



VioGate-340/340A

IP Surveillance Server

User Manual

Version: 2.2.0



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NOTE

- All features, functionality and other product specifications are subject to change without prior notice or obligation.
- All brands and products names referred to are trademarks of their respective holders.
- This product can only operate indoor. Please do NOT place the product outdoor or put any objects on the product.

WARRANTY

QNAP® guarantees all VioGate-340 IP surveillance servers have passed strict and complete test and can operate normally in general condition. In case of system malfunction within the warranty period under normal operation of this product, QNAP® will provide product maintenance service.

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1. Overview of VioGate



Note: Unless otherwise specified, VioGate mentioned herein refers to VioGate-340/340A IP Surveillance Server.

1.1 About VioGate

VioGate adopts advanced MPEG-4 image compression technology and hardware compression chipset to minimize image and maintain DVD (720x480) quality resolution for instant display. VioGate is both a network image server and a network video monitoring module. The management software VioGate Master supports monitoring and managing various VioGate products over the network at the same time. VioGate can be equipped with QNAP[®] NAS (network attached storage) server for backup and storage of remote video recording.

1.2 Features

- 4-channel Full-D1 (720x480) instant MPEG-4 hardware compression
- Supports 4-channel real-time monitoring and recording (VioGate-340A)
- SMART recording mode for automatic adjustment recording speed
- Supports 2 x 3.5" hard disks to preserve recording data for longer period
- Built-in Gigabit network chipset for high speed data transfer
- Multiple event alert triggering mode, e.g. motion detection triggering email or SMS notification
- Support multiple high speed dome cameras and control modes
- Audio recording for event action settings

1.3 New Functions

✓ **SMART Recording**

VioGate supports SMART Recording technology. When the monitoring screen stays the same for 5 minutes, VioGate will adjust the bit rate and frame rate for recording automatically. When moving object is detected in the monitoring screen, the system will automatically resume the bit rate and frame rate to original settings. For more information, please refer to Chapter 4.8.

✓ **Backup storage path**

VioGate provides two storage paths for saving recording and snapshot files. You can select to save recording and snapshot files on local disk, NAS, remote PC or an FTP site. The second storage acts as a backup storage path. When the primary storage path fails, currently recording files can be automatically switch to the second storage within the time period specified by user. When the primary storage device works properly again, it will resume the storage job automatically to enhance consistency and stability of data. For more information, please refer to Chapter 4.8.

✓ **Dual hard disk function**

VioGate supports two IDE hard disks at maximum and provides linear disk volume to maximize storage capacity and increase the time for reserving recording and snapshot files. For more information, please refer to Chapter 4.11.

✓ **PTZ camera**

VioGate supports pan/tilt/zoom cameras which are video cameras with enhanced control mechanism. You can select one-click operation or press button for continuous actions, and increase adjustable camera rotation angles in **Camera Settings** page. For more information, please refer to Chapter 4.7.

✓ **Network bandwidth information**

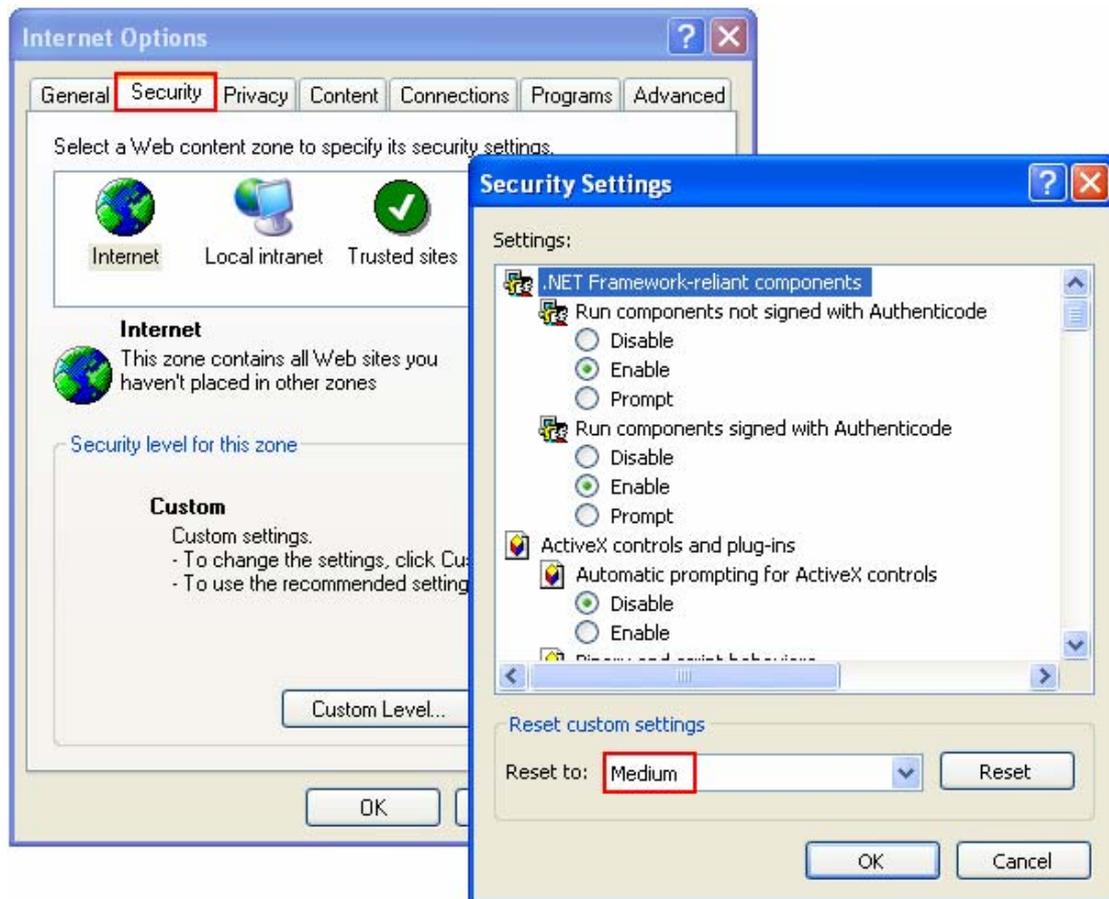
VioGate provides network bandwidth detection tool. User can click  to acquire information of network bandwidth for the reference of system settings.

1.4 System Requirements

- Analog B/W or color camera (NTSC or PAL)
- Audio line-in device for audio recording (if necessary)
- Network requirements:
RJ-45 Ethernet connection and dynamic or static IP address
- Client side PC requirements:
Pentium 4 or above CPU
256MB system memory or above
VGA card (recommended resolution: 1024x768 pixels)
Microsoft® Windows® 2000/ XP
Internet Explorer 6.0 or above



Note: To connect VioGate by IE browser, "Security level for this zone" in Internet Options must be set to Medium or lower.

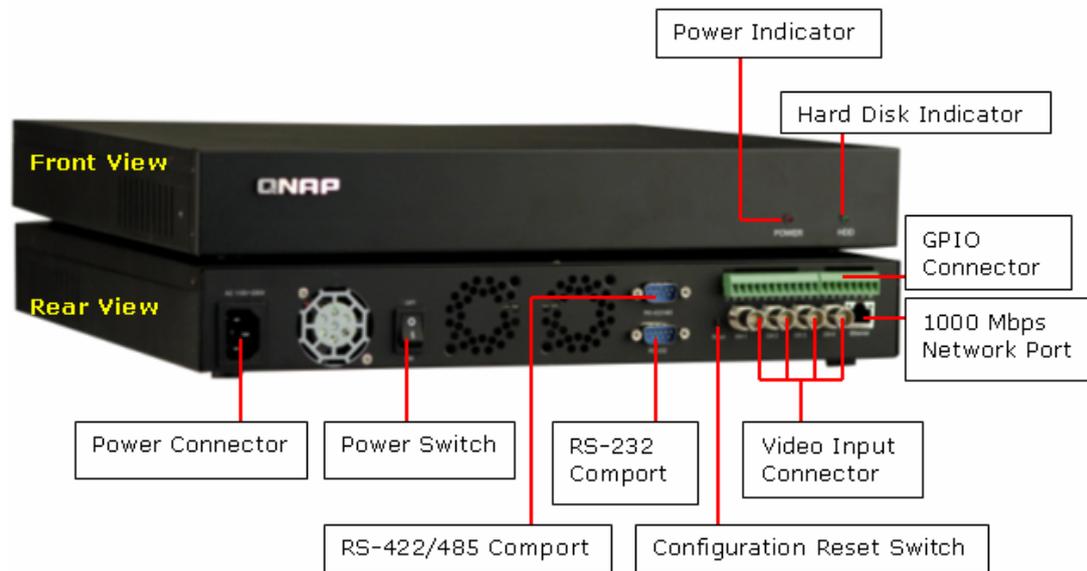


1.5 Package Contents

- i. 4-channel MPEG IP surveillance server VioGate
- ii. Power cord
- iii. Network cable
- iv. CD-ROM (user manual and software inclusive)
- v. GPIO connector
- vi. Quick Installation Guide

1.6 Product Illustration

VioGate-340



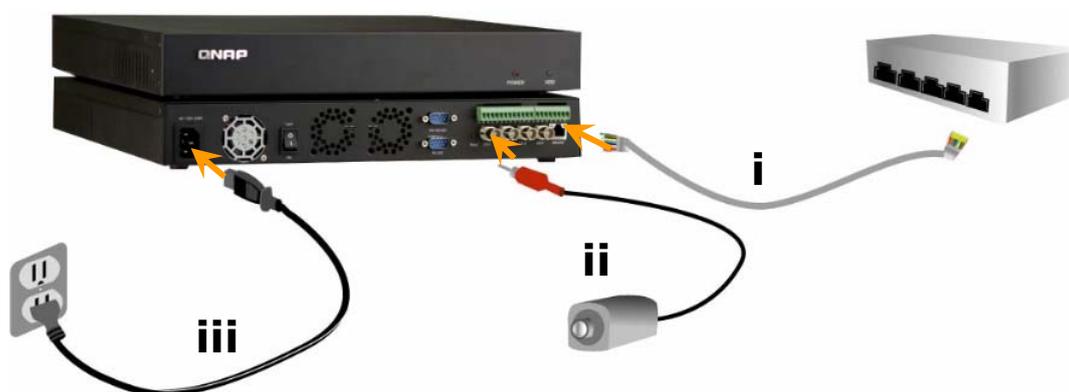
VioGate-340A



2. Install VioGate

Please follow the steps below to install VioGate. If you are not familiar with network settings, please contact your Internet service provider (ISP) or network administrator for the details.

1. Connect the server to local network with DHCP server



- i. Connect VioGate to the local network with the enclosed CAT-5 Ethernet cable.
- ii. Connect camera to video input connectors of VioGate via video cable. Up to 4 cameras can be supported.
- iii. Connect the power cord to VioGate and turn on the server.

- iv. Insert VioGate CD-ROM in your PC and install **QNAP Finder**.



- v. Select the language of QNAP Finder.



- viii. Select the display language of the administration interface. VioGate supports English, Traditional Chinese, Simplified Chinese, Polish and French. Enter the user name and password to login VioGate.

User name: **administrator**

Password: **admin**



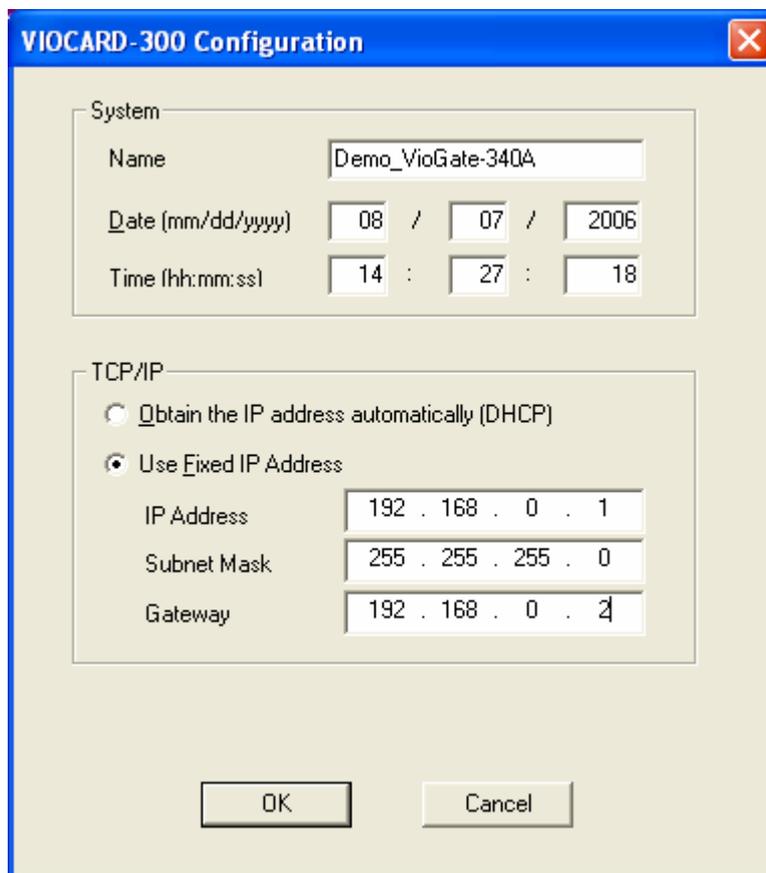
The screenshot shows the VioGate login interface. At the top, the VioGate logo is displayed. Below it, the 'Server Location' is set to '10.8.12.39'. The 'User Name' field contains 'administrator' and the 'Password' field contains '*****'. A 'Save password' checkbox is checked. At the bottom left, a language dropdown menu is open, showing 'English' as the selected option, with other options: Traditional Chinese, Simplified Chinese, Polish, and French. At the bottom right, there are 'OK' and 'Cancel' buttons.

- vii. Enter administrator name and password.



The image shows a dialog box titled "Login Administrator" with a blue header and a close button (X) in the top right corner. The dialog has a light beige background. It contains two text input fields: "Administrator Name" with the text "administrator" and "Administrator Password" with "xxxxxx". Below the fields are two buttons: "OK" and "Cancel".

- viii. Select "Use Fixed IP Address" and enter the TCP/IP settings.

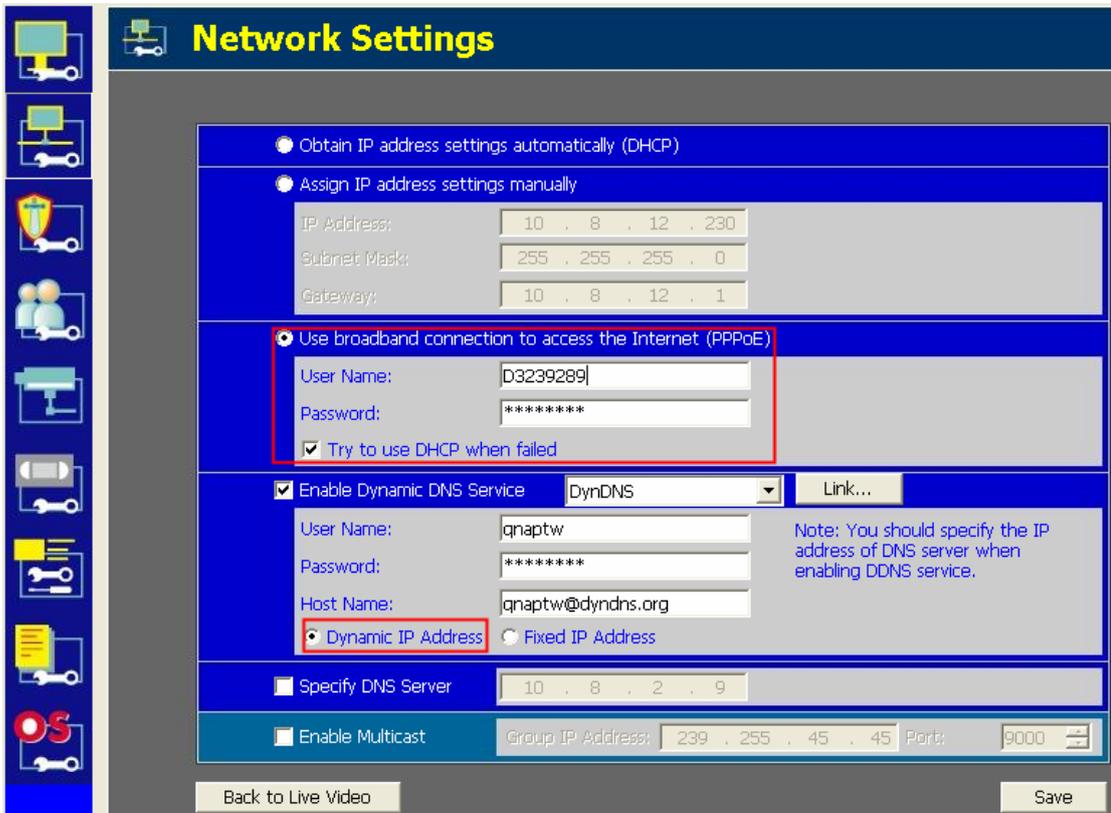


The image shows a dialog box titled "VIOCARD-300 Configuration" with a blue header and a close button (X) in the top right corner. The dialog has a light beige background. It is divided into two sections: "System" and "TCP/IP".
The "System" section contains three rows of input fields: "Name" with "Demo_VioGate-340A", "Date (mm/dd/yyyy)" with "08 / 07 / 2006", and "Time (hh:mm:ss)" with "14 : 27 : 18".
The "TCP/IP" section contains two radio buttons: "Obtain the IP address automatically (DHCP)" (unselected) and "Use Fixed IP Address" (selected). Below the radio buttons are three rows of input fields: "IP Address" with "192 . 168 . 0 . 1", "Subnet Mask" with "255 . 255 . 255 . 0", and "Gateway" with "192 . 168 . 0 . 2".
At the bottom of the dialog are two buttons: "OK" and "Cancel".

- ix. Click **OK** and restart VioGate.
x. Launch the web browser and enter the IP address of VioGate. Login VioGate.

3. Connecting VioGate to the Internet using ADSL service

- i. If VioGate is connected to the Internet through ADSL (i.e. dynamic IP is used), it is recommended to use Dynamic DNS service to connect VioGate with an easy-to-remember server name. Register an account name on <http://www.dyndns.org>, <http://update.ods.org>, or <http://www.dhs.org>, to obtain a user name, password and a domain name. (For further details, please refer to Appendix A).
- ii. Please refer to Appendix B for details of connecting VioGate to PC.
- iii. Click on the setting icon  on the left of the screen. In the setup page, choose  "Network Settings" and select "Use broadband connection to the Internet (PPPoE)". Then enter the correct user name and password to connect to the ADSL.
- iv. Check the box "Enable Dynamic DNS Service". Enter the user name, password, and host name. Select "Dynamic IP address".



Network Settings

Obtain IP address settings automatically (DHCP)

Assign IP address settings manually

IP Address: 10 . 8 . 12 . 230

Subnet Mask: 255 . 255 . 255 . 0

Gateway: 10 . 8 . 12 . 1

Use broadband connection to access the Internet (PPPoE)

User Name: D3239289

Password: *****

Try to use DHCP when failed

Enable Dynamic DNS Service DynDNS Link...

User Name: qnaptw

Password: *****

Host Name: qnaptw@dyndns.org

Note: You should specify the IP address of DNS server when enabling DDNS service.

Dynamic IP Address Fixed IP Address

Specify DNS Server 10 . 8 . 2 . 9

Enable Multicast Group IP Address: 239 . 255 . 45 . 45 Port: 9000

Back to Live Video Save

- v. Click **Save** and wait for a few seconds for VioGate to apply the new network configuration.
- vi. Shut down the VioGate, and connect the server to the ADSL modem.
- vii. Restore the network settings of your PC and restart VioGate.
- viii. Enter the host name you have registered in the IE browser. When you have completed the settings for VioGate successfully, you can access the server administration page.

Default Network Configuration of VioGate

By default, VioGate will acquire IP address and other TCP/IP network protocol settings from DHCP server. If DHCP server is not supported on the network, VioGate will use the following default settings:

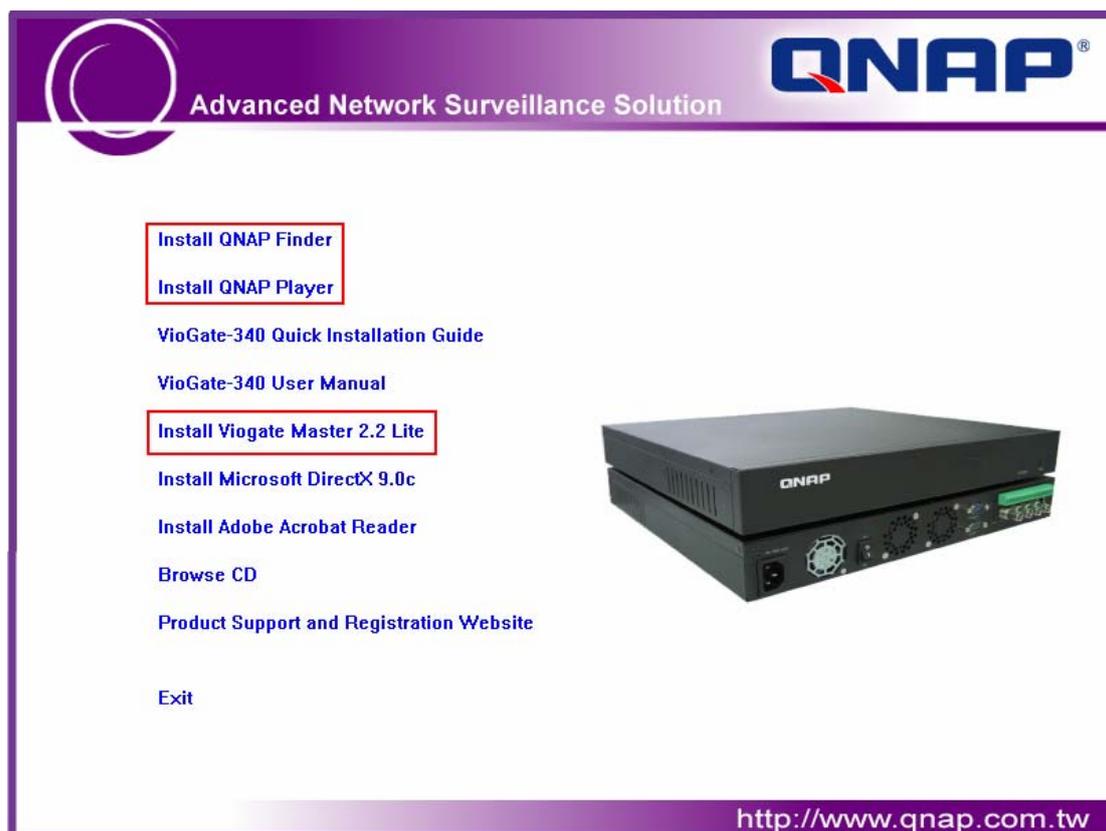
IP Address: 192.168.0.1
Subnet Mask: 255.255.255.0

Login the server with the default administrator account:

User name: administrator
Password: admin

3. VioGate CD-ROM

QNAP provides different software for various surveillance products. When using VioGate, you will need to install QNAP Finder, VioGate Player, and VioGate Master Lite from VioGate CD-ROM. After installing the programs, you can find the shortcuts on the desktop of your PC. Run these shortcuts to use the programs.



You may select to install three programs dedicated for more convenient use of VioGate. After installing the programs, you can find the shortcuts on the desktop of your PC. Run these shortcuts to use the programs.

Software	Description
QNAP Finder	To find all available VioGate servers in the same network
VioGate Player	To view recorded data of all cameras
VioGate Master Lite	To monitor multiple VioGate servers available in the same network

4. Using VioGate

When you have installed VioGate successfully, you can use the web browser to connect and manage VioGate. VioGate supports Microsoft® Internet Explorer 6.0 or above.

4.1 Accessing Administration Page

- i. You can access VioGate administration page by one of the following methods:
 - Open an IE browser and enter the IP address of VioGate. You can find the IP address by QNAP Finder. OR
 - Run QNAP Finder, and double click on the server you want to configure on the list.
- ii. The first time you access administration page, download ActiveX control.
- iii. When the following login window appears, select a language for web display. Enter the user name and password of the administrator.

Default user name: **administrator**
Password: **admin**

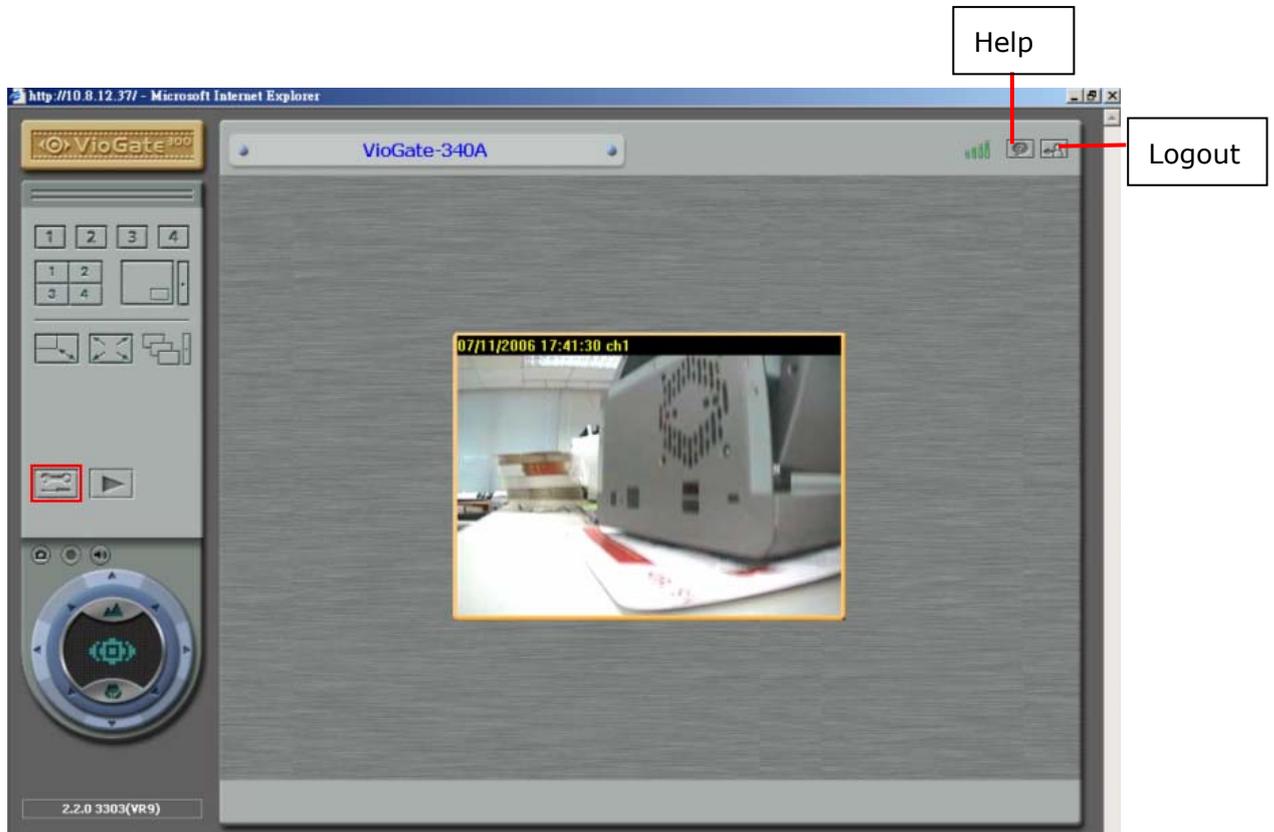


The screenshot shows the VioGate login interface. At the top left is the VioGate logo. Below it is a form with the following fields:

- Server Location: 10.8.12.39
- User Name: administrator
- Password: *****
- Save password

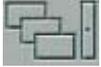
At the bottom left, there is a language selection dropdown menu with the following options: English (selected), Traditional Chinese, Simplified Chinese, Polish, and French. To the right of the dropdown are 'OK' and 'Cancel' buttons.

- iv. Upon successful login to the server, click  on the left column of the monitoring page to enter system configuration page.



4.1.1 Display Mode

Select the display mode for the monitoring page.

Button	Description
	View single channel
	Adjust window size: Select a single channel and click this button to enlarge or shrink the viewing window.
	Full-screen mode: Click this button to switch to full screen. Press Esc to return to normal display.
	Picture-in-picture mode: Click this button to display viewing channels to main screen and sub-screens. Click  to adjust the settings.
	Quad mode: To display four channels in one window.
	Sequential mode: Click this button to view monitoring channels in sequence. Click  to adjust the time interval for sequential display.

Login VioGate as an administrator, you can click the button  to go to system administration page to view and modify all settings.

4.1.2 Manual Recording Video

Click  to record and save the live video of a camera to the PC. Click the button again to stop recording. The recorded files will be saved as vg3 format. You can play the files with VioGate Player in the CD-ROM.

4.1.3 Manual Snapshot Taking

Click  to take a snapshot of the monitoring video and save it to the PC.

4.1.4 Audio Support

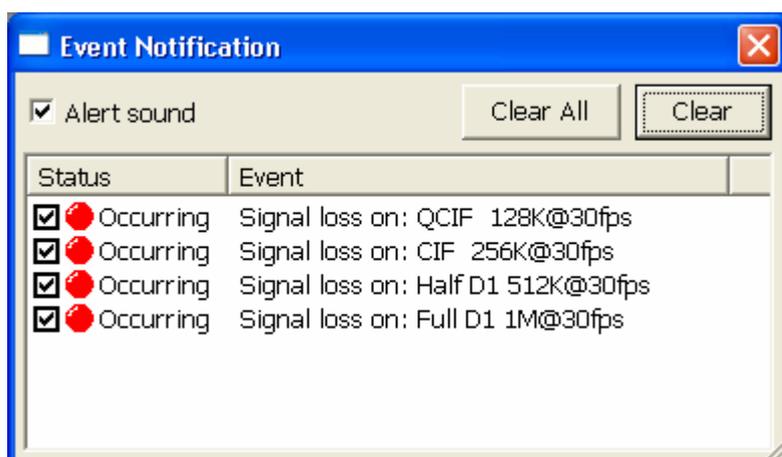
Click  to turn on/ off audio support for monitoring and video recording.

4.1.5 System Warnings

When events set in Event Handling section (refer to Chapter 4.9) are triggered, the

monitoring page will show an event notification icon  to inform the administrator the current status of the server. Double click the warning icon to view the detailed description.



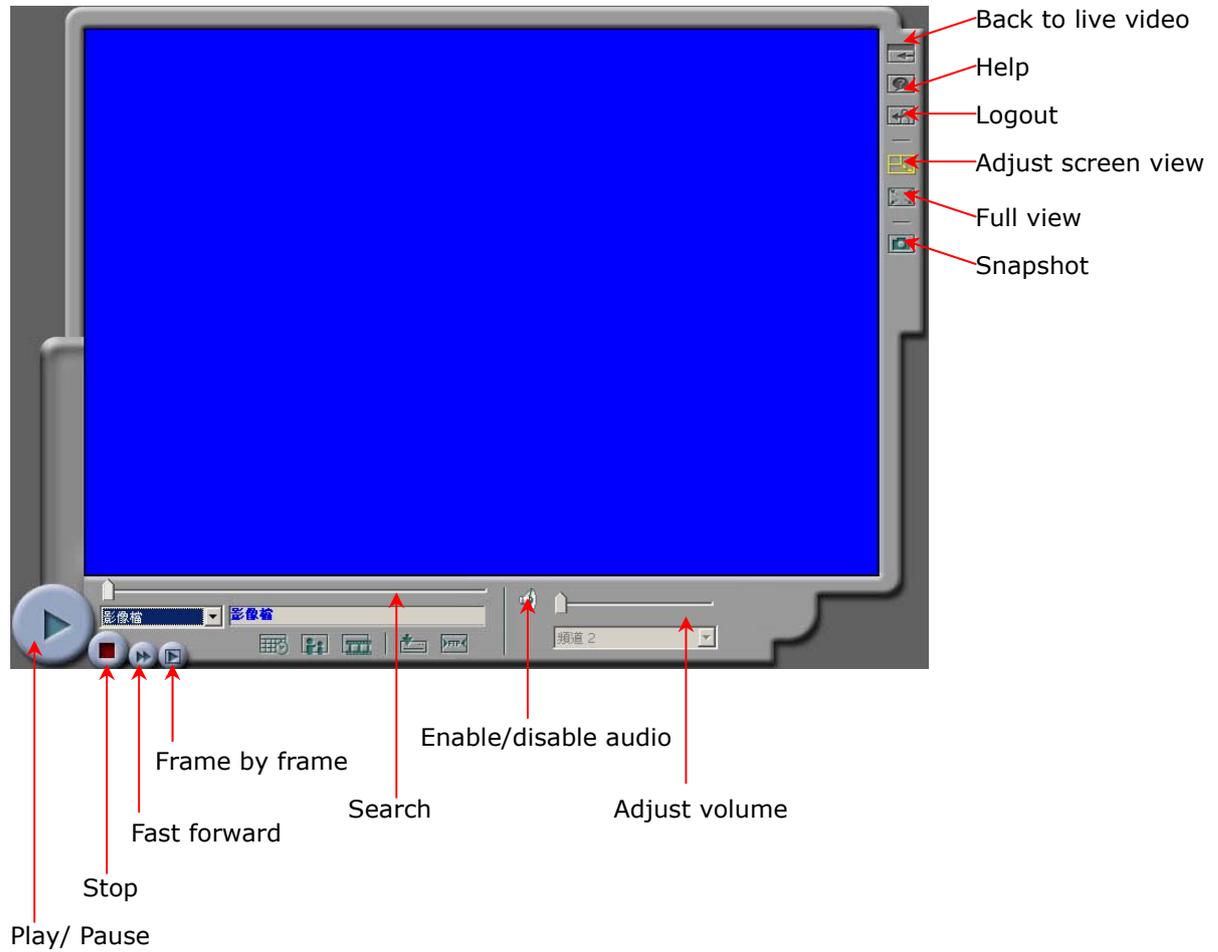


Event notification will be shown in the following conditions:

- Motion is detected
- Video input is lost
- Connection to storage device fails
- Storage space is full
- Alarm input is triggered

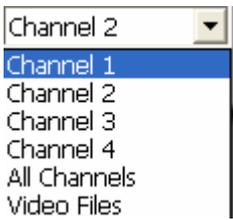
4.1.6 Playback Video Files

To playback video files recorded, click  to enter the video playback page.



- **Select Video Files**

Select the following options to play video files:

	<p>Select the video file to play on the drop-down menu.</p>
	<p>Search video files by specified date and time.</p>
	<p>Search video files by events.</p>
	<p>Select to play files stored on local PC.</p>
	<p>Select files stored on the disk of VioGate.</p>

- **Save Video Files**

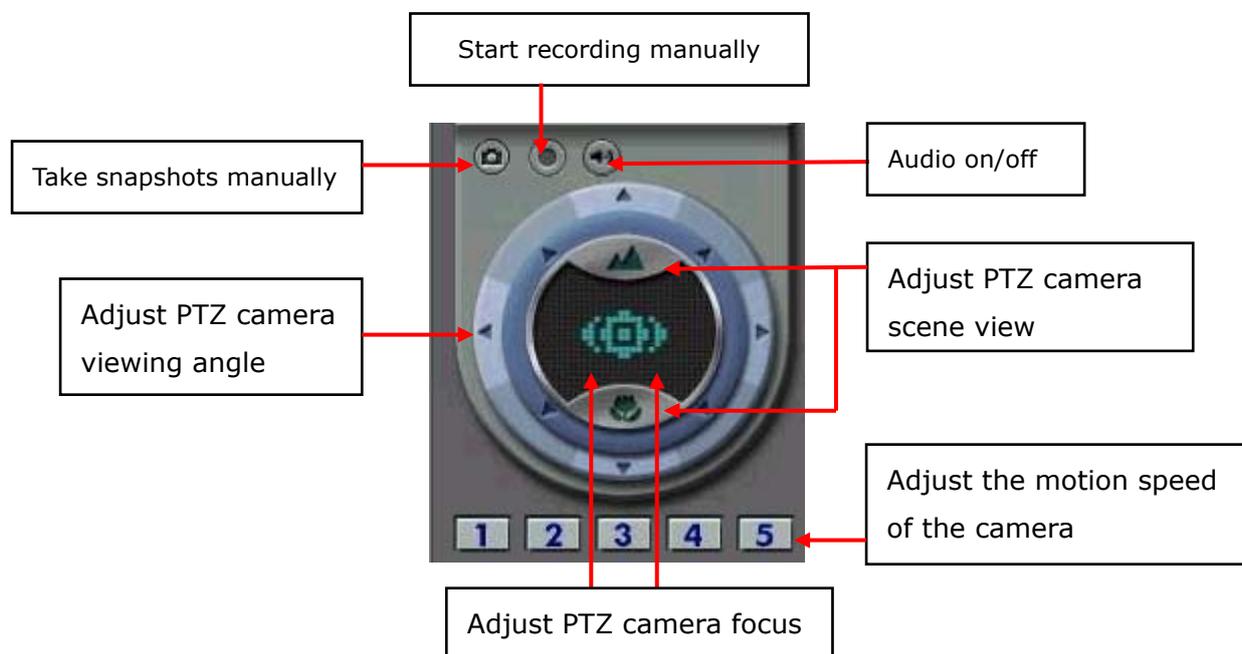
To save a playing file on a particular remote storage device, click . The files can be saved as vg3 format.

- **Play Video Files**

Use the following controls to play the video:

	<p>Play</p>
	<p>Stop</p>
	<p>Fast playing video file</p>
	<p>Play video frame by frame</p>
	<p>Adjust playback screen size</p>

4.1.7 Other Function Buttons



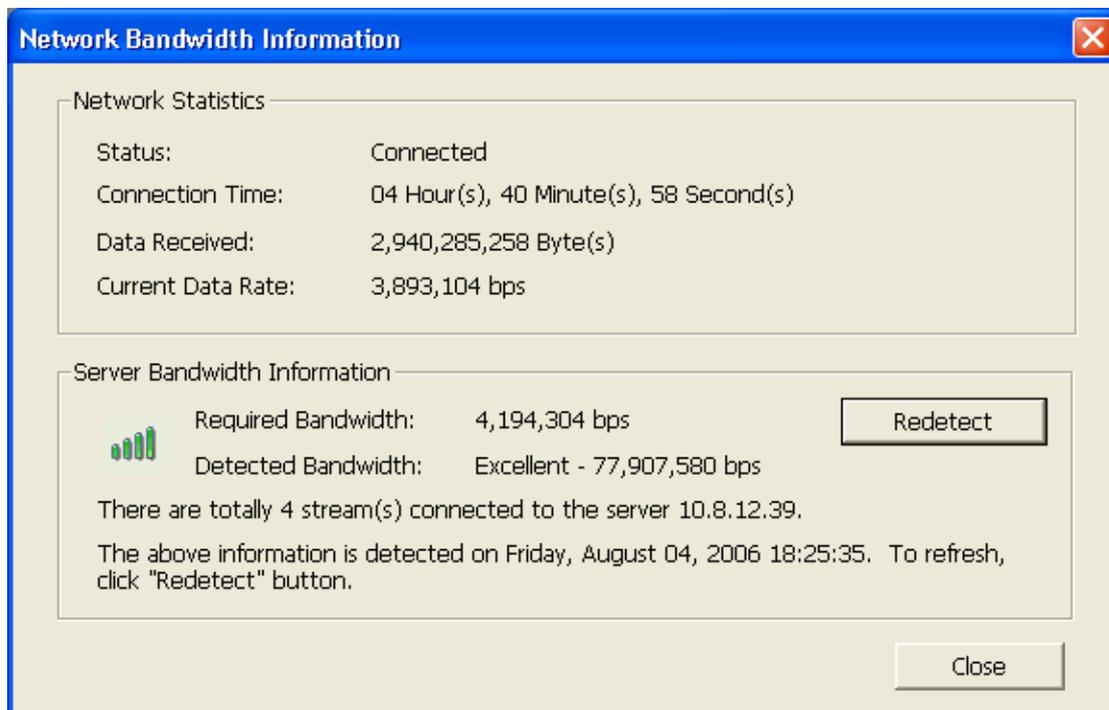
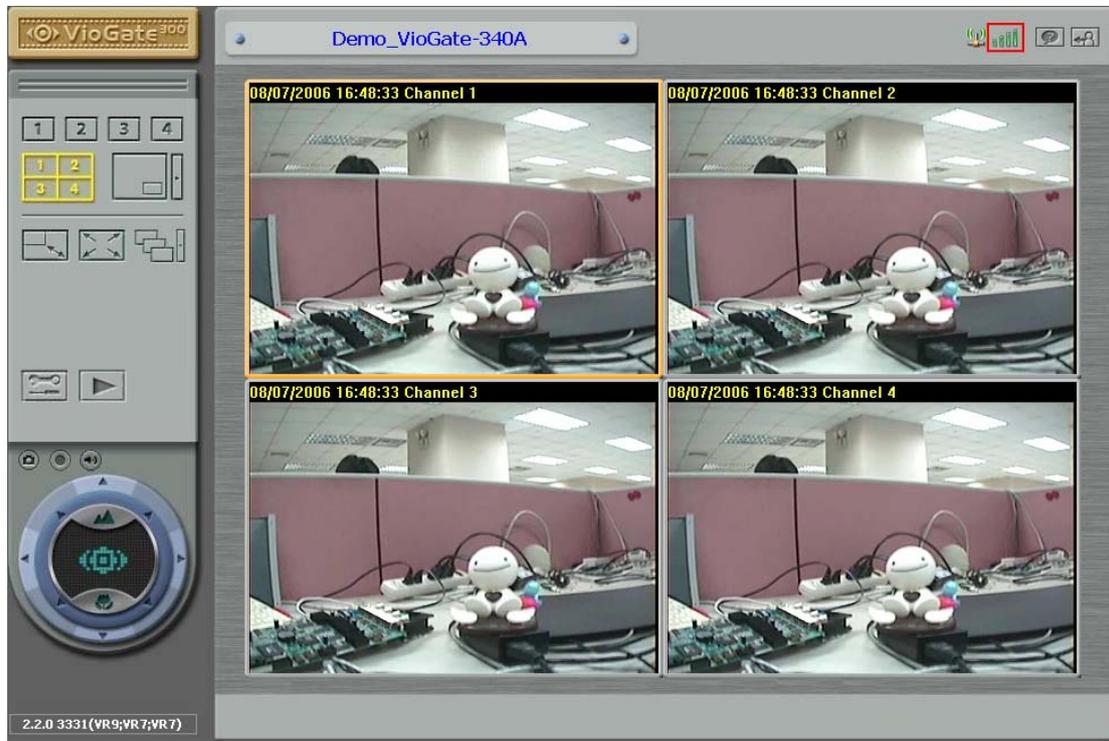
Function keys of PTZ camera

- i. : Adjust focusing lenses to minimize scope.
- ii. : Adjust focusing lenses to maximize scope.
- iii. : Zoom in to adjust the scene view.
- iv. : Zoom out to adjust the scene view.
- v. : Arrow buttons can be used to adjust the rotation direction of the PTZ camera.
- vi. When VioGate uses Merit Lilin and Pelco D protocols, click and hold your mouse to adjust camera direction of the PTZ camera, you can then move the camera angle continuously. To stop moving the angle, simply release the mouse.
- vii. : Adjust the motion speed of the camera. When PTZ camera is enabled, these options will be shown on the left of the page.

4.1.8 Network Bandwidth Information

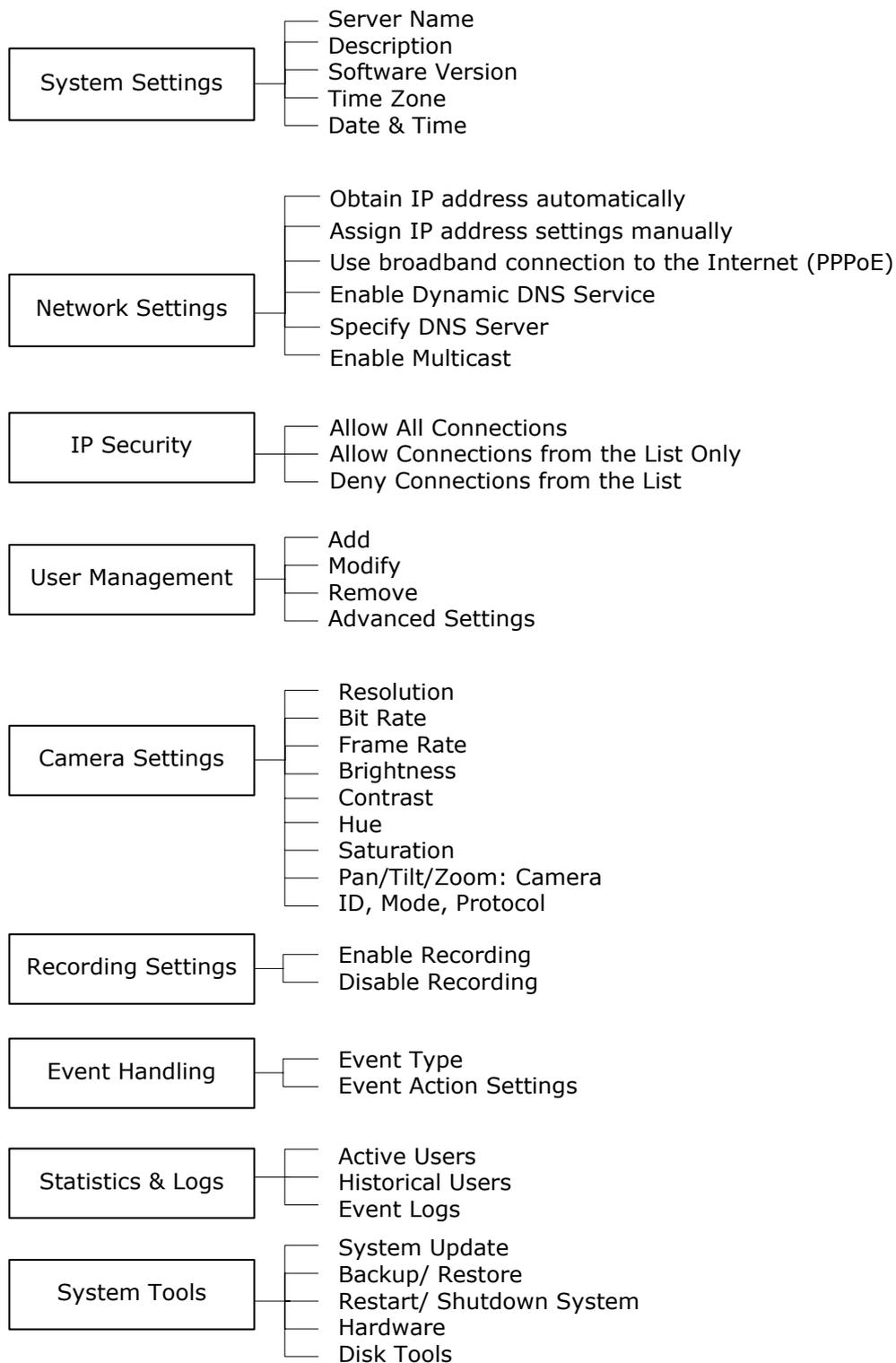


: Click this button to view and redetect the information of network bandwidth.

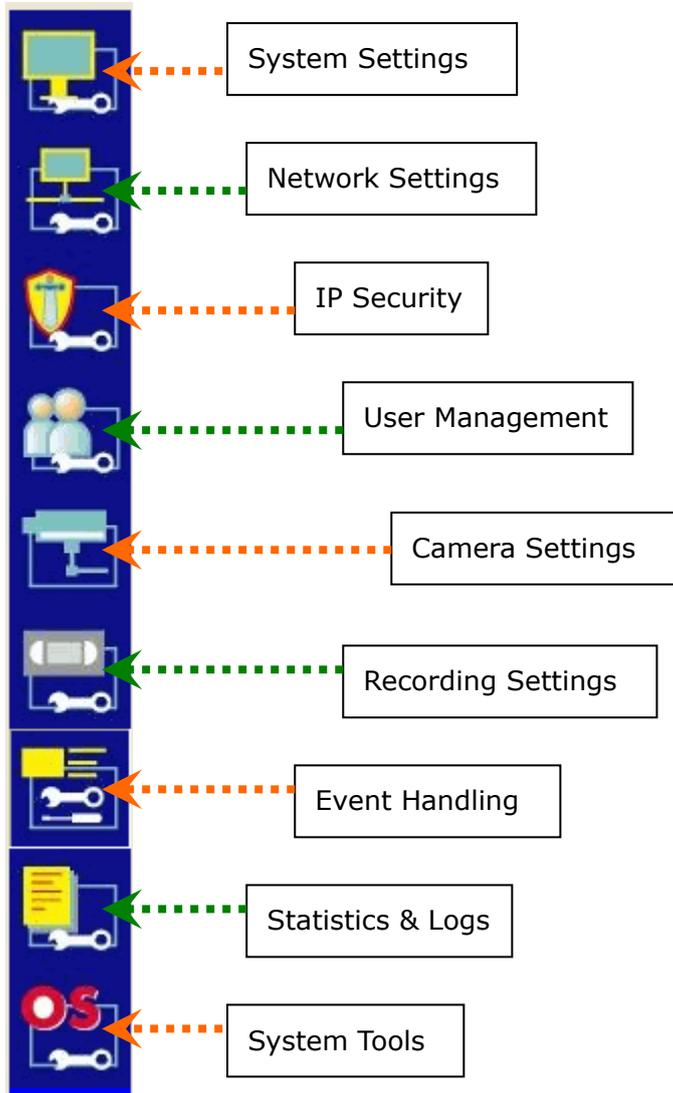


4.2 System Overview

The sections in System Configuration are shown below:

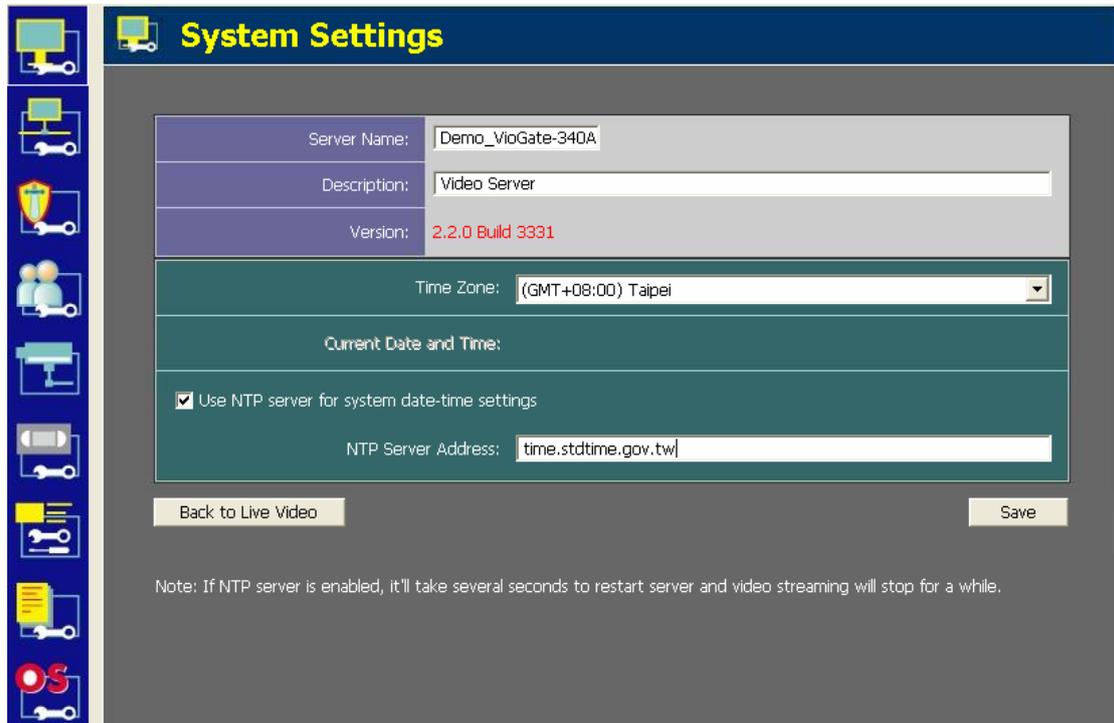


Icons on System Settings Page



4.3 System Settings

Enter the basic information for the system such as the server name, date and time, and verify the current software version.



Server Name:	Demo_VioGate-340A
Description:	Video Server
Version:	2.2.0 Build 3331

Time Zone: (GMT+08:00) Taipei

Current Date and Time:

Use NTP server for system date-time settings

NTP Server Address: time.stdtime.gov.tw

Back to Live Video Save

Note: If NTP server is enabled, it'll take several seconds to restart server and video streaming will stop for a while.

- **Server Name**
Enter a unique server name for VioGate. The server name supports up to 20 characters but cannot contain the following characters:
" , ; \ : | * ? > < ' ` [] / %
- **Description**
Enter a description of VioGate (126 characters at maximum), e.g. the administrator name, department name, or the location of the server.
- **Version**
The firmware version of VioGate will be displayed in this field.

- **Time Zone**

Select the time zone according to the location of the server. If you enter invalid time zone settings, you may encounter the following problems:

1. If you are using web browser to view live video, the time displayed will not be the same as the time shown on the personal computer.
2. Incorrect date and time information will be displayed when you try to play video files or view event logs.



Note: Daylight time saving will be automatically adjusted for different time zones.

- **Use NTP server for system date-time settings**

To update system date and time with an NTP (Network Time Protocol) server, enter the domain name or IP address of an NTP server and click **Save**. When this function is enabled, it will take several seconds to restart the server and video streaming will stop a while. Note that when NTP server is enabled, you cannot adjust current date and time manually.

The screenshot shows a web interface for configuring system date and time. At the top, it says "Current Date and Time:". Below that, there is a checkbox labeled "Use NTP server for system date-time settings" which is checked. Underneath the checkbox is a text input field labeled "NTP Server Address:" containing the text "time.stdtime.gov.tw". At the bottom of the interface, there are two buttons: "Back to Live Video" on the left and "Save" on the right. A note at the very bottom of the interface reads: "Note: If NTP server is enabled, it'll take several seconds to restart server and video streaming will stop for a while."

To return to live video monitoring page, click **Back to Live Video**.

4.4 Network Settings



Select the method VioGate uses to connect to the network. Enable multicast function if necessary. If you are not certain how your server connects to the external network or about TCP/IP settings, contact your network administrator.

- **Obtain IP address settings automatically (DHCP)**

Often used in conjunction with cable modem and corporate networks, the system will obtain IP address and other TCP/IP information automatically. If your network supports Dynamic Host Configuration Protocol (DHCP), VioGate will obtain IP address and other TCP/IP information automatically from the DHCP server.

- **Assign IP address settings manually**

Specify the IP address and other settings if you are using ADSL connection service. If the server's external network uses ADSL service to connect to the Internet, specify a valid IP address provided by the ISP. Enter the following settings:

- IP address
- Subnet mask
- Gateway

- **Use broadband connection to the Internet (PPPoE)**

PPPoE is often used in dial-up ADSL broadband service. Enter the user name and password provided by the ISP to connect to the Internet.

- Try to use DHCP when failed

When this option is enabled, the server will use DHCP for network connection when PPPoE connection fails.

- **Enable Dynamic DNS service**



Note: If you assign IP address settings manually to connect to the Internet, and want to enable dynamic DNS service, specify a DNS server.

To enable external access to VioGate by a domain name, activate dynamic domain name service. Apply for an account and register a dynamic domain name from a dynamic domain name service provider. Please refer to Appendix A for further details. After you have registered a dynamic domain name and completed the setup, VioGate will automatically update the dynamic IP address with the service provider's server.

- **Specify DNS Server**

To assign a specific DNS server, enter the server's IP address.

- **Enable Multicast**

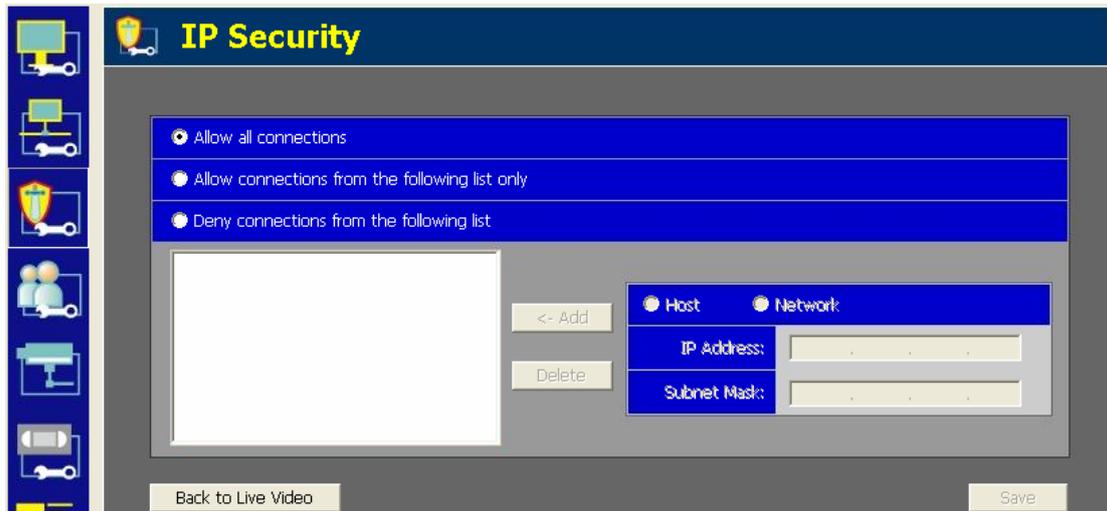
Multicast enables the server to broadcast data to a specified group of clients simultaneously to control network flow.

- **Enable FTP Port Map**

To configure VioGate as virtual server via router, the virtual server must be mapped to external port 21 so that users from external network can play video on VioGate (please refer to Appendix F for more information).

4.5 IP Security

Specify the connections to be allowed and denied to access VioGate. Choose one of the following options to restrict access from a network or an IP address (host) to the server:



1. Allow all connections (Default setting)

Allow connection from all hosts to the server.

2. Allow connections from the following list only

Allow connection from hosts specified on the list only.



Note: When this function is enabled, you can only use PC that the IP address is listed on the connection list to find VioGate by QNAP Finder. The IP address not included in the list will not be able to detect VioGate not listed in allowed connections.

3. Deny connections from the following list

Deny connection from hosts specified on the list.



Note: Make sure your PC is added in the list of hosts allowed to connect to the server. Otherwise, VioGate will disconnect your PC when you apply the new settings.

4.6 User Management

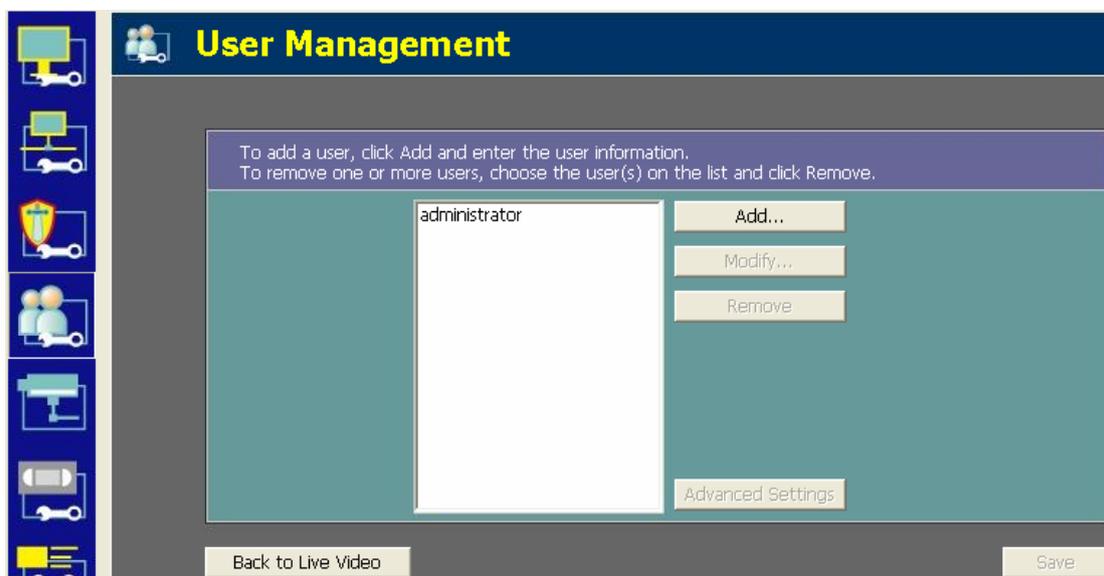


This section enables you to maintain user accounts and configure account privilege for effective management of server access. The server can provide services to any authorized users. The system has a default account that cannot be renamed or deleted. **It is strongly recommended that you change the administrator password the first time you login the server for higher system security.**

The default user name and password are:

User name: **administrator**

Password: **admin**



To add a new user, enter the following information.

- **User name**

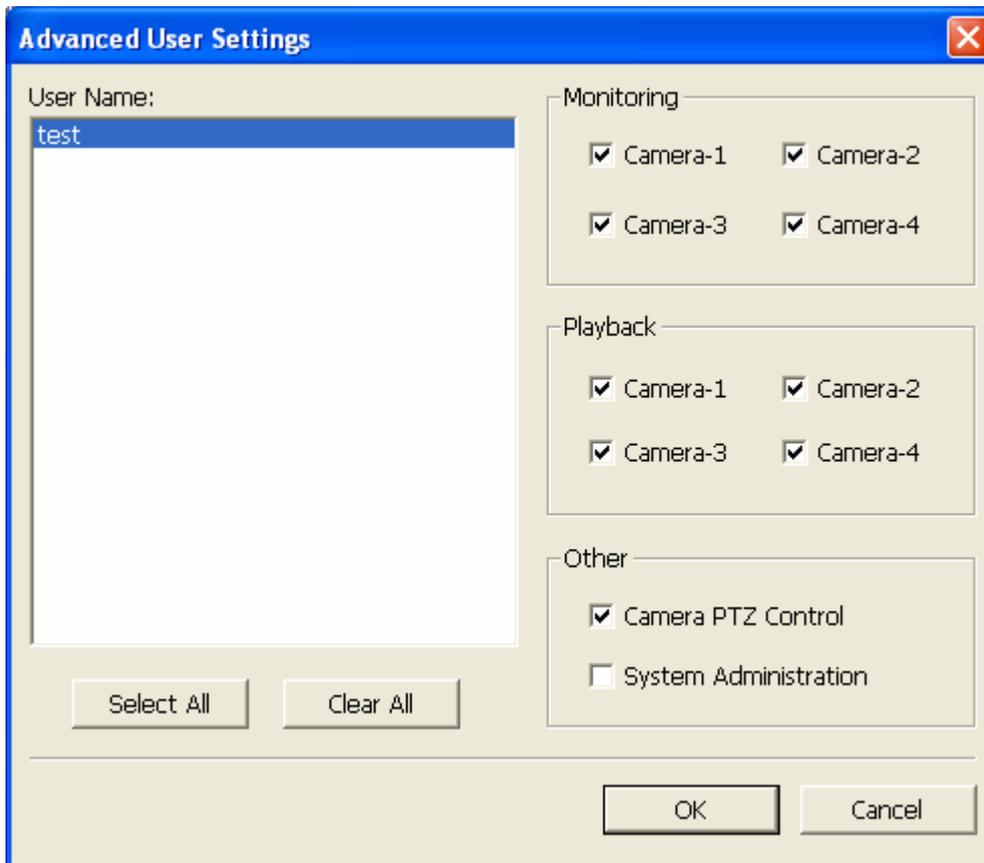
The user name can contain up to 32 characters. It is case-insensitive, and supports double-byte characters, e.g. Chinese, Japanese, and Korean, but cannot contain the following ones:

" , ; \ : | * ? > < ' ` [] / %

- **Password**

The password is case-sensitive and supports up to 16 characters. It is recommended to set a password longer than 6 characters.

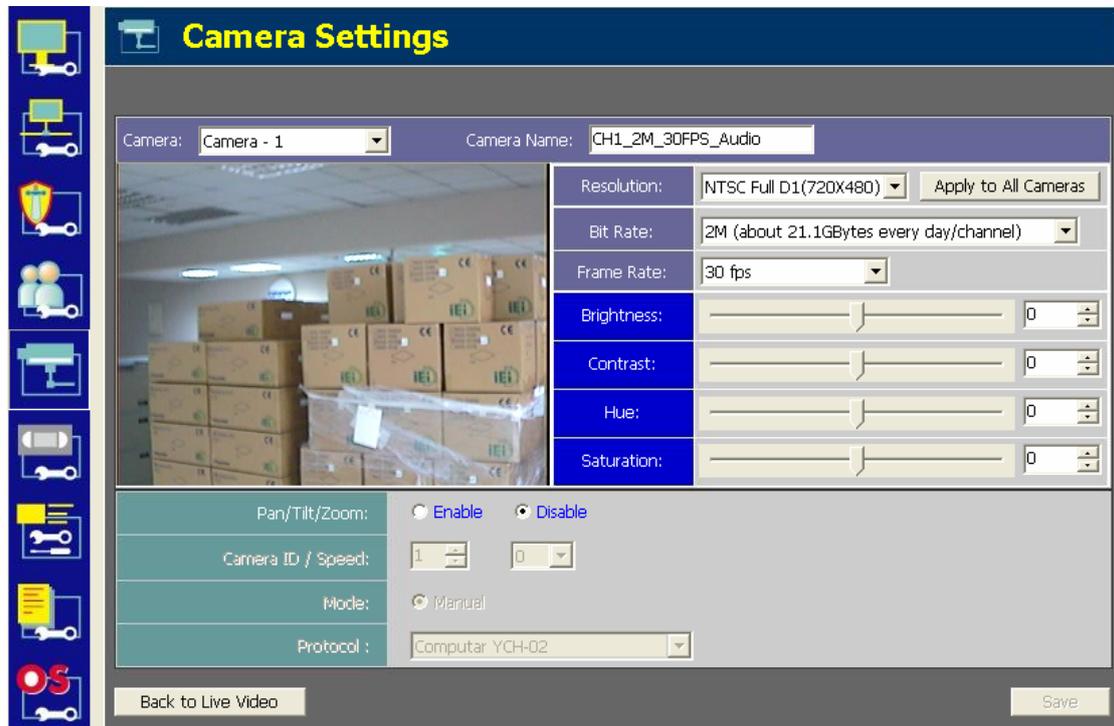
- **Advanced User Settings**



You may configure the following permissions to a user account:

- ✓ **Monitoring**
Allow users to view live video of assigned cameras.
- ✓ **Playback**
Allow users to view recorded video of assigned cameras.
- ✓ **Camera PTZ Control**
If the attached camera supports PTZ functions, users can control Pan/Tilt/Zoom functions of assigned camera.
- ✓ **System Administration**
The user will have the right to change all system settings.

4.7 Camera Settings

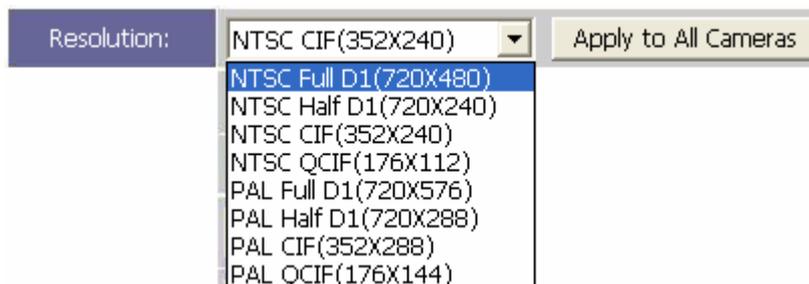


Define the following settings for the camera:

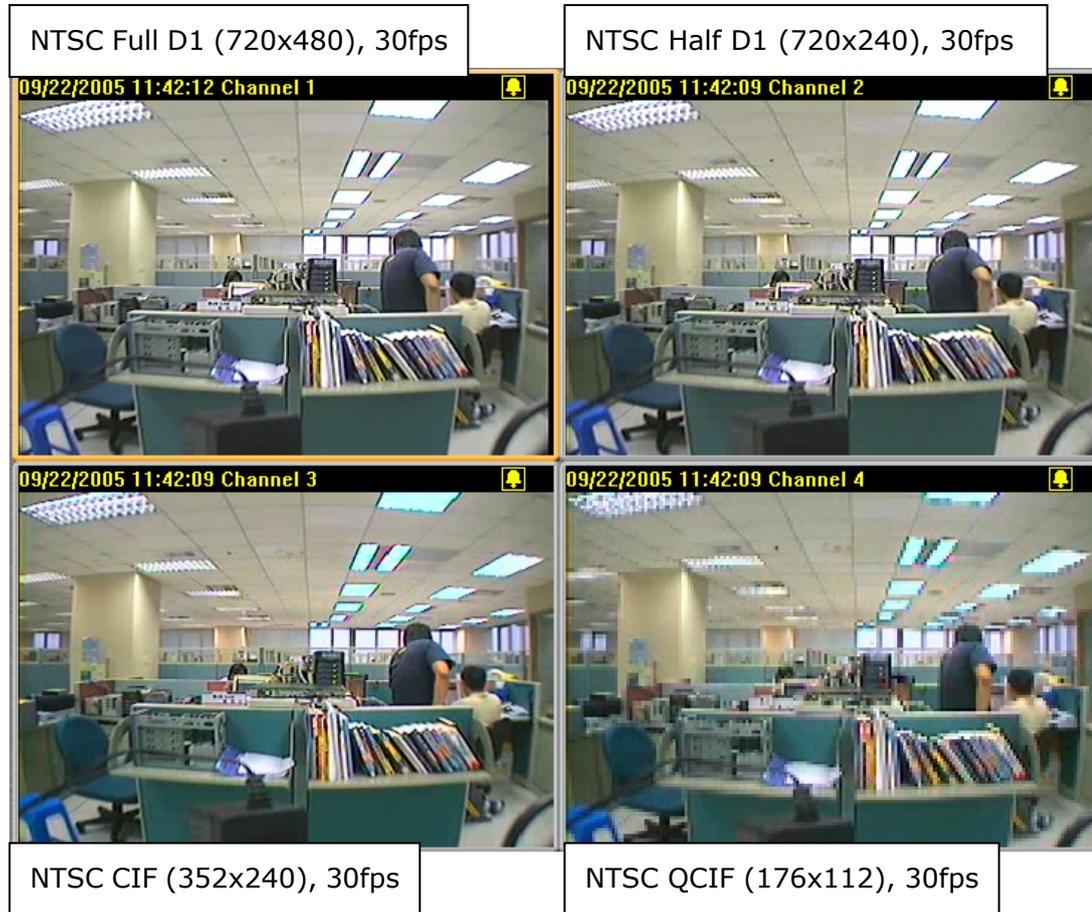
i. Camera name

20 English characters or 10 Chinese characters can be used. The name can contain only English alphabets, numbers, dash (-), or Chinese characters (excluding " , ; \ : | * ? > < ' ` [] / %)

ii. Resolution

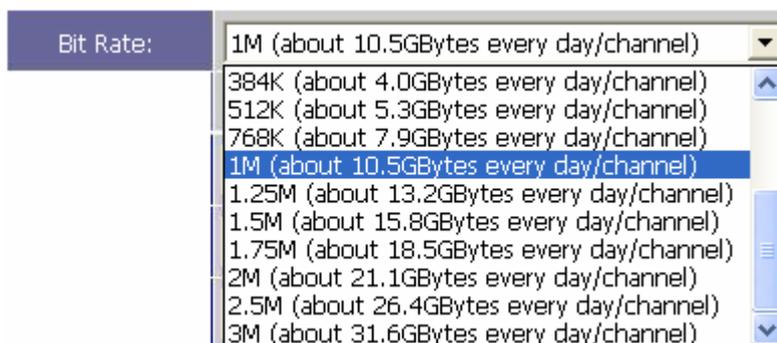


The higher the resolution, the larger the display of the recording files. If the bit rate is unchanged, image quality will decrease but this will not increase the size of recording files.



iii. Bit rate

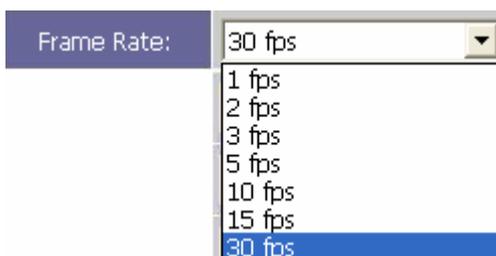
Select the bit rate for camera. Bit rate controls the storage space required by recording files. You can refer to the approximate disk space required every day by each channel for all bit rate options. The total bit rate of the four channels of VioGate will be affected by network bandwidth. The bandwidth used by audio is not included (audio sample: 16-bit, 8K, mono).



 **Note:** MPEG-4 applies dynamic storage technology. Storage capacity varies according to the motion of image recorded by the camera.

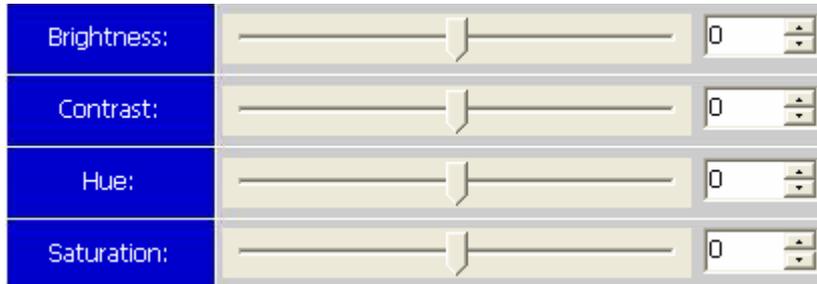
iv. Frame rate

The faster the frame rate, the smoother the display image is displayed. It is recommended to set the frame rate as 15 fps for optimized smoothness and quality of the image.



v. Brightness, contrast, hue, saturation

You can adjust the best image for each channel of VioGate when different cameras are implemented. If cameras of relatively less optimized default settings are used, you can adjust the settings here for better image quality.



- **Pan/ Tilt/ Zoom Camera**

If the camera connected to VioGate supports P/T/Z function, you can operate it with the control unit on the monitoring page.



To use P/T/Z function, configure the following settings:

- ✓ **Camera ID/ Speed**

Select the ID of P/T/Z camera to control and the moving speed of operation. Camera ID can be 255 at maximum. Speed refers to the moving speed of PT control unit. The larger the number, the faster the moving speed. Please refer to the user manual of the camera for further information.

- ✓ **Mode**

Manual mode: The camera will stay still and you can control the angle via the monitoring page.

Auto mode: The camera will adjust monitoring angel automatically.

Preset mode: You can select preset points for PTZ camera. PTZ camera will move according to each preset position (1-10) every 10 seconds.

- ✓ **Protocol**

The system supports multiple PTZ protocols: Computar YCH-02, DynaColor, Honeywell GC-655, Honeywell GC-755, Merit Lilin, Panasonic WV-CS564, Pelco D-Type, Sony VISCA, VideoTrec and VideoTrec SP-8006W.

Pan/Tilt/Zoom:	<input checked="" type="radio"/> Enable <input type="radio"/> Disable	Left	Up	Right	Zoom In	Zoom Out
Camera ID / Speed:	1 <input type="text"/> <input type="text"/>	Down			Focus Far	Focus Near
Mode:	<input type="radio"/> Manual <input checked="" type="radio"/> Preset	1	2	3	4	5
Protocol :	Pelco D-Type	6	7	8	9	10

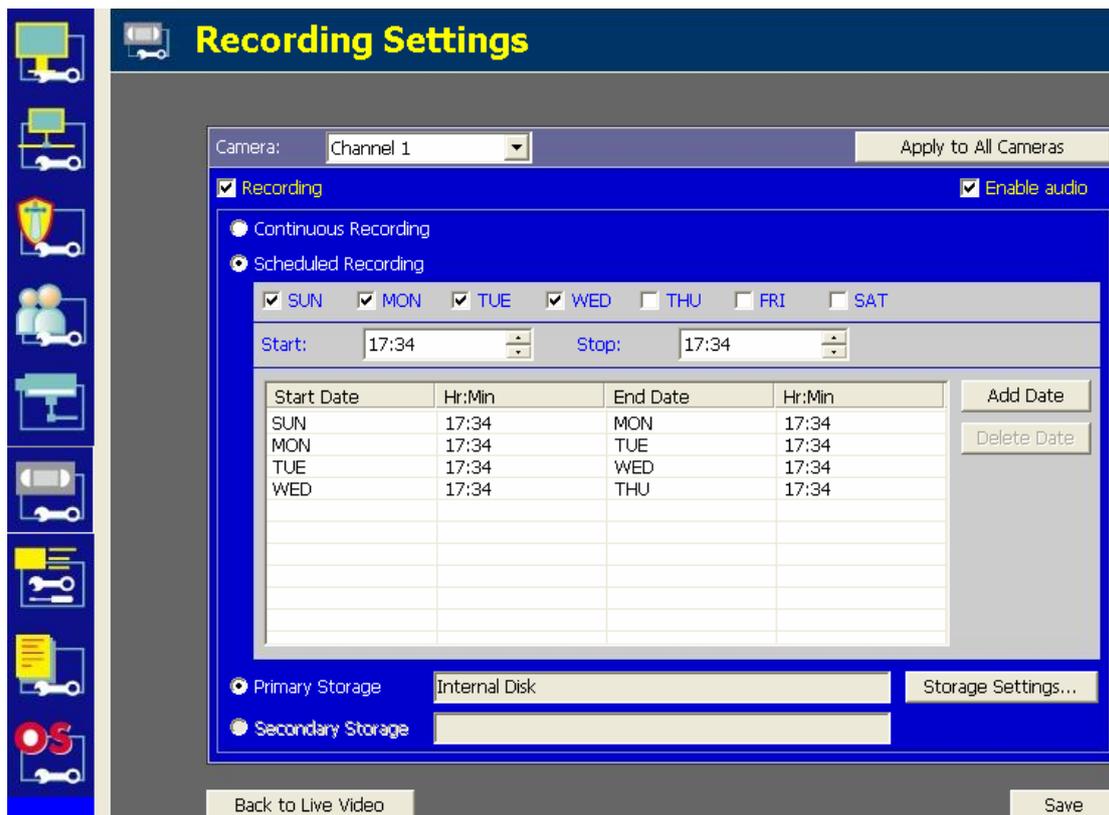


Note: For further PTZ support information, please refer to Appendix D.

4.8 Recording Settings



VioGate supports audio and video recording of live video. To save live video and activate video playback function, enable recording function. VioGate supports multiple-interval scheduled recording.



- **Recording Mode**

Select a channel and enable recording. VioGate supports the following two recording modes:

- i. Continuous Recording

- VioGate will record video continuously to the storage device.

ii. Scheduled Recording

To configure scheduled recording, select the week day(s), start and stop time. Then click **Add Date**. VioGate will record video according to schedule. The system also supports overnight scheduled recording. For instance, when you set the start time for recording as 18:00 on Monday and the end time as 09:00, the system will automatically defines the end time as 09:00 on the following day, i.e. Tuesday. To delete a schedule, select an item on the schedule list and click **Delete Date**.

The screenshot shows a software interface for recording configuration. At the top, there are two checkboxes: Recording and Enable audio. Below these, there are two radio buttons: Continuous Recording and Scheduled Recording. Under Scheduled Recording, there are checkboxes for days of the week: SUN, MON, TUE, WED, THU, FRI, and SAT. Below the day checkboxes, there are two time input fields: Start: 17:34 and Stop: 17:34. At the bottom, there is a table with columns: Start Date, Hr:Min, End Date, and Hr:Min. The table contains four rows of data. To the right of the table are two buttons: Add Date and Delete Date. The Add Date button is highlighted with a red border.

Start Date	Hr:Min	End Date	Hr:Min
SUN	17:34	MON	17:34
MON	17:34	TUE	17:34
TUE	17:34	WED	17:34
WED	17:34	THU	17:34

- **Recording**

To enable audio recording, click **Enable audio**.

The screenshot shows a software interface for recording configuration. At the top, there are two checkboxes: Recording and Enable audio. The Enable audio checkbox is highlighted with a red border.

- **Storage Settings for Recording/ Snapshot**

To configure the storage settings for recording and snapshot functions of VioGate, click **Storage Settings**.

Camera: Channel 1 Apply to All Cameras

Recording Enable audio

Continuous Recording

Scheduled Recording

SUN MON TUE WED THU FRI SAT

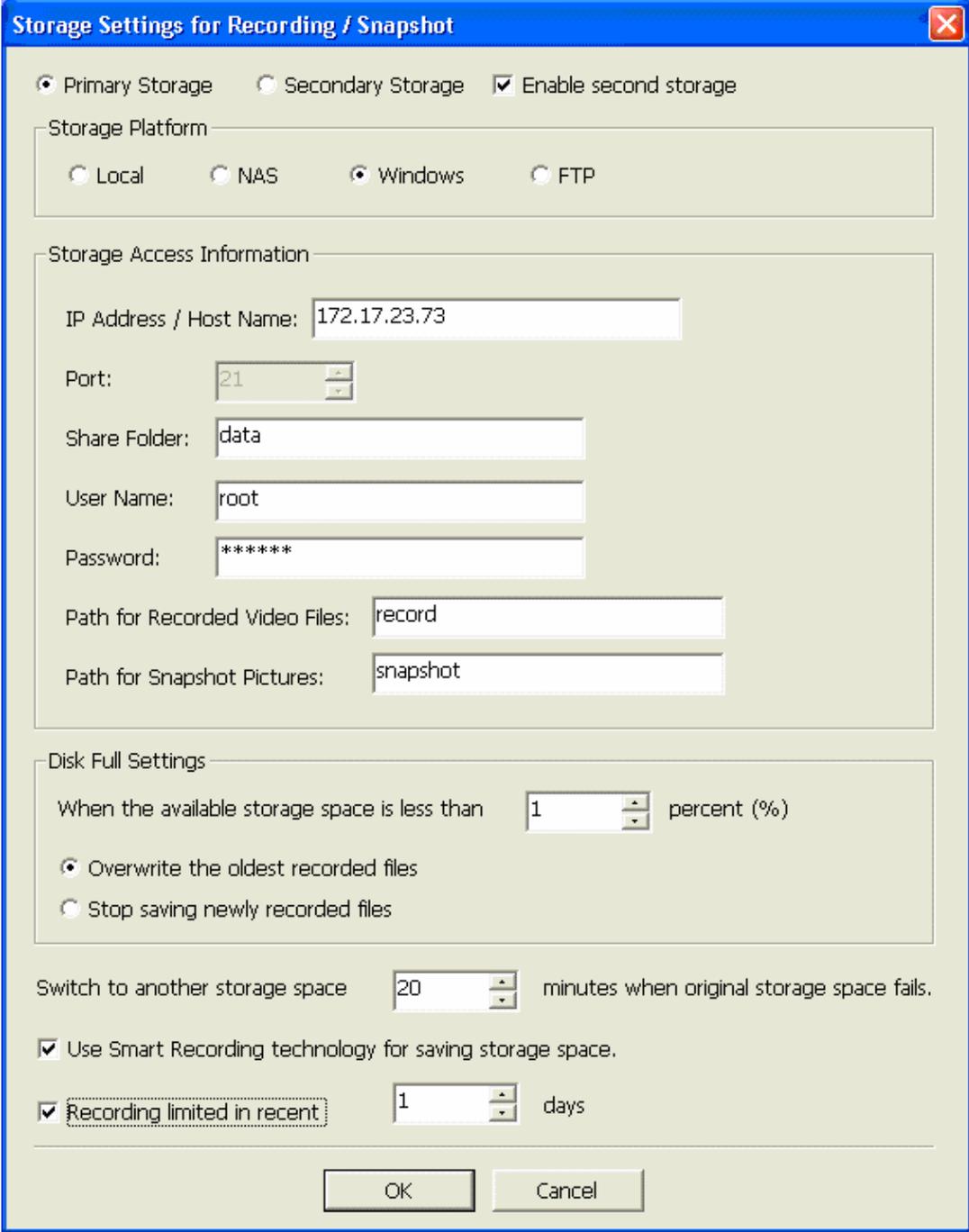
Start: 17:34 Stop: 17:34

Start Date	Hr:Min	End Date	Hr:Min
SUN	17:34	MON	17:34
MON	17:34	TUE	17:34
TUE	17:34	WED	17:34
WED	17:34	THU	17:34

Primary Storage

Secondary Storage

VioGate provides two disks at maximum as built-in storage. You may also select to use NAS, Windows, or FTP as the storage platform. Firmware version 2.1.0 or later supports second storage for recording when primary storage fails.



The image shows a dialog box titled "Storage Settings for Recording / Snapshot". It contains several sections for configuring storage options:

- Storage Platform:** Radio buttons for Primary Storage (selected), Secondary Storage, and Enable second storage (checked). Below are radio buttons for Local, NAS, Windows (selected), and FTP.
- Storage Access Information:** Fields for IP Address / Host Name (172.17.23.73), Port (21), Share Folder (data), User Name (root), Password (*****), Path for Recorded Video Files (record), and Path for Snapshot Pictures (snapshot).
- Disk Full Settings:** A field for "When the available storage space is less than" (1) percent (%). Radio buttons for "Overwrite the oldest recorded files" (selected) and "Stop saving newly recorded files".
- Switch to another storage space:** A field for "20" minutes when original storage space fails.
- Use Smart Recording technology for saving storage space:** A checked checkbox.
- Recording limited in recent:** A checked checkbox and a field for "1" days.

At the bottom are "OK" and "Cancel" buttons.

Storage Platform & Storage Access Information

Select one of the following storage types and enter the necessary information.

i. Local Disk

To use local disk as storage device, please format the disk in **System Tools—Disk Tools** section.

ii. NAS

To use NAS (Network Attached Storage) as external storage device, enter the IP address of NAS, user name and password to access the server.

iii. Windows

If VioGate is set to save files to a share folder on a Windows® server, enter the IP address of the server, user name and password to access the server.

iv. FTP

To save files to an FTP server, enter the IP address of the server, user name, and password. If the FTP server uses a particular port, specify the port number.

The screenshot shows a configuration window with the following elements:

- At the top, there are three radio buttons: Primary Storage, Secondary Storage, and Enable second storage.
- Below this is a section titled "Storage Platform" containing four radio buttons: Local, NAS, Windows, and FTP.
- The "Storage Access Information" section contains several input fields:
 - "IP Address / Host Name:" with the value "172.17.23.73".
 - "Port:" with a dropdown menu showing "21".
 - "Share Folder:" with the value "data".
 - "User Name:" with the value "root".
 - "Password:" with a masked field showing "*****".
 - "Path for Recorded Video Files:" with the value "record".
 - "Path for Snapshot Pictures:" with the value "snapshot".

Storage Path

Enter two different paths (folders) to store the recorded video files and snapshot pictures.



Note:

1. To save video files via FTP, enter a valid path.
2. Both recording and snapshot files are stored in the same path.

Disk Full Settings

Select an action to be taken when available storage space falls under a specified limit:

1. Overwrite the oldest recorded files
2. Stop saving newly recorded files

Disk Full Settings

When the available storage space is less than percent (%)

Overwrite the oldest recorded files

Stop saving newly recorded files



Note: When saving files on an FTP server, the system will not be able to detect the storage size of the FTP server. Therefore, you will not be able to set the limit for storage space.

Switch storage space

Set the number of minutes VioGate should wait to switch to another storage space when the original one fails. Note that you have to enable second storage first before setting this function.

Smart Recording

Smart Recording is a function to optimize recording quality and recording space of VioGate. When Smart Recording is enabled, VioGate will determine recording performance according to the change of input image. When the screen does not change (nearly still image), VioGate will enter Smart Recording mode after 5 minutes. The frame rate will drop to 1 fps and bit rate will drop at the same time. VioGate will determine the frame rate according to the complexity of the monitoring image. When a moving object enters the monitoring area, VioGate will resume from Smart Recording mode and uses previous frame rate and bit rate settings to acquire the best recording quality.



Note: Please make sure the camera is installed in an environment where the brightness is higher than the minimum brightness required by the camera to avoid too much noise which may lead to inability to action of Smart Recording function.

Recording limit

Set the number of days that recording is recorded to save.

Switch to another storage space	<input type="text" value="0"/>	minutes when original storage space fails.
<input checked="" type="checkbox"/>	Use Smart Recording technology for saving storage space.	
<input checked="" type="checkbox"/>	<input type="text" value="15"/>	Recording limited in recent days

4.9 Event Handling



When an event occurs, the system will automatically trigger alarms, and be configured to ensure correct capturing and recording of video files.

4.9.1 Event Type

VioGate provides event action settings for following event type:

1. Motion Detection
2. Video Input Loss
3. Network Failure
4. Storage Connection Failure
5. Storage Space Full
6. Alarm Input 1, 2, 3, 4

Event Handling

Event Type

- Motion Detection CH1_2M_30FF
 Enable Advanced...
- Video Input Loss CH1_2M_30FF
- Network Failure
- Storage Connection Failure
- Storage Space Full Setting...
- Alarm Input 1 Setting...
- Alarm Input 2 Setting...
- Alarm Input 3 Setting...
- Alarm Input 4 Setting...

Motion Detection - Event Action Settings

- Recording Settings...
- Snapshot Settings...
- Alert E-mail Settings...
- Alarm SMS Settings...
- Alarm Buzzer Settings...
- Notify Remote Client
- Alarm Output 1 Settings...
- Alarm Output 2 Settings...
- Alarm Output 3 Settings...
- Alarm Output 4 Settings...

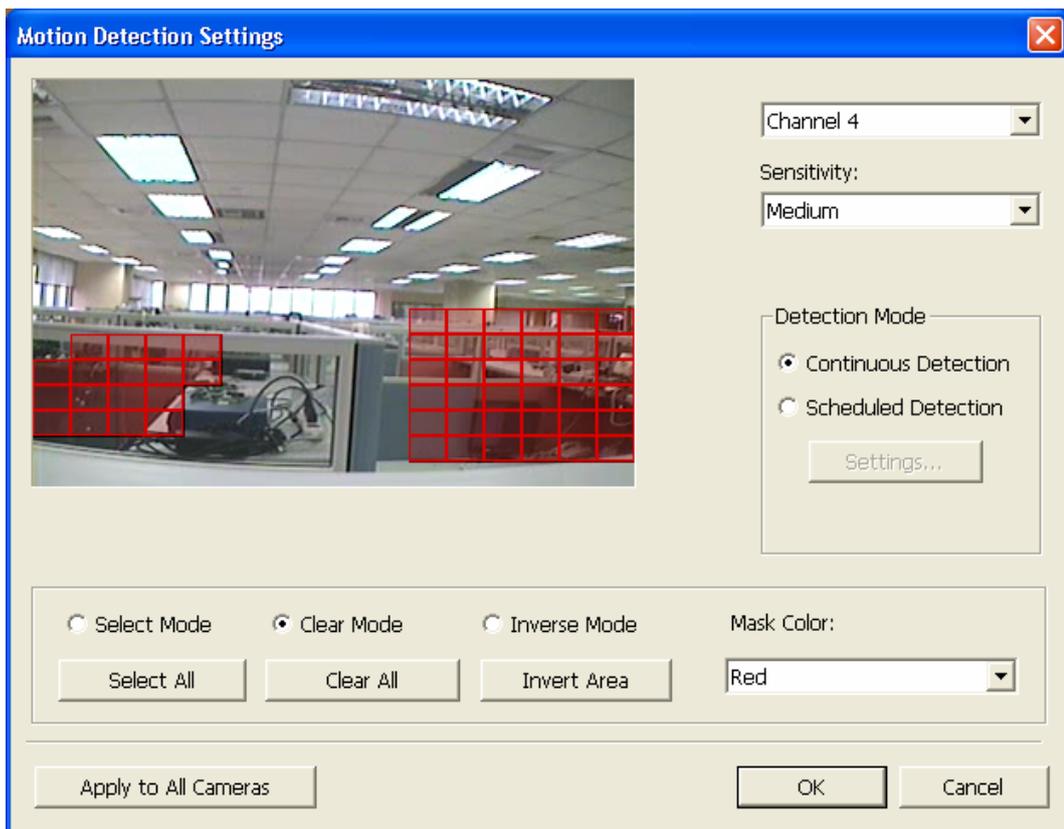
Apply to All Cameras

Note:
You must select at least one action after enabling Motion Detection function, or it will not work properly.

Back to Live Video Save

1. Motion Detection

VioGate provides up to 256 detection areas to replace the monitoring screen of your camera. When motion detection is enabled, any movement detected in the monitoring area will trigger a notification sent by the system. Highlight the area for motion detection. Click **Advanced** under Motion Detection, and select the camera movement and its dissection. Then select the sensitivity of motion detection for the specified area. It is recommended to select higher sensitivity level if the camera is located in indoor environment. If the camera is located outdoors where motion often occurs, select lower sensitivity level. VioGate also supports motion detection for multiple time periods according to your selection.





Note: When adjusting the sensitivity level of VioGate, it will affect the sensitivity of Smart Recording. Please make sure the settings are necessary for the operation.

Sensitivity:

Medium
Highest
High
Medium
Low
Lowest

To set motion detection schedule, select **Scheduled Detection** and click **Settings** to configure the schedule.

Detection Mode

Continuous Detection

Scheduled Detection

Settings...

Configure the detection schedule, click **Add Date** and **OK** to confirm.

Motion Detection Schedule

SUN MON TUE WED THU FRI SAT

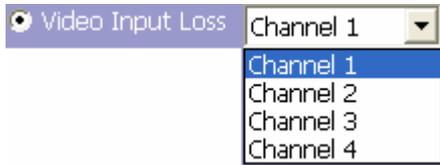
Start: PM 02:53 Stop: PM 02:53

Start Date	Hr:Min	End Date	Hr:Min
SUN	03:00	SUN	06:00
SUN	09:00	SUN	12:00
SUN	15:00	SUN	18:00
SUN	21:00	MON	00:00
MON	03:00	MON	06:00
MON	09:00	MON	12:00
MON	15:00	MON	18:00
MON	21:00	TUE	00:00
TUE	03:00	TUE	06:00

Add Date Delete Date OK Cancel

2. Video Input Loss

You can select different types of event action for signal loss of the channels, e.g. recording and snapshot taking by another channel, alert e-mail and SMS.



3. Network Failure

You can enable alarm buzzer and GPIO alarms when network connection fails.

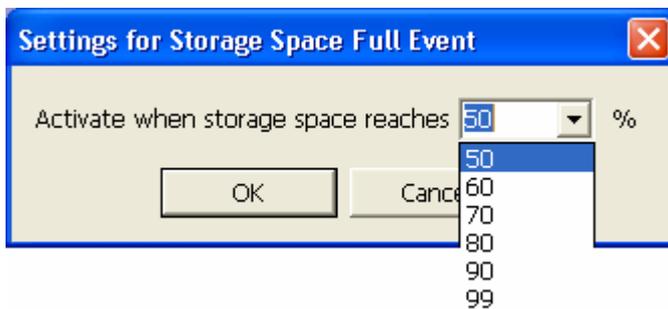
4. Storage Connection Failure

Configure the event action settings for failure to connect to the storage device.



5. Storage Space Full

Select the percentage from the drop-down menu to set the level when an event action should be activated.



Note: If you choose to store the files on an FTP server, the video server will not be able to detect the amount of available space on the FTP server. Therefore, you will not be able to set the percentage for the "Storage Space Full" event.

6. Alarm Input

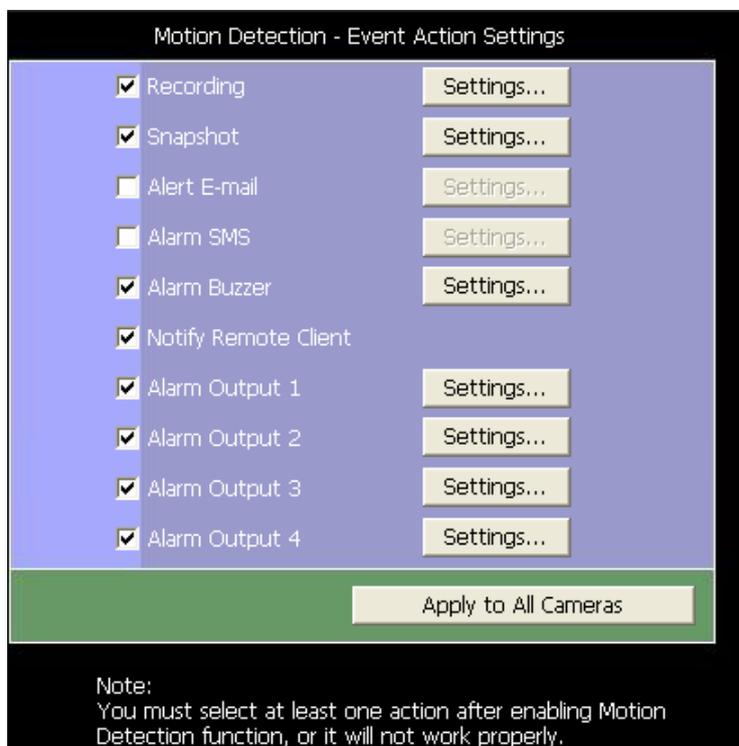
Configure the actions to take when an alarm input is triggered.



Note: GPIO device supports only 0-24V (voltage). It is recommended to use voltage of less than 24V. For further information, Appendix G.

4.9.2 Event Action Settings

You can configure the actions to take for each event type on the left column to alert the administrator or save evidence by recording and snapshot taking.

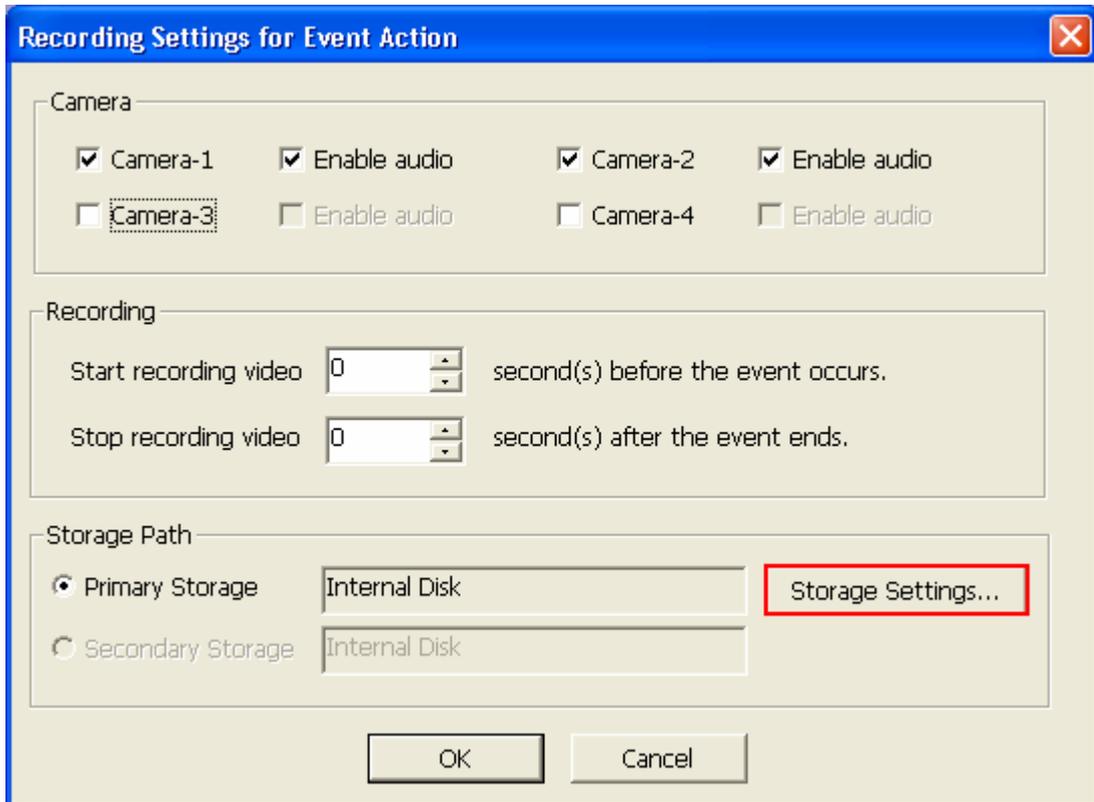


Event Action Settings	Event Type Supported					
	Motion Detection	Video Input Loss	Network Failure	Storage Connection Storage	Storage Space Full	Alarm Input 1, 2, 3, 4
Recording	√	√	√	×	×	√
Snapshot	√	√	×	×	×	√
Alert E-mail	√	√	×	√	√	√
Alarm SMS	√	√	×	√	√	√
Alarm Buzzer	√	√	√	√	√	√
Notify Remote Client	√	√	×	√	√	√
Alarm Output 1, 2, 3, 4	√	√	√	√	√	√

√: Supported ×: Not supported

- Recording

Select the channel(s) which recording should be triggered when an event occurs, e.g. motion is detected. You can enable audio recording function for the selected channel. To specify the storage path for recording files, click **Storage Settings**.



The image shows a dialog box titled "Recording Settings for Event Action" with a close button in the top right corner. The dialog is divided into three sections: Camera, Recording, and Storage Path.

Camera Section: Contains four pairs of checkboxes. The first pair is "Camera-1" (checked) and "Enable audio" (checked). The second pair is "Camera-2" (checked) and "Enable audio" (checked). The third pair is "Camera-3" (unchecked) and "Enable audio" (unchecked). The fourth pair is "Camera-4" (unchecked) and "Enable audio" (unchecked).

Recording Section: Contains two rows. The first row is "Start recording video" with a spinner box set to "0" and the text "second(s) before the event occurs." The second row is "Stop recording video" with a spinner box set to "0" and the text "second(s) after the event ends."

Storage Path Section: Contains two radio buttons. The first is "Primary Storage" (selected) with a text box containing "Internal Disk" and a "Storage Settings..." button to its right. The second is "Secondary Storage" (unselected) with a text box containing "Internal Disk".

At the bottom of the dialog are "OK" and "Cancel" buttons.

Select the storage path for recording and enter relevant information. Configure disk full settings and relevant action to take, i.e. overwrite the oldest recorded files or stop saving newly recorded files. You can enable secondary storage and configure the settings.

Storage Settings for Recording / Snapshot

Primary Storage Secondary Storage Enable second storage

Storage Platform

Local NAS Windows FTP

Storage Access Information

IP Address / Host Name: 172.17.23.73

Port: 21

Share Folder: data

User Name: root

Password: *****

Path for Recorded Video Files: record

Path for Snapshot Pictures: snapshot

Disk Full Settings

When the available storage space is less than 1 percent (%)

Overwrite the oldest recorded files
 Stop saving newly recorded files

Switch to another storage space 20 minutes when original storage space fails.

Use Smart Recording technology for saving storage space.

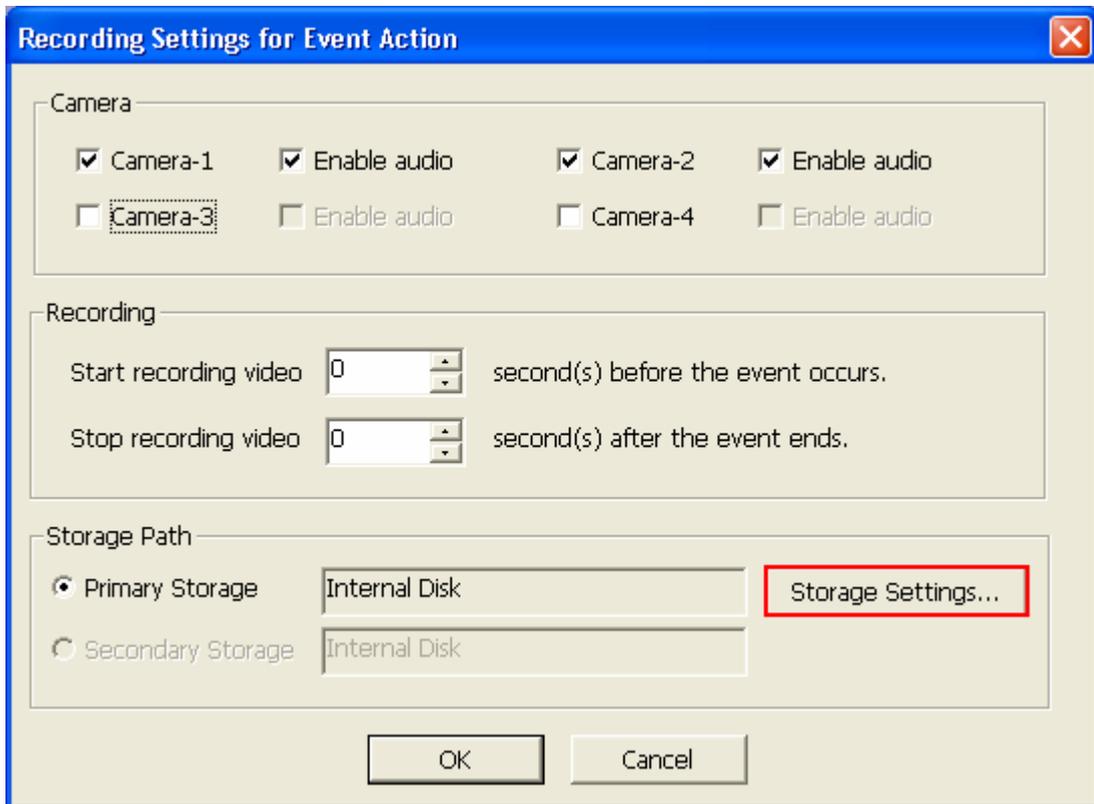
Recording limited in recent 1 days

OK Cancel

When video input loss detection is activated for a channel set for recording, in case that channel, e.g. channel 1, loses video input, the consecutive channel, channel 2, will replace the primary channel for recording.

- Snapshot

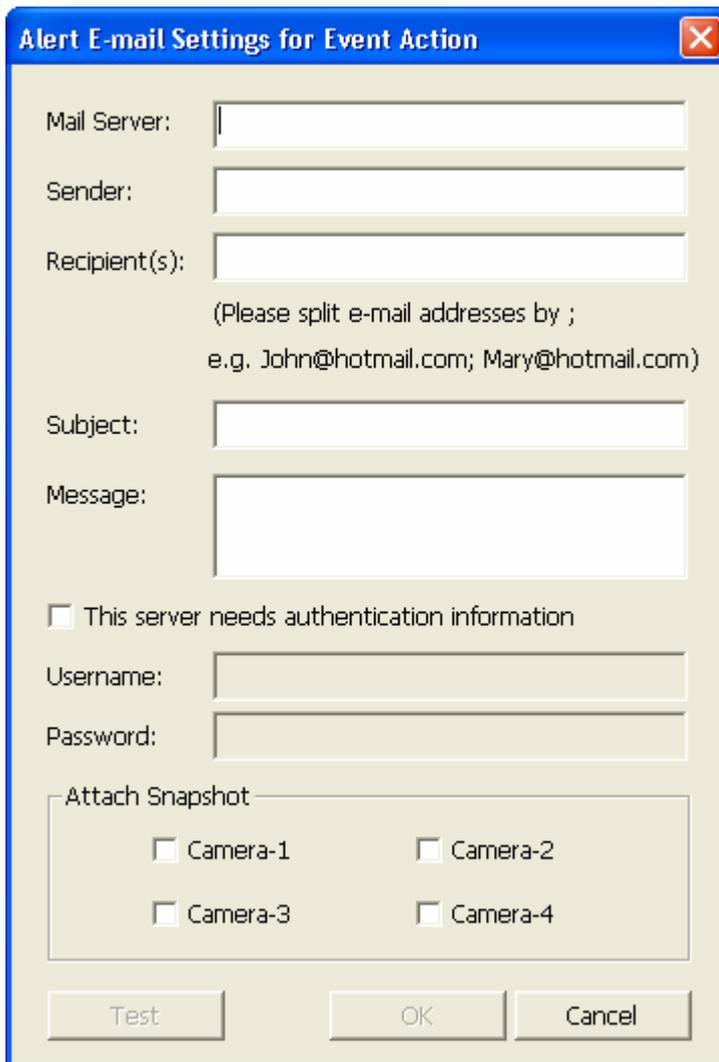
To activate snapshot function of particular cameras when an event action is detected, enable Snapshot function in Event Action and modify the settings. To specify the storage path for snapshot files, click **Storage Settings**.



When video input loss detection is activated for a channel set for snapshot taking, in case that channel, e.g. channel 1, loses video input, the consecutive channel, channel 2, will replace the primary channel for taking snapshot.

- Alert e-mail

To send an e-mail to particular recipients when an event is detected. Enable this option, enter a valid mail server name, sender and recipient's email address, email subject and other settings. You can select to attach snapshots of particular cameras in the e-mail. Click **Test** to send an e-mail to test the function.

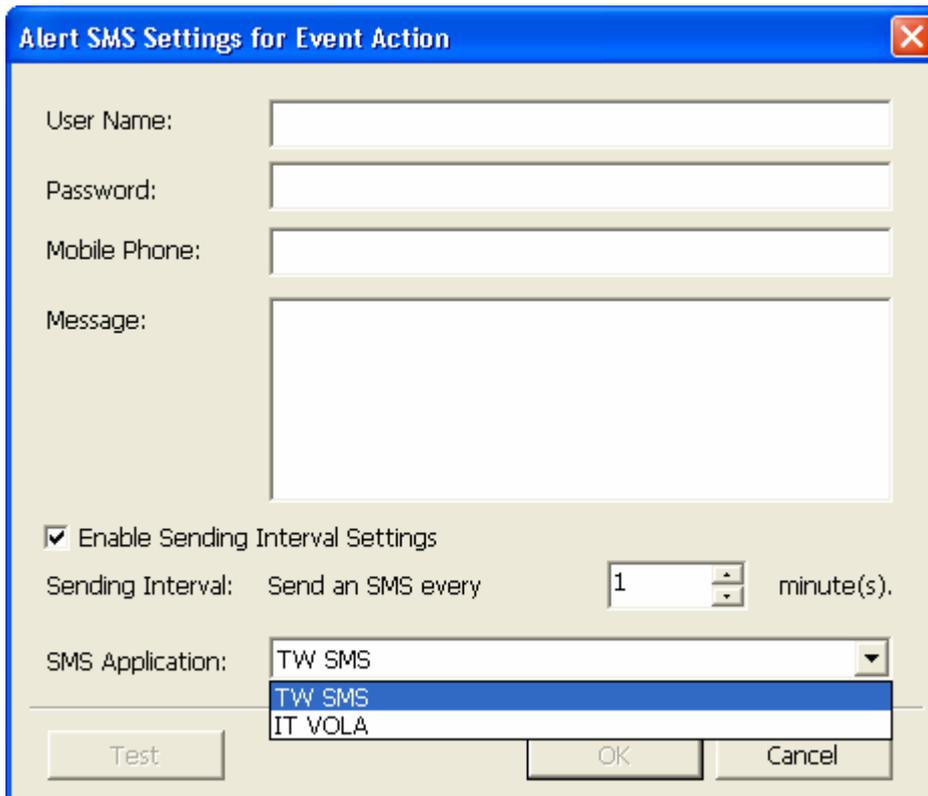


The image shows a dialog box titled "Alert E-mail Settings for Event Action". It contains several input fields and checkboxes. The fields are: "Mail Server:", "Sender:", "Recipient(s):", "Subject:", and "Message:". Below the "Recipient(s):" field is a note: "(Please split e-mail addresses by ; e.g. John@hotmail.com; Mary@hotmail.com)". There are also checkboxes for "This server needs authentication information", "Camera-1", "Camera-2", "Camera-3", and "Camera-4". At the bottom, there are three buttons: "Test", "OK", and "Cancel".

When video input loss detection is activated for a channel set for snapshot taking, in case that channel, e.g. channel 1, loses video input, the consecutive channel, channel 2, will replace the primary channel for snapshot taking. That snapshot will be attached to the alert e-mail.

- Alert SMS (Short Message Service)

When an event action is detected, an SMS message will be sent to a particular phone number. You must purchase SMS package from TW SMS (<http://www.twsms.com/>) or VOLA (<http://www.vola.it/>) to acquire user name and password, and use the points for SMS service. After entering all necessary information, you can send a test message before saving the settings by clicking **Test**.



The dialog box titled "Alert SMS Settings for Event Action" contains the following fields and controls:

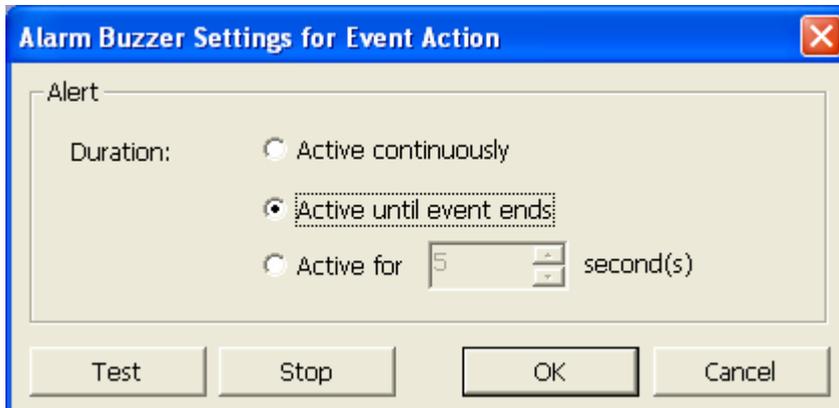
- User Name: [Text Input Field]
- Password: [Text Input Field]
- Mobile Phone: [Text Input Field]
- Message: [Text Area]
- Enable Sending Interval Settings
- Sending Interval: Send an SMS every [1] minute(s).
- SMS Application: [TW SMS] (dropdown menu with options TW SMS and IT VOLA)
- Buttons: Test, OK, Cancel



Important Notice: VioGate must be able to connect to the Internet.

- Alarm buzzer

This is an internal buzzer of the server. Set the alarm, and the buzzer will sound when an event action is detected. To stop the alarm, disable this function.

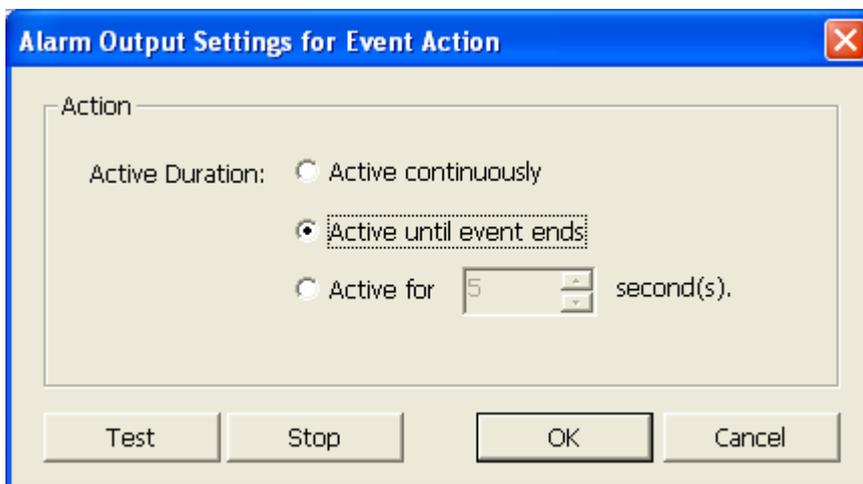


- Notify remote client

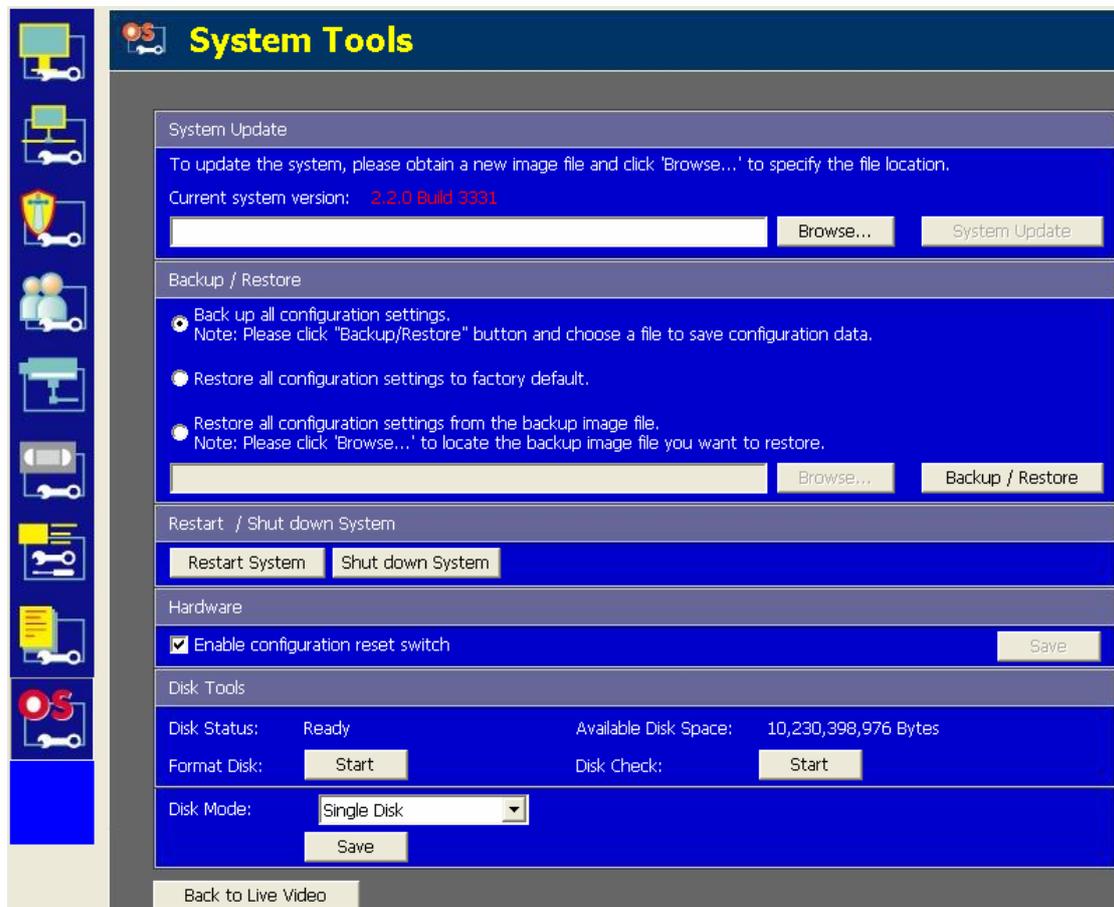
When an event action is detected, a notification icon will pop up on user's screen.

- Alarm output 1, 2, 3, 4

You can connect up to four GPIO devices to VioGate for action detection and set the alert.



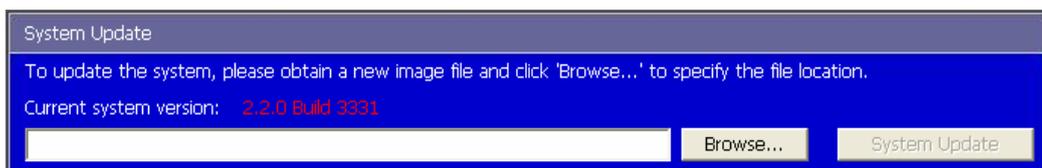
4.11 System Tools



You can use the following system tools to configure VioGate.

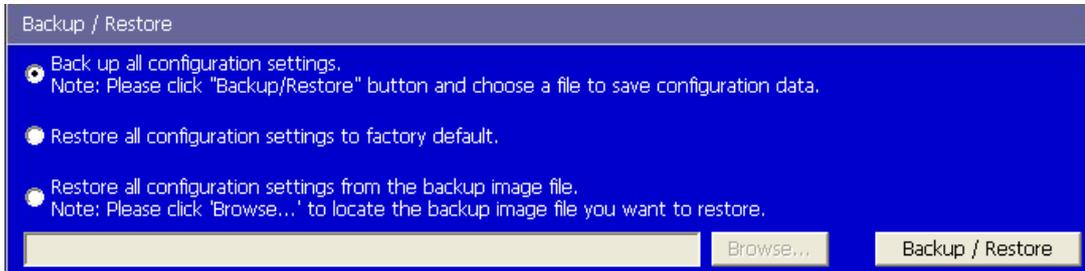
- **System Update**

You can download the latest system firmware from QNAP website (<http://www.qnap.com>) and update your system. Please make sure the firmware is correct and read the relevant release notes before update. (Refer to Chapter 6.3.)



- **Backup/ Restore**

You can back up and restore system settings and user information to your computer, and reset the system to default.



- **Restart/ Shut down System**

You can select to restart or shut down VioGate in this section. When VioGate is recording and the files are saved to the built-in, please shut down the server by this setting so that magnetic head of the hard disk will resume to its place to avoid system malfunction in case of sudden power outage. When the option **Shut down System** is selected, please turn off the power of the server after 30 seconds.



- **Hardware**

This option is enabled by default. When it is enabled, you can press the configuration reset switch of the server for a few seconds until you hear a beep sound, the administrator password and network settings will restore to default. After resetting the system, all connections to VioGate will be allowed.



Warning: If this option is disabled, you will not be able to reset VioGate by pressing the switch.

Hardware

Enable configuration reset switch

- **Disk Tools**

In this section, you can select disk mode: single disk or dual disk linear. You can also view current disk status of VioGate and space available, format and check the disk in this section.

Disk Tools			
Disk Status:	Ready	Available Disk Space:	10,230,398,976 Bytes
Format Disk:	<input type="button" value="Start"/>	Disk Check:	<input type="button" value="Start"/>
Disk Mode:	Single Disk		
	Single Disk		
	Dual Disk Linear		



Note: Dual disk linear can only combines the storage capacity of two disks to lengthen the time for saving recording data but does not provide RAID protection.

5. Use VioGate Player/ Finder/ Master Lite

When selecting to record image files by VioGate, VioGate will automatically save video files in vg3 format to a specified storage device. The video files will be named as **yyyy-mm-dd hh-mm-ss.vg3** (i.e. year-month-date hour-minute-second.vg3). You can play the video files by VioGate Player.

5.1 Use VioGate Player

Launch VioGate CD-ROM in your PC and install VioGate Player. When finished, double click VioGate Player shortcut on desktop to run the program. The following screen will be shown:

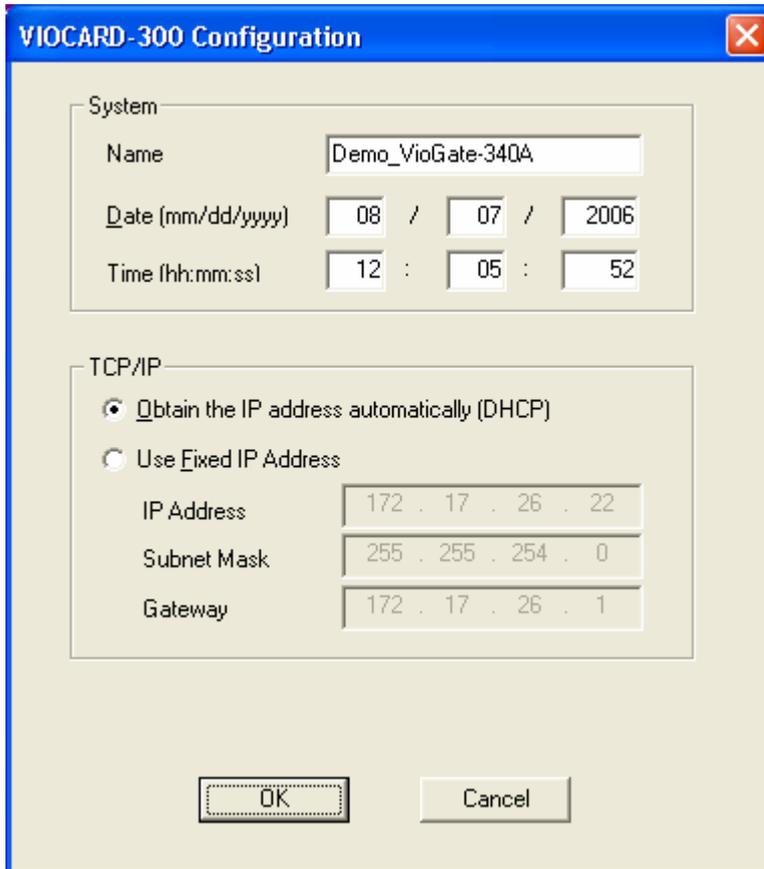


Play Video Files

1. Click  and  to select and remove the video files on the playlist.
2. Use the function buttons at the bottom left corner of the screen to play, pause, and stop video files.
3. Click  or  to adjust the size of playback window.
4. Move the arrow on the slide bar to adjust video playing.

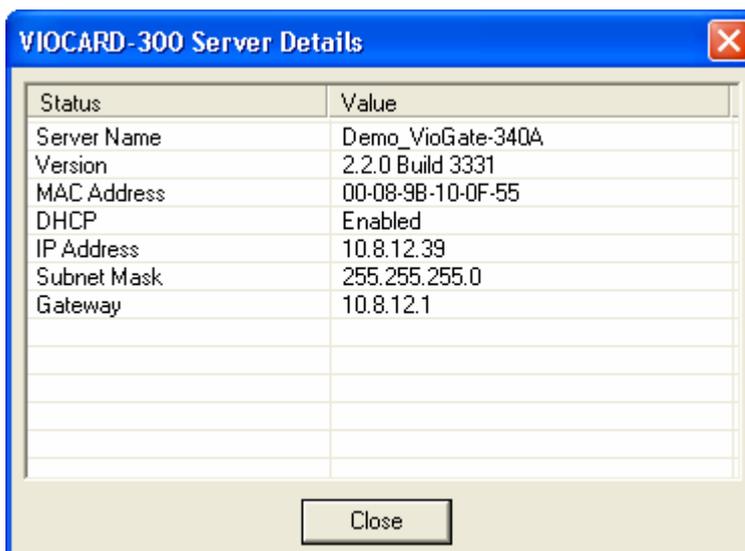


3. Enter the information for VioGate and click **OK**.



The image shows a 'VIOCARD-300 Configuration' dialog box with a blue title bar and a close button. It is divided into two sections: 'System' and 'TCP/IP'. The 'System' section contains three rows of input fields: 'Name' with the text 'Demo_VioGate-340A', 'Date (mm/dd/yyyy)' with '08 / 07 / 2006', and 'Time (hh:mm:ss)' with '12 : 05 : 52'. The 'TCP/IP' section has two radio buttons: the first is selected and labeled 'Obtain the IP address automatically (DHCP)', and the second is labeled 'Use Fixed IP Address'. Below the radio buttons are three rows of IP address input fields: 'IP Address' with '172 . 17 . 26 . 22', 'Subnet Mask' with '255 . 255 . 254 . 0', and 'Gateway' with '172 . 17 . 26 . 1'. At the bottom of the dialog are 'OK' and 'Cancel' buttons.

4. Click **Details** to view the information of VioGate.



The image shows a 'VIOCARD-300 Server Details' dialog box with a blue title bar and a close button. It contains a table with two columns: 'Status' and 'Value'. The table lists the following information:

Status	Value
Server Name	Demo_VioGate-340A
Version	2.2.0 Build 3331
MAC Address	00-08-9B-10-0F-55
DHCP	Enabled
IP Address	10.8.12.39
Subnet Mask	255.255.255.0
Gateway	10.8.12.1

At the bottom of the dialog is a 'Close' button.

5.3 Use VioGate Master Lite

Features of VioGate Master Lite:

- ✓ 1/4/9/12/16/20-channel simultaneous display
- ✓ Supports 32-channel display at maximum
- ✓ Supports picture-in-picture and sequential display
- ✓ Free combination of monitoring screen
- ✓ Remote monitoring high speed dome camera
- ✓ Supports reception of alert messages from remote VioGate
- ✓ Various warning modes

5.3.1 Install VioGate Master Lite

1. Install VioGate Master Lite from VioGate CD-ROM.



2. Select the language of VioGate Master Lite.



3. Double click the VioGate Master Lite shortcut to launch the program.

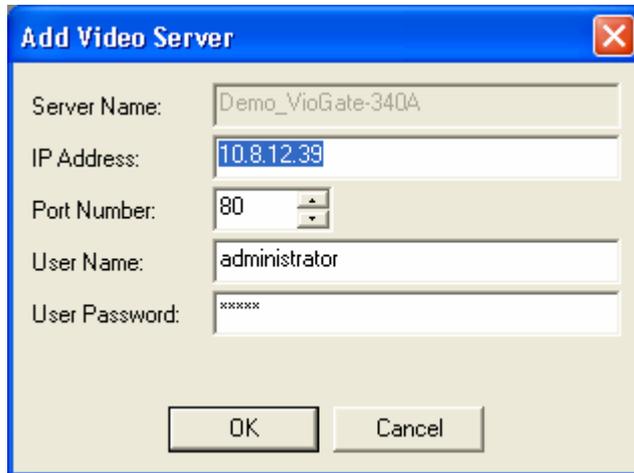


4. Enter the user name and password to login VioGate Master Lite.



5.3.2 Add/ Delete VioGate

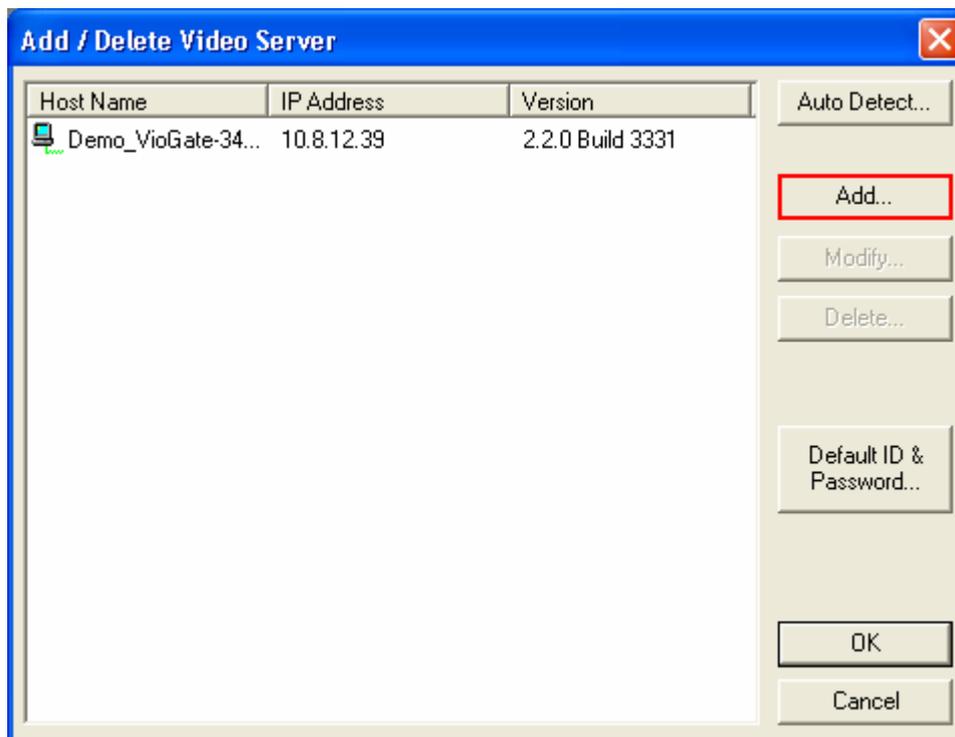
The first time you use VioGate Master Lite, the program will search for all available VioGate servers on the network. Click **OK** to add the server or **Cancel** to add server manually.



The 'Add Video Server' dialog box has a blue title bar with a close button. It contains the following fields and controls:

- Server Name: Demo_VioGate-340A
- IP Address: 10.8.12.39
- Port Number: 80 (with up/down arrows)
- User Name: administrator
- User Password: *****
- Buttons: OK, Cancel

You can also click **Add** to add VioGate server manually.



The 'Add / Delete Video Server' dialog box has a blue title bar with a close button. It features a table and several buttons:

Host Name	IP Address	Version
 Demo_VioGate-34...	10.8.12.39	2.2.0 Build 3331

Buttons on the right side:

- Auto Detect...
- Add..** (highlighted with a red box)
- Modify...
- Delete...
- Default ID & Password...
- OK
- Cancel

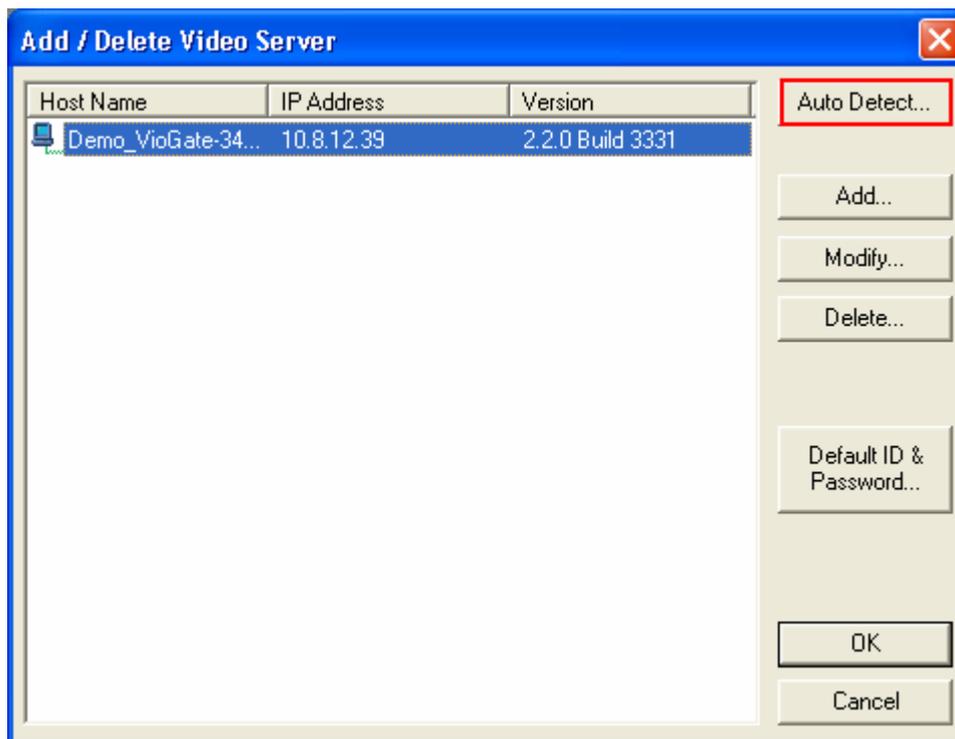
Enter the IP address or domain name, port number, user name and password to add the server for VioGate Master monitoring.



The 'Add Video Server' dialog box contains the following fields and controls:

- Server Name: [Empty text box]
- IP Address: [Empty text box]
- Port Number: [Spin box with value 80]
- User Name: [Text box containing 'administrator']
- User Password: [Text box containing 'xxxxxx']
- Buttons: OK, Cancel

After adding video server, the following screen will appear. You can add, modify or delete VioGate connection. Click **Auto Detect** to search for VioGate in the LAN.



The 'Add / Delete Video Server' dialog box features a table and several buttons:

Host Name	IP Address	Version
 Demo_VioGate-34...	10.8.12.39	2.2.0 Build 3331

Buttons on the right side of the dialog:

- Auto Detect... (highlighted with a red box)
- Add...
- Modify...
- Delete...
- Default ID & Password...
- OK
- Cancel

VioGate Master Lite will use admin as the default user name and password to login VioGate. To change the login name and password, click **Default ID & Password**. Enter the new user name and password, click **Apply All** to apply the settings to all servers or click **OK** to save the settings for the selected VioGate.



Default ID & Password

When you input a default ID & Pw here, these same data will be assigned to all newly added servers automatically.

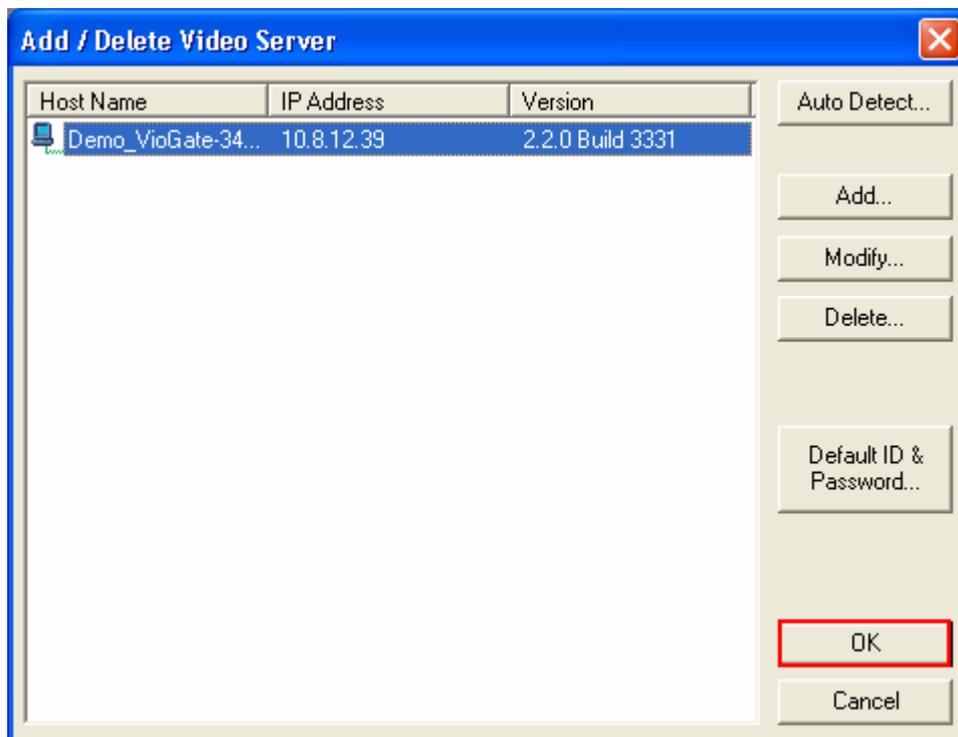
If you wish to replace the ID Pw of all existing servers with this one, please click the "Apply All" button.

User Name: administrator

User Password: *****

OK Cancel Apply All

To delete a server, select a server on the list and click **Delete**. Click **OK** to start using VioGate Master Lite.



Add / Delete Video Server

Host Name	IP Address	Version
Demo_VioGate-34...	10.8.12.39	2.2.0 Build 3331

Auto Detect...

Add...

Modify...

Delete...

Default ID & Password...

OK

Cancel

You can then use VioGate Master to manage multiple VioGate servers.

Add/Delete Server

Admin/ User Mode

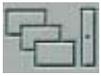
Master Lite Version

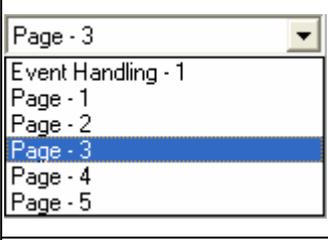
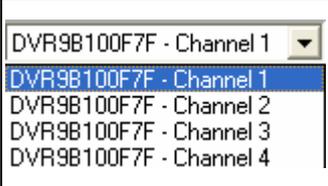


Master Lite Settings

5.3.3 Display Mode

Select the display mode on VioGate Master Lite. You can use the buttons on the left to adjust the display.

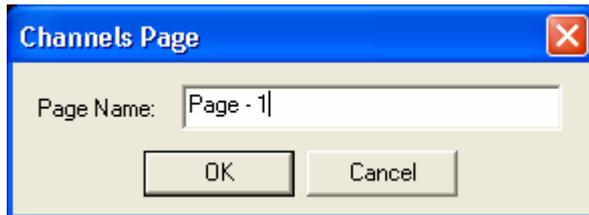
Field	Description
	View single channel
	Quad mode: Display 4 channels in one window.
	Picture-in-picture mode: Click this button to display viewing channels to main screen and sub-screens. Click  to adjust the settings.
	9-channel mode: Display 9 channels in one window.
	12-channel mode: Display 12 channels in one window.
	16-channel mode: Display 16 channels in one window.
	20-channel: Display 20 channels in one window.
	Click  to select other display mode: 1x2, 2x4, 3x6, 4x8, 5x8
	Adjust window size: Select a single channel and click this button to enlarge or shrink the view window.
	Full-screen mode: Click this button to switch to full screen. Press Esc to return to normal viewing.
	Sequential mode: Click this button to view monitoring channels in sequence. Click  to adjust the settings.

Field	Description
	<p>If there are multiple pages of channels, select the page from the drop-down menu. VioGate Master also provides event handling page to display channels which event handling is triggered.</p>
	<p>To view particular channel, click on a channel window and select the channel on the drop-down menu.</p>

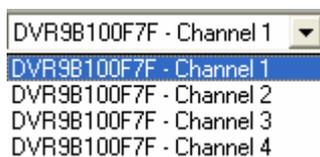
- **Add Channel Page**

1. To add a channel page, select a display mode, e.g.  (4-channel) and click .

2. Enter the page name.

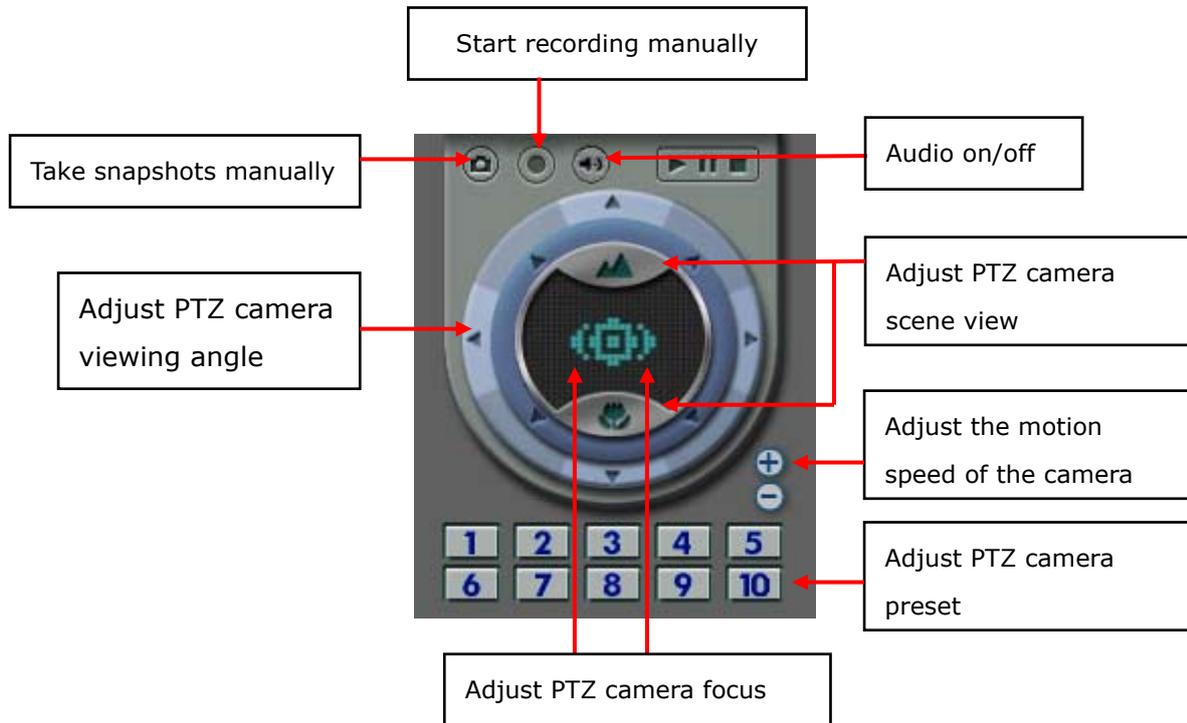


3. Click on a channel window and select the channel from the drop-down menu. Then select other channels for other channel windows.



- To change the name of the channel page, click .
- To delete the channel page, click .

Other buttons



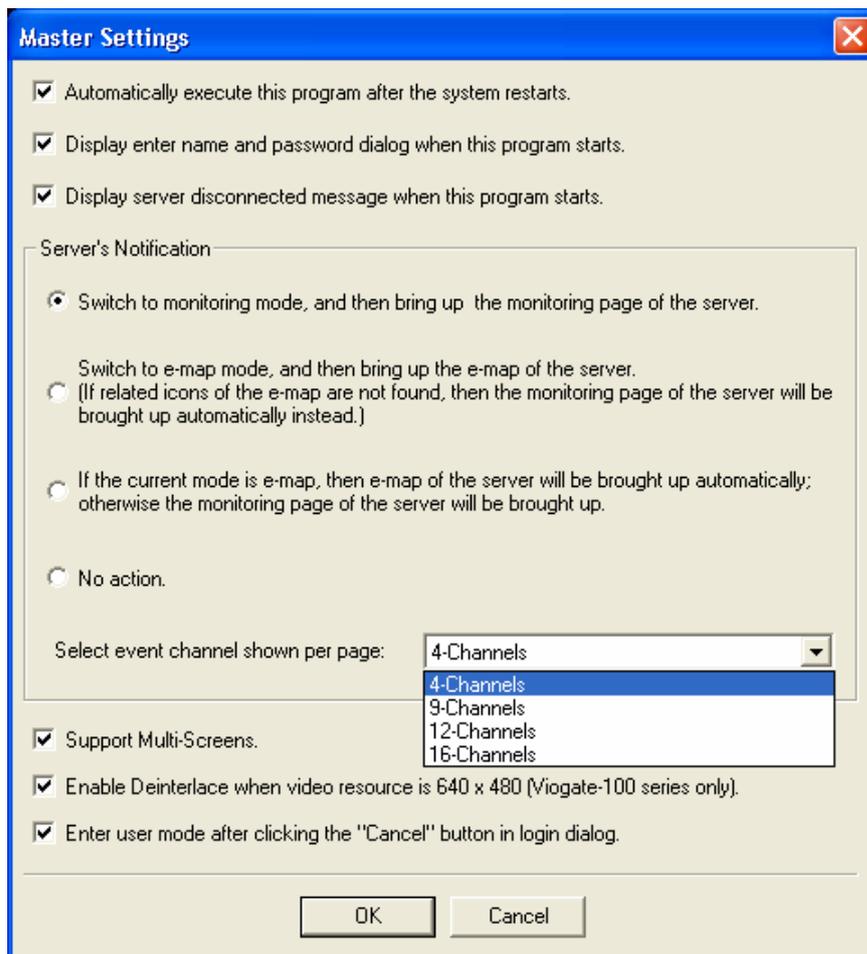
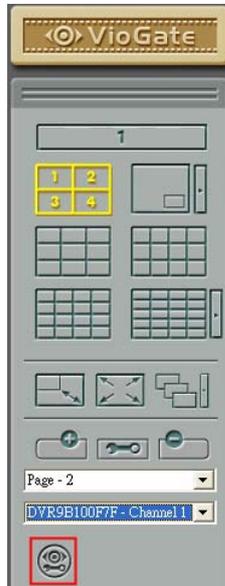
: Sort channel order



: Delete the selected channel

5.3.4 VioGate Master Lite Settings

Click  to configure VioGate Master Lite settings.



5.3.5 Admin/ User Mode

Click  to switch from admin mode to user mode. In user mode , users can only view channels and electronic map, but do not have the right to modify viewing channel and page, and Master Lite settings.



To return to admin mode, click  and enter the user name and password. ◦

To change the user name and password, click the button  next to . Enter the new user name and password.

User Name/Password Setting	
User Name:	admin
Password:	*****
Retype password:	*****
OK Cancel	

6. Maintenance

VioGate is specially designed to run 24 x 7. The server also provides a dedicated power protection system to protect against system crash caused by power outage. Please read this section carefully for information of system maintenance.

6.1 Restart/ Shut down VioGate

To shut down or restart VioGate, go to **System Tools** page. Follow the instructions to restart or shut down the system. You can also shut down the system by pressing the power button of the server.



Note: When recording is enabled, data will be written to hard disk continuously. Do not shut down power supply directly or it will cause disk damage. Any improper operation of the system will lead to data damage or loss.

System Tools

System Update

To update the system, please obtain a new image file and click 'Browse...' to specify the file location.

Current system version: **2.2.0 Build 3331**

Backup / Restore

- Back up all configuration settings.
Note: Please click "Backup/Restore" button and choose a file to save configuration data.
- Restore all configuration settings to factory default.
- Restore all configuration settings from the backup image file.
Note: Please click 'Browse...' to locate the backup image file you want to restore.

Restart / Shut down System

Hardware

Enable configuration reset switch

Disk Tools

Disk Status: Ready Available Disk Space: 10,230,398,976 Bytes

Format Disk: Disk Check:

Disk Mode:

6.2 Reset Administrator Password & Network Settings

If you forget the administrator password, you will not be able to login VioGate and perform system administration. To reset the administrator password and network configuration of VioGate to default, press the configuration reset button of VioGate for a few seconds until a beep sound is heard. The network configuration will be reset.

Default administrator name and password of VioGate:

User name: administrator
Password: admin



Warning: If the configuration reset button is disabled in **System Tools—Hardware Settings** page, you will not be able to reset administrator password and network configuration by pressing the reset switch.

When allowed connections are set in IP Security and configuration reset switch is disabled, you must remember the allowed IP addresses, user account and password. Otherwise you will not be able to find the correct IP address of VioGate and reset the system. VioGate must be sent to QNAP to reset configuration and all data on the server will be lost.

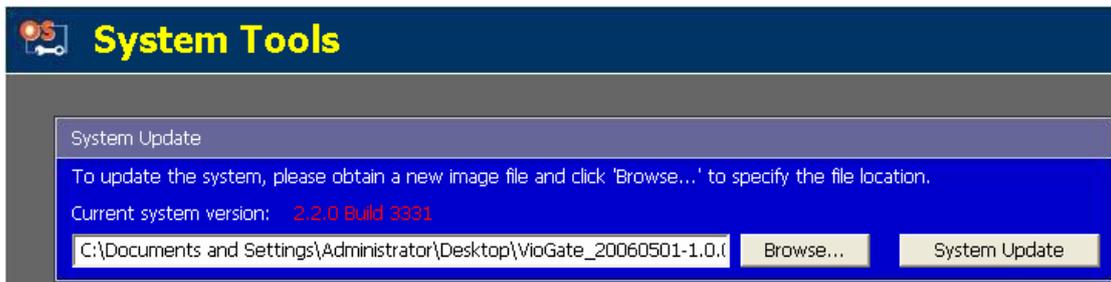
The screenshot shows the 'System Tools' interface with the following sections:

- System Update:** Includes a text box for the image file location, a 'Browse...' button, and a 'System Update' button. Current system version is 2.2.0 Build 3331.
- Backup / Restore:** Includes three radio button options: 'Back up all configuration settings', 'Restore all configuration settings to factory default', and 'Restore all configuration settings from the backup image file'. Each option has a corresponding note. A 'Browse...' button and a 'Backup / Restore' button are also present.
- Restart / Shut down System:** Includes 'Restart System' and 'Shut down System' buttons.
- Hardware:** This section is highlighted with a red box and contains a checked checkbox for 'Enable configuration reset switch' and a 'Save' button.

6.3 System Update

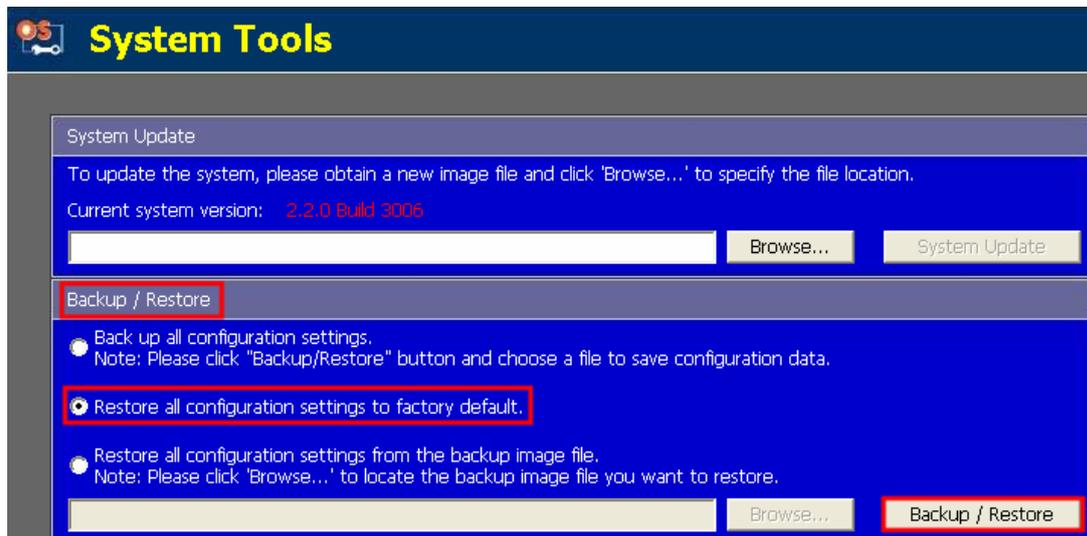
When you have successfully registered the product, you will receive email notification on firmware update from QNAP. You can update the system and enjoy the new functions free. To update VioGate firmware version, follow the steps below:

1. Download the release notes of the same version as the firmware from QNAP website <http://www.qnap.com>. Read the release notes carefully to make sure you need to upgrade the firmware.
2. Before upgrading system firmware, back up all disk data on the server to avoid any potential data loss during system update.
3. Open an IE browser and connect to VioGate. Login VioGate as an administrator.
4. Go to "System Tools–System Update" page. Make sure you have obtained the latest firmware version. Browse and select the appropriate image file and upload it to VioGate. Then click **System Update**.



6.4 Restore Configuration

To restore VioGate to factory default, open an IE browser and connect to the server. Go to "System Tools–Backup/Restore" page and select **Restore all configuration settings to factory default**. Then click **Backup/Restore**.



Appendix A Dynamic Domain Name Registration

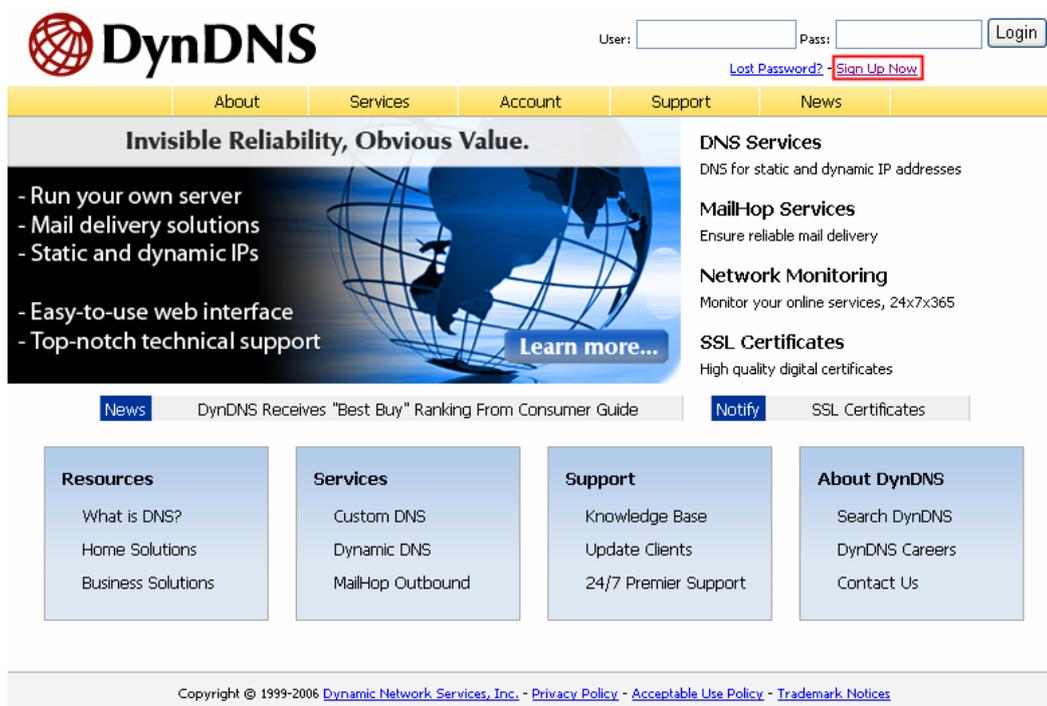
VioGate supports DDNS service provided by DynDNS, ODS, DHS, and DyNS. For example, you can go to the web site of DynDNS (<http://www.dyndns.org/>) and register for a dynamic domain name. Configure and activate DDNS service, then the Internet users will be able to access your VioGate via this dynamic domain name. When the ISP assigns a new WAN IP address, VioGate will update the new address to the DynDNS server automatically.

Registration Procedure

Please follow the steps below to register a dynamic domain name.

 **Note:** This guide is for reference only. If there are any changes, please refer to the instructions or documents on the web site.

1. Open the browser and connect to <http://www.dyndns.org/>. Click **Sign Up Now** to begin registration.



The screenshot shows the DynDNS website homepage. At the top left is the DynDNS logo. To the right are input fields for 'User:' and 'Pass:' with a 'Login' button. Below these are links for 'Lost Password?' and 'Sign Up Now'. A yellow navigation bar contains links for 'About', 'Services', 'Account', 'Support', and 'News'. The main content area features a large banner with the headline 'Invisible Reliability, Obvious Value.' and a list of benefits: '- Run your own server', '- Mail delivery solutions', '- Static and dynamic IPs', '- Easy-to-use web interface', and '- Top-notch technical support'. To the right of the banner are sections for 'DNS Services', 'MailHop Services', 'Network Monitoring', and 'SSL Certificates'. Below the banner is a 'News' section with a link to 'DynDNS Receives "Best Buy" Ranking From Consumer Guide' and a 'Notify' button for 'SSL Certificates'. At the bottom, there are four columns of links: 'Resources' (What is DNS?, Home Solutions, Business Solutions), 'Services' (Custom DNS, Dynamic DNS, MailHop Outbound), 'Support' (Knowledge Base, Update Clients, 24/7 Premier Support), and 'About DynDNS' (Search DynDNS, DynDNS Careers, Contact Us). The footer contains copyright information: 'Copyright © 1999-2006 Dynamic Network Services, Inc. - Privacy Policy - Acceptable Use Policy - Trademark Notices'.

2. Select to agree to the use policy.

User: Pass:
[Lost Password?](#) - [Sign Up Now](#)

[About](#) | [Services](#) | [Account](#) | [Support](#) | [News](#)

My Account

- [Create Account](#)
- [Login](#)
- [Lost Password?](#)

Create Account

Please complete the form below to create your account. You will receive an e-mail containing instructions to activate your account. If you do not follow these directions within 48 hours, you will need to recreate your account.

Search DynDNS

Acceptable Use Policy

Policy Last Modified: February 6, 2006

1. ACKNOWLEDGMENT AND ACCEPTANCE OF TERMS OF SERVICE

All services provided by Dynamic Network Services, Inc. ("DynDNS") are provided to you (the "Member") under the Terms and Conditions set forth in this Acceptable Use Policy ("AUP") and any other operating rules and policies set forth by DynDNS. The AUP comprises the entire agreement between the Member and DynDNS and supersedes all prior agreements between the parties regarding the subject matter contained herein. BY COMPLETING THE REGISTRATION PROCESS AND CLICKING THE "Accept" BUTTON, YOU ARE INDICATING YOUR AGREEMENT TO BE BOUND BY ALL OF THE TERMS AND CONDITIONS OF THE AUP.

2. DESCRIPTION OF SERVICE

I have read and agree to the Acceptable Use Policy above:

I understand that each Member may have only one (1) free account, and acknowledge that any creation of multiple free accounts will result in the termination of all of my accounts:

3. Enter the user name, email address and password to create an account for DDNS service. Please verify your email address to receive the confirmation message from the server. Then click **Create Account** to proceed.

Username

Username:

Your username will be used to login to your account and make changes.

E-mail Address

E-mail Address: Confirm E-mail Address:

The e-mail address you enter must be valid. Instructions to activate your account will be sent to the e-mail address provided. You must keep this address current. Any accounts with invalid e-mail addresses are subject to removal without warning. We do not sell our account information to anyone. Read more about our [privacy policy](#).

Password

Password: Confirm Password:

The password you enter will be used to access your account. It must be more than 5 characters and cannot be the same as your username. Do not choose a password that is a common word, or can otherwise be easily guessed.

Mailing Lists

DynDNS maintains a number of mailing lists designed to keep our users informed about product announcements, client development, our company newsletter, and our system status. Please use the checkboxes below to alter your subscription preference. Your subscription preference may be changed at any time through the [account settings](#) page.

Mailing List	Subscribe
Announce	<input type="checkbox"/>
MailHop	<input type="checkbox"/>
system-status	<input type="checkbox"/>

Optional Information

How did you hear about us: Details:

Providing this information will help us to better understand our customers, and tailor future offerings more accurately to your needs. Thanks for your help!

Copyright © 1999-2006 [Dynamic Network Services, Inc.](#) - [Privacy Policy](#) - [Acceptable Use Policy](#) - [Trademark Notices](#)

4. When your account is successfully created, a confirmation message will be sent to your e-mail address. Please follow the instructions in the e-mail to activate your account within 48 hours. When you have finished the confirmation process, you can apply for your own dynamic domain name. Please refer to the website of the DDNS provider for more information.

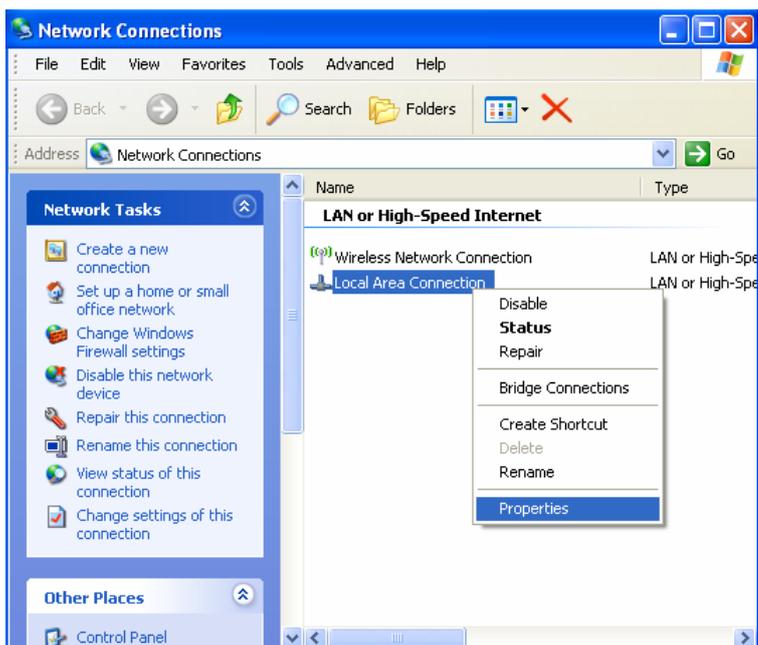
Appendix B Connect to VioGate via PC

To access VioGate by a PC, connect the PC to VioGate by a crossover cable. Configure the network settings of your PC and VioGate in the same network domain. To connect VioGate by default IP address, please configure the network settings of your PC as below:

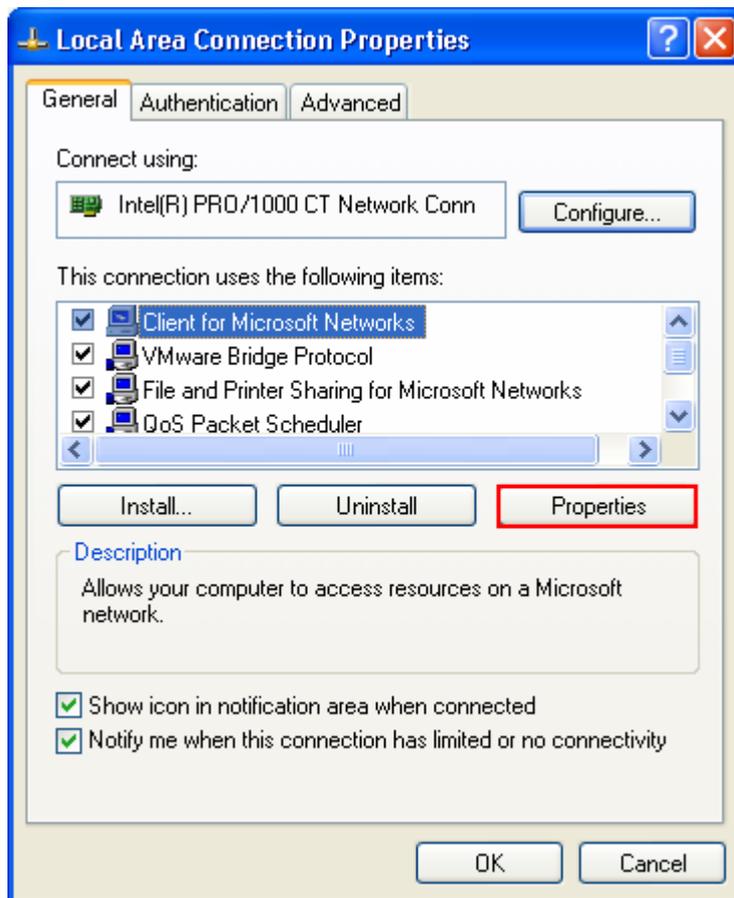
IP address: 192.168.0.2
Subnet Mask: 255.255.255.0

Please follow the steps below to access VioGate by a PC. The example is based on Windows® XP.

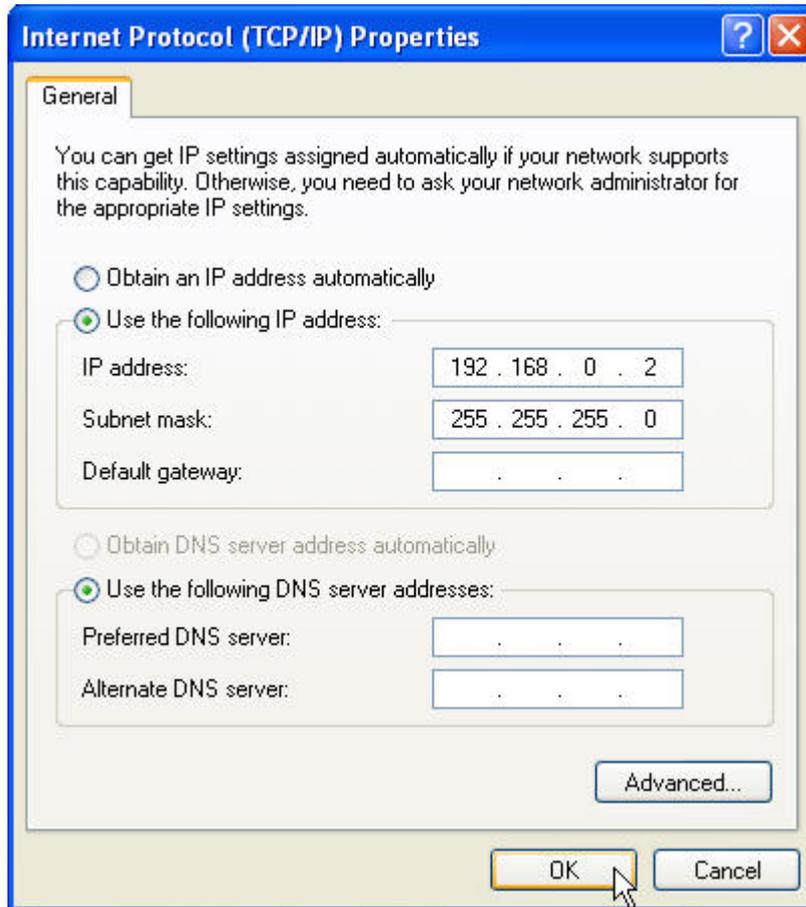
1. Right click "My Network Places" shortcut on the desktop, and click "Properties". Right click your network device, and click "Properties".



2. Highlight Internet Protocol (TCP/IP), and click "Properties".



3. Set the IP address and subnet mask as the following:



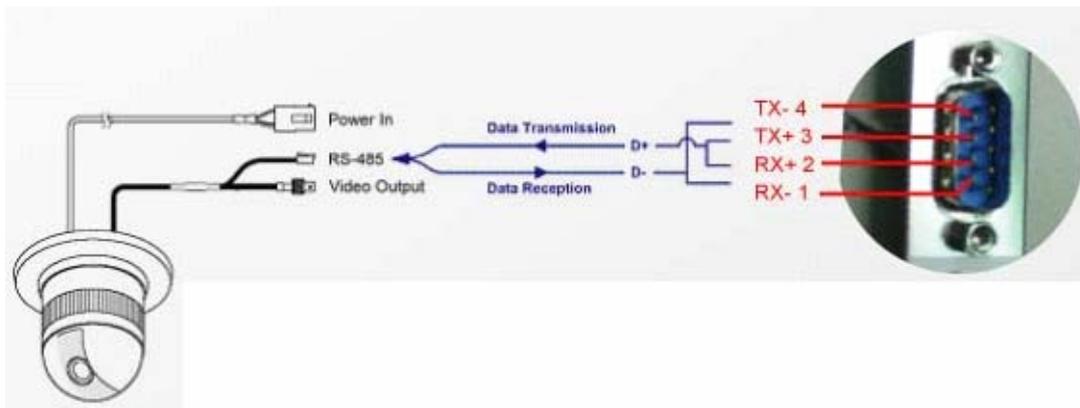
4. Restart your PC. Open an IE browser and enter the IP address of VioGate **192.168.0.1**.

Upon successful connection to VioGate, enter the default user name and password to login the administration page:

User name: administrator
Password: admin

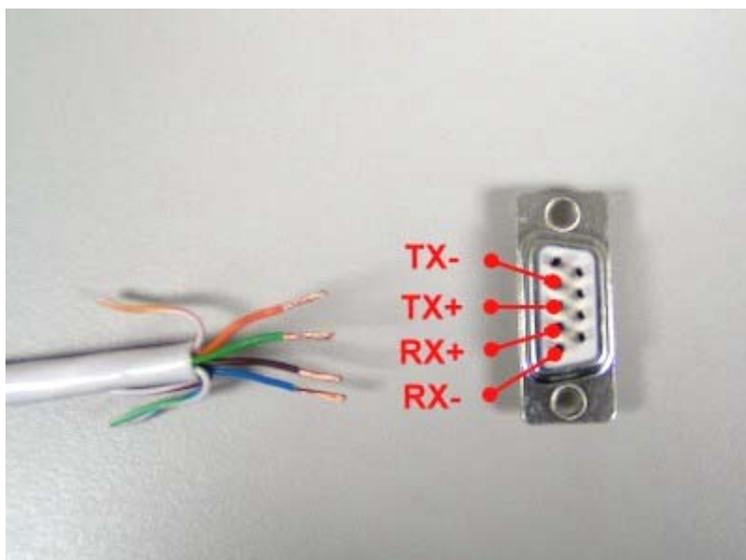
Appendix C Connect to VioGate via RS-422/ 485 Port

To connect a PTZ camera to VioGate using the RS-422/485 port, you will need a cable and a D-Type 9-pin connector. The four connectors for data transfer are shown in the picture below.

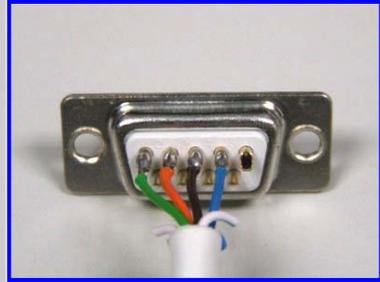
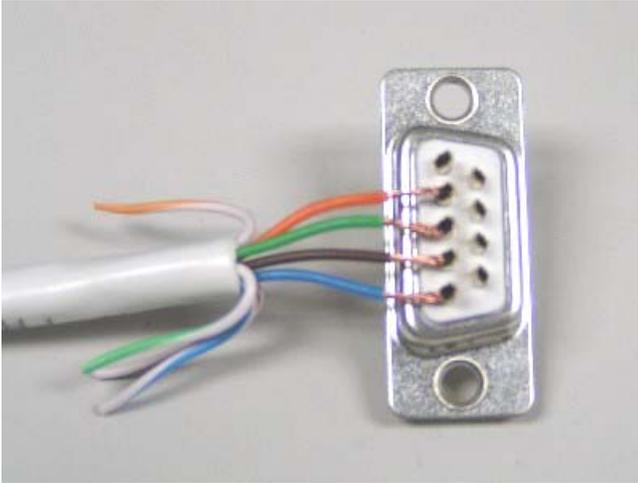


To make a communication control wire, follow the steps below (*):

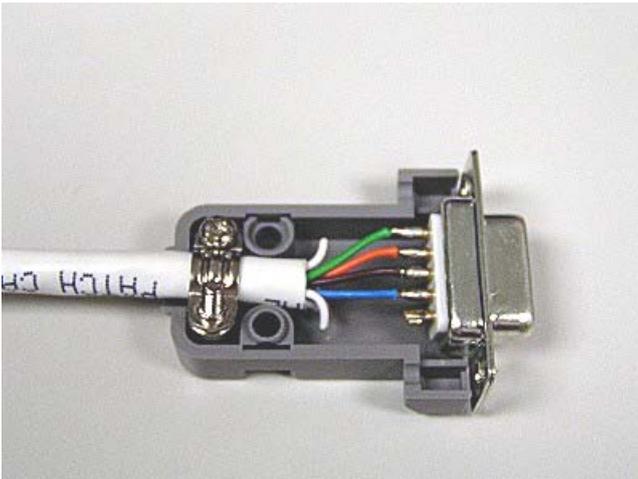
1. Prepare a D-Type 9-pin female header and the wires necessary for RS-485. Cat.5E network cable will be used in this example. Take four wires for data transfer.



2. Weld the wires to the D-Type 9-pin female header.



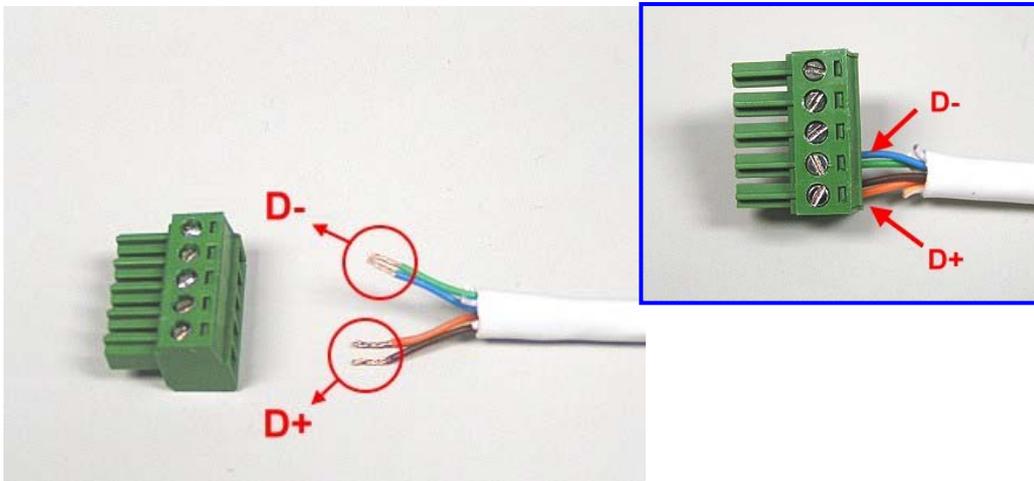
3. Cover the header carefully.



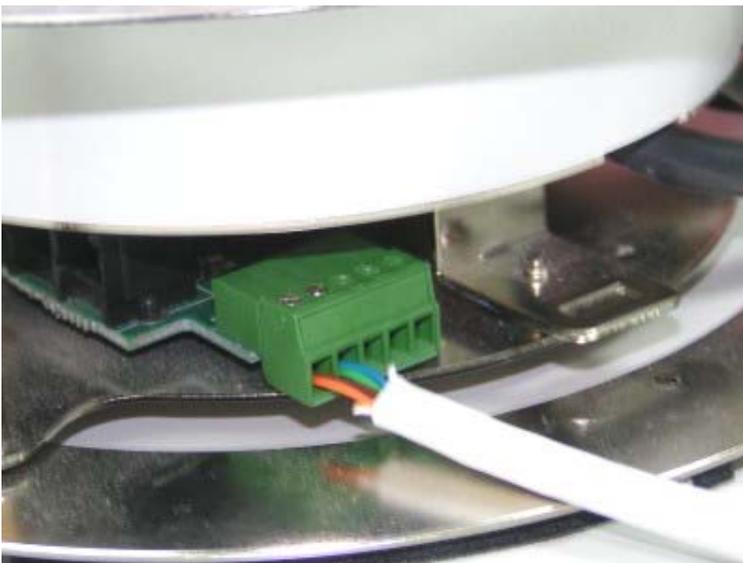
4. VioGate header is made.



5. Connect TX+ and RX+ with twist pair (***) as data output D+. Connect TX- and RX- as data input D-.



6. Connect D+ and D- to the RS-485 data control input (***) of high speed dome camera.



Note:

* Sony VISCA uses RS-232 port. This control wire is not applicable.

** For the details of communication control wires compatible with RS-485, please refer to the recommended wire list in the user manual.

*** DynaColor D7720A is used as an example. The RS-485 design varies among different high speed dome providers. Please refer to the user manual of the camera.

High Speed Dome Recommendation List:

Protocol Name	Interface	Preset Mode	Manual Focus
DynaColor 7720A	RS-485	×	×
Sony VISCA VI-D30	RS-232	×	×
Merit Lilin	RS-485	○	×
Panasonic WV-CS564	RS-485	○	×
Honeywell GC-755	RS-485	×	×
Honeywell GC-655	RS-485	×	×
Computar YCH-02	RS-485	○	○
VideoTrec	RS-485	○	×
VideoTrec SP-8006W	RS-485	○	×
Pelco D-Type	RS-485/422	○	○

For the most updated information of recommended high speed dome models, please visit <http://www.qnap.com>.

Appendix D PTZ Control Information

1. VioGate supports three types of PTZ control service: Manual Mode, Auto Mode and Preset Mode.
2. All PTZ protocols support Manual Mode. You can use PTZ control panel on the bottom left of monitoring page to control PTZ device of the active channel.
3. If PTZ control mode is set as Auto Mode or Preset Mode, you cannot use PTZ control panel to control PTZ device on the administration page via IE browser.
4. Only one protocol supports Auto Mode, i.e. DynaColor. PTZ device will rotate 360° automatically in this mode.
5. Some protocols support "Preset mode". In this mode, up to 10 preset positions can be stored for camera surveillance. Monitoring screen of the preset positions will be displayed in order. Please refer to the list below for further information:

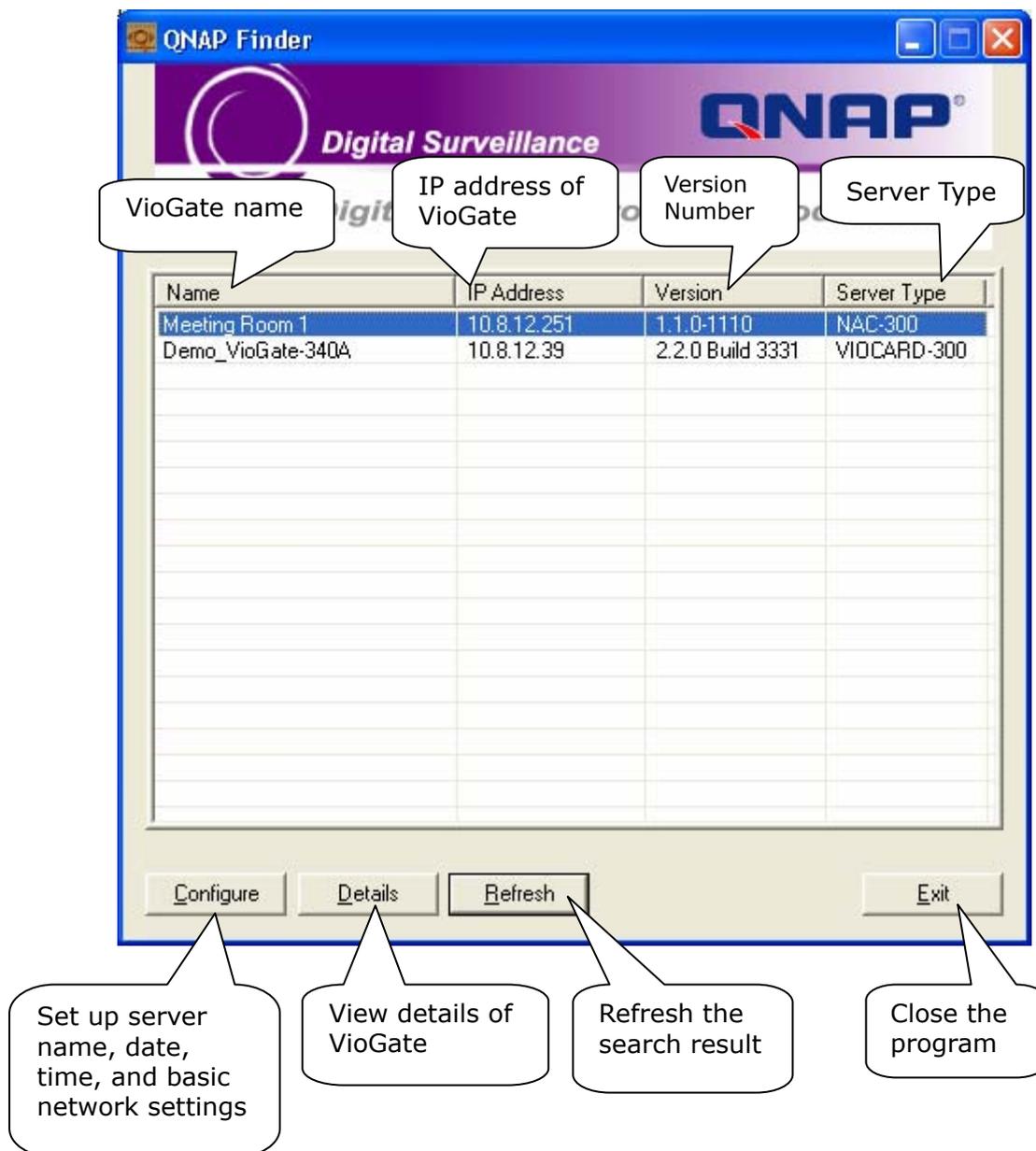
Supported PTZ Protocols Information:

Protocol Name	Interface	Baud Rate (bps)	Start Bits	Stop Bits	Data Bits	Parity Check	Manual Focus Support	Auto Mode Support	Preset Mode Support
Computar YCH-02	RS-485	4800	1	1	8	None	Yes	No	Yes
DynaColor D7720A	RS-485	9600	1	1	8	None	No	Yes	No
Honeywell GC-655	RS-485	9600	1	1	8	None	No	No	No
Honeywell GC-755	RS-485	9600	1	1	8	None	No	No	No
Merit Lilin	RS-485	9600	1	1	8	None	Yes	No	Yes
Panasonic WV-CS564	RS-485	9600	1	1	8	None	No	No	Yes
Pelco D-Type	RS-485/ RS-422	2400	1	1	8	None	Yes	No	Yes
Sony VISCA EVI-D30	RS-232	9600	1	1	8	None	No	No	No
VideoTrec	RS-485	9600	1	1	8	None	No	No	Yes
VideoTrec SP-8006W	RS-485	9600	1	1	8	None	No	No	Yes

For the most updated information of supported PTZ protocols, please visit <http://www.qnap.com>.

Appendix E QNAP Finder

QNAP Finder is a dedicated program provided by QNAP to search for all available VioGate servers in the local network. QNAP Finder shows all surveillance servers in the local network and displays the basic information such as server name, workgroup and IP address. You may also set up the server name, date, time, and basic network configuration of the surveillance server via this program. To use QNAP Finder, you can run the program in VioGate CD-ROM.



QNAP Finder

Digital Surveillance **QNAP**
Digitalized ■ Networked ■ Modularized

Name	IP Address	Version	Server Type
Meeting Room 1	10.8.12.251	1.1.0-1110	NAC-300
Demo_VioGate-340A	10.8.12.39	2.2.0 Build 3331	VIOCARD-300

VIOCARD-300 Server Details

Status	Value
Server Name	Demo_VioGate-340A
Version	2.2.0 Build 3331
MAC Address	00-08-9B-10-0F-55
DHCP	Enabled
IP Address	10.8.12.39
Subnet Mask	255.255.255.0
Gateway	10.8.12.1

Buttons: **Configure** **Details** **Refresh** **Exit**

You may obtain information such as server name, software version, MAC address, and basic network settings.

Login Administrator

Administrator Name : administrator

Administrator Password : *****

Buttons: **OK** **Cancel**

Enter the administrator name and password. Then configure network settings.

VIOCARD-300 Configuration

System

Name: Demo_VioGate-340A

Date (mm/dd/yyyy): 08 / 07 / 2006

Time (hh:mm:ss): 10 : 47 : 55

TCP/IP

Obtain the IP address automatically (DHCP)

Use Fixed IP Address

IP Address: 172 . 17 . 26 . 22

Subnet Mask: 255 . 255 . 254 . 0

Gateway: 172 . 17 . 26 . 1

Buttons: **OK** **Cancel**

Appendix F Use VioGate with IP Sharing Router

Configure the virtual server settings of an IP sharing router connecting to VioGate: A fixed IP address mapping approach.

If VioGate is in the same network as an IP sharing router using a fixed IP address, you can assign certain ports of the virtual server on the IP sharing router to access VioGate. Assign two different ports for monitoring live video on VioGate and playing the recorded video files.

In this case, configure the virtual server settings of the router as below:

- **Monitor live video**
You can assign any available port on the IP sharing router to map to port 80 of VioGate.
- **Play recorded video files**
You can assign port 21 only on the IP sharing router to map to port 21 of VioGate.

Appendix G GPIO Connections

- **Connections for Input/ Output Devices**



Description of Output Connector (From left to right)

Cm1	Common 1
NC1	Normal Close 1
NO1	Normal Open 1
Cm2	Common 2
NC2	Normal Close 2
NO2	Normal Open 2
Cm3	Common 3
NC3	Normal Close 3
NO3	Normal Open 3
Cm4	Common 4
NC4	Normal Close 4
NO4	Normal Open 4

Description of Input Connector (From left to right)

In1	Input 1
Gnd	Ground 1
In2	Input 2
Gnd	Ground 2
In3	Input 3
Gnd	Ground 3
In4	Input 4
Gnd	Ground 4

- **Specifications for General Inputs**

The general inputs can take DC voltage from 0~24V. Voltage above 24V is not recommended.

Input	Voltage Range	
5 VDC	Logic 0	0.5V Max
	Logic 1	4.5V Min
12 VDC	Logic 0	0.5V Max
	Logic 1	11V Min

- **Specifications for General Outputs**

Relay Contact Ratings

Contact form	1 FORM C (SPDT)
Contact capacity	coil = 0.36W
Resistive load (cos θ = 1)	1A/125 VAC 2A/24 VDC
Inductive load (cos θ = 0.4 L/R = 7 msec)	0.3A/30 VDC
Rated carrying current	2A
Max allowable voltage	AC 120V. DC 60V
Max allowable current	2A
Max allowable power	48W
Contact material	Ag Alloy

Relay Coil Specifications (At 20° C)

Coil Voltage	Normal Voltage (VDC)	Normal Current (mA)	Coil Resistance (ohm \pm 10%)
5V	5V	66.7	75
Power Consumption (W)	Pull-in Voltage (VDC)	Drop-out Voltage (VDC)	Max Allowable Voltage (VDC)
About 0.36W	75% max 3.75V	10% min 0.5V	110% 5.5V

Please set up the external device properly before plugging the connector of the device to VioGate.