Central Management Software

User's Manual

Version 1.0

For NVR-x10

Network Video Recorder System

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Minimum System Requirements

Hardware requirement:

- CPU: P4-3.0GHz or Dual Core and above
- RAM: Minimum 1 GB, or above is recommended
- HDD: SATA 250GB or above is recommended
- Display card: Independent display card suggested
  - **Make sure your display DPI setting is set to default at 96DPI**
  - **To set DPI value, right-click on desktop, choose "Settings" tab >> "Advanced" >> "General"**
- Ethernet interface: 100Mbps Ethernet card or above

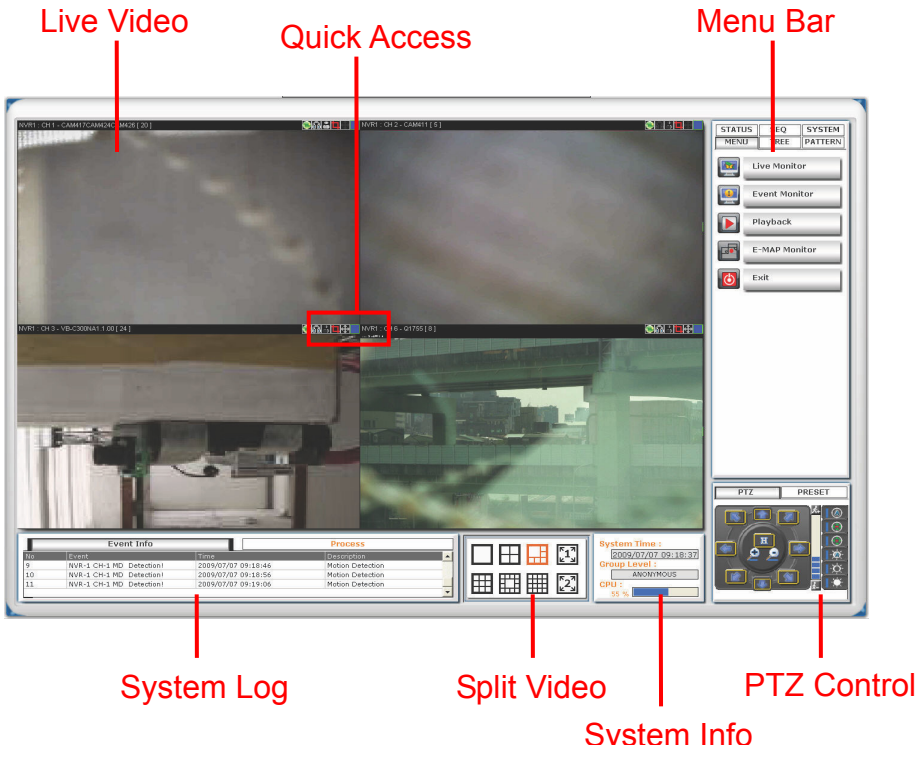
Software requirement:

- OS: Windows 2000(SP4), Windows XP, Windows 2003

1. User Interface Overview

The Central Management System (CMS in the following sections) is a tool that help you to manage PLANET NVR-xx10 (NVR in the following sections) Family Network Video Recorder System (where xx indicate the channel supported).
This tool is helpful for managing up to 16 NVR in the wired network. Please follow the sections below for more about the use and manage of your NVR systems.

Following is the Graphic User Interface (GUI) of the CMS



Live Video:

This is where all the videos are displayed. You can decide what channels' videos to be displayed here by dragging cameras from the side menu bar and dropping them anywhere in this section.

Menu Bar:
This is where you can access all functions of the software. Camera list and device status information are also available from the menu bar.

Quick Access:
Each video window comes with quick access buttons which allows you to quickly take certain actions to the video you are viewing.

System Logs:
System status such as motion detection, functions that were accessed or settings that were altered are displayed here.

Split Video Windows:
You can change the video split windows with you desire depends on how many videos you wish to view at a time.

System Info:
It provides information of current system time, who is currently logged in and the CPU usage that the software is currently consuming.

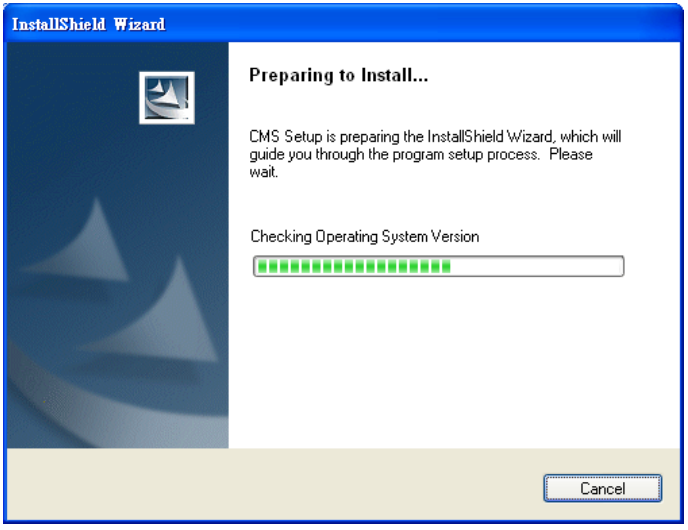
PTZ Control:
This is where you can pan, tilt, zoom the selected PTZ camera. Functions such as preset point navigation and auto pan can also be accessed here.

2. Installation

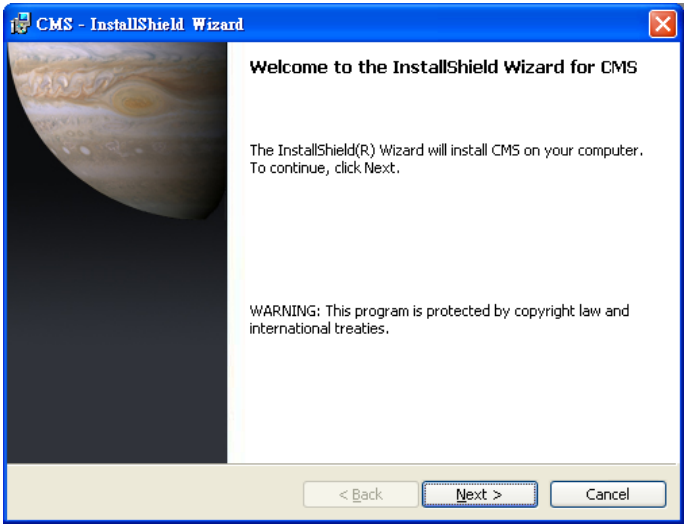
Begin Installation

Please insert the bundle CD disk into your CD-ROM drive. Then the welcome web page will appear. Please click the "**CMS software**" hyperlink to start the installation. If the welcome page doesn't appear, simply double-click on your CD-ROM drive icon in "My Computer" to launch the welcome web page.

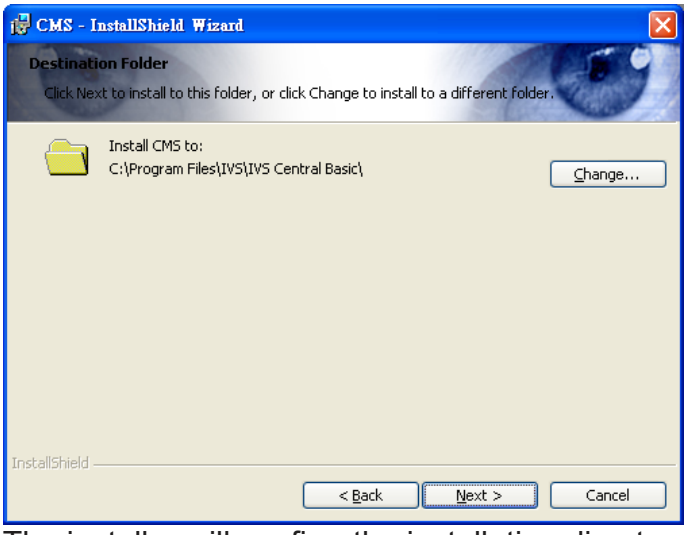
Once the installer is launched, it should start by checking the compatibility with the operating system you are running this installation on.



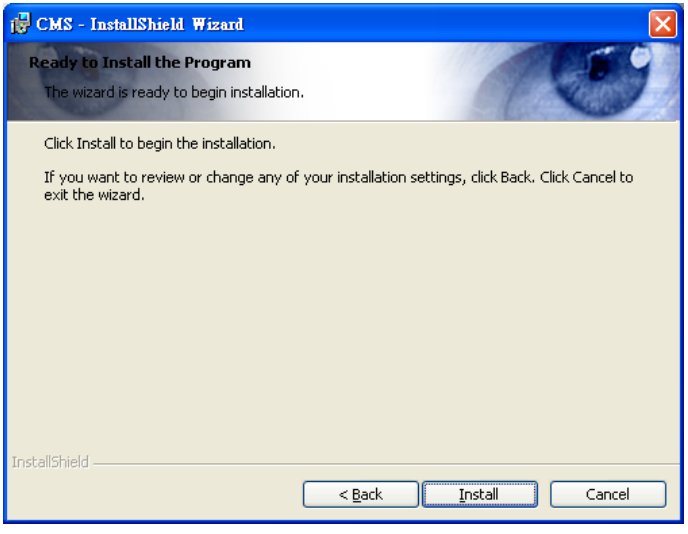
Once the compatibility check is passed, you can begin the installation by clicking “next”.



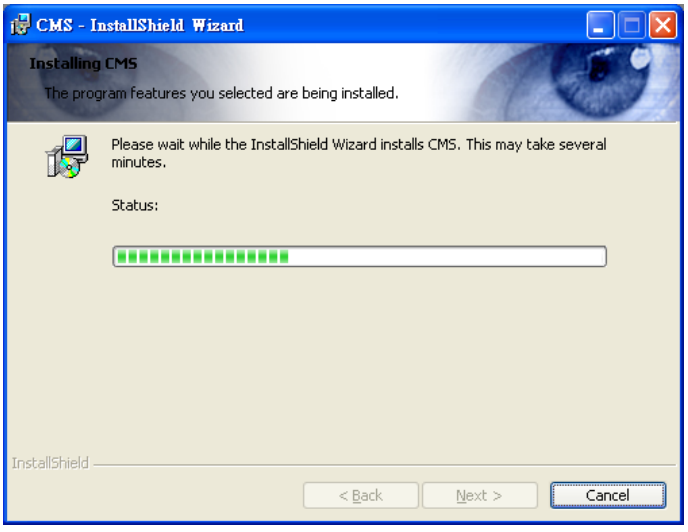
The installer will install the program in a pre-defined directory. You can accept the default and click “Next” to proceed with the installation. Or you can press “Change…” to choose which location you will install this software.



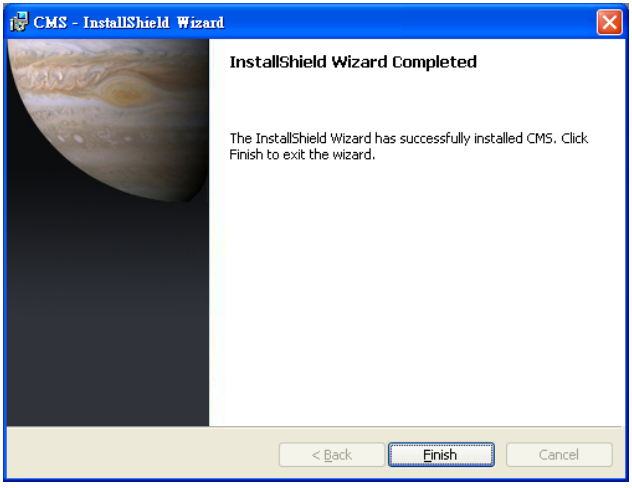
The installer will confirm the installation directory one more time. Click “Install” to begin installation, or click “Back” to change the installation directory.



The installer will display the installation process.



Once the installation is completed, click “Finish” to exit the installer.



Start the CMS software

After the program is successfully installed on the PC, there are two ways to start it.

.Start it from the “Start” menu:

Simply go to Start >> Programs >> IVS >> CMS Central Basic”>> CMS_Basic.

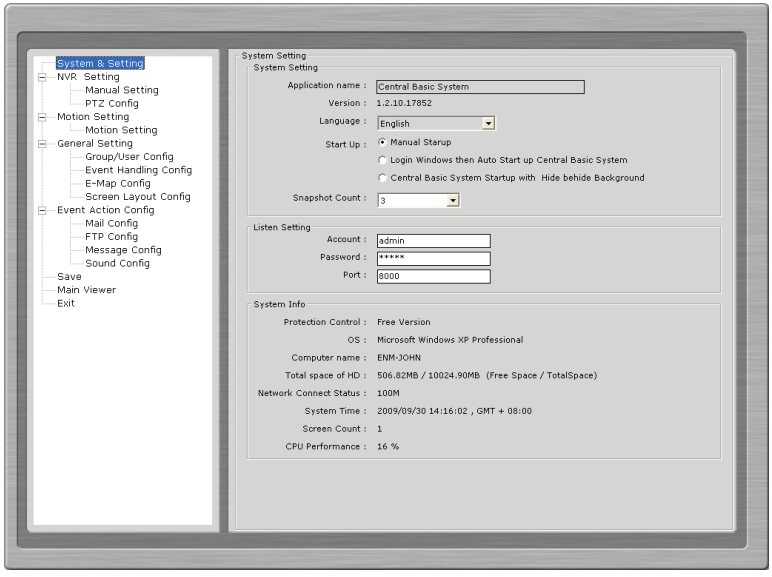
.Start it from the desktop:

The program automatically creates a shortcut icon on your desktop after it’s successfully installed. Simply double-click the icon 

to launch the program.

* You should run the “Setup Wizard” before launching the CMS software. The Setup Wizard is a separate program which you can launch it the same way you launch the CMS software (from Start menu or the desktop shortcut). The purpose of the Setup Wizard is to help users with certain preliminary settings in order for the program to work with NVR network video recorder.

3. Using the Setup Wizard



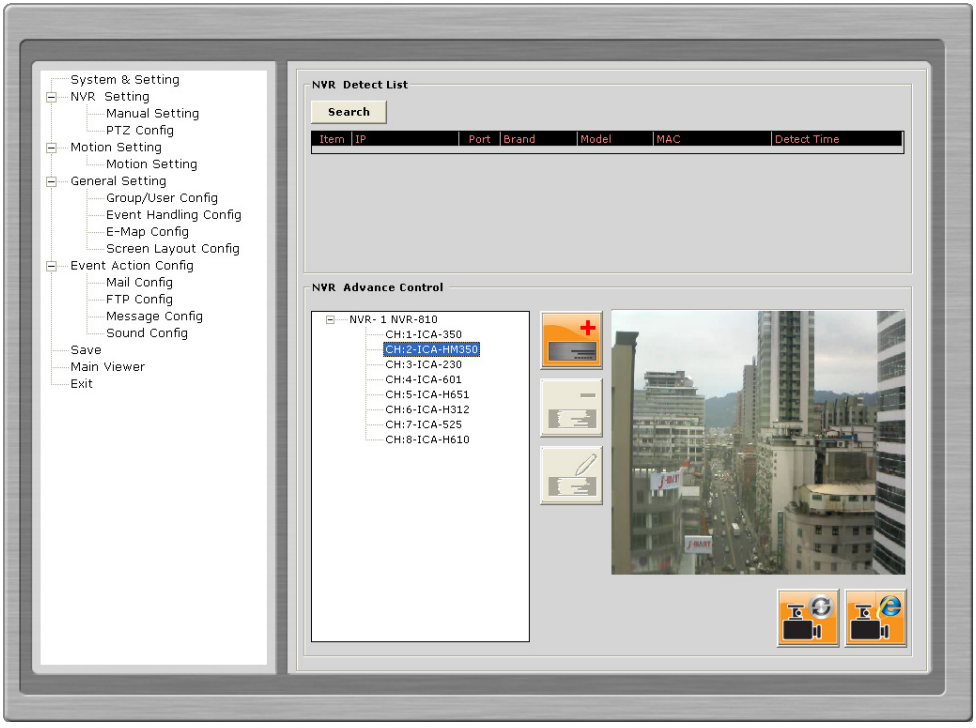
It's necessary to use the Wizard

The majority of the settings of the CMS software rely on its Setup Wizard. It's necessary that you run the wizard prior to using the CMS software.

With the Setup Wizard, you are able to:

- Add/Remove/Edit one or more NVRs
- Configure PTZ preset points
- Configure Motion Detection
- Configure user privileges
- Configure how events are handled
- Configure E-map
- Configure multiple monitors
- Configure event actions

4. Add a NVR

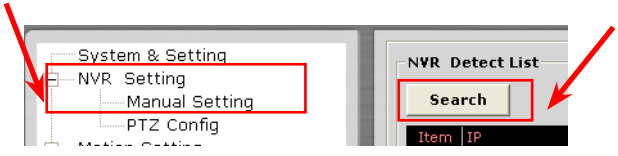


Connect the program with NVR

The main purpose of the CMS software is to manage multiple NVRs. Before it can be done, you would need to tell the program which NVR you need it to manage. You do that by adding one or more NVRs to the program through the Setup Wizard.

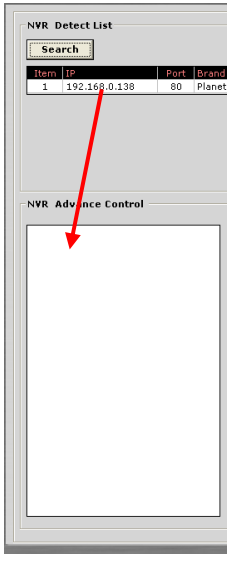
Automatic Search:

The Setup Wizard is able to find NVR on your local network automatically. Simply go to **“NVR Settings”** >> “**Manual Settings”** in the Setup Wizard, and click the search button to locate NVRs that are placed on your local network.

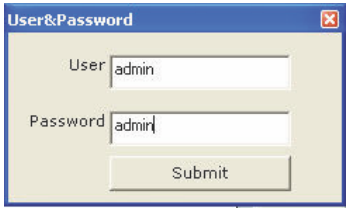


Drag and Drop to add

Once the Setup Wizard detects NVR on the network, they will be listed in the “Detect List”. Simply drag one from the list and drop it in the “Advance Control List” below to add it.

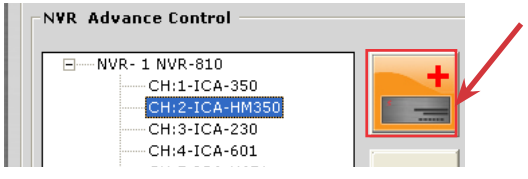


You will then be prompted with its username and password which you need to enter accordingly to complete the action.

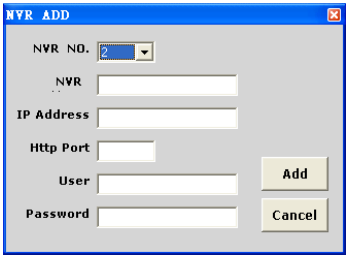


Add NVR Manually with Setup Wizard:

Simply click on the “Add NVR” button in the same page to add it manually.

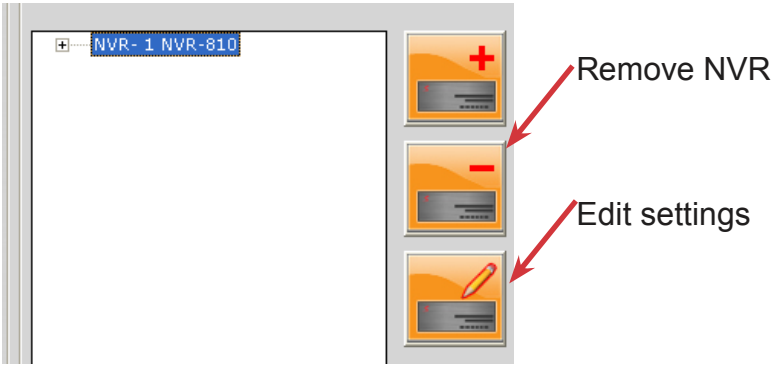


You will be asked for the information shown below before successfully adding the NVR to the program.

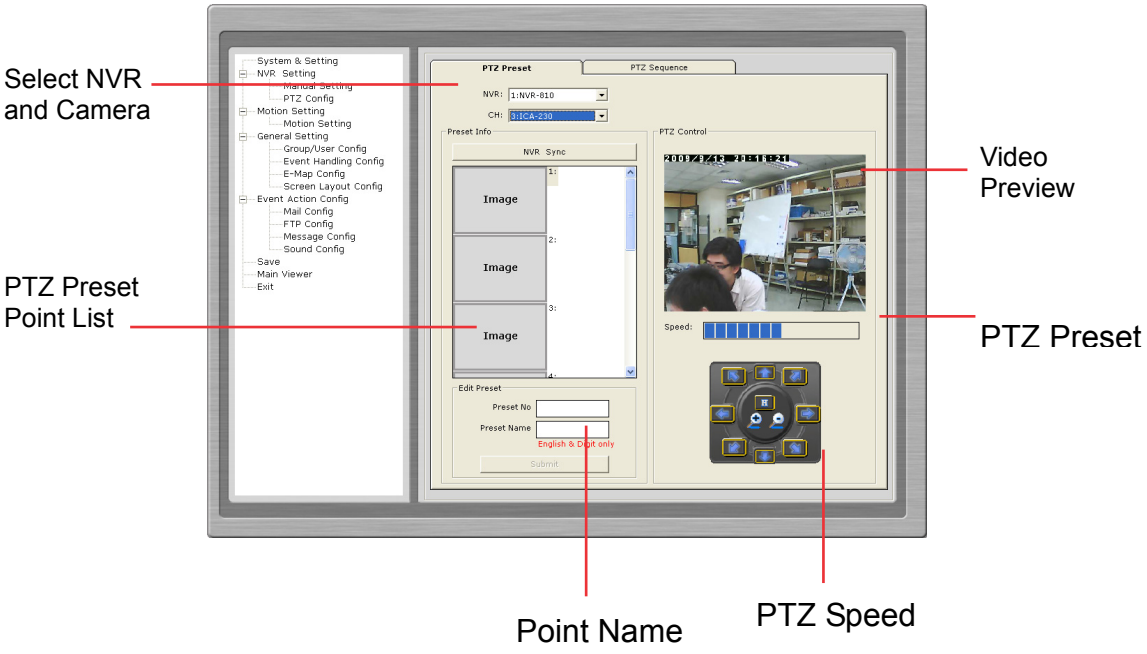


Remove a NVR or Edit its Settings

Once you have one or more NVR added to the program, the “Remove” and “Edit Settings” buttons will become available. Simply click to select a NVR from the list on the left and choose the corresponding button on the right.



5. PTZ Configuration

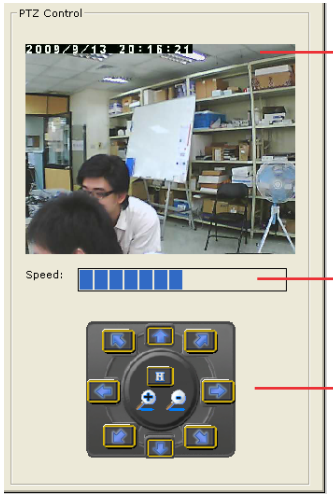


Synchronize or Add New PTZ Preset Points

You can synchronize PTZ settings from all cameras connected to NVR on the network or you can create and add new PTZ preset points to those cameras through the Setup Wizard.

Simply select a NVR from the drop-down menu first and then select a camera to synchronize or add new PTZ preset points.

Use the provided PTZ control panel to define a PTZ preset point. You may change the speed of the PTZ movements if you will.

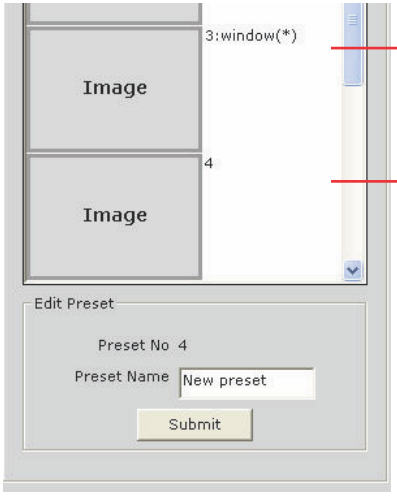


Video Preview
You can get a video preview of the selected camera here.

PTZ Speed Control
Adjust the increment of the PTZ movements.

PTZ Control Panel
Use this panel to define a new preset point or make change to an existing one.

You can get a list of the preset points that have been added to the camera as well as the opening slots that are available which you can add new preset points to later on.

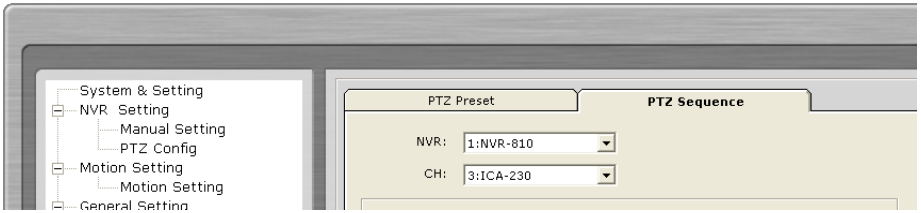


Slot configured with a PTZ preset point.

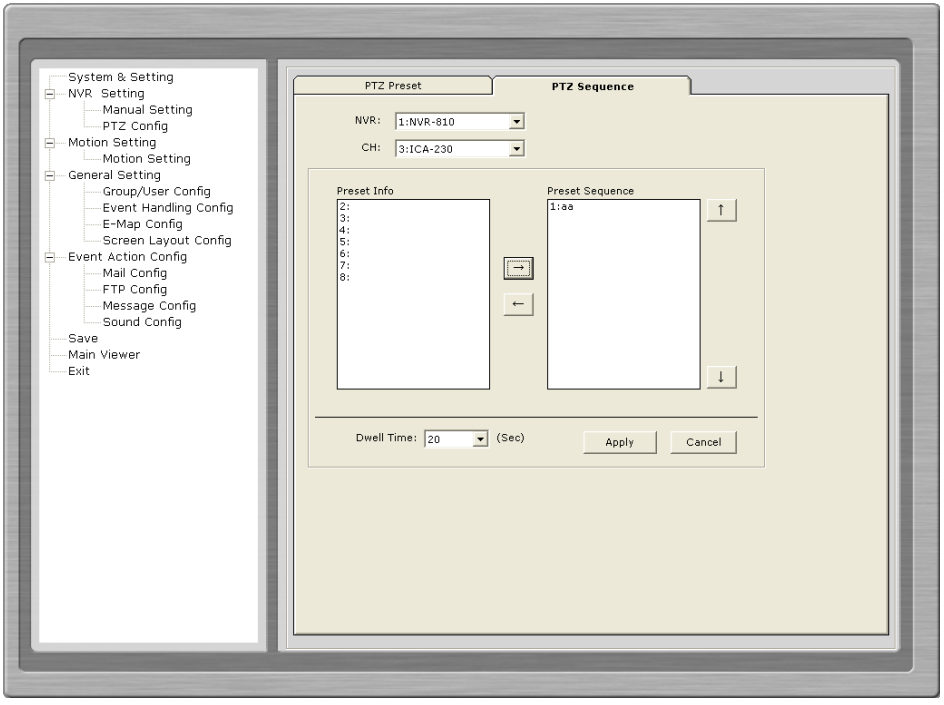
Slot that has not been configured with a PTZ preset point.

Configuring PTZ Preset Sequence

You can configure the PTZ preset sequence after you create and define PTZ preset points for the cameras. To configure PTZ sequence, open the setup wizard and go to NVR setting >> PTZ Config >> PTZ sequence.



You can get a list of the preset points that have been added to the camera as well as the opening slots that are available which you can add new preset point to later on.



Select an NVR
Select an NVR from the drop down menu first.

Select a PTZ Camera
Select a PTZ camera to configure PTZ sequence.

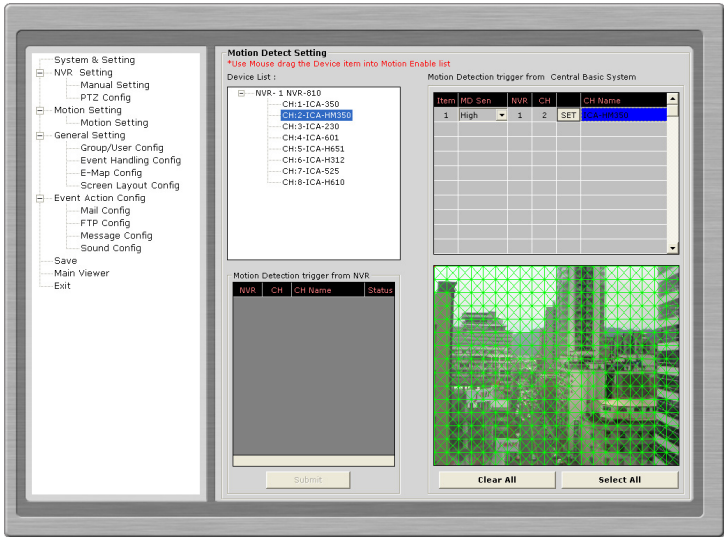
Select Preset Points
The previously configured preset points will be listed on the left.

Move the ones to the right
Move the preset points to the list on the right using the → which they will be used for PTZ sequencing.

Adjust Sequence Order
You can use the ↑ or ↓ buttons to adjust the sequence orders.

Set Dwell Time
Finally set the dwell time for sequencing view among each point.

6. Motion Detection

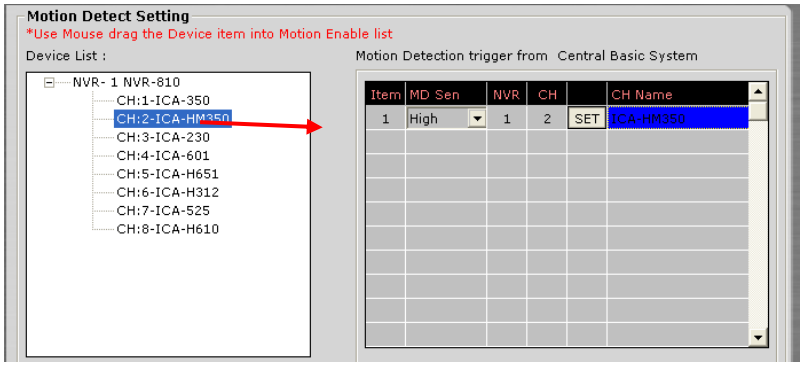


Configuring Motion Detection

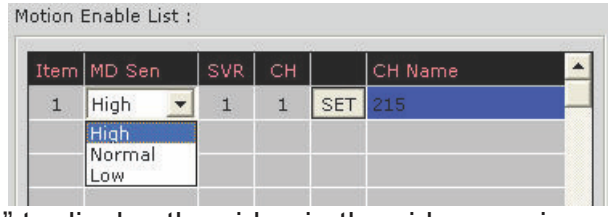
The program can be configured to alert users when detecting motions in video streams received from one or more cameras. The user is able to define an area in a live video where motions in this area will trigger the program and send out alerts.

An example of this can be to have a camera pointing to the doorway where no one comes through during the day. You can then define an area with the door included. This tells the program that any moving object shows up in this area (such as a person walking in through the doorway) is considered abnormal and an alert should be sent to user for further action.

To enable motion detection to certain cameras, drag a camera from the device list and drop it on to the motion detection enable list.

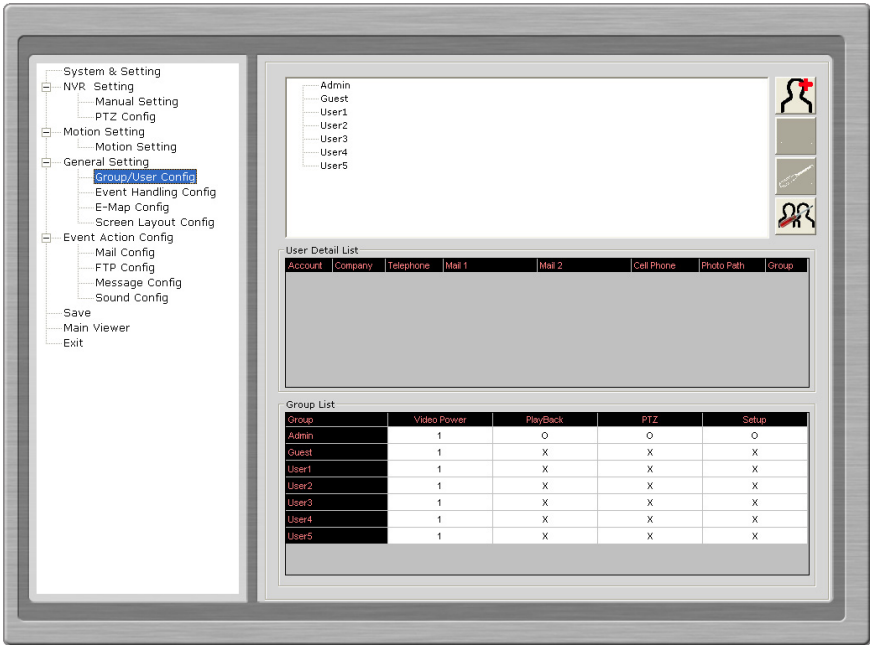


The camera will then show up in the motion detection enable list. You can then set sensitivity of the motion detection.



Click “Set” to display the video in the video preview window in which you can define an area for motion detection.

7. Users and Groups



Users and Groups Configuration

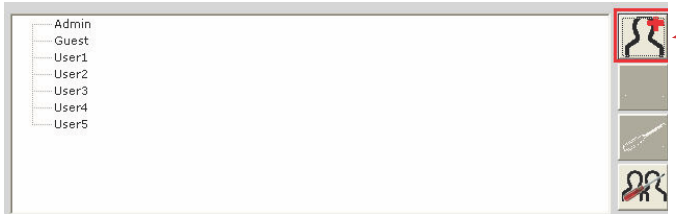
The section allows users to add new users and customize each of their access privilege by assigning them to different user groups. The purpose of this function is to limit the number of people to have access to the program, hence, having access to view live videos, playback videos or altering settings of the program.

Once you add users to the program, you will be prompted to enter the username and password of a valid user account.

* There is no user account configured for the program by default.
The privileges of the “Admin” and the “Guest” groups are not configurable and the “Guest” account is configured with the “view only” privilege”.

Add a New User

To add a new user, simply click on the “add new user” button available at the upper-right hand corner in the “User/Group config” page.



This opens up a new window for you to enter the detail information of the user you are creating.

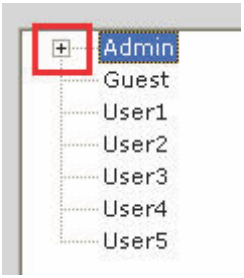


* The “Username”, “Password” and “Confirm Password” fields are required when creating a new user account. The rest of the fields are optional.

* You can click the “Check” button to check if the username you are crating for the new account has been used by another account.



A “+” will appear next to the group indicating a user has been added to that particular group. Click on the “+” to expand the group and all users will be displayed.



The “Remove” and “Edit” buttons will become avail- able once a user has been created.

Click the “Remove” button to remove an existing user, or the “Edit” button to edit setting of an existing user account



Remove an user

Edit setting of an existing user account

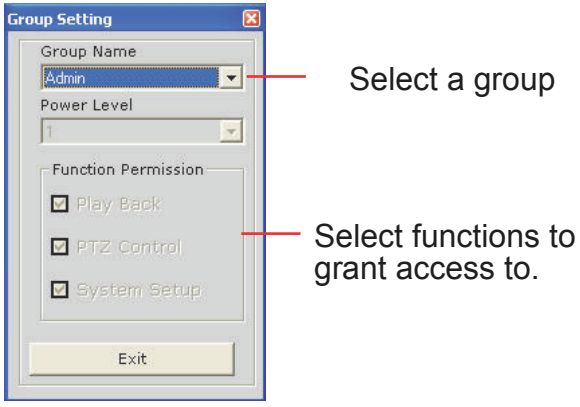
Edit Group Privilege

To edit access privilege of a particular user group, simply select a group first then click the “Edit Group” button.

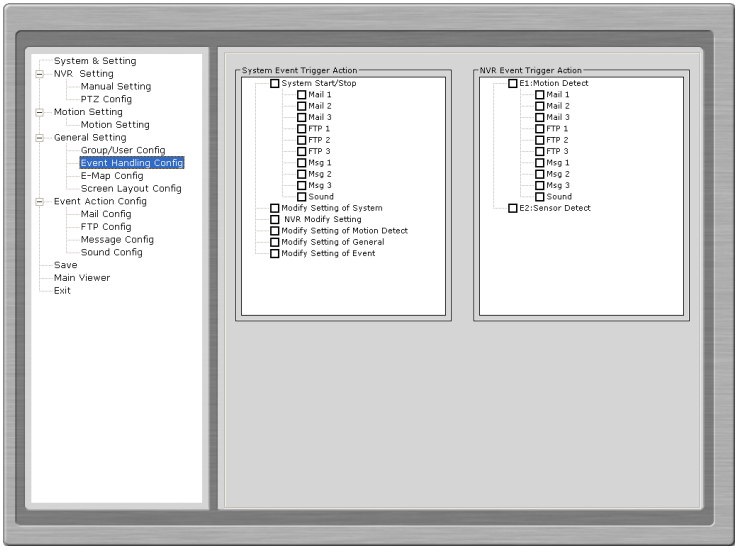


Edit privilege of a group

This opens up the group privilege configuration dialog.
Select a group from the drop-down menu and check which function(s) this group has permission to.



8. Event Handling



Event Handling Configuration

Here you can define what constitutes an event with pre-defined conditions and what actions to be taken when these conditions are met.

The conditions are divided into two categories:

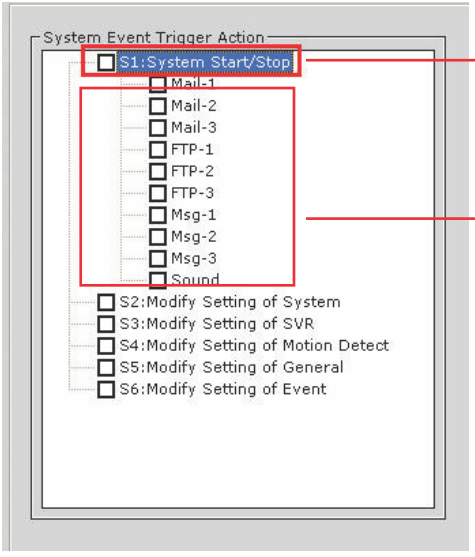
. General event conditions

Conditions such as settings being altered

. NVR-specific event conditions

Conditions such as motion detection

To enable a condition for event trigger, simply tick the checkbox of a particular condition.



Event Condition
Tick the checkbox to enable Double-click pulls down the event servers

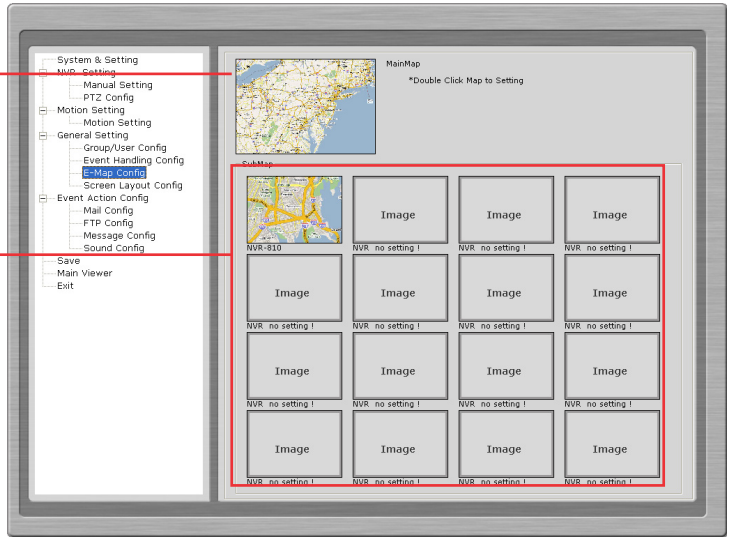
Event Servers
Tick the checkbox to enable

Double-click on any condition pulls down the event servers which users can choose to use for that particular condition.
The event servers can be considered as actions that are taken place when events are triggered.

9. Configure E-Map

Main Map
The main map which displays locations of all NVRs

Sub-maps
Each sub-map displays the near-by area of a particular NVR which shows locations of all cameras connected to it



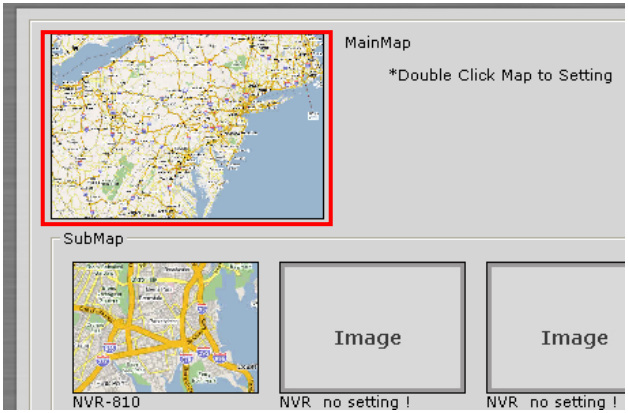
The E-Map
The program provides two-layered e-map which the top layer displays the location of all NVRs and the second layer (sub-map) displays locations of all cameras connected to one NVR.

* There are 16 sub-maps and one for each NVR.

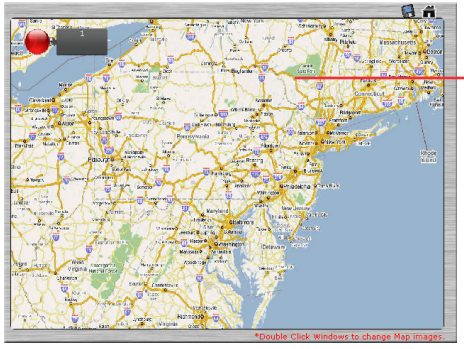
This function is particularly useful when motion detection is configured. You can simply place the e-map on one monitor and whenever there is motion detected, the NVR will be highlighted on the map and live video will be displayed for live event monitoring.

Configuring The E-Map

You can replace the map of your own when configure e-map.
Simply double-click anywhere on the map to enlarge it.

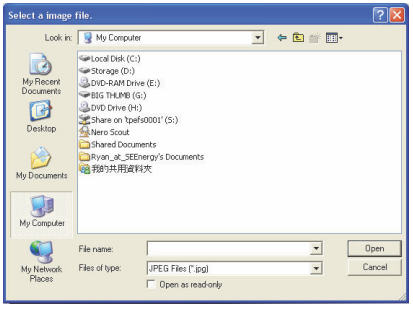


Double-click on the enlarged map again to open the dialog which lets you locate the new map file. You will need to select a map file that is in the JPEG file format.



Double-click to replace the map

Locate the new map file from the local computer.



Once the new map is in place, move the red dots on the map to define locations of each NVR.



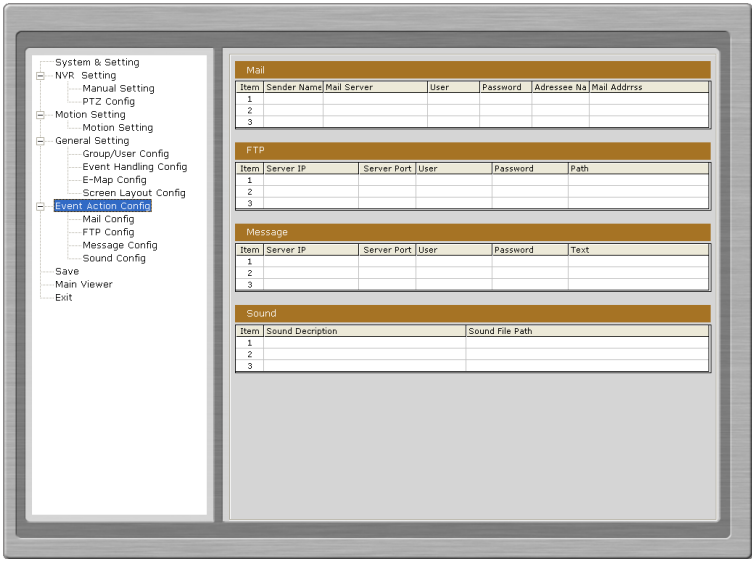
Click the “Save” button at the upper-right hand corner to save changes when you are done.



Save settings

* Use the same method described above to configure sub-maps for each NVR.

10. Event Servers



Event Servers are Event Actions

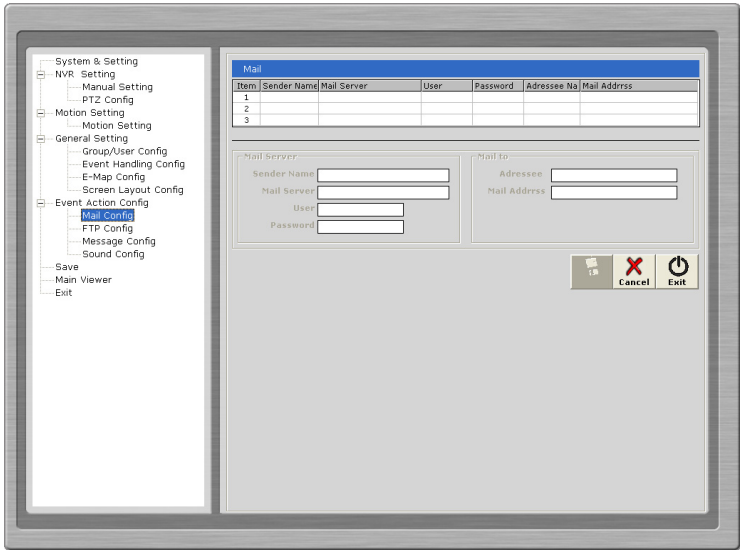
The program provides four different event servers that can be used when events are triggered.

- Mail server
- FTP server
- Message server
- Sound server

You can add up to three for each server and pick the one(s) you would like to use for particular event(s).

You can get a configuration overview of all the event servers under the “Event Action Config” page.

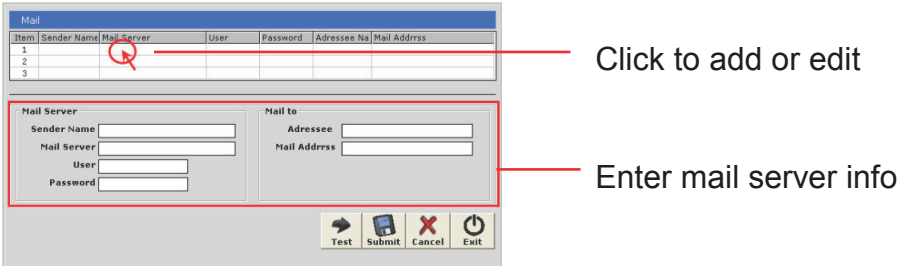
Configure Mail Server For Events



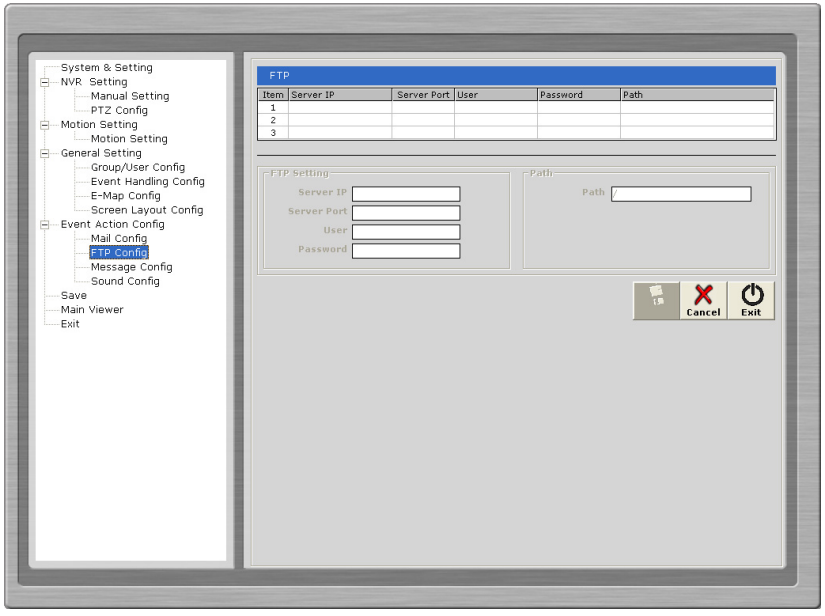
You can configure up to three mail servers in which you can select later and use them for different event trigger conditions.
When configuring an mail server, it's essential that you provide the following information:

. Mail server address (IP or FQDN domain name)
. Username and password for the mail server (if required)
. Recipient's e-mail address

To start adding a mail server, click on an item field and the setting boxes should become available.
Enter the mail server information and click "Submit" to save the settings.
You may click "Test" to verify the settings prior to saving the configurations.



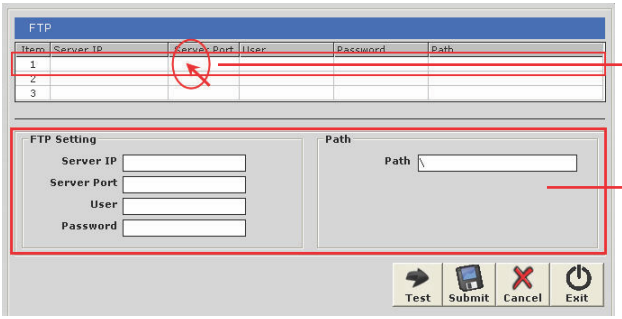
Configure FTP Server For Events



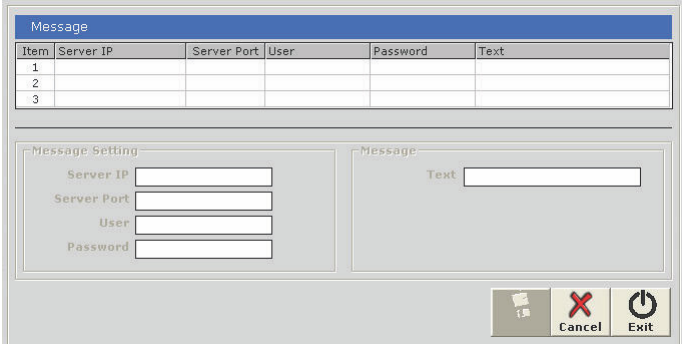
You can configure up to three FTP servers in which you can select later and use them for different event trigger conditions.
When configuring an FTP server, it's essential that you provide the following information:

- FTP server address (IP or FQDN domain name)
- FTP server port (such as port 21)
- Username and password for the FTP server (if required)
- Path to upload the files to (if not I directory)

To start adding an FTP server, click on an item field and the setting boxes should become available.
Enter the FTP server information and click "Submit" to save the settings.
You may click "Test" to verify the settings prior to saving the configurations.



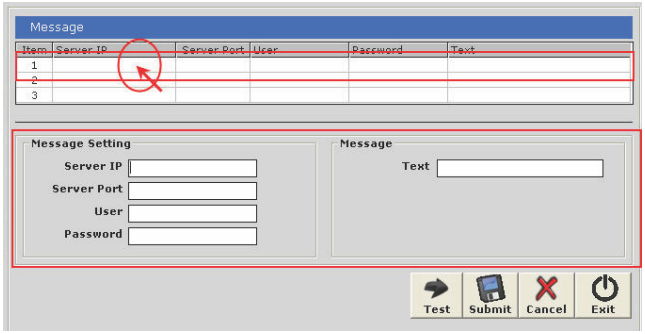
Configure Message Server For Events



You can configure up to three message servers in which you can select later and use them for different event trigger conditions. When configuring a message server, it's essential that you provide the following information:

- Message server address (IP or FQDN domain name)
- Message server port
- Username and password for the Message server (if required)
- Text to be broadcasted

To start adding a message server, click on an item field and the setting boxes should become available. Enter the message server information and click "Submit" to save the settings.
You may click "Test" to verify the settings prior to saving the configurations.



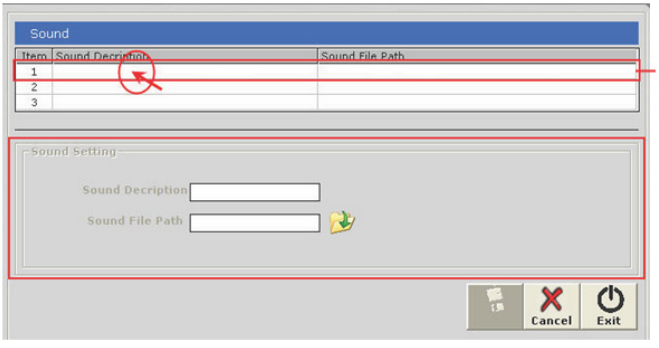
Click to ads or edit

Enter mail Server info

Configure Sound Server For Events

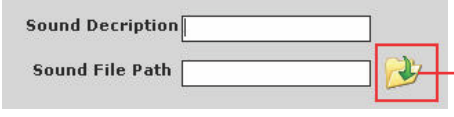
You can configure the program to send warning sound from the system's speaker when events are triggered.

To start adding a sound server, click on an item field and the setting boxes should become available.



Click to add or edit

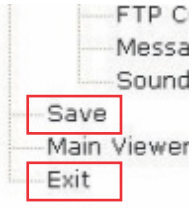
Click on the "folder" icon to locate the sound file. You may select a sound file that is only in the WAV file format.



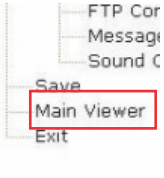
Click to locate sound file

Accessing the main program

Now that you have finished configuring the mail program through its setup wizard, after saving all the settings (which you can do so by clicking on the “Save” button on the left pane tree menu), simply click “Exit” to close the Setup Wizard.



To access the main program, simply click on “Main Viewer” to exit the Setup Wizard and it will be open the main program automatically.

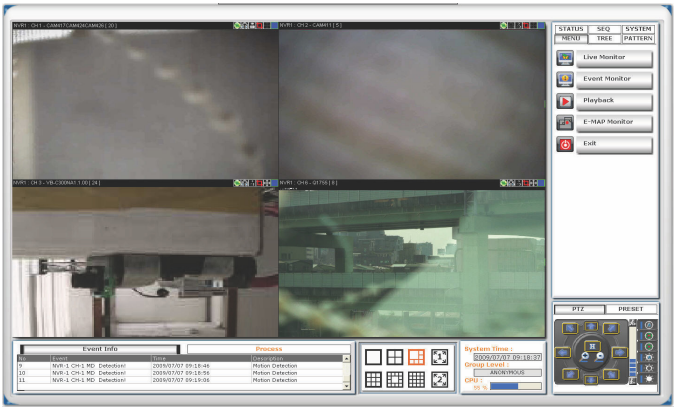


If the Main viewer doesn’t run, you can start the main program by double-clicking on the short cut icon located on the desktop.



Or you can access the main program by simply go to “Start” >> “Programs” >> “IVS” >> “CMS Central Basic”>>”CMS Central Basic”.

11. Using the Main Program



Working with the Live Video Page

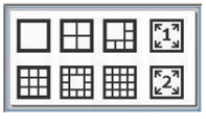
This page basically provides you the ability to view, and manage the video streams of each channel.

The program provides certain functions which helps users to monitor effectively.

- Video Function Bar



- View Window Switcher



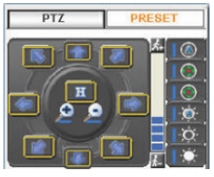
- System Information



- Side Menu Bar



- PTZ Control



Video Function Bar

The function bar is available for each video window.
The function bar provides the following functions:



Reconnect video

If you find the video is streamed at a lower frame rate than it should or the video is simply lost, you can click this button to re-initiate the connection with the camera and receive the stream again.

Turn on/off audio

If the camera supports audio function, you can click this button to receive audio from the camera.

This function is turned off by default and you can only receive audio from one channel at a time.

Motion Detection Status

This icon serves the function to display whether motion detection has been configured for this channel.

If it's not configured, the icon is grayed out 
If it's configured, it will be in light grey 

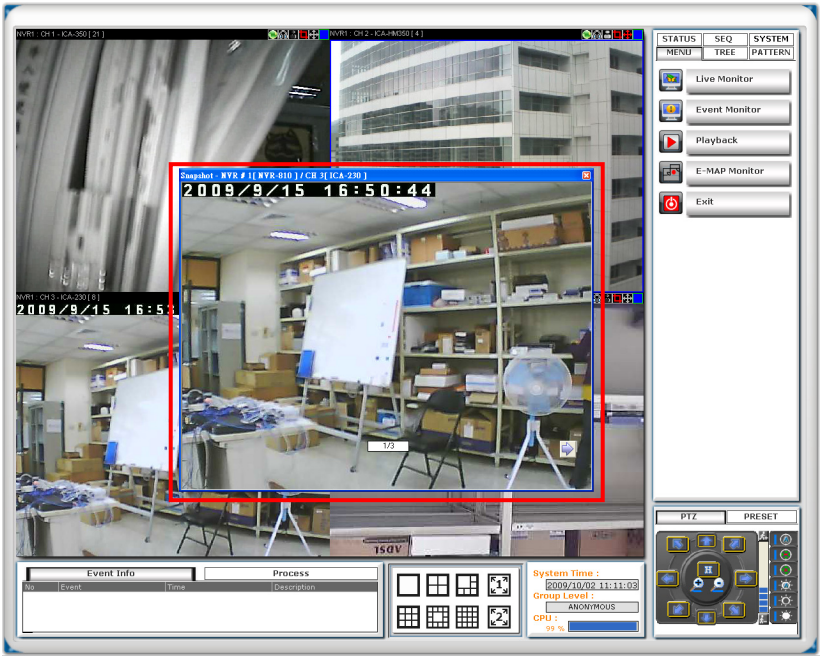
Turn on/off Motion Display

Once a channel is configured with motion detection, click the same icon allows you to turn on motion display which adds highlights on moving objects in the video. The icon will show in red  when this function is turned on.

Take a Snapshot

The function allows you to take snapshots of the live video and save them on your local computer.

Simply click on the icon and the snapshot of the video will be displayed in a pop-up window.



Right-click anywhere on the pop-up window will give you the option to save the snapshot.



* The snapshot is automatically saved in a pre-defined folder under the directory where the program is installed.

PTZ Control Indicator

You are able to control one PTZ camera at a time and this icon tells users which camera is currently selected for PTZ action.

The video window will also be highlighted with blue color to indicate it's currently being selected.

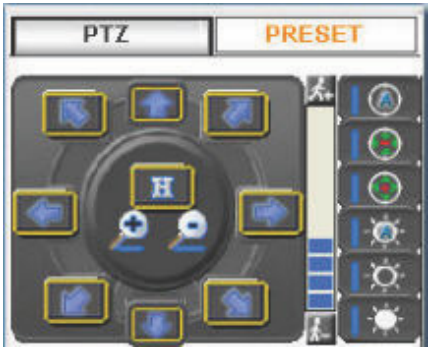


PTZ icon shown in red meaning this is a PTZ camera, or it would gray out.

Blue high-light.

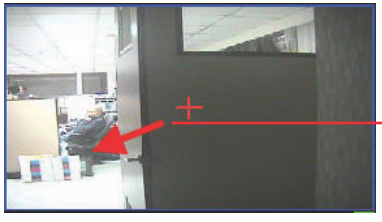
Using PTZ Control Panel

Once a video is selected for PTZ action **(right-click on a video to select)**, you are able to do the PTZ with the PTZ control panel.



Use Mouse-over-video PTZ

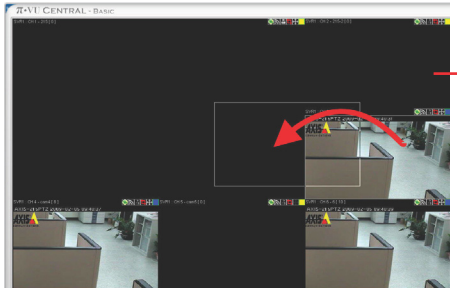
You can simply move the mouse onto the video, an arrow and the crosshair should be displayed. Simply right-click on the video to pan / tilt the camera. Use the mouse scroll button to scroll down to zoom in and scroll up to zoom out.



Right-click to pan and tilt, use mouse scroll button to zoom in/out

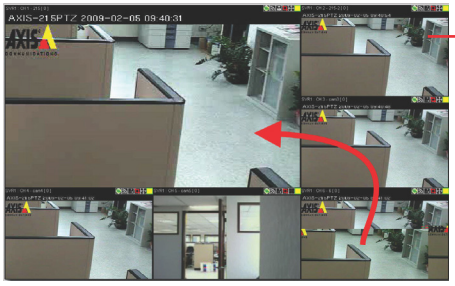
Drag and Drop to Relocate Videos

On the live view page, you can simply drag the video to re-arrange its location or switch location with an- other video.



Drag a video and drop it to a new

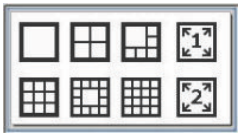
location



Drag a video and switch place with another video

View Window Switcher

You can use this function to switch between different view patterns and set up how videos are displayed on the screen.



Support Two Full Screen View

The program supports two full screen views if there are more than one monitors connected to the PC. You can view up to 16 live video on each full screen with configurable view patterns.



The first full screen displays videos in full screen with its current view pattern layout (if it's displaying videos in a 6 split window view, the same displays in full screen).



The second full screen displays videos in full screen in a 16 split window by default. You can change the layout by right-click anywhere on the screen and make selection from the drop-down menu.

Side Menu Bar

You can access all functions of the program from the side menu bar. Some can be displayed onto different monitors if you enabled this function in the Setup Wizard.

A list of the functions available from the side menu:

- Live Monitor
- Event Monitor
- Playback
- E-Map Monitor
- NVR and Camera Status
- Camera Tree List
- Sequence View
- Create patterns for different split view
- Service Mode
- Check Program Version
- Change Display Language



Camera Tree List

You can retrieve a list of the cameras and NVRs from the side menu bar. Simply click on the “TREE” menu to access this function.

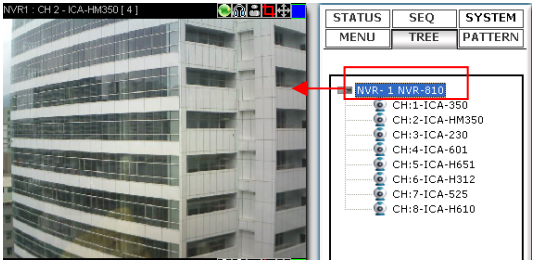


By default, only the NVRs are listed. You can double- click on any of them to retrieve the camera list of that NVR.

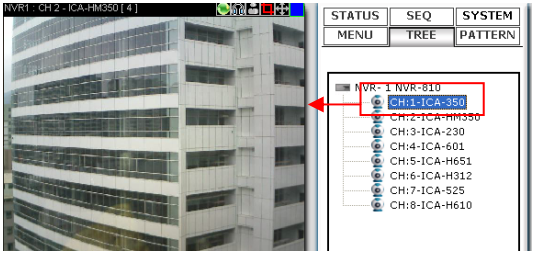
You can then drag an NVR from the list and drop it onto the live video area, in which all cameras’ videos will be displayed.

You can also drag one camera from the list and drop it onto any video window to display video from that camera.

Drag and drop an NVR

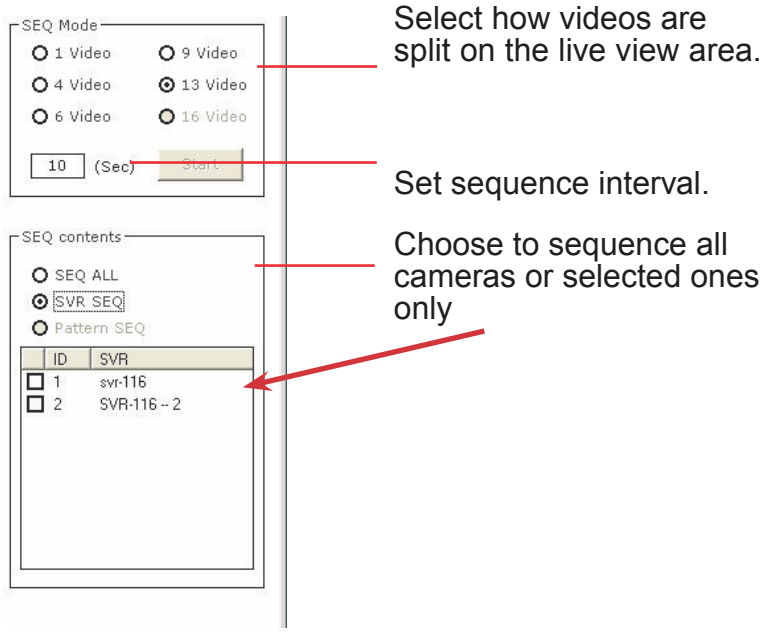


Drag and drop a camera



Sequence View

This is a useful tool which you can simply setup the program to display videos from certain or all cam- eras and the program will automatically switch views for you. You can also set up the sequence interval and decide how long you would like each video to stay on the screen.



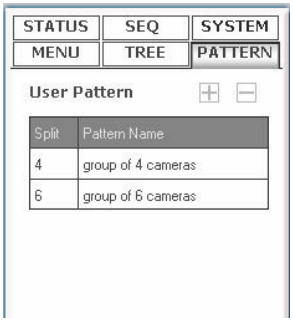
* The “Pattern SEQ” will not become available until you create “patterns” under the “PATTERN” menu.

Live View Pattern Groups

You can create multiple profiles for different live view split layouts. This is a extreme useful function in a larger environments where you have many cameras in place and multiple cameras setup for each area.

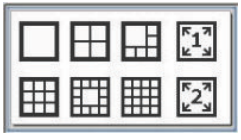
After the “patterns” are created, you can head back to the “SEQ”

menu and enable the “Pattern SEQ” feature. This will ask the program to display videos from the “pattern” groups in sequence.

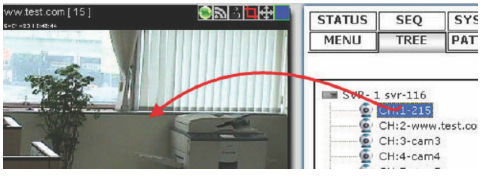


To configure view pattern groups and set it for pat- tern sequence view:

1. Select a view layout first.



2. Then, select cameras from the camera tree list.

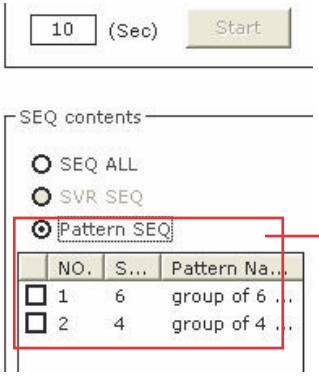


Drag and drop videos on the screen to arrange their locations as you desire.

3. Click the “+” sign under the “PATTERN” menu to add it.

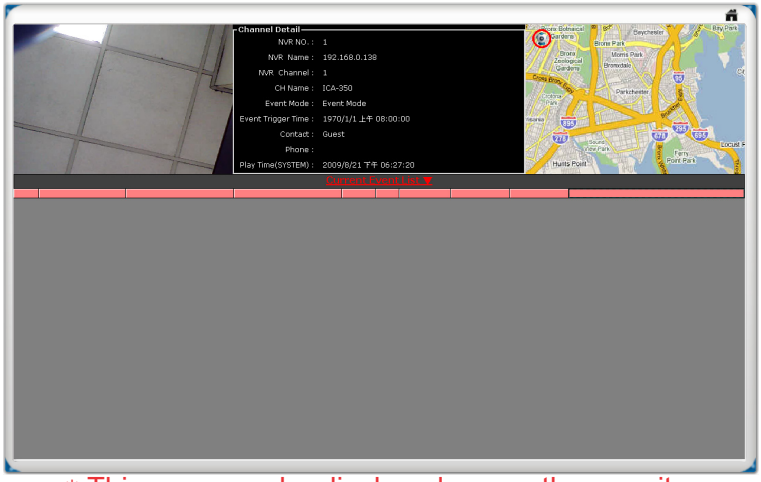


4. Go back to the “SEQ” menu and select “Pattern Seq” and the patterns should be available.



Select the ones for sequence viewing.

12.Event Monitor



* This page can be displayed on another monitor

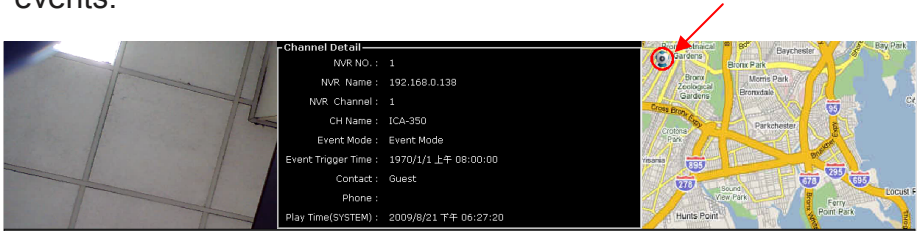
The Event Monitor is an advance live video monitor tool that combines functions of:

. Single live video view from camera that's triggered with events

. Channel configuration information.

. Event log, search, playback.

. E-Map displays cameras' locations which were triggered with events.



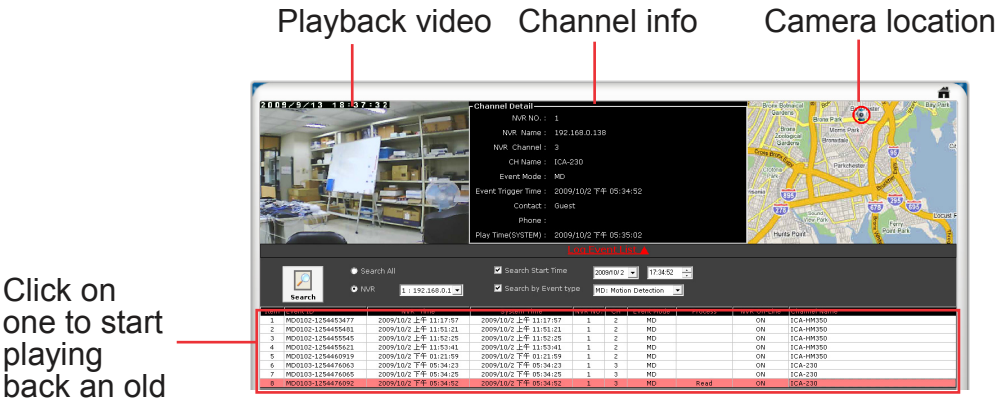
Video from the camera that is triggered with event

Detail information of the camera, such as channel number, the NVR is connected

The location of the camera will be displayed on the E-Map

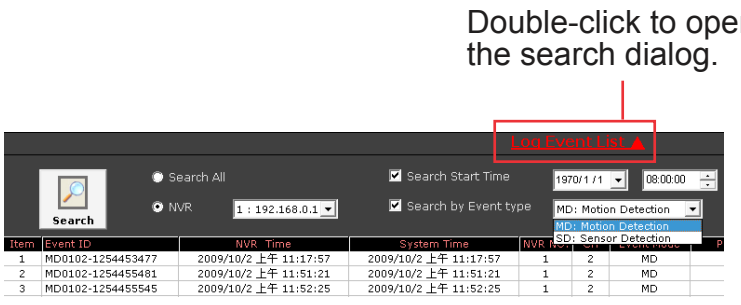
Playback Events from Event Monitor

The program will log continuously when new events are triggered. Simply click on one to start playing back the video. Its corresponding configuration and location will also be displayed according.

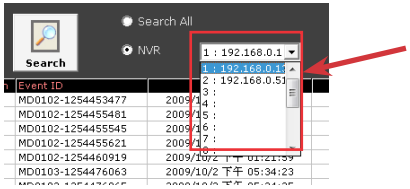


Filter and Search Events

While the event logs keep stacking up the screen, it's difficult to look for a particular event for playback. You can then use the search function and filter the search result by either search from an event start time, search by event type or both.

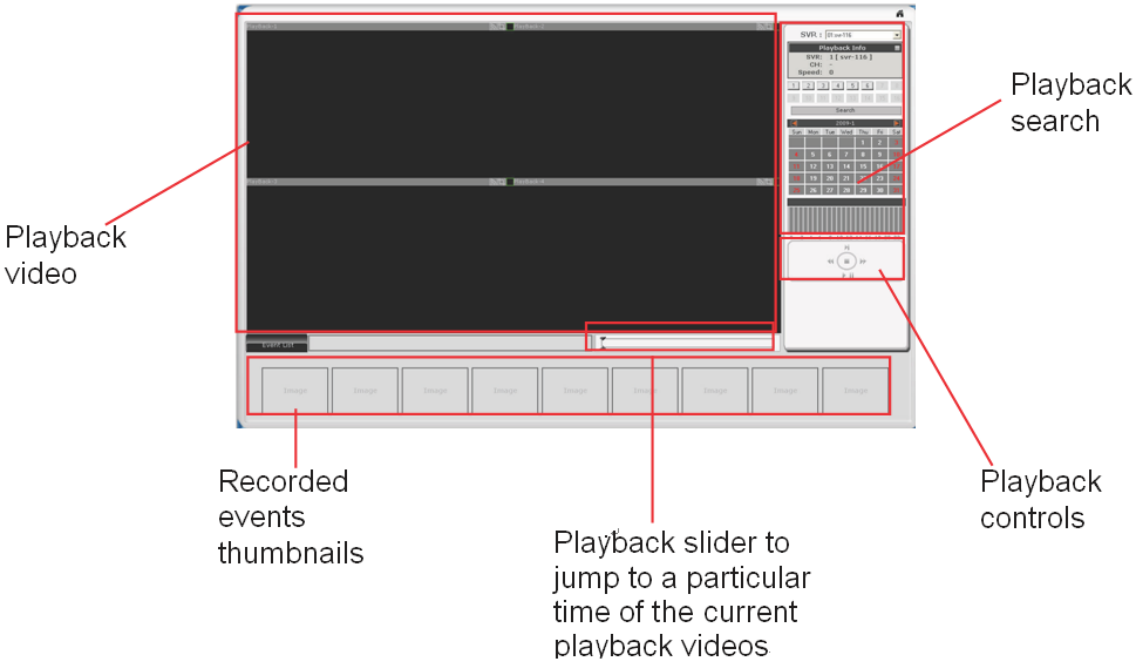


You can also narrow the search results by performing search to a particular NVR.



* The event trigger interval is set at 10 seconds

13. Playback

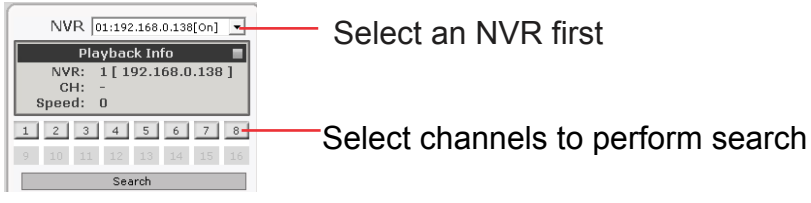


* This page can be displayed on another monitor.

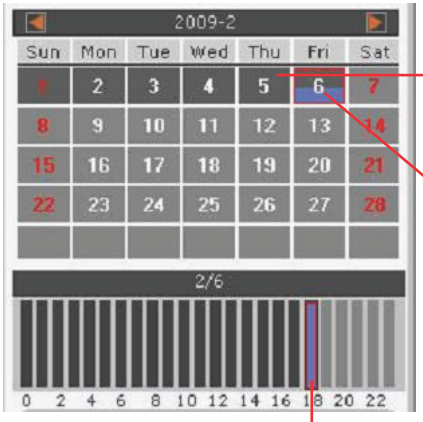
The program supports 4-channel synchronous play- back in a quad view layout. Search results that include events will be marked in blue on the calendar and their corresponding event thumbnails will be displayed at the bottom to reduce the search time and effort.

Searching for Playback Videos

To start looking for playback videos, simply select an NVR from the drop-down menu first and select which channels to look for playbacks.



Search results will then be displayed on the calendar indicating which days have recordings available.



Days marked in dark gray means recording available

Days marked in blue means there are events being recorded

Click on a day will shows what hours of that day recording were performed. Click on a particular hour to start playing back videos.

If you click on an hour which event recordings were performed, the program will display the thumbnails of the first frame from each trigger at the bottom.



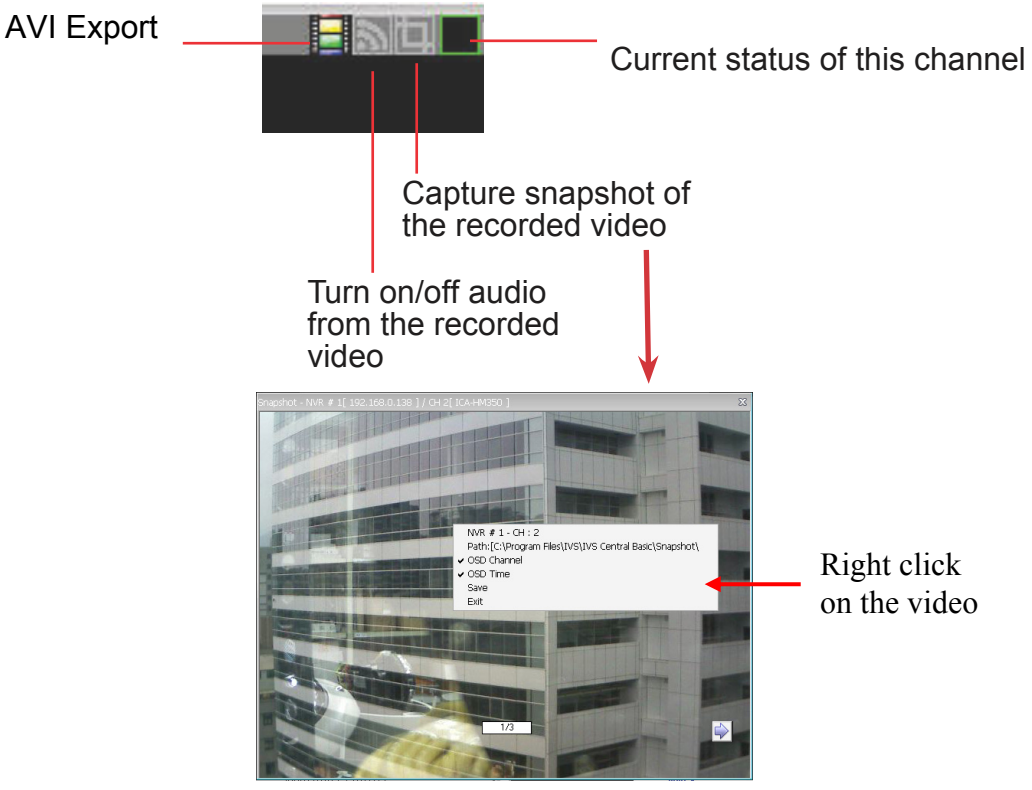
This is useful for users to help them quickly find the footage that's meaningful to them instead of fast- warding few times.

You can also use the time bar and go directly to a particular start time.



Capture Snapshots of a Playback Video

This is the same function that is available in the live view page. Each playback video windows comes with function bar at the upper-right hand corner.

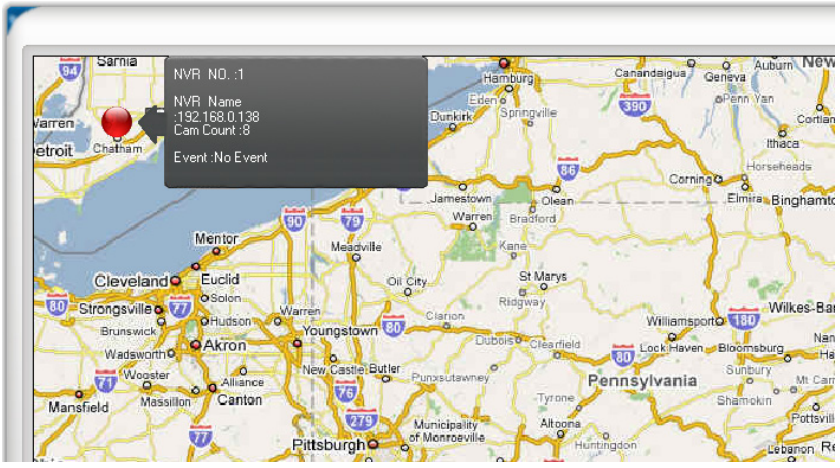


AVI Export

You can export the recorded videos to AVI files and save them onto a local hard disk. Simply click on the “AVI Export” icon while a video is being played back. Click it again to stop the process.

- All exported videos are automatically saved in the “AVI” folder under the program installation directory.
  “Ex.: C:\Program Files\IVS\CMS Central Basic\ AVI”
- The program allows a maximum of one hour of video per channel to be exported.

14. E-Map Monitor



The E-Map provides a simple overview of where events are happening. This allows users to only pay attention to what's meaningful to them.

This function comes with two layers of maps where the first layers represents locations of each NVR.

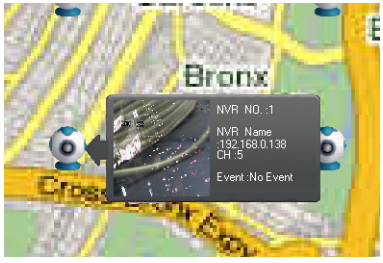
This is normally referred as the main map which a map with overview of a larger scale area should be used.

Once there's an event triggered from a particular NVR, the location of the NVR will be circled in red to notify users an event has been triggered.

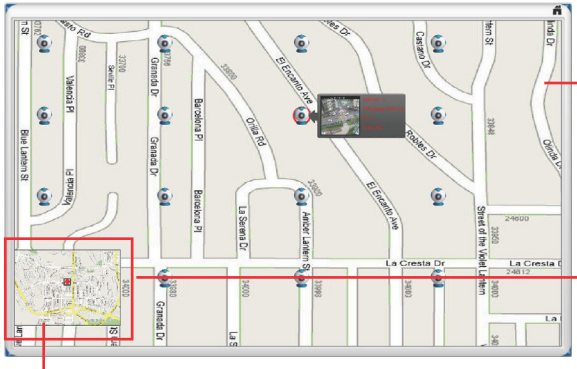
The video and event trigger type are also displayed on the map.

Double-click on the red dot (the location of the NVR) will take you to the sub map where the locations of all the cameras within will be displayed.

The camera of which the event is triggered from will be circled in red to tell the user the location of the event in a more detail manner.



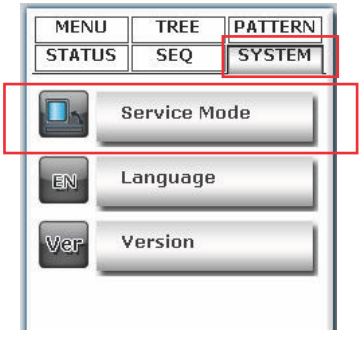
The sub map provides the PIP (Picture-in-Picture) view which the main map is embedded in the sub map so that users can still know if there are events being triggered from other NVRs at the same time.



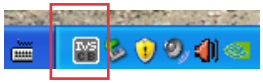
Simply double-clicking the embedded main map to go back to the main map view.

15. Service Mode

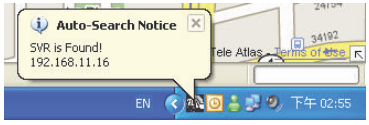
If you are using a PC that is not dedicated to run this program only (working with some other programs at the same time). You can turn on the service mode, which can be accessed from the side menu bar under the “**SYSTEM**” menu, select “**Service Mode**”.



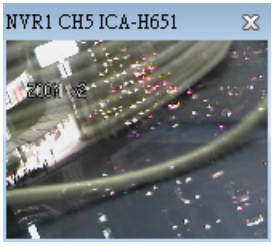
This will minimize the program to the Windows system tray.



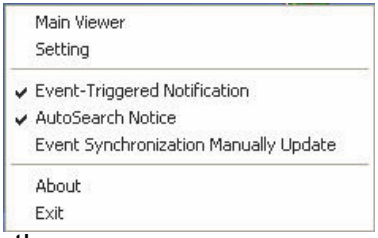
The function to detect new NVR and event trigger notification will continually to work in the back- ground.
You will get notification from the tray if the program has detected a new NVR has been placed on the network.



A small video will also be popping out from the tray to notify you that an abnormal motion has been detected.



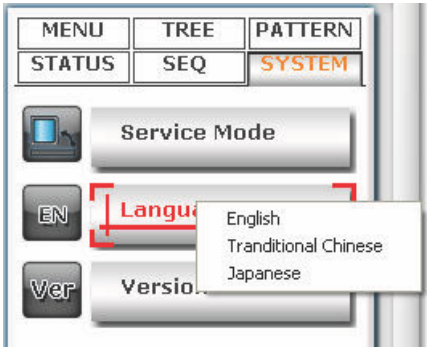
Right-click on the program tray icon gets you other functions.



- Maximize the program
- Close the main program and open the Setup Wizard
- Turn on/off event notification (on by default)
- Turn on/off NVR Smart Search (on by default)
- Switch to synchronize events manually (off by default)
- About the program
- Exit the program

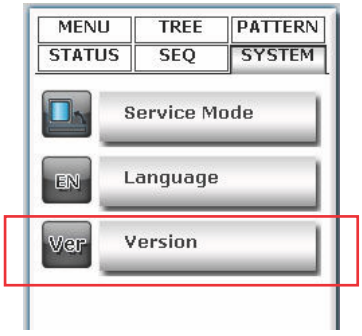
Change Program Display Language

The program provides multiple languages user interface. To change the display language, go to the side menu and select “SYSTEM” >> “Language” and select a desired language from the drop-down menu.



Check Program Version

To check the program's version, go to "SYSTEM" >> "Version".



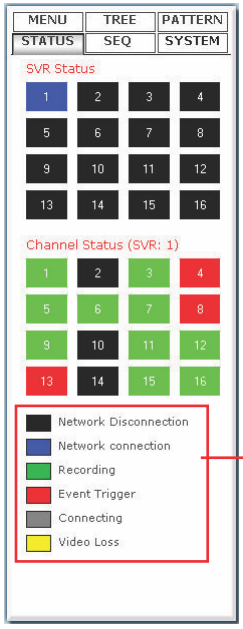


Check Camera and NVR Status

On the live view page, each camera's current status is displayed in the upper-right hand corner of the video window.



You can, however, obtain status of all NVRs and the cameras from the side menu under “STATUS”.



Status definition