

Vivotek ST2403 Software User's Manual

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Manual Revision:	2.0
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System Hardware Requirements

Before installing the ST2403 application software, make sure your system has the following recommended minimum hardware requirements.

Recommended minimum system hardware requirements

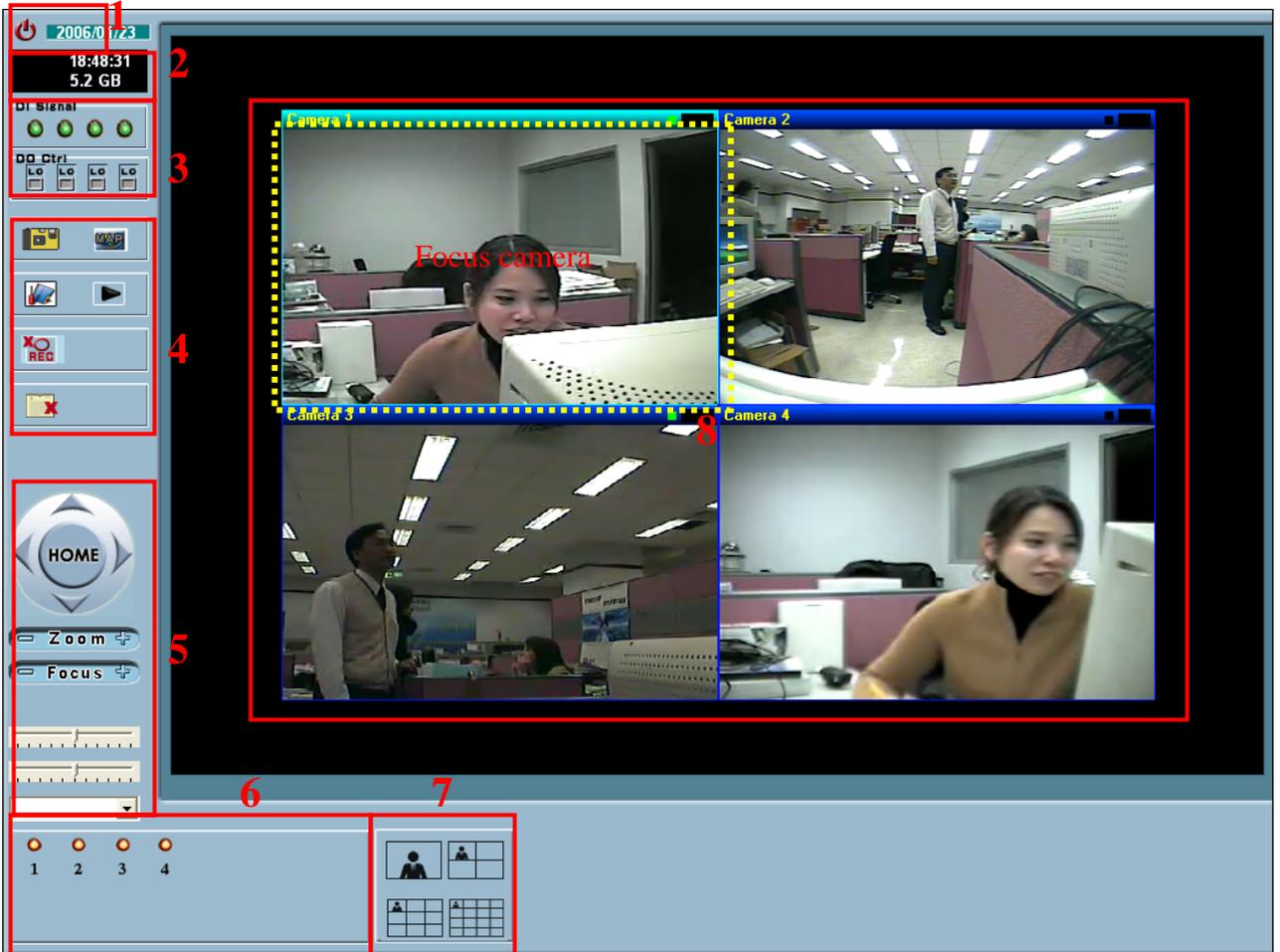
OS:	MS Windows 2000/XP
CPU:	Intel 2.0 GHz Pentium IV or higher; AMD Athlon or higher
SDRAM:	256 MB SDRAM; 512 MB SDRAM or higher for 16 channels
Hard disk:	40 GB
Display Chip:	nVidia, GeForce series with 32 MB Display memory ATI Radeon series with 32 MB Display memory

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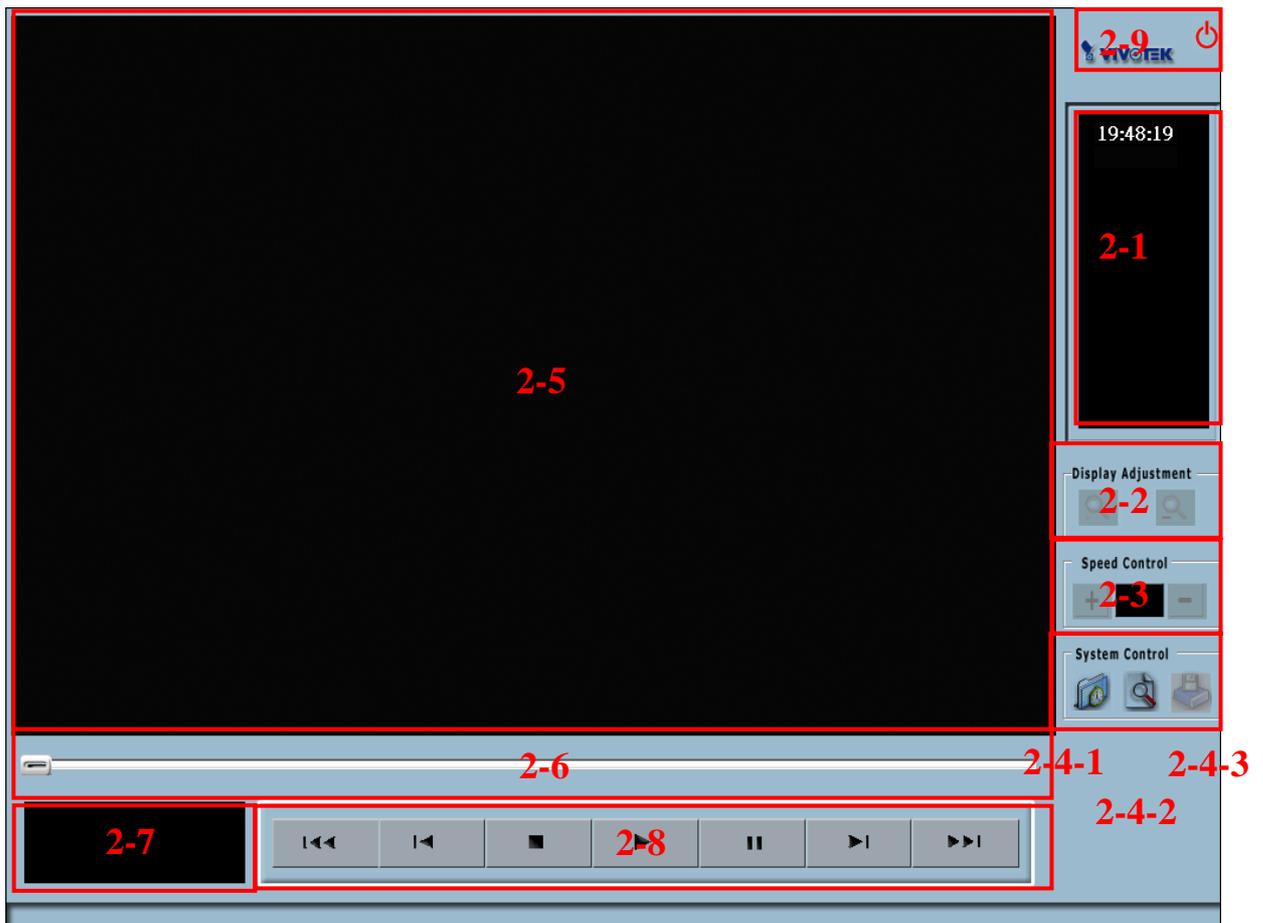
Chapter 1: Quick Start

1. Function & Operation Display



1. Logout System/ Exit System/ Minimize Display/ Display Version.
2. Hard disk space usage status and system time.
3. DI/DO status and control. (on Focus Camera)
4. Functions Control Area: All function-settings and execution.
5. PTZ Control Area: Control PTZ in four directions/zoom/focus/preset recalls.(on Focus Camera)
6. Video Camera Number: Display the video camera number.
7. Split Display: Select the display split mode.
8. Display Area: Display the current video images.

2. Data Image Playback



- 2-1. Display current time.
- 2-2. Image zooms in or out.
- 2-3. Adjust the playing speed.
- 2-4. Search and select image for playing.
- 2-5. Display area.
- 2-6. Progress of playback.
- 2-7. Display the image recorded date and time.
- 2-8. Playback function controls.
- 2-9. Exit the playback function and return to the main display.

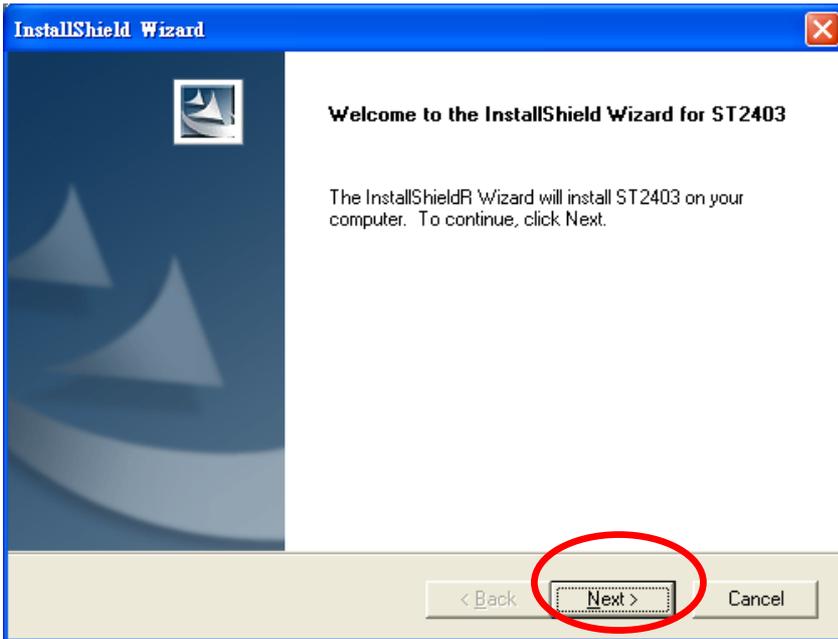
3. System Descriptions

ST2403 product series is one of the state-of-the-art scattering remote digital monitoring products. It adopts the advanced MPEG-4 image compression technology to accomplish the high-speed image displaying and high-speed recording requirements. Furthermore, ST2403 also provides users and managers with the modern E-Map management module and an operation style, which resembling a PC-Based DVR, to enjoy the high quality, convenient, and stable remote digital surveillance.

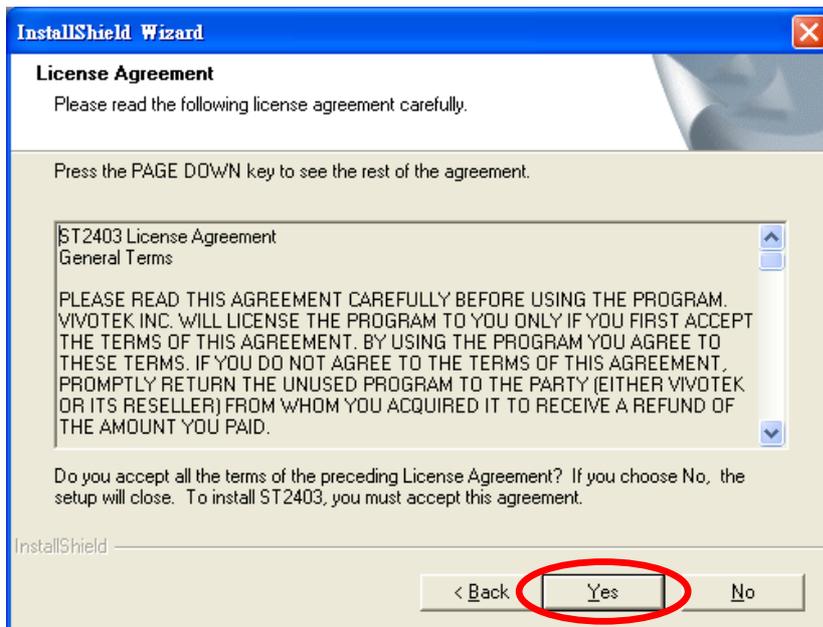
Chapter 2: ST2403 Installation

1. Installation

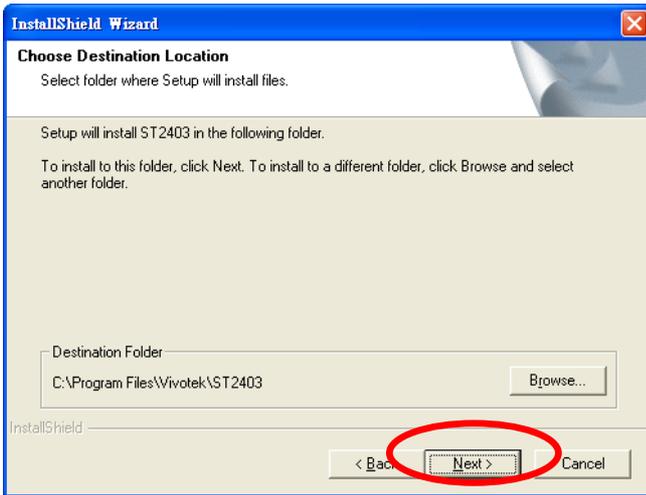
1. Before installing 【ST2403】, please make sure user computer has installed 『Direct X 8.0』 or above.
2. Click on 【VivoSoftLite.exe】.
3. System will activate auto-installation, and the following display will appear. Click 【Next】.



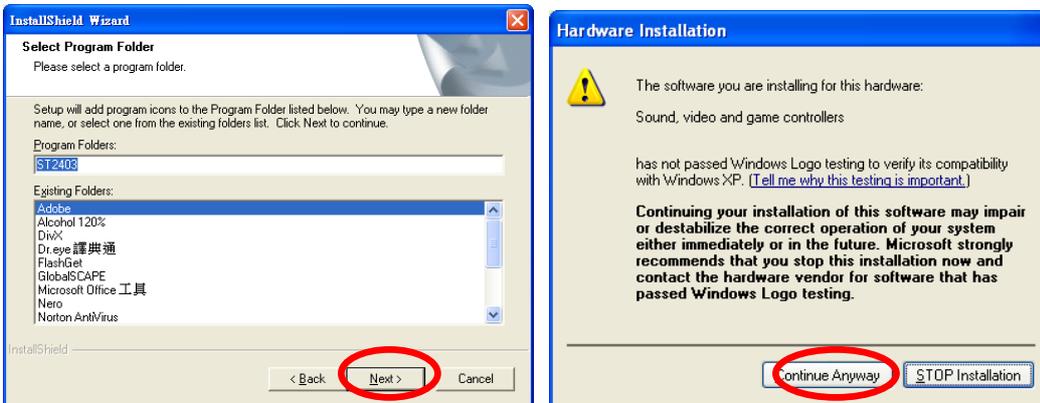
Then click 【Yes】 , and 【Next】 .



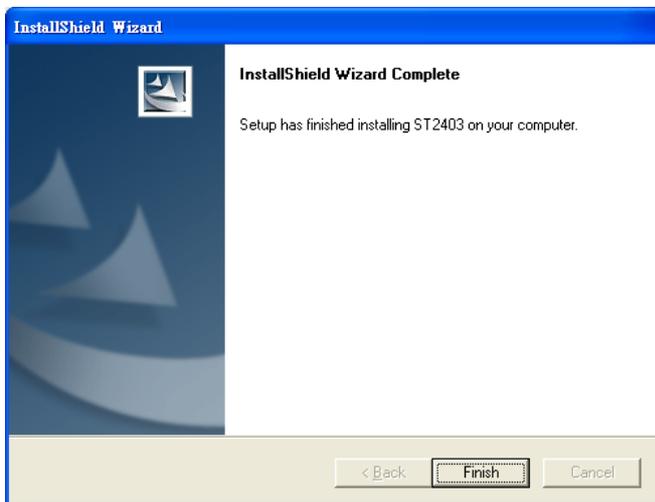
Then click 【Yes】 , and 【Next】 .



4. The software's installation program data will appear, click **【Next】** and then **【Yes】** .



5. System will automatically complete the installation. Click **【Finish】** to complete the installation.



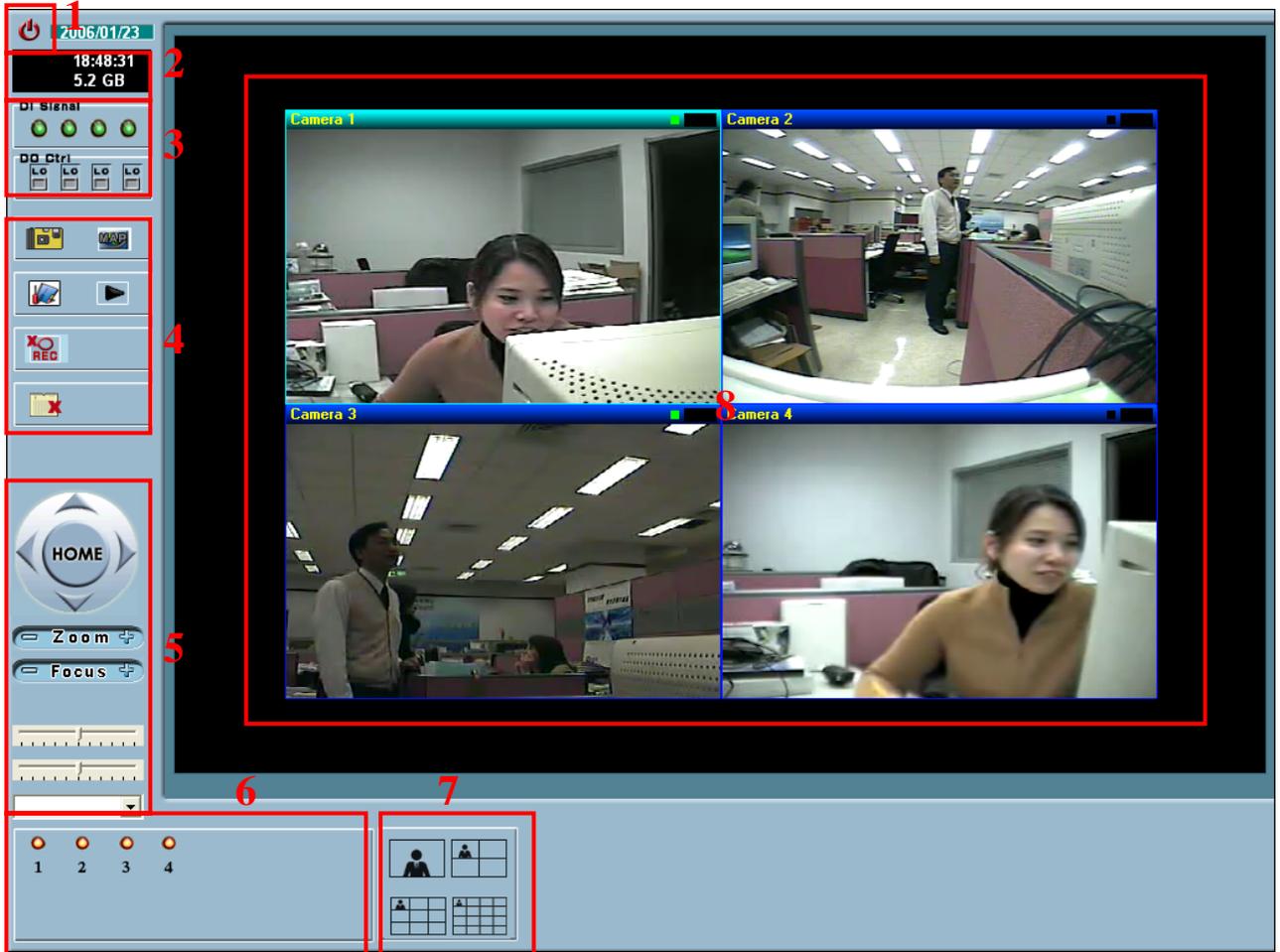
2. Start ST2403

1. System will automatically install **【ST2403】** in Programs. Click on window's **【Start】** menu and locate **【ST2403】** under **【Programs】** . Click to start.



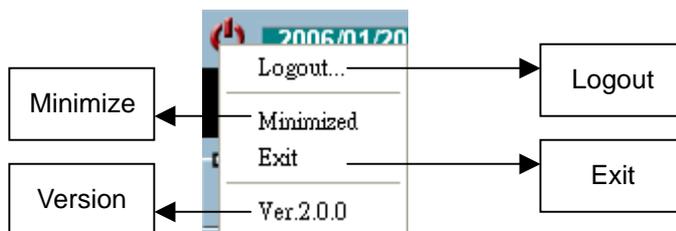
Chapter 3: Functions

1. Main Display Functions



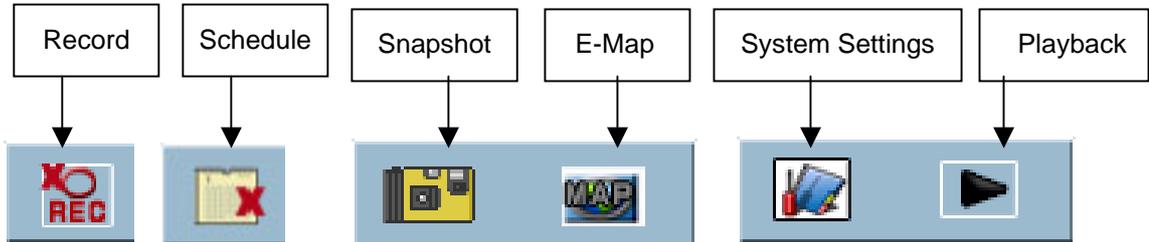
The surveillance display is divided into 8 areas, including system status, PTZ control area, image control area, speed control area, preset position display area, screen split display area, display area, camera selecting area, alarm history, function control area, and Logout system/ exit system/ minimize display/ display version area.

1. Logout System/ Exit System/ Minimize Display/ Display Version



When users want to logout or exit the system, users would need left click here and select **【Logout】** or **【Exit】**. If user wished to operate the current system in conjunction with other functions of the system, users could left click here and select **【Minimized】** to bring the system down to minimum. It will also display the current operating system version.

2. Hard disk and time status: It shows the usage status of remaining hard disk space and current system time.
3. DI/DO Status: This shows the DI/DO status of the focus camera. DO-Ctrl. button can control the status of DO in the video server.
4. Function Control Area: All function settings and executions of the system.



5. PTZ Control Area: Control PTZ cameras.

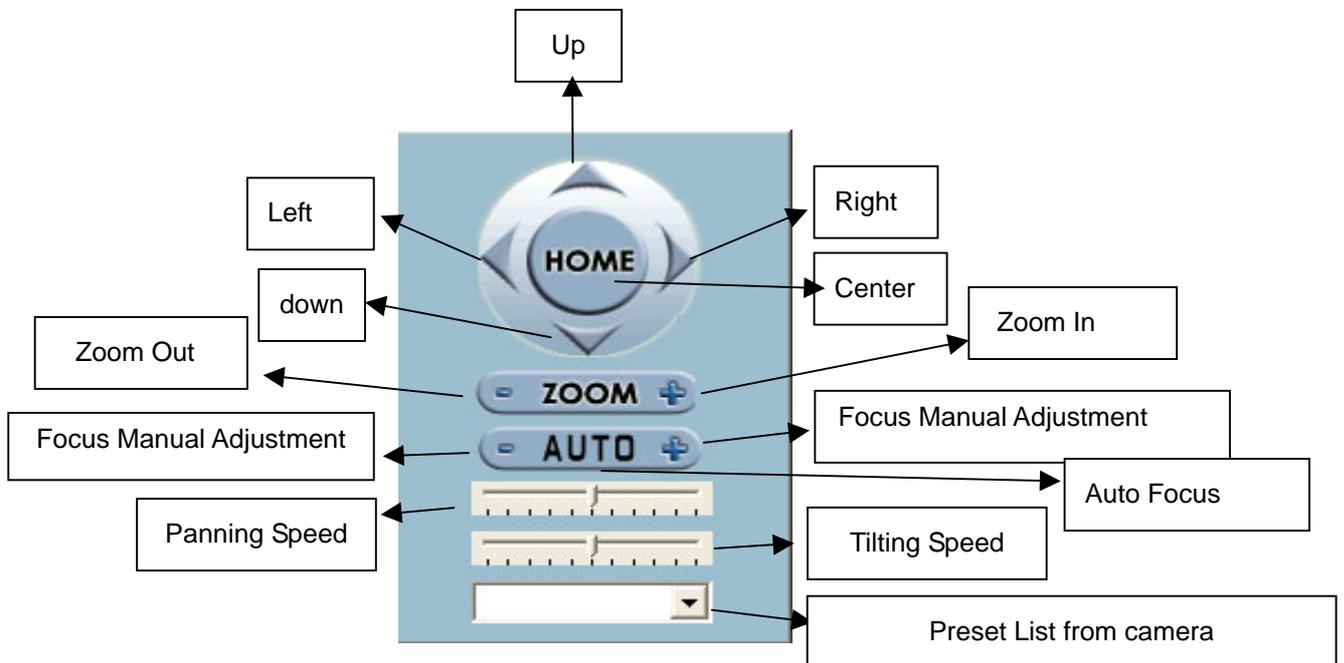
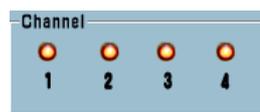


Image Control Area: Image zoom in, out, and focus.

Speed Control: Control the PTZ speed.

Preset Position: Display the preset position of PTZ.

6. Camera Number: Display the camera number. A maximum of 16 cameras can be connected.

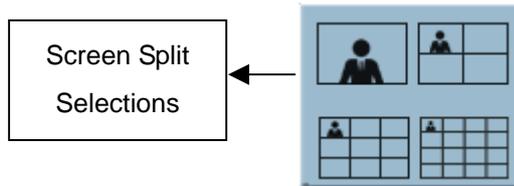


When cameras working normally, the color of the buttons is orange. When

cameras are disconnected, the color of the button will become like this, .

7. Split Display: Select the display split mode. The image displayed on the upper left corner is set as the main display regardless of the split mode. If the camera does not support PTZ, the PTZ

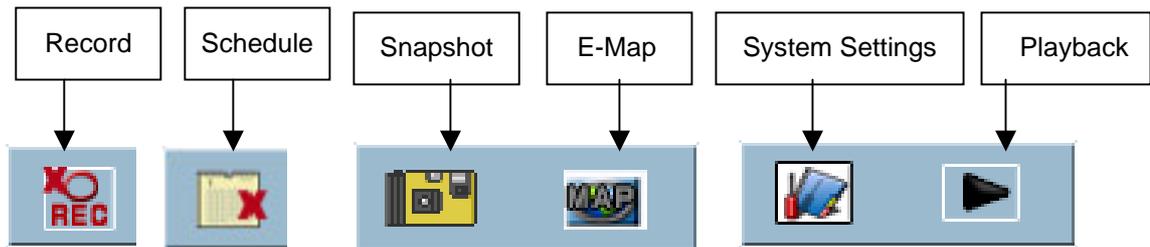
control button would not appear on the right hand side.



8. Display Area: Display the current video images. If no video cameras connected, nothing would be showed. If the video signal lost, it would appear "NO VIDEO SIGNAL".



2. Function Controls



Record: this is for starting or stopping manual recording. Details are described Paragraph 1.

Schedule: this is for starting or stopping schedule to follow the schedule setting.

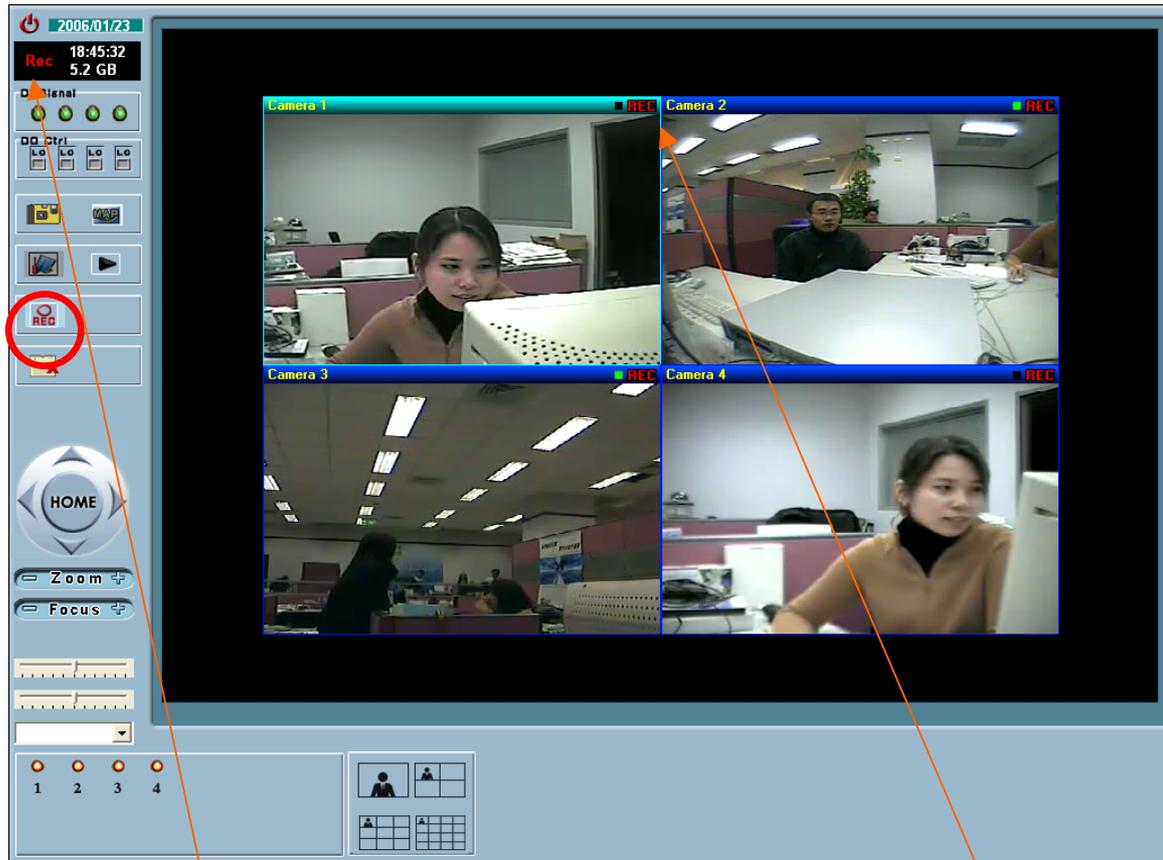
Snapshot: this is for capturing on screen picture saving as a JPEG file under the **sub-directory Snapshot** of the installation directory.

E-Map: this is for arranging camera location in a background graphic. Details are described Paragraph 3.

Playback: this is for searching and image recording files playback. Details are described Paragraph 2

System settings: this is for configuring the whole system. Details are described Paragraph 4.

1. Start/Stop Recording



Click on this function button to start or stop recording.

(1) When the system is recording, each right-top area of images would be shown **【Rec】** and also on the System Status area.

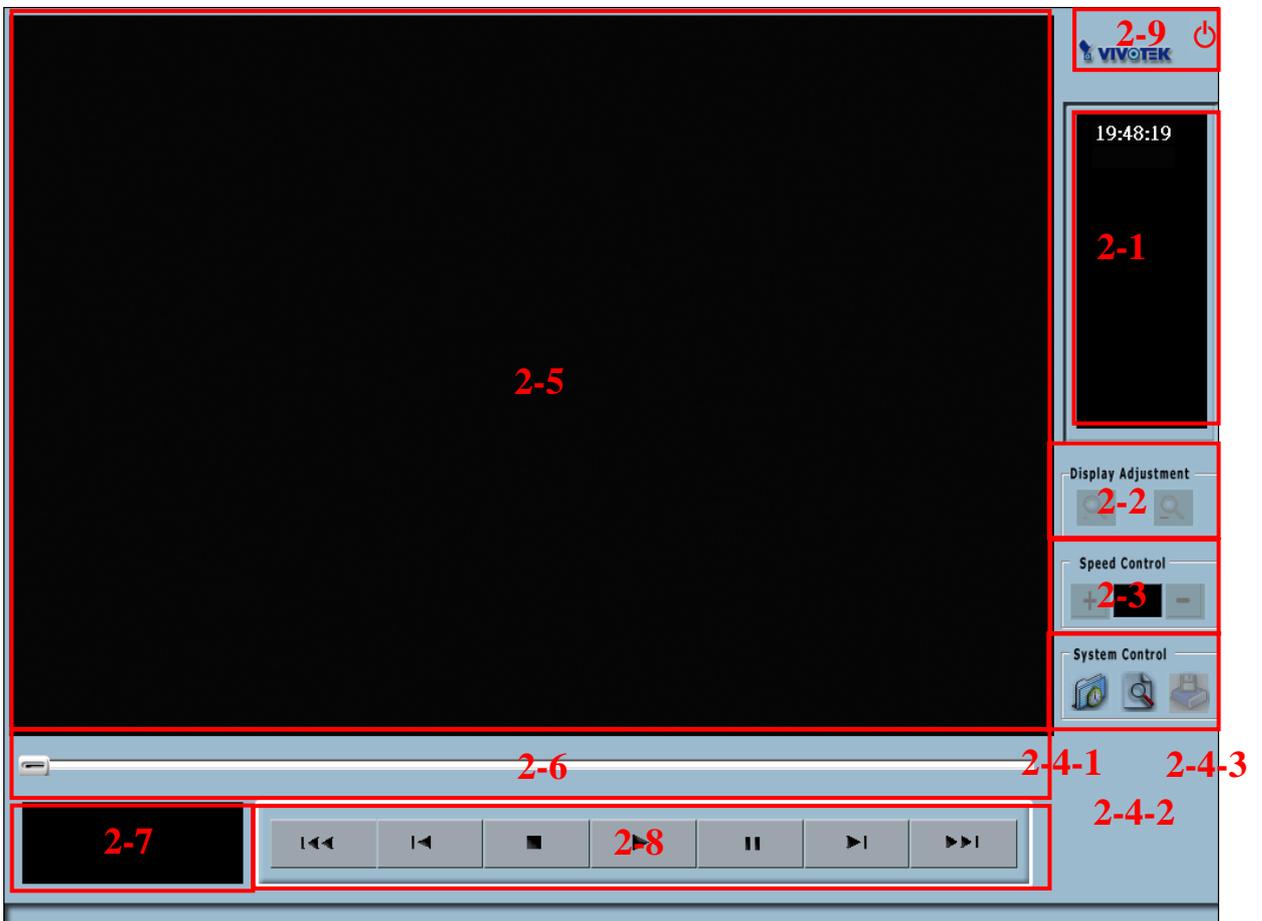
(2) When the system is only receiving and not recording images, each right-top area of images would

not show 【Rec】 .

2. Playback



Recording must be stopped before playback. Click on this button to enter the following playback page.



2-1. Display current time.

2-2. Playback image zooms in or out. Click  +  to zoom in and  -  to zoom out.

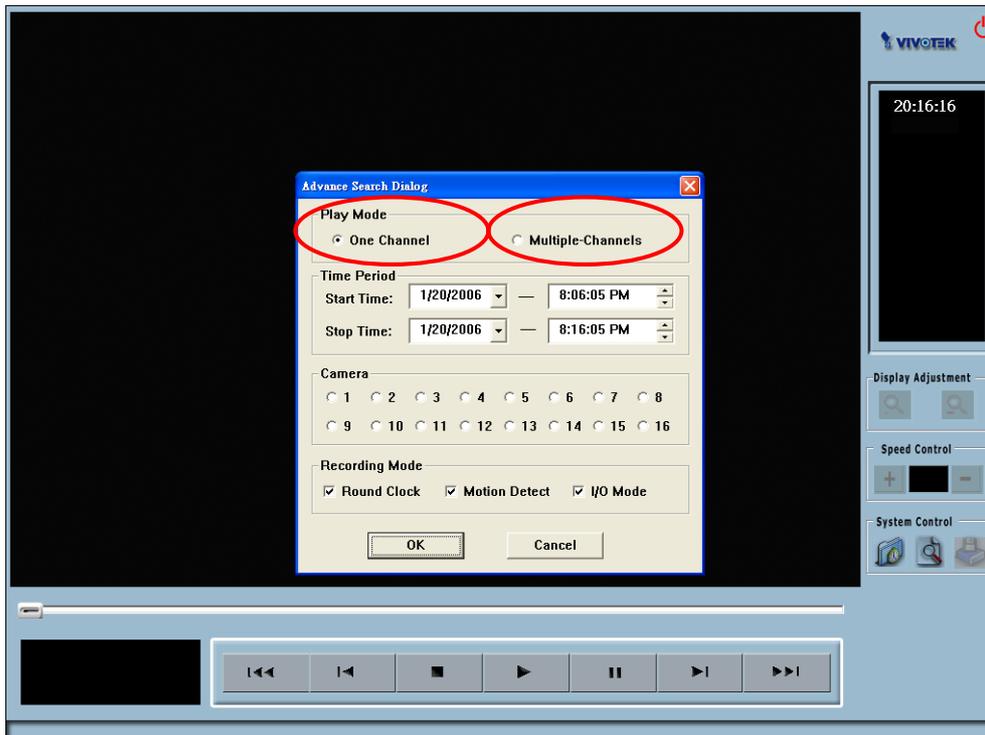
2-3. Adjust the playing speed: The playing speed ranges from 1/8X to 8X. Click on the left button to increase speed, and right button to reduce speed. The selected playing speed is shown in the middle. Select the playing speed before playing the recorded video. The speed cannot be changed during the playing.

2-4. Search and select recorded video

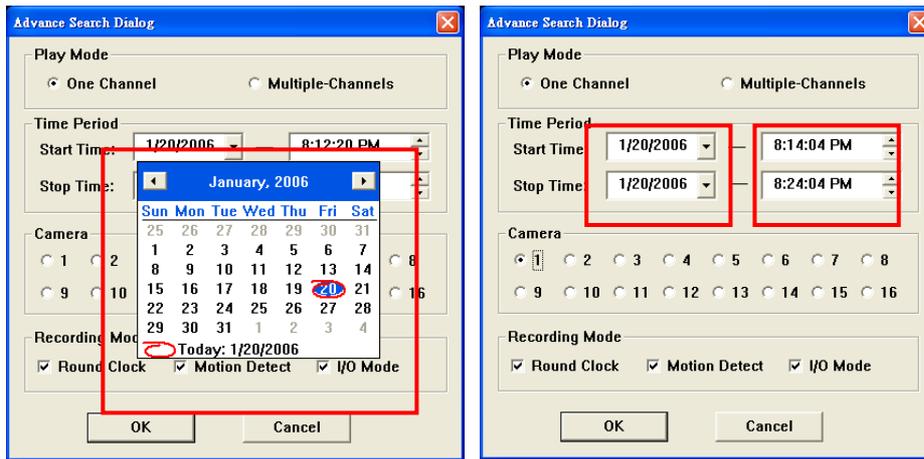
ST2403 supports 2 types of video search mode: by channel and event

2-4-1 Channel Search Mode

2-4-1-1 Select single channel to play only one channel video or multiple channels button to select desire cameras to play several channel videos simultaneously.

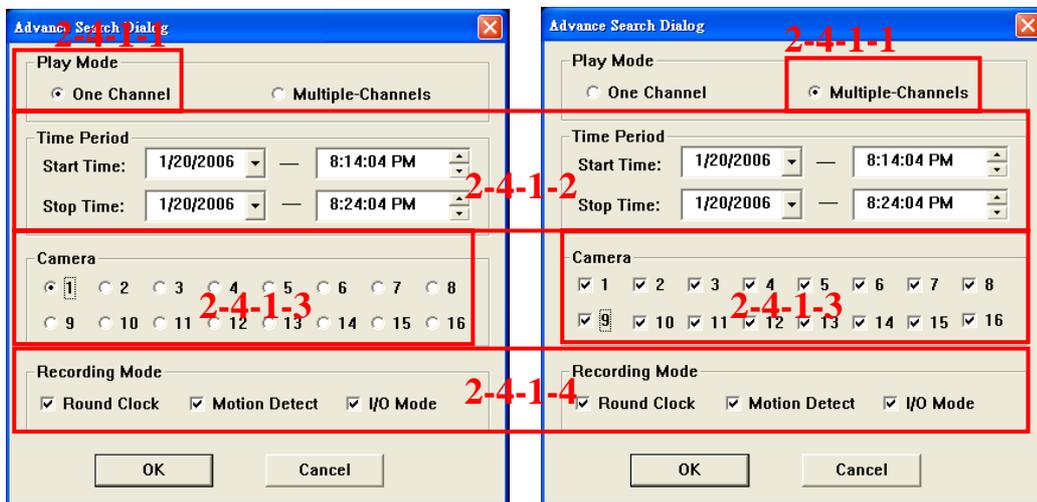


2-4-1-2 Select expected date and time frame. The left column is for date selection, and right column for time selection. On the date section, a calendar will pop up for selecting the date. Click on AM, PM, and the hr/min/sec sections respectively on the time section to mark up each condition; then, use the up/down button to adjust the time. The current date will be circled in red and also be shown in the left bottom of the calendar. Use the arrow button on the up left right of the calendar for previous months and the right up arrow button for future months.



2-4-1-3 If the One Channel playing mode is selected, a corresponding camera must also be selected for searching. If the Multiple Channel mode is selected, more than one camera could be selected for simultaneous searching.

2-4-1-4 Select 『Round Clock』, 『Motion Detect』, 『I/O Mode』 separately or together for searching.



2-4-1-5 Click 【OK】. System will list out all image data under the criteria for playing.

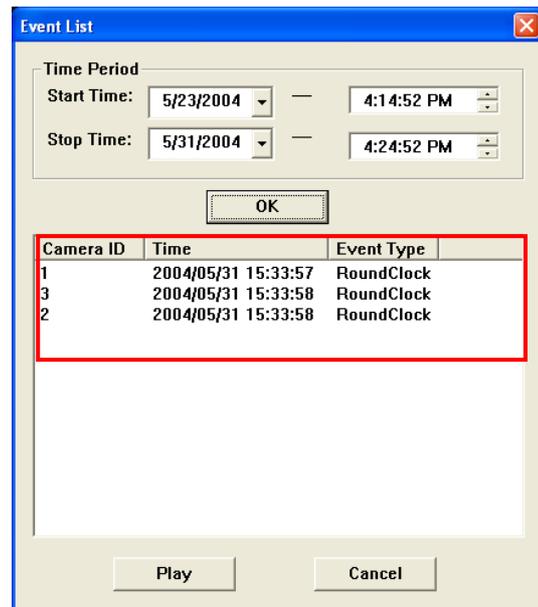
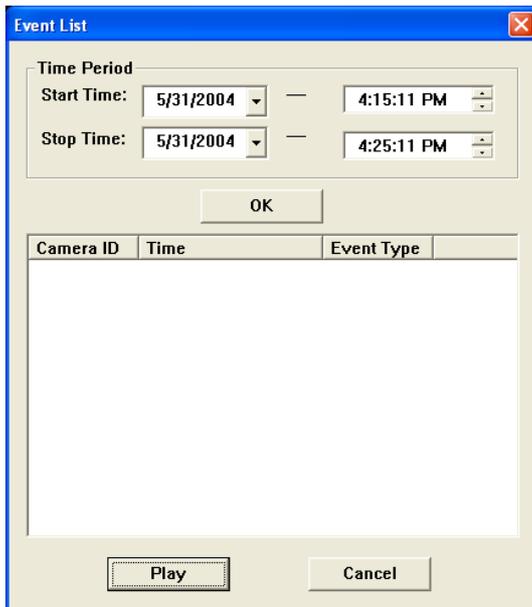
2-4-1-6 Users now can use the functions in 4-8, including viewing and checking the broadcasting image.

2-4-2 Event Search Mode

This mode refers to the search and playback of the recorded video data by the individual event.

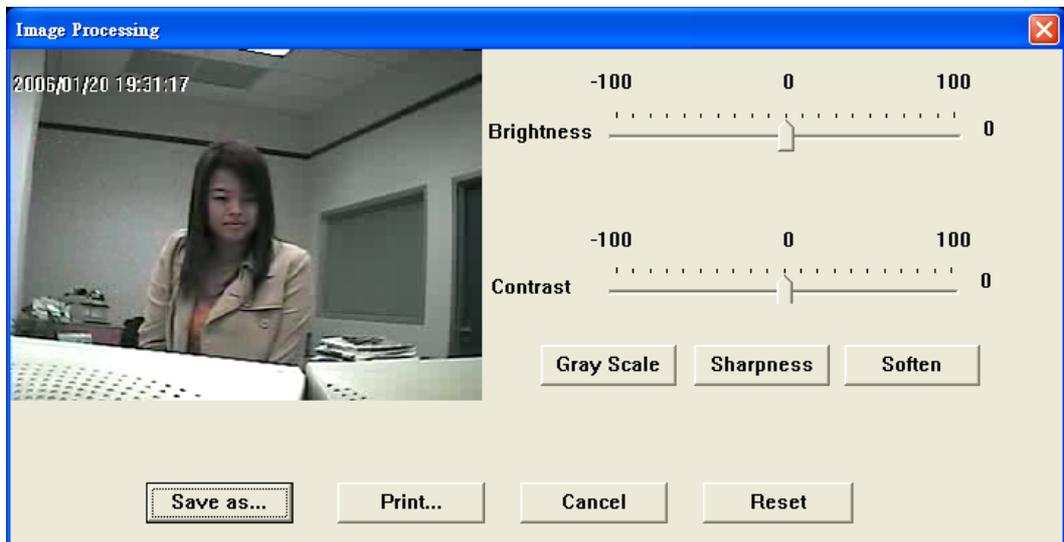
2-4-2-1 Select Event Search Mode.

2-4-2-2 Select the time period. The left column is for date selection, and right column for time selection. On the date section, a same calendar as in the channel selection will pop up for selecting the date. On the time section, click on AM, PM, and the hr/min/sec section; then, use the up/down button to adjust the time. Click on the 【OK】 button in the middle. System will list out all corresponding events.

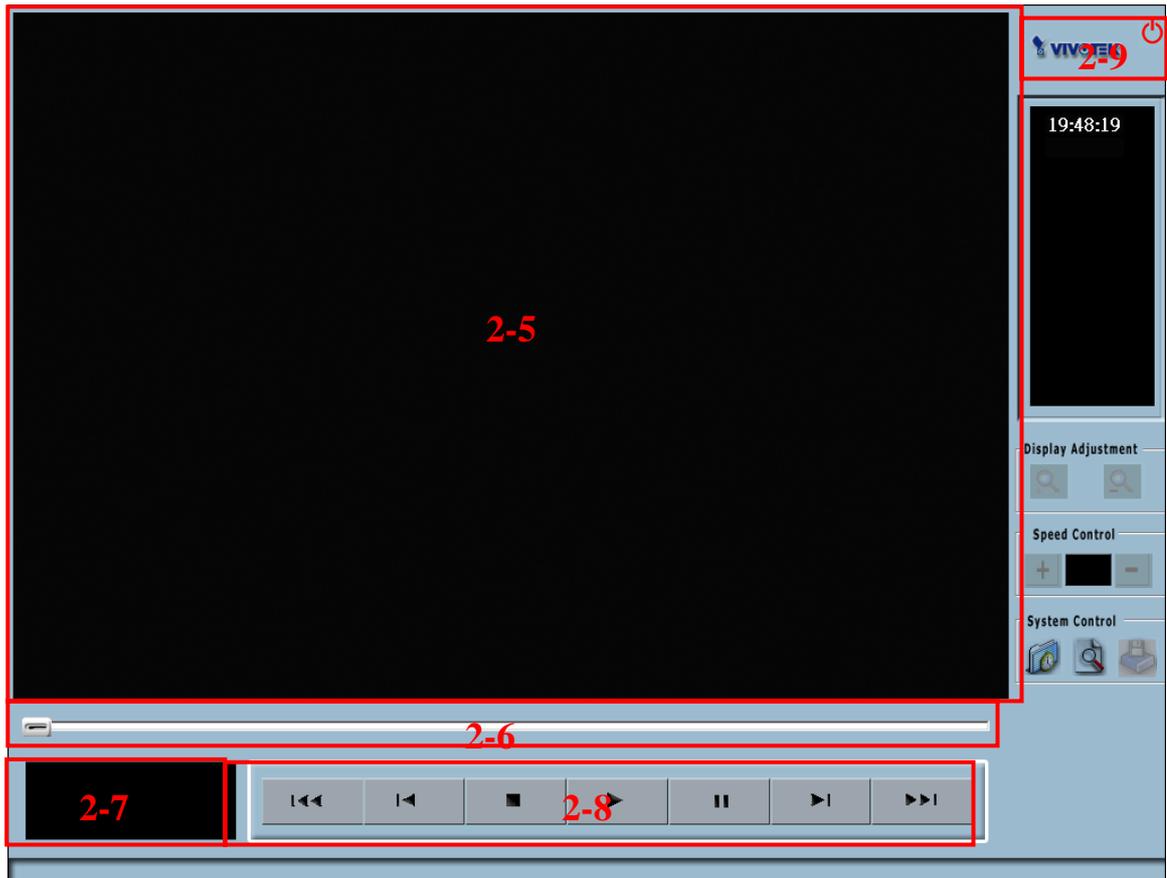


Use mouse to click on the event that users wish to playback; then, click on **【Play】** at the bottom to play the recorded video.

2-4-3 Image Adjusting. Before users can start processing the image, the **【Pause】** button under the playing mode must be selected first. Drag the cursor on the right to adjust the brightness or contrast of the selected image, and the image value will appear on the right of the respective cursor. Or click on the Gray Scale/ Sharpen/ Soften button continuously to adjust the image. After the image adjusting is done, click **【Save As】** to save, **【Print】** to print the image, **【Cancel】** to cancel the adjustment and close the Image Adjusting window, or **【Reset】** to undo the adjustment and return to the original image condition.



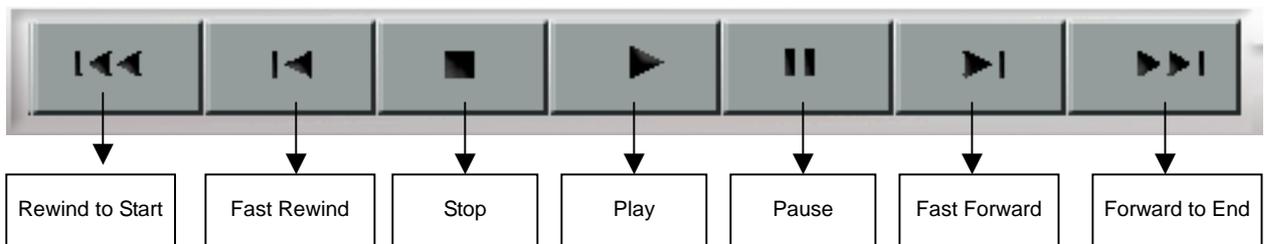
2-5. Display area: Playback the selected video



2-6. Progress of playback: Indicate the proportion of the played video

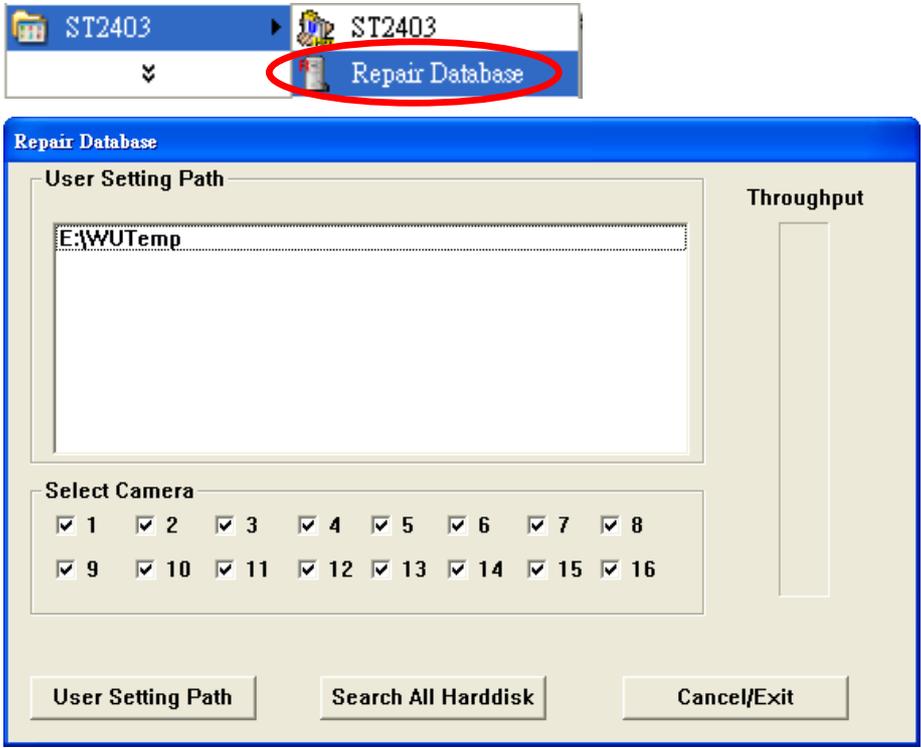
2-7. Display the video recorded date and time.

2-8. Video playing-control tools. The operations are identical with the common VCR operations.



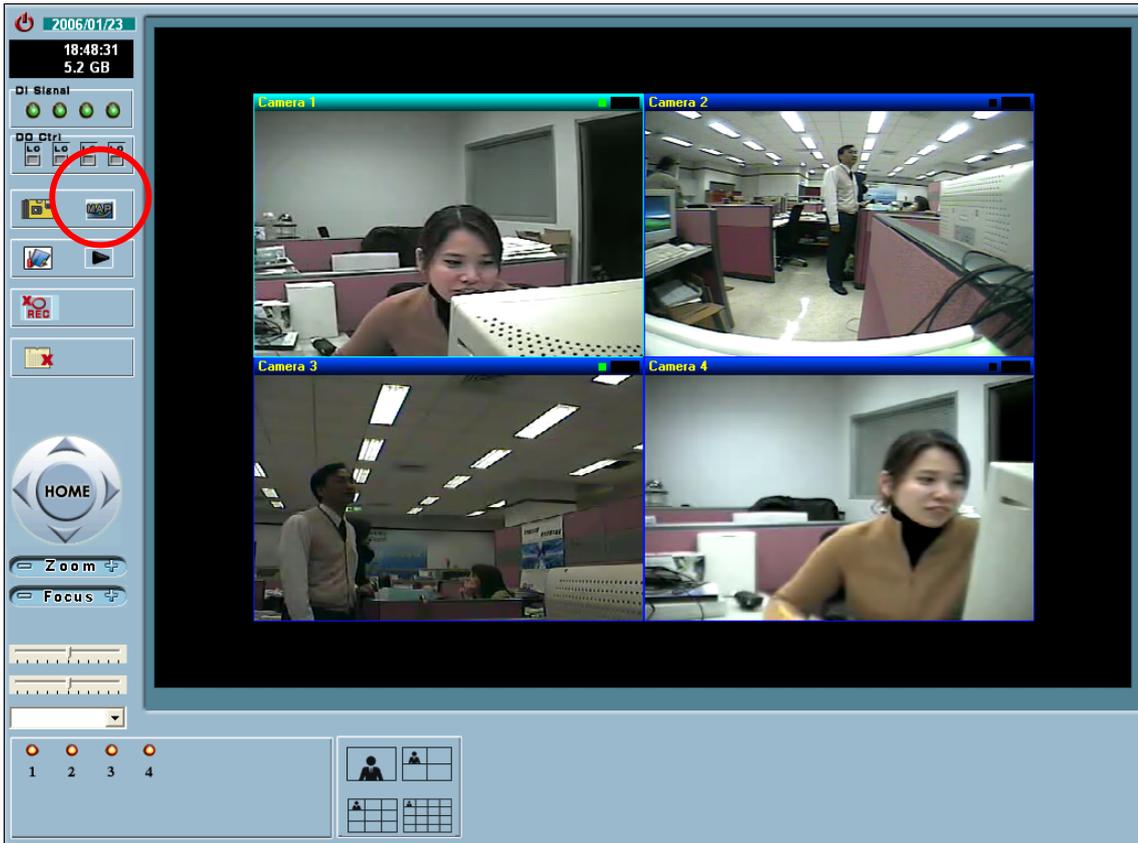
2-9. Exit the playback function and return to the main display.

2-10. Attention: When the database is damaged, which would result in the inability to find the video data, or when users must re-install the system due to problems in user's computer, which would require user to import the existing video data to the database of the new installed program, it would require to execute 【Repair Database】 under the Programs directory of the start menu (this function is also included in the installation CD). Please quit the ST2403 program while executing the repairing.

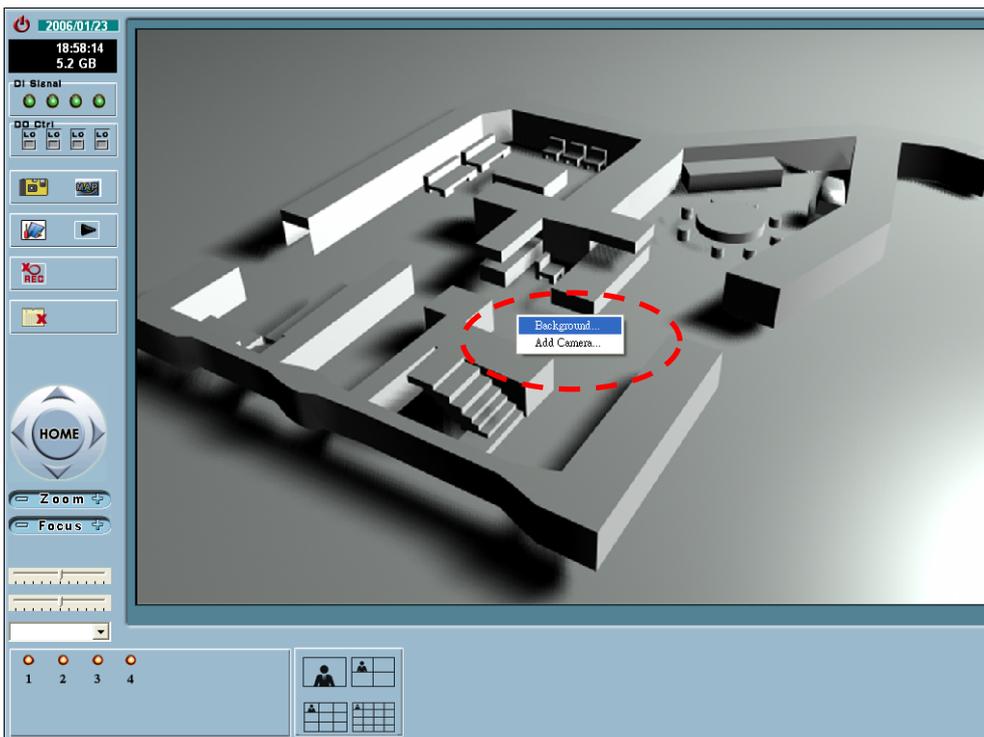


3. E-Map

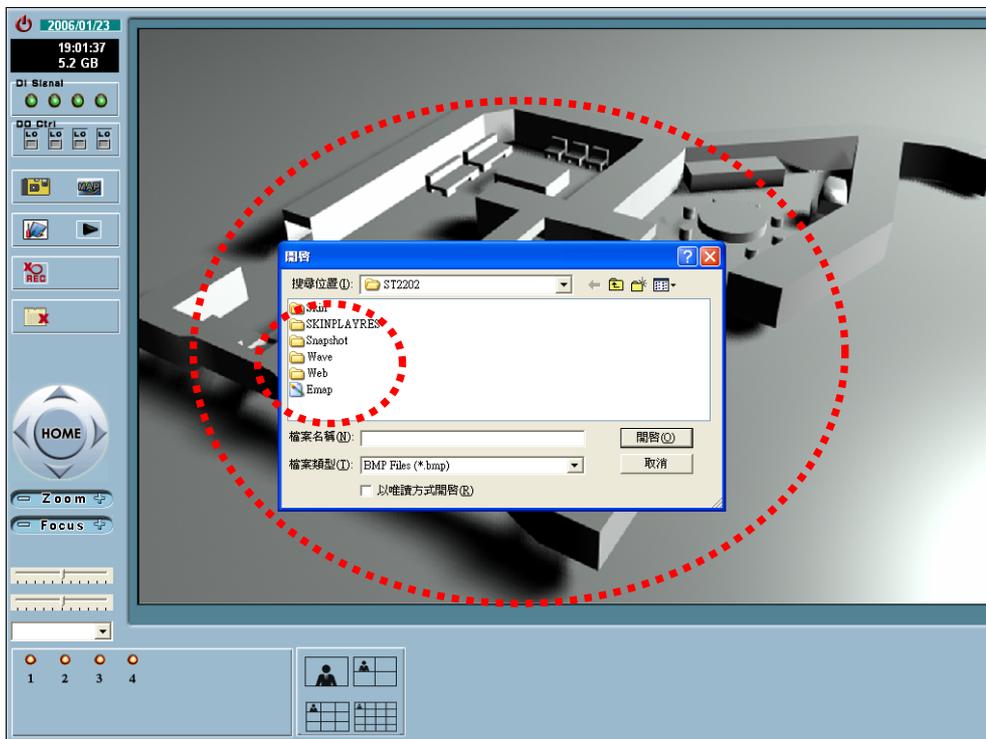
Also known as the “plane layout”. Click on the E-Map button to enter the electronic map display,



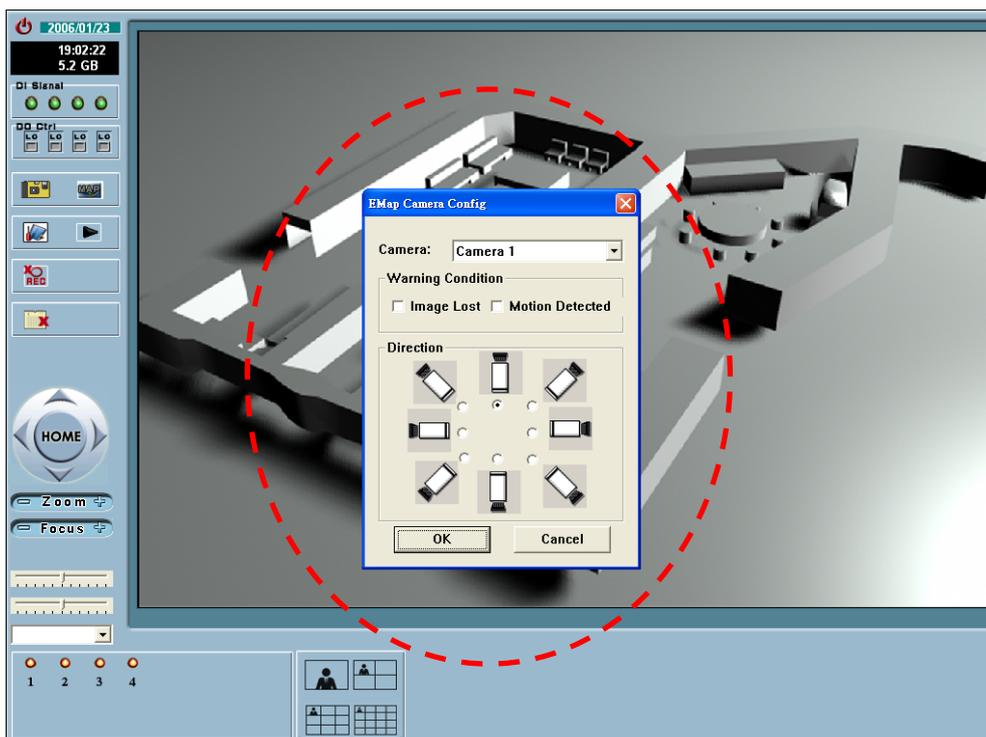
Move the mouse cursor on the E-Map and left click , a window will appear with two options of 【Background】 and 【Add Camera】 .



3-1 Change Background: Select **【Background】**, and a new background or the file location route of the plane layout will appear. Click on the new background that users wish to use or the filename of the plane layout, and click Open or double-click on the file to change the current background. The background file types are limited to GIF, JPG, BMP, and PNG.



3-2 Add Camera: A maximum of 16 cameras can be added. Select **【Add Camera】** and open the **【Camera Config】** window to set the warning conditions and camera directions.

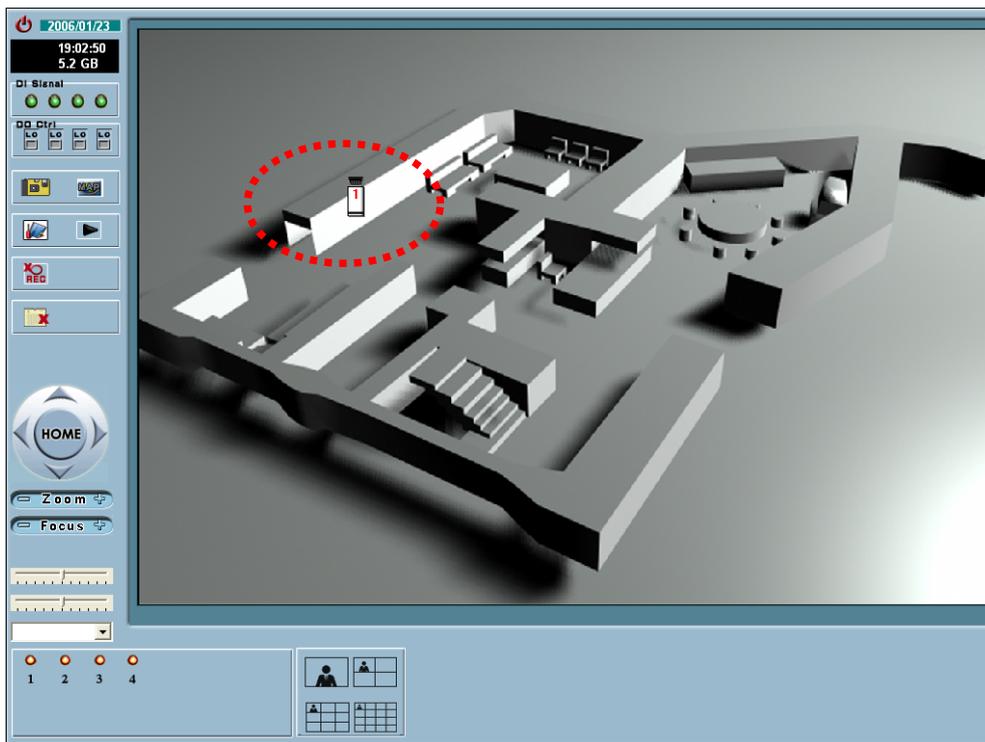


3-2-1 Click on the pull-down menu beside Camera to add new cameras. Only one camera can be added every time. Users need to repeat the procedure when more than one camera must be added.

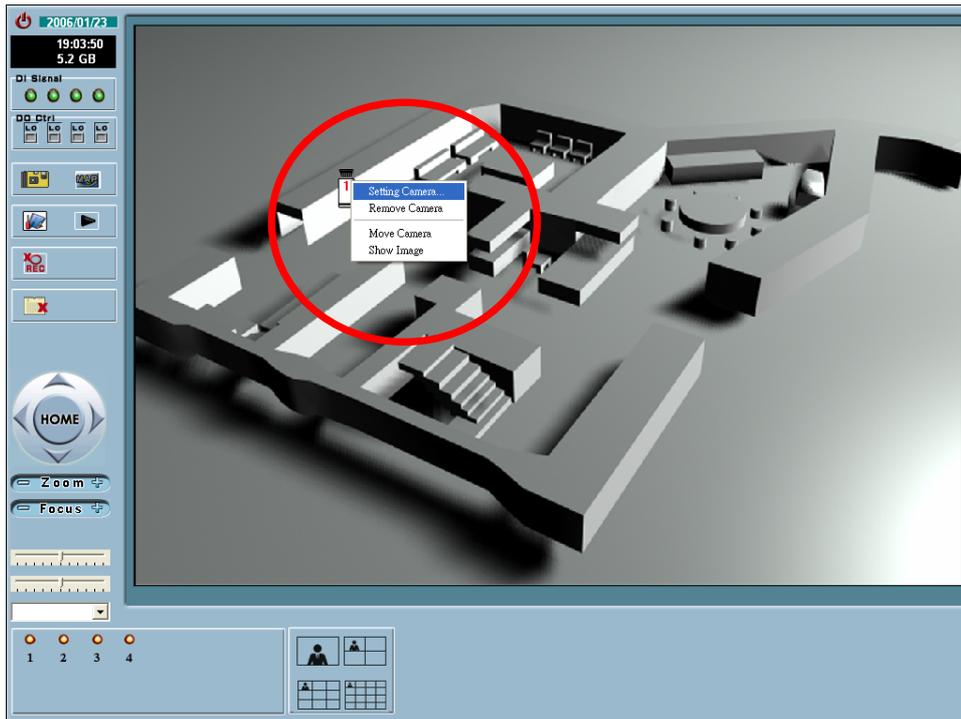
3-2-2 Select the warning conditions, including Image Lost and Motion Detected. Then select the direction of the camera. Click OK to save the settings. The camera will flash when an event occurs which meets the set conditions.

3-2-3 Camera Direction: Set the direction of the camera by clicking the direction button.

3-2-4 When completed, a new camera will appear on the E-Map.



3-3 Camera Settings.



3-3-1 Setting a Camera: Move mouse on left click the camera that required to be set. Select one Camera and repeat the above steps to adjust the settings.

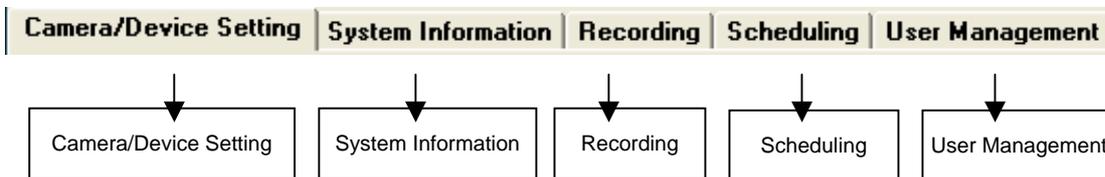
3-3-2 Remove a Camera: Move mouse on the camera to be deleted and left click on it. Select a camera that wanted to removed and click remove.

3-3-3 Move a Camera: Move mouse on click on the camera. Select a camera that wanted to move. The camera selected will flash. Drag and move the camera to a new position and left click again to release it. The camera will be located in the new position.

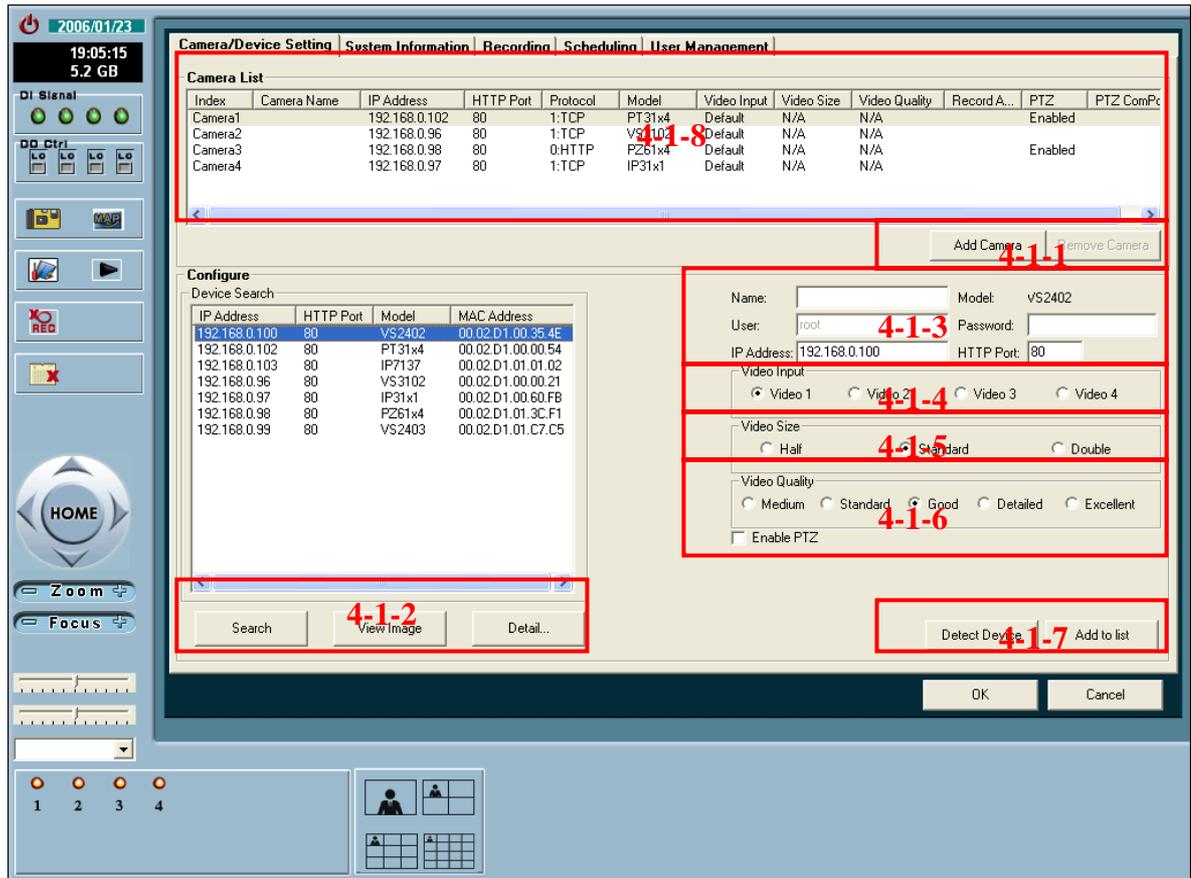
3-3-4 Show Image: Move mouse on and left click on the camera. Select Show Image. The currently monitoring image of the camera will be displayed.

4. System Settings

After entering System Settings, users can make changes on the functions of the system. Function settings include:



4-1 Camera/Device Setting

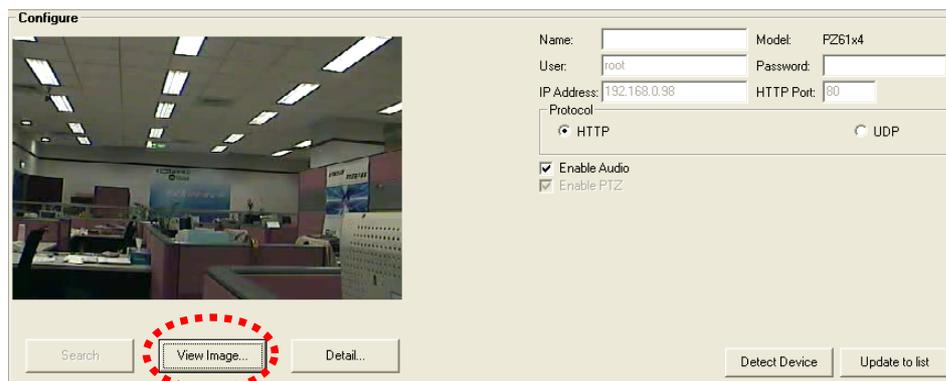


4-1-1. Add Camera/ Remove Camera from “Camera List”.

4-1-2. Search Video Server and IP camera devices automatically through LAN by using “Search” function. View device Image and check the detail that you choose.

4-1-2-1 View Image: Select a camera from the list and click View Image. The real-time image of the camera will be showed here.

(**Notice:** When you click “View Image”, please confirm that the device password input correctly.)



4-1-2-2 Detail...: Click 【Detail...】 to open the Configuration Detail window, provide Upload Firmware and Device Reset function.

4-1-2-2-1 Upload Firmware: Click **【Select File...】** to browse the location and select the firmware file, and then click **【Upload】** to upload the file. The uploading progression will be shown in the progression column.

4-1-2-2-2 System Recovery: Click **【Reset】** to restore the previous system settings. Or click **【Factory Reset】** to restore the manufacturer's default settings.

4-1-3. Enter the name of server, user, password, host IP Address and HTTP port.

4-1-4. Video Input Configuration for VS Series Products: Supports up to four video inputs

4-1-5. Video Image Size: Three sizes are available:

4-1-5-1 Half: NTSC: 176x120, PAL: 176x144

4-1-5-2 Standard: NTSC: 352x240, PAL: 352x288

4-1-5-3 Double: NTSC: 704x480, PAL: 704x576

4-1-6. Video Quality: Include medium, standard, good, detailed, and excellent.

Enable PTZ: Check this button to Enable PTZ. Check Custom PTZ to set PTZ port when there is more than one com port in the computer.

Attention: Due to the difference in the model series provided by different companies, please refer to the PTZ user manual for the respective models.

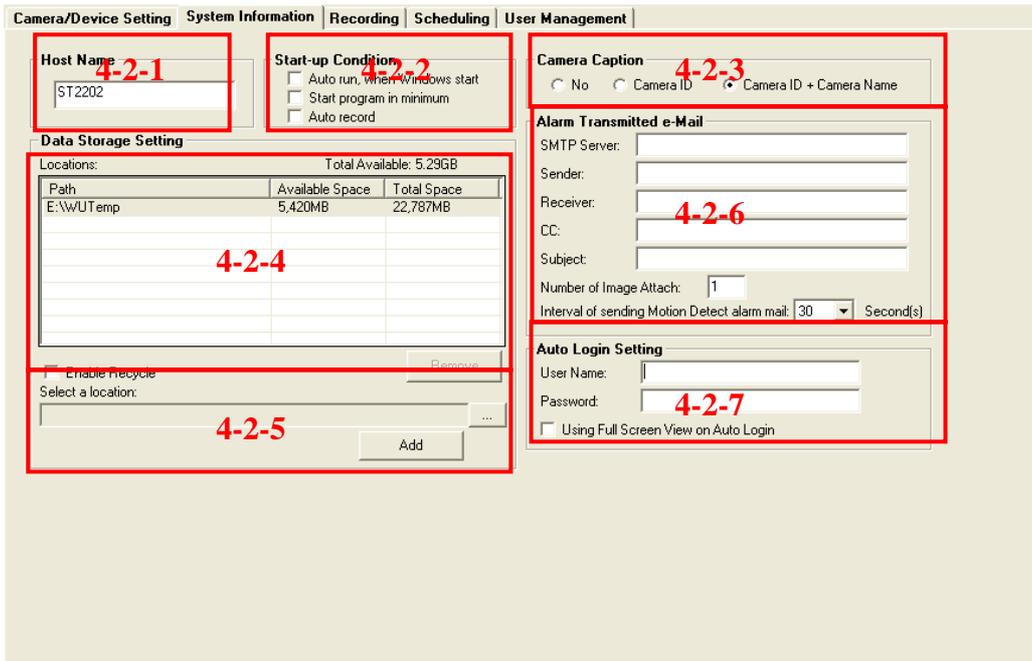
4-1-7 Camera List: List all the cameras and relevant information. Click on any camera, and its settings information will be shown on relevant column below. To remove a camera, select the camera and click Remove Camera. Or click Add Camera to add a new one device by obeying above procedure again.

Index	Camera Name	IP Address	HTTP Port	Protocol	Model	Video Input	Video Size	Video Quality	Record A...	PTZ	PTZ ComPt
Camera1		192.168.0.102	80	1:TCP	PT31x4	Default	N/A	N/A		Enabled	
Camera2		192.168.0.88	80	1:TCP	IP31x1	Default	N/A	N/A	Enabled		
Camera3		192.168.0.96	80	1:TCP	VS3102	Default	N/A	N/A			
Camera4		192.168.0.98	80	0:HTTP	PZ61x4	Default	N/A	N/A		Enabled	

Add Camera Remove Camera

4-2 System Information

Set host name, auto start up, camera display, caption, data storage locations and E-Mail alarm.



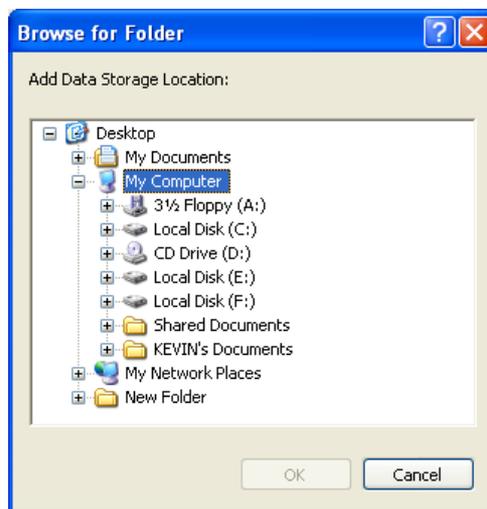
4-2-1 Host Name: Set the name of the host.

4-2-2 Start Up: Include auto run when Windows starts, start in minimum form and Auto record.

4-2-3 Camera Caption: Set whether to show camera ID, Camera ID and Camera Name, or not showing any.

4-2-4 Data Storage Locations: Set the file location and path of the video data, whether to recycle the savings, and remove the path.

4-2-5 Select a location: Click  to select the video data record file path.



After clicking OK for selecting the path, click **【Add】** to complete the setting. The new path will be shown on the list above. To remove a storage path, select the path and click **【Remove】**. If Recycle box were checked, the system would automatically overwrite the data by first in first out order when the HD is full. System will also indicate the available space remaining on the HD of the storage location.

4-2-6 E-Mail Alarm: To send the alarm image via E-Mail. The E-Mail's SMTP server, sender/receiver/copy receiver's e-mails, and char-sets, subject, number of image

attached, and interval between sending the e-mail must be set.

4-2-6-1 Number of Image Attached: To decide how many images will be sent in one e-mail.

The more images to be sent in one mail, the wider bandwidth and longer time are required. It is recommended that only one image to be sent with each e-mail to shorten the transmission time.

4-2-6-2 Interval of Sending Email: Set the time interval for auto email re-send. The interval can range from 1 to 99 seconds. If relevant action or alarm deactivating procedure were not taken within this time interval, E-Mail alarm would be continuously issuing at this interval until relevant action or alarm deactivating procedure had been taken.

4-2-6-3 Multiple receivers are allowed in both receiver and copy receiver columns. Use “;” to separate the receivers or copy receivers, e.g. service@youcompany.com.tw; 1234@5678.com.tw

4-2-7 Auto Login Setting: System allow users to auto login and full screen view when starting up.

(**Note:** Administrator’s default user name is “admin” and password is null)

4-3 Recording

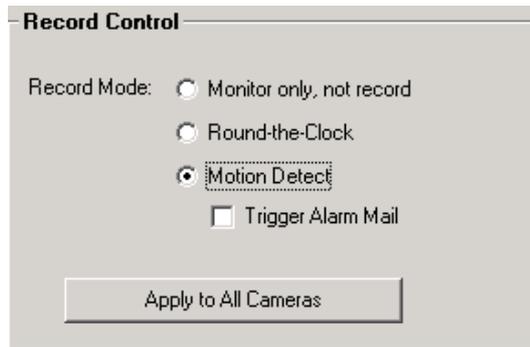
Set the camera name, record mode, and motion detect.



4-3-1 Select Camera: Select a camera and its real-time image will be shown on the right below the camera name.

4-3-2 Camera Name: Enter the camera name that wants to be shown. This name will also appear on the main display and the playback video. It can also be left blank.

4-3-3 Record Control: Select a recording mode from monitor only, not record/ round-the-clock/ motion detect/ generic input trigger. If generic input trigger were selected, the input type must be also chosen. After the setting is made, user can click **【Apply to All Cameras】** to apply the current setting to all cameras.



4-3-4 Image Display Area: Display the real-time image of the camera selected.

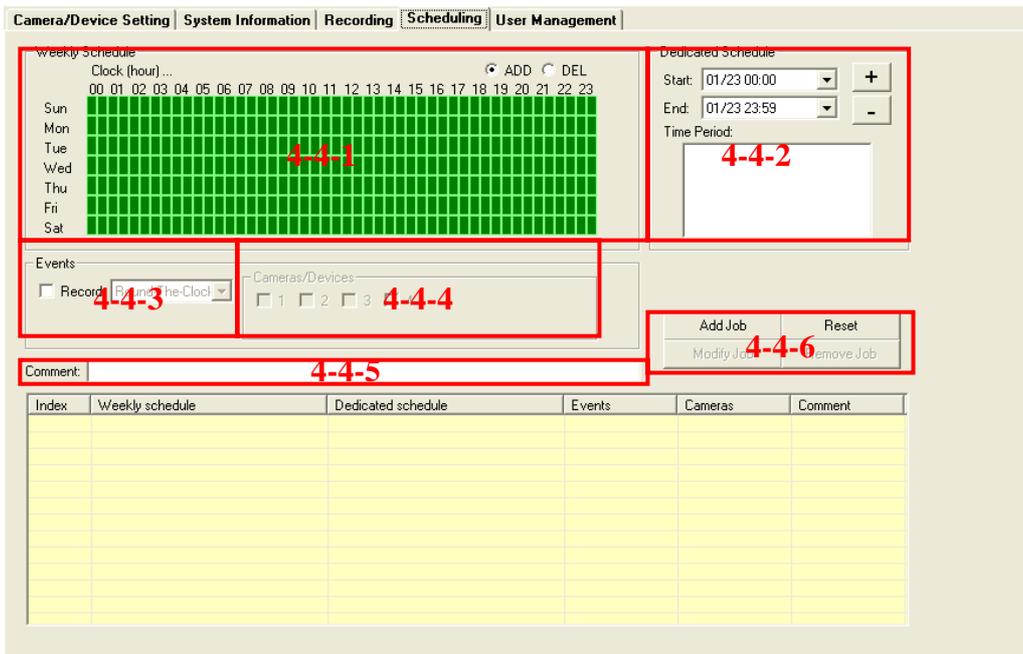
4-3-5 Motion Detect: Recording will start when motions are detected. The sensitivity level must be set.

4-3-5-1 Sensitivity Level: Drag the indicator between the sensitivity level from 1 to 10. The sensitivity value will be shown on the left of the bar. The higher the value, the higher the sensitivity will be.

4-3-5-2 Click【Apply to All Cameras】to apply the motion detect settings to all cameras. When an event which meets the motion detect conditions occurs, recording will be started, and an **M** sign will appear on the upper-left corner of the display area.

4-4 Scheduling

Set the recording schedules and contents.



4-4-1 Weekly Schedule: Use mouse to direct pull on the day/hour time stamp to be adjusted for the starting or ending day/hour weekly.

4-4-2 Dedicated Schedule: Decide to dedicate recording schedule. **Attention: the start time must be earlier than the end time, or a “double settings for the time period” message will appear on the screen. Each day starts at 00:00 and ends at 23:59.**

4-4-3 Events: There are two recording modes including round-the-clock and motion detect. Only one recording mode can be chosen.

4-4-4 Enable Camera/Device: Select cameras/ for the schedule job.

4-4-5 Comment: Leave blank or add relevant descriptions regarding the scheduling.

4-4-6 Add Job: When finished, click **【Add Job】** to add the settings into the scheduling. The job information will be shown in the table below schedule list.

Reset: Reset and add a new schedule.

Modify Job: Select and click a job that need to be modified, click **【Modify Job】**, and follow the above steps to edit the job contents.

Remove Job: Select and click a job that need to be removed from the schedule and click **【Remove Job】**.

4-5 User Management

Set, modify, or add user ID and password.

4-5-1 General administrator's password setting. The password can be a combination of up to 12 English letters and numerical numbers. The ID can be inputted in either capital or small letters, whereas the password is case sensitive. The default name of the system administrator is **【root】**, and no password is set. If no password were assigned for the administrator, or no user were added, there would be no login window or password request when the start-up of the system. Simply click **【OK】** to proceed. However, if password was assigned to the administrator, or one or more users were added, the system would request to login and input of the correct user name and password to activate the system.

The screenshot shows the 'User Management' tab in a software interface. It contains several sections:

- Administrator:** Fields for 'Password' and 'Confirm Password' (labeled 4-5-1).
- User Information:** Fields for 'User Name', 'Password', 'Confirm Password', and 'Description' (labeled 4-5-2).
- User List:** A table with columns for 'User Name', 'Password', 'Description', and 'Camera'.
- User Privilege:** A section with checkboxes for 'Multi-Camera View Operation', 'Camera Map Operation', 'System Operation (Start/Stop)' (including 'Scheduling', 'Recording', 'Playback' - labeled 4-5-3), and 'Camera Privilege' (including 'Camera 1', 'Camera 2', 'Camera 3', 'Camera 4', and 'PTZ Operation').
- Buttons:** 'Remove' (labeled 4-5-5), 'Reset' (labeled 4-5-4), and 'Add' buttons.

4-5-2 User Information: Add the information of the new users.

4-5-2-1 User ID: Can be a combination of up to 16 characters of Chinese, English, and numerical numbers. The User ID is case insensitive.

4-5-2-2 Password: Can be a combination of up to 16 characters of English and numerical numbers. Password is case sensitive.

4-5-2-3 Description: Relevant information regarding the user can be added, e.g., "administrator" or "guest."

4-5-3 User Privilege: Select functions that allow the user to operate. Simply check the function boxes

to decide what function.

4-5-3-1 View: Include multi-camera view operation and camera map operation. Multiple selections are allowed.

4-5-3-2 System Operation: Include scheduling, recording, and playback. Multiple selections are allowed.

After relevant conditions are checked, click New to add a user. System will automatically add the data to the User and List user information on the left column. Repeat the steps to add another new user. User can begin to operate the system within the limitations assigned according to the user ID and password.

4-5-3-3 Camera Privilege: Allow each camera recording setting and PTZ operating.

4-5-4 Reset/ Add: A new user or select a current user from the list on the left column by clicking on it.

The user information will be shown in the right corresponding columns. Make any change on the relevant column or finish a new one, and click Add when finished.

4-5-5 Remove: To remove a user, select the user from the list and click Remove.