

**Multi-CH Encoder Firmware – D1
A8D-R2N-V2.06.00-AC**

User's Manual



www.acti.com

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1 INSTALLATION

1.1 Minimum System Requirements

CPU	Pentium 4 2.4GHz and above
Hard Disk	40 GB or above
Memory	256 MB or above
Operating System	Windows XP with SP2 or above
Video Resolution	SVGA or XGA with 1024x768 resolution

1.2 Preparation before setup

Our IP device provides access through Internet Explorer. You need to set up the network settings and the IP address for the IP device. Please make sure all connections are properly connected, then follow the procedures below.

1. Setup your PC network

The IP address for your PC must be within the same subnet as the IP device. You need to match the TCP/IP settings between PC and IP device before you can access it via IE.

2. Setup IP device's IP address

This IP device's IP address can be assigned manually or acquired automatically by network service (DHCP). If it acquires the IP address by using the DHCP service, please use the IP utility software bundled in the product CD to find the IP address for all IP devices.

1.2.1 Setup your PC network

To set up the network of IP device via a PC, you have to change the TCP/IP settings of the PC.

The following are the default network settings of IP device.

IP Address: 192.168.0.100

Subnet Mask: 255.255.255.0

To access the IP device, the IP address of the PC should match the address below.

IP Address: 192.168.0.xxx

Subnet Mask: 255.255.255.0



NOTE: xxx should be a number from 1 to 254 except 100, which is used by the IP device. Please also make sure that no two equipments use the same IP address in the same network.

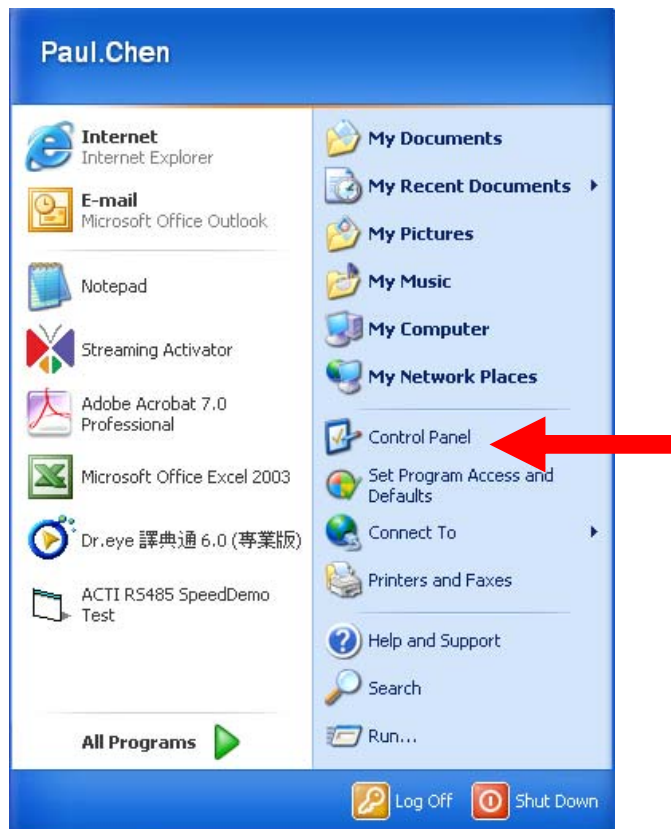
The procedures below is the setup procedure on Windows XP. If you use operating system other than Windows XP, please refer to OS manuals for proper setup procedures.

- **STEP1**

Start up your PC.

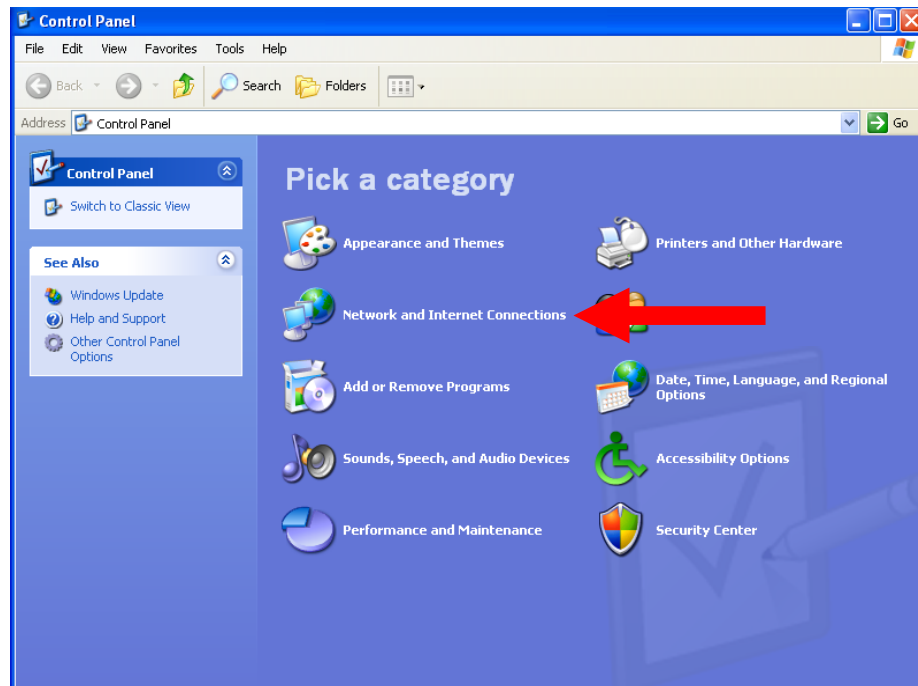
- **STEP2**

Click the [Start] and select the "Control Panel"



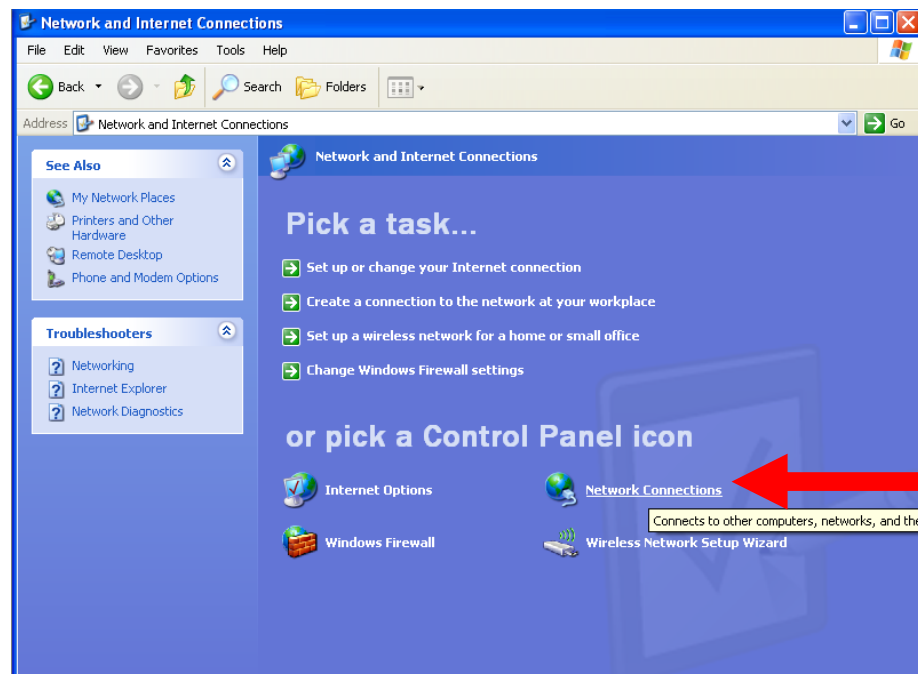
- **STEP3**

Double-click the "Network and Internet connections" icon.



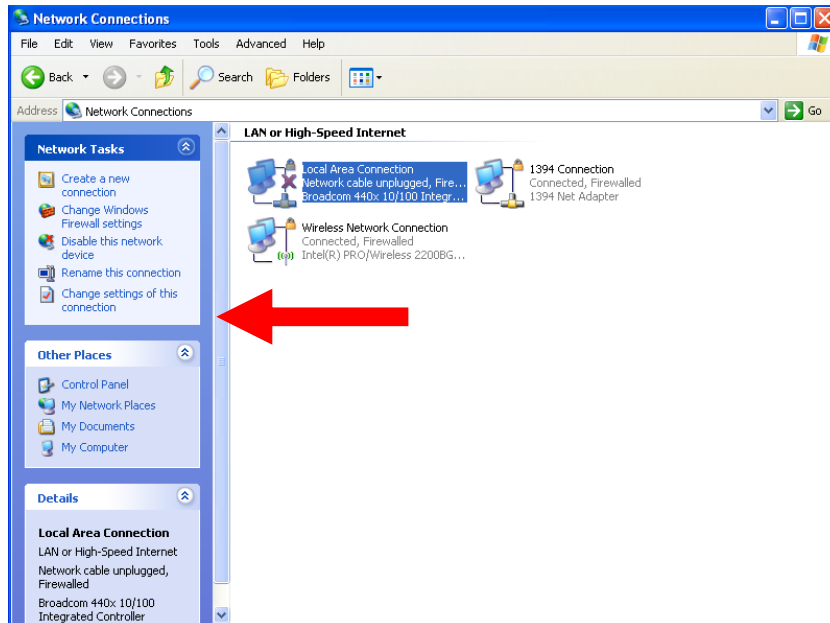
- **STEP4**

Double-click the "Network connections" icon



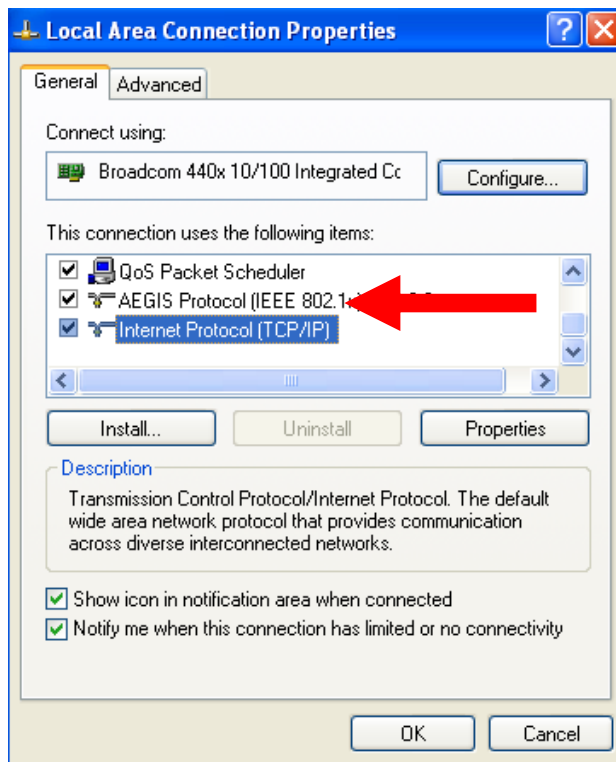
- **STEP5**

Click “Local Area Connections”, and then click “Change settings of this connection” in the network Task menu.



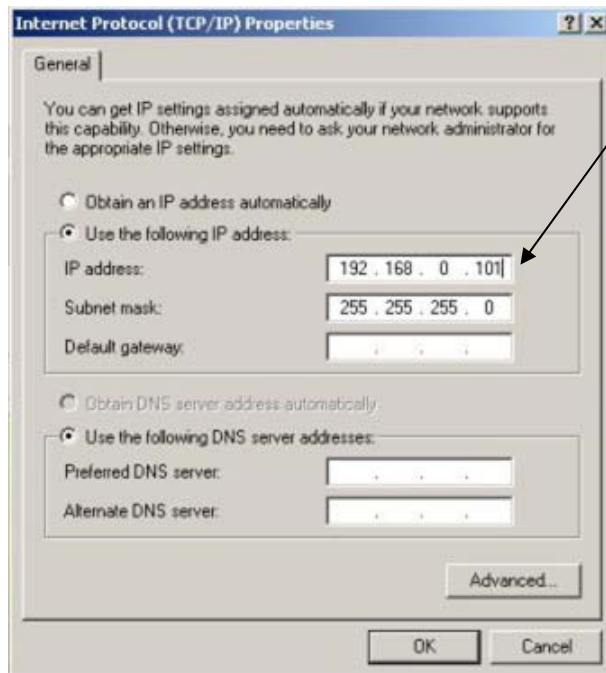
- **STEP6**

Click “Internet Protocol (TCP/IP)”, and then click the [Properties] button. If you have both IPv4 and IPv6, choose IPv4.



- **STEP7**

Click the “Use the following IP address” radio button and enter the IP address and the subnet mask.



Please set the settings as below.

IP address: 192.168.0.xxx
Subnet mask: 255.255.255.0

(NOTE: xxx should be a number from 1 to 254 except 100, which is used by the IP device. Please also make sure that no two equipments use the same IP address in the same network..)

- **STEP8**

Click the [OK] button and the window dialog box closes.

1.3 Configuring the IP device - System

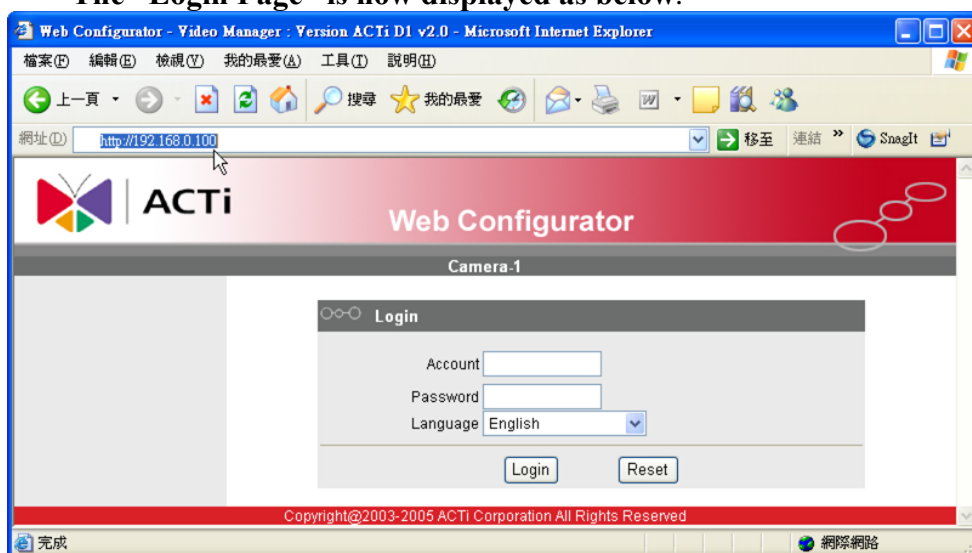
This section describes how to configure the IP device. The administrator has unlimited access to all settings, while the normal user can only view live video. The IP device is configured under a standard browser (Microsoft Internet Explorer 6.0 or above).

Follow the procedures below to configure the IP device.

- **STEP1:** Open a browser
- **STEP2:** Enter the IP address of the IP device.

The default IP address is “192.168.0.100”

The “Login Page” is now displayed as below.



- **STEP3:** Enter account name (factory default: Admin) and password (factory default: 123456).



NOTE: Internet Explorer 6.0 or above is highly recommended. You may download it from <http://www.microsoft.com/windows/ie/downloads/default.msp>

- **STEP4:** Select the language of the IP device user interface. You can select from English, Traditional Chinese, Simplified Chinese, Japanese, Spanish, Italian, German, Portuguese, Czech, and French. This user interface setting will disappear once you log out, if you want to change the default user interface language, please change the setting of [Host setting] after login.

- **STEP5:** Click the **Login** button to login or click the **Reset** button to re-enter account and password.

Once successfully login, the “Main Setup page” will be displayed as below.



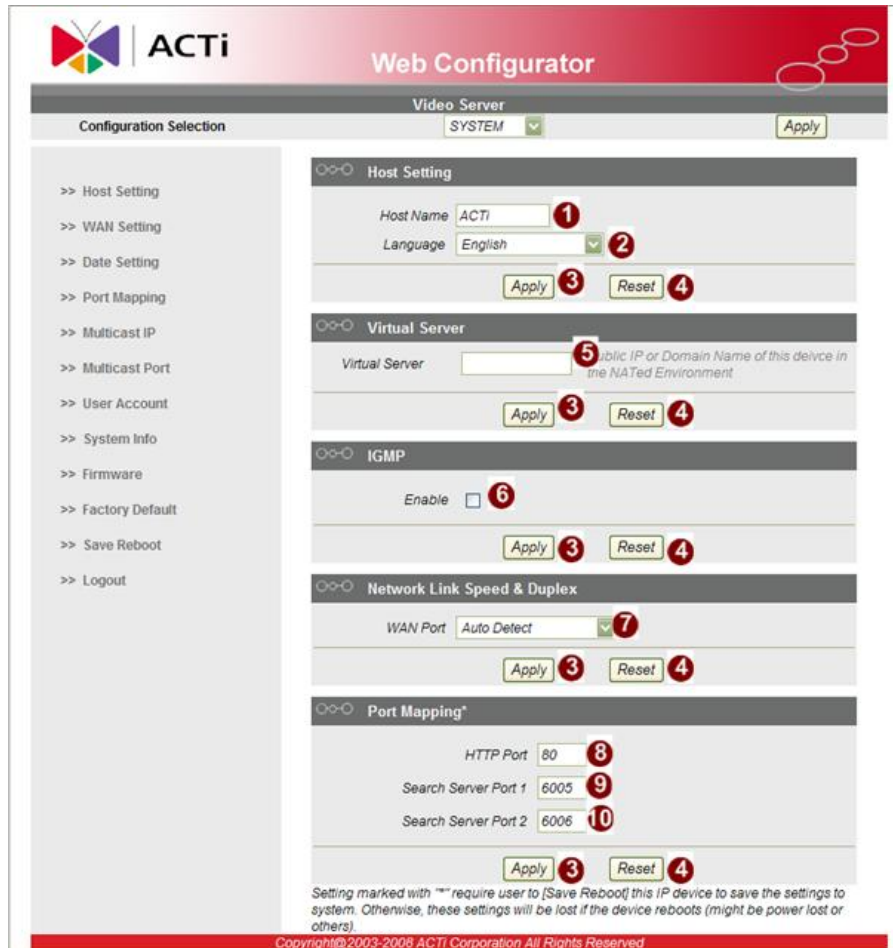
- **STEP1:** Click **1** to set system configurations of Multi-CH Video Server
- **STEP2:** Click **2** to apply the choice

1.3.1 Host Setting

This section tells you how to setup IP device's host settings

- **STEP1:** Click the [Host Setting] on the “Main Setup page”.

The “Host setting page” is displayed as below.



- **STEP2:** Configure these settings with reference to the table below. If you are still unsure what to set, contact your system administrator.

■ Host Setting

Parameters	Description
① Host name	Enter a host name, and this host name will be shown when you use the IP utility or the SDK to search for the IP device.
② Language	Select the language of default user-interface. Every user will see the default user-interface first when logging in.

■ **Virtual Server**

Parameters	Description
5 Virtual Server	Enter the Public IP or Domain Name of this device in a network environment with Network Address Translation.

■ **IGMP**



Parameters	Description
6 Enable	This option appears only in Multicast. Enabling it will enable using IGMP membership to do multicast.

■ **Network link speed & duplex**

Parameters	Description
7 WAN port	This item lets you select the network transmission speed of WAN port. You can select from 1. Auto detect (default setting) 2. 100Mbps / Full duplex 3. 100Mbps / Half duplex 4. 10Mbps / Full duplex 5. 10Mbps / Half duplex

■ **Port Mapping**

Parameters	Description
8 HTTP port	Select the port for this IP device to use HTTP protocol.
9 Search server port1	Select the first port on which software applications can find this IP device with. (e.g. IP utility).
10 Search server port2	Select the second port on which software applications can find this IP device with. (e.g. IP utility).

- **STEP3:** Click the  [Apply] button of each setting to confirm the settings or click the  [Reset] button to re-enter the parameters.



NOTE: Once you finish all settings, be sure to click the [Save Reboot] button. Otherwise, some settings may not take effect.



NOTE: Check with your system administrator, if Client PC and IP device are setting in different VLANs, please connect to WAN port.



NOTE: For all network router/switches connected to this Camera/Video Server, be sure to use Auto Negotiation as the Network Connections Type. This will enable the whole network to always run at the highest possible speed. Please also refer to Network Speed & Duplex settings in Host Setting section on Page 11 of this manual.

1.3.2 WAN Setting

This section tells you how to setup IP device's WAN, DNS server and DDNS server settings.

- **STEP1:** Click the [WAN Setting] on the “Main Setup page”.

The “WAN setting page” is displayed as below

- **STEP2:** Configure these settings with reference to the table below. If you are still unsure what to set, contact your system administrator.

■ WAN Setting

Parameters	Description
1 Dynamic IP address	Click this to enable IP device's DHCP function. It will acquire its WAN port IP address from a DHCP server within the same network. (You must have a DHCP server in order to enable this function.)
2 Static IP address	Click this to manually enter the IP device WAN port IP address. 3 IP address: Enter the WAN port IP address. 4 Subnet mask: Enter the subnet mask of WAN port. If

	<p>IP address is changed, adjust the subnet mask accordingly.</p> <p>5 ISP gateway: Enter the IP address of the gateway (the router).</p>
6 PPPoE	<p>Click this when you connect IP device directly to the xDSL modem.</p> <p>7 User name: Enter the user name of your xDSL account.</p> <p>8 Password: Enter the password of your xDSL account.</p> <p>Note: You have to click the [Save Reboot] after you click the [Apply button] to let this IP device start xDSL connections.</p>

■ DNS server Setting

Parameters	Description
11 Primary DNS server	Defines the IP address of the primary DNS server. This is used for identifying this computer by name instead of IP address.
12 Secondary DNS server	The IP address of the secondary DNS server. It will be used once the primary DNS server fails.

■ DDNS server Setting

Parameters	Description
13 DDNS type	Click this to enable IP device's DDNS function. DDNS function enables user to connect to this IP device by domain name even if its IP address is not static.
14 Service ISP	Click one of the DDNS service providers. You can visit their website to get a DDNS service account for this IP device.
15 Host name	Enter the host name of your DDNS service account. (ex: xxxx.dyndns.org)
16 User name	Enter the user name to login your DDNS service account.
17 Password	Enter the password to login your DDNS service account.

- **STEP3:** Click the **9** [Apply] button of each setting to confirm the settings or click the **10** [Reset] button to re-enter the parameters.



NOTE: Check with your system administrator, if Client PC and IP device are setting in different VLANs, please connect to WAN port.



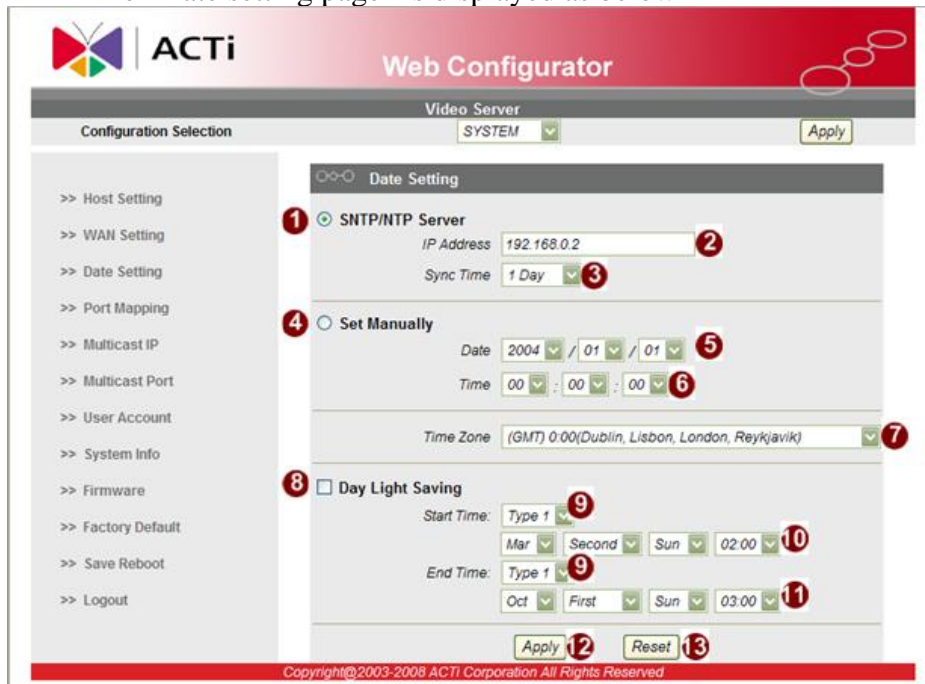
NOTE: Once you finish all settings, be sure to click the [Save Reboot] button. Otherwise, some settings may not take effect.

1.3.3 Date Setting

This section tells you how to setup IP device's date and time settings.

- **STEP1:** Click the [Date Setting] on the “Main Setup page”.

The “Date setting page” is displayed as below



- **STEP2:** Configure these settings with reference to the table below. If you are still unsure what to set, contact your system administrator.

■ Date Setting

Parameters	Description
1 SNTP/NTP server	Click this to enable IP device's SNTP/NTP function. SNTP/NTP function enables this video to synchronize its time settings with a SNTP/NTP server. You can use this function to make sure all your IP devices' time is the same. Additionally, with our embedded digital-time-code in the streaming, you can tell the event sequence accurately. 2 IP address: Enter the IP address of the SNTP/NTP server. 3 Sync time: Select the time interval for this IP device to synchronize its time.
4 Set manually	Click this to manually setup the date & time. 5 Date : Select the date 6 Time: Select the time
7 Time zone	Select the time zone offset for local settings

8 Day Light Saving	9 Select Type 1 to specify daylight saving time by week number in a month; select Type 2 to specify daylight saving time by date. 10 Start Time : Select the daylight savings start time. 11 End Time : Select the daylight savings end time.
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- **STEP3:** Click the 12 [Apply] button of each setting to confirm the settings or click the 13 [Reset] button to re-enter the parameters.



NOTE: Once you finish all settings, be sure to click the [Save Reboot] button. Otherwise, some settings may not take effect.

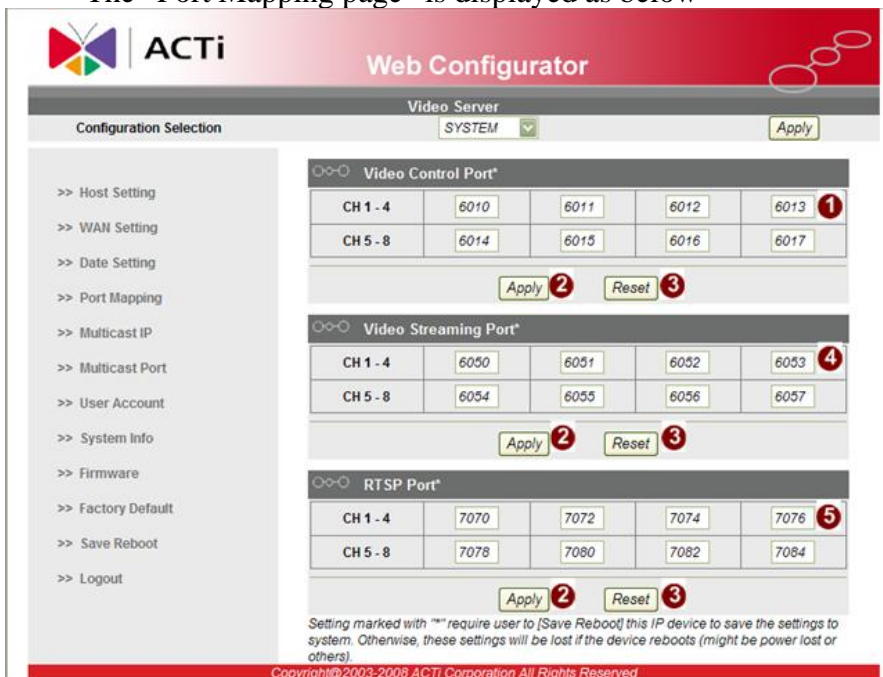
Manually set date and time will NOT be kept if device loses power.

1.3.4 Port Mapping

This section tells you how to setup IP device's Port number.

- **STEP1:** Click the [Port Mapping] on the “Main Setup page”.

The “Port Mapping page” is displayed as below



- **STEP2:** Configure these settings with reference to the table below. If you are still unsure what to set, contact your system administrator.

■ Port Mapping

Parameters	Description
1 Video Control Port	Select the port through which software applications may control each channel via this IP device.
4 Video Streaming Port	Select the port through which software applications may establish video streaming to each channel via this IP device.
5 RTSP Port	Select the port for each channel of this IP device to provide streaming over RTSP protocol.

- **STEP3:** Click the 2 [Apply] button of each setting to confirm the settings or click the 3 [Reset] button to re-enter the parameters.



NOTE: Once you finish all settings, be sure to click the [Save Reboot] button. Otherwise, some settings may not take effect.

Manually set date and time will NOT be kept if device loses power.

1.3.5 Multicast IP

This section tells you how to setup IP device's Multicast IP.

- **STEP1:** Click the [Multicast IP] on the “Main Setup page”.

The “Multicast IP page” is displayed as below

The screenshot shows the ACTi Web Configurator interface for a Video Server. The 'Configuration Selection' menu on the left includes options like Host Setting, WAN Setting, Date Setting, Port Mapping, Multicast IP, Multicast Port, User Account, System Info, Firmware, Factory Default, Save Reboot, and Logout. The 'Multicast IP*' section contains a table with 8 rows (CH 1 to CH 8) and 4 columns for IP address (228, 5, 7, and a channel-specific last octet). A red circle '1' is around the first row. Below the table are 'Apply' (2) and 'Reset' (3) buttons. A note at the bottom states: 'Setting marked with "" require user to [Save Reboot] this IP device to save the settings to system. Otherwise, these settings will be lost if the device reboots (might be power lost or others).' The footer contains the copyright notice: 'Copyright©2003-2008 ACTi Corporation All Rights Reserved'.

Channel	IP Address
CH 1	228 . 5 . 7 . 1
CH 2	228 . 5 . 7 . 2
CH 3	228 . 5 . 7 . 3
CH 4	228 . 5 . 7 . 4
CH 5	228 . 5 . 7 . 5
CH 6	228 . 5 . 7 . 6
CH 7	228 . 5 . 7 . 7
CH 8	228 . 5 . 7 . 8

- **STEP2:** Configure these settings with reference to the table below. If you are still unsure what to set, contact your system administrator.

■ Multicast IP

Parameters	Description
1 Multicast IP	Enter the multicast IP for each channel.

- **STEP3:** Click the 2 [Apply] button of each setting to confirm the settings or click the 3 [Reset] button to re-enter the parameters.



NOTE: Once you finish all settings, be sure to click the [Save Reboot] button. Otherwise, some settings may not take effect.

Manually set date and time will NOT be kept if device loses power.

1.3.6 Multicast Port

This section tells you how to setup IP device's Multicast Port.

- **STEP1:** Click the [Multicast Port] on the “Main Setup page”.

The “Multicast Port page” is displayed as below

The screenshot shows the ACTi Web Configurator interface for the Multicast Port page. It features a sidebar with navigation options like Host Setting, WAN Setting, Date Setting, Port Mapping, Multicast IP, Multicast Port, User Account, System Info, Firmware, Factory Default, Save Reboot, and Logout. The main content area is titled 'Video Server' and 'Configuration Selection' with a dropdown menu set to 'SYSTEM'. There are three main configuration sections:

- Video Multicast Port***: A table with two rows (CH 1 - 4 and CH 5 - 8) and four columns of input fields, all containing the value '5000'. A red circled '1' is next to the first '5000'. Below the table are 'Apply' (2) and 'Reset' (3) buttons.
- Video RTP Over Multicast***: A table with two rows (CH 1 - 4 and CH 5 - 8) and four columns of input fields, all containing the value '5000'. A red circled '4' is next to the first '5000'. Below the table are 'Apply' (2) and 'Reset' (3) buttons.
- Audio RTP Over Multicast***: A table with two rows (CH 1 - 4 and CH 5 - 8) and four columns of input fields, all containing the value '5002'. A red circled '5' is next to the first '5002'. Below the table are 'Apply' (2) and 'Reset' (3) buttons.

A note at the bottom states: "Setting marked with '*' require user to [Save Reboot] this IP device to save the settings to system. Otherwise, these settings will be lost if the device reboots (might be power lost or others)." The footer contains the copyright notice: "Copyright©2003-2008 ACTi Corporation All Rights Reserved".

- **STEP2:** Configure these settings with reference to the table below. If you are still unsure what to set, contact your system administrator.

■ Port Mapping

Parameters	Description
1 Video Multicast Port	Enter the port used by each channel of this IP device to support video multicast function.
4 Video RTP Over Multicast	Enter the port used by each channel of this IP device to support video RTP over multicast function.
5 Audio RTP Over Multicast	Enter the port used by each channel of this IP device to support audio RTP over multicast.

- **STEP3:** Click the **2** [Apply] button of each setting to confirm the settings or click the **3** [Reset] button to re-enter the parameters.

1.3.7 User Account Management

This section tells you how to setup the accounts.

- **STEP1:** Click the [User account] on the “Main Setup page”.

The “User Account Management” is displayed as below

ACTi Web Configurator

Video Server

Configuration Selection SYSTEM Apply

User Account Setting

User	Account	Password
Root	admin	123456
User 1		
User 2		
User 3		
User 4		
User 5		
User 6		
User 7		
User 8		
User 9		
User 10		

Apply 3 Reset 4

Setting marked with "" require user to [Save Reboot] this IP device to save the settings to system. Otherwise, these settings will be lost if the device reboots (might be power lost or others).

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- **STEP2:** Setup the account names and their respective passwords. There are 1 root (administrator) account and 10 common user accounts allowed. Root(administrator) account allows the user to watch the live view and modify all settings. The common user account only allows for live video view, and cannot change settings.
- **STEP3:** Click the [Apply] button of each setting to confirm the settings or click the [Reset] button to re-enter the parameters.



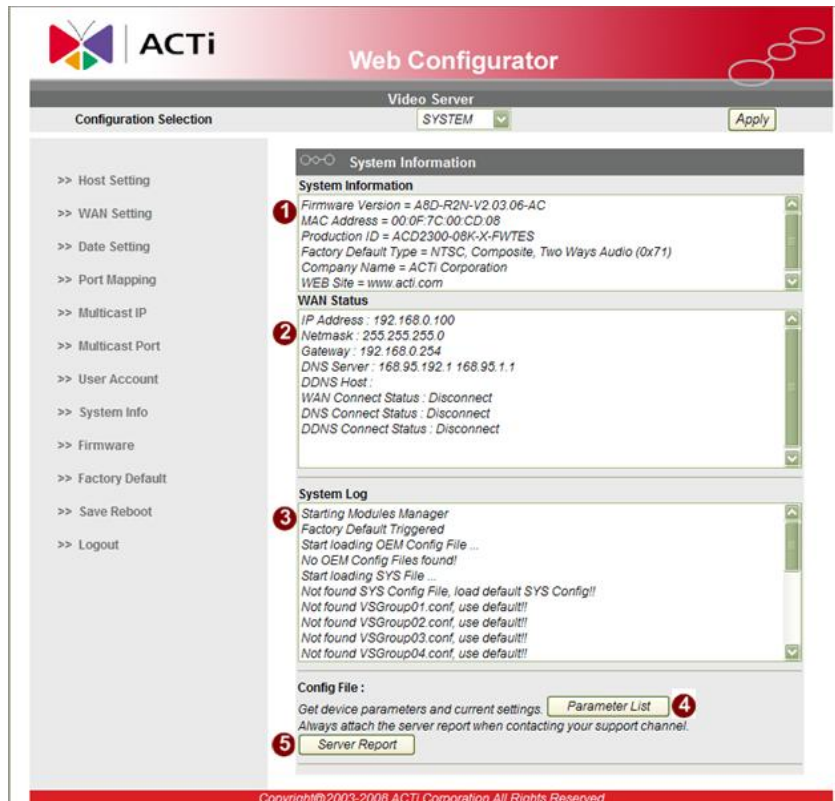
NOTE: Once you finish all settings, be sure to click the [Save Reboot] button. Otherwise, some settings may not take effect

1.3.8 System Info

This section tells you how to see the system information of this IP device, including firmware version, MAC address, Product ID, WAN status and system log.

- **STEP1:** Click the [System info] on the “Main Setup page”.

The “System information page” is displayed as below



- **STEP2:** View the information in the 3 columns. This information is very useful to understand the IP device status and to resolve any problem that might occur.

Column	Description
1 System info	It shows the firmware version, MAC address, production ID, and factory default type of IP device.
2 WAN status	It shows the WAN port's IP address, netmask, gateway, DNS server, DDNS host and connection status.
3 System log	It shows the system event log. This column is very useful as a diagnostic tool.

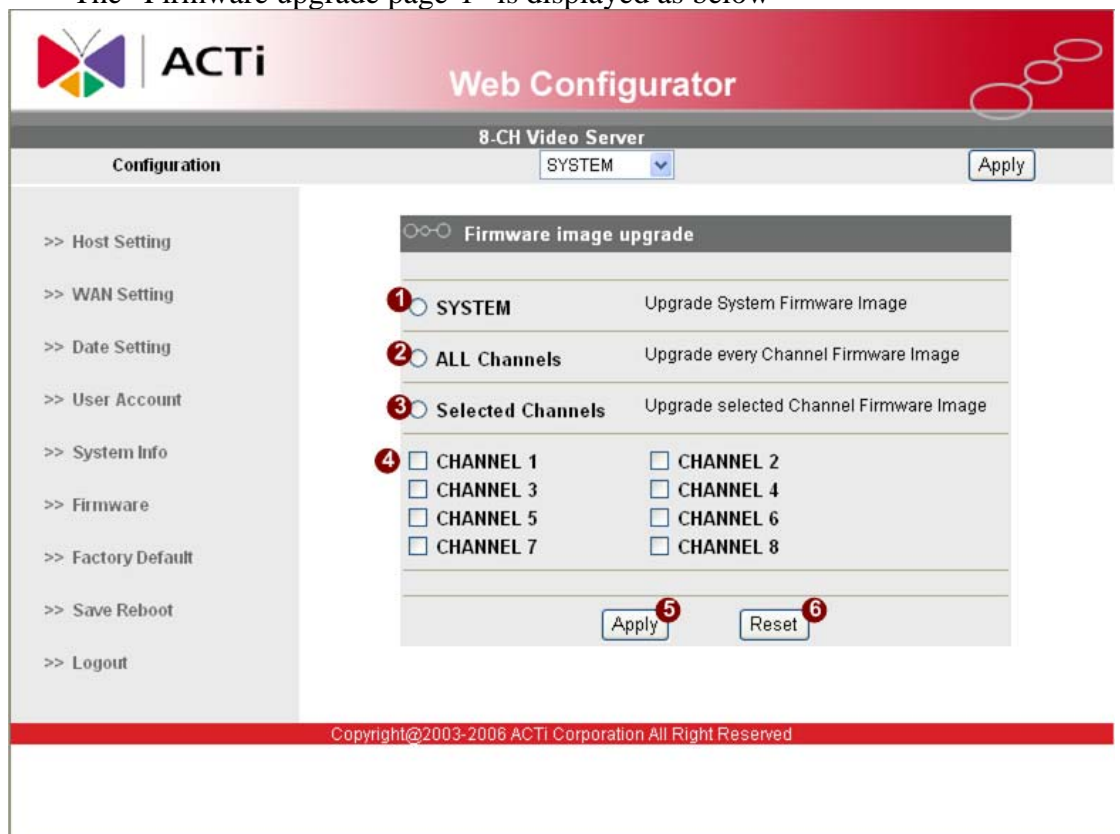
- **STEP3:** Click 4 [Parameter List] where you may see all configurations of the IP device.
- **STEP4:** Click 5 [Server Report] to export related information of the IP device while contacting your support channel.

1.3.9 Firmware Upgrade

This section tells you how to see update IP device’s firmware. You can always visit our web site for the latest firmware.

- **STEP1:** Click the [Firmware] on the “Main Setup page”.

The “Firmware upgrade page-1” is displayed as below



- **STEP2:** Select system or channels that you are going to do firmware upgrade. The “firmware upgrade status” will be displayed as below.

■System information

Column	Description
1 System	Select this option if you want to upgrade only the system firmware.
2 All Channels	Select this option if you want to upgrade firmware image of all channels at the same time.
3 Selected Channels	Select this option if you want to upgrade firmware image of selected channels only.
4 Channel Selection	Check the box before each channel if you wish to upgrade firmware of that channel

- **STEP 3:** Click the 5 [Apply] button of each setting to confirm the settings or click the 6 [Reset] button to re-enter the selection.

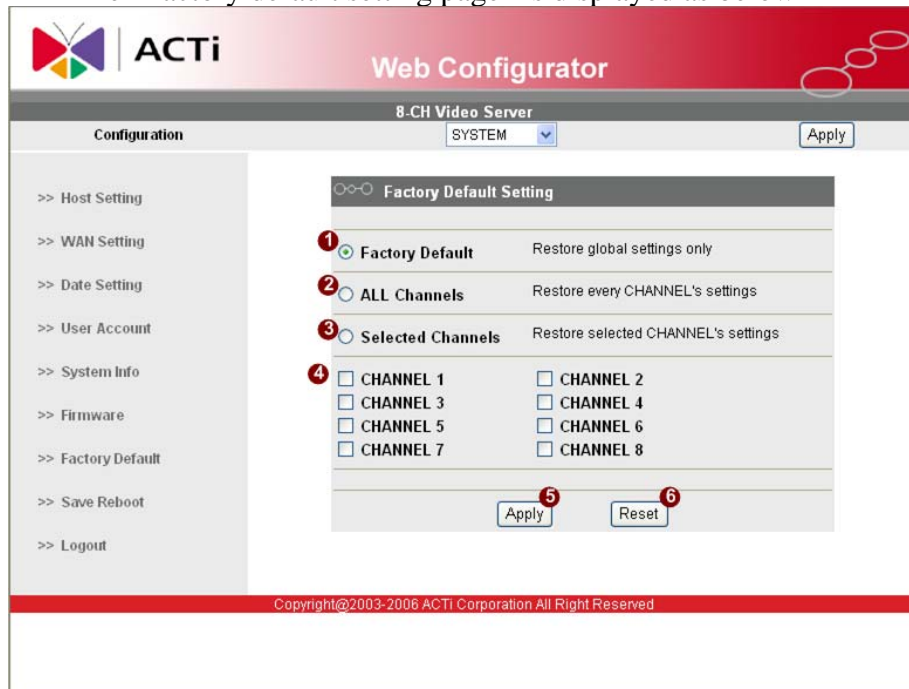
- **STEP 4:** Select the corresponding .upg(image file) and .md5 file(md5 file), and upload it to IP device for upgrading
- **STEP 5:** After successfully upgrading the firmware of IP device, please be sure to power off the device and power on again after upgrading firmware to complete the firmware upgrade process properly.

1.3.10 Factory Default

This section tells you how to see load IP device's factory default setting.

- **STEP1:** Click the [Factory Default] on the “Main Setup page”.

The “Factory default setting page” is displayed as below



- **STEP2:** Select system or channels that you are going to execute factory default.

■System information

Column	Description
1 Factory Default	Restore global settings only
2 All Channels	Restore all channels' settings back to the factory default
3 Selected Channels	Restore selected channel's setting back to its factory default
4 Channel Selection	Select channels to execute factory default by checking the box before each channel

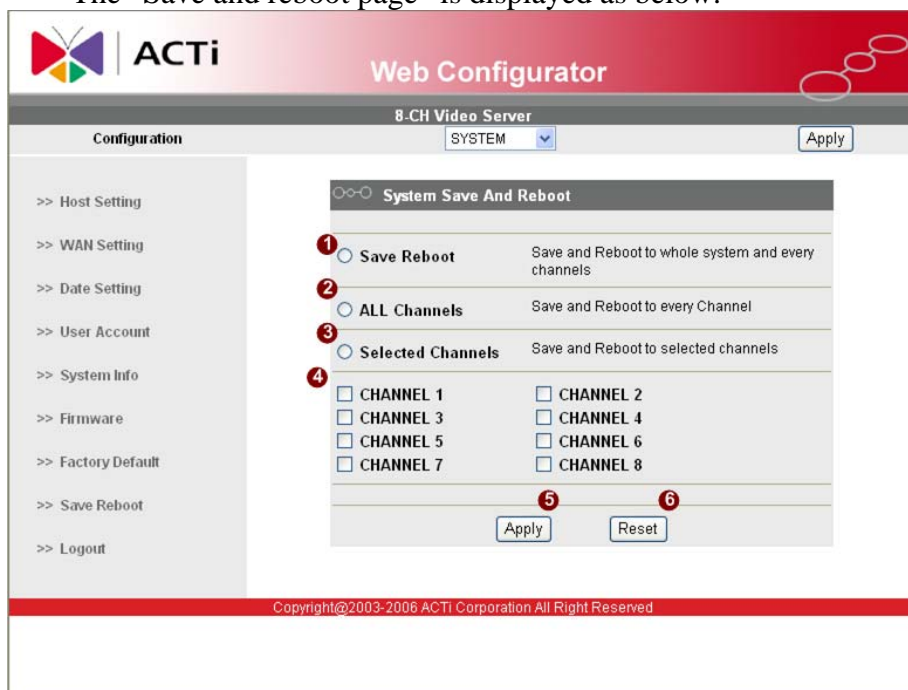
- **STEP3:** Click the 5 [Apply] button of each setting to confirm the selection or click the 6 [Reset] button to re-enter the selection.

1.3.11 Save Reboot

This section tells you how to save all the settings and reboot this IP device. This is critical because some settings might not take effect before save and reboot.

- **STEP1:** Click the [Save and reboot] on the “Main Setup page”.

The “Save and reboot page” is displayed as below.



- **STEP2:** Select system or channels that you are going to execute save and reboot action.

■System information

Column	Description
1 Save Reboot	Perform save and reboot to entire system and all channels
2 All Channels	Save and reboot to all channels
3 Selected Channels	Save and reboot the selected channels
4 Channel Selection	Select the channels to do save and reboot

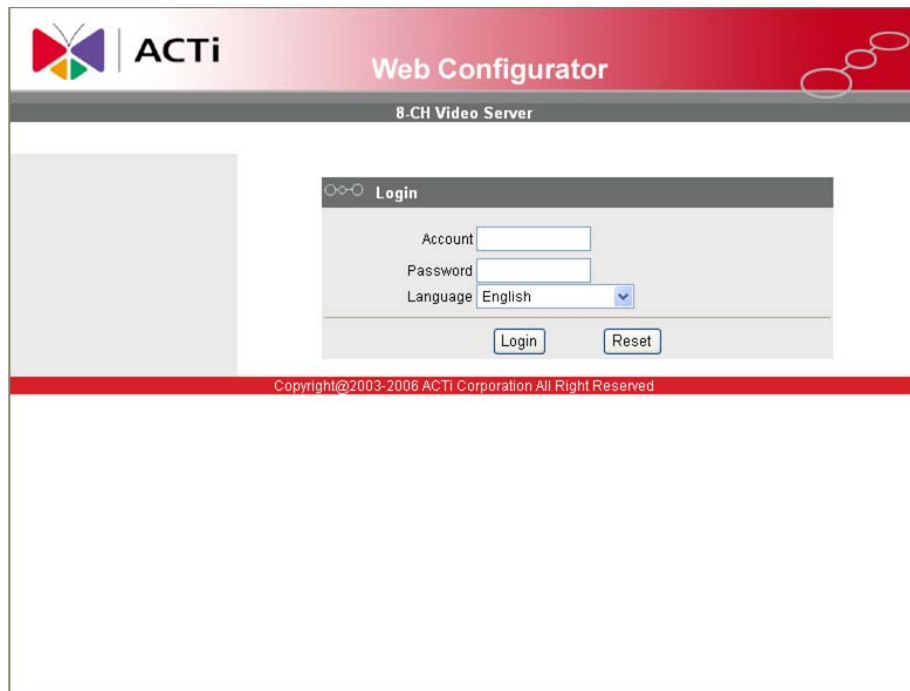
- **STEP3:** Click the **5** [Apply] button of each setting to confirm the selection or click the **6** [Reset] button to re-enter the selection.
- **STEP4:** The Action LED indicator will go off to indicate that the IP device is rebooting. After around 30 seconds, the Action LED will light up again to indicate that the reboot is completed.

1.3.12 Logout

This section tells you how to logout of the IP device. Be sure to logout from this IP device once your setting is completed.

- **STEP1:** Click the [Logout] on the “Main Setup page”.

You will logout and return to the “Login Page” as displayed below.



The screenshot displays the ACTi Web Configurator interface. At the top, there is a red header bar with the ACTi logo on the left, the text "Web Configurator" in the center, and a decorative graphic of three overlapping circles on the right. Below the header, a dark grey bar indicates "8-CH Video Server". The main content area features a light grey sidebar on the left and a central "Login" window. The "Login" window has a title bar with a close button and the text "Login". It contains three input fields: "Account" (text), "Password" (text), and "Language" (a dropdown menu currently set to "English"). Below these fields are two buttons: "Login" and "Reset". At the bottom of the page, a red footer bar contains the text "Copyright@2003-2006 ACTi Corporation All Right Reserved".

1.4 Configuring the IP device - Channel

This section describes how to select and configure the individual video channel. Depending upon the channel firmware series, you will see either section user interface of either section 1.4 or section 1.5.



- **STEP1:** Click **1** to set configurations of every single channel of Multi-CH Video Server
- **STEP2:** Click **2** to apply the choice

1.4.1 Video Display

This section tells you how to view live images via Internet Explorer.

- **STEP1:** Click the [Video Display] on the “Main Setup page”.

The “Video Display page” is displayed as below.



- **STEP2:** Check the **1** [Mute] checkbox to select mute enable/disable
- **STEP3:** Click the **2** [Audio Out] checkbox to enable/disable audio output from control PC to IP device.
- **STEP4:** Click the **3** if you cannot see the video, and follow the instructions.
- **STEP5:** Click the **4** [Quit] to exit the live view and return to “Main Setup page”.



NOTE: If the streaming is disabled, you cannot see the live images here.



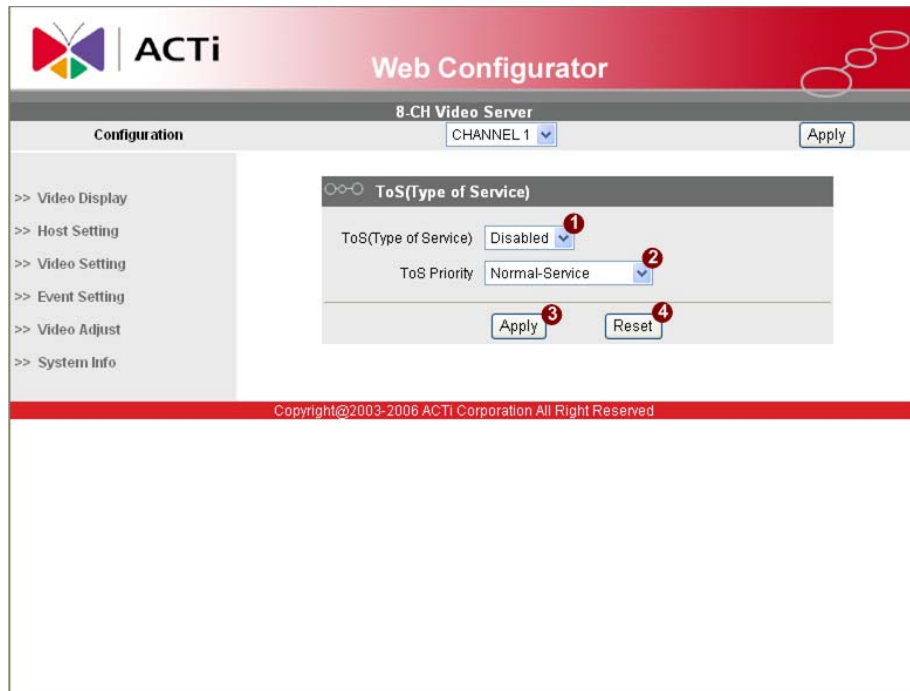
NOTE: For all network router/switches connected to this Camera/Video Server, be sure to use Auto Negotiation as the Network Connections Type. This will enable the whole network to always run at the highest possible speed. Please also refer to Network Speed & Duplex settings in Host Setting section on Page 11 of this manual.

1.4.2 Host Setting

This section tells you how to setup IP device's host settings and LAN settings.

- **STEP1:** Click the [Host Setting] on the “Main Setup page”.

The “Host setting page” is displayed as below.



STEP2: Configure these settings with reference to the table below. If you are still unsure what to set, contact your system administrator.

■ ToS (Type of Service)

Parameters	Description
① TOS (type of service)	Select whether to add the TOS tag onto the streaming data. Streaming data with a higher priority TOS tag will be transmitted first while compared with other data being transmitted.
② TOS priority	Select the TOS tag's priority to be added onto the streaming. You can select between 1. Normal-Service 2. Minimize-Cost 3. Maximize-Reliability 4. Maximize-throughout 5. Minimize-Delay

STEP3: Click the ③ [Apply] button of each setting to confirm the settings or click the ④ [Reset] button to re-enter the parameters.

1.4.3 Video Setting

This section tells you how to setup IP device's video and streaming settings.

- **STEP1:** Click the [Video Setting] on the “Main Setup page”.

The “Video setting page” is displayed as below.



- **STEP2:** Click **2** to enter the configuration table.



■ Video setting of Version V2.0

Parameters	Description
1 Camera name	The camera name is reserved for customer use.
2 Streaming Method	Select the streaming mode. 1. TCP only 2. Multicast only 3. TCP & Multicast 4. RTP over UDP 5. RTP over Multicast 6. RTP over UDP & Multicast
3 RTSP Authen Enable	Checkbox to enable RTP streaming's Account/Password authentication.
4 RTP B2 Frame Enable	Check box to enable the B2 frame in RTP streaming
5 Audio	Select to enable or disable the audio function.
* Multicast IP	Setting belongs to "system" part, please refer section "1.3.5 Multicast IP"

6 Analog video	Select video type connected to the video-in of this IP device. If you use an incorrect video type, some images might be lost.
7 Resolution	Select the video resolution of the IP device.
8 Bitrate	Select the bit rate of the video streaming. You can select from 28Kbps to 3Mbps. Note: Lower bit rate consumes less bandwidth but delivers lower quality images. High bit rate consumes more bandwidth but delivers higher quality images.
9 Frame rate mode	Select the frame rate mode. Constant: The streaming's frame rate remains constant at all conditions. Variable: The streaming frame rate will vary according to the amount of motion and change in the scene to maintain proper image quality.
10 Frame rate	Select the frame rate of the video streaming.
11 Frame Integration	Select the deinterlace mode.
12 LowPass Filter	Enable to reduce color noise, and prevent data burst
13 Serial Port Baud Rate	Select the Baud Rate setting of serial port.
14 Serial Port Control	Select the Control setting of serial port.

- **STEP3:** Click the **15** [Apply] button of each setting to confirm the settings or click the **16** [Reset] button to re-enter the parameters.
- **Note:** Setting with mark ***** means they belong to "system" part, please refer to section "1.3.4 Port Mapping" or section "1.3.6 Multicast Port"



NOTE: Once you finish all settings, be sure to click the [Save Reboot] button. Otherwise, some settings may not take effect.

1.4.4 Video Adjustment

This section tells you how to adjust the streaming video.

- **STEP1:** Click the [Video Adjust] on the “Main Setup page”.

The “Video adjust page” is displayed as below

The screenshot displays the ACTi Web Configurator interface for an 8-CH Video Server. The main content area is titled "Video Adjustment" and features a video feed (1) showing an office scene. Below the video, there are three motion detection sensitivity settings (Motion 1, 2, and 3), each with a value of 0 and a "Set" button (2). There are also four color and light settings: Hue (50), Brightness (43), Saturation (58), and Contrast (50), each with a slider and a "Set" button (3, 4, 5, 6). At the bottom of the settings are "Apply" (7) and "Reset" (8) buttons. A link (9) is provided for users who cannot see the video. The footer contains the copyright notice: Copyright©2003-2006 ACTi Corporation All Right Reserved.

- **STEP2:** Set the (2) sensitivity of motion detection windows.
- **STEP3:** Adjust the video by changing the value of (3) “Hue”, (4) “Brightness”, (5) “Saturation” and (6) “Contrast”. See the images displayed above for the effect of the current setting.
- **STEP4:** When satisfied with the video settings, click the (7) [Apply] button of each setting to confirm the settings or click the (8) [Reset] button to re-enter the parameters.
- **STEP5:** Click the (9) if you cannot see the video, and follow the instructions.



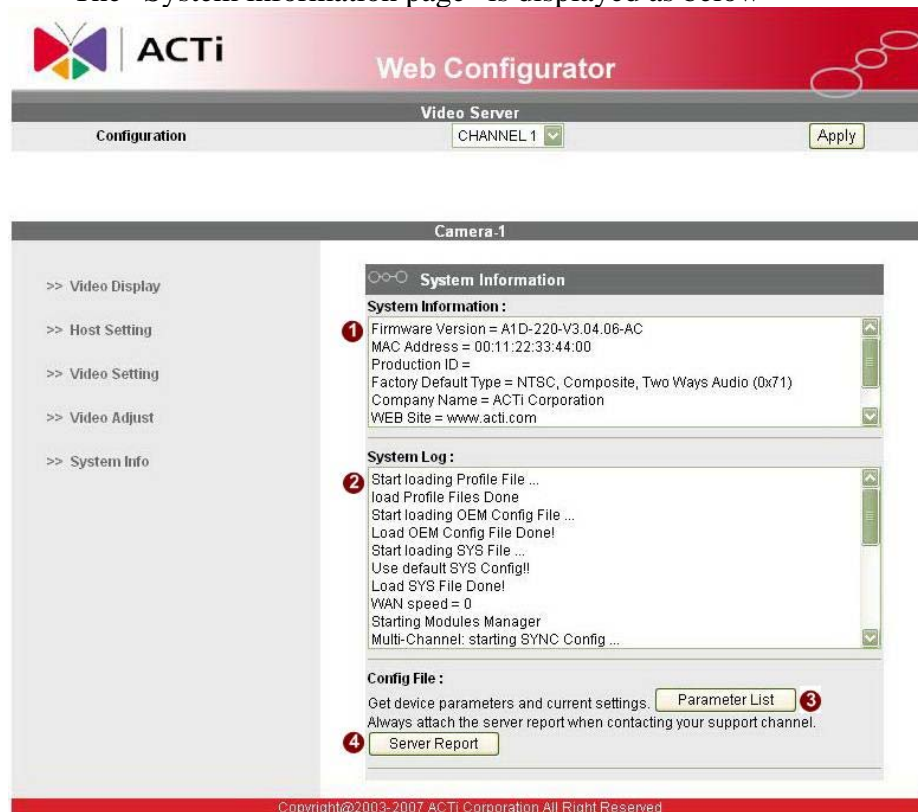
NOTE: Once you finish all settings, be sure to click the [Save Reboot] button. Otherwise, some settings may not take effect.

1.4.5 System Info

This section tells you how to see the system information of every single channel of IP device.

- **STEP1:** Click the [System info] on the “Main Setup page”.

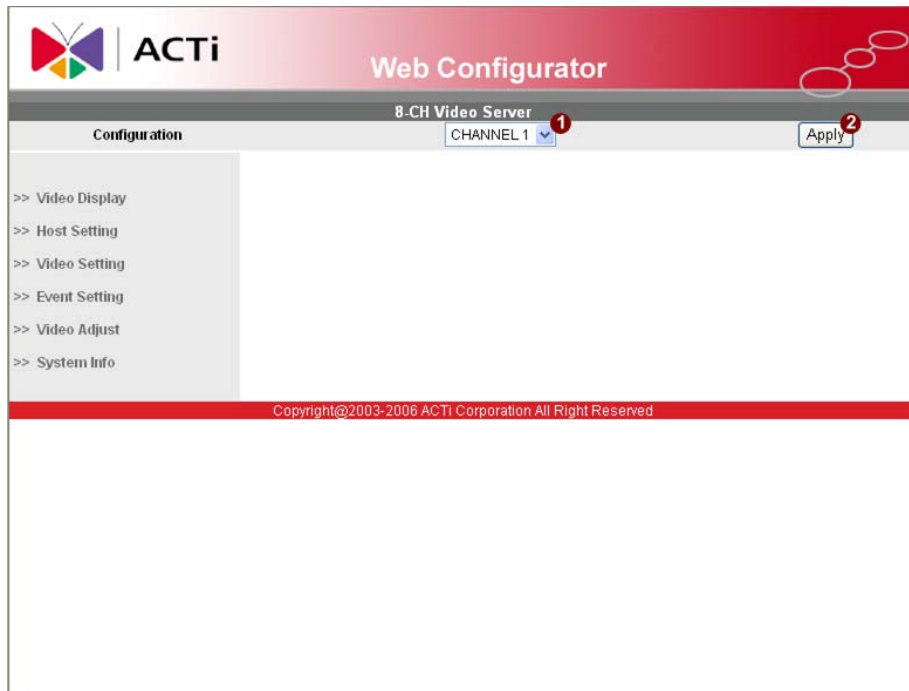
The “System information page” is displayed as below



- **STEP2:** In the **1**, it shows the firmware version, MAC address, production ID, and factory default type of IP device.
- **STEP3:** In the **2**, It shows the system event. This column is very useful as a diagnostic tool.
- **STEP4:** Click **3** [Parameter List] where you may see all configurations of the IP device.
- **STEP5:** Click **4** [Server Report] to export related information of the IP device while contacting your support channel.

1.5 Configuring the IP device – Channel (Channel Firmware series 3.xx.xx)

This section describes how to select and configure the individual video channel. Depending upon the channel firmware series, you will see either section user interface of either section 1.4 or section 1.5. You can find out channel firmware version from the system info section of individual channels.



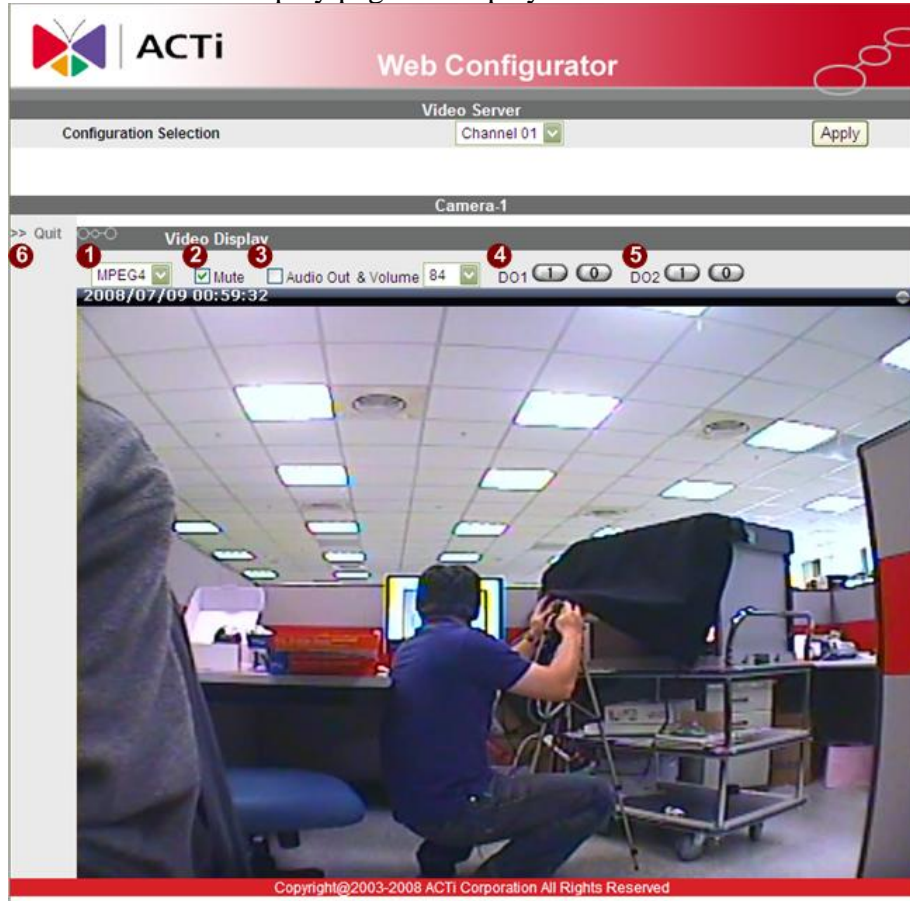
- **STEP1:** Click **1** to set configurations of every single channel of Multi-CH Video Server
- **STEP2:** Click **2** to apply the choice

1.5.1 Video Display



This section tells you how to view live images via Internet Explorer.

- **STEP1:** Click the [Video Display] on the “Main Setup page”.

The “Video Display page” is displayed as below.



- **STEP2:** Check the **1** [MPEG4/MJPEG] to select the Compression type. Once selected, the video server/IP camera will start to stream with the new compression type.
- **STEP3:** Check the **2** [Mute] checkbox to mute or display audio from the video server/IP camera.
- **STEP4:** Click the **3** [Audio Out] checkbox to enable/disable audio transmission from this PC to IP device’s audio out and change audio out volume. E.g. while this function is enabled you can talk to the people at the IP device site.
- **STEP5:** Click the **4** [D01] Button of trigger / un-trigger DO function by D01.

- **STEP6:** Click the  [DO2] Button of trigger / un-trigger DO function by DO2.
- **STEP7:** Click the  [Quit] to exit the live view and return to “Main Setup page”.



NOTE: If the streaming is disabled, you cannot see the live images here.



NOTE: For all network router/switches connected to this Camera/Video Server, be sure to use Auto Negotiation as the Network Connections Type. This will enable the whole network to always run at the highest possible speed. Please also refer to Network Speed & Duplex settings in Host Setting section on Page 11 of this manual..

1.5.2 Host Setting

This section tells you how to setup IP device's host settings.

- **STEP1:** Click the [Host Setting] on the “Main Setup page”.

The “Host setting page” is displayed as below.



STEP2: Configure these settings with reference to the table below. If you are still unsure what to set, contact your system administrator.

■ ToS (Type of Service)

Parameters	Description
1 TOS (type of service)	Select whether to add the TOS tag onto the streaming data. Streaming data with a higher priority TOS tag will be transmitted first while compared with other data to be transmitted.
2 TOS priority	Select the TOS tag's priority to be added onto the streaming. You can select between 1. Normal-Service 2. Minimize-Cost 3. Maximize-Reliability 4. Maximize-throughout 5. Minimize-Delay

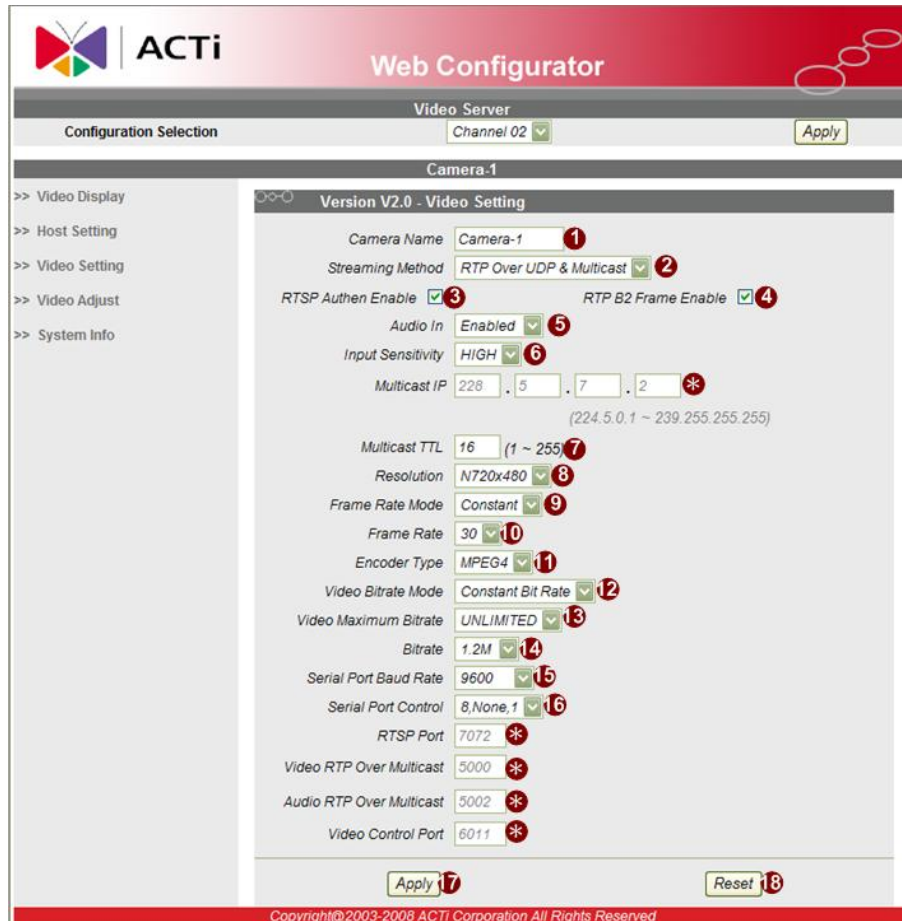
STEP3: Click the 3 [Apply] button of each setting to confirm the settings or click the 4 [Reset] button to re-enter the parameters.

1.5.3 Video Setting

This section tells you how to setup IP device's video and streaming settings.

- **STEP1:** Click the [Video Setting] on the “Main Setup page”.

The “Video setting page” is displayed as below.



■ Video setting

Parameters	Description
1 Camera name	The camera name is reserved for customer use.
2 Streaming Method	Select the streaming mode. 1. TCP only 2. Multicast only 3. RTP Over UDP 4. RTP Over Multicast 5. RTP Over UDP & Multicast
3 RTSP Authen Enable	Check box to enable RTP streaming's Account/Password authentication.
4 RTP B2 Frame Enable	Checkbox to enable the B2 frame in RTP streaming

5	Audio	Select to enable or disable the audio function.
6	Input Sensitivity	Select HIGH or LOW to change the audio input sensitivity
7	Multicast IP	Select the multicast IP. Default settings is 228.5.6.1
*	Multicast TTL	Select the multicast TTL. Default setting is 255.
8	Resolution	Select the video resolution of the IP device.
9	Frame rate mode	Select the frame rate mode. Constant: The streaming's frame rate remains constant at all conditions. Variable: The streaming frame rate will vary according to the amount of motion and change in the scene to maintain proper image quality.
10	Frame rate	Select the frame rate of the video streaming.
11	Encoder Type	Select the encoder's compression type. 1. MPEG4 2. MJPEG
12	Video Bitrate Mode	Select the video bitrate mode. Constant Bit Rate: The streaming's bitrate remains constant at all conditions. Variable Bit Rate: The streaming's bitrate will variants according to the images variability to keep the image quality good.
13	Video Maximum Bitrate	Select the Maximum bitrate of the video streaming. If the bitrate limit is too low, actual frame rate may also be limited. Doing so will also disable Bit Rate setting below.
14	Bitrate	Select the bit rate of the video streaming. You can select from 28Kbps to 3Mbps. Note: Lower bit rate consumes less bandwidth but delivers lower quality images. High bit rate consumes more bandwidth but delivers higher quality images.
15	Serial Port Baud Rate	Select the Baud Rate setting of serial port.
16	Serial Port Control	Select the Control setting of serial port.

- **STEP2:** Click the 17 [Apply] button of each setting to confirm the settings or click the 18 [Reset] button to re-enter the parameters.
- **Note:** Setting with mark * means they belong to "system" part, please refer to section "1.3.4 Port Mapping" or section "1.3.6 Multicast Port"



NOTE: Once you finish all settings, be sure to click the [Save Reboot] button. Otherwise, some settings may not take effect.

1.5.4 Video Adjustment

This section tells you how to adjust the streaming video.

- **STEP1:** Click the [Video Adjust] on the “Main Setup page”.

The “Video adjust page” is displayed as below

The screenshot displays the ACTi Web Configurator interface for video adjustment. At the top, the ACTi logo and 'Web Configurator' title are visible. Below this, the 'Video Server' section shows 'Channel 01' selected. The main area is titled 'Camera-1' and contains a 'Video Adjustment' window. This window includes a video feed of a desk with a red line indicating a motion detection region. To the right of the video feed is an 'Activity' bar chart. Below the video feed is a table for configuring motion detection settings for three regions. Below the table are sliders for Brightness (63), Saturation (85), and Contrast (51). At the bottom of the video adjustment window are 'Apply' and 'Reset' buttons. Numbered callouts (1-12) highlight key UI elements.

Region	Sensitivity [0-100]	Trigger Interval [1-300sec]	Trigger Threshold [0-100%]
1	70	1	10
2	70	1	10
3	70	1	10

Brightness: 63
Saturation: 85
Contrast: 51

- **STEP2:** Set the **3** checkbox to enable motion detection function.
- **STEP3:** Set the **4** sensitivity of motion detection region.
- **STEP4:** Set the **5** interval time of motion detection. After a motion event is triggered, no more event will be triggered within this time in the same region.
- **STEP5:** Set the **6** trigger threshold of motion detection windows.
- **STEP6:** In motion activity window **2**, the bar shows the motion activity status. You can also see the trigger threshold (Red line). When

the motion activity exceeds the trigger threshold, the bar would become red to indicate that a motion event has been triggered. While viewing the motion activity window, you can adjust the motion sensitivity (for more or less activities to be triggered) and the threshold (for how many activities would trigger a motion event). If the default settings are not satisfactory for your scene, you may try our alternative recommendations of:

- a. Sensitivity: 80, Threshold: 2~5 (for normal environment)
 - b. Sensitivity: 80, Threshold: 5~10 (for very noisy environment)
- **STEP7:** When satisfied with the motion settings, click **7** [Apply]
 - **STEP8:** Adjust the video by changing the value of **8** “Brightness”, **9** “Saturation” and **10** “Contrast”. See the images displayed above for the effect of the current setting.
 - **STEP9:** When you are satisfied with the video settings, click the **11** [Apply] button of each section to confirm the settings. Otherwise, you may also click the **12** [Reset] to restore previous settings.



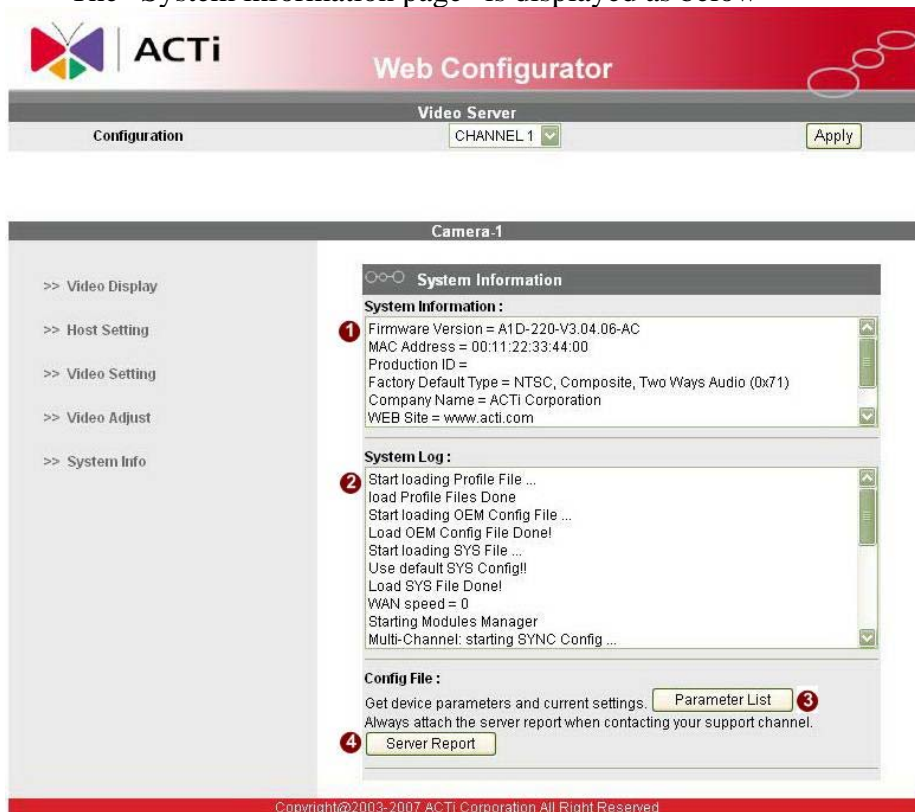
NOTE: Once you finish all settings, be sure to click the [Save Reboot] button. Otherwise, some settings may not take effect.

1.5.5 System Info

This section tells you how to see the system information of every single channel of IP device.

- **STEP1:** Click the [System info] on the “Main Setup page”.

The “System information page” is displayed as below



- **STEP2:** In the **1**, it shows the firmware version, MAC address, production ID, and factory default type of IP device.
- **STEP3:** In the **2**, It shows the system event. This column is very useful as a diagnostic tool.
- **STEP4:** Click **3** [Parameter List] where you may see all configurations of the IP device.
- **STEP5:** Click **4** [Server Report] to export related information of the IP device while contacting your support channel.