



AirLive NVR Serials

Network Video Recorder

User's Manual



www.airlive.com



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FCC Interference Statement

The NVR has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against radio interference in a commercial environment. This equipment can generate, use and radiate radio frequency energy and, if not installed and used in accordance with the instructions in this manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures are necessary to correct the interference.



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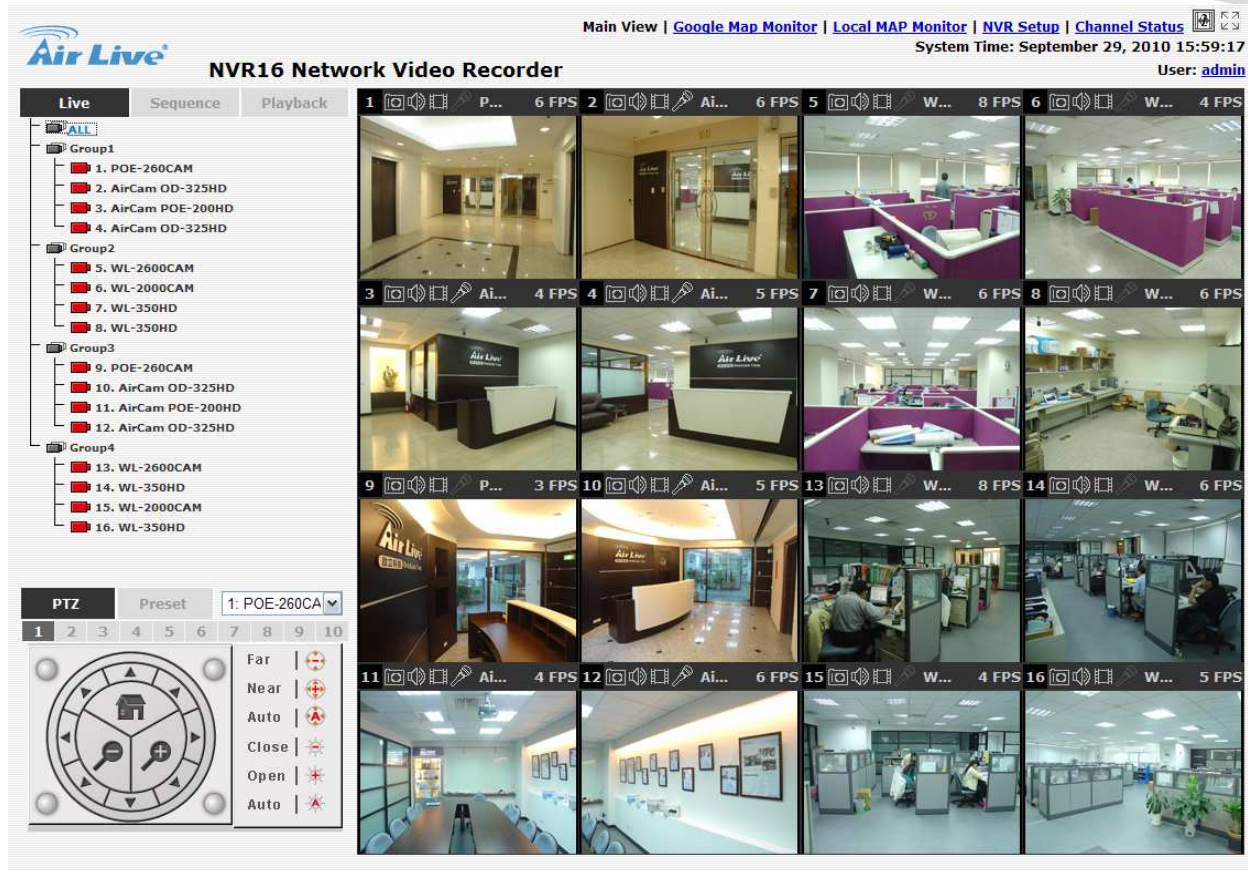
Overview

1.1 Introduction

AirLive NVR serial products are Network Video Recorder for home, retailer store and small office applications; with AirLive NVR, you don't have to prepare another PC for your daily monitoring job. AirLive NVR can connect up to 4/8/16 IP-based cameras for high quality, real-time video viewing, recording and playback. The IP Camera PNP function provides an easy way to setup your surveillance system; by a few clicking on the build-in web pages of AirLive NVR, users can search, configure and receive the video clips from his IP-based cameras without any suffering. AirLive NVR supports two high-speed SATA II hard drivers and raises its capacity up to 2TB; with the H.264 video compression format, it could keep video clips for more than 200 hours (4Mb bitrates per channel).

Recording Video Clip without You Computer

AirLive NVR utilizes the embedded Linux technology, and so eliminates users from experiencing the annoying hardware compatibility issues from a PC/Software based recording system. Furthermore, the AirLive NVR provides a build-in, web-based GUI that gives users an easy-to-access, easy-to-watch, easy-to-manage way for working with.

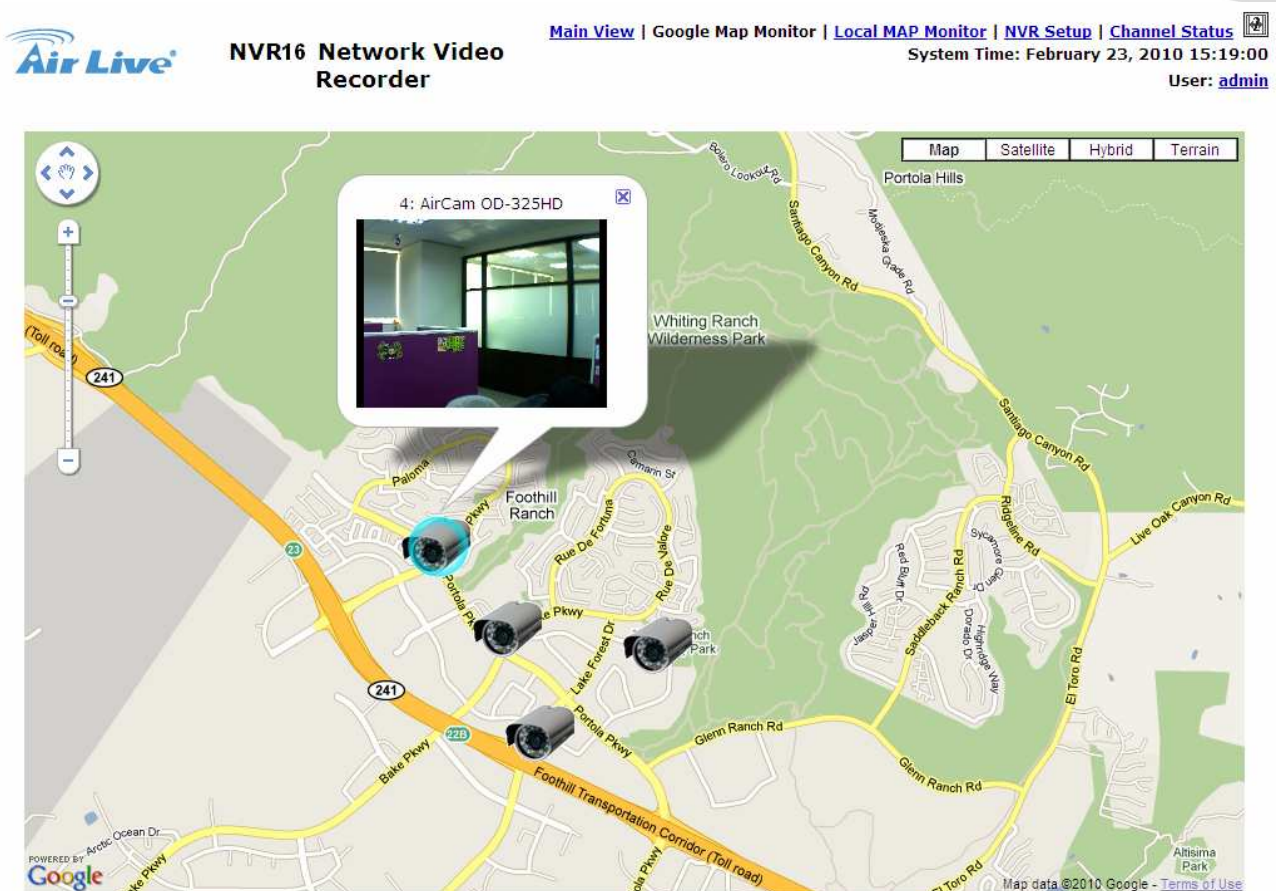


Fully Control on Your IP-based Cameras

AirLive NVR supports almost all AirCam IP cameras, the most stable and cost-efficient IP cameras in the market place nowadays. It also supports PTZ Control, Preset Point Patrol, Motion Detection Recording, e-Mail Alert and FTP Upload, which won't let you miss any critical moment that you concerned. With AirCam IP camera, AirLive NVR will be your most reliable guard for securing your family and property.

E-Map function for Live Street Monitor

User might utilize the Google Map or upload his floor plan to the AirLive NVR. Just few steps of drag-and-drop operation, user could use the camera icons for denoting the location of the IP cameras. In case of some IP camera triggered by an event, a live view window will popup right beside the corresponding camera icon for alerting the user that there is something unusual in front of that camera. With this function, user can quickly make a response to the intruder or accident.



Multiple Video Compression Format Support

AirLive NVR supports H.264, MPEG-4 and MJPEG video compression format. H.264 is a high performing video compression standard that boasts a much higher compression ratio than others, drastically reducing file sizes and conserving valuable network bandwidth and storage space. With up to 90% reduction in file size, a 1 MB image can be drastically reduced to as low as 10KB using H.264.

Smart Phone Live Browsing

The mobile view function let you browse your AirLive NVR via your smart phone. Through the 3G, 3.5G or even 4G mobile networks, user might receive the image from his AirLive NVR when on his business trap, vacation, or just leaving for shopping.

1.2 Features

- Support up to 4/8/16 IP Base Camera
- Recording Video Clip without You Computer
- Support Easy Installation, IP Camera Plug and Play
- Support 2X SATAII Hard Driver, High-Capacity Storage up to 2TB
- Support Multi-Channel Recording, Playback, Motion Detection
- E-Map function for Live Street Monitor
- Support Pan and Tile Function
- Support 10/100/1000 Giga Lan port

1.3 Product Specification

Model	NVR
CPU	Marvell 500Mhz
Memory	128 MB DDR Ram
HDD	SATA II x 2
Network	Gigabit, half duplex/full duplex auto-negotiation
Camera Support	Support IP-based Camera (AirLive, Axis, Sony, Panasonic, Vivotek)
Video Compression	H.264, MPEG-4, MJPEG
Resolution	Up to 1280 x 1024
Max. FPS	Support 30FPS for Each Channel
Audio	Two-way audio
Live View	Split Screen/Full Screen PTZ Control Sequence Mode Snapshot E-Map Smart Phone Live Browsing

Playback	Split Screen Full Screen Playback Control (Play/Pause/Stop/Forward/Reverse/Speed Adjust/Step by Step) AVI Export
Recording	More than 200 Hours (with 2 x 1TB HDD) Manual/Continuous/Schedule/Event Recording
Protocols	HTTP SMTP DHCP ARP NTP DNS UPnP FTP RTP RTSP
Event	System Events: System Start Shutdown System Settings modified Camera Settings Modified Start Recycle, Camera Events Motion Detection Sensor Detection

1.4 System Requirement

The following are minimum system requirements for you to operate AirLive NVR

Hardware	
CPU	Minimum Intel® Pentium® 4 2.4 GHz or higher (Dual Core Processor is recommended)
RAM	Minimum 1 GB of RAM, 2GB or above is recommended

Network	Minimum 10/100 Ethernet (Gigabit Ethernet is recommended)
Graphics Adapter	AGP or PCI-Express, minimum 1024x768, 16 bit colors
Software	
Operating System	Microsoft® Windows® 2000 Professional, Windows® XP Professional (32 bit) or Windows® Server 2003 (32 bit)
Browser	Microsoft Internet Explorer 6 or above
IP Camera	<p>For WL-2000CAM, POE-100CAM, POE-200CAM, OD-300CAM, POE-100CAMv2, POE-200CAMv2, WL-2600CAM, and POE-260CAM, please upgrade it's firmware to LM.1.6.16.05 or above.</p> <p>For POE-200HD, OD-600HD, POE-250HD, OD-325HD and POE-100HD, please upgrade it's firmware to 5.0.3713 or above.</p> <p>You might find the last released firmware on our web site: http://www.airlive.com</p>

Note: We highly recommend you to set your Screen resolution to 1024 x 768 or above for getting the full experience of AirLive NVR. Please also make sure your display DPI setting is set to default at 96DPI, and you might right-click on desktop, choose “Settings” tab → “Advanced” → “General” for further configuring your desktop environment.





Note: If not specified, NVR means AirLive NVR in the following article.

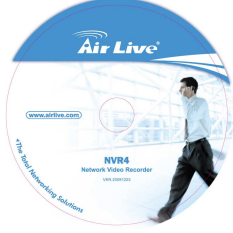

2

Package Contents and Installation

2.1 Package Content

User can find the following items in the package as below:

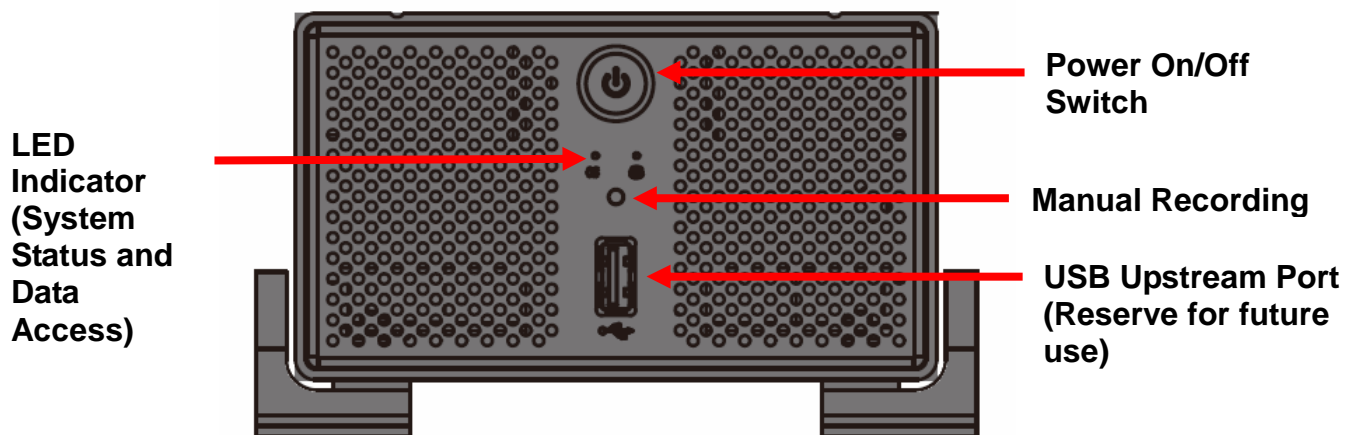
Item	Descriptions
 <p data-bbox="352 1296 751 1330">NVR8/16 or NVR4</p>	<p data-bbox="940 1093 1299 1160">1. AirLive NVR: the main unit of AirLive NVR</p>
	<p data-bbox="940 1391 1262 1496">2. Power adapter: the dedicate power adapter for AirLive NVR</p>
	<p data-bbox="940 1641 1310 1709">3. Ethernet cable: for connect the AirLive NVR to your switch.</p>
	<p data-bbox="940 1895 1310 1962">4. Screw Packet: for fixing the HDD inside the AirLive NVR</p>

	<p>5. Bundle CD: includes the Search Utility/User's Manual/QIG</p>
	<p>6. Quick Installation Guide(QIG): printed Quick Installation Guide</p>

2.2 Hardware Overview

NVR4

Front View:

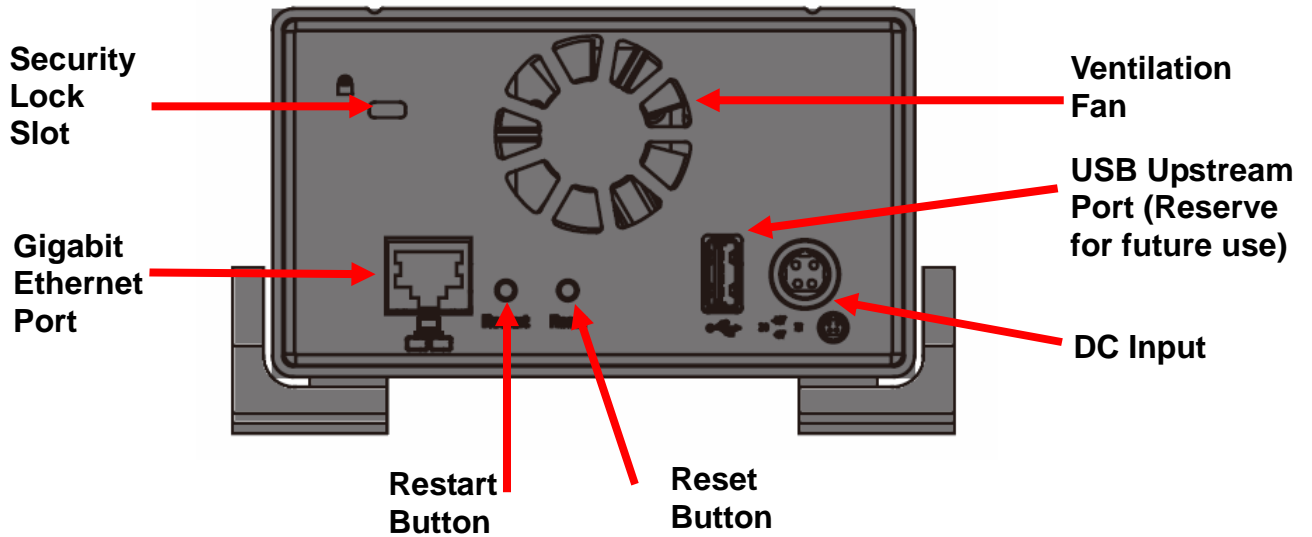


LED Status

	System Status (Green)	Data Access (Amber)
Solid	System Ready	Recording

Blinking	System Shutting Down	Manual Recording
Off	System Off	Recording Off

Rare View:



Ethernet LED Status

LED Status	Green	Yellow	Green & Yellow
Speed	10 Mbps	1000 Mbps	100 Mbps

Restart Button

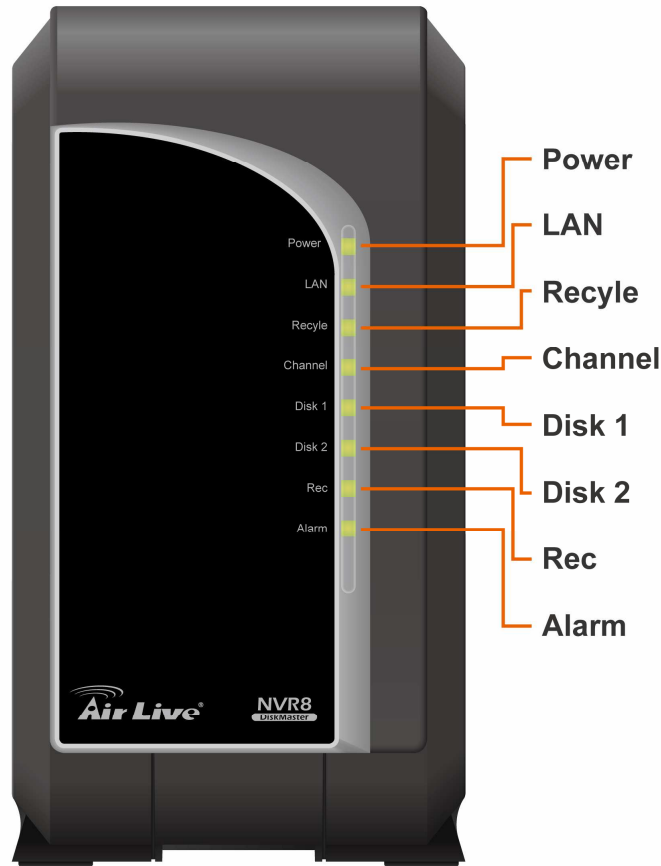
Press and release the button for hardware restart. The OS LED should go off during the restart to indicate the system is restarting. The LED should indicate in solid green once the system becomes ready.

Reset Button

Press this button will restore the system’s settings to factory default values. To start, press and hold the button for 5 seconds then release it once the OS LED goes off. The OS LED should indicate in solid green once the system becomes ready.

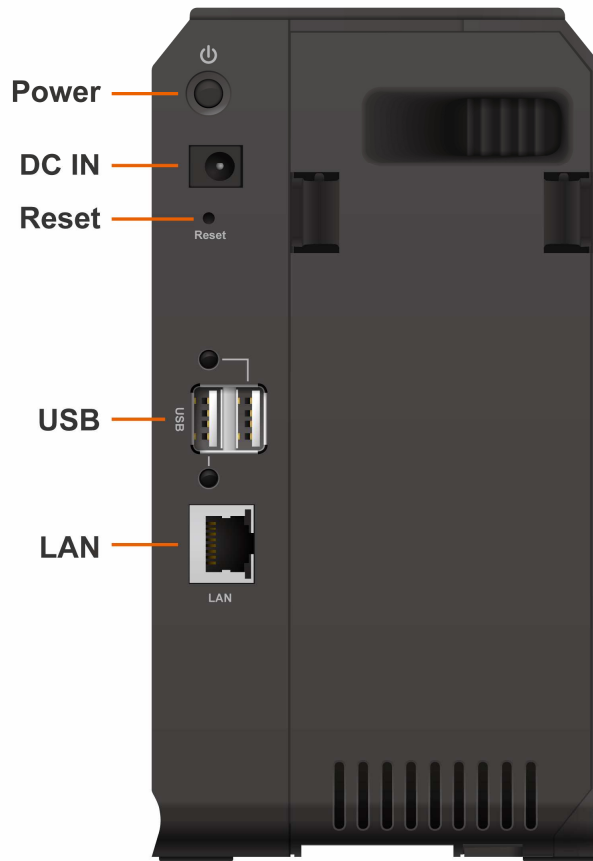
NVR8/16

Front View:



LED Status

	Color	Status
Power	Red or Green	Blinking red indicating NVR is initializing, Green: Normal operation
LAN	Green	Light when network is ready
Recycle	Green	Light when recycle recording is performed
Channel	Green	Light when any camera is connected
Disk 1	Green	Light when Disk1 is mounted
Disk 2	Green	Light when Disk2 is mounted
Rec	Green	Light when recording is performed
Alarm	Green	Light when an alarm occurs

Rare View:**Power Button**

For power on/off the NVR.

Reset Button

Press this button will restore the system's settings to factory default values. To start, press and hold the button for 10 seconds then release it. The NVR should reset to the factory default.

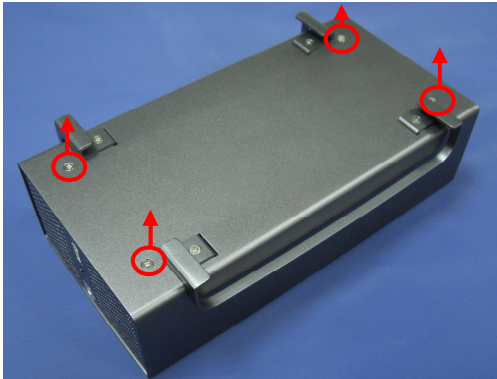
USB

The USB port are reserved for future use.

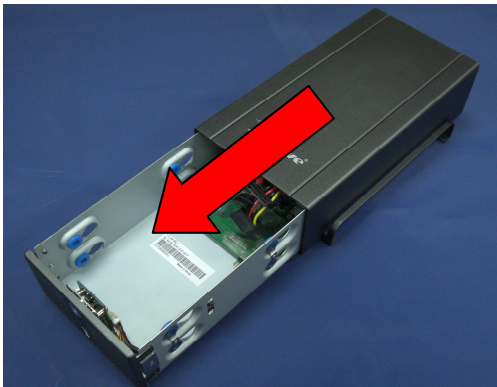
2.3 Hardware Installation

2.3.1 Install the Hard Disk (NVR4)

- Remove the four screws from the bottom of the case.



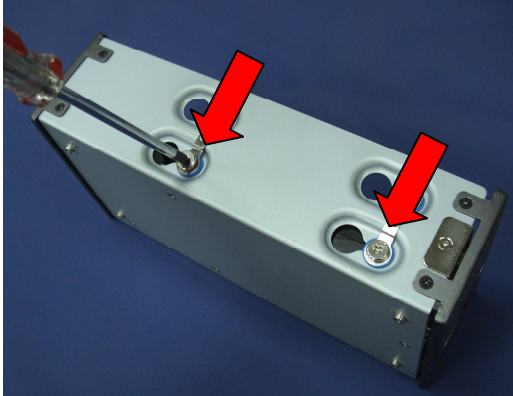
- Push the inner enclosure out, and remove the outer chassis.



- Install the first hard drive by placing it in the enclosure and connecting the SATA plus power cables.



- Mount the drive with two screws on each side.



- Attach the thermal probe with the tape provided to the first hard drive.
- Install the second hard drive by placing it in the enclosure and connecting the SATA plus power cables.

2.3.2 Install the Hard Disk (NVR8/16)

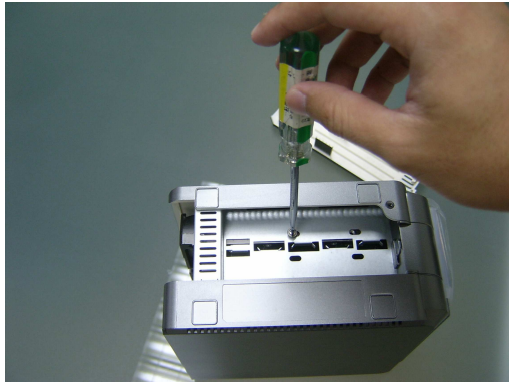
- Remove the back panel.



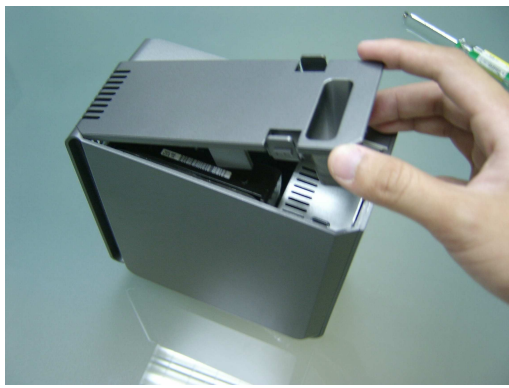
- Insert the disks and push it until the SATA connector is closed.



- Scroll the screws for fixing the disks.



- Put the back panel.



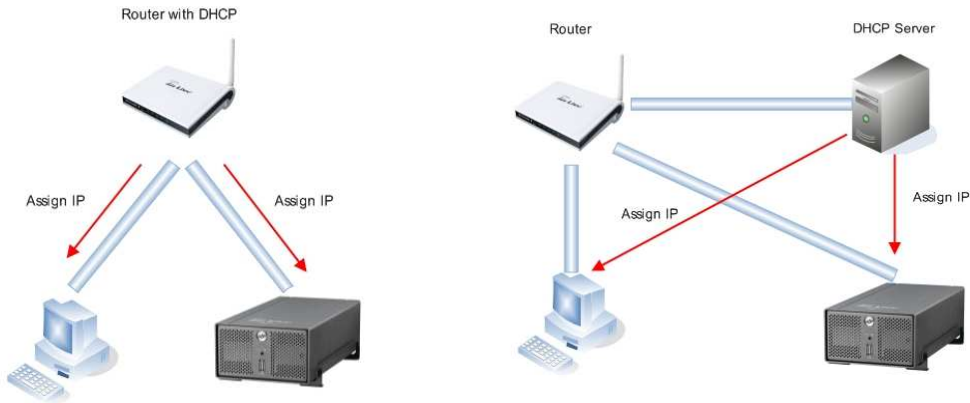
2.3.3 Connect to the NVR

There are various ways you can connect to NVR and below are the suggested methods for different network setup:

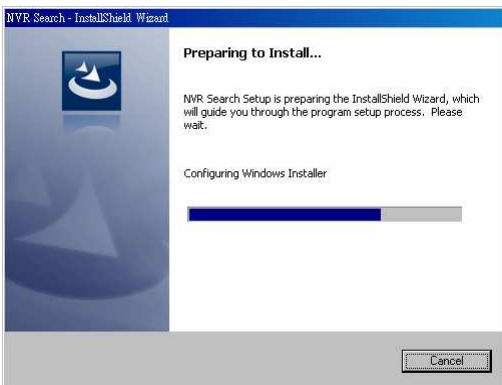
- The NVR is placed in a network with a DHCP server: Connect to the NVR by using “NVR Search” Utility
- The NVR is placed in a network without DHCP server (or you are connecting to it directly): Access NVR with its default IP: 192.168.1.1

2.3.2.1 Use NVR Search Utility

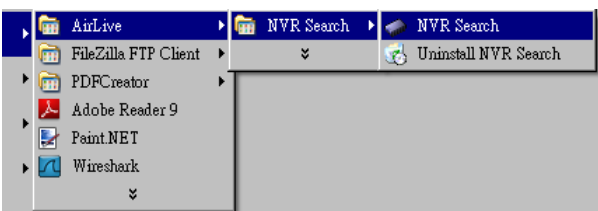
If the NVR is placed in a corporate network or a local area network where a DHCP server is already presented, install the “NVR Search” utility on the CD from a computer that is on the same network and locate the NVR with its IP address that is assigned by the top-level DHCP server.



To begin, install the “NVR Search” utility from the CD and proceed with the installation:



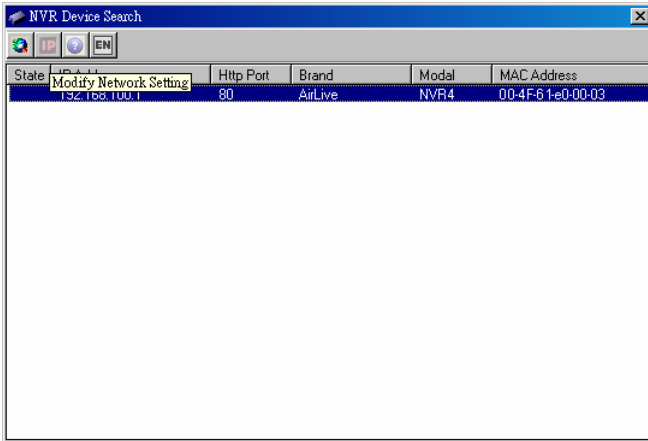
Once the installation is complete, you might start the search tool by clicking “Start” → “Program File” → “AirLive” → “NVR Search” → “NVR Search”.



The search should start automatically and its status should be displayed:



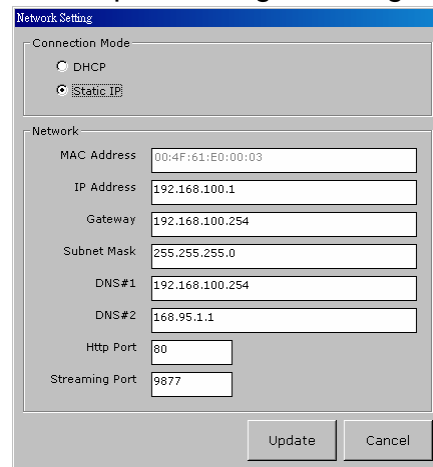
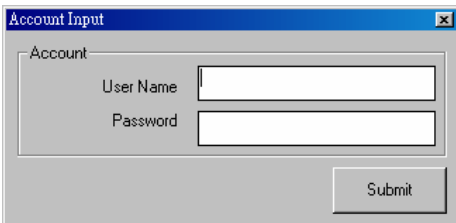
The NVR should be located and its IP address should be displayed: Double-click on it and the program should automatically access the NVR’s web page from your default browser



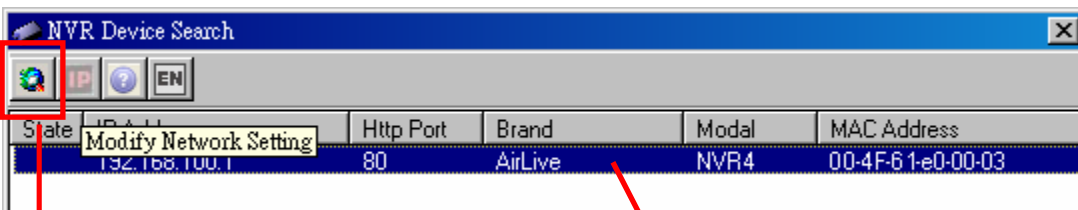
You may change NVR's IP address by click on the button highlighted below.



You will be prompted for the NVR's login information before proceeding to change device's IP address.



You may click on the button highlighted below to perform search again. Or double-click on any of the search results to access NVR's web administration page



Perform NVR Searching again.

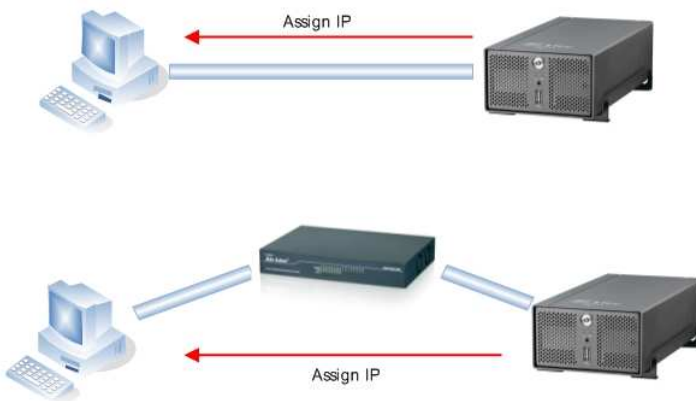
Double click for accessing the NVR

You should be prompted for the NVR's username and password. Enter its default username "admin" and password "airlive" and then click on "OK" to enter the system

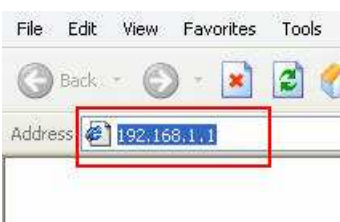


2.3.2.2 Access NVR with its default IP address

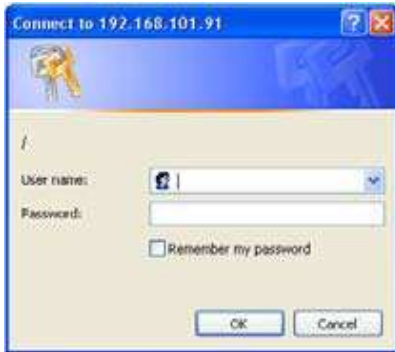
The NVR comes with a pre-configured static IP "192.168.1.1. However, it is only used when there is no DHCP server presented in the network. The NVR will turn on its DHCP server function and act as the DHCP server in the network. To connect to the NVR, use a PC that is on the same network over a switch or hub, or connect the PC directly to the NVR using a crossover CAT5 Ethernet cable.



The PC that is connected directly to the NVR (or within the same local area network) should receive an IP from it. Simply access the NVR from your web browser with its IP address



Again, you should be prompted for the username and password. Enter its default username “admin” and password “airlive” and then click on “OK” for accessing the system



Note: After you login into the NVR, your browser will prompt you to install the ActiveX component. For letting the NVR work properly, please click on the prompted message and allow the browser to install the ActiveX component.

2.4 Start to Use the NVR

After accessing the NVR via your browser, you should format your hard disk first. Then you could open the “Channel Setting” page (Setup → Channel Configuration → Channel Setup) for further configuring the connection between your NVR and IP camera.

Note: You should be prompted to install another ActiveX component after you open the “Channel Setting” page. In order to make the search function work properly, please go ahead and install the ActiveX component.

2.4.1 Format the hard disk

Once you install a hard disk to the NVR, you need to initialize it so that it can be ready for recording. You can obtain the basic information about the disk you installed on the “Hard Disk Setting” page (Setup→System Configuration→Disk Setup).

To initialize your hard disk, simply click the “Format” button. Please note, after performing the format, all the data on the hard disk will disappear.

NVR Setup

- [-] System Configuration
 - Network Setup
 - Time and Date
 - Users Account
 - Group Privilege
 - Disk Setup
- [-] Channel Configuration
- [-] Event Configuration
- [-] Recording Configuration
- [-] System Options

Hard Disk Setting

Disk ID	Disk Type	Capacity	Disk Status	Format
1	Internal	891GB	Online	<input type="button" value="Format"/>

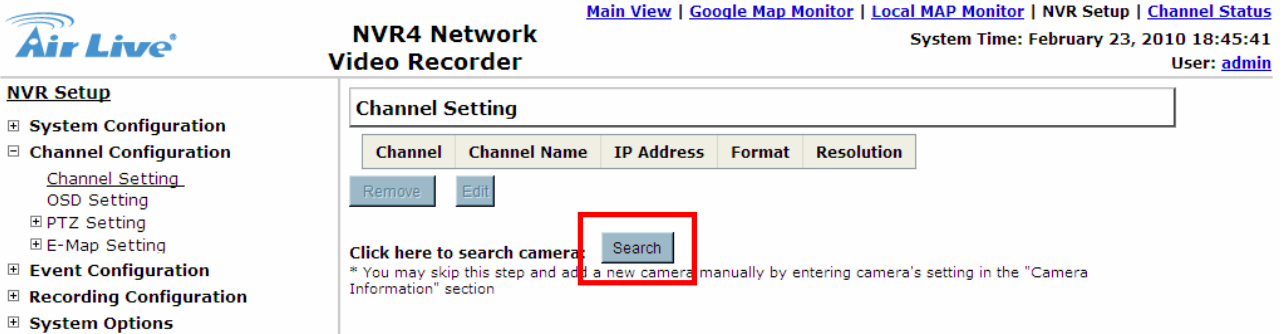
Note: To obtain detail information about the disk, go to “System Options”→“Disk Status”

2.4.2 Connect to your IP cameras

The NVR provides two options for adding a new IP camera. Users have the option to let the NVR automatically find the cameras or to enter the camera’s information and add it manually.

2.4.2.1 Automatic search:

Click the “Search” button to perform the camera search.



NVR4 Network Video Recorder

System Time: February 23, 2010 18:45:41
User: admin

Channel Setting

Channel	Channel Name	IP Address	Format	Resolution
<input type="button" value="Remove"/>	<input type="button" value="Edit"/>			

Click here to search camera:
* You may skip this step and add a new camera manually by entering camera's setting in the "Camera Information" section

After that, the NVR should begin to search the IP camera and the progress of the searching should be displayed on the screen:



Found IP cameras should be listed on the WEB. User can simply select a camera from the list and press “Configure” button for configuration.

NVR4 Network Video Recorder

System Time: February 23, 2010 18:50:55
User: admin

Channel Setting

Channel	Channel Name	IP Address	Format	Resolution
<input type="button" value="Remove"/>	<input type="button" value="Edit"/>			

Click here to search camera:

* You may skip this step and add a new camera manually by entering camera's setting in the "Camera Information" section

Brand	Model	IP Address	HTTP Port	Installed
Airlive	WL-350HD	192.168.1.3	80	
Airlive	AirCam OD-325HD	192.168.1.4	80	
Airlive	POE-100CAMv2	192.168.1.100	80	
Airlive	POE-100CAM	192.168.2.3	80	

*Select a camera from search result and click "Configure" to configure setting below.

The NVR will retrieve the information about the selected IP camera. The information should be displayed on the "Camera Information" section. Enter the username and password of the IP camera, then select the channel ID and name the camera.

Add New Channel:

Channel ID:

Channel Name:

IP Address:

User Name:

Password:

HTTP Port:

Once you fill out above information, click "Detect" to retrieve camera setting

Click on "Detect" button for establishing the connection between the NVR and the camera. If connection establishes, the detailed information of the IP camera should be polled and displayed as below

Additional Camera Information

Video Port:

Format:

Resolution:

Frame Rate:

Bitrate Mode:

Quality:

Record: Continuous

Record Audio: Record audio

Adjust the video format, frame rate, resolution or bitrate... according to your environment. You can also click on the “Preview” button to preview the live video of the camera. Click “Add” to finish adding the camera.

Note: We highly recommend our user to choose mpeg4 or H.264 compression format. For that will not only save the network bandwidth but also save the NVR’s storage space. If it is possible, we also advised our user to set his surveillance system upon an independent network segment or VLAN. This should help to avoid the network collision and make the NVR its best performance.

Note: After auto search, if there was any IP camera marked with “*” on the list, that means the IP camera was already configured and connected to NVR.

Brand	Model	IP Address	HTTP Port	Installed
Airlive	WL-350HD	192.168.1.3	80	*
Airlive	AirCam OD-325HD	192.168.1.4	80	
Airlive	POE-100CAMv2	192.168.1.100	80	
Airlive	POE-100CAM	192.168.2.3	80	

Configure *Select a camera from search result and click "Configure" to configure setting below.

2.4.2.2 Add a camera manually

Simply follow the instruction described above but instead of using the “Search” function by entering the camera’s IP address and credential in the “Camera Information” manually.

Add New Channel:

Channel ID:

Channel Name:

IP Address:

User Name:

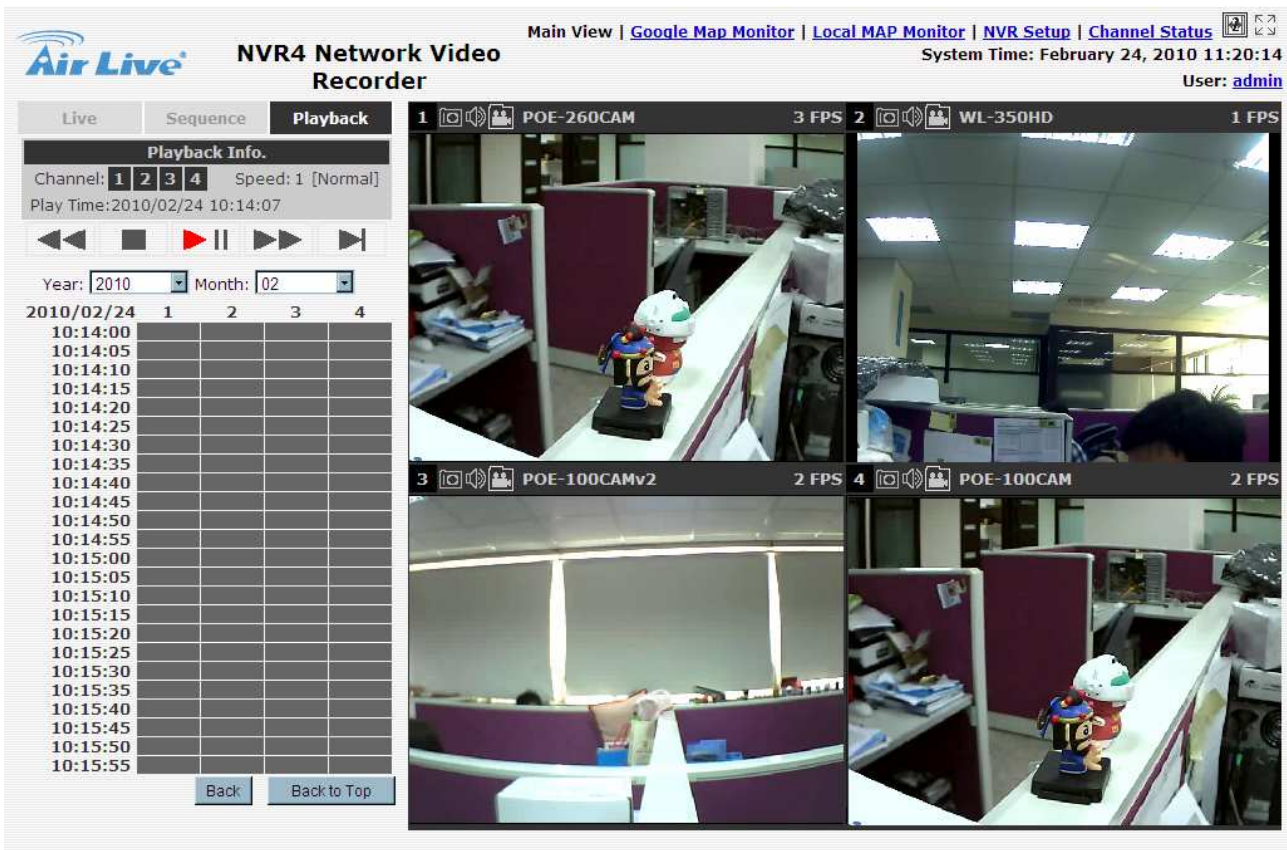
Password:

HTTP Port:

Detect Once you fill out above information, click "Detect" to retrieve camera setting

3

Live View



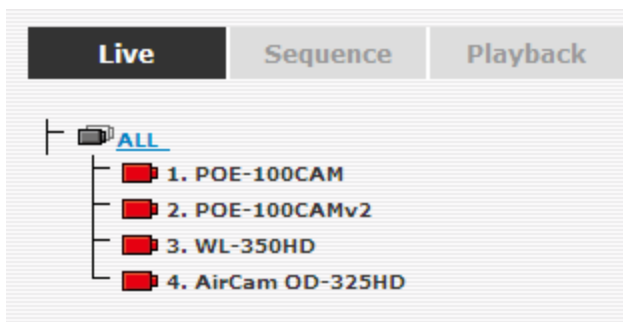
The “Live View” page provides the following functions:

- Retrieve camera’s video stream
- Retrieve camera’s status
- Perform Live Sequence Viewing
- PTZ Control
- Perform PTZ Preset Sequence viewing
- Perform manual recording
- Take snapshot
- Receive audio of a video stream
- Send audio

- Control “Buzzer”
- Change web UI display language

3.1 Retrieve camera’s video stream




The camera list is expanded and displayed on the Live View page.



- Click “All” to display all the channels in the quad-view mode
- Click on any camera to display video in single-view mode

3.2 Retrieve camera’s status

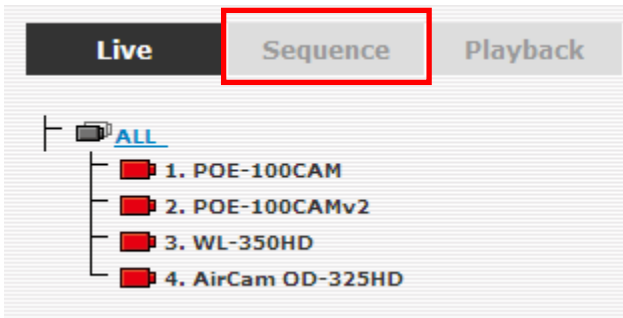
The camera list can show each camera’s current status. Each status is represented with different colors and their meanings are explained on the left

-  Camera is connected
-  Camera is NOT connected
-  Camera is current performing recording

3.3 Perform Sequence Viewing

Sequence view is a function that allows you to view multiple video streams from certain cameras in sequence automatically without having to select them one by one.

To perform sequence view, select “Sequence” from the upper-left hand corner



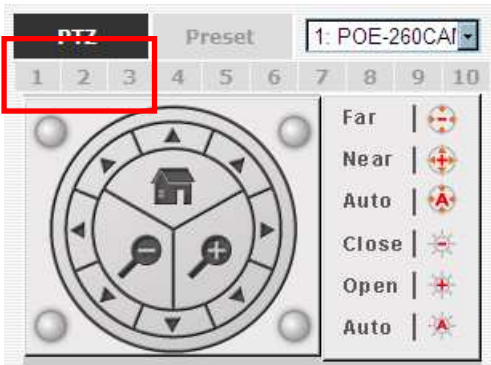
Next, select one or more camera(s) for sequence viewing. You might also select all channels by pressing the “All Channels” button.



Then select dwell interval from the drop-down menu, finally click “Start” to start sequence viewing

3.4 PTZ Control

PTZ control provides functions to pan, tilt, and zoom PTZ camera as well as the ability to adjust camera focus and iris



Camera(s) that are currently being selected for live viewing will be listed in the PTZ drop-down menu. Simply select a camera then use the PTZ control panel to control the camera



The bar shown below allows you to control the pan/tilt speed.



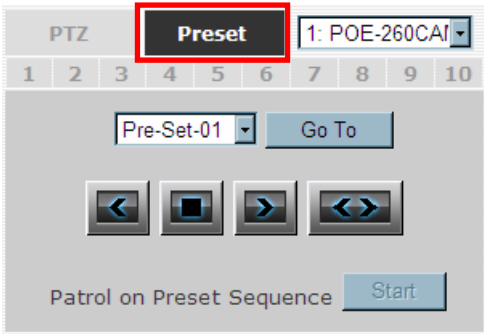
3.5 Perform PTZ Preset Viewing

There are three functions provided in the “Preset” section:

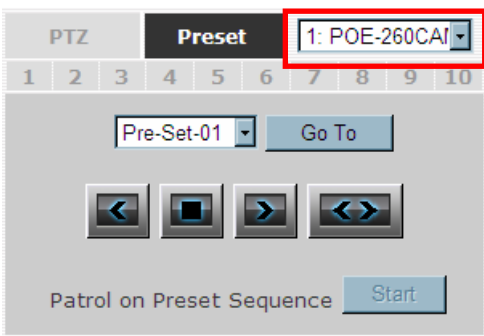
- Perform preset point viewing of a particular camera
- Auto pan a particular camera
- Perform preset point sequence viewing

3.5.1 Preset Point Viewing

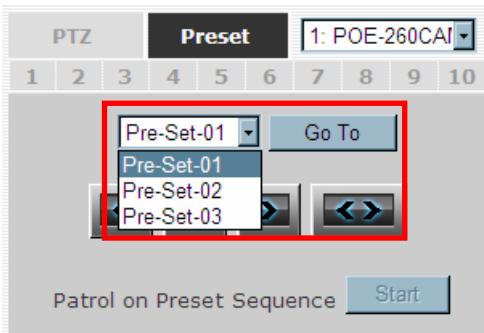
For starting the Preset function, please click on the “Preset” tab shown below:



Start by selecting a PTZ camera from the drop-down list:



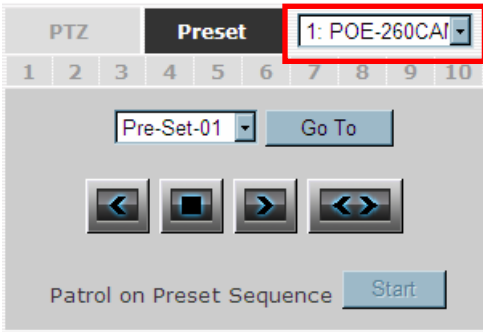
Available PTZ preset points of the selected camera will be listed in the drop-down list shown below:



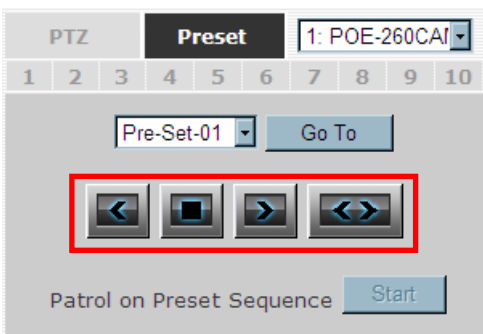
Select a preset position from the drop-down list and click“. Go to” to move the live view to that position.

3.5.2 Auto Pan Viewing

Start by selecting a PTZ camera from the drop-down list:



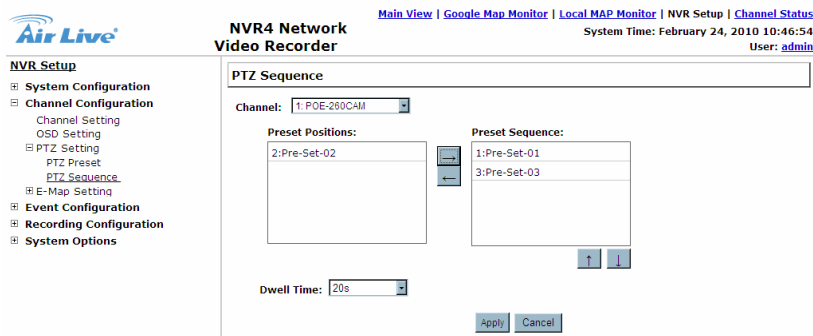
Use the Auto Pan to control buttons to pan right, left and stop auto pan

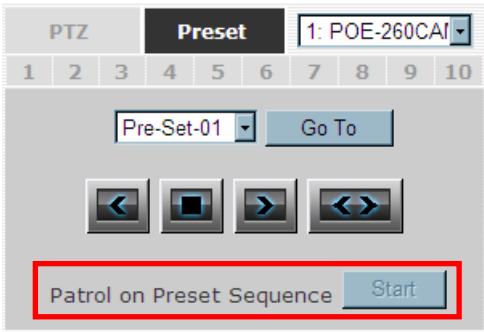


Note: Certain cameras do not support bi-directional pan movements. Use the “Auto Pan” button for such camera

3.5.3 Patrol function

This function allows you to view multiple preset points from a video of a camera without having to select them one by one. Once you have defined the preferred preset points in “Channel Configurations” → “PTZ Setting” → “PTZ Sequence” under the “Setup” menu, click “Start” in the lower-left hand corner in Live View under “Preset” and the NVR will begin to display videos from those preset points in sequence automatically until you click “Stop”







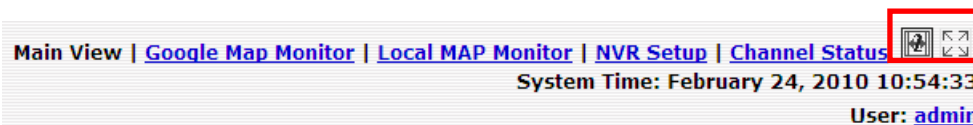


3.6 Live Video Control Buttons


Each live video window comes with control buttons with functions described below:



-  Take a snapshot of a live video
-  Turn on/off audio of a live video
-  Start/stop recording of a live video (manual recording)
-  Audio post function

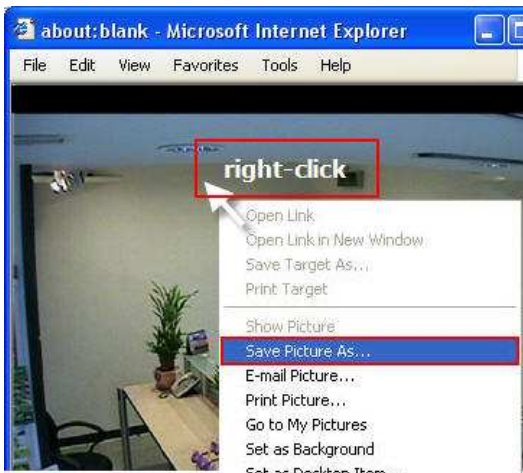


 Full screen view of a live video

 Display video in its original ratio

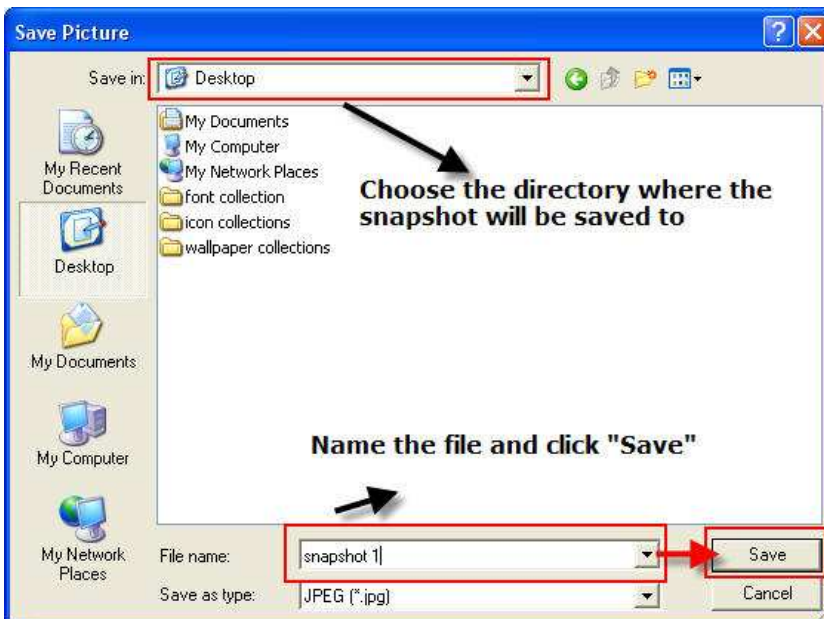
3.6.1 Take a snapshot of a live video

To take a snapshot of a live video, click the  button and the snapshot of the video will be displayed in a pop up window shown like below




For saving the image, please right click on the image and select “Save Image as” from the pop-up menu.


In the pop up dialog, name the image file and choose which directory the image will be saved to and click “Save”




3.6.2 Full Screen View of a Live Video


To view a video in full screen, click the  button. To exit full screen video, double-click on the video.


3.6.3 Turn On/Off Audio of a Live Video

You can retrieve audio from a particular camera. Simply click the  button.

The button will show in different color once the audio is turned on (). Click on it again to turn off audio.

3.6.4 Start/Stop Recording of a Live Video

You can manually start or stop recording of a live video by using the  button.

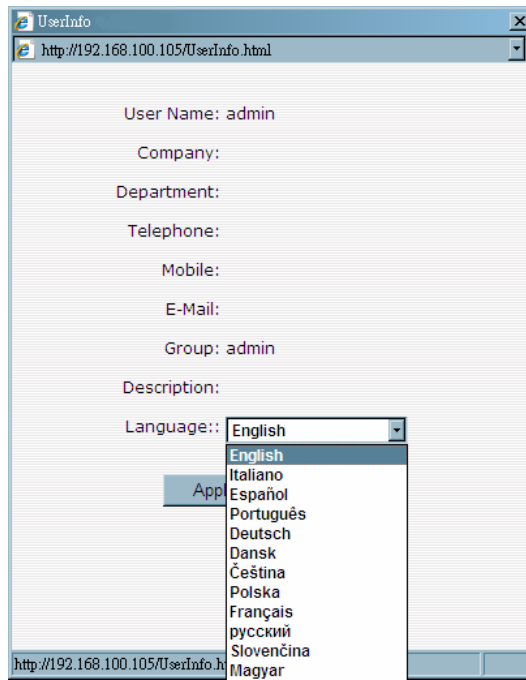
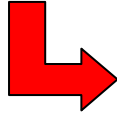
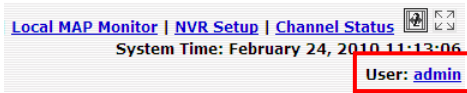
The button will show in red once the recording is started manually (). Click on it again to stop recording.

3.6.5 Audio post

This function allows user to speak from a PC through a micro-phone and the audio can be played at the camera side if it has a speaker connected to it.

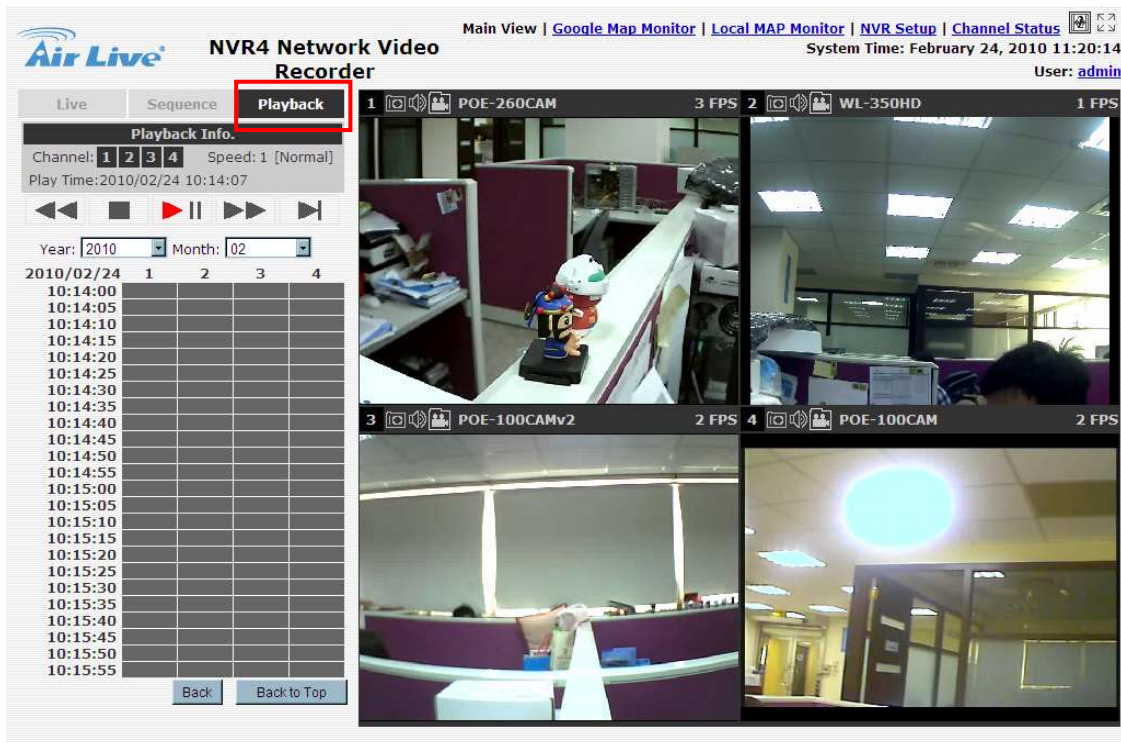
3.7 Change Web UI Display Language

You can change the web UI display language from the current login username link located at the upper-right hand corner. Click on the link opens up a new window which displays detail information about the user as well as a drop-down menu which lets you change the display language.



4

Playback



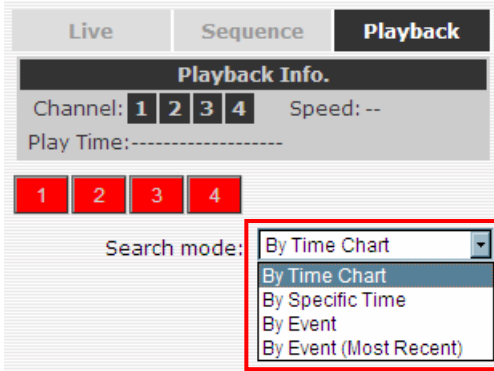
Playback is a function that allows you to play one or more videos that were previously recorded by a chosen recording method or due to an event trigger. The NVR offers synchronized playback from up to 4 channels and various types of search methods are provided to help you find the footage you need quickly.

You can turn on or off the audio of a recorded video at your choice if audio was also recorded during the recording of the video.

Playback video can be viewed in full screen and snapshots can be taken and saved during a video playback.

4.1 Methods to Search Playback Videos

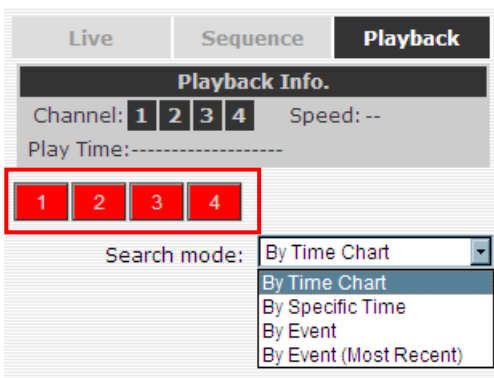
The NVR offers four methods to quickly help users find videos that were previously recorded:



- By Time Chart: Search the video clip by just clicking on the Time Chart.
- By Specific Time: Search the video clip by the specific time.
- By Event: Search the video clip by the Event List.
- By Event (Most Recent): Search the video clip by the Event List. The events will list in the order from the most recent to the oldest.

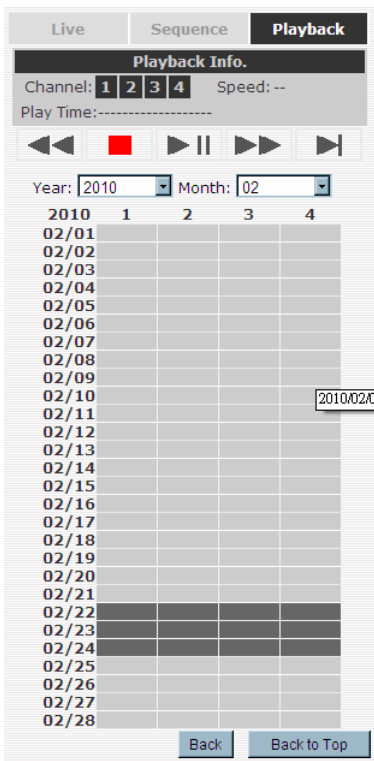
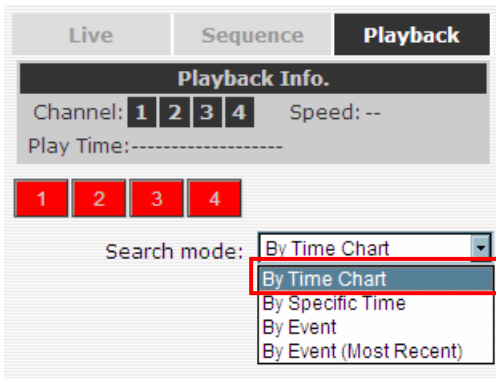
4.1.1 Search by time chart

Start by selecting which channel(s) you would like to perform a search on:

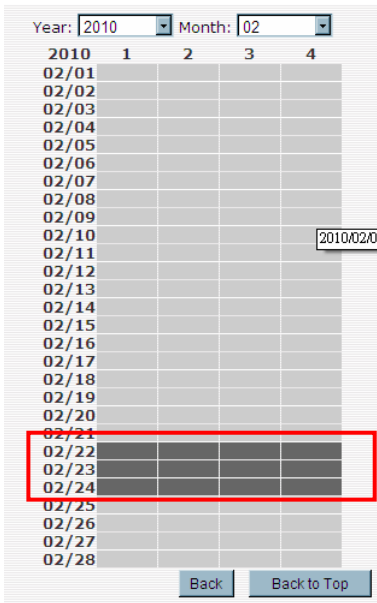


Note: Selected channels will be marked in red.

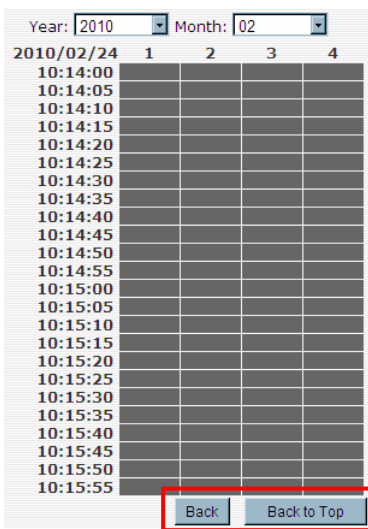
Select “Search by time chart” from the “Search Method” dropdown list and the Time Chart will be shown on the page.



Results will then be displayed in a “Date/Channel” table and boxes marked in gray represent videos found in those dates:

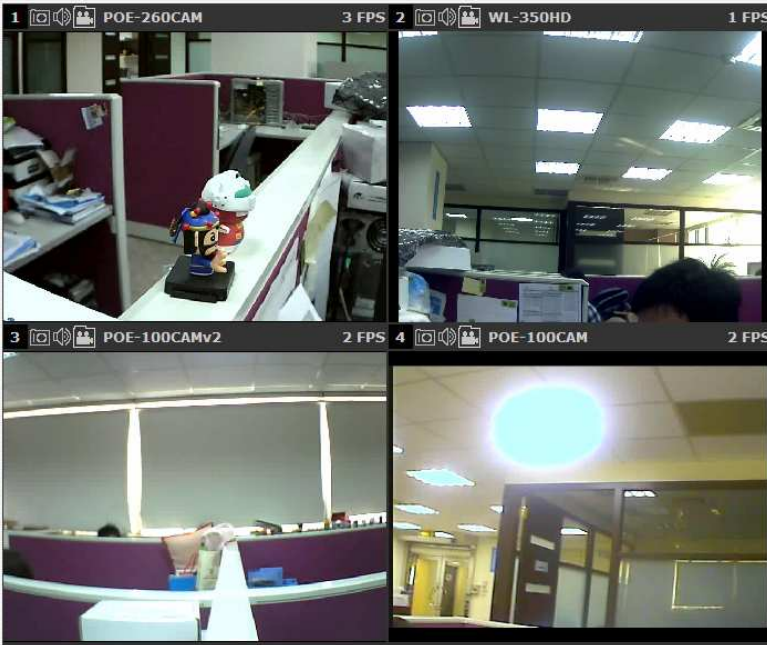


Click on any gray cell box should direct you to the hour/channel table. Click on the gray cell on the hour/channel should direct you to the minute/channel table, if there were videos recorded during that date. By clicking on the “Back” button, the chart would return to the hour/channel table for you to re-select the time period. By clicking on the “Back to Top” button, the chart would return to the search mode select function for you to re-search the video clip.



Note: Videos from other cameras that are recorded on the same date will also be displayed.

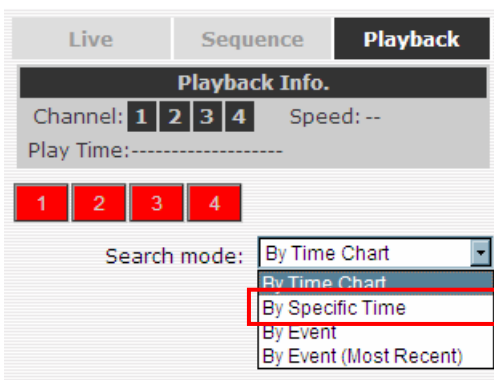
Click on the cell box again will start playing back the videos if you have reached the end of search results:



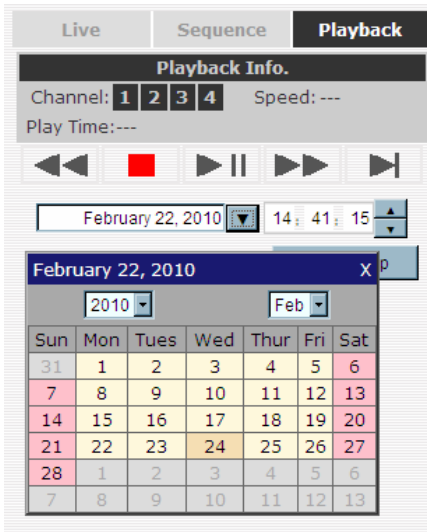
Note: Videos found from other cameras that were recorded at the same time will also be played.



4.1.2 Play by specific time

If you know when a recording was taken place, or you just want to check the videos started from a specific time, you may choose the “By Specific Time” from the “Search Method” drop-down list.



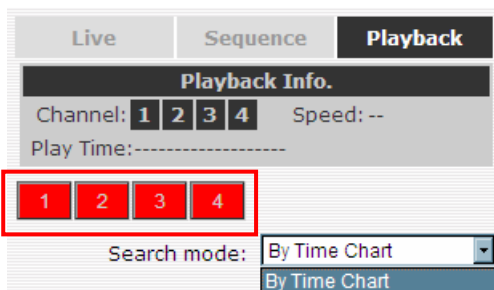
Then you will be prompted to enter a specific time and date for the recorded video.



Use the  button to select month, date, and year. Then press the  button to start the playback.

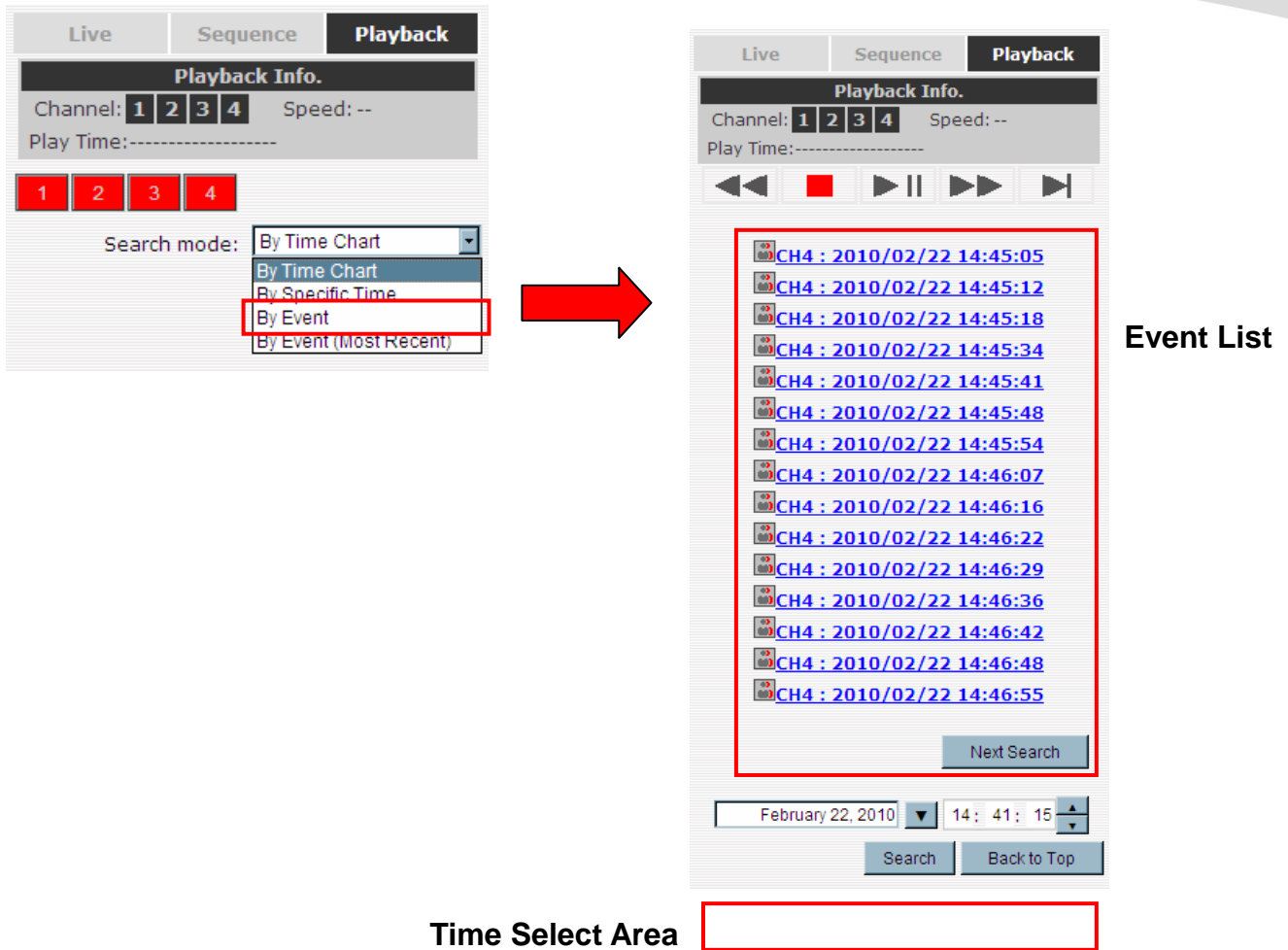
4.1.3 Search by event

Start by selecting which channel(s) you would like to perform a search on:



Note: Selected channels will be marked in red.

Select “Search by event” from the “Search Method” drop-down list and click “Go” to start the search. You might the video clips by a specific time via the time select dialog box:

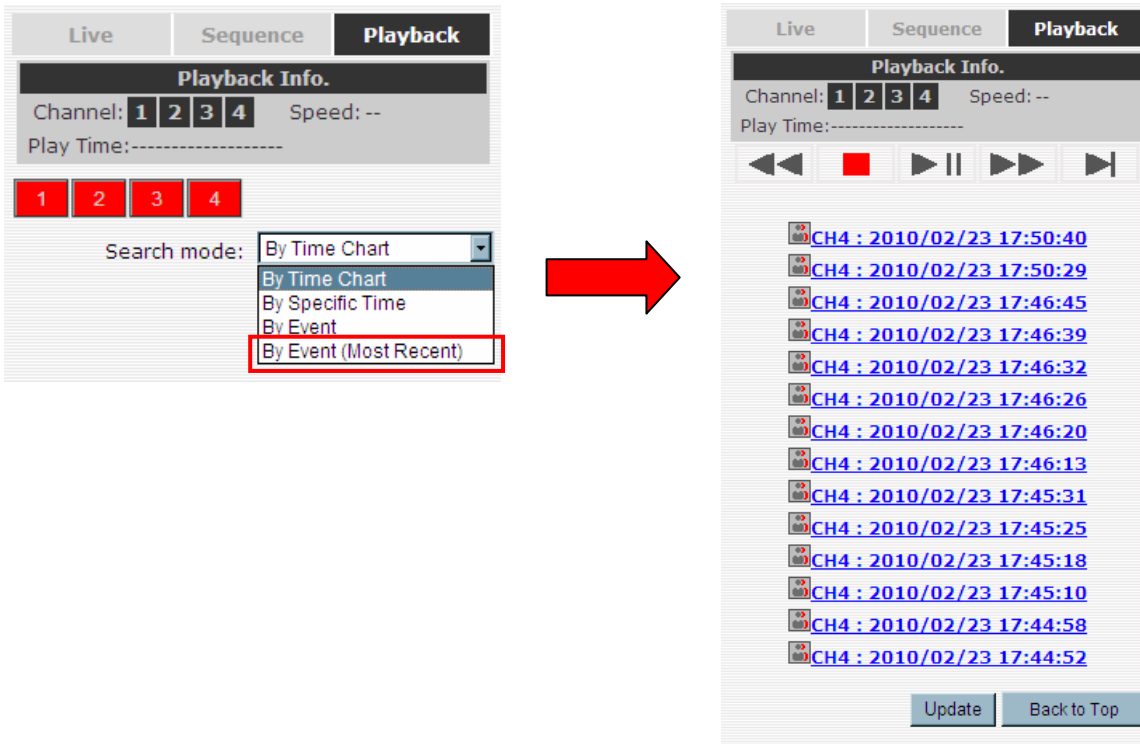


Results will then be listed like what is shown above (displays from the oldest to the most recent). Click on a particular result to start the playback:

Note: You can click “Next Search” to display the next 15 searching results. And you can also search the event by a specific time via the time select area below the event list.

4.1.4 Search by event (Most Recent)

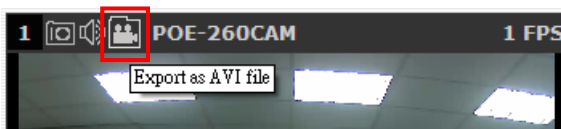
This function quickly displays the most recent event recordings from the selected channels, displaying the most recent result top down. You may click “Update” to update the list to display the most recent result.



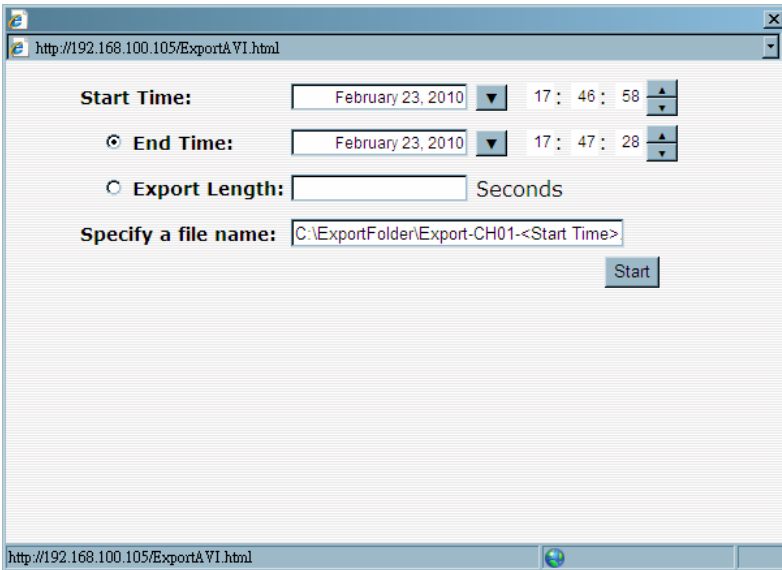
4.2 Export Playback Videos to AVI Files


User can export the recorded playback videos stored on SVR-116 to a local computer and save them in AVI file format. The files can then be played on the PC by a 3rd party media player such as VLC player or Windows Media player.

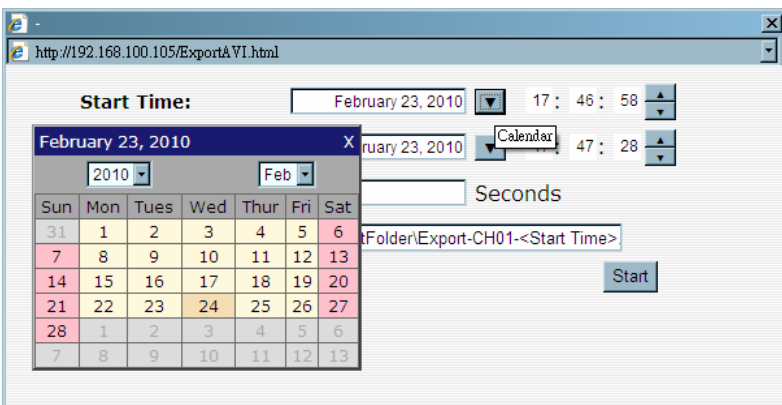
Once you locate the recorded videos with steps described in the previous section, hit the “Export AVI” button on a video window of the video you wish to export.



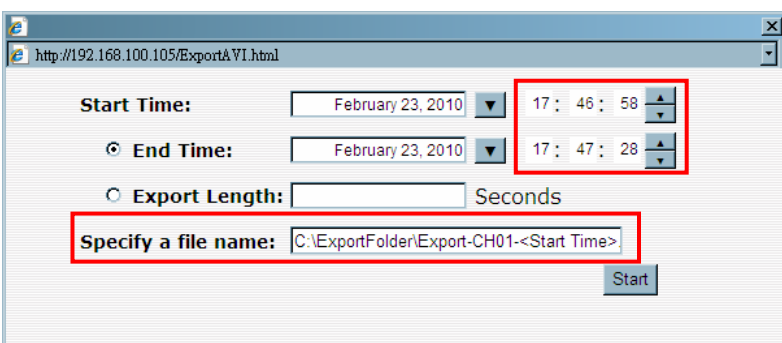
A new dialog will pop up and allows you to specify the time frame (or length) of the video you wish to export



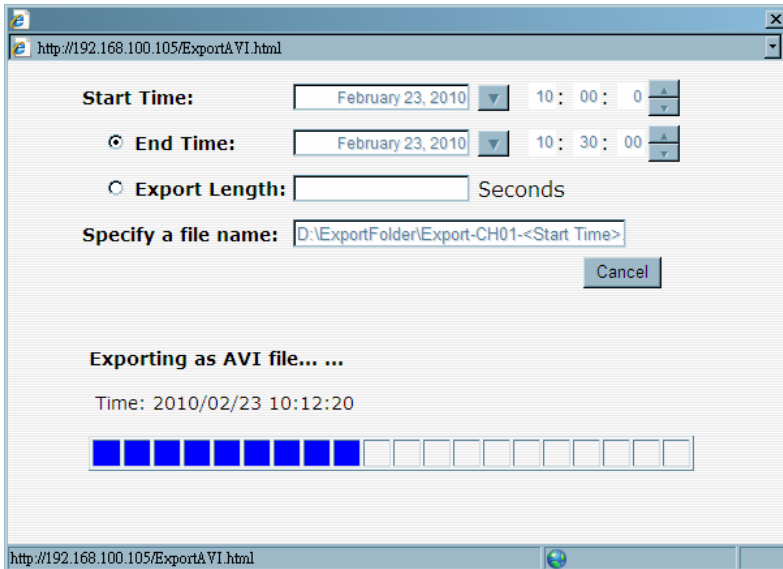
Click the  button to pull down the calendar to help you specify the month, date and the year



Specify the starting and ending hours of the video by entering numbers in the text boxes. You can also specify the path, file name by entering the information in the “Specify a file name” textbox.



Hit the “Start” button to start exporting. The process will be started and there will be a status bar for you to learn the status of the progress.



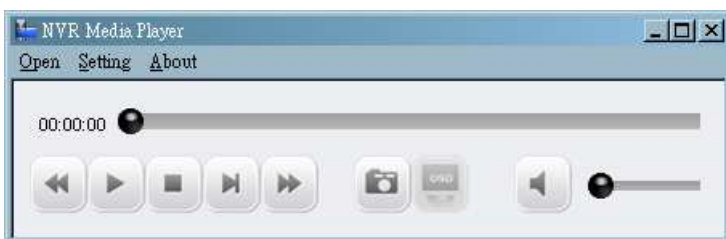
You will be notified once the process is completed successfully.

Note: FFDSHOW is required in order to play the exported AVI file with Windows Media Player. You can get it at “<http://ffdshow-tryout.sourceforge.net/>” → “Download” to download the last released install package.

4.3 Play Export Playback Videos with NVR Media Player

You can also use the NVR Media Player to play the exported AVI files. You might find the software named “NVRMediaPlayer.exe” in the bundle CD.

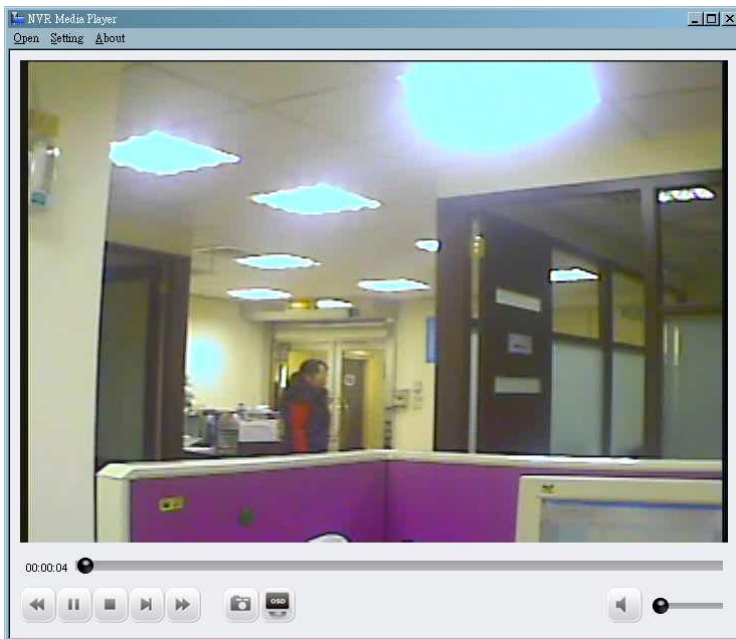
Run the NVR Media Player on the CD:



Click “Open” >> “AVI File”



Locate the exported AVI file, and click "open" (normally under "C:\ExportFolder). The video will then start playing.



Note: User should use our NVR Media Player for playing the attached pictures in the trigger alert mail. For further information about the trigger alert mail, please see section 5.3.

5

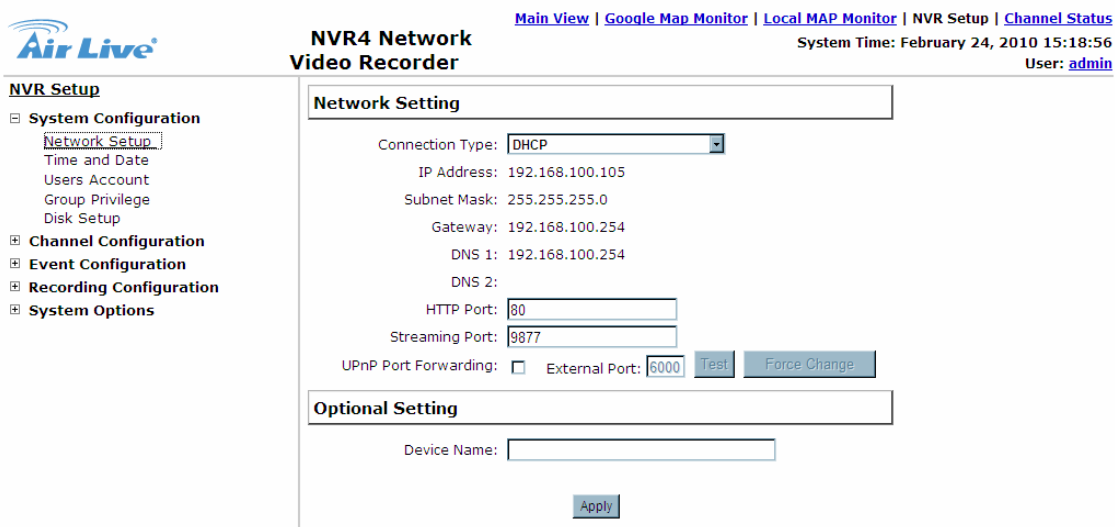
System Setup

In this chap, it will show you how to set the system configuration for your NVR.

5.1 System Configurations

The “System Configurations” page provides users options to setup the device quickly and properly. After properly configuring all settings in all the sub-pages, users should expect a fully working network video recorder that is ready to manage cameras on the network. We will start by configuring its network settings to make sure it works correctly in your network. Next, we will help you adjust the system time so videos will be recorded with correct timestamp. To better secure the system for unwanted disturbance, we will guide you on setting up user’s account and privileges to prevent settings gets altered by users other than the system administrator. Lastly, we will tell you what you should expect after installing a hard disk and how to prepare the hard disk for the video recording.

5.1.1 Network Settings



The screenshot shows the web interface for the NVR4 Network Video Recorder. At the top, there is a navigation bar with links: [Main View](#), [Google Map Monitor](#), [Local MAP Monitor](#), [NVR Setup](#), and [Channel Status](#). The system time is displayed as February 24, 2010 15:18:56, and the user is identified as admin.

The main content area is titled "NVR4 Network Video Recorder" and "Network Setting". On the left, there is a sidebar menu under "NVR Setup" with the following options: System Configuration (expanded), Network Setup (selected), Time and Date, Users Account, Group Privilege, Disk Setup, Channel Configuration, Event Configuration, Recording Configuration, and System Options.

The "Network Setting" section contains the following fields and controls:

- Connection Type:
- IP Address: 192.168.100.105
- Subnet Mask: 255.255.255.0
- Gateway: 192.168.100.254
- DNS 1: 192.168.100.254
- DNS 2:
- HTTP Port:
- Streaming Port:
- UPnP Port Forwarding:
- External Port:

The "Optional Setting" section contains:

- Device Name:

An "Apply" button is located at the bottom of the form.

You need to adjust settings in this page for the device to work properly in your network. It is critical that settings here are configured correctly based on your network environment so that the NVR can be administered through the local area network and cameras can be connected with it.

By default, the NVR is set to obtain its IP address from DHCP server, and most likely you should use a static IP address for your management purpose. To locate the NVR, simply use the Search Utility with steps described in section 2.3.2

Please assign the NVR with a static IP address in your local area network. The steps of how to assign a static IP address to your NVR are as below:

- a. Choose “Static IP” from the “Connection Type” drop-down menu.
- b. Enter the IP address, subnet mask, default gateway address and DNS server address for the NVR
- c. Enable “DHCP Server” under “DHCP Server” if you wish to use the NVR as a DHCP server, or leave it disabled if there is already a DHCP server in the network
- d. Click Apply for the settings to take effect.

Network Setting

Connection Type: Static IP

IP Address: 192 . 168 . 100 . 105

Subnet Mask: 255 . 255 . 255 . 0

Gateway: 192 . 168 . 100 . 254

DNS 1: 192 . 168 . 100 . 254 Please enter at least one valid DNS server if you plan to use services (such as NTP server) with their domain names

DNS 2: 168 . 95 . 92 . 1

HTTP Port: 80

Streaming Port: 9877

UPnP Port Forwarding: External Port: 6000 Test Force Change

Optional Setting

Device Name:

DHCP Server

DHCP Server: ON OFF

Apply

Current DHCP Clients

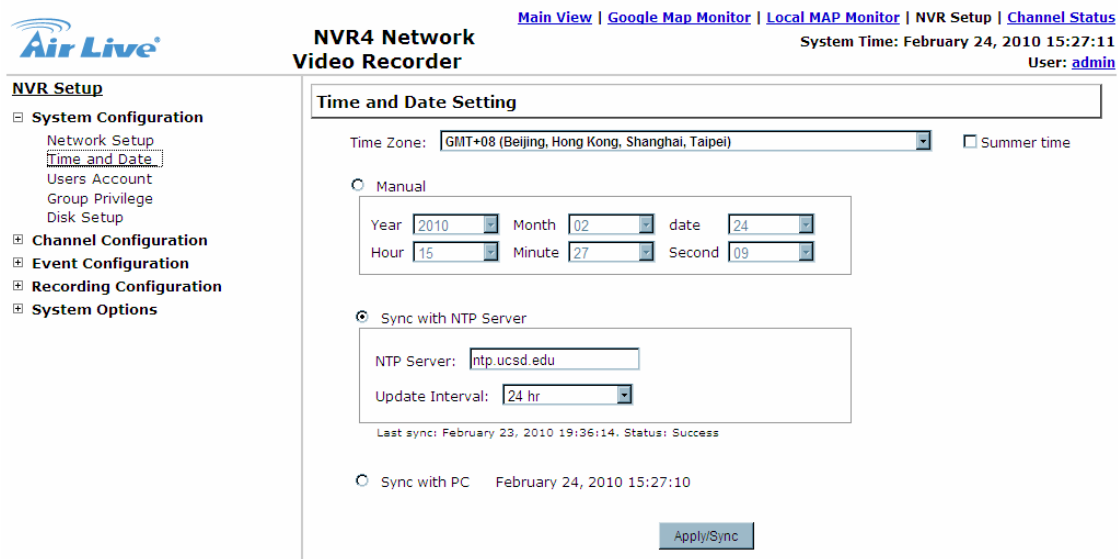
IP Address	Name (if any)	MAC Address	Time when IP obtained

Note: The NVR can detect the presence of a DHCP server upon startup. It sets itself to use

static IP address if there is no DHCP server currently presented in the network. Its DHCP server function is also turned on at the same time to assign IP addresses to cameras that are later connected to the network. You can manually turn off the DHCP server function if you wish to use a separate DHCP server.

Note: Change the NVR's IP address would require the NVR to restart. Restart the device under "system Options" → "Maintenance" for the settings to take effect.

5.1.2 Time and Date



The screenshot shows the "Time and Date Setting" page in the NVR4 Network Video Recorder web interface. The page has a navigation menu on the left with options like "System Configuration", "Channel Configuration", "Event Configuration", "Recording Configuration", and "System Options". The main content area is titled "Time and Date Setting" and contains three radio button options: "Manual", "Sync with NTP Server", and "Sync with PC". The "Manual" option is selected, and it shows fields for Year (2010), Month (02), date (24), Hour (15), Minute (27), and Second (09). The "Sync with NTP Server" option is also visible, with an NTP Server field (ntp.ucsd.edu) and an Update Interval field (24 hr). A status message indicates the last sync was successful on February 23, 2010. The "Sync with PC" option is also visible, showing the current system time: February 24, 2010 15:27:10. There is an "Apply/Save" button at the bottom.

Set the time and date by selecting the time zone according to your location. It is imperative that you set the NVR's time correctly to avoid the following errors:

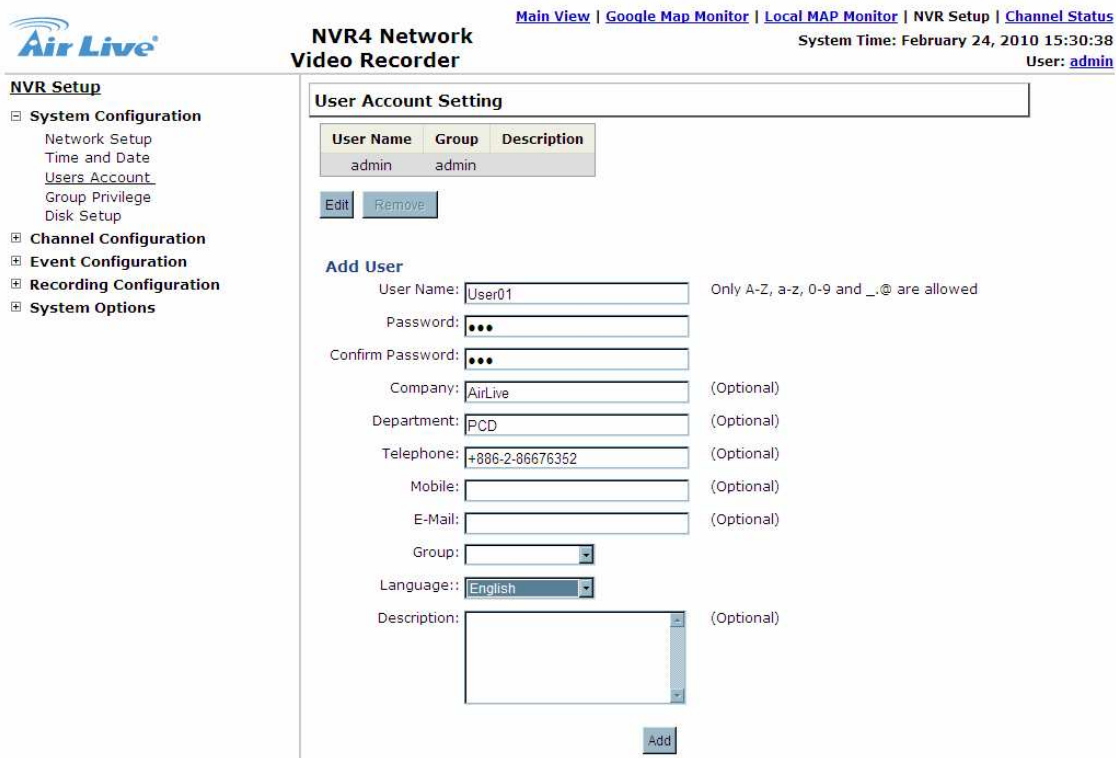
- Incorrect display time for playback videos.
- Inconsistent display time of event logs and when they actually occur.

After selecting the time zone, choose an option below to set the NVR's time.

- a.** Manual – Use the drop-down list and configure the time manually
- b.** Sync with NTP server – enter the hostname or IP address of a valid NTP server and set how often the NVR should synchronize the time with it by using the "Update interval" drop-down menu
- c.** Sync with PC – Check this option to synchronize the NVR time with the PC that you are currently using to access the NVR

5.1.3 User Account

The NVR can be accessed by multiple users simultaneously. You can add, remove, and edit users by using options provided in this page to keep user information organized. Each NVR comes with a built-in “admin” account with password “airlive”. We highly recommended users to change the password upon first initial login.



NVR4 Network Video Recorder

System Time: February 24, 2010 15:30:38 User: admin

User Account Setting

User Name	Group	Description
admin	admin	

[Edit](#) [Remove](#)

Add User

User Name: Only A-Z, a-z, 0-9 and _.@ are allowed

Password:

Confirm Password:

Company: (Optional)

Department: (Optional)

Telephone: (Optional)

Mobile: (Optional)

E-Mail: (Optional)

Group: (Optional)

Language: (Optional)

Description: (Optional)

[Add](#)

5.1.3.1 To change the password of the “admin” account:

- Click and highlight the “admin” account in the account list and click “Edit”.
- Its information should be displayed in “User Account Information”.
- Enter a new password in the “Password” field and enter it again in “Confirm Password”

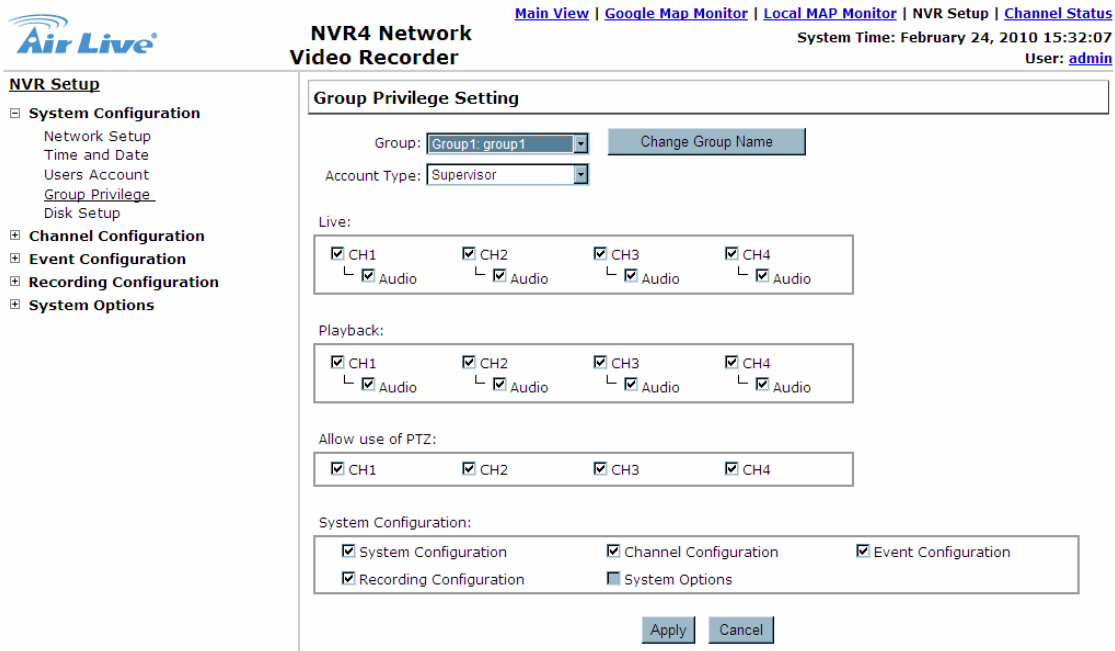
5.1.3.2 To add a new user:

- Enter a username and password in “User Account Information”. All other fields are optional for your own reference.
- Select a group from the “Group” drop-down menu to assign the new user to a particular group

- c. Enter a short description for the account if you wish
- d. Click “Apply” to finish configuration.

5.1.4 Group Privilege

Group Privilege is where you can create multiple customized access policies for situations if you need the NVR to be accessed by users other than the administrator. You can do so by creating a group, and then remove access privileges for certain configuration pages or cameras. Users that are created and assigned to this group will have limited access instead of full administration rights.



NVR4 Network Video Recorder

System Time: February 24, 2010 15:32:07
User: admin

Group Privilege Setting

Group:

Account Type:

Live:

<input checked="" type="checkbox"/> CH1	<input checked="" type="checkbox"/> CH2	<input checked="" type="checkbox"/> CH3	<input checked="" type="checkbox"/> CH4
<input type="checkbox"/> Audio	<input type="checkbox"/> Audio	<input type="checkbox"/> Audio	<input type="checkbox"/> Audio

Playback:

<input checked="" type="checkbox"/> CH1	<input checked="" type="checkbox"/> CH2	<input checked="" type="checkbox"/> CH3	<input checked="" type="checkbox"/> CH4
<input type="checkbox"/> Audio	<input type="checkbox"/> Audio	<input type="checkbox"/> Audio	<input type="checkbox"/> Audio

Allow use of PTZ:

<input checked="" type="checkbox"/> CH1	<input checked="" type="checkbox"/> CH2	<input checked="" type="checkbox"/> CH3	<input checked="" type="checkbox"/> CH4
---	---	---	---

System Configuration:

<input checked="" type="checkbox"/> System Configuration	<input checked="" type="checkbox"/> Channel Configuration	<input checked="" type="checkbox"/> Event Configuration
<input checked="" type="checkbox"/> Recording Configuration	<input type="checkbox"/> System Options	

The NVR comes with seven built-in groups and five built-in privilege profiles, except the “admin” and the “guest” accounts; the other five groups are fully customizable or you can simply assign a group with one of the default privilege profiles. You can, however, assign more than one users to the “admin” account if you wish to do so. The guest account comes with a “view-only” privilege in the “Live View” page, and users in this group do not have the power to make any changes in the “Live View” page or have access to pages other than the “Live View” page.

To create a group, please follow the steps below:

- a. Select a group from the “Group” drop-down menu.

Group Privilege Setting

Group: Group1: group1 Change Group Name

Account Type: Admin: admin

Live:
 CH1
 Audio

 CH3
 Audio

 CH4
 Audio

b. You can change the group name by clicking the “Change Group Name” button. A text box will be displayed for you to enter the new group.

Group Privilege Setting

Group: Group1: group1 Change Group Name group1

Account Type: Supervisor

c. Choose what type of privilege you would like this group to have from the “Privilege Type” drop-down menu.

Account Type: Operator

Live:
 CH1
 Audio

 CH3
 Audio

 CH4
 Audio

d. Its access privilege will then be displayed. You can alter its settings by allowing or denying access to other cameras using the checkboxes instead of accepting the defaults

Live:

<input checked="" type="checkbox"/> CH1 <input checked="" type="checkbox"/> Audio	<input checked="" type="checkbox"/> CH2 <input checked="" type="checkbox"/> Audio	<input checked="" type="checkbox"/> CH3 <input checked="" type="checkbox"/> Audio	<input checked="" type="checkbox"/> CH4 <input checked="" type="checkbox"/> Audio
--	--	--	--

Playback:

<input checked="" type="checkbox"/> CH1 <input checked="" type="checkbox"/> Audio	<input checked="" type="checkbox"/> CH2 <input checked="" type="checkbox"/> Audio	<input checked="" type="checkbox"/> CH3 <input checked="" type="checkbox"/> Audio	<input checked="" type="checkbox"/> CH4 <input checked="" type="checkbox"/> Audio
--	--	--	--

Allow use of PTZ:

<input checked="" type="checkbox"/> CH1	<input checked="" type="checkbox"/> CH2	<input checked="" type="checkbox"/> CH3	<input checked="" type="checkbox"/> CH4
---	---	---	---

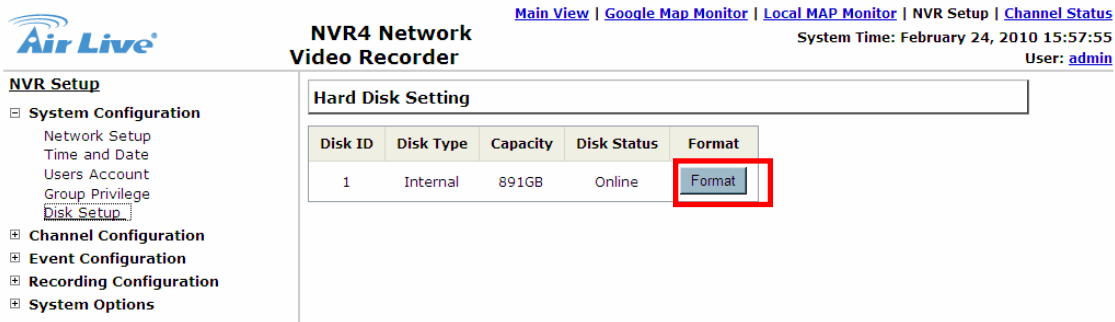
System Configuration:

<input checked="" type="checkbox"/> System Configuration	<input checked="" type="checkbox"/> Channel Configuration	<input checked="" type="checkbox"/> Event Configuration
<input checked="" type="checkbox"/> Recording Configuration	<input type="checkbox"/> System Options	

5.1.5 Disk Setup

Once you install a hard disk to the NVR, you need to initialize it so that it can be ready for recording. You can obtain basic information about the disk you installed in this page.

To initialize it, simply click the “Format” button



[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
System Time: February 24, 2010 15:57:55
User: [admin](#)

NVR Setup

- System Configuration
 - Network Setup
 - Time and Date
 - Users Account
 - Group Privilege
 - Disk Setup
- Channel Configuration
- Event Configuration
- Recording Configuration
- System Options

Hard Disk Setting

Disk ID	Disk Type	Capacity	Disk Status	Format
1	Internal	891GB	Online	<input type="button" value="Format"/>

Note: To obtain detail information about the disk, go to “System Options”→“Disk Status”

5.2 Channel Configurations

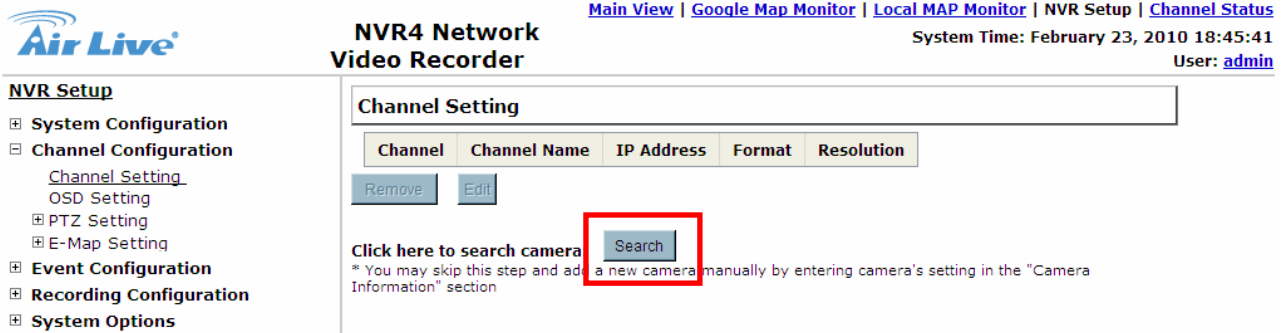
5.2.1 Add a Camera

The NVR provides two options for adding a new IP camera. Users have the option to let the NVR automatically find the cameras or to enter the camera’s information and add it manually.

Note: You should be prompted to install another ActiveX component after you open the “Channel Setting” page. In order to make the search function work properly, please go ahead and install the ActiveX component.

5.2.1.1 Automatic Search:

Click the “Search” button to perform the camera search.



After that, the NVR should begin to search the IP camera and the progress of the searching should be displayed on the screen:



Found IP cameras should be listed on the WEB. User can simply select a camera from the list and press “Configure” button for configuration.



Brand	Model	IP Address	HTTP Port	Installed
Airlive	WL-350HD	192.168.1.3	80	
Airlive	AirCam OD-325HD	192.168.1.4	80	
Airlive	POE-100CAMv2	192.168.1.100	80	
Airlive	POE-100CAM	192.168.2.3	80	

The NVR will retrieve the information about the selected IP camera. The information should be displayed on the “Camera Information” section. Enter the username and password of the IP camera, then select the channel ID and name the camera.

Add New Channel:

Channel ID:

Channel Name:

IP Address:

User Name:

Password:

HTTP Port:

Once you fill out above information, click "Detect" to retrieve camera setting

Click on “Detect” button for establishing the connection between the NVR and the camera. If connection establishes, the detailed information of the IP camera should be polled and displayed as below

Additional Camera Information

Video Port:

Format:

Resolution:

Frame Rate:

Bitrate Mode:

Quality:

Record: Continuous

Record Audio: Record audio



Adjust the video format, frame rate, resolution or bitrate... according to your environment. You can also click on the “Preview” button to preview the live video of the camera. Click “Add” to finish adding the camera.

Note: We highly recommend our user to choose mpeg4 or H.264 compression format. For that will not only save the network bandwidth but also save the NVR’s storage space. If it is possible, we also advised our user to set his surveillance system upon an independent network segment or VLAN. This should help to avoid the network collision and make the NVR its best performance.

Note: After auto search, if there was any IP camera marked with “*” on the list, that means the IP camera was already configured and connected to NVR.

Brand	Model	IP Address	HTTP Port	Installed
Airlive	WL-350HD	192.168.1.3	80	*
Airlive	AirCam OD-325HD	192.168.1.4	80	
Airlive	POE-100CAMv2	192.168.1.100	80	
Airlive	POE-100CAM	192.168.2.3	80	

Configure *Select a camera from search result and click "Configure" to configure setting below.

5.2.1.2 Add a camera manually

Simply follow the instruction described above but instead of using the “Search” function by entering the camera’s IP address and credential in the “Camera Information” manually.

Add New Channel:

Channel ID:

Channel Name:

IP Address:

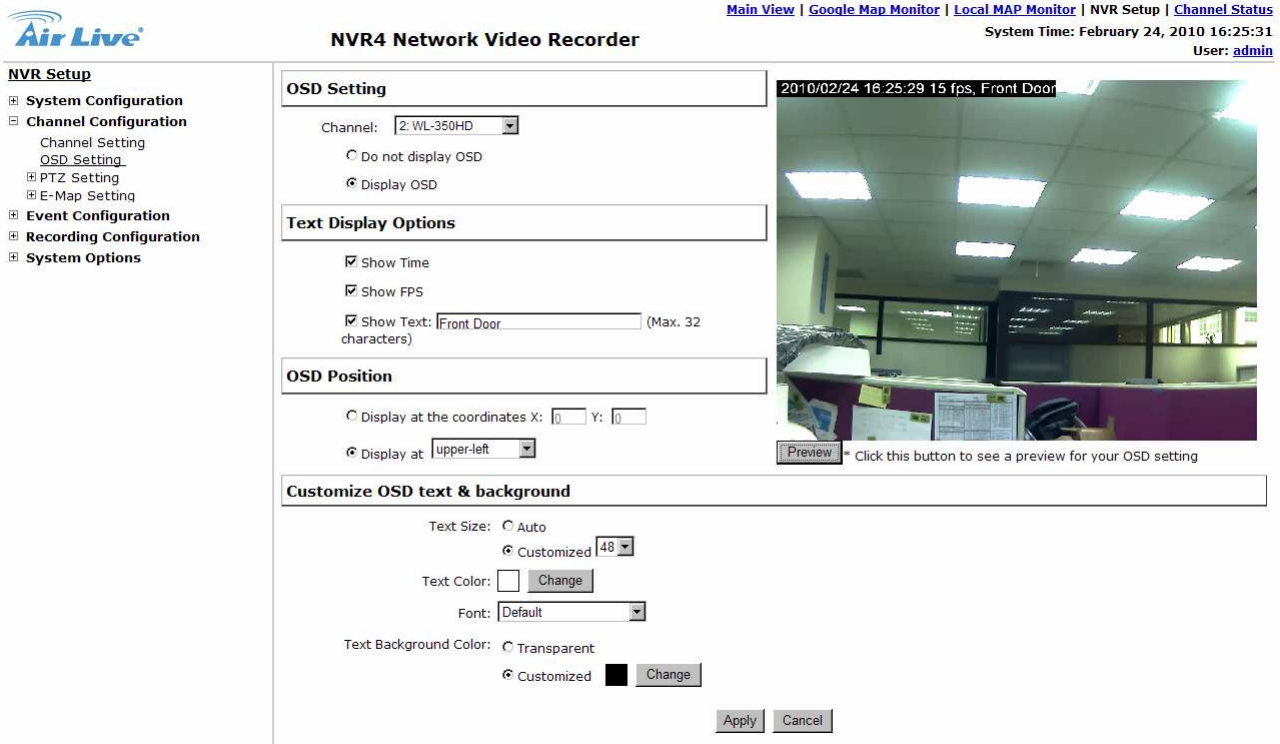
User Name:

Password:

HTTP Port:

Detect Once you fill out above information, click "Detect" to retrieve camera setting

5.2.2 OSD Settings



NVR Setup

- System Configuration
- Channel Configuration
 - Channel Setting
 - OSD Setting
 - PTZ Setting
 - E-Map Setting
- Event Configuration
- Recording Configuration
- System Options

OSD Setting

Channel: 2: WL-350HD

Do not display OSD

Display OSD

Text Display Options

Show Time

Show FPS

Show Text: Front Door (Max. 32 characters)

OSD Position

Display at the coordinates X: 0 Y: 0

Display at: upper-left

Customize OSD text & background

Text Size: Auto Customized 48

Text Color: Change

Font: Default

Text Background Color: Transparent Customized Change

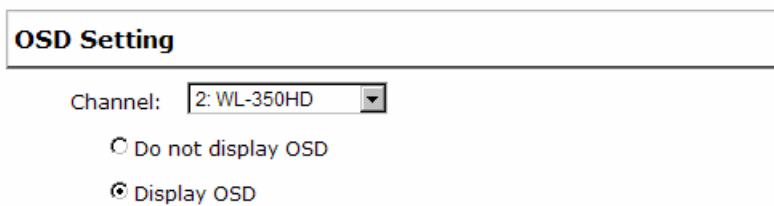
Apply Cancel

2010/02/24 16:25:29 15 fps, Front Door

Preview Click this button to see a preview for your OSD setting

The OSD (On Screen Display) allows users to add informational text message and embed it onto the video. By default, this function is turned off. To add texts to one or more video, please follow the steps below:

- Select a camera you would like to add text to and choose “Display OSD”.



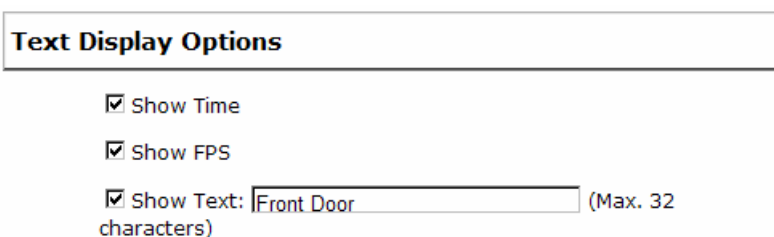
OSD Setting

Channel: 2: WL-350HD

Do not display OSD

Display OSD

- Choose one or more display options if you would also like the NVR to automatically embed the system time or the frame rate for you. Or simply choose to display a custom message of your own.



Text Display Options

Show Time

Show FPS

Show Text: Front Door (Max. 32 characters)

- c. Next, define where the text will be displayed by either entering an X/Y coordinate or use the system pre-defined position from the drop-down menu.

OSD Position

Display at the coordinates X: Y:

Display at

- d. Click on the “Preview” button to see the preview of your setting and click “Apply” to save the configuration.



Note: The texts can be further adjusted with changes to different size, color or font so they can be more visible on the video.

5.2.3 PTZ Preset Settings

The NVR supports PTZ cameras and can set multiple preset points or retrieve and manage preset points that are set in the camera. This is helpful if you need to monitor multiple spots in one area from a particular camera.

[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
 System Time: February 24, 2010 16:46:27
 User: [admin](#)

NVR4 Network Video Recorder

NVR Setup

- System Configuration
- Channel Configuration
 - Channel Setting
 - OSD Setting
 - PTZ Setting
 - PTZ Preset**
 - PTZ Sequence
 - E-Map Setting
- Event Configuration
- Recording Configuration
- System Options

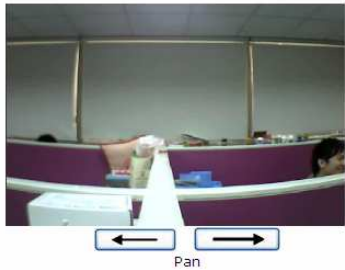
PTZ Preset

Channel: 1. POE-260CAM

Set as Home	Move Here When Event Trigger	Position No	Position Name	Description
<input type="radio"/>	<input type="radio"/>	1	Pre-Set-01	
<input type="radio"/>	<input type="radio"/>	2	Pre-Set-02	
<input type="radio"/>	<input type="radio"/>	3	Pre-Set-03	

Position No: 4

Position Name: Pre-Set-04



PTZ Speed:

Zoom:

Focus:

Description:

a. To set up PTZ preset points, select a camera from the “Camera” drop-down menu and click “Add”.

PTZ Preset

Channel: 1. POE-260CAM

Set as Home	Move Here When Event Trigger	Position No	Position Name	Description
<input type="button" value="Add"/>	<input type="button" value="Edit"/>	<input type="button" value="Remove"/>	<input type="button" value="Sync with Camera"/>	

b. Select a position number for the preset point from the “Position Number” drop-down menu and fill in a name in the “Position Name” field for easier identification.

Position No: 4

Position Name: Pre-Set-04

c. Use the PTZ control provided in the configuration page to set the preset point. Use the “PTZ Speed”, “Zoom”, and “Focus” for further configuring the preset point. And you can also fill some comment in the “Description” as reminder.

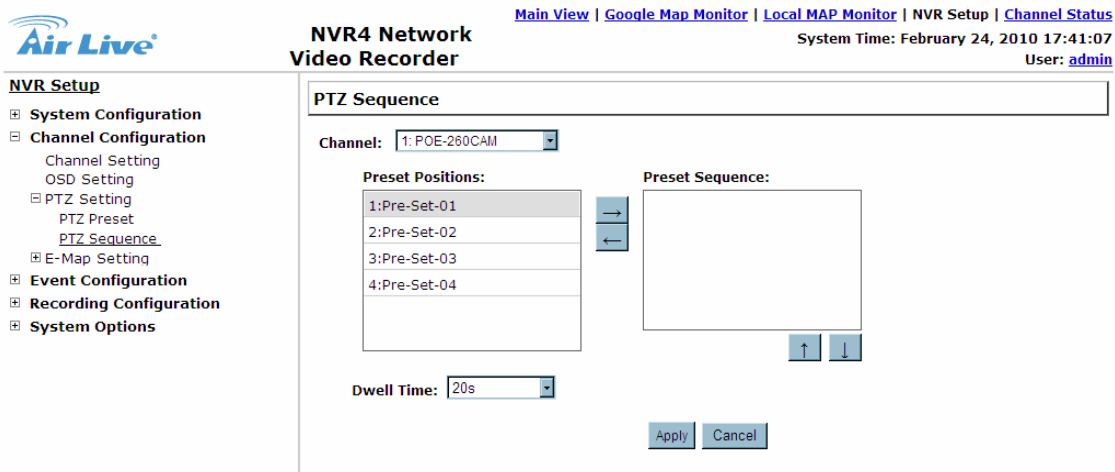


- d. Click “Apply” to save the configuration.
- e. User can select a specific point as the HOME position, and a specific point as the reaction against some event was triggered.

Set as Home	Move Here When Event Trigger	Position No	Position Name	Description
<input type="radio"/>	<input type="radio"/>	1	Pre-Set-01	
<input type="radio"/>	<input type="radio"/>	2	Pre-Set-02	
<input type="radio"/>	<input type="radio"/>	3	Pre-Set-03	

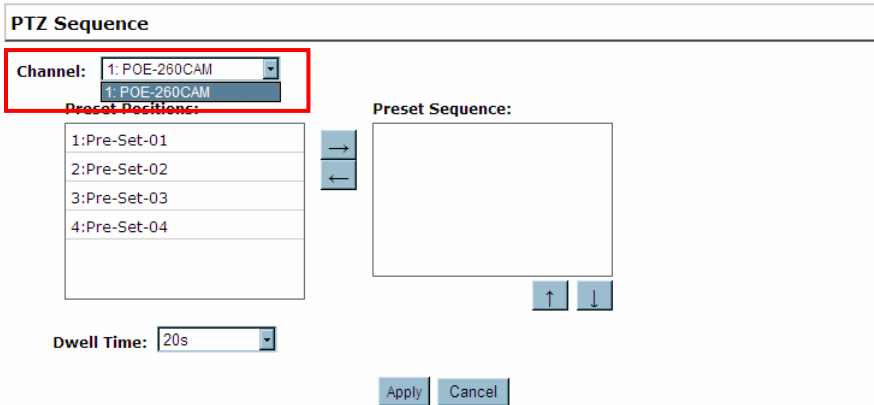
5.2.4 PTZ Preset Sequence

Once you have multiple preset points defined for a camera, it is convenient for the user to set up the sequencing viewing among those preset point and let the NVR automatically switch between them for you.

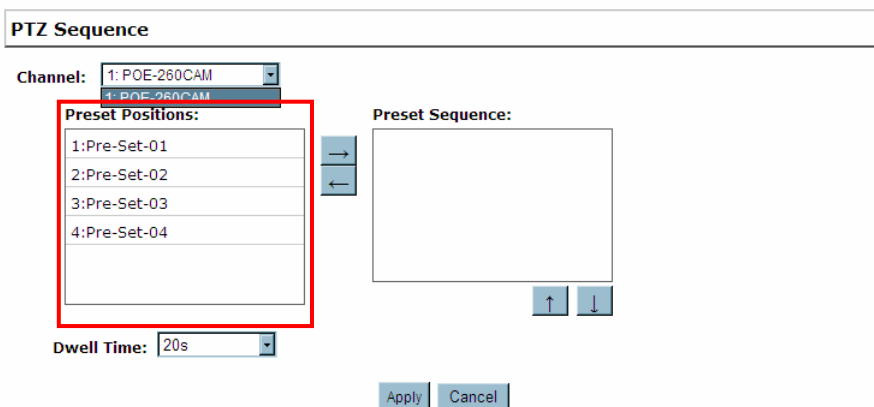


To configure preset sequence for a camera, please follow the steps below:

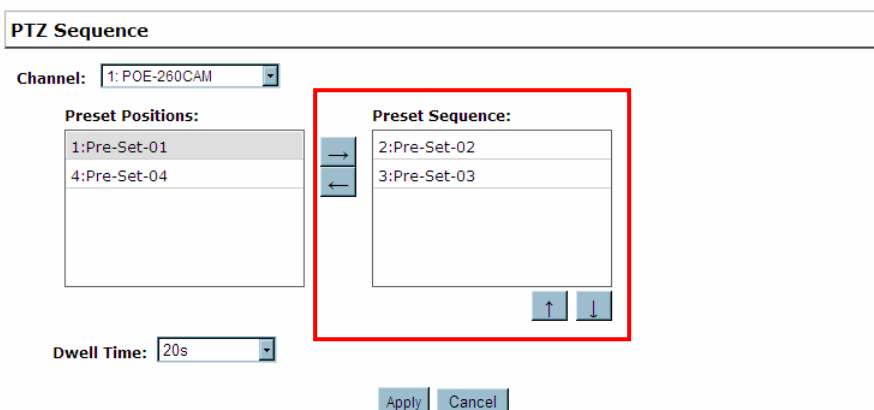
- a. Select a channel from the “Channel” drop-down menu.



- b. The available preset points should be listed in “Preset Position” area.



- c. Pick the ones you like for sequence viewing and press the “->” button to move them to the “Preset Sequence” section, then use the up and down buttons to adjust their sequencing positions.



- d. Finally, select a dwell time from the drop-down menu and click “Apply” to save the configuration.

PTZ Sequence

Channel: 1: POE-260CAM

Preset Positions:

1:Pre-Set-01	→
4:Pre-Set-04	←

Preset Sequence:

2:Pre-Set-02
3:Pre-Set-03

↑ ↓

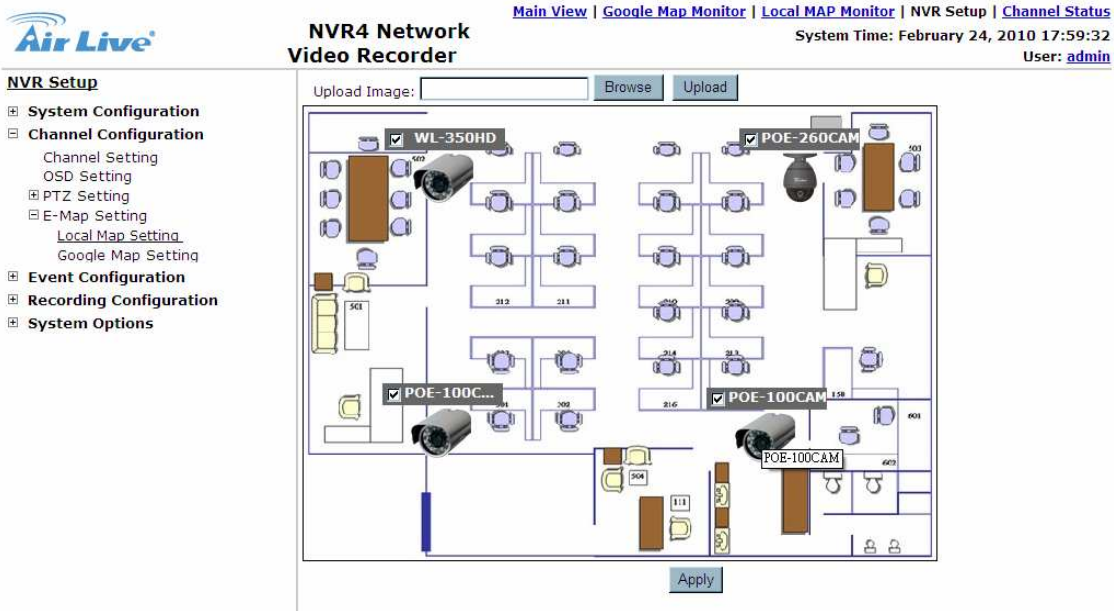
Dwell Time: 20s

Apply Cancel

Note: To start preset sequence viewing, section 3.5.1 for instructions

5.2.5 E-Map Monitor

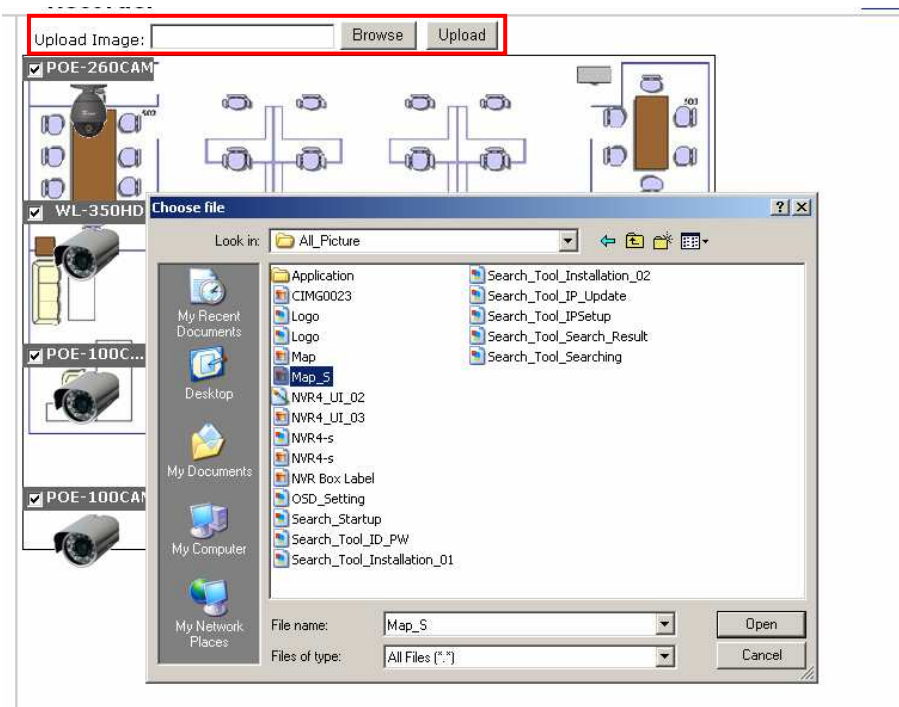
E-Map monitor is a function that alerts users whenever there is an event triggered (e.g. motion detected) from a camera with a geographical perspective. With this function, users can quickly identify which camera has detected an unusual event and where this event is happening. This function works by incorporating the event detection function as well as the recording function, which, as a result, helps users take all the necessary actions when an unusual event occurs. NVR supports two modes of E-Map Live Monitoring; user might use a private map file or use e-map service, Google Map, on the Internet.



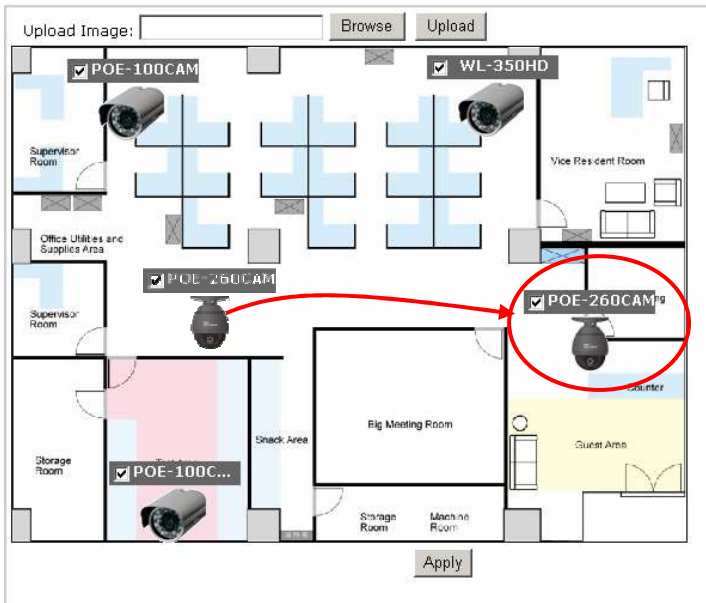
5.2.5.1 Use the private map

To replace the map, please follow the steps below:

- a. Click “Browse” button to locate the new map image file from the local PC and then click “Upload”



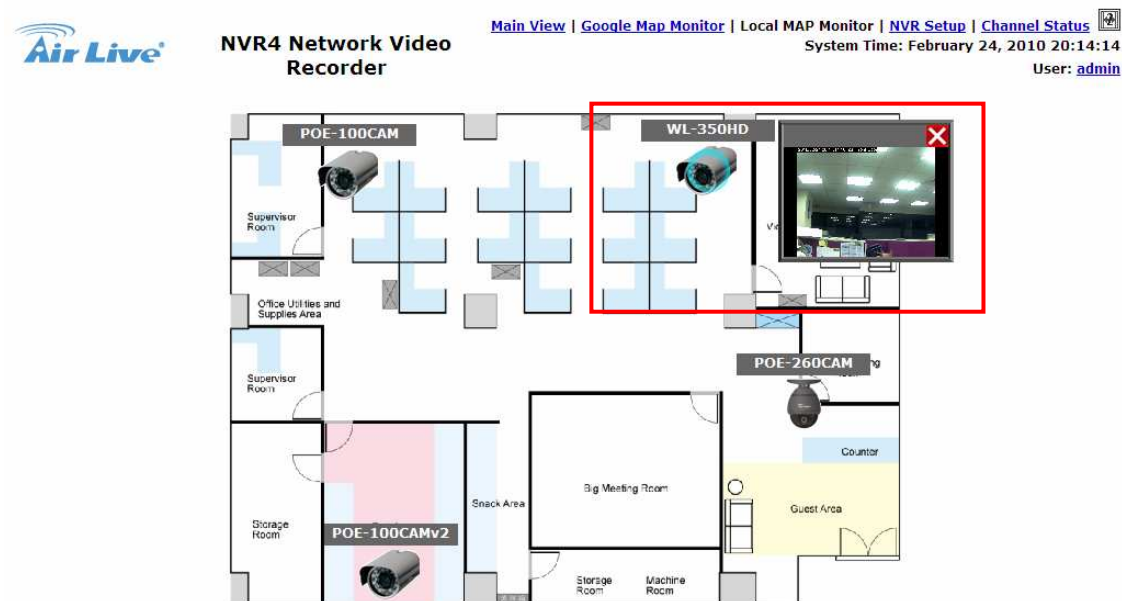
- b. Then drag and drop the camera icon to define its location. Then press the “Apply” button



c. Access the E-Map Monitor page from the upper-right hand corner menu.

[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
 System Time: February 24, 2010 19:53:26
 User: [admin](#)

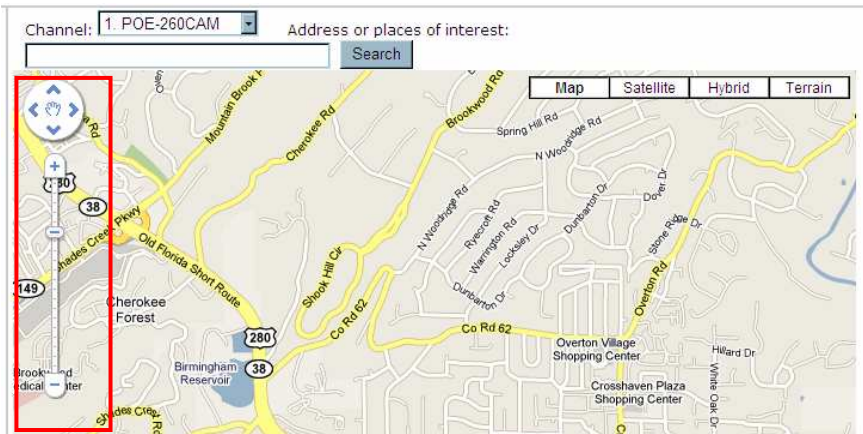
d. When the NVR receives an event triggered from any of the cameras, their videos will be displayed on the E-Map and you can double-click on the video to enlarge it.



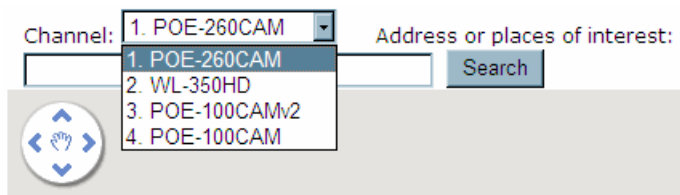
5.2.5.2 Use the Google Map

To use the Google Map, please follow the steps below:

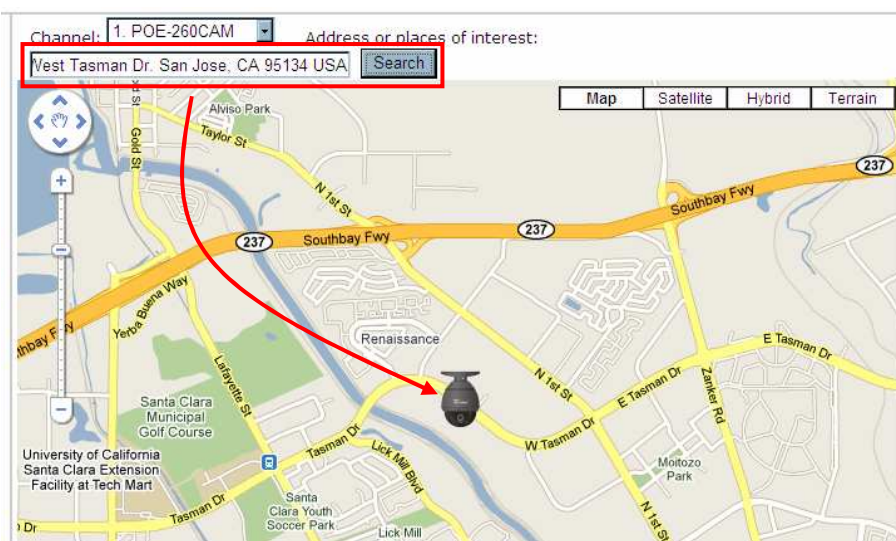
- a. Zoom the map to a proper size.



- b. Select the camera you would like to configure from the channel drop-down list.



- c. Entering the address where the camera located in the “Address or places of interest” text box. Then press the “Search” button. The NVR will find and pin the camera’s icon on the map automatically.



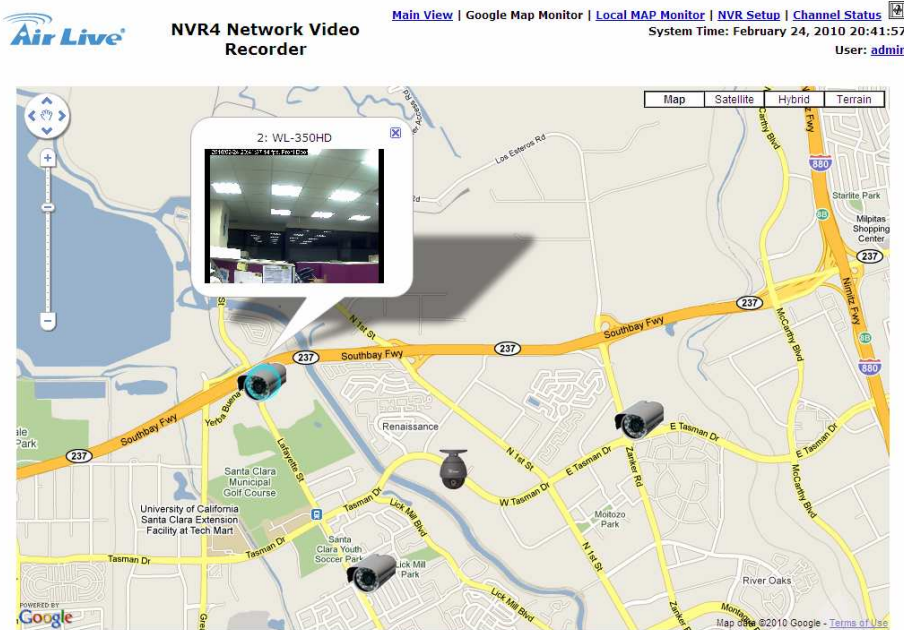
- d. Access the Google Map Monitor page from the upper-right hand corner menu.

[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)

System Time: February 24, 2010 19:53:26

User: [admin](#)

- e. When the NVR receives an event triggered from any of the cameras, their videos will be displayed on the E-Map and you can double-click on the video to enlarge it.

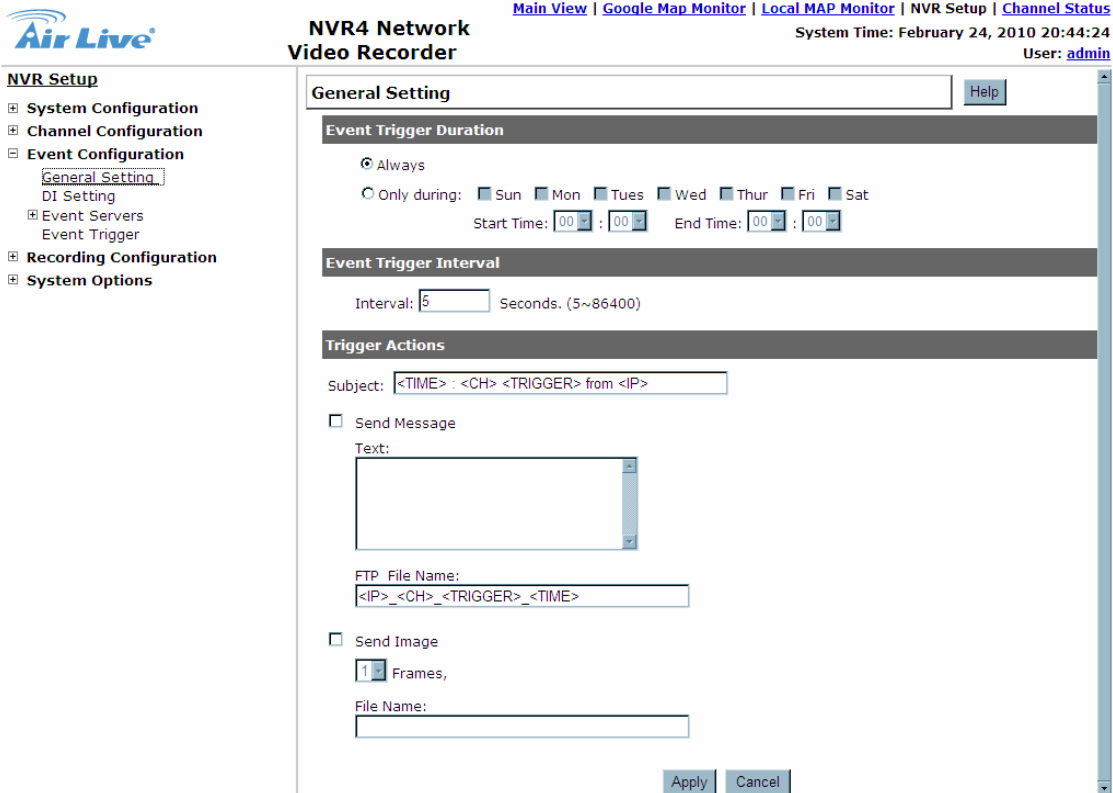


5.3 Event Configurations

The “Event Configurations” section allows users to define conditions that constitute an event, its corresponding trigger action and when it will be triggered. Such setting can reduce the management overhead and notify the administrator only when it’s necessary.

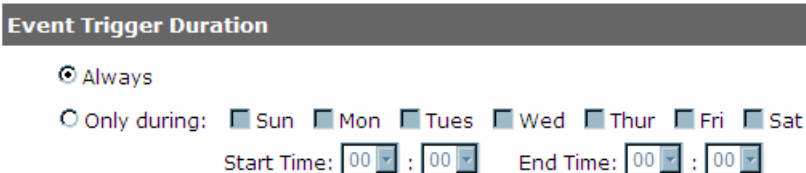
5.3.1 General Settings

The general settings section can help you quickly configure event trigger duration, event trigger interval and the corresponding actions when events are triggered.



Start the event configuration by defining the general settings:

5.3.1.1 Define when will the event alerts be received by the NVR



- a. Choose “Always” or “Only during...” under “Event Trigger Duration”
- b. For the “Only during...” option, choose the days by using the check-box and then define the time period in those days in the “Start Time” and “End Time” fields that you would like the event trigger function to be enabled.
- c. Only during period define here will the NVR receive the event alerts from the cameras, that is, the trigger function will be disabled when it is outside the period.

5.3.1.2 How often an event is triggered

Event Trigger Interval

Interval: Seconds. (5~86400)

Set a time interval under “Event Trigger Interval” for defining the time interval between two events.

5.3.1.3 Trigger action

Now that you have the event trigger duration and interval defined, choose what action to be taken during an event trigger:

Trigger Actions

Subject:

Send Message

Text:

FTP File Name:

Send Image

Frames,

File Name:

- a. You can choose to have the NVR send out the first few frames of the video recorded upon an event is triggered.
- b. You can also choose to have the NVR send out a warning message in e-mail or in txt file format and upload it to destined FTP server.

5.3.2 DI Setting

You might configure the NVR to receive the event alert when the DI event is triggered on the cameras. For setting the DI event, select the “DI Setting”, and then you might select the desired camera, its DI port, and the triggering condition.



NVR4 Network Video Recorder

[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
 System Time: February 24, 2010 20:53:33
 User: [admin](#)

- NVR Setup**
- System Configuration
- Channel Configuration
- Event Configuration
 - General Setting
 - DI Setting
 - Event Servers
 - FTP Servers
 - SMTP Servers
 - Event Trigger
- Recording Configuration
- System Options

DI Setting

	Trigger Event When	
	IP Camera	
	Port	Condition
CH 1	1	Open
CH 2	-----	-----
CH 3		
CH 4		

Apply Cancel

5.3.3 Event Servers

Event servers are to be used with event trigger actions. In case of unusual motion detected by the camera or a disk failure, the NVR can send notification with the acceptable format (image/txt) to a destined event server according to the configuration.

5.3.2.1 Configuring an FTP server



NVR4 Network Video Recorder

[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
 System Time: February 24, 2010 20:54:52
 User: [admin](#)

- NVR Setup**
- System Configuration
- Channel Configuration
- Event Configuration
 - General Setting
 - DI Setting
 - Event Servers
 - FTP Servers
 - SMTP Servers
 - Event Trigger
- Recording Configuration
- System Options

FTP Servers Setting

Name	Network Address	Port	Passive Mode	Enabled
<input type="button" value="Edit"/> <input type="button" value="Remove"/>				

FTP Server

Name:

Network Address: *Enter host name or IP address

Port:

Login Information

User Name:

Password:

Passive Mode

Use Passive Mode

Test

*Click "Test" to test the connection to the FTP server

- a. Start by giving a name to the server profile that you are adding to the NVR.
- b. Enter the hostname or the IP address of the FTP server.
- c. Enter the communication port of the FTP server (usually port 21).

FTP Server

Name:

Network Address: *Enter host name or IP address

Port:

- d. Enter the username and password of the FTP server if it's required.

Login Information

User Name:

Password:

- e. Check "Use Passive Mode" if it's required or leave it unchecked to use active mode.

Passive Mode

Use Passive Mode

- f. You might click the "Test" button to verify if all information is entered correctly and the connection to the FTP server can be established successfully.
- g. Click "Add" for the settings to take effect.

Test

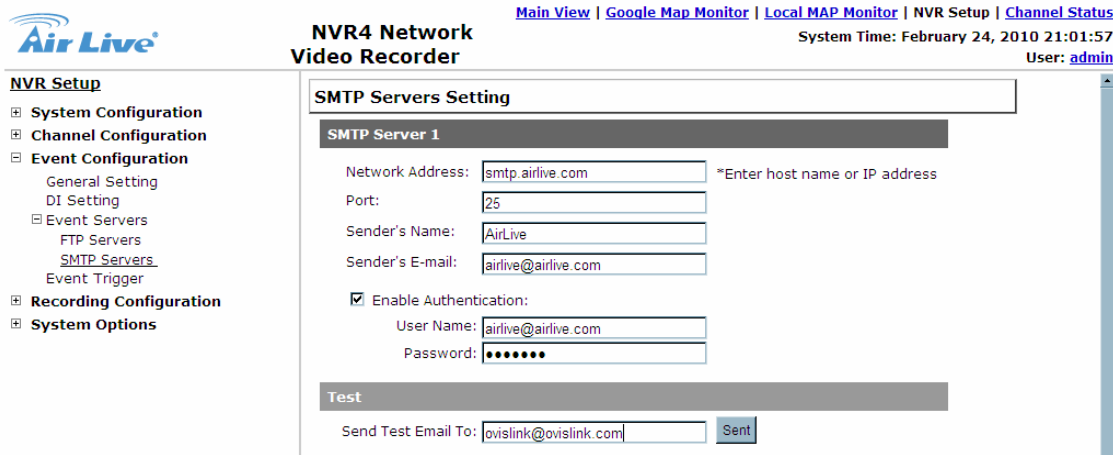
*Click "Test" to test the connection to the FTP server

Note: If you wish to edit/remove/enable/disable an FTP server, click to highlight one from the profile list and choose the corresponding action button/checkbox.

FTP Servers Setting

Name	Network Address	Port	Passive Mode	Enabled
FTP_01	192.168.100.100	21	No	<input checked="" type="checkbox"/>

5.3.2.2 Configuring an SMTP server



[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
 System Time: February 24, 2010 21:01:57
 User: [admin](#)

NVR Setup

- System Configuration
- Channel Configuration
- Event Configuration
 - General Setting
 - DI Setting
 - Event Servers
 - FTP Servers
 - SMTP Servers
 - Event Trigger
- Recording Configuration
- System Options

SMTP Servers Setting

SMTP Server 1

Network Address: *Enter host name or IP address

Port:

Sender's Name:

Sender's E-mail:

Enable Authentication:


User Name:

Password:

Test

Send Test Email To:

- a. Enter the hostname or the IP address of the SMTP server.
- b. Enter the port of the SMTP server.
- c. Specify the sender's name in the "Sender's name" field.
- d. Check "Enable Authentication" and enter the username and password of the SMTP server and as it requires authentication.



SMTP Server 1

Network Address: *Enter host name or IP address

Port:

Sender's Name:

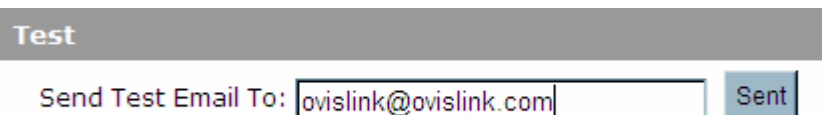
Sender's E-mail:

Enable Authentication:

User Name:

Password:

- e. Enter the sender's e-mail address for testing if the mail configuration was correct.



Test

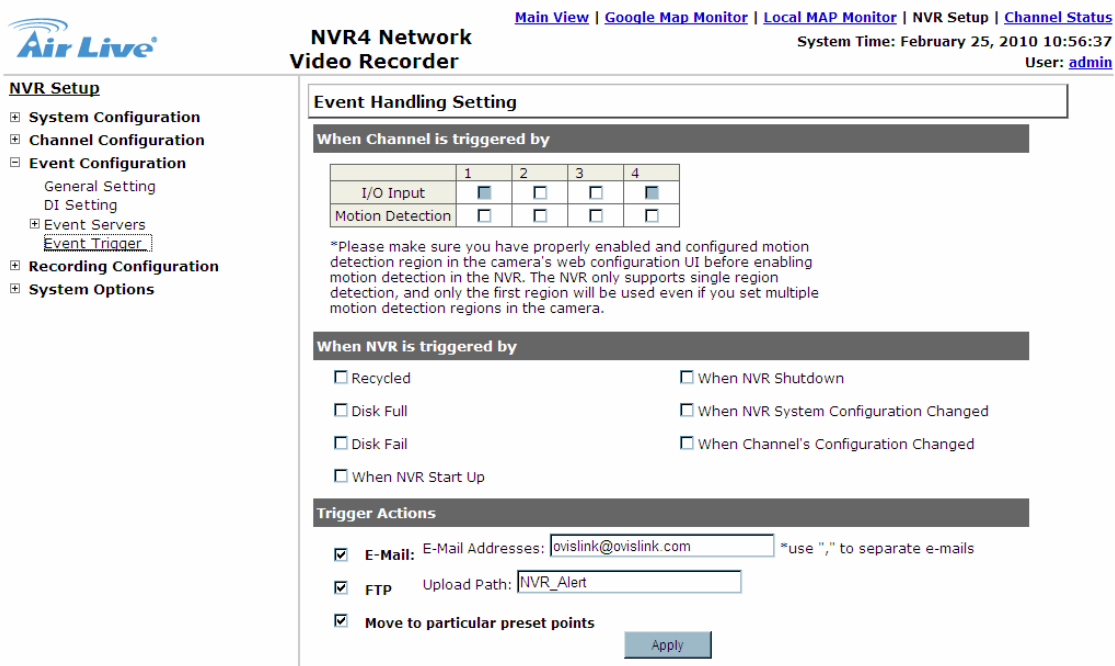
Send Test Email To:

- f. Click "Apply" to save the configuration.

5.3.4 Event Triggers

We have finished defining how an event will be triggered and which servers will be receiving notifications in the previous two sections, now we can finish up the event configuration by setting:

- Which channels will have event trigger function enabled.
- What is considered to be an event?
- Where the warnings will be sent to and how they will be sent.



NVR4 Network Video Recorder

System Time: February 25, 2010 10:56:37
User: admin

Event Handling Setting

When Channel is triggered by

	1	2	3	4
I/O Input	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Motion Detection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Please make sure you have properly enabled and configured motion detection region in the camera's web configuration UI before enabling motion detection in the NVR. The NVR only supports single region detection, and only the first region will be used even if you set multiple motion detection regions in the camera.

When NVR is triggered by

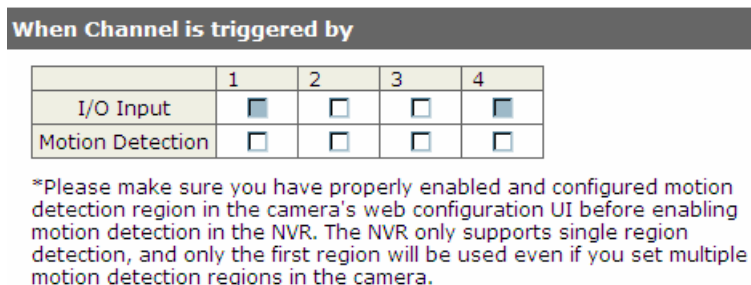
Recycled When NVR Shutdown
 Disk Full When NVR System Configuration Changed
 Disk Fail When Channel's Configuration Changed
 When NVR Start Up

Trigger Actions

E-Mail: E-Mail Addresses: *use "," to separate e-mails
 FTP Upload Path:
 Move to particular preset points

5.3.3.1 Enable Event Trigger

- a. Use the checkbox to enable event trigger on the desired channels.



When Channel is triggered by

	1	2	3	4
I/O Input	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Motion Detection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Please make sure you have properly enabled and configured motion detection region in the camera's web configuration UI before enabling motion detection in the NVR. The NVR only supports single region detection, and only the first region will be used even if you set multiple motion detection regions in the camera.

- b. Use the checkbox to enable system event trigger. The system events are list as below:

When NVR is triggered by

- | | |
|--|--|
| <input type="checkbox"/> Recycled | <input type="checkbox"/> When NVR Shutdown |
| <input type="checkbox"/> Disk Full | <input type="checkbox"/> When NVR System Configuration Changed |
| <input type="checkbox"/> Disk Fail | <input type="checkbox"/> When Channel's Configuration Changed |
| <input type="checkbox"/> When NVR Start Up | |

c. Define how the notifications will be sent and where they will be sent to. You can also instruct your PTZ camera to move to a specific preset point when the event is triggered.

Trigger Actions

- E-Mail:** E-Mail Addresses: *use "," to separate e-mails
- FTP** Upload Path:
- Move to particular preset points**

Note: Event trigger may not work for cameras that are placed outside of your local network or on the Internet until the “UPnP Port Forwarding” is enabled in both the NVR and the router.

5.4 Recording Configurations

The “recording configurations” gives users the overall control of how and when a recording is performed. NVR provide you to select weather to record I Frame only, or to record all frames delivered by the camera. It can help the NVR to operate with sufficient system resource by performing recording only when it’s necessary with adjustable recording frame rate.

Note: In an MPEG video stream, I Frame means a full frame. That is, I Frame does not need any information from the frame before it or after it to be played back properly. If you select to record I Frame only, NVR will not save frames other than I Frame.

5.4.1 General Settings

You can configure the following in “General Settings”:

- Pre-Alarm/Post-Alarm recording length.
- Recording frame type.
- Enable/disable different recording types on different cameras.



NVR4 Network Video Recorder

[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)

System Time: February 24, 2010 21:04:28

User: [admin](#)

NVR Setup

- System Configuration
- Channel Configuration
- Event Configuration
- Recording Configuration
 - General Setting
 - Schedule Recording Setting
- System Options

Recording General Settings

Recording Buffer

Pre-Alarm Buffer: Seconds

Post-Alarm Buffer: Seconds

Recording Frame Rate

	1	2	3	4
Continuous	I Only	I Only	I Only	I Only
Schedule	I Only	I Only	I Only	I Only
Event	Full	Full	Full	Full
Manual	Full	Full	Full	Full

Keep Video

Keep the previous days of recorded videos

Camera Recording Setting

	1	2	3	4
Continuous	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Event	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Record Audio

	1	2	3	4
Record audio	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

The “recording buffer” allows user to configure the “pre-alarm” and “post- alarm” time for event recordings. The “pre-alarm” time sets the NVR to record in advance when an event is triggered. The “post-alarm” time sets the NVR to continue recording for a period of time after an event trigger is finished.

Recording Buffer

Pre-Alarm Buffer: Seconds

Post-Alarm Buffer: Seconds

Note: The “Pre-alarm” function only works when the “Continuous” recording is also activated.

Recording frame rate allows you to set different frame type for recording. Instead of recording all the frames delivered from the camera, you might choose to record the I Frame only. Recording only I Frame will help you to reduce the total storage space but decrease the frame rate of the recorded video. Use the drop-down menu and select one of the pre-defined types for your needs.

Recording Frame Rate

	1	2	3	4
Continuous	I Only	I Only	I Only	I Only
Schedule	I Only	I Only	I Only	I Only
Event	Full	Full	Full	Full
Manual	Full	Full	Full	Full

The section at the bottom allows you to turn on or off a particular recording method on any channels. And you might choose whether to record the audio in the “Record Audio” section.

Camera Recording Setting


	1	2	3	4
Continuous	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Event	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Record Audio

	1	2	3	4
Record audio	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

5.4.2 Schedule Recording

Here you can define the time range of the schedule recording for all channels.



[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
 System Time: February 24, 2010 21:05:18
 User: [admin](#)

NVR4 Network Video Recorder

Schedule Recording Settings

Channel: 1. POE-280CAM

Schedule To	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sunday																							
Monday																							
Tuesday																							
Wednesday																							
Thursday																							
Friday																							
Saturday																							

[Clear](#)

Quick Configuration

Days:
 Sun Mon Tues Wed Thur Fri Sat All

Duration:
 All day
 During Start Time: 00 : 00 End Time: 00 : 00 [Add](#)

Copy Schedule To Channel: [Dropdown]

[Copy Schedule To All Channels](#) [Apply](#) [Cancel](#)

5.4.2.1 To configure a schedule recording:

- a. Use the “Channel” drop-down menu and select a camera first.

Channel:

- 1. POE-260CAM
- 2. WL-350HD
- 3. POE-100CAMv2
- 4. POE-100CAM

- b. You can use the schedule table to set the time range. Click on the cell boxes to let you set the time and duration that NVR will perform recording action.

Schedule Table																								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sunday																								
Monday							■	■	■	■														
Tuesday																								
Wednesday									■	■	■	■	■					■	■	■	■			
Thursday																								
Friday								■	■	■														
Saturday																								

- c. After the schedule is set, please press the “Apply” button for save the configuration.

Note: Each cell box represents 15 minutes of time. Click one or more boxes to omit consecutive recording. Press “Clear” button for correct the setting, if you want to reset the schedule table.

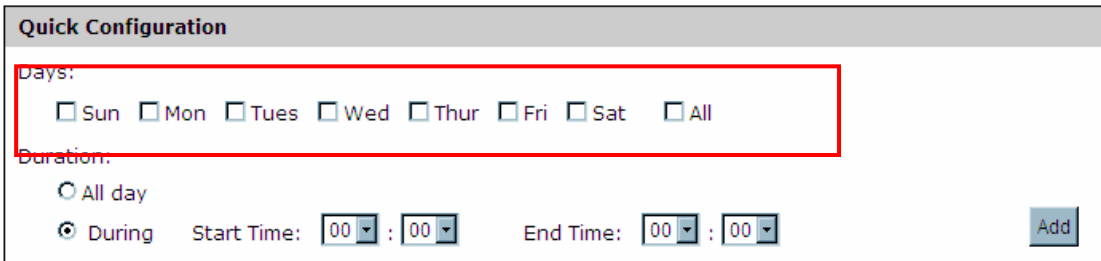
5.4.2.2 Quick configuration

- a. Use the “Channel” drop-down menu and select a camera first.

Channel:

- 1. POE-260CAM
- 2. WL-350HD
- 3. POE-100CAMv2
- 4. POE-100CAM

- b. Select the day you would like to configure the schedule. Or select “All” for select all day for configuring the schedule.



Quick Configuration

Days:

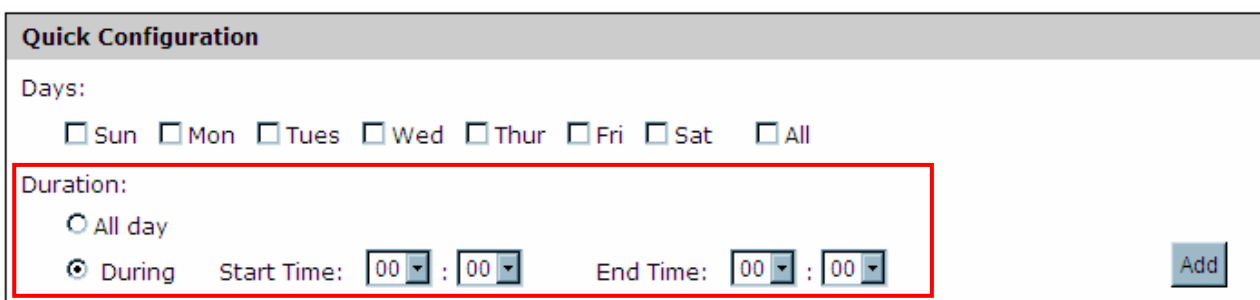
Sun Mon Tues Wed Thur Fri Sat All

Duration:

All day

During Start Time: : End Time: :

c. You might set the duration separately via the “Start Time” and “End Time” drop-down menu, or select the “All day” option to make the NVR recording for 24 hours.



Quick Configuration

Days:

Sun Mon Tues Wed Thur Fri Sat All

Duration:

All day

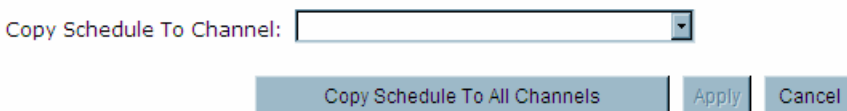
During Start Time: : End Time: :

d. Press the “Add” button, then the schedule should be shown on the “Schedule Table”.

e. After the schedule is set, please press the “Apply” button for save the configuration.

5.4.2.3 Copy the schedule to other channels

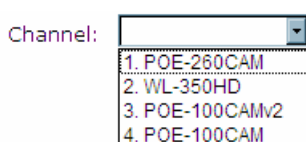
User can use the “Copy Schedule to Channel” function to copy current schedule setting to other channel. Just select the desired channel from the drop-down menu and then press the “Apply” button for saving the configuration. You can also copy the current schedule setting to the other channels by pressing the “Copy Schedule To All Channels”.



Copy Schedule To Channel:

5.4.2.4 Remove the schedule

a. Use the “Channel” drop-down menu and select a camera first.



Channel:

- 1. POE-260CAM
- 2. WL-350HD
- 3. POE-100CAMv2
- 4. POE-100CAM

b. Press the “Clear” button, the “Schedule Table” should be cleared.

Schedule Table																								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sunday																								
Monday																								
Tuesday																								
Wednesday																								
Thursday																								
Friday																								
Saturday																								


c. Then press the “Apply” button for save the configuration.

5.5 System Options

System Options gives users a glance of the overall system status and allows users to perform maintenance tasks such as upgrading firm- ware, restore/backup device settings or reboot deviceetc.

5.5.1 Device Information

The “Device Information” provides the general information of the device such as firmware version and system time. It also provides information of the current network settings and status.



[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
 System Time: February 24, 2010 21:06:18
 User: [admin](#)

NVR Setup

- System Configuration
- Channel Configuration
- Event Configuration
- Recording Configuration
- System Options
- Device Information
- System Logs
- Maintenance
- Disk Status

NVR4 Network Video Recorder

General Information

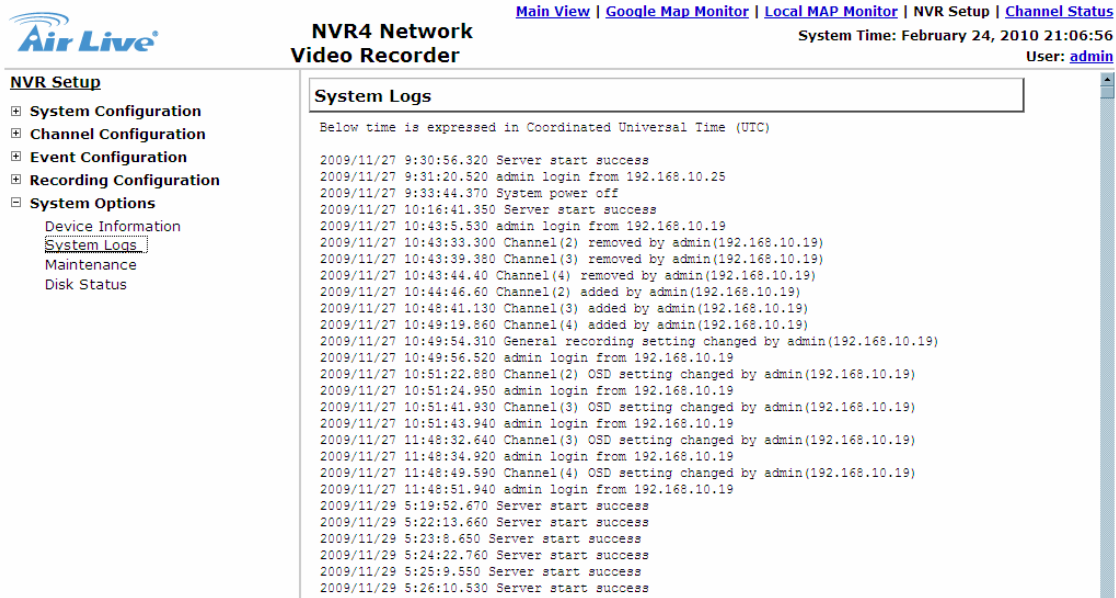
Device Name:
 Model Name: NVR4
 Firmware Version: 1.5.0A.30023607
 Device Time: Up 1 days 01:30:11, since Feb 23 2010 19:36:07

Network Information

Network Type: DHCP
 Device IP: 192.168.100.105
 HTTP Port: 80
 Streaming Port: 9877
 MAC Address: 00:4F:61:E0:00:03
 UPnP Port Forwarding: Disabled

5.5.2 Logs and Reports

“Logs and Reports” keeps a record of what’s been happening to the device and provides basic information for troubleshooting.



The screenshot shows the web interface for an NVR4 Network Video Recorder. At the top, there are navigation links: [Main View](#), [Google Map Monitor](#), [Local MAP Monitor](#), [NVR Setup](#), and [Channel Status](#). The system time is displayed as February 24, 2010 21:06:56, and the user is identified as admin.

The left sidebar contains a menu with the following items:

- NVR Setup
 - System Configuration
 - Channel Configuration
 - Event Configuration
 - Recording Configuration
 - System Options
 - Device Information
 - System Logs
- Maintenance
- Disk Status

The main content area is titled "System Logs" and contains the following text:

Below time is expressed in Coordinated Universal Time (UTC)

```

2009/11/27 9:30:56.320 Server start success
2009/11/27 9:31:20.520 admin login from 192.168.10.25
2009/11/27 9:33:44.370 System power off
2009/11/27 10:16:41.350 Server start success
2009/11/27 10:43:5.530 admin login from 192.168.10.19
2009/11/27 10:43:33.300 Channel(2) removed by admin(192.168.10.19)
2009/11/27 10:43:39.380 Channel(3) removed by admin(192.168.10.19)
2009/11/27 10:43:44.40 Channel(4) removed by admin(192.168.10.19)
2009/11/27 10:44:46.60 Channel(2) added by admin(192.168.10.19)
2009/11/27 10:48:41.130 Channel(3) added by admin(192.168.10.19)
2009/11/27 10:49:19.860 Channel(4) added by admin(192.168.10.19)
2009/11/27 10:49:54.310 General recording setting changed by admin(192.168.10.19)
2009/11/27 10:49:56.520 admin login from 192.168.10.19
2009/11/27 10:51:22.880 Channel(2) OSD setting changed by admin(192.168.10.19)
2009/11/27 10:51:24.950 admin login from 192.168.10.19
2009/11/27 10:51:41.930 Channel(3) OSD setting changed by admin(192.168.10.19)
2009/11/27 10:51:43.940 admin login from 192.168.10.19
2009/11/27 11:48:32.640 Channel(3) OSD setting changed by admin(192.168.10.19)
2009/11/27 11:48:34.920 admin login from 192.168.10.19
2009/11/27 11:48:49.590 Channel(4) OSD setting changed by admin(192.168.10.19)
2009/11/27 11:48:51.940 admin login from 192.168.10.19
2009/11/29 5:19:52.670 Server start success
2009/11/29 5:22:13.660 Server start success
2009/11/29 5:23:8.650 Server start success
2009/11/29 5:24:22.760 Server start success
2009/11/29 5:25:9.550 Server start success
2009/11/29 5:26:10.530 Server start success

```

5.5.3 Maintenance

“Maintenance” provides functions for users to:

- Reboot the NVR when necessary
- Reboot cameras directly from the NVR
- Perform Firmware Upgrade
- Backup the NVR’s settings to a local hard drive
- Restore the NVR’s settings from a previously saved configuration file
- Reset the NVR’s settings to their factory default values



NVR4 Network Video Recorder

[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)

System Time: February 24, 2010 21:07:17

User: [admin](#)

NVR Setup

- System Configuration
- Channel Configuration
- Event Configuration
- Recording Configuration
- System Options
 - Device Information
 - System Logs
 - Maintenance**
 - Disk Status

Maintenance

Restart NVR

Click "Restart" button to restart NVR

Restart Camera

Select a camera below to perform a restart

Upgrade NVR Firmware

Locate the new firmware and perform the upgrade (**Current Firmware Version: 1.5.0A.30023607**)

Specify the firmware file: and click

***** Note ***:** Please DO NOT power off the system during the firmware upgrade process. You will be notified once the upgrade process is complete

Backup NVR's Setting

Backup the configuration to a local hard disk

Restore NVR's Setting

Restore configuration from a previously saved configuration file

Specify the configuration file: and click

***** Note ***:** Please DO NOT power off the system during the restore process. You will be notified once the process is completed.

Reset NVR to Factory Default

This will restore all configurations to their factory default values

When the DHCP server function is disabled, the default IP of the system is:192.168.1.1

***** Note ***:** Please DO NOT power off the system during the reset process. You will be notified once the process is complete.

Replace NVR Web UI Logo

Locate the new logo and perform the updates:

Specify the logo file: and click

5.5.3.1 Reboot the NVR

Reboot the NVR after you upload a new firmware. You would need to manually reboot the system for the new firmware to take effect. Such process would prevent a recording from getting interrupted because the system would not automatically reboot itself after the new firmware is loaded onto the NVR.

Simply click "Restart" to begin the reboot process and confirm the action:

Restart NVR

Click "Restart" button to restart NVR

Restart

The restart process should be displayed and you should be prompted back to the "Maintenance" page after it is complete.

5.5.3.2 Reset the NVR to Factory Default

To reset the NVR back to its factory default, click "Default" button and begin the process:

Reset NVR to Factory Default

This will restore all configurations to their factory default values

Restore Factory Default

When the DHCP server function is disabled, the default IP of the system is:192.168.1.1

*** **Note** ***: Please DO NOT power off the system during the reset process. You will be notified once the process is complete.

The process should be displayed and you should be prompted back to the "Live View" page after it is complete.

5.5.3.3 Firmware Upgrade

User might use this function to perform the firmware upgrading. Please press the "Browse" button for select the firmware you download from the Internet. Then press "Upgrade" button for starting the upgrading process.

Upgrade NVR Firmware

Locate the new firmware and perform the upgrade (**Current Firmware Version: 1.5.0A.30023607**)

Specify the firmware file: Browse and click Upgrade

*** **Note** ***: Please DO NOT power off the system during the firmware upgrade process. You will be notified once the upgrade process is complete

Note: During the upgrading process, please do not unplug the power or the network cable from the NVR, for that will damage the NVR and raise the reparation issue. Besides, after upgrading the firmware, you will not be able to downgrade to the previous version. Please contact your dealer or installer for the firmware upgrade operation.

5.5.3.4 Reboot cameras

You could re start the camera via NVR. Please select the desired camera from the drop-down menu and press the “Restart” button for rebooting the camera.

Restart Camera

Select a camera below to perform a restart

5.5.3.5 Backup and Restore the NVR’s settings

User can backup the entire configuration to the PC. Please press the “Backup” button, then a dialogue box will appear for prompting you the select the location you’d like to save the backup file. Press “Save” button for completing this process.

Backup NVR's Setting

Backup the configuration to a local hard disk

User might restore his previous configuration to the NVR via the “Restore NVR’s Setting” function. Please press the “Browse” button to select the backup file, and then press the “Restore” button for completing this process.

Restore NVR's Setting

Restore configuration from a previously saved configuration file

Specify the configuration file: and click

*** **Note** ***: Please DO NOT power off the system during the restore process. You will be notified once the process completed.

5.5.4 Disk Status

“Disk Status” gives you a more detailed information of the hard drive that is currently installed in the NVR.



NVR4 Network Video Recorder

[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)

System Time: February 24, 2010 21:11:50

User: [admin](#)

NVR Setup

- ☐ System Configuration
- ☐ Channel Configuration
- ☐ Event Configuration
- ☐ Recording Configuration
- ☐ System Options
 - Device Information
 - System Logs
 - Maintenance
 - Disk Status

Disk Status

Disk ID	Status	Capacity	Remaining Disk Space	Remaining	Online Time	Recording Period	Est. Remaining Time
1	Online	891GB	838GB	93%	Feb 23 2010 19:36:07	Feb 22 2010 14:41:15 - Feb 24 2010 21:11:35	35 day(s) 22 hour(s)

6

Appendix

A. HDD compatibility list

Brand	Model	Capacity
Seagate	Barracuda 7200.7	40G
	Barracuda 7200.9	160G
	ST3320620AS	320G
	Barracuda 7200.10	500G
	ST3750330AS	750G
	ST3750330SV	750G
	Barracuda 7200.10	750G
	Barracuda 7200.11	750G
	Barracuda 7200.11	1500G
	ST31500341AS	1500G
Toshiba	MK1237GSX	120G
WD	WD800	80G
	WD1200	120G
	WD1600AAJS	160G
	WD2500	250G
	WD2500JS	250G
	WD5000	500G
Maxtor	DiamondMax10	120G
	DiamondMax Plus 9	200G
	DiamondMax11	500G
HITACHI	HDT722516DLA380	164G
	Deskstar 7K160	160G
	Deskstar T7K250	250G
	Deskstar 7K1000	1000G
Samsung	SP0812C	80G
	SP2504C	250G
	HD501LJ	500GB
	HD103UJ	1000G