



**8/16-Channel
Network Video Recorder
NVR-810 / NVR-1610**

User's Manual

Version 1.0

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Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio technician for help.

FCC Caution

To assure continued compliance. (example-use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the Following two conditions: (1) This device may not cause harmful interference, and (2) this Device must accept any interference received, including interference that may cause undesired operation.

Federal Communication Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm (8 inches) during normal operation.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

CE Mark Warning

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

WEEE Regulation



To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.



Revision

User's Manual for PLANET 8/16-ch Network Video Recorder

Model: NVR-810 / NVR-1610

Rev: 1.0 (September, 2009)

Part No. EM-NVRx10

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1. Product Description

The Network Video Recorder is designed for use within a surveillance system, and performs recordings and playbacks pictures from network cameras in the system. It is a recording device using a hard disk drive to record camera pictures instead of using video tapes so that pictures recorded by repeated overwriting will not experience deterioration of the recorded picture quality. Up to 8 (for NVR-810) or 16 (for NVR-1610) cameras can be connected via a network and it is possible to record their camera pictures. It is possible to perform the settings or operate the NVR using a web browser installed on a PC connected to a network, or remote controller. Recorded video can be played back from remote site by a PC. Up to 4 PCs (web browsers) can access this unit concurrently and it is possible to perform the settings and operate this unit. The NVR is compatible with most major brand cameras and its ability to automatically search and find the available cameras on the network can greatly reduce the user effort when expanding the system.

1.1 Product Features

- Simultaneous Record and Live Video Streams
- Manual or Schedule Recording of 8/16 IP Cameras simultaneously.
- Supports M-JPEG / MPEG-4 / H.264 compression
- Web-Based and manage utility for Easy Configuration
- Video resolution up to HD (1920 * 1080)
- Support up to 16 NVR, max. 256 channel with the manage software
- Auto power on auto recover and recording
- Supports Real Time Clock (RTC)
- Gigabit Ethernet port
- Two-way Audio function
- Video recycle function makes the video keep recording in 7/24
- E-map interface in web and utility configuration
- Auto discover by management software
- Supports external UPS
- Smart IP camera search
- Export record video file to AVI format
- Compliant with major brands. Axis, Panasonic, Sony, Planet, Canon and more
- Support mobile phone remote view with WinCE 6.1, Android, Symbian S60, iPhone, Blackberry 4.6
- LED indicators to display the status of connected IP camera
- DI/DO/RS-232/RS-485 interfaces supported
- Multiple Languages support

1.2 System Requirements

The following are minimum system requirements for the system to operate Network Video Recorder (NVR):

Operating System

Microsoft® Windows® 2000 Professional, Windows® XP Professional (32 bit) or Windows® Server 2003 (32 bit)

Browser

Microsoft Internet Explorer 6 or above

CPU

Minimum Intel® Core2 Duo E6300 2.8GHz or higher (Core2 Quad is recommended)

RAM

Minimum 1 GB of RAM, 2GB or above is recommended

Network

Minimum 10/100 Ethernet (Gigabit Ethernet is recommended)

Graphics Adapter

Standalone AGP or PCI-Express, 128MB Ram, minimum 1024x768, 16 bit colors. (256MB is recommended, we highly recommend to work above the 1024 x 768 resolution to get the full experience of the software)

- . **Make sure your display DPI setting is set to default at 96DPI**
- . **To set DPI value, right-click on desktop, choose “Settings” tab >> “Advanced” >> “General”**

1.3 Packet Content

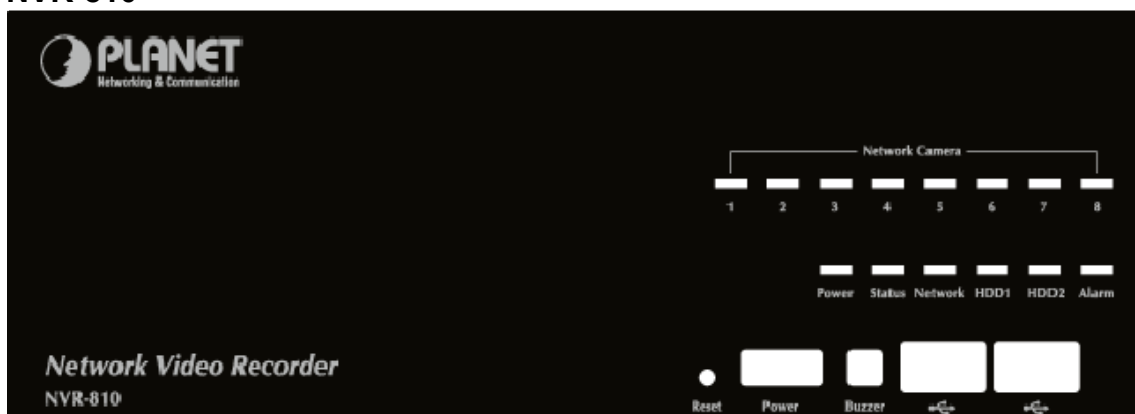
- 1 x NVR
- 1 x Power Cord
- 1 x RJ-45 Cable
- 1 x CD-ROM
- 1 x Quick Installation Guide

1.4 Specification

Product	NVR-810	NVR-1610
General		
OS	Embedded Linux	
Ethernet	1 x RJ-45, 10/100/1000 Base-TX	
USB Interface	2 x USB2.0 for backup device and firmware upgrade	
Storage Device	2 x 3.5" SATA hard disk	
Button	Power, Reset, Buzzer	
LED Display	1 x Power 1 x Status 1 x LAN 2 x HDD 1 x alarm 8 x IP camera	1 x Power 1 x Status 1 x LAN 2 x HDD 1 x alarm 16 x IP camera
Video Input	8 channel IP cameras	16 channel IP cameras
Recording Mode	Manual, Schedule, Event	
E-Map	Web Browser, CMS utility	
Network Service	TCP/IP, DHCP, DNS, HTTP, FTP, NTP, SMTP, UPnP	
Network File Protocol	Microsoft Networks (CIFS/SMB), Internet (HTTP), FTP	
Management	Web-based administration Network Time Protocol Multiple users account E-mail notification System log Firmware upgrade	
User Interface	Web browser CMS utility	
Multiple Language	English, Italian, Japanese, Portuguese, Spanish, Traditional Chinese, Simplified Chinese	
Power	100~240V AC, 1.4A / Max. 50/60Hz	
Consumption	90W	
Operating Temperature	0~45 Degree C	
Storage Temperature	-40~70 Degree C	
Humidity	0~90% (non-condition)	
Weight	2.98 kg	
Dimension (W x D x H)	240 x 218 x 72 mm	

1.5 Front Panel

NVR-810



NVR-1610



1.6 LEDs Definition

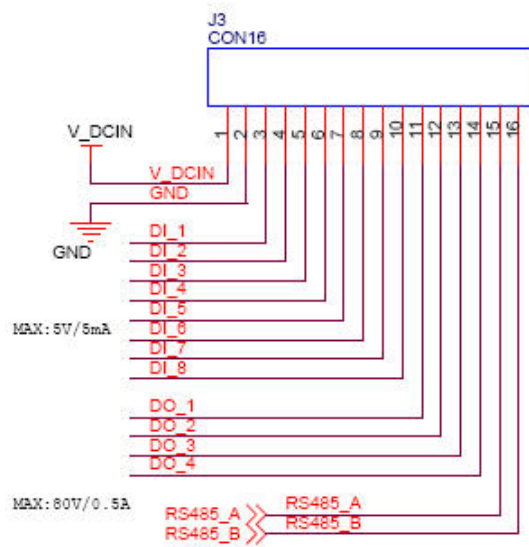
HDD x 2	Green	Solid green when the hard disk is mounted and being accessed
	Red	Solid red for disk fail
	Amber	Solid amber when disk is full Blinking when recycling
Network	Amber	Solid amber for activity on a 1G bps network.
	Green	Solid green for activity on a 10/100 Mbps network.
Status	Amber	Blinking during firmware upgrade
	Green	Shows solid green for normal operation. Blinking green when firmware upgrade is done
	Red	Flashes red for failed firmware upgrade.
	Green	Normal operation

	Red	System off (power adapter remains plugged in)
	Amber	Blinking amber indicating device is initializing
Alarm	Red	Blinking when an alarm occurs
	None	When alarm is reset

Camera LEDs	Green	Solid green, live connected with no event or recording activity
	Amber	Blinking amber, manual or event recording is being performed
	Amber	Solid amber, schedule or continuous recording is being performed
	Red	Recording is set but no video from camera

1.7 I/O Ports





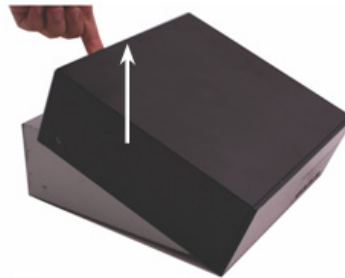
Pin	Signal
1	DC IN
2	GND
3	Alarm Input 1
4	Alarm Input 2
5	Alarm Input 3
6	Alarm Input 4
7	Alarm Input 5
8	Alarm Input 6
9	Alarm Input 7
10	Alarm Input 8
11	Alarm Out 1
12	Alarm Out 2
13	Alarm Out 3
14	Alarm Out 4
15	RS-485+
16	RS-485-

2. Install Hard Disk

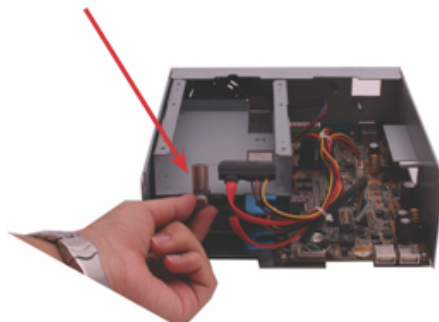
1. Removing the screws on the side.



2. Push the top housing forward, then lift it up.



3. Remove the hard drive cover plate.



- . The NVR supports SATA I or SATA II hard disks.
- . The NVR supports max. 1TB per hard disk and it supports total of 2 hard disks (2TB)

4. Pull out the hard drive tray holder.



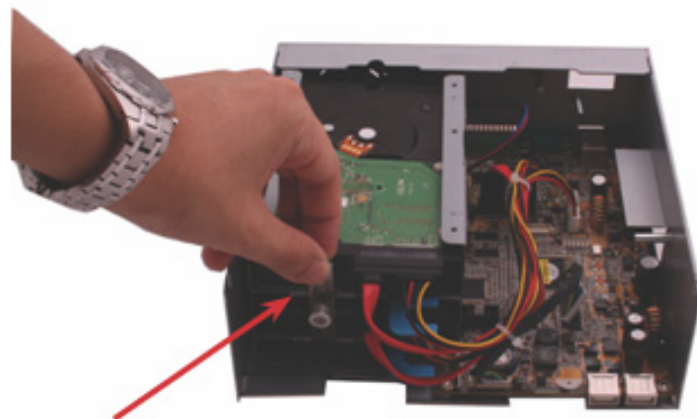
5. Place the hard drive into the tray and push it inward to secure the hard drive.



6. Connect the SATA cable to the hard drive.



7. Put the hard drive tray cover plate back.



8. Place the top housing back and secure it with the bottom housing.



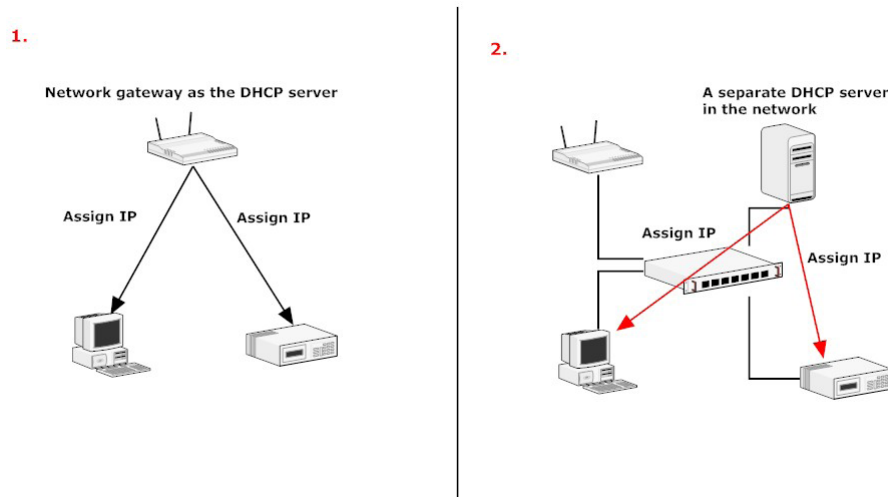
3. Connect to the NVR

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

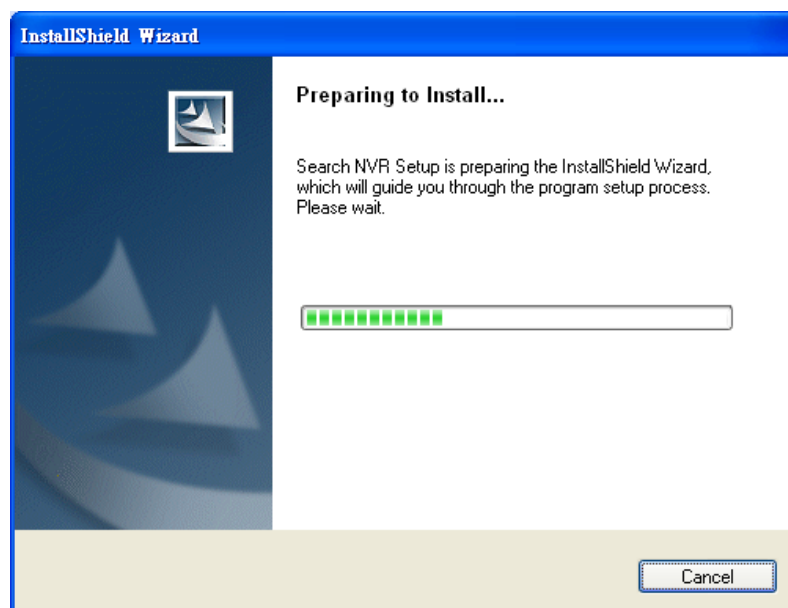
- . The NVR is placed in a network with a DHCP server: Connect to the NVR by using “**Device Search**” Utility.
- . The NVR is placed in a network without DHCP server (or you are connecting to it directly): **Access NVR with its default IP (192.168.0.20).**

3.1 Use Device Search Utility

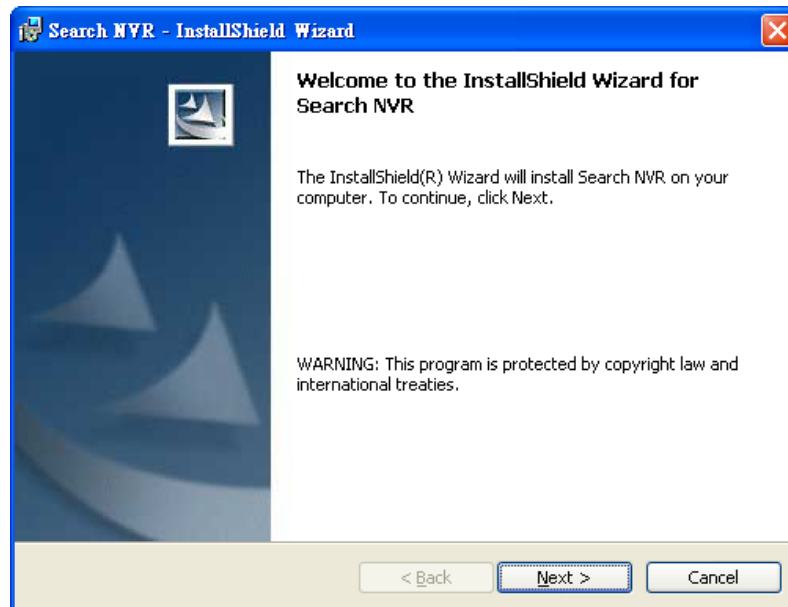
If the NVR is placed in a corporate network or a local area network where a DHCP server is already presented, please install the “Device Search” utility from the bundled CD disk.



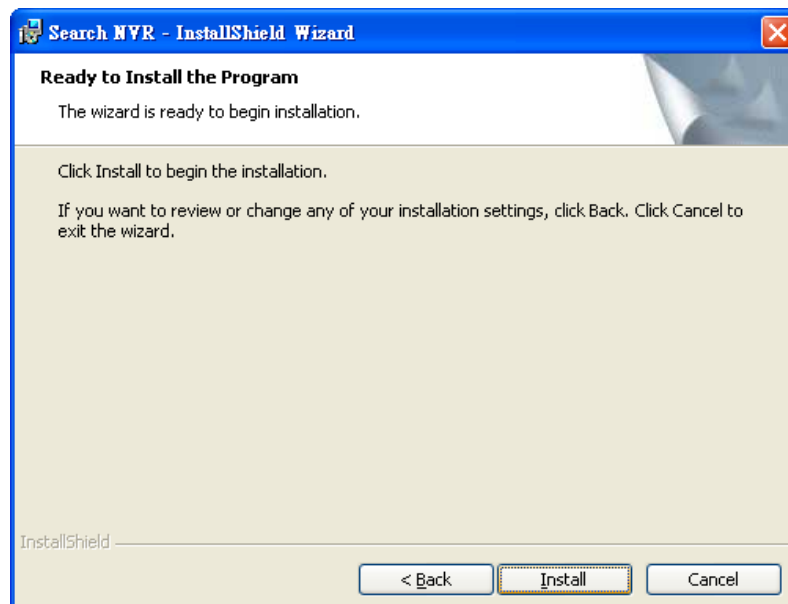
To begin, launch the “Device Search” utility from the CD and proceed with the installation.



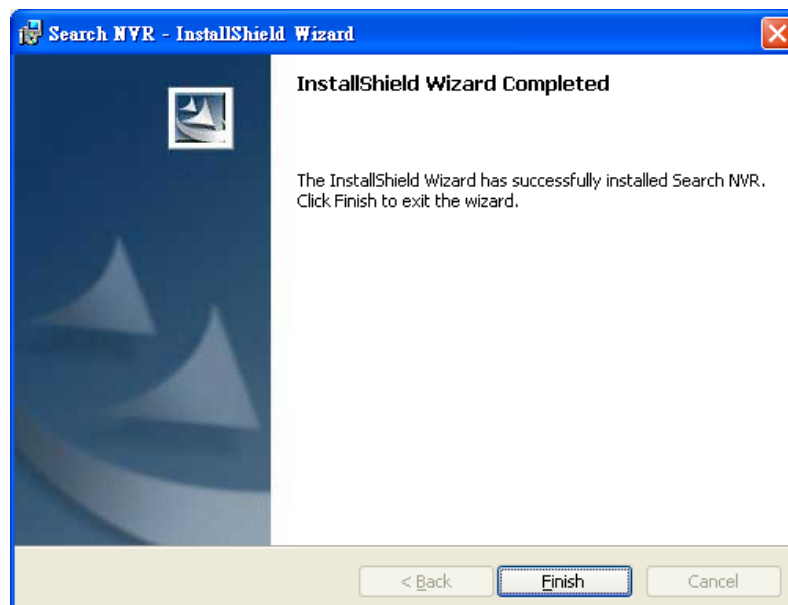
Please click “Next” to continue.



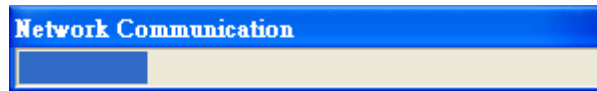
Please click “Install” to start the installation.



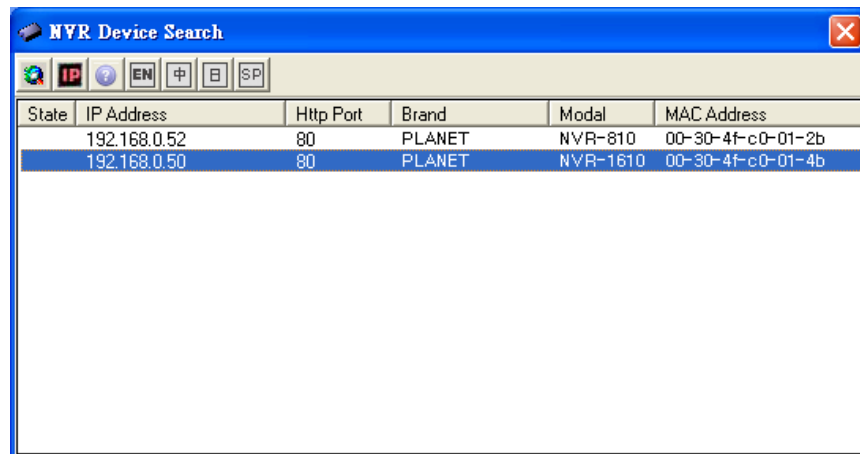
Once the installation is complete, please check the “Finish”.



Please go to Start => Programs => NVR => Search NVR to run the search tool. Then you will see the utility start search the network.



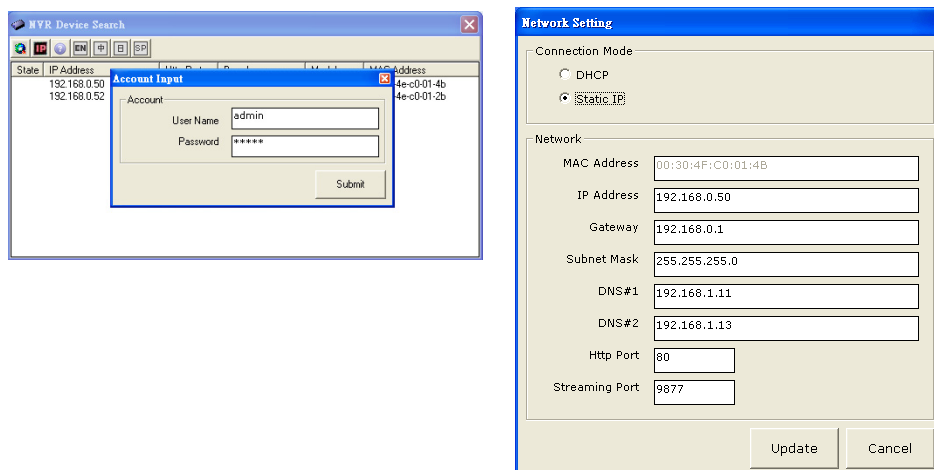
The NVR should be located and its IP address should be displayed: Double-click on it and the program should automatically access the NVR's web administration page from your default browser.



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.



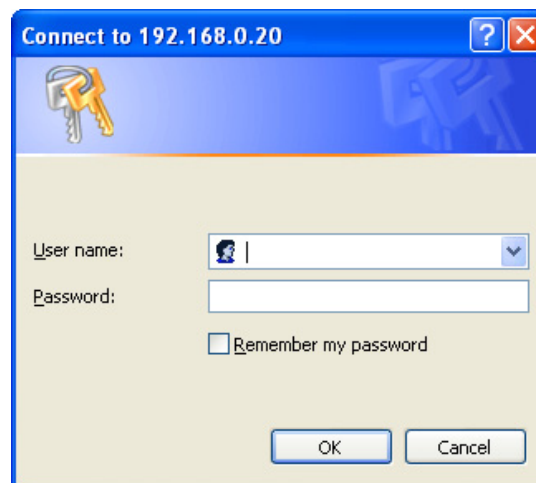
You may click on the button highlighted below to perform search again. Or double-click on any of the search results to access NVR's web administration page.



Perform search again

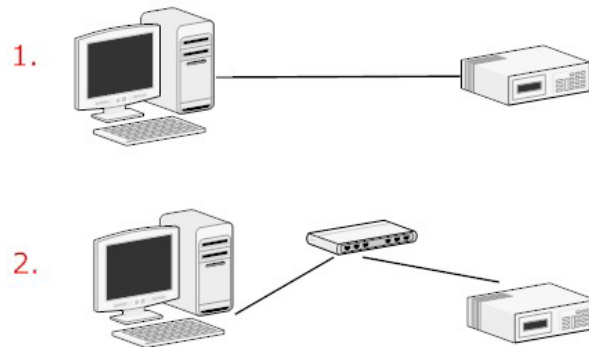
Access NVR's web administration page

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

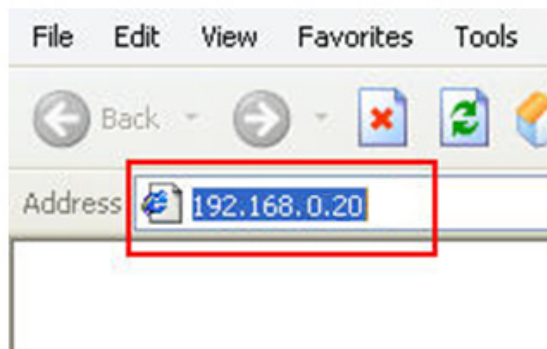


3.2 Access NVR with its default IP address

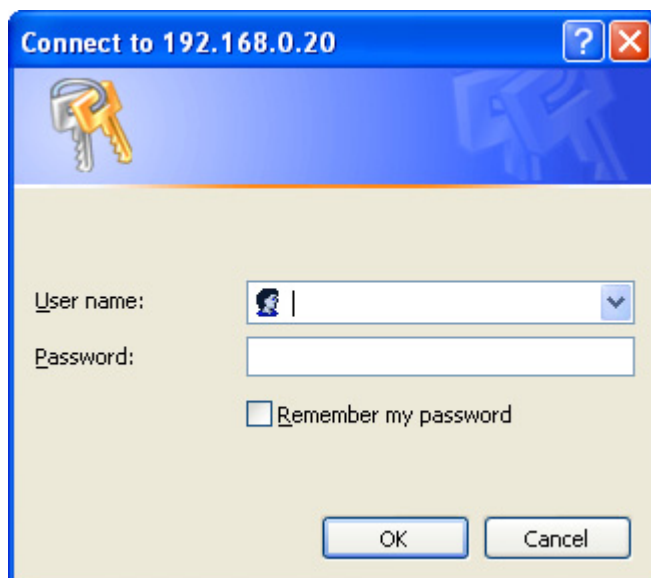
The NVR comes with a pre-configured static IP address “**192.168.0.20**”. However, it is only used when there is no DHCP server presented in the network. Connect the NVR and PC to your switch or hub, or connect the PC directly to the NVR using a crossover CAT5 Ethernet cable.



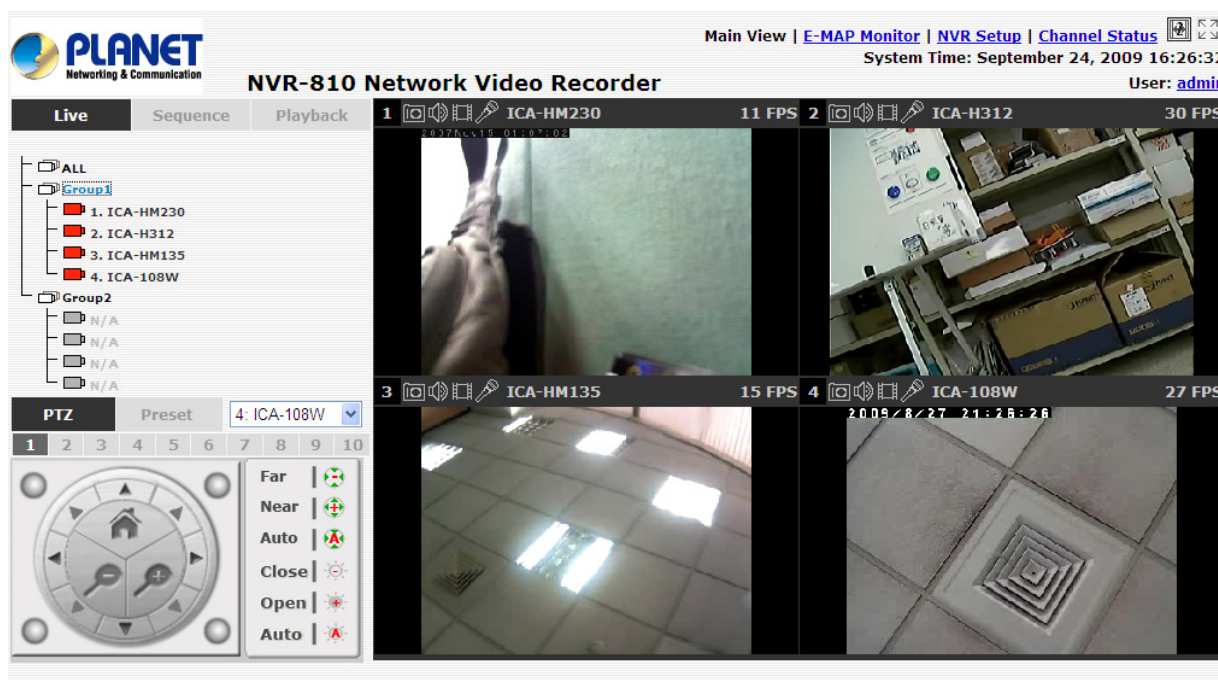
The PC that is connected directly to the NVR (or within the same local area network) should receive an IP from it. Simply access the NVR from your web browser with NVR default IP address.



You should be prompted for the user name and password. Enter its default username “**admin**” and password “**admin**” and then click” OK” to enter the system.



4. Live View



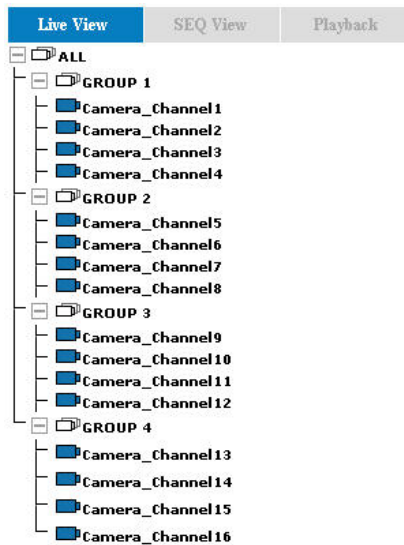
The 8 channel NVR comes with a 8-video split window view with one video displays on a larger window. Select a channel from the drop-down menu to display its video on the larger split window. You can also double-click on any of the smaller one to display its video to the larger window.

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

4.1 Retrieve camera's video stream




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



- Click "All" to display videos in the 8-video mode (NVR-810) or 16-video mode (NVR-1610).
- Click on a "Group" (ex. Group 1) to display videos from cameras under that group in quad view.
- Click on any camera to display video in single-view mode.

4.2 Retrieve camera's status

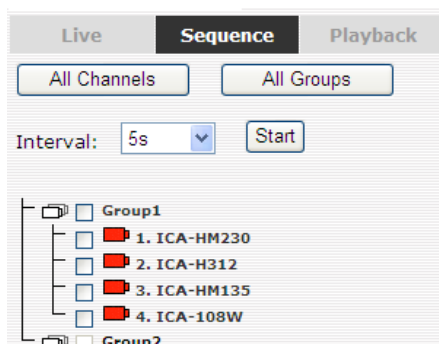
The camera list can show each camera's current status. Each status is represented with different colors and their meanings are explained on the left.

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

4.3 Perform Sequence Viewing

Sequence view is a function that allows you to view multiple video streams from certain cameras in sequence automatically with having to select them one by one.

To perform sequence view, select "Sequence" from the upper-left hand corner. Then select one or more camera(s) or camera group(s) for sequence viewing



Then select dwell interval from the drop-down menu

Interval:

Finally click “Start” to start sequence viewing

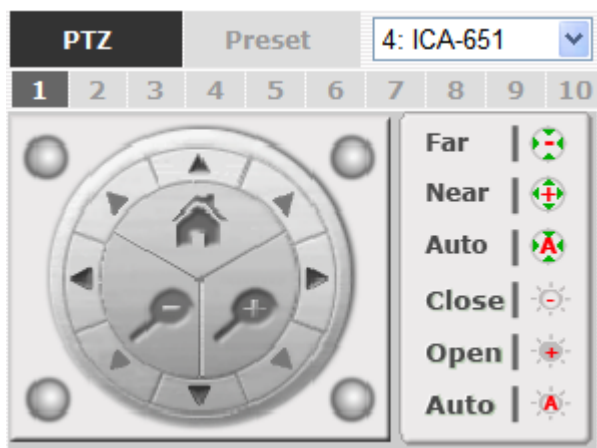
Click “**All Channels**” to quickly select all available channels and start sequence view in single-view mode.

Click “**All Groups**” to quick select all available groups and start sequence view in quad-view mode.

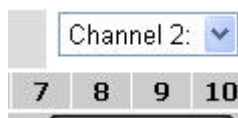
Or simply select the desired channels and press “Start” to start sequence view.

4.4 PTZ Control

PTZ control provides functions to pan, tilt, zoom a 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.



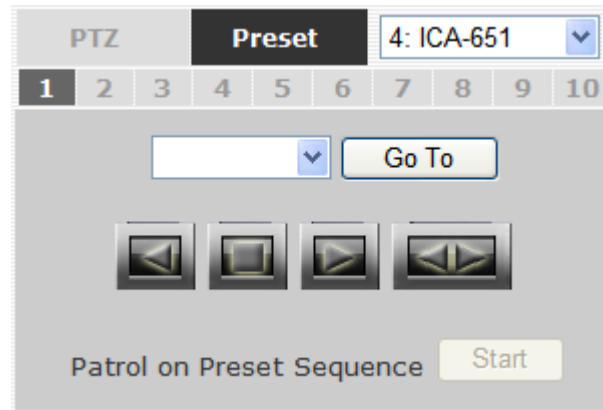
The bar shown below allows you to control the pan/tilt speed.



4.5 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.



Preset Point Viewing

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



Its available PTZ preset points will be listed in the drop- down list shown below:



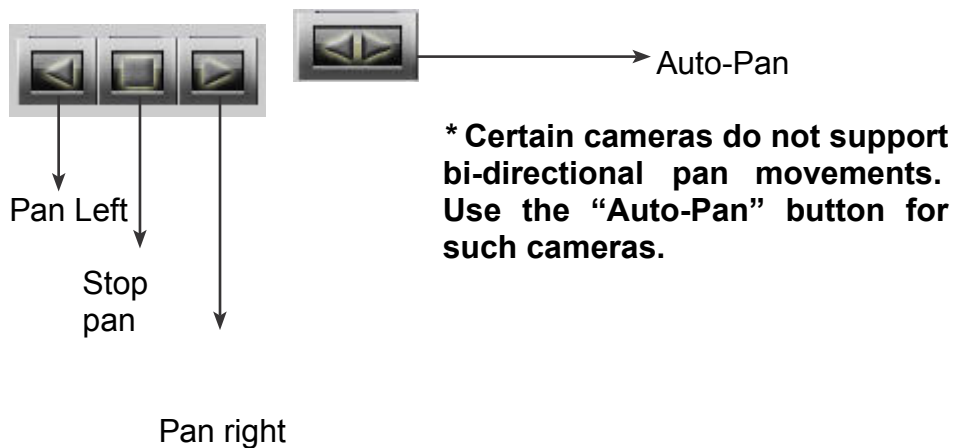
Select a preset position from the drop-down list and click “Go to” to move the live view to that position.

Auto Pan Viewing

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



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



Preset Point Sequence Viewing

This function allows you to view multiple preset points videos of a camera without having to select them one by one. Once you have defined the prefer preset points in "**Camera Configuration**" => "**PTZ Preset Sequence**" under the "**Setup**" menu, click "Start" here and the recorder will begin to display videos from those preset points in sequence automatically until you click "Stop".

4.6 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.




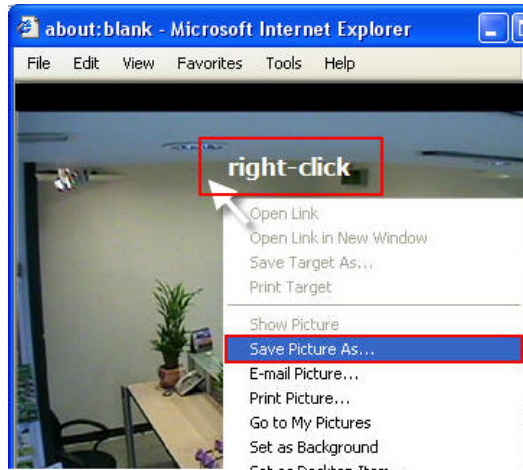
Full screen view of a live video



Display video in its original ratio

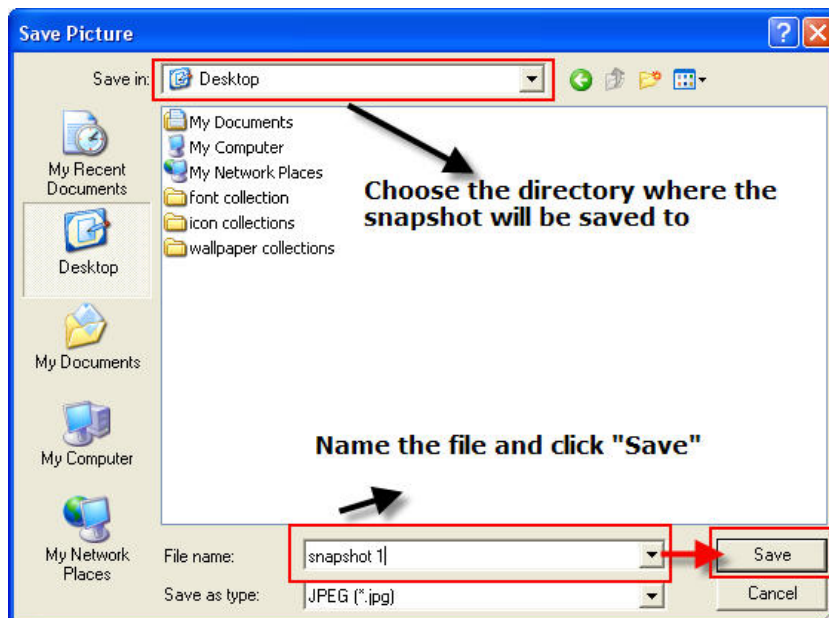
Take a snapshot of a live video

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.




Right-click anywhere on the image and select “Save Image as” from the pull-down menu.


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




Full Screen View of a Live Video

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

Turn On/Off Audio of a Live Video


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

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



You may only turn on audio once channel at a time

Start/Stop Recording of a Live Video

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

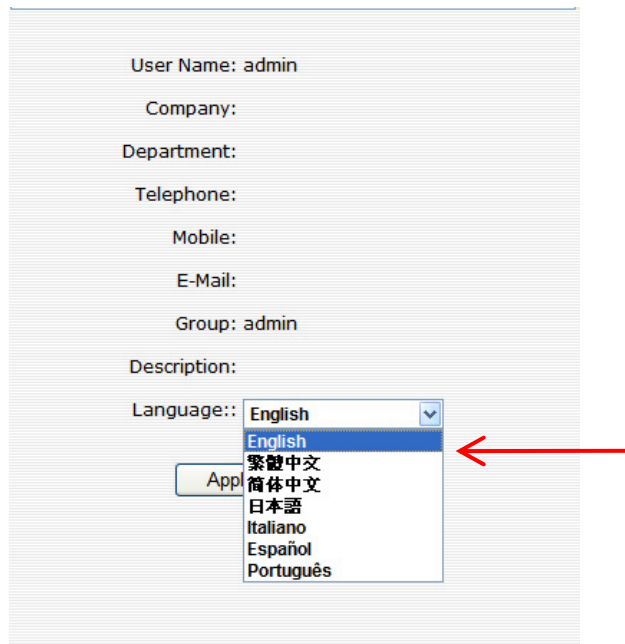
The button will show in different color once the recording is started manually.  Click on it again to stop recording.

Audio post

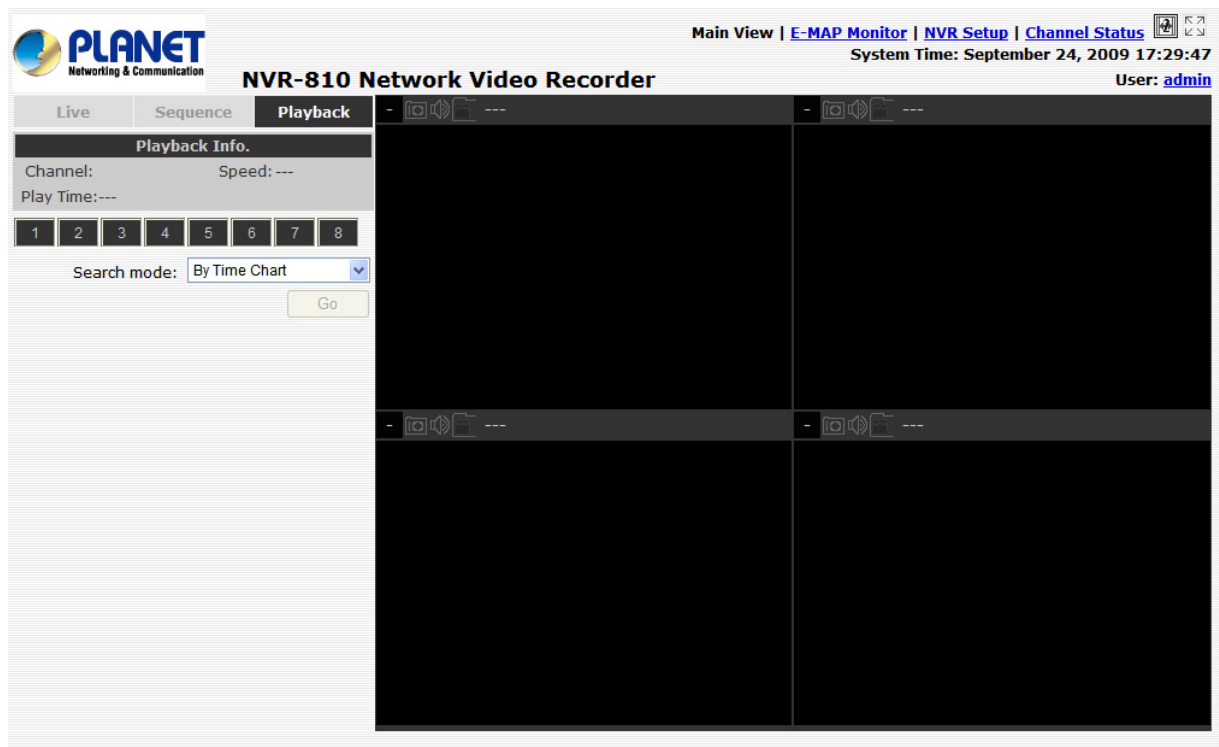
This function allows user to speak from a PC through a micro- phone and the audio can be played at the camera side if it has a speaker connected to it.

4.7 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.



5. 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.

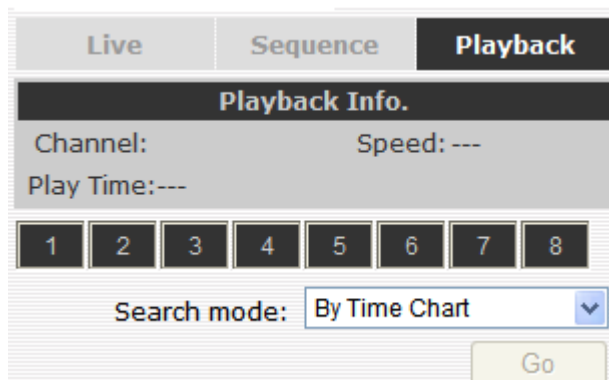
5.1 Methods to Search Playback Videos

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

- Search by time: Specify a time range and search videos recorded within that range.
- Search by event: Find videos that were recorded due to event triggers.
- Play by start time: Enter a specific time a video was recorded to start playing back the video.

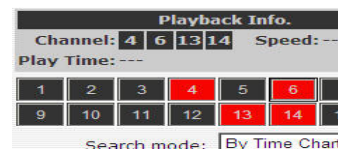
Search by time chart

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



The screenshot shows a web interface with three tabs: 'Live', 'Sequence', and 'Playback'. The 'Playback' tab is active. Below the tabs is a 'Playback Info.' section with fields for 'Channel:', 'Speed: ---', and 'Play Time: ---'. Below these fields is a row of eight buttons labeled 1 through 8. At the bottom, there is a 'Search mode:' label followed by a dropdown menu currently set to 'By Time Chart' and a 'Go' button.

- * Selected channels will be marked in red



This screenshot shows the same 'Playback Info.' form, but now the 'Channel:' field displays '4 6 13 14'. In the row of buttons below, the buttons for 4, 6, 13, and 14 are highlighted in red. The 'Search mode:' dropdown remains set to 'By Time Chart'.

- . Select "Search by time chart" from the "Search Method" drop- down list and click "Go" to start the search:



This is a close-up of the 'Search mode:' dropdown menu. The text 'By Time Chart' is visible in the dropdown list, and the 'Go' button is located to the right of the dropdown.

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

Date:

CH1	Ch2	CH3	CH4	
				1
				2
				3
				4
				5
				6
				7
				8
				9
				10
				11
				12
				13
				14
				15
				16
				17
				18
				19
				20
				21
				22
				23
				24
				25
				26
				27
				28
				29
				30
				31

- Click on any blue cell box should direct you to the hour/channel table if there were multiple videos recorded during that date:

CH1	Ch2	CH3	CH4	
				1
				2
				3
				4
				5
				6
				7
				8
				9
				10
				11
				12
				13
				14
				15
				16
				17
				18
				19
				20
				21
				22
				23
				24

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

* Move the mouse cursor on a particular cell box without clicking gives you a preview of the play- back video n a small thumbnail.

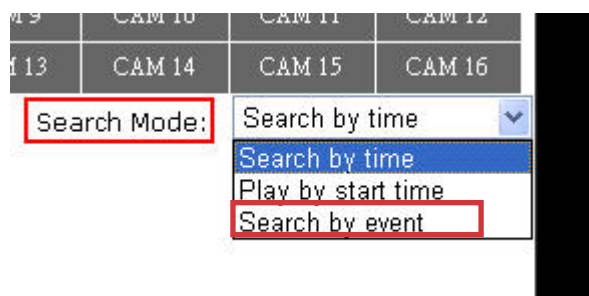
- Click on the cell box again will start playing back the videos if you have reached the end of search results:



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

Search by event

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



Selected channels will be marked in red.

LIVE VIEW	SEQ VIEW	PLAYBACK	
1. 21	2. 21-MPEG	3. 20	4. 20-MPEG
5. 23	6. 23-MPEG	7. 24	8. 24-MPEG
9. Camera	10. Camera	11. 27	12. 27-H26
13. Camera	14. 26-MPE	15. 28 Axi	16. 28 Axi

- Select “Search by event” from the “Search Method” drop-down list and click “Go” to start the search.
- Results will then be listed like what is shown below (displays the oldest record top down). Click on a particular result to start the playback.



* You can click “Next Search” to display the next 15 results.

- You may also specify a new start time to search and display results from then on. You can restrict the number of results to be displayed at once (max. 30) and perform the search again.

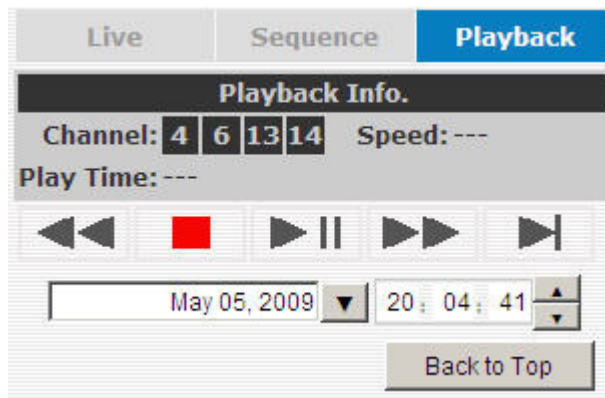


Play by specific time

If you know when a recording was taken place, you may choose the “Play by start time” from the “Search Method” drop-down list.



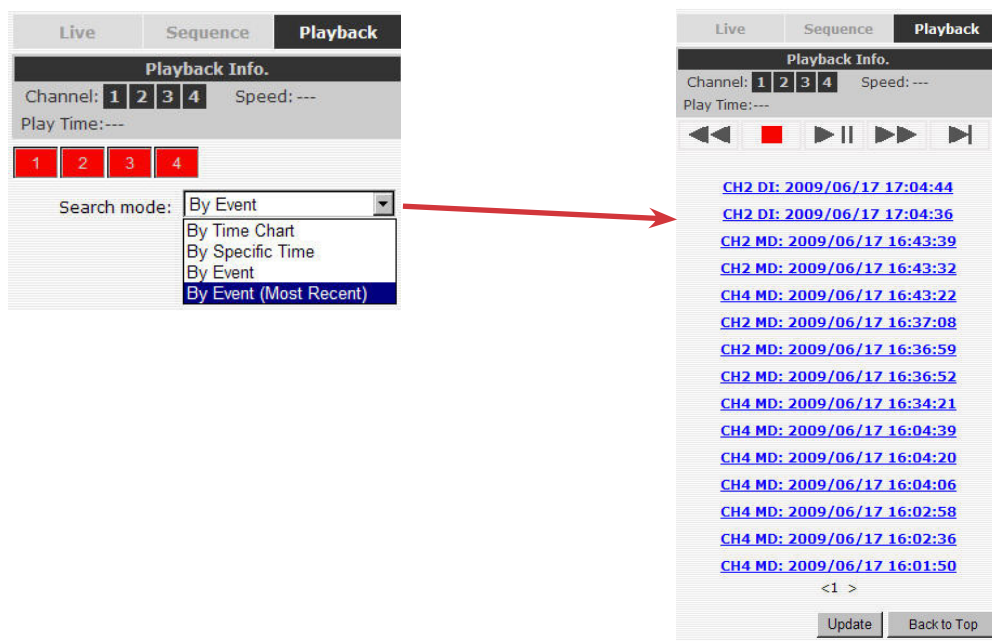
Then you will be prompted to enter a specific time and date for the recorded video.



Use the  button to select month, date, and year.

Search by event (Most Recent)

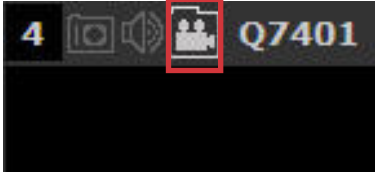
This function quickly displays the most recent event recordings from the selected channels, displaying the most recent result top down. You may click “Update” to update the list to display the most recent result.



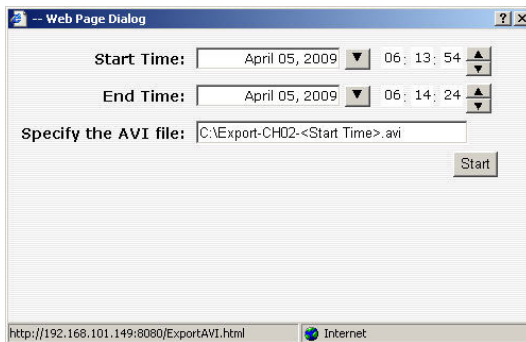
5.2 Export Playback Videos to AVI Files


User can export the recorded playback videos stored on NVR-1610 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.



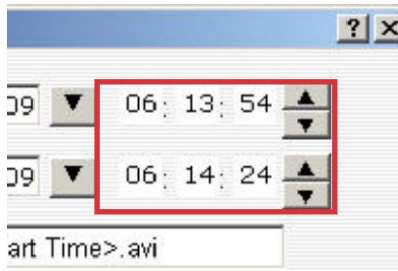
A new dialog will pop up and allows you to specify the time frame (or length) of the video you wish to export.



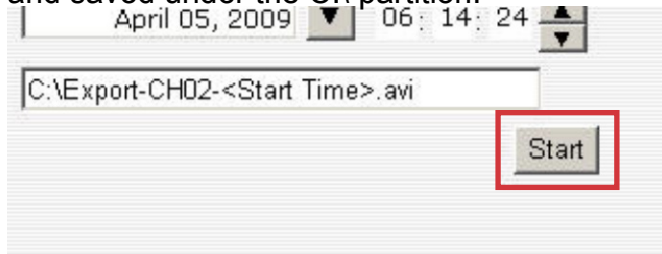
Click the  button to pull down the calendar to help you specify the month, date and the year



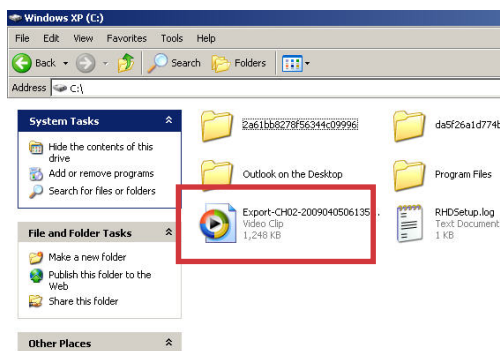
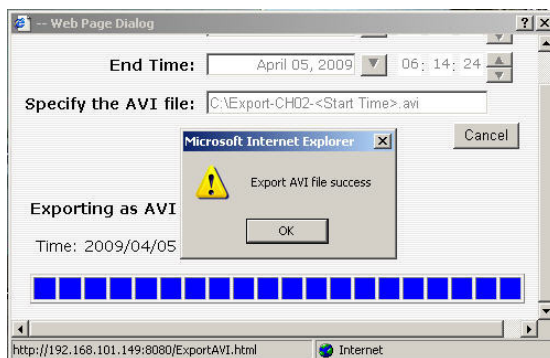
Specify the starting and ending hours of the video by entering numbers in the text boxes.



Hit the “Start” button to start exporting. The file will be automatically named and saved under the C:\ partition.



You will be notified once the process is completed successfully



The exported AVI file will be saved under the C partition.


* ffdshow is required in order to play the exported AVI file with Windows Media Player. You can get it at “<http://sourceforge.net/projects/ffd-show-tryout/>” to download the “ffdshow_beta6_rev2527_20081219.exe”.

6. System Setup

6.1 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 recorder 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.

6.1.1 Network Settings



[Main View](#) | [E-MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
System Time: September 24, 2009 18:08:59
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

Network Setting

Connection Type: Static IP

IP Address:

Subnet Mask:

Gateway:

DNS 1:

DNS 2:

HTTP Port:

Streaming Port:

UPnP Port Forwarding: ☐ External Port:

Optional Setting

Device Name:

DHCP Server

DHCP Server: ☒ ON ☐ OFF

DHCP Server Status: OFF

Max. DHCP Client: (Max. 30 clients)


Current DHCP Clients

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

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 configurations so that the recorder can be administered through the local area network and cameras can be connected from it.

By default, the recorder is set to obtain IP address from DHCP server, it should be sufficient in most network environments, and most likely you should not need to alter anything in this page. To locate the recorder, simply use the IP Utility with steps described in page 13.

If you wish to set the recorder to use a static IP address in your local area network,

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



The recorder 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.



Change the recorder's IP address would require the recorder to restart. Restart the device under "system Options" >> "Maintenance" for the settings to take effect.

6.1.2 Time and Date

The screenshot displays the web interface of an NVR-810 Network Video Recorder. The top navigation bar includes links for [Main View](#), [E-MAP Monitor](#), [NVR Setup](#), and [Channel Status](#). The system time is shown as September 24, 2009 18:09:59, and the user is [admin](#). On the left, the **NVR Setup** menu is expanded, showing options like System Configuration, Network Setup, Time and Date, Users Account, Group Privilege, Disk Setup, Channel Configuration, Event Configuration, Recording Configuration, and System Options. The **Time and Date Setting** page is active, featuring a Time Zone dropdown set to GMT+08 (Beijing, Hong Kong, Shanghai, Taipei) and a Summer time checkbox. Two methods are available: Manual (with Year, Month, date, Hour, Minute, and Second dropdowns) and Sync with NTP Server (with NTP Server and Update Interval dropdowns). The current selection is Sync with NTP Server, with the NTP Server set to ntp.ucsd.edu and the Update Interval set to 24 hr. A status message indicates the last sync on September 24, 2009 16:18:56 failed. An Apply/Sync button is at the bottom.

Set the time and date by selecting the time zone according to your location. It is imperative that you set the recorder'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 recorder time.

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

6.1.3 User Account

The recorder 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 recorder comes with a built-in “admin” account with password “admin”. It’s highly recommended to change the password upon your initial login.

PLANET
Networking & Communication

NVR-810 Network Video Recorder

[Main View](#) | [E-MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
System Time: September 24, 2009 18:10:39
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

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:

Language: English

Description: (Optional)

[Add](#)

To change the password of the “admin” account:

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

User Account Information

Username	Group	Description
admin	admin	This is the admin account

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

User Account Information

Username: admin

Password: *****

Confirm Password:

Company: (optional)

Department: (optional)

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

6.1.4 Group Privilege

Group Privilege is where you can create multiple customized access policies for situations if you need the recorder 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.

The screenshot shows the 'NVR-810 Network Video Recorder' web interface. On the left is a sidebar with a tree view under 'NVR Setup' containing: System Configuration (Network Setup, Time and Date, Users Account, Group Privilege, Disk Setup), Channel Configuration, Event Configuration, Recording Configuration, and System Options. The 'Group Privilege Setting' page is active. It features a 'Group' dropdown menu (currently showing 'Group 1') and a 'Change Group Name' button. Below is an 'Account Type' dropdown. The 'Live:' section has checkboxes for CH1 through CH8. The 'Playback:' section also has checkboxes for CH1 through CH8. The 'Allow use of PTZ:' section has checkboxes for CH1 through CH8. A 'System Configuration:' section contains checkboxes for System Configuration, Channel Configuration, Event Configuration, Recording Configuration, and System Options. At the bottom are 'Apply' and 'Cancel' buttons. The top right of the interface shows links for 'Main View', 'E-MAP Monitor', 'NVR Setup', and 'Channel Status', along with the system time 'September 24, 2009 18:11:06' and the user 'admin'.

The recorder 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, select a group from the “Group” drop-down.

This close-up shows the 'Group' dropdown menu with 'Group 1' selected and a 'Change Group Name' button to its right. Below it, the 'Privilege Type' dropdown menu is shown with 'Operator' selected.

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.

This close-up shows the 'Change Group Name' button, which is highlighted with a red box. To its right is an empty text input field for entering a new group name. The 'Group' dropdown shows 'Group 1' and the 'Privilege Type' dropdown shows 'Operator'.

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

This close-up shows the 'Privilege Type' dropdown menu with 'Operator' selected, highlighted by a red box. The 'Group' dropdown above it shows 'Group 1' and a 'Change' button is visible to its right.

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.

Group Privilege Setting

Group: Group1: supervisor Change Group Name

Account Type: Supervisor

Live:

<input type="checkbox"/> CH1	<input checked="" type="checkbox"/> CH2	<input checked="" type="checkbox"/> CH3	<input checked="" type="checkbox"/> CH4	<input checked="" type="checkbox"/> CH5	<input checked="" type="checkbox"/> CH6	<input checked="" type="checkbox"/> CH7	<input checked="" type="checkbox"/> CH8
<input checked="" type="checkbox"/> CH9	<input checked="" type="checkbox"/> CH10	<input checked="" type="checkbox"/> CH11	<input checked="" type="checkbox"/> CH12	<input checked="" type="checkbox"/> CH13	<input checked="" type="checkbox"/> CH14	<input checked="" type="checkbox"/> CH15	<input type="checkbox"/> CH16

Playback:

<input type="checkbox"/> CH1	<input checked="" type="checkbox"/> CH2	<input checked="" type="checkbox"/> CH3	<input checked="" type="checkbox"/> CH4	<input checked="" type="checkbox"/> CH5	<input checked="" type="checkbox"/> CH6	<input checked="" type="checkbox"/> CH7	<input checked="" type="checkbox"/> CH8
<input checked="" type="checkbox"/> CH9	<input checked="" type="checkbox"/> CH10	<input checked="" type="checkbox"/> CH11	<input checked="" type="checkbox"/> CH12	<input checked="" type="checkbox"/> CH13	<input checked="" type="checkbox"/> CH14	<input checked="" type="checkbox"/> CH15	<input type="checkbox"/> CH16

Allow use of PTZ:

<input type="checkbox"/> CH1	<input checked="" type="checkbox"/> CH2	<input checked="" type="checkbox"/> CH3	<input checked="" type="checkbox"/> CH4	<input checked="" type="checkbox"/> CH5	<input checked="" type="checkbox"/> CH6	<input checked="" type="checkbox"/> CH7	<input checked="" type="checkbox"/> CH8
<input checked="" type="checkbox"/> CH9	<input checked="" type="checkbox"/> CH10	<input checked="" type="checkbox"/> CH11	<input checked="" type="checkbox"/> CH12	<input checked="" type="checkbox"/> CH13	<input checked="" type="checkbox"/> CH14	<input checked="" type="checkbox"/> CH15	<input type="checkbox"/> CH16

System Configuration:

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

6.1.5 Disk Setup

Once you install a hard disk to the recorder, you would 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.

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	445GB	Online	Format
2	Internal	142GB	Online	Format

Enable RAID 1

You can also connect external USB thumb drive to the recorder for firmware upgrade.



For instructions to install a hard disk to the recorder, refer to page 10.




To obtain detail information about the disk, go to “System Options” >> “Disk Status”.

6.2 Channel Configurations

6.2.1 Add a Camera

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



[Main View](#) | [E-MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
System Time: September 24, 2009 18:37:07
User: [admin](#)

NVR Setup

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

NVR-810 Network Video Recorder

Channel Setting

Channel	Channel Name	Group	IP Address	Format	Resolution
1	ICA-HM230	Group1	192.168.0.23	MPEG4	qvga
2	ICA-H312	Group1	192.168.0.119	H.264	cif
3	ICA-HM135	Group1	192.168.0.113	MPEG4	qvga
4	ICA-651	Group1	192.168.0.65	MPEG4	CIF

[Remove](#) [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

Edit Channel Setting:

Channel ID: 1
Channel Name:
Group:
IP Address:
User Name:
Password:
HTTP Port:

Once you change the camera's IP, User Name, Password or HTTP Port, click "Detect" to retrieve the camera's settings

Additional Camera Information

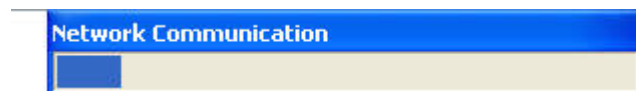
Video Port:
Format:
Resolution:
Frame Rate:
Bitrate Mode:
Quality:
Record: ☒ Continuous

Automatic Search:

1. Click the "Search" button to perform the camera search. You should be prompted to install Active Control component in order for the search to function properly. Go ahead and click "Install"



2. After that, the search should begin and its status should be displayed.



3. Found cameras should be listed and simply select a camera from the list and press “Configure”.

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
PLANET	ICA-510	192.168.0.49	80	
PLANET	ICA-601	192.168.0.61	80	
PLANET	ICA-230	192.168.0.230	80	
PLANET	ICA-H651	192.168.0.231	80	

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

4. It's corresponding information should be displayed in the “Camera Information” section. Enter its username and password and select the channel ID and name the camera.

Add New Channel:

Channel ID:

Channel Name:

Group:

IP Address:

User Name:

Password:

HTTP Port:

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

5. Click on “Detect” to establish connection between the recorder and the camera. If connection establishes successfully, camera's detailed information should be polled and displayed as below.

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

Additional Camera Information

Video Port:

Format:

Resolution:

Quality:

Record: ☒ Continuous

6. Adjust its video format, frame rate, resolution or bitrate...etc if you wish. You can also click on the “Preview” to preview the live video of the camera.

Click “Add” to finish adding the camera.



If cameras are marked with “*” in the search result, it means those cameras are already configured and connected to NVR.

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
PLANET	ICA-510	192.168.0.49	80	*
PLANET	ICA-601	192.168.0.61	80	
PLANET	ICA-230	192.168.0.230	80	
PLANET	ICA-H651	192.168.0.231	80	

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

Add a camera manually

Simply follow the instruction described above but instead of using the “Search” function, enter the camera’s IP address and credential in the “Camera Information” manually, then follow step 5 and 6 described above.

Add New Channel:

2. Channel ID:

Channel Name:

Group:

IP Address: **1.**

User Name:

Password:

HTTP Port:

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

Enter manually

6.2.2 OSD Settings

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 videos.

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



OSD Settings

Camera:

☐ Do Not Display OSD

☒ Display OSD

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



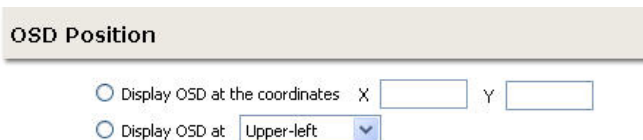
Text Display Options

☐ Show Time

☐ Show FPS

☐ Show Text (Max. 32 char.)

3. 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

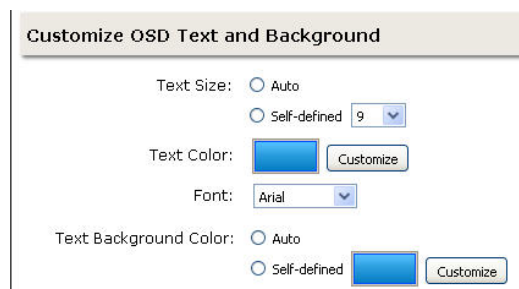
☐ Display OSD at the coordinates X Y

☐ Display OSD at:

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



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



Customize OSD Text and Background

Text Size: ☐ Auto ☐ Self-defined

Text Color:

Font:

Text Background Color: ☐ Auto ☐ Self-defined

6.2.3 PTZ Preset Settings

The recorder 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.

Setup

- System Configuration
- Channel Configuration
 - Channel Setting
 - OSD Setting
 - PTZ Setting
 - PTZ Preset
 - PTZ Sequence
 - E-MAP Monitor
- Event Configuration
- Recording Configuration
- System Options

PTZ Preset


Channel: 4. Q7401

Set as Home	Position No	Position Name	Description
-------------	-------------	---------------	-------------

Add Edit Remove Sync with Camera

Position No:

Position Name:

 PTZ Speed: Zoom: Focus: Description:

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

PTZ Preset

Channel: 4. Q7401

Set as Home	Position No	Position Name
-------------	-------------	---------------

Add Edit Remove

2. 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:

Position Name:

3. Use the PTZ control provided in the configuration page to set the preset point and set the position as the “HOME” position if you wish.

4. Click “Apply” to save the configuration.

6.2.4 PTZ Preset Sequence

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

The screenshot displays the web interface of an NVR-810 Network Video Recorder. The top navigation bar includes links for [Main View](#), [E-MAP Monitor](#), [NVR Setup](#), and [Channel Status](#). The system time is shown as September 24, 2009 18:41:40, and the user is identified as [admin](#). On the left, the **NVR Setup** menu is expanded, showing options like System Configuration, Channel Configuration, Event Configuration, Recording Configuration, and System Options. The **Channel Configuration** sub-menu is further expanded, highlighting **PTZ Sequence**. The main content area is titled **PTZ Sequence** and features a **Channel:** dropdown menu. Below this, there are two large empty rectangular boxes labeled **Preset Positions:** and **Preset Sequence:**. At the bottom, a **Dwell Time:** dropdown menu is visible, along with **Apply** and **Cancel** buttons.

To configure preset sequence for a camera,” select a camera from the “Camera” drop-down menu.

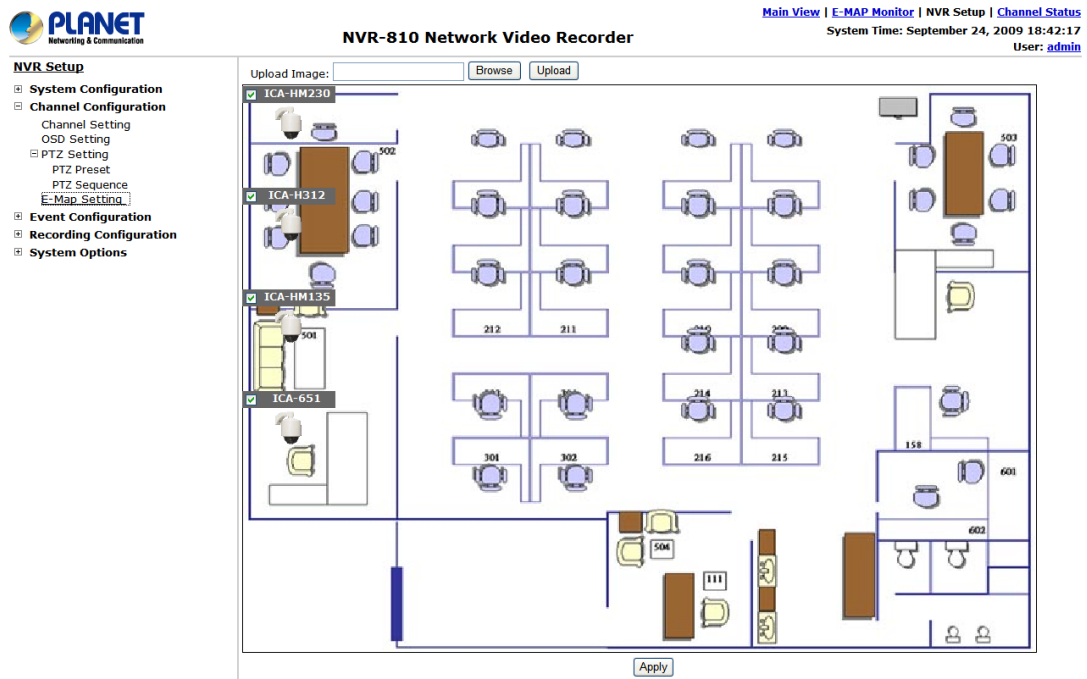
The available preset points should be listed in “Camera Presets” section.

Pick the ones you like for sequence viewing and press the “->” button to move them to the “Adjust Position” section, then use the up and down buttons to adjust their sequences.

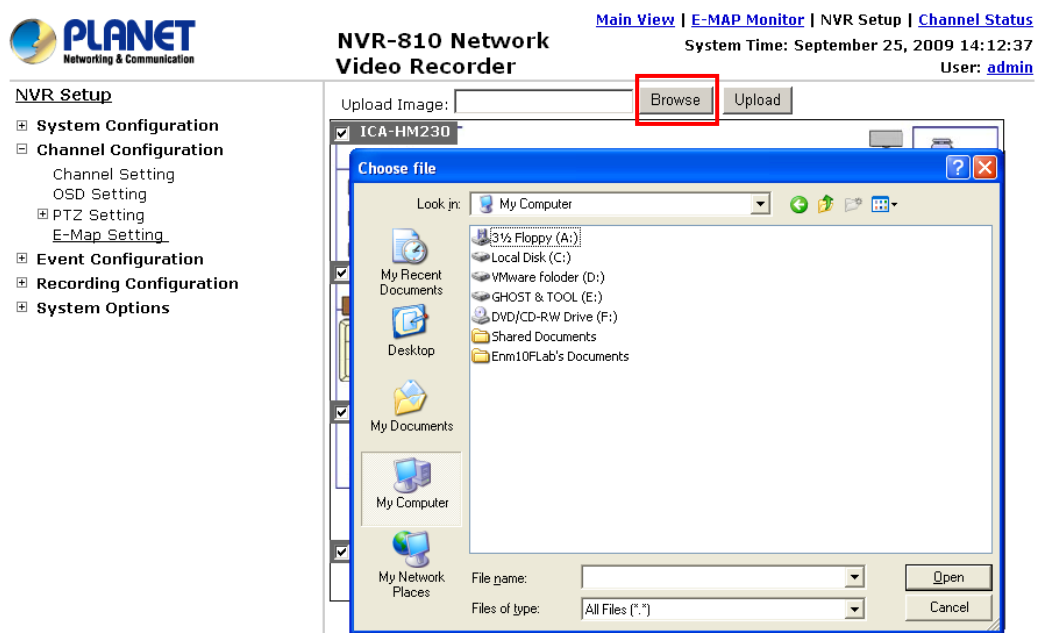
Finally, select a dwell time from the drop-down menu and click “Apply” to save the configuration.

6.2.5 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.



To replace the map, click “Browse” button to locate the new map image file from the local PC and then click “Upload”.



Then click and drag the camera icon to move the camera to define its location.

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NVR-810 Network Video Recorder

[Main View](#) | [E-MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
System Time: September 25, 2009 14:14:41
User: [admin](#)

NVR Setup

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

Upload Image:

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

[Main View](#) | [E-MAP Monitor](#) | [Setup](#) | [Channel Status](#)
System Time: May 06, 2009 11:27:58
User: [admin](#)

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.

PLANET
Networking & Communication

NVR-810 Network Video Recorder

[Main View](#) | [E-MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
System Time: September 25, 2009 14:31:40
User: [admin](#)

6.3 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.

6.3.1 General Settings

The general settings section can help you quickly configure when an event is triggered, how often events are triggered and the corresponding actions when events are triggered.

The screenshot displays the web interface of an NVR-810 Network Video Recorder. The top navigation bar includes links for 'Main View', 'E-MAP Monitor', 'NVR Setup', and 'Channel Status'. The system time is shown as 'September 24, 2009 18:43:30' and the user is 'admin'. On the left, a sidebar menu under 'NVR Setup' lists 'System Configuration', 'Channel Configuration', 'Event Configuration' (selected), 'Event Servers', 'Event Trigger', 'Recording Configuration', and 'System Options'. The 'General Setting' page is active, showing three main sections: 'Event Trigger Duration', 'Event Trigger Interval', and 'Trigger Actions'. In 'Event Trigger Duration', 'Always' is selected. In 'Event Trigger Interval', the interval is set to 5 seconds. In 'Trigger Actions', the 'Subject' field is populated with a template string. The 'Send Message' option is checked, with a text area for the message content. The 'Send Image' option is also checked, with a dropdown for the number of frames (set to 1) and a field for the file name. 'Apply' and 'Cancel' buttons are at the bottom right.

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Networking & Communication

[Main View](#) | [E-MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
System Time: September 24, 2009 18:43:30 User: [admin](#)

NVR-810 Network Video Recorder

NVR Setup

- System Configuration
- Channel Configuration
- Event Configuration**
 - General Setting**
 - DJ/DO Setting
 - Event Servers
 - Event Trigger
- Recording Configuration
- System Options

General Setting [Help](#)

Event Trigger Duration

☒ Always

☐ Only during: ☐ Sun ☐ Mon ☐ Tues ☐ Wed ☐ Thur ☐ Fri ☐ Sat

Start Time: 00 : 00 End Time: 00 : 00

Event Trigger Interval

Interval: 5 Seconds. (5~86400)

Trigger Actions

Subject: <TIME> : <CH> <TRIGGER> from <IP>

☐ Send Message

Text:

FTP File Name:
<IP>_<CH>_<TRIGGER>_<TIME>

☐ Send Image

1 Frames,

File Name:

[Apply](#) [Cancel](#)

Start the event configuration by defining the general settings:

Define when an event will be triggered.

- Choose “Always” or “Only during...” under “Event Trigger Duration”.
- For the “Only during...” option, choose the days by using the check- box and then define the time range in those days in the “Start Time” and “End Time” fields that you would like the event trigger function to be enabled.

How often an event is triggered

- Set a time interval under “Event Trigger Interval” to define how often events are triggered.

Trigger action

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

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

6.3.2 I/O Settings

This function allows users to manage camera's digital input and output ports right from the recorder. You can setup the recorder to receive triggers from a particular camera's input port and trigger a device, such as an alarm that is connected to the recorder or camera's output port. Cameras that do not have built-in digital input/output port can also be configured to pair with the recorder's DI/DO ports.

PLANET
Networking & Communication

NVR-810 Network Video Recorder

Main View | E-MAP Monitor | NVR Setup | Channel Status
System Time: September 24, 2009 18:44:17
User: admin

NVR Setup

- System Configuration
- Channel Configuration
- Event Configuration
 - General Setting
 - DI/DO Setting**
 - Event Servers
 - Event Trigger
- Recording Configuration
- System Options

DI/DO Setting

	Trigger Event When				Trigger DO			
	IP Camera		NVR-810		NVR-810			
	Port	Condition	Port	Condition	Port	State	Duration	
NVR-810	-----	-----	-----	-----	<input type="text"/>	<input type="text"/>	0 Seconds (0:unlimited or 5~86400 sec)	
CH 1	-----	-----	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	0 Seconds (0:unlimited or 5~86400 sec)	
CH 2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	0 Seconds (0:unlimited or 5~86400 sec)	
CH 3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	0 Seconds (0:unlimited or 5~86400 sec)	
CH 4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	0 Seconds (0:unlimited or 5~86400 sec)	

Apply Cancel

1. For cameras that come with physical digital input ports, their ports will be listed in the far left drop-down menu.
2. Pick the desired channel for I/O mapping, and then select the camera's input port from the drop-down menu.
3. Select the trigger condition from the "Condition" drop-down menu.
4. Select the recorder's input port if you would also like to use the recorder's input port for event trigger. And then select the trigger condition as well.
5. Next, select the recorder's output port and the trigger action.
6. Finally, define the trigger duration.

The recorder does not control camera's input or output ports in a way to let you pair recorder itself with a camera's input or output port for event receiving or triggering.

The recorder only acts as a medium for pairing up input/output ports between cameras and the recorder.

Only connected cameras will be displayed in the list.

Some cameras only allow one trigger source be configured at a time, e.g.: if the camera has the motion detection function turned on, its digital input will be disabled and vice versa. Under such circumstance, if you set to use camera's digital input port as the event trigger source, you will not be able to select motion detection as the trigger source for this camera under "Event Configurations" >> "Event Trigger" setup page.

6.3.3 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 recorder can send notification with the acceptable format (image/txt) to a destined event server according to the configuration.

Configuring an FTP server

The screenshot shows the NVR-810 Network Video Recorder web interface. The top navigation bar includes links for [Main View](#), [E-MAP Monitor](#), [NVR Setup](#), and [Channel Status](#). The system time is displayed as September 24, 2009 18:45:50, and the user is [admin](#). The left sidebar shows the **NVR Setup** menu with options for **System Configuration**, **Channel Configuration**, **Event Configuration** (which is expanded to show **FTP Servers**), **Recording Configuration**, and **System Options**. The main content area is titled **FTP Servers Setting** and features a table with columns: **Name**, **Network Address**, **Port**, **Passive Mode**, and **Enabled**. Below the table are **Edit** and **Remove** buttons. The **FTP Server** section contains input fields for **Name**, **Network Address** (with a note: *Enter host name or IP address), and **Port** (with the value 21 entered). The **Login Information** section has fields for **User Name** and **Password**. The **Passive Mode** section includes a checkbox for **Use Passive Mode**. The **Test** section has a **Test** button and a note: *Click "Test" to test the connection to the FTP server. An **Add** button is located at the bottom right.

To add an FTP server,

1. Start by giving a name to the server that you are adding to the recorder.
2. Enter the hostname or the IP address of the FTP server.
3. Enter the communication port of the FTP server (usually port 21).

This is a close-up of the **FTP Server** configuration form. It includes a header bar labeled **FTP Server**. Below it are three input fields: **Name:**, **Network Address:** (with a note: * Enter host name or IP address), and **Port:**.

4. Enter the username and password of the FTP server if it's required
5. Check "Use Passive Mode" if it's required or leave it unchecked to use active mode.

Login Information

Username:

Password:

Passive Mode

☐ Use Passive Mode

6. Click "Test" to verify if all information is entered correctly and the connection to the FTP server can be established successfully.
7. Click "Apply" for the settings to take effect.


Test

Test

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

Apply

Cancel

 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.

Name	Network Address	Upload Path	Port	Passive Mode
FTP 1	192.168.101.100	event	21	No

Edit

Remove

Enable

Disable

Configuring an HTTP server



[Main View](#) | [E-MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)

System Time: September 24, 2009 18:52:05

User: [admin](#)

NVR-810 Network Video Recorder

NVR Setup

- ⊕ System Configuration
- ⊕ Channel Configuration
- ⊕ Event Configuration
 - General Setting
 - DI/DO Setting
 - ⊕ Event Servers
 - FTP Servers
 - HTTP 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:

SMTP Server 2

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:

1. Start by giving it a name as well.
2. Enter the hostname or the IP address of the HTTP server.
3. Enter the port that's used to communicate with the server.
4. Enter the username and password if it's required.
5. Click "Test" to verify if the information is entered correctly.
6. Click "Apply" for the settings to take effect.

Configuring an SMTP server



NVR-810 Network Video Recorder

[Main View](#) | [E-MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)

System Time: September 24, 2009 18:52:05

User: [admin](#)

NVR Setup

- ⊕ System Configuration
- ⊕ Channel Configuration
- ⊕ Event Configuration
 - General Setting
 - DI/DO Setting
 - ⊕ Event Servers
 - FTP Servers
 - HTTP 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:

SMTP Server 2

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:

1. Enter the hostname or the IP address of the SMTP server.
2. Enter the port of the SMTP server.
3. Specify the sender's name in the "Sender's name" field.
4. Enter the sender's e-mail address.
5. Check "Enable Authentication" and enter the username and password of the SMTP server and it requires authentication.
6. Click "Apply" to save the configuration.


6.3.4 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.

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Networking & Communication

[Main View](#) | [E-MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
System Time: September 24, 2009 18:52:34
User: [admin](#)

NVR-810 Network Video Recorder

NVR Setup

- System Configuration
- Channel Configuration
- Event Configuration
 - General Setting
 - DI/DO Setting
 - Event Servers
 - FTP Servers
 - HTTP Servers
 - SMTP Servers
 - Event Trigger**
- Recording Configuration
- System Options

Event Handling Setting

When Channel is triggered by

	1	2	3	4	5	6	7	8
I/O Input	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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
- ☐ Disk Full
- ☐ Disk Fail
- ☐ When NVR Start Up
- ☐ When NVR Shutdown
- ☐ When NVR System Configuration Changed
- ☐ When Channel's Configuration Changed

Trigger Actions

- ☐ **E-Mail:** E-Mail Addresses: *use "," to separate e-mails
- ☐ **FTP** Upload Path:
- ☐ HTTP
- ☐ Trigger I/O Output
- ☐ Buzzer

Apply

Select Channels to Enable Event Trigger and which type of event should be triggered.

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

When Channel is triggered by

	1	2	3	4	5	6	7	8
I/O Input	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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.

. Define which system events should trigger the recorder to send out notifications

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

. Define how the notifications will be sent and where they will be sent to.

Trigger Actions

☐

E-Mail:

E-Mail Addresses: *use "," to separate e-mails

☐

FTP

Upload Path:

☐

HTTP

☒

Trigger Output

☐

Buzzer

Apply

Cancel

* 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.


6.4 Recording Configurations

The “recording configurations” gives users the overall control of how and when a recording is performed and the quality of different types of recordings performed on each channels. It can help the recorder to operate with sufficient system resource by performing recording only when it’s necessary with adjustable recording frame rate.

6.4.1 General Settings

You can define the following in “General Settings”:

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

**PLANET**
Networking & Communication

[Main View](#) | [E-MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
System Time: September 24, 2009 18:53:13
User: [admin](#)

NVR-810 Network Video Recorder

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	5	6	7	8
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				

Recycling
☒ Enable Recycle

Camera Recording Setting

	1	2	3	4	5	6	7	8
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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

Apply Cancel

The “recording configurations” gives users the overall control of how and when a recording is performed and the quality of different types of recordings performed on each channels. It can help the recorder to operate with sufficient system resource by performing recording only when it’s necessary with adjustable recording frame rate.

Recording Buffer

Pre-alarm Buffer: sec

Post-alarm Buffer: sec

Recording frame rate allows you to set different frame rate for different types of recording instead of recording at one frame rate only. Use the drop-down menu and select one of the pre-defined frame rates for a particular recording type.

Recording Frame Rate

	1	2	3	4	5	6	7	8
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 type on any channels.

Camera Recording Setting


	1	2	3	4	5	6	7	8
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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

Apply

Cancel

6.4.2 Schedule Recording

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

**PLANET**
Networking & Communication

[Main View](#) | [E-MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
System Time: September 24, 2009 18:53:56
User: [admin](#)

NVR Setup

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

NVR-810 Network Video Recorder

Schedule Recording Settings

Channel:

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																								

Clear

Quick Configuration

Days:
☐ Sun ☐ Mon ☐ Tues ☐ Wed ☐ Thur ☐ Fri ☐ Sat ☐ All

Duration:
☐ All day
☒ During Start Time: : End Time: :

Add

Copy Schedule To Channel:

Copy Schedule To All Channels

Apply

Cancel

To configure a schedule recording:

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

Camera:

2. You can use the schedule table to set the time range. Click the cell boxes then move the cursor horizontally lets you set what hours to perform recording during a day. Click and move vertically lets you set what days to perform recording at a specific time.

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																								

Clear

* Each cell box represents 15 minutes of time. Click one or more boxes to omit consecutive recording.

3. You can also use the “Quick Configuration” to define recording time range instead of clicking cell box one by one on the time table. Simply check what days you would like to perform recording and specify the recording duration by either choosing “All Day” or enter a start and end time for specific recording duration.

Quick Configuration

Days

☐ Mon. ☐ Tue. ☐ Wed. ☐ Thur. ☐ Fri. ☐ Sat. ☐ Sun.

Duration

☐ All day

☐ During Start Time: End Time:

4. Select the “Copy to” option if you would like to set the same re- cording schedule to another camera.

☒ During

Start Time: :

End Time:

Copy Schedule To Channel:

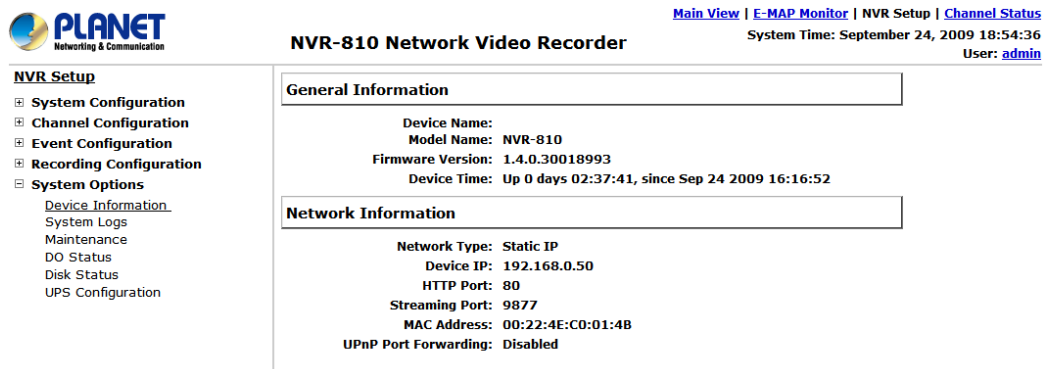
Apply

6.5 System Options

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

6.5.1 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.



The screenshot displays the NVR-810 Network Video Recorder web interface. The top navigation bar includes links for Main View, E-MAP Monitor, NVR Setup, and Channel Status. The system time is shown as September 24, 2009 18:54:36, and the user is admin. The left sidebar shows the NVR Setup menu with options for System Configuration, Channel Configuration, Event Configuration, Recording Configuration, and System Options. The main content area is titled "General Information" and displays the following details:

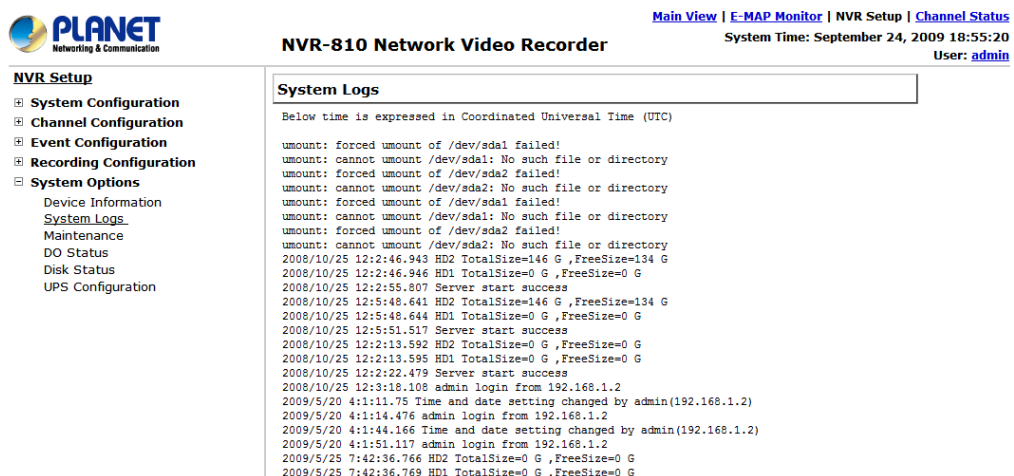
- Device Name: NVR-810
- Model Name: 1.4.0.30018993
- Firmware Version: 1.4.0.30018993
- Device Time: Up 0 days 02:37:41, since Sep 24 2009 16:16:52

Below this, the "Network Information" section displays:

- Network Type: Static IP
- Device IP: 192.168.0.50
- HTTP Port: 80
- Streaming Port: 9877
- MAC Address: 00:22:4E:C0:01:4B
- UPnP Port Forwarding: Disabled

6.5.2 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 displays the NVR-810 Network Video Recorder web interface, specifically the System Logs page. The top navigation bar and system time (September 24, 2009 18:55:20) are consistent with the previous screenshot. The left sidebar shows the NVR Setup menu with options for System Configuration, Channel Configuration, Event Configuration, Recording Configuration, and System Options. The main content area is titled "System Logs" and displays a list of system events. Below the title, a note states: "Below time is expressed in Coordinated Universal Time (UTC)". The log entries include:

- umount: forced umount of /dev/sda1 failed!
- umount: cannot umount /dev/sda1: No such file or directory
- umount: forced umount of /dev/sda2 failed!
- umount: cannot umount /dev/sda2: No such file or directory
- umount: forced umount of /dev/sda1 failed!
- umount: cannot umount /dev/sda1: No such file or directory
- umount: forced umount of /dev/sda2 failed!
- umount: cannot umount /dev/sda2: No such file or directory
- 2008/10/25 12:2:46.943 HD2 TotalSize=146 G ,FreeSize=134 G
- 2008/10/25 12:2:46.946 HD1 TotalSize=0 G ,FreeSize=0 G
- 2008/10/25 12:2:55.807 Server start success
- 2008/10/25 12:5:48.641 HD2 TotalSize=146 G ,FreeSize=134 G
- 2008/10/25 12:5:48.644 HD1 TotalSize=0 G ,FreeSize=0 G
- 2008/10/25 12:5:51.517 Server start success
- 2008/10/25 12:2:13.592 HD2 TotalSize=0 G ,FreeSize=0 G
- 2008/10/25 12:2:13.595 HD1 TotalSize=0 G ,FreeSize=0 G
- 2008/10/25 12:2:22.479 Server start success
- 2008/10/25 12:3:18.108 admin login from 192.168.1.2
- 2009/5/20 4:1:11.75 Time and date setting changed by admin(192.168.1.2)
- 2009/5/20 4:1:14.476 admin login from 192.168.1.2
- 2009/5/20 4:1:44.166 Time and date setting changed by admin(192.168.1.2)
- 2009/5/20 4:1:51.117 admin login from 192.168.1.2
- 2009/5/25 7:42:36.766 HD2 TotalSize=0 G ,FreeSize=0 G
- 2009/5/25 7:42:36.769 HD1 TotalSize=0 G ,FreeSize=0 G

6.5.3 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.

NVR Setup

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

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: 1.4.0.30018993**)

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:192.168.0.20

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

Reboot the NVR

Reboot NVR-1610 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 recorder.

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

NVR Setup

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

Maintenance
Restart NVR

Click "Restart" button to restart NVR

Restart Camera

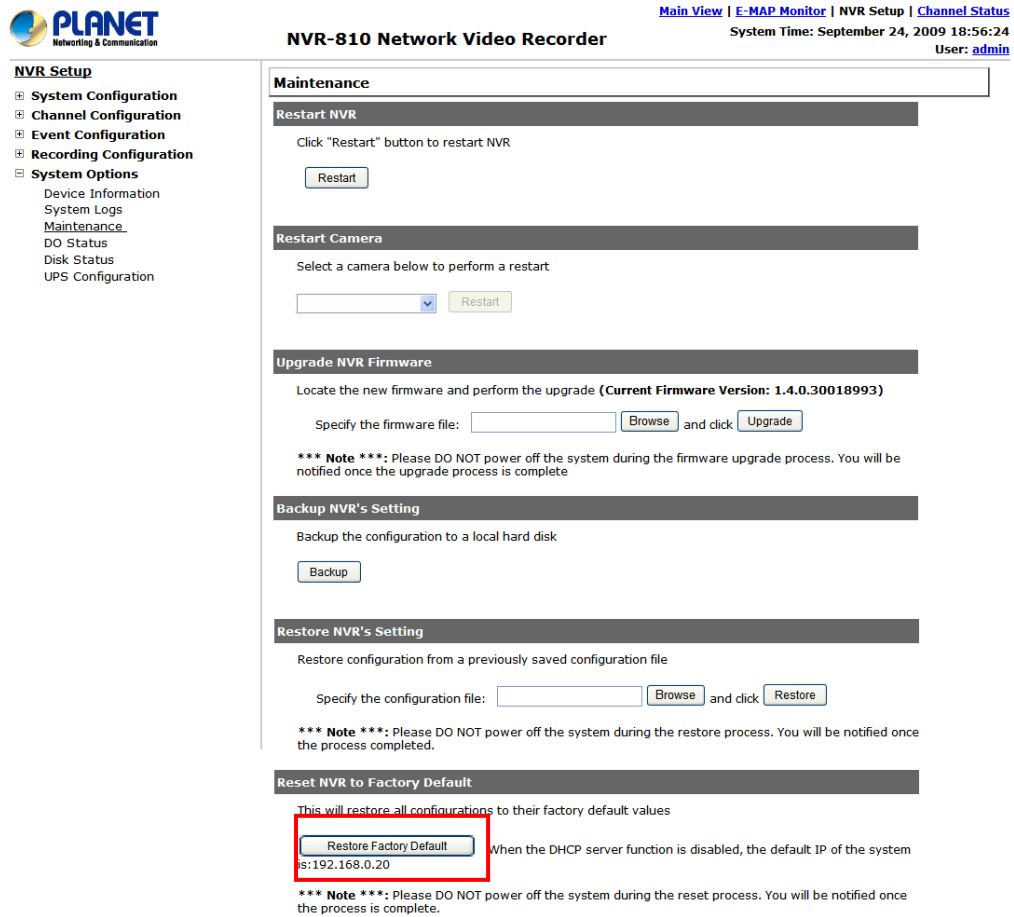
Select a camera below to



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

Reset the NVR to Factory Default

To reset the recorder back to its factory default, click “Default” button and begin the process.



The screenshot displays the web interface of a PLANET NVR-810 Network Video Recorder. The top navigation bar includes links for [Main View](#), [E-MAP Monitor](#), [NVR Setup](#), and [Channel Status](#). The system time is shown as September 24, 2009 18:56:24, and the user is identified as [admin](#).

The left sidebar shows the **NVR Setup** menu with the following options: [System Configuration](#), [Channel Configuration](#), [Event Configuration](#), [Recording Configuration](#), [System Options](#), [Device Information](#), [System Logs](#), [Maintenance](#) (highlighted), [Disk Status](#), and [UPS Configuration](#).

The main content area is titled **Maintenance** and contains several sections:


- Restart NVR**: A section with a "Restart" button and a note: "Click 'Restart' button to restart NVR".
- Restart Camera**: A section with a dropdown menu to select a camera and a "Restart" button. The note says: "Select a camera below to perform a restart".
- Upgrade NVR Firmware**: A section with a text input for the firmware file, "Browse" and "Upgrade" buttons, and a note: "Locate the new firmware and perform the upgrade (Current Firmware Version: 1.4.0.30018993)".
- Backup NVR's Setting**: A section with a "Backup" button and a note: "Backup the configuration to a local hard disk".
- Restore NVR's Setting**: A section with a text input for the configuration file, "Browse" and "Restore" buttons, and a note: "Restore configuration from a previously saved configuration file".
- Reset NVR to Factory Default**: A section with a "Restore Factory Default" button (highlighted with a red box) and a note: "This will restore all configurations to their factory default values". Below the button, it states: "When the DHCP server function is disabled, the default IP of the system is: 192.168.0.20".

A final note at the bottom of the section reads: "*** 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 “Maintenance” page after it is complete.

6.5.4 DO Status

This is where you can get the current status of the NVR digital output ports. You can also change their status from this page.



[Main View](#) | [E-MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
System Time: September 24, 2009 18:57:52
User: [admin](#)

NVR-810 Network Video Recorder

NVR Setup


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

DO Status

Port Number	Normal State (Click to change)	Current State (Click to change)
Output1	<input checked="" type="radio"/> Open <input type="radio"/> Ground	<input checked="" type="radio"/> Open <input type="radio"/> Ground
Output2	<input checked="" type="radio"/> Open <input type="radio"/> Ground	<input checked="" type="radio"/> Open <input type="radio"/> Ground
Output3	<input checked="" type="radio"/> Open <input type="radio"/> Ground	<input checked="" type="radio"/> Open <input type="radio"/> Ground
Output4	<input checked="" type="radio"/> Open <input type="radio"/> Ground	<input checked="" type="radio"/> Open <input type="radio"/> Ground

6.5.5 Disk Status

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



[Main View](#) | [E-MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
System Time: September 24, 2009 18:58:18
User: [admin](#)

NVR-810 Network Video Recorder

NVR Setup

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


Disk Status

Disk ID	Status	Capacity	Remaining Disk Space	Remaining	Online Time	Recording Period	Est. Remaining Time
1	Online	891GB	25GB	2%	Sep 24 2009 16:16:52	Aug 19 2009 20:57:29 - Sep 24 2009 18:50:12	1 day(s) 1 hour (s)

6.5.6 UPS Configuration

Connect the UPS to the NVR's DI/DO port for sending and receiving signals between the UPS and the NVR. Refer to the diagram below to connect the UPS with its RS-232 interface to the NVR's DI/DO port.

The NVR can receive signal from the UPS when there is a power failure and shut down itself automatically within a period of time.

**PLANET**
Networking & Communication

[Main View](#) | [E-MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
System Time: September 24, 2009 18:58:37
User: [admin](#)

NVR-810 Network Video Recorder

NVR Setup

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

UPS Configuration

☐ Enabled UPS Support

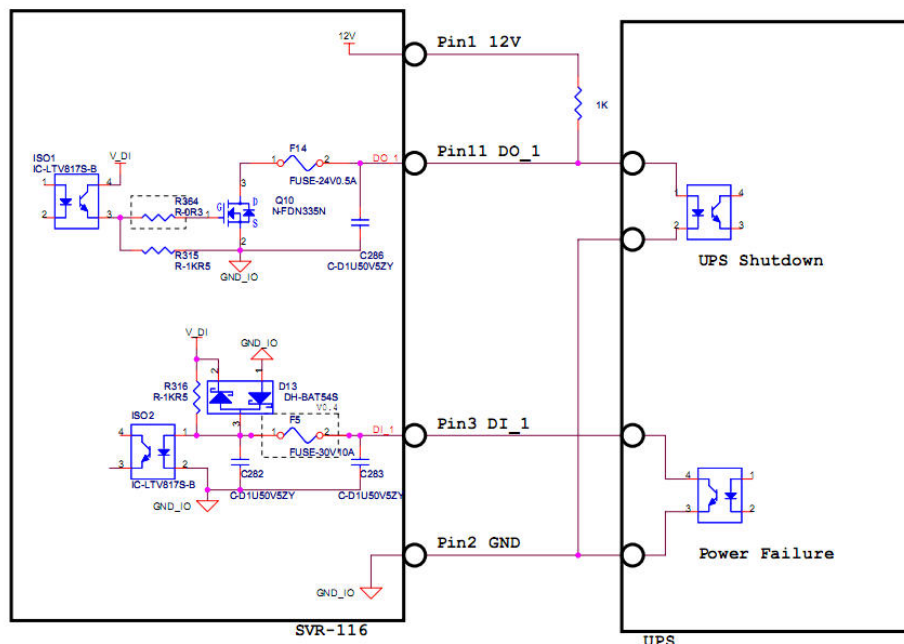
Power failed:

UPS shutdown:

Automatically shuts down the NVR if power fails for more than minutes

* The NVR uses DI_1 to receive signal from UPS system and uses DO_1 to shut it down.

Connect UPS with its RS-232 interface to the NVR's 10 port:



* The NVR uses DI_1 to receive signal from UPS system and uses DO_1 to **shut it down**.

EC Declaration of Conformity

For the following equipment:

*Type of Product : 8/16-CH Network Video Recorder

*Model Number : NVR-810 / NVR-1610

* Produced by:

Manufacturer's Name : **Planet Technology Corp.**

Manufacturer's Address : 11F, No. 96, Min Chuan Road, Hsin Tien,
Taipei, Taiwan, R.O.C.

is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility (2004/108/EC).

For the evaluation regarding the Electromagnetic Compatibility, the following standards were applied:

EN 55022	(2006, Class A)
EN 61000-3-2	(2006, Class A)
EN 61000-3-3	(1995 + A1: 2001 + A2: 2005)
EN 55024	(1998 + A1: 2001 + A2: 2003)
IEC 61000-4-2	(2001)
IEC 61000-4-3	(2006)
IEC 61000-4-4	(2004)
IEC 61000-4-5	(2005)
IEC 61000-4-6	(2006)
IEC 61000-4-8	(2001)
IEC 61000-4-11	(2004)

Responsible for marking this declaration if the:

☒ **Manufacturer** ☐ **Authorized representative established within the EU**

Authorized representative established within the EU (if applicable):

Company Name: **Planet Technology Corp.**

Company Address: **11F, No.96, Min Chuan Road, Hsin Tien, Taipei, Taiwan, R.O.C**


Person responsible for making this declaration

Name, Surname **Jonas Yang**

Position / Title : **Product Manager**

Taiwan
Place

30 Sep., 2009
Date


Legal Signature

PLANET TECHNOLOGY CORPORATION

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