

User Manual

4 Ch Video Sever

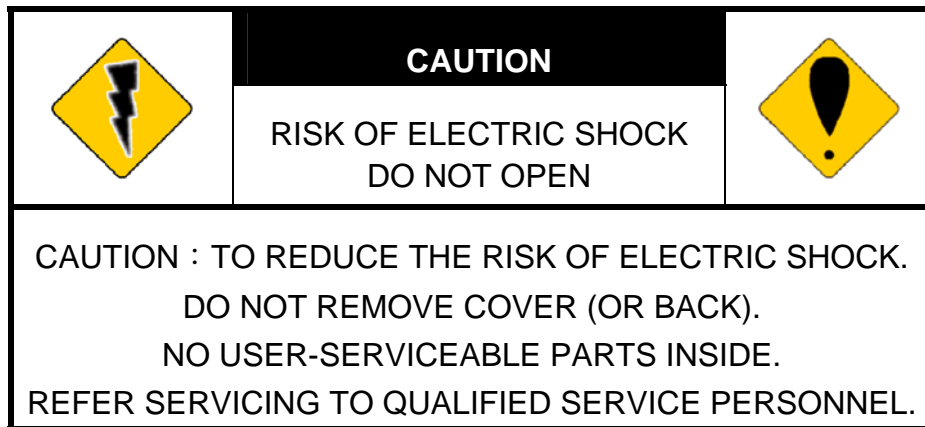


WARNINGS

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

DO NOT INSERT ANY METALLIC & ELETRIC CONDUCTIVE OBJECT THROUGH VENTILATION GRILLS.

CAUTION



COPYRIGHT

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

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I. PREFACE

This is a four channel MPEG-4/ MJPEG Video Server with web server built-in.

It encodes analogue signals of traditional cameras to digital signals; the users can monitor real-time video via IE browser. MPEG-4 compression format supports smooth video quality. Also, it supports SD Card backup. 2-way audio enables the user to have a video conference. In addition, the user can control Video Server with user friendly interface via IE browser to build a home surveillance system.

II. Product Specifications

FEATURES:

- MPEG4/ MJPEG compression formats
- RS-485 Control Interface (PTZ)
- SD Card backup.
- Wireless network connection (802.11 b/ g) - Optional
- 2-way audio.
- Online firmware upgrade.
- Support dynamic IP and PPPoE through free DDNS.
- Support AVI video backup via IE browser.
- Compatible with Microsoft Windows Media Player.

Hardware	
CPU	ARM 9 ,32 bit RISC
RAM	64MB
ROM	8MB
Video Input	BNC x 4
Input Video Looping	BNC x 4
Audio In/Out	1 in / 1 out (RCA type)
Alarm Input	X4
Relay Out	X4
RS232	1
RS-485	X1, for PTZ control
Power	Lan: DC 12V 600mA Wlan: DC 12V 700mA
Dimensions (WxHxD)	218x44x202mm
Weight	1400 g
Network	
Ethernet	10/ 100 Base-T
Wireless	802.11b/g
WEP	64/ 128 bit
Network Protocol	HTTP, TCP/ IP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP
System	
Video Resolution	NTSC:688x448, 360x240, 336x244, 160x96
	PAL: 688x544, 360x288, 336x272, 160x128
Video adjust	Brightness, Contrast, Saturation, Hue
Image snapshot	Yes
Full screen monitoring	Yes
Compression format	MPEG-4, MJPEG
Video bitrate adjust	CBR, VBR
Motion Detection	Yes, 4 Areas (1 Area per CH)
Triggered action	Relay, Mail, FTP, Save to SD storage
Post alarm	Yes, configure
Remote PTZ control	Yes
Security	Password protection
Firmware upgrade	HTTP mode, can be upgraded remotely
Simultaneous connection	Up to 5

Audio	Yes, 2-way (Duplex Support)
SD Storage	
Recording trigger	Motion Detection, Alarm, IP check, Network Status (Wire connection only)
Video format	AVI
Video playback	Yes
Delete files	Yes, can be deleted or overwrite
Client system requirement	
OS	Windows 2000/ 2003, XP, Vista, IE 6 or above
Hardware	
Suggested	Intel-C2.8G, RAM: 512MB, Graphic Card: 64MB
Minimum	Intel-C1.6G, RAM: 256MB, Graphic Card: 32MB

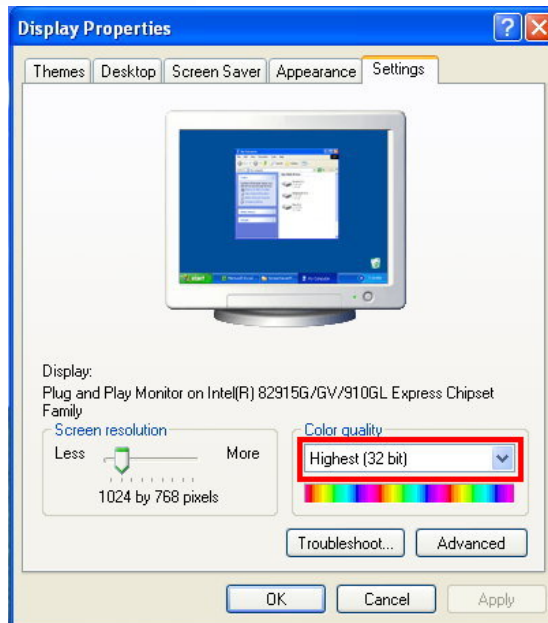
III. Product Installation

A. Monitor Setting

- i. Right-Click on the desktop. Select “ Properties”.



- ii. Change color quality to highest (32bit).



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, alarm notifications. It provides the interface to:

1 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.

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

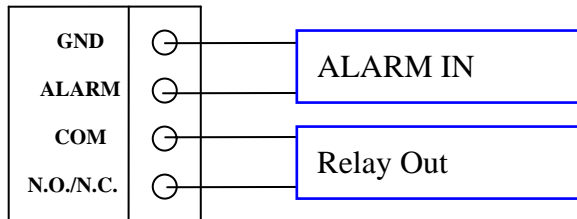
Digital Input

Alarm Input

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

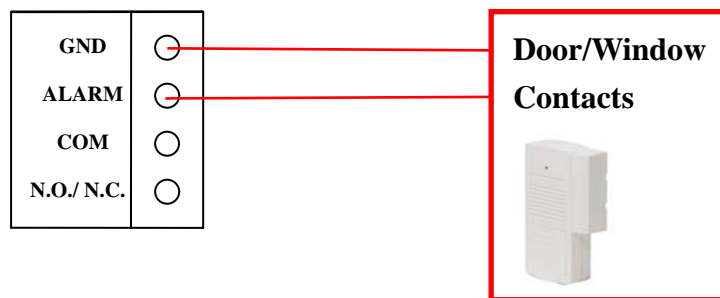
Relay Output

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

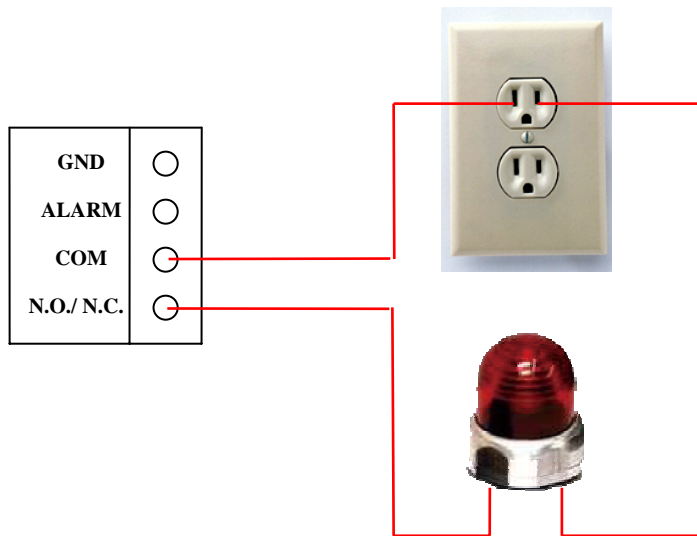


B-2. Relay Connection:

Digital Input connection



Relay Output Connection

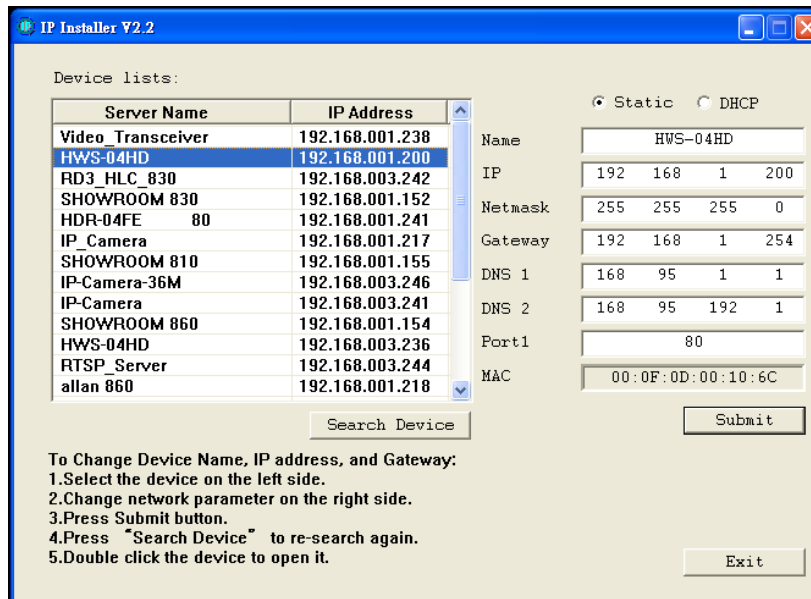


C. IP Assignment

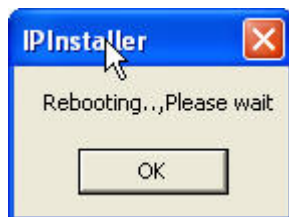
- i. Use "IP Installer", comes with CD, to assign the IP address of VIDEO SERVER.
- ii. There are two languages for IP Installer :
 - a. IPInstallerCht.exe: Chinese version
 - b. IPInstallerEng.exe: English version
- iii. 3 different IP configurations based on different environments.
 - a. Fixed IP (Public 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 popup, please click "Unblock."



vi. The GUI of IP Installer :



- vii. IP Installer searches all IP devices 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 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". And, then, the following message will popup. 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: 192.168.1.210

PC IP address: 192.168.1.100

Different Subnets:

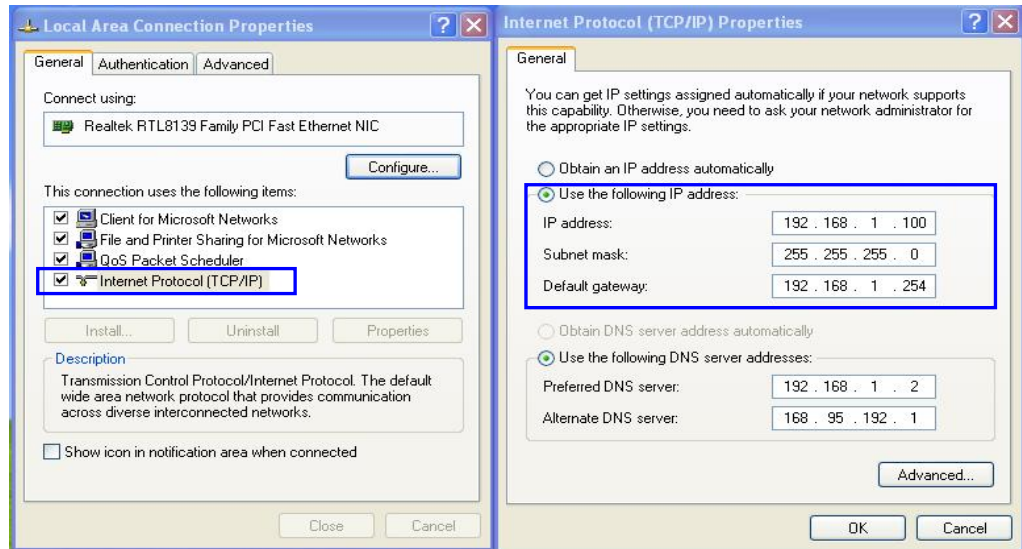
VIDEO SERVER IP address: 192.168.2.210

PC IP address: 192.168.1.100

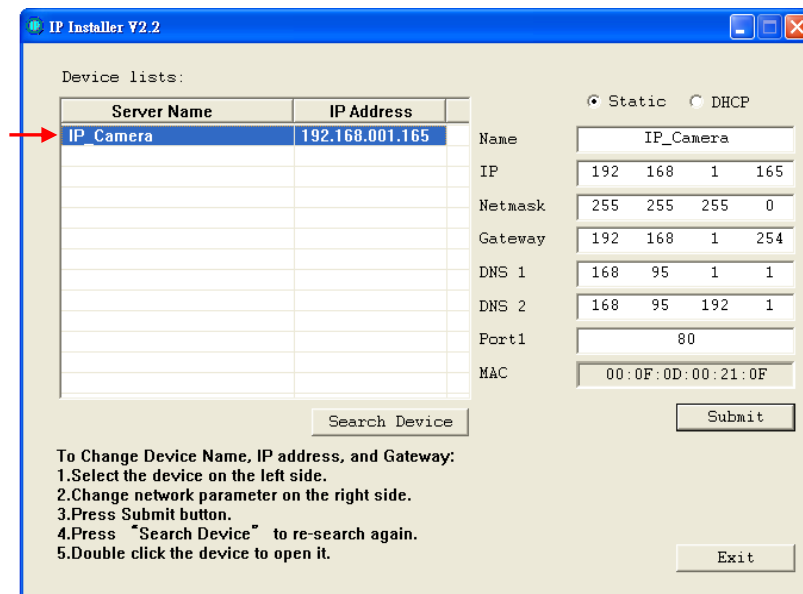
To Change PC IP address:

Control Panel → Network Connections → Local Area Connection Properties → Internet Protocol (TCP/IP) → Properties

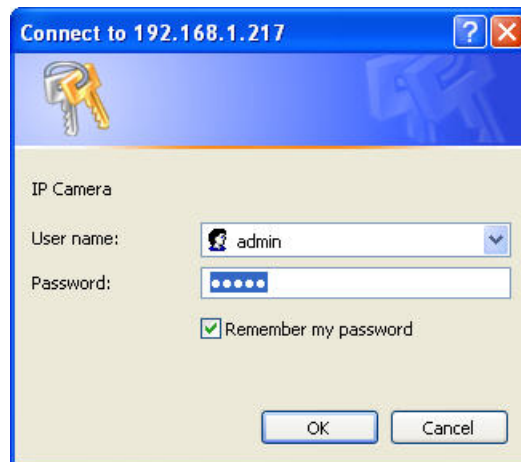
Please make sure your Video Server and PC have the same Subnet. If not, please change Video Server subnet or PC IP subnet accordingly.



- 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 IP Installer. An IE browser will be opened.



- xi. Then, please key in the default “user name: admin” and “password: admin”.



- xii. After VIDEO SERVER reboot, click “Search Device” to research VIDEO SERVER. And, use IE Browser for live viewing.

D. Install ActiveX control (setup once only):

For the first time to view VIDEO SERVER via IE browser, it will request the user to install ActiveX.

 This website wants to install the following add-on: 'WEBWATCH2.cab' from

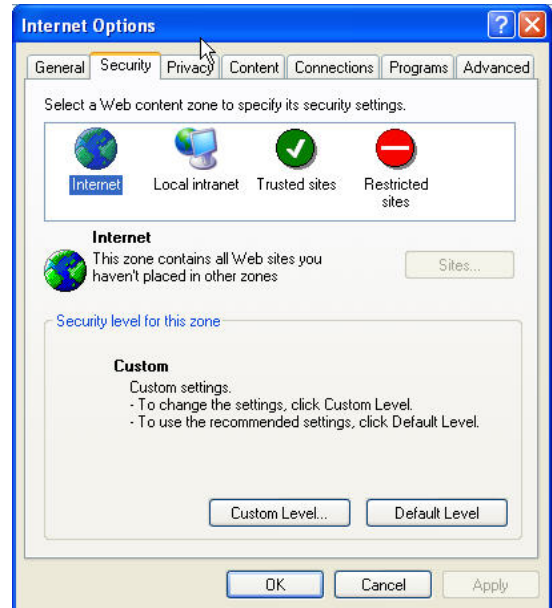
Also, check the security setting as follows.

- i. IE → Tools → Internet Options... → Security Tap → Custom Level → Security Settings → Download unsigned ActiveX controls → Select “Enable” or “Prompt (Recommend).
- ii. IE → Tools → Internet Options → Security Tap → Custom Level... → Security Settings → Initialize and script ActiveX controls not marked as safe → Select “Enable” or “Prompt” (Recommend).

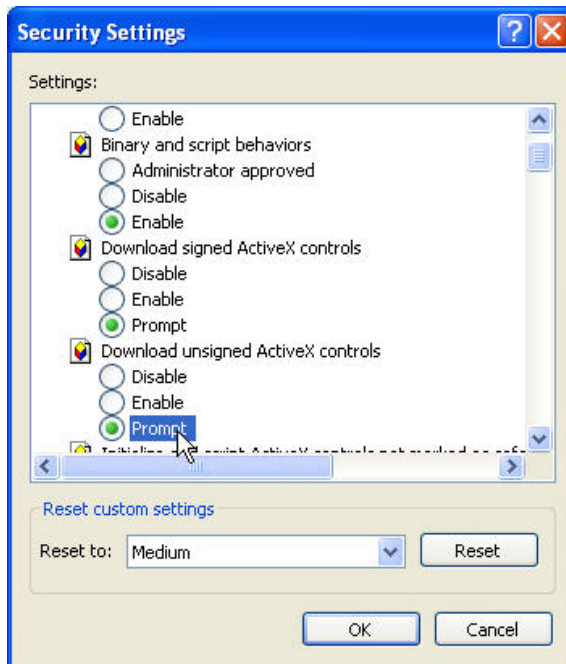
1



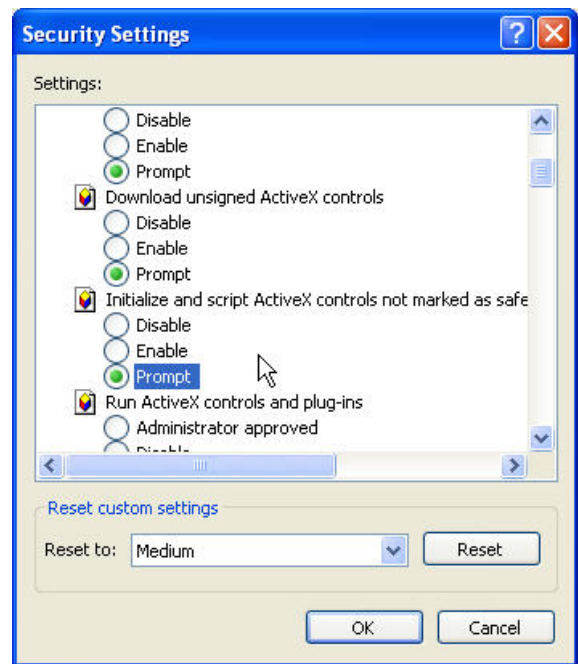
2



3

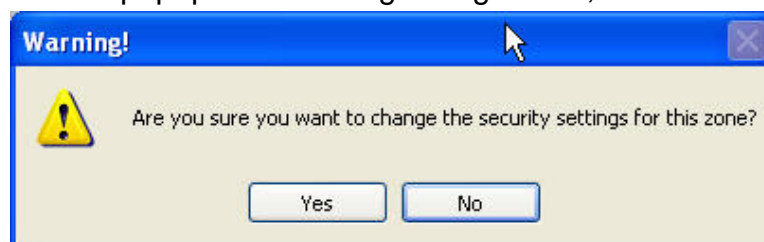


4



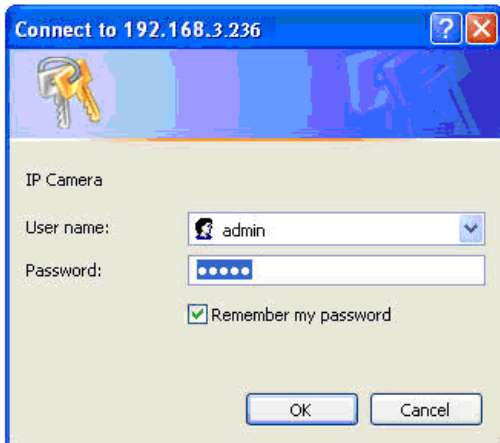
5

When popup the following dialogue box, click "Yes".

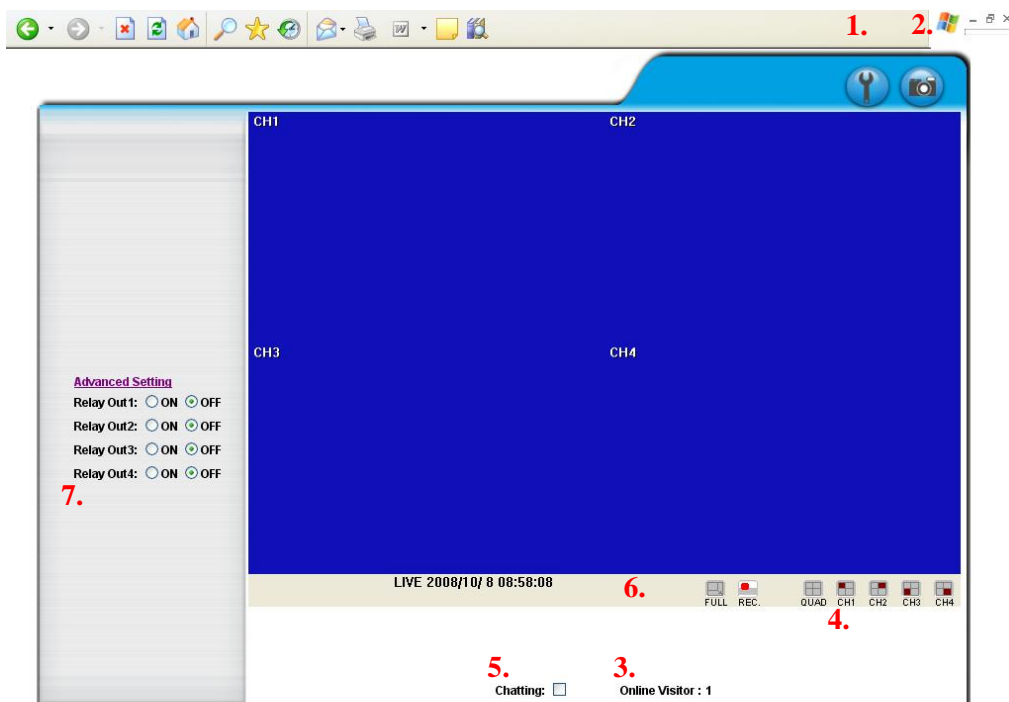



IV. Live Video


After executing IE browser and typing the IP address of VIDEO SERVER, the following message will popup 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. Show 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 normal mode.

B ·  Record with AVI file.

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

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



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

V. VIDEO SERVER Configuration



Click



to return to the live

viewing as follows.

System Information	
Server Information	
Server Name:	<input type="text" value="4CH Server NEW NT"/>
MAC Address:	<input type="text" value="00:0F:0D:00:21:EC"/>
Language :	<input checked="" type="radio"/> English <input type="radio"/> 繁體中文 <input type="radio"/> 简体中文
Time Setting	
Server Time:	3/3/2008 17:39:37 Time Zone: GMT+08:00
Time zone:	<input type="text" value="GMT+08:00"/>
<input type="radio"/> NTP :	
NTP Server :	<input type="text" value="time.stdtime.gov.tw"/>
<input type="radio"/> Synchronize with PC's time	
Date :	<input type="text" value="3/3/2008"/>
Time :	<input type="text" value="17:41:6"/>
<input type="radio"/> Manual	
Date :	<input type="text" value="3/3/2008"/>
Time :	<input type="text" value="17:40:3"/>
<input checked="" type="radio"/> The date and time remain the same	
<input type="button" value="Apply"/>	

A. System

i. System Setup

Set up the video server name, select language, and the time on this video server.

- Sever name : This is the video server name for the user to search on IP Installer.
- Select language : There are English, Traditional Chinese, and simplified Chinese. When a certain language is selected, the following message will popup and ask the user to confirm language changed.



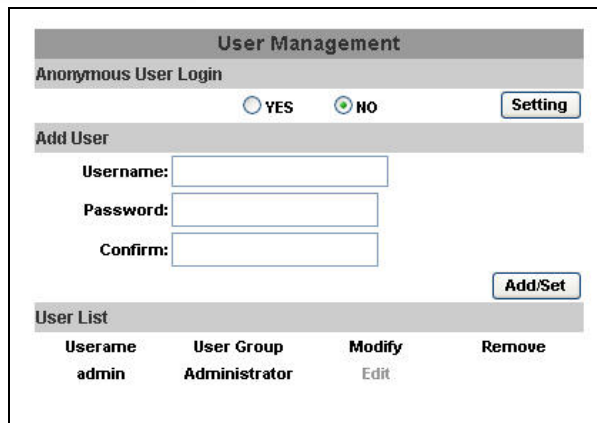
- Sever time setting : Select options to set up time - "NTP", "Synchronize with PC's time", "Manual", "The date and time remain the same".



ii. User Management

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

Default Username and Password: admin/ admin



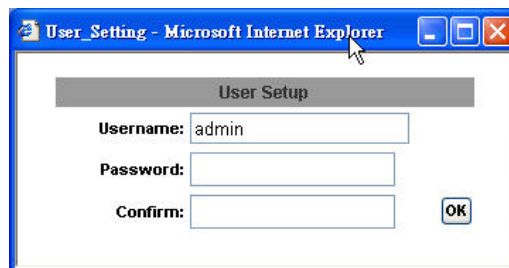
User Management

Anonymous User Login
 YES NO

Add User
 Username:
 Password:
 Confirm:

Username	User Group	Modify	Remove
admin	Administrator	Edit	

- a. Anonymous User Login :
 Yes : Allow anonymous login.
 No : Require user name and password to login.
- 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.

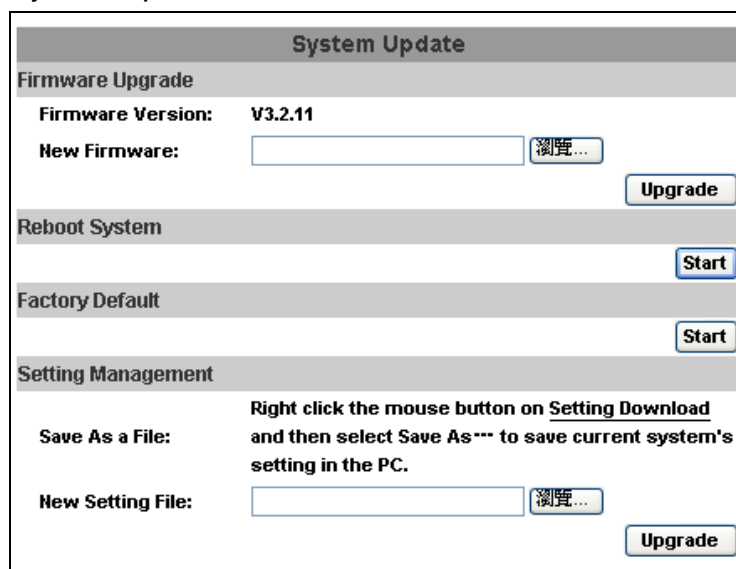


User_Setting - Microsoft Internet Explorer

User Setup

Username: admin
 Password:
 Confirm:

iii. System update



System Update

Firmware Upgrade
 Firmware Version: V3.2.11
 New Firmware: 瀏覽...

Reboot System

Factory Default

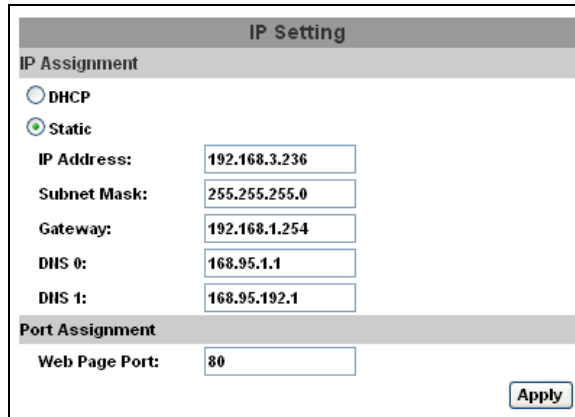
Setting Management
 Right click the mouse button on Setting Download and then select Save As... to save current system's setting in the PC.
 New Setting File: 瀏覽...

- a. To update the firmware online, click “Browse...” to select the firmware. Then click “Upgrade” to the proceed.
- b. Reboot system : re-start the Video Server
- c. Factory default : delete all the settings and restore defaults system.
- d. Setting Management : User may download the current setting to PC, or upgrade from 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

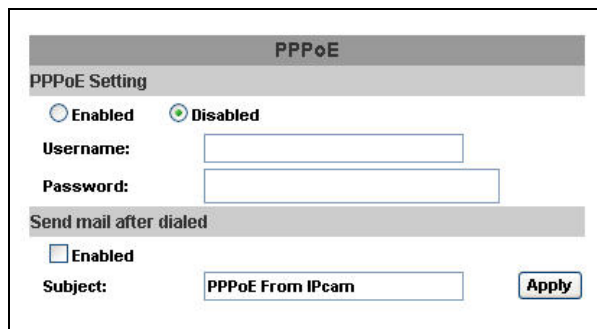
i. IP Setting

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 have to be adjusted in case of conflict.

ii. PPPoE



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

Username: username for ADSL connection.

Password: password for ADSL connection.

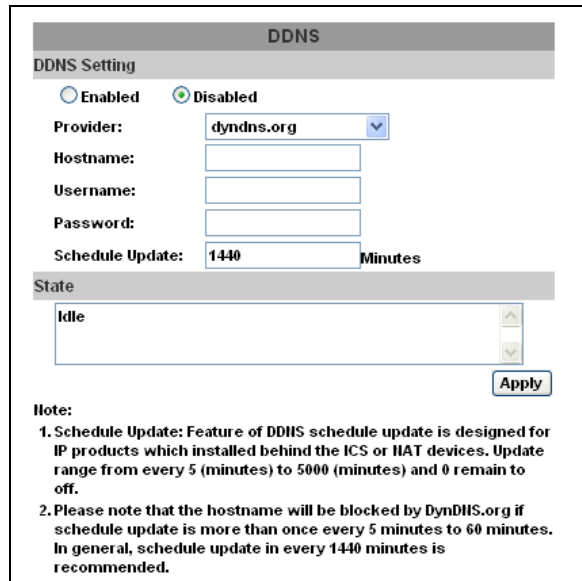
Send mail after dialed : After this function is enabled, it will send an email to a specific mail account. For the mail setting, please refer to IV. “Mail and FTP” settings.

iii. DDNS

VIDEO SERVER supports DDNS. It uses dynamic IP to redirect IP and connect with the video sever.

VIDEO SERVER supports 3 kinds of DDNS severs, including dyndns.org, ddns.camddns.com, and ddns2.ydsdvr.com.

a. DynDNS ;



DDNS

DDNS Setting

Enabled Disabled

Provider:

Hostname:

Username:

Password:

Schedule Update: Minutes

State

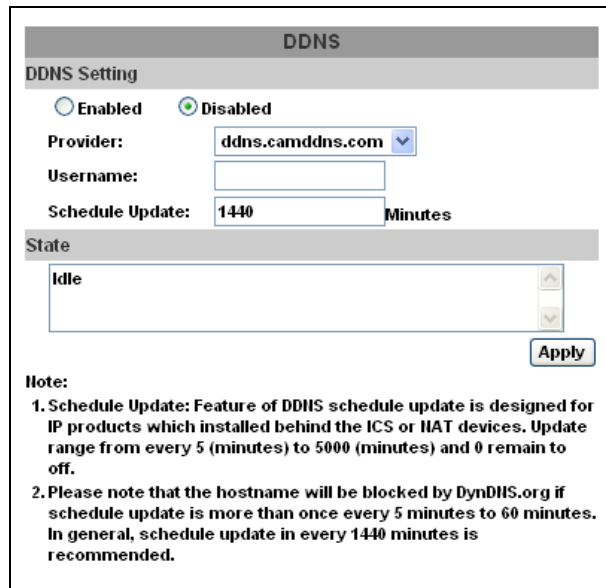
Note:

1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.

2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

1. DDNS Setting: Enable or Disable DDNS setting.
2. Input the DynDNS's host name, user name, and password.
3. Schedule Update: Default 1440 minutes.
* 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 :



DDNS

DDNS Setting

Enabled Disabled

Provider: ddns.camddns.com

Username:

Schedule Update: 1440 Minutes

State

Idle

Apply

Note:

1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or IAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.
2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

1. Input user name.
2. Schedule Update: Default 1440 minutes.
3. Click on “Apply” on save.

c. DDNS State :

1. Updating: Information updating.
2. Idle: Stop Service.
3. DDNS registration successful, can now log 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 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 wireless setting, the user has to unplug Ethernet cable because both use the same IP. If the user doesn't unplug Ethernet cable, wireless setting can not 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
<input type="button" value="Apply"/>	

- a. Status of Wireless Networks ;
it can scan all wireless services.
- b. Wireless Setting :
 1. **Mode** : There are Infrastructure and Ad-hoc. Infrastructure is for connecting with the router. Ad-hoc is for connecting with PC. When the user uses Ad-hoc mode, “Channel” option can be selected.
e.g. If one PC’s channel is 1, the other’s channel has to 1, too.

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 be used when the user selects Ad-hoc mode in order to avoid conflict.
4. **Security** : It supports “None”, “WEP”, “WPA-PSK” security encryption based on the setting of the Router.

『WEP』

- Authentication : There are Open System and Shared Keys, 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 Key Type based on the Router’s setting.

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

Security:	WEP
WEP Setting	
Authentication:	Open System
Encryption:	64 bit
Key Type:	HEX (10 character max)
Key 1:	<input checked="" type="radio"/> <input type="text"/>
Key 2:	<input type="radio"/> <input type="text"/>
Key 3:	<input type="radio"/> <input type="text"/>
Key 4:	<input type="radio"/> <input type="text"/>

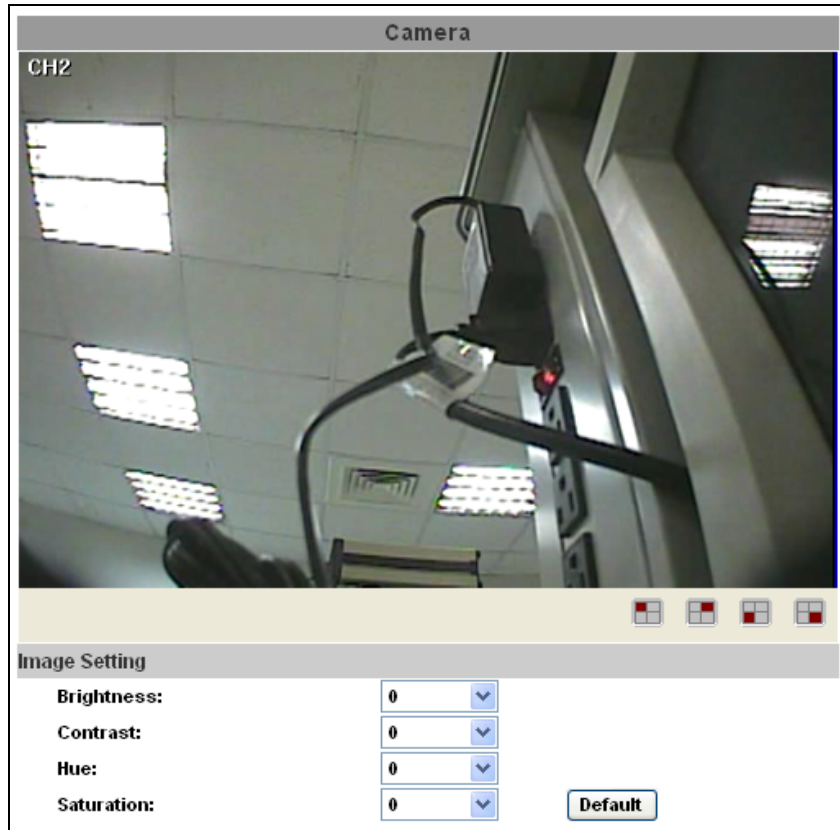
『WPA-PSK』 :


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

Security:	WPA-PSK
WPA-PSK Setting	
Encryption	TKIP
Pre-Shared Key:	<input type="text"/> (ASCII format, 8~63)

C.Multimedia

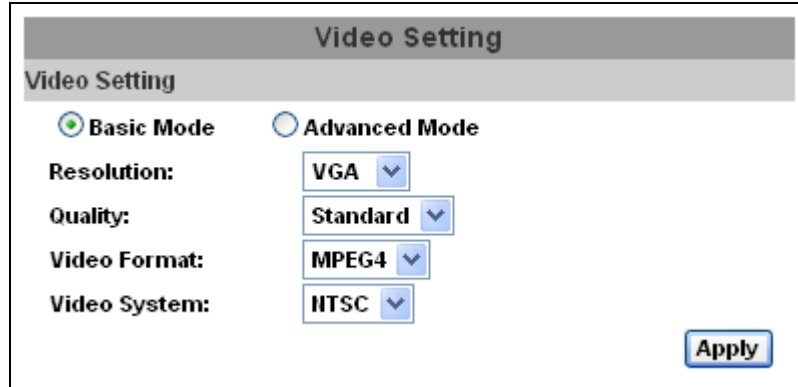
i. Image Setting



- ii.  Select each channel to control.
- iii. Adjust "Brightness", "Contrast", "Hue", and "Saturation".

iv. Video Setting

a. Basic mode :



Video Setting

Video Setting

Basic Mode Advanced Mode

Resolution: VGA

Quality: Standard

Video Format: MPEG4

Video System: NTSC

Apply

1. Resolution :

There are 3 resolutions to be adjusted.

VGA

QVGA

QCIF

2. Quality :

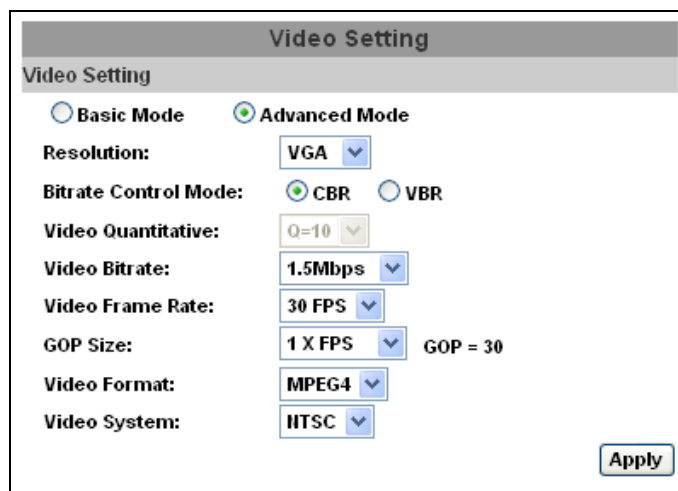
There are 5 qualities to be adjusted. The higher the quality is, the bigger the files size is.

3. Video Format : MPEG4 or JPEG.

4. Video System :

It supports NTSC and PAL.

b. Advanced Mode :



Video Setting

Video Setting

Basic Mode Advanced Mode

Resolution: VGA

Bitrate Control Mode: CBR VBR

Video Quantitative: 0=10

Video Bitrate: 1.5Mbps

Video Frame Rate: 30 FPS

GOP Size: 1 X FPS GOP = 30

Video Format: MPEG4

Video System: NTSC

Apply

1. Resolution :

There are 3 resolutions to be adjusted.

VGA
QVGA
QCIF

2. Bitrate Control Mode :

There are CBR [Constant Bit Rate] and VBR [Variable Bit Rate] .

CBR : 64Kbps~4Mbps ◦

VBR : Q=4~30 ◦

If the bandwidth is smaller than CBR or VBR setup, it will cause legging and incomplete images.

3. Video Frame Rate :

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

4. GOP

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

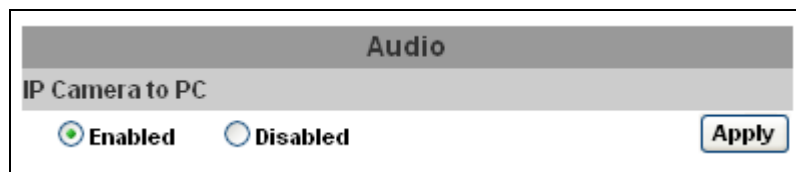
5. Video Format : MPEG4 or JPEG.

6. Video System : It supports NTSC and PAL.

v. Audio:

VIDEO SERVER supports 2-way audio.

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



Audio	
IP Camera to PC	
<input checked="" type="radio"/> Enabled	<input type="radio"/> Disabled
<input type="button" value="Apply"/>	

b. For local PC to the video server, click on "chatting" on IE browser.

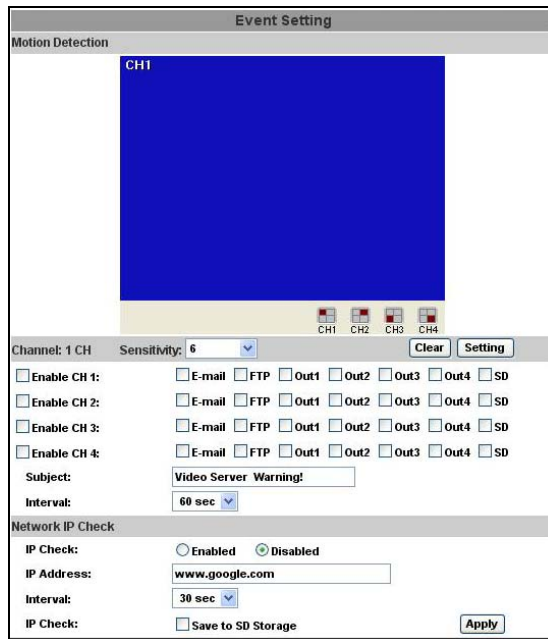


The interface displays two video channels, CH3 and CH4. The video feeds are currently blue, indicating they are not active or are in a test mode. Below the video feeds, a timestamp reads '2007/0/10 11:34:20'. To the right of the timestamp are several small icons for window management. At the bottom of the interface, there is a 'Chatting: [checked]' button, where the 'checked' box is highlighted with a red rectangle, and the text 'Online Visitor : 1' is displayed to its right.

D.Event

VIDEO SERVER provides multiple event settings.

i. Event Setting



VIDEO SERVER supports one motion detection area on each channel. When the motion is triggered, it can send out the video to a certain email address or upload the video to FTP. If the user has a SD Card, they can

do SD backup. The user can clicks on  to select

channels and use the motion detection function.

Use the mouse to drag the area for motion detection area and then click on “Apply” to save.

ii. I/O Setting :

I/O Setting

Input Setting

Input 1 Action: E-mail FTP Out1 Out2 Out3 Out4 Save to SD card

Input 2 Action: E-mail FTP Out1 Out2 Out3 Out4 Save to SD card

Subject:

Interval: ▼

Output Setting

Mode Setting: OnOff Switch Slide Switch

Interval: ▼

- a. Input Setting :
 - 1. Input 1 Action : E-mail/ FTP/ Out1/ Out2/ Out3/ Out4/ Save to SD card.
 - 2. Input 2 Action : The same as Input 1.
 - 3. Subject : Default GPIO In 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:

Path:

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

iv. SD card

Please Insert SD card before use it. Make sure pushing 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

a. Playback :



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

2006/04/17			Del
Time	Video	Event Type	<input type="checkbox"/>
09:05:22	090522f.avi	Network Dis-connected	<input type="checkbox"/>
09:05:52	090552f.avi	Network Dis-connected	<input type="checkbox"/>
09:06:22	090622f.avi	Network Dis-connected	<input type="checkbox"/>
09:06:52	090652f.avi	Network Dis-connected	<input type="checkbox"/>
09:07:22	090722f.avi	Network Dis-connected	<input type="checkbox"/>
09:07:52	090752f.avi	Network Dis-connected	<input type="checkbox"/>
09:08:22	090822f.avi	Network Dis-connected	<input type="checkbox"/>
09:08:51	090851f.avi	Network Dis-connected	<input type="checkbox"/>
09:09:21	090921f.avi	Network Dis-connected	<input type="checkbox"/>
09:09:51	090951f.avi	Network Dis-connected	<input type="checkbox"/>

1 2 3 4 5

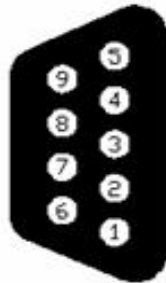
2. The video format is AVI. Click the video to start Microsoft Media Player to play it.
3. To delete the video, check it, then click **Del**. When the SD card is full, it will remove the oldest video automatically.

v. 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.

VI. Factory Default



- i. Unplug the power of the Video Server.
- ii. Please contrast above RS232 interface image, and then connect Index 2 to 3.
- iii. Turn on the Video Server and wait for few minutes until IP installer can search the video server.
- iv. Please remove Index 2 and 3 connections.
- v. All the setting will be restored to factory default
- vi. Default IP address is <http://192.168.1.210>. Moreover, user name and password are admin

VII. Package contents

1. 4Ch Video Server
2. Adaptor
3. Ethernet Cable
4. CD (user manual, IP installation utility).

Appendix I

SD Card Recommended :

SanDisk 128M	Transcend 128M 80X
SanDisk 256M	Transcend 256M 80X
SanDisk 512M	Transcend 512M 80X
SanDisk 1G	Transcend 1G 80X
SanDisk 2G	Transcend 2G 80X
SanDisk 4G	Transcend 4G 80X