



# User Manual

## 2-Bay Professional Network Video Recorder

# Manual Overview

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# Table of Contents

Features.....	4	User Management.....	33
Hardware Overview .....	7	System .....	35
Front View.....	7	Firmware Update .....	36
Rear Panel (Connections).....	8	RAID.....	37
<b>Installation .....</b>	<b>9</b>	Dynamic DNS .....	39
Install the Hard Drives.....	9	<b>Status .....</b>	<b>40</b>
Getting Started.....	12	Camera Status.....	40
D-Link NVR Search Utility .....	13	System Info .....	41
Web UI Login .....	15	System Log.....	42
Auto Search Camera .....	16	NVR Log.....	43
Web UI .....	18	Support .....	44
<b>Setup.....</b>	<b>19</b>	<b>Live Video.....</b>	<b>45</b>
Configuring the NVR.....	19	LiveView Setting .....	48
Network Setup.....	20	Multiple View .....	51
Camera Search.....	21	<b>Playback.....</b>	<b>52</b>
Camera Setup.....	22	Record and Playback Settings.....	55
Audio and Video.....	23	Search the Recorded Video For Playback.....	57
Live and Playback Setup .....	24	Smart Search from the Recorded Video .....	59
Recording Schedule.....	25	Recorded Video Enhancement .....	61
Event Setup.....	28	Save Video .....	62
Auto Backup .....	29	Save Image.....	63
E-mail Setup.....	31	Print Image.....	64
Time and Date Setup.....	32	Print Setup.....	64
<b>Maintenance.....</b>	<b>33</b>	Backup Recorded Video .....	65

<b>Multi-NVR Viewer Application .....</b>	<b>66</b>
<b>Playback Manager Application.....</b>	<b>68</b>
Set Connections to the Units.....	70
<b>Backup and File Manager Application .....</b>	<b>71</b>
<b>Verification Tool .....</b>	<b>73</b>
Verify Image / Video.....	74
<b>Troubleshooting .....</b>	<b>75</b>
<b>Choose a RAID Level .....</b>	<b>77</b>
<b>Replacing or Adding a New Hard Drive.....</b>	<b>79</b>
<b>Technical Specifications .....</b>	<b>80</b>

# Package Contents

- D-Link DNR-326 2-Bay Professional Network Video Recorder (NVR)
- CAT5 Ethernet Cable
- Power Adapter
- Cable Holder
- Manual and Software on CD
- Quick Installation Guide

**Note:** Using a power supply with a different voltage than the one included with your product will cause damage and void the warranty for this product.

If any of the above items are missing, please contact your reseller.



# System Requirements

<b>Hardware Requirements</b>	<ul style="list-style-type: none"><li>• One or two 3.5" SATA hard disk drive(s)*</li></ul>
<b>Network Requirements</b>	<ul style="list-style-type: none"><li>• Broadband Internet connection (for remote access)</li><li>• Network camera(s) (refer to the D-Link website for a list of supported cameras)</li><li>• 10/100/1000Mbit Gigabit Ethernet switch or router</li></ul>
<b>Web-based Configuration Utility Requirements/Remote PC Minimum Requirements</b>	<p><b>Computer with the following:</b></p> <ul style="list-style-type: none"><li>• Microsoft Windows® 7, Vista®, or XP (32-bit)</li><li>• Pentium 4 - 2.4GHz or higher</li><li>• 512 MB or higher</li></ul> <p><b>Browser Requirements:</b></p> <ul style="list-style-type: none"><li>• Internet Explorer 7.0 or higher</li></ul> <p>Make sure you have the latest version of Java installed. Visit <a href="http://www.java.com">www.java.com</a> to download the latest version.</p>
<b>Optional</b>	UPS with USB interface

\*Hard disk drives should be from the same manufacturer. To ensure maximum performance, identical drives are recommended for RAID 1 configurations.

# Introduction

Congratulations on your purchase of the DNR-326 2-bay Professional NVR.

The DNR-326 is a standalone wired Network Video Recorder (NVR) which supports D-Link multi-channel network cameras, as well as those of other top brands, with M-JPEG, MPEG4, or H.264 recording with capacity for two high-speed 3.5-inch SATA hard disks for long-term recording. Thanks to the powerful embedded system, the NVR can record video from network cameras located in local or remote sites to a dedicated HDD storage without requiring a PC to be turned on.

The DNR-326 can be easily set up for Internet access through PPPoE and DDNS. It supports real-time monitoring and playback from anywhere via a web browser. The triplex function allows the DNR-326 to keep recording while the user is viewing live footage or searching playback at the same time. With complete video management and a full set of display and playback functionality, the DNR-326 is a convenient and stable video recorder.

The DNR-326 is a professional NVR designed for small and medium business; it supports all D-Link network cameras and those of other top brands including Axis, Panasonic, Sony, Mobotix, Arecont Vision, IQinVision, Cisco, and ACTi. The Smart Search feature dramatically increases the convenience and efficiency of searching through recorded video footage. Furthermore, the bundled software – D-ViewCam NVR - can connect and group footage from multiple NVRs, and displays them in a split window.

# Features

## Comprehensive IP Surveillance Solution

- **Total Solution:** The D-Link NVR is a standalone SATA RAID network video recorder capable of 24/7 recording without a PC. The NVR can manage multiple network cameras, providing direct access to viewing live video and playing recorded data through the Internet from anywhere anytime. The device itself is compact in size and incorporates a physical security lock.
- **Easy to Use:** A user-friendly GUI simplifies network and camera setup, allowing users to easily access multiple cameras for viewing, recording, playback, and configuration.
- **Centralized Interface for Configuration:** The NVR provides a flexible and economic alternative to manage and configure multiple network cameras on a centralized web interface.
- **Megapixel Resolution Support:** The major advantage of digital over analog video is its higher resolution support. The NVR supports high resolution megapixel recording for vivid video with high clarity.

## Complete Network Functionality

- **PPPoE Support:** The D-Link NVR utilizes ADSL services. It can connect to the Internet via an ADSL modem over Ethernet.
- **DDNS Support:** Dynamic DNS is a solution for users without a fixed IP address. With DDNS service, users can connect to the NVR from the Internet using an easy-to-remember domain name.
- **NTP Support:** Maintaining an accurate record of time is essential if recorded data is to be used as evidence. To ensure that the time recording is always accurate, the NVR can update the system clock from an Internet server using the Network Time Protocol (NTP).
- **DHCP Server:** The NVR can act as a DHCP server for easy deployment when the network environment is very simple and there is no existing DHCP server.

## Fully Functional Recording

- **Flexible Recording Schedule:** Once cameras have been set up, a highly configurable scheduling system allows for continuous recording or recording during specifically allotted time frames. Each camera can be set to record independently at preset intervals. It also provides event recording based on specific triggers.



- **Recording Automatic Overwrite:** The NVR can be configured to overwrite the oldest data automatically when Hard Disk space runs out, allowing for continuous and uninterrupted recording. Users can specify the number of days the recording should be kept (within the limits of the Hard Disk capacity). For example, if the NVR has the capacity to store 7 days of recording, using the overwrite option, the NVR will record the 8th day and delete the 1st day.
- **Recording Stop Alert:** The NVR also provides the option to stop recording when the Hard Disk is full. When the disk reaches full capacity, a notification can be sent via e-mail or to an external device such as an audible alarm or LED display.

### Comprehensive Data and Hardware Security

- **Secure Data:** RAID 1 duplicates the recordings database onto two separate drives. In the event of an Hard Disk failure, data integrity is maintained on the secondary Hard Disk.
- **Auto Boot after Power Recovery:** The NVR will boot up automatically once the power is recovered after a power outage.
- **Access List Control:** Users can specify safe and blocked IP addresses to filter the external connections; this feature increases data security.
- **Multiple User Privilege Control:** Administrators may also choose access privileges for users by specifying the cameras they may have access to live view, playback, audio, and PTZ functions.
- **UPS Status Monitor:** A UPS can be used as an emergency power supply for the NVR. The UPS uses a USB interface to notify the NVR to perform a proper shutdown before battery power runs out.
- **Backup Recording Data:** Recorded data is stored in a secure database. This recorded data can be backed up to additional storage locations periodically or whenever needed.

### Powerful Event Management

- **Camera Status:** The camera status page will show the connection, recording, frame rate, and bit rate information of each camera. Meanwhile, the estimated available recording time is also displayed for quick reference.
- **Flexible Event Management:** Event setup is another key configuration feature of the NVR. The NVR can monitor all of the camera triggers from motion detection. One of the most powerful functions is the notification application. The NVR centrally controls the e-mail and recording of all the connected cameras.

### Instant Live View

- **Full Screen:** The display can be enlarged to full screen for live view and recorded video.
- **Drag and Drop GUI:** With multiple channels enabled, users can change channels by drag and drop.
- **Camera Name and Status on OSD:** Camera name and recording status are displayed via OSD to aid in identification.
- **PTZ/Audio Support:** Users can control pan/tilt/zoom (PTZ) functions from within the interface using the provided interface buttons or by directly clicking on the video. A single camera may be viewed full-screen with optional two-way audio.
- **Preset Point:** Presets from within the interface can be set to instantly restore a previously saved view.
- **Digital Zoom:** Videos can be enlarged by digital zoom.
- **Multi-NVR Viewer:** Up to 128 channels of live video footage can be simultaneously viewed.

### Intelligent Playback

- **AVI/ASF Outputs:** During playback, if a user uncovers video that needs to be exported, two formats are available. The AVI format will export raw video. The ASF file format will transpose a timestamp on the exported video.
- **Playback Speed Control:** Playback speed control allows for up to 16x speed fast forward or fast backward play. The step playback option displays one frame at a time.
- **Video Enhancement:** Users can enhance the recorded video with controls such as brightness, contrast, and sharpness.
- **Print Picture:** If a printer is connected to the user's PC, the NVR can also print the selected still image.
- **Smart Search:** Users can search through footage by setting specific criteria such as motion detection or lost focus.
- **Four-channel Playback:** Four channels of video footage can be played and viewed simultaneously.

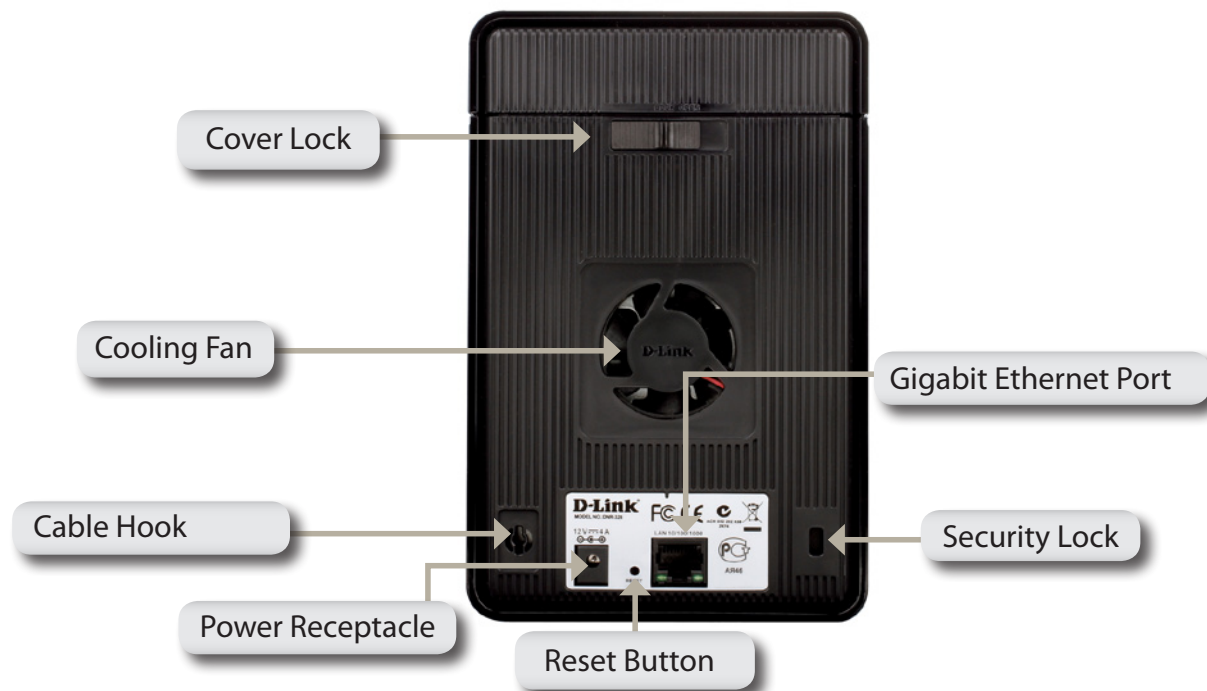
# Hardware Overview

## Front View



COMPONENT	DESCRIPTION
Power Button	Press once to power on the NVR. Press and hold the button until the LED begins to blink to power down the NVR.
Power LED	Power LED will blink when boot, turn steady when working normal.
Drive LED	These LEDs will be solid blue when the drives are connected but inactive. The LEDs will blink when the drives are being accessed, formatted or synchronized. They will illuminate orange if a drive has failed.
USB Port	USB port for UPS status updates.

## Rear Panel (Connections)



COMPONENT	DESCRIPTION
Cover Lock	This lock is used to remove the cover when unlocked. Locking it will restrict the removal of the top cover.
Cooling Fan	The cooling fan is used to cool the hard drives and features speed control. When the unit is first powered on, the fans rotate at a low speed. The fans will rotate at a high speed when the temperature rises above 49 °C.
Reset Button	Press this button for more than 5 seconds to reset the unit to the factory defaults.
Power Receptacle	Connect the supplied power cord to the receptacle.
Gigabit Ethernet Port	Use the Gigabit Ethernet Port to connect the device to the local network. The port is equipped with both a LAN LINK (R) and Traffic LED (L) to indicate connectivity and traffic respectively to the local LAN
Security Lock	This lock can be used to tie the DNR-326 to the desk to prevent theft. Cables are sold separately.

# Installation

## Install the Hard Drives

This step shows you how to open your NVR so that you can install one or two hard drives. Access the DNR-326's hard drive bays by sliding the top cover back until it unlatches from the device. Once the faceplate is unlatched, pull it off the device bay.



Slide either one or two hard drives into the open hard drive bays of your device. Align the drives with the grooves in the enclosure and insert one or two 3.5" SATA hard drives into the drive bays until they are firmly seated.



Once the hard drives are installed, you can reattach the top cover.



Use a standard CAT5E Ethernet cable with a RJ-45 connector to connect your NVR to your network.



Connect the power adapter to the power receptor on the back of the device. Press the power button located under the faceplate LEDs to turn on the device.



# Getting Started

Make sure the NVR is connected to a network via a router or a switch, or directly connected to a PC.

Step 1: Insert the DNR-326 CD in the CD-ROM drive. If the CD Autorun function does not automatically start on your computer, go to **Start > Run**. In the Run box, type **D:\autorun.exe** (where D represents the drive letter of your CD-ROM drive) and click **OK**. When the autorun screen appears, click **NVR Search Utility**.

Step 2: Highlight an available NVR and click **Configuration** to access the NVR's web User Interface. For more detailed configuration instructions, please refer to the user manual on the CD-ROM.



# D-Link NVR Search Utility

When first powered on, during the initial boot sequence, the device will wait to be assigned an IP address via DHCP. If it does not receive a DHCP-assigned IP address, the Auto-IP process will assign a 169.254.xxx.xxx address to the device. If you want to change the IP address before login or are unable to connect to the NVR IP address, you can use the NVR Search Utility provided on the product CD to locate the device on your network and make any needed changes.

**Network Video Recorder:** The D-Link NVR Search Utility displays any NVR devices it detects on the network.

**Refresh:** Click to refresh the device list.

**Configuration:** Click **Configuration** to access the Web-based configuration of the NVR.

**LAN:** Configure the LAN Settings for the NVR here.

**Apply:** Click **Apply** to save and activate the changes to the LAN Settings.

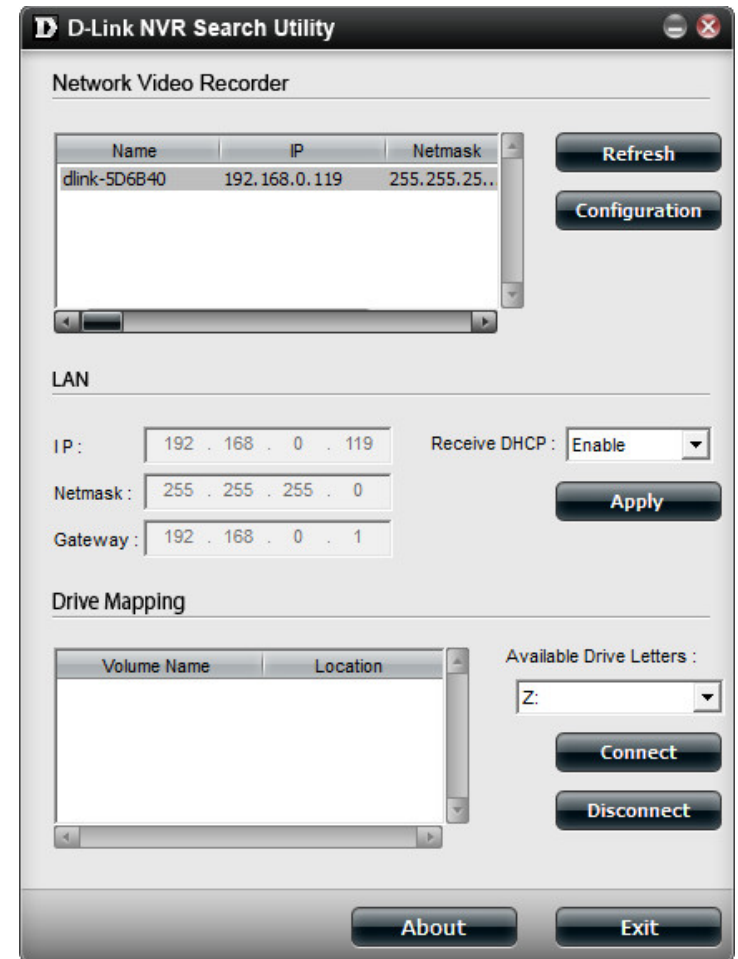
**Drive Mapping:** Volumes available for mapping are displayed here.

**Available Drive:** Select an available drive letter. Click **Connect** to map the selected volume.

**Letters:** Click **Disconnect** to disconnect the selected mapped volume.

**About:** Click **About** to view the software version of the NVR Search Utility.

**Exit:** Click **Exit** to close the utility.



Select the device from the list and click **Configuration**. This will launch the computer's default web browser and direct it to the IP address listed for the device. Make sure the browser is not configured to use a proxy server.

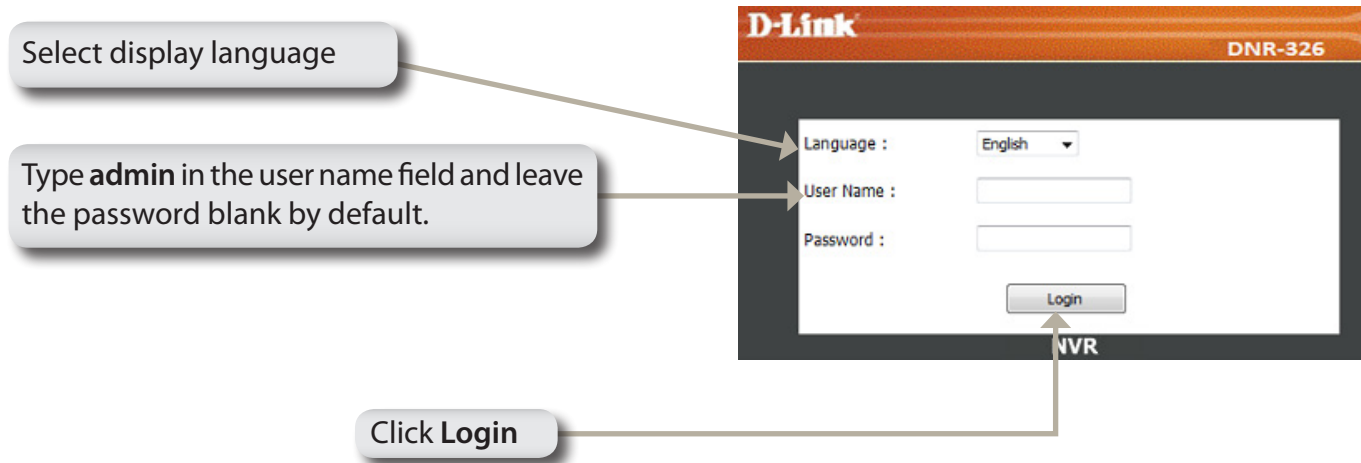
**Note:** The computer used to access the NVR web-based configuration manager must be on the same subnet as the NVR. If your network is using a DHCP server and the computer receives IP settings from the DHCP server, the NVR will automatically be in the same subnet.

## Web UI Login

This section will show you how to configure your new D-Link NVR using the Web-based Configuration Utility.

To access the configuration utility, click the NVR name or IP on the **NVR Search Utility** or manually open a web browser (Internet Explorer only) and enter the IP address of your NVR.

The Login screen will appear:



When logging in to the NVR for the first time, you will be asked to choose a drive configuration type and format the drives. There are four options: **Standard**, **JBOD**, **RAID 0** and **RAID 1**. **Standard** configures each disk as a separate volume, while **JBOD** combines both disks into a single volume. See page 37 for more details on using the RAID configurations.

**Note:** Refer to page 34 for instructions on how to change the password of your admin account.

## Auto Search Camera

Please connect your network camera(s) to the network and power them on.  
The NVR will search for your available camera(s) in the local network (LAN) and add them to the NVR List in the NVR automatically.  
The NVR will use the default login ID **admin** and a blank password to add new camera(s).  
If there are camera(s) found, the NVR will start manual recording at the last step.

**Note:** If you have existing camera(s) with different ID and password, NVR will add the camera(s) but it will not be able to connect and record. You can change the settings in the NVR Setup page.

Click **Exit Wizard** to finish the auto search.

Type **admin** for the username and leave the password field blank.

Click **Login**

**D-Link** DNR-326

**NVR CAMERA CONFIGURATION**

New Camera Configuration

1. The NVR will automatically search for any available network cameras.
2. Cameras will be added in order based on their default ID, password, and name.
3. Once the search finishes, if the NVR has found any cameras, they will now be available for recording and live display.
4. If the wizard does not find any cameras, please first make sure that your cameras are properly connected. Click Live View to try again.

Search Camera...

Add Camera1: D-Link DCS-930 (192.168.1.7)

Add Camera2: D-Link DCS-3430 (192.168.1.3)

Start Manual Recording

Add Camera3: D-Link DCS-5605 (192.168.1.8)

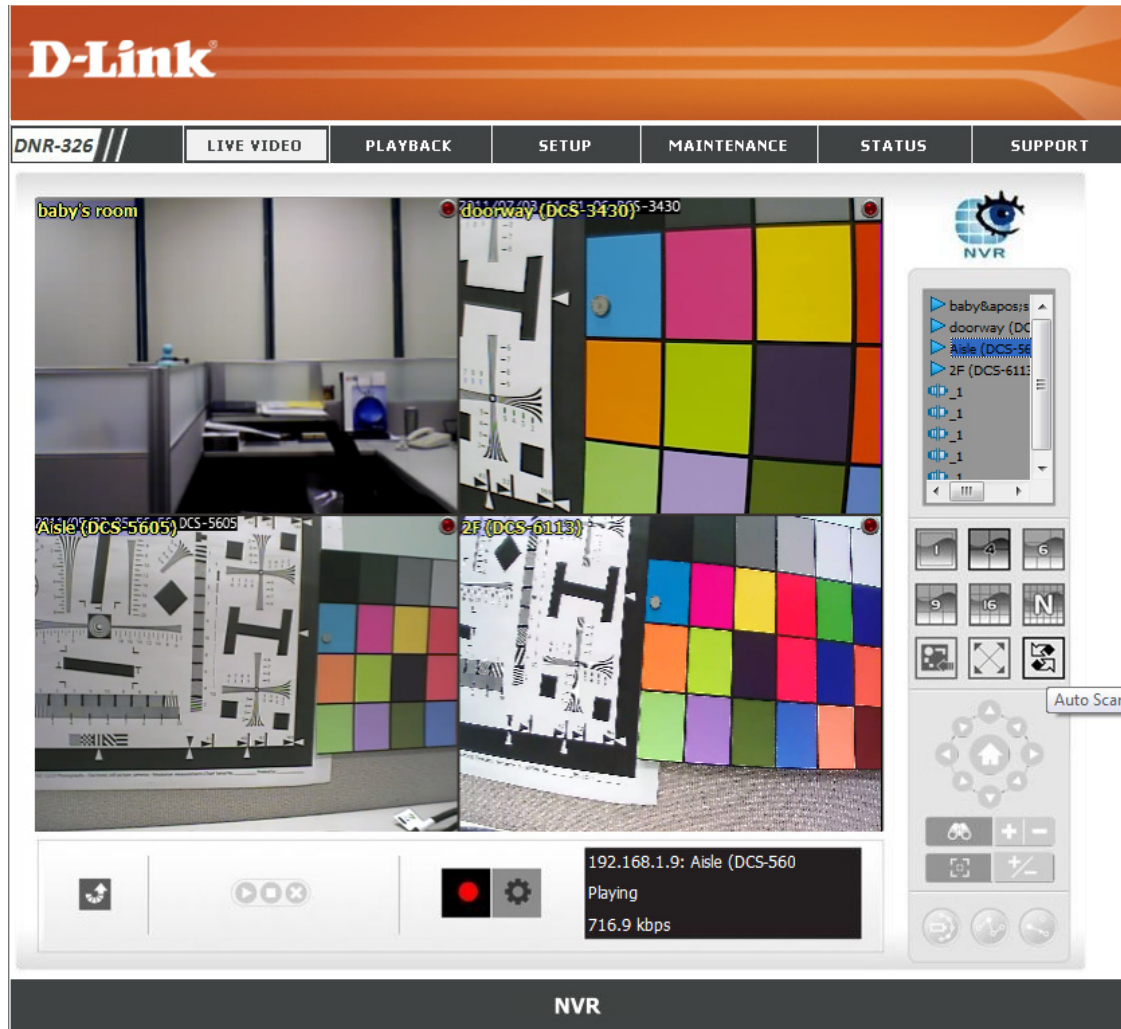
Language

User Name

Password

**NVR**

After login, you will be redirected to the NVR web UI:



# Web UI

The main categories for configuration are located on the menu tabs at the top of the page. These categories include:

- **LIVE VIDEO** - Shows the live video of network cameras and controls PTZ functions.
- **PLAYBACK** - Displays recorded video and exports snapshots or video.
- **SETUP** - Contains the NVR setup wizard, as well as the LAN configuration settings, camera search, camera settings, recording schedule, auto backup, event settings, time and system settings, and device settings.
- **MAINTENANCE** - Contains the Administrator account configuration options, Hard Disk management options and RAID configuration options. System configuration, backup, and restore functions are also available.
- **STATUS** - Contains system, NVR, and event logs.

These categories and their configuration options will be discussed in detail in the following pages of this manual.

# Setup

## Configuring the NVR

### BASIC OPERATION

You may run the wizard to configure the setup for your NVR. There are basic and advanced operations. You must first configure the basic operations in order to activate and utilize the features of the NVR.

Step 1: **Camera Search** - Search for a network camera using UPnP and add it to the NVR camera list.

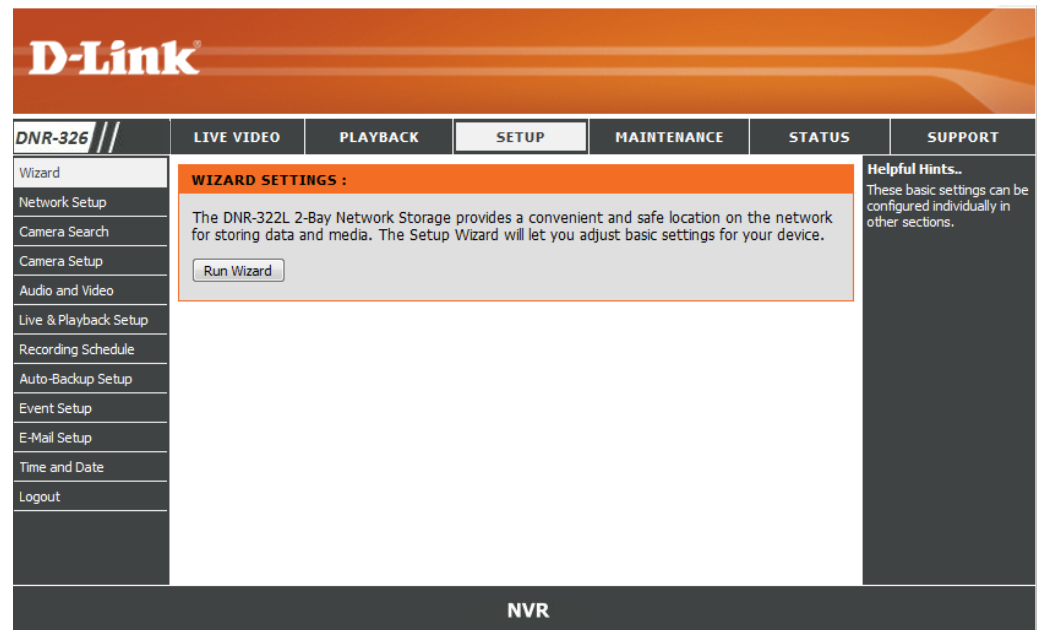
Step 2: **Recording Schedule** - Configure a camera for recording and create a detailed schedule. Users can also simply choose **Always Record** and select connected cameras.

After completing the above settings, the NVR will be fully functional.

### ADVANCED OPERATION

Step 1: **E-mail Setup** - Configure the e-mail address and messages for event notification.

Step 2: **Event Setup** - Configure event options with various combinations. Events can be triggered in the event of camera motion detection or full hard disk warning. An event action can be configured to send e-mail.



# Network Setup

Network Setup allows you to configure the LAN settings for your NAS device.

**DHCP:** Select this connection if you have a DHCP server running on your network and would like a dynamic IP address to be automatically updated to your NVR.

**Static IP:** You may obtain a static or fixed IP address and other network information from your network administrator for your NVR. A static IP address will simplify access to your NVR in the future.

**IP Address:** The fixed IP address.

**Subnet Mask:** The default value 255.255.255.0 is used to determine if the destination is in the same subnet.

**Gateway IP Address:** The gateway forwards frames to destinations in a different subnet. Invalid gateway settings may cause the failure of transmissions to a different subnet.

**DNS1:** Primary domain name server that translates names to IP addresses.

**DNS2:** Secondary domain name server to backup the primary one.

**PPPoE Settings:** Enable this setting if your ISP (DSL service) is using PPPoE. You may already have a Username and Password provided by your ISP, or you may need to contact your ISP. The connection status will be determined automatically by the system.

**DHCP server:** Enable or disable the DHCP server. If your network doesn't have DHCP server, enable NVR DHCP server for easier local network setup.

**D-Link**

DNR-326 // LIVE VIDEO PLAYBACK **SETUP** MAINTENANCE STATUS SUPPORT

Wizard  
Network Setup  
Camera Search  
Camera Setup  
Audio and Video  
Live & Playback Setup  
Recording Schedule  
Auto-Backup Setup  
Event Setup  
E-Mail Setup  
Time and Date  
Logout

**NETWORK SETUP :**

Here you can configure the LAN Settings for your NAS device.

Save Settings Don't Save Settings

**NETWORK SETUP :**

DHCP Client  
 Static IP

IP Address   
Subnet Mask   
Gateway IP Address   
DNS1   
DNS2

**PPPOE SETTINGS :**

PPPoE  Enable  Disable  
User Name  e.g. name@isp.com  
Password   
Connection Status **Not Available.**

**Helpful Hints..**  
A Static IP is recommended if you will be using the FTP server.

**NVR**



# Camera Search

**Step 1:** Click the **Search** button to search for UPnP cameras. The system will list all the available cameras at this moment. Click the **+** icon to add this camera into your camera list. If the cameras are already added, it will be marked as a red word.

**Step 2:** After clicking the icon, the camera setting page will pop-up. Click on the camera that you want to add.

**Step 3:** Enter the camera name, user name, and password of the camera.

## Note

- Some cameras will limit the login authority to the administrator only.
- To add cameras without the UPnP function, please go to the camera Setup menu and enter the IP address manually.
- You may not be able to see all the cameras on your first search. It may take a moment for the devices to respond to the UPnP request. Please click **Search** again if cameras are not immediately displayed.

**Step 4:** Click **Add** to add the selected camera.

**Step 5:** After clicking **Add**, the updated information will be displayed in the camera list.

**Step 6:** Repeat steps 2 through 5 to add other cameras onto your list.

**Helpful Hints...**

To add a camera:  
1. Click + to add a camera into the list. The camera setting page appears.  
2. Select the camera you want to add.  
3. Enter the camera name, user name and password details. Please input user name ("admin" is the user name for every D-link's cameras) and password in order to access and configure the cameras using the NVR's UI.

**Notes**

-Some cameras will limit the login authority to the administrator only.  
-To add cameras without the UPnP function, please go to Camera Setup menu and enter the IP address manually.  
-You may not be able to see all the cameras on your first search. It takes time for the devices to respond to UPnP request. Please click search again.

Index	Camera Name	Address	Port	Vendor	Model
1	baby's room (DCS-9)	192.168.1.7	80	D-Link	DCS-930
2	doorway (DCS-3430)	192.168.1.3	80	D-Link	DCS-3430
3			80	-- none --	-- none --
4			80	-- none --	-- none --
5			80	-- none --	-- none --
6			80	-- none --	-- none --
7			80	-- none --	-- none --
8			80	-- none --	-- none --
9			80	-- none --	-- none --

IP Addr	Vendor	Model	MAC	
192.168.1.3	D-Link	DCS-3430	00-26-5A-6E-D6-70	+
192.168.1.7	D-Link	DCS-930	F0-7D-68-01-0B-AB	+
192.168.1.8	D-Link	DCS-5605	F0-7D-68-00-DE-D2-	+

**ADD IP CAMERA**

Camera Name: Aisle (DCS-5605)  
 IP Address: 192.168.1.8 Port: 80  
 Administrator Name: admin Password:   
 Add to channel: 3 Protocol: HTTP  
 Vendor: D-Link Model: DCS-5605  
 [Add] [Cancel]

**CURRENT CAMERA SETTINGS**

Index	Camera Name	IP Addr	Vendor	Model
1	baby's room (DCS-9)	192.168.1.7	D-Link	DCS-930
2	doorway (DCS-3430)	192.168.1.3	D-Link	DCS-3430
3			-- none --	-- none --
4			-- none --	-- none --
5			-- none --	-- none --

# Camera Setup

**Step 1:** Select the camera which you would like to modify.

**Step 2:** Modify its information on the top of the page.

**Step 3:** Click the **Save Settings** button.

**Step 4:** If you would like to replace a camera, select that camera, modify its address, port, user name, and password, and then click the **Save Settings** button.

**Camera Channel:** Select the number of analog cameras supported by one video server from the list.

**Vendor:** Displays the manufacturer's name.

**Auto Detection:** If you have already input the camera IP, you may simply click this button to automatically detect camera information (such as the channel, protocol, vendor, and model number).

**Note:**

Some cameras will limit the login authority to the administrator only.

**D-Link**

DNR-322L // LIVE VIDEO PLAYBACK **SETUP** MAINTENANCE STATUS SUPPORT

Wizard  
Network Setup  
Camera Search  
Camera Setup  
Audio and Video  
Live & Playback Setup  
Recording Schedule  
Auto-Backup Setup  
Event Setup  
E-Mail Setup  
Time and Date  
Logout

**CAMERA SETUP**

To manually add the camera, enter the IP address of the camera.

Save Settings Don't Save Settings

**CAMERA SETUP**

Index **Camera 1**

Camera Name 2F living room (DCS-6113)

Address 192.168.1.5 Port 80

Administrator Name admin Password

Camera Channel 1 Protocol  TCP  UDP  HTTP

Vendor D-Link Model DCS-7110

Auto Detection Clear

**CAMERA LIST**

Index	Camera Name	Address	Port	Vendor	Model
1	baby's room (DCS-930)	192.168.1.7	80	D-Link	DCS-930
2	doorway (DCS-3430)	192.168.1.3	80	D-Link	DCS-3430
3	Aisle (DCS-5605)	192.168.1.8	80	D-Link	DCS-5605
4			80	-- none --	-- none --
5			80	-- none --	-- none --

**Helpful Hints..**

The following list briefly describes the **Camera Setup** menu items:

**Camera Channel:** Select the number of analog cameras supported by one video server from the list.

**Vendor:** Displays the manufacturer's name.

**Auto Detection:** Click to automatically detect all the information (such as camera channel, protocol used, vendor, model number) of the camera.

**Note:**  
Some cameras will limit the login authority to the administrator only.

# Audio and Video

This section will allow you to configure and modify the audio and video parameters for each camera.

**Step 1:** Select the camera which you would like to modify in the camera list.

**Step 2:** The NVR will display the parameters for the selected camera. You can modify the information at this page.

**Camera Name:** The name of the camera.

**Video Format:** Select the video format that the camera supports.

**Frame rate:** Select the frame rate.

**Resolution:** Select the resolution.

**Quality:** Select the image quality.

**Audio:** Check the **Enable Audio** option for live view and recording.

**Go to Web:** Click to connect to the web page of the selected network camera for advanced setup. For example, motion detection should be configured via the camera web interface to enable the NVR to receive the trigger message.

**Step 3:** Click the **Save Settings** button.

**Note:** The system will adjust the frame rate automatically based on the maximum frame rate which that camera can support.

The screenshot shows the D-Link NVR configuration interface. The top navigation bar includes 'LIVE VIDEO', 'PLAYBACK', 'SETUP', 'MAINTENANCE', 'STATUS', and 'SUPPORT'. The 'SETUP' tab is active, and the 'AUDIO AND VIDEO' sub-tab is selected. The interface displays the following information:

- Wizard:** A list of configuration options including Network Setup, Camera Search, Camera Setup, Audio and Video, Live & Playback Setup, Recording Schedule, Auto-Backup Setup, Event Setup, E-Mail Setup, Time and Date, and Logout.
- AUDIO AND VIDEO:** A section with a warning message: "You may wish to modify the parameters in this page or directly go to the camera web site. The NVR will display all the necessary information of the selected camera." Below this are 'Save Settings' and 'Don't Save Settings' buttons.
- CAMERA PARAMETER:** A section for configuring the selected camera (Aisle (DCS-5605)).
  - Name: Aisle (DCS-5605)
  - Video Format: Radio buttons for Motion JPEG, MPEG4, and H.264 (selected).
  - Frame Rate: Dropdown menu set to 10.
  - Resolution: Dropdown menu set to 704x480.
  - Bitrate: Dropdown menu set to 768.
  - Audio: Checkmark for 'Enable Audio'.
- CAMERA LIST:** A table listing all cameras in the system.
 

Index	Name	Address	Vendor	Model	Original Web
1	baby's room	192.168.1.7	D-Link	DCS-930	<a href="#">Go to Web</a>
2	doorway (DCS-3430)	192.168.1.3	D-Link	DCS-3430	<a href="#">Go to Web</a>
3	Aisle (DCS-5605)	192.168.1.8	D-Link	DCS-5605	<a href="#">Go to Web</a>
4	2F (DCS-6113)	192.168.1.5	D-Link	DCS-7110	<a href="#">Go to Web</a>
5	-- none --	-- none --	-- none --	-- none --	<a href="#">Go to Web</a>
6	-- none --	-- none --	-- none --	-- none --	<a href="#">Go to Web</a>
7	-- none --	-- none --	-- none --	-- none --	<a href="#">Go to Web</a>
8	-- none --	-- none --	-- none --	-- none --	<a href="#">Go to Web</a>
9	-- none --	-- none --	-- none --	-- none --	<a href="#">Go to Web</a>
- Helpful Hints:** A sidebar on the right containing:
  - Helpful Hints..**: "The following list briefly describes the Audio and Video menu items:"
  - Video Format:** "Select the type of format the camera supports."
  - Frame rate:** "Select the frame rate of the camera."
  - Resolution:** "Select the resolution of the camera."
  - Quality:** "Select the image quality of the camera."
  - Audio:** "Select Enable Audio to view and enable audio recording."
  - Note:** "The system will automatically adjust the frame rate, based on the maximum frame rate of the camera."

The bottom of the interface shows the 'NVR' label.

# Live and Playback Setup

## Live Streaming Server

**Port:** Enter the live streaming transmission port.

**Maximum Connections:** Enter the maximum connections for remote access. The maximum number of remote connections is 32.

## Playback Server

**Port:** Enter the playback transmission port.

**Maximum Users:** Enter the maximum number of users who can access playback functions at the same time. The maximum number of users for the playback server is 8.

**Emap:** Upload your map with camera location to the NVR. Max. size 20 KB of BMP and JPG file.

**CMS Server:** The NVR supports 3rd party\* CMS(Central Management System). It is able to be connected to CMS as a client.  
**CMS Server:** Check the Enable option to enable CMS service.  
**Port:** the port number through which the CMS connects to this NVR.  
**Maximum Connections:** The maximum number of allowed CMS connections.

**Note:** For detailed 3rd party information, please contact your local D-Link office.

The screenshot shows the D-Link NVR-326 web interface. The top navigation bar includes tabs for LIVE VIDEO, PLAYBACK, SETUP, MAINTENANCE, STATUS, and SUPPORT. The left sidebar lists various setup options like Wizard, Network Setup, Camera Search, etc. The main content area is titled 'LIVE AND PLAYBACK SETUP' and contains several configuration sections:

- LIVE AND PLAYBACK SETUP:** A note about dedicating a port for the streaming server, with 'Save Settings' and 'Don't Save Settings' buttons.
- LIVE STREAMING SERVER:** Fields for Port (5150) and Maximum Connections (16).
- PLAYBACK SERVER:** Fields for Port (5160) and Maximum Users (4).
- CMS SERVER:** A checkbox for 'Enable' (checked), and fields for Port (5170) and Maximum Connections (8).
- E-MAP UPLOAD:** A 'File Path' field with 'Browse...', 'Upload', and 'Delete E-Map' buttons.
- ALLOWED/BLOCKED LIST:** Checkboxes for 'Allowed List' and 'Blocked List' (both checked). Below are 'Add to Allowed List' and 'Add to Blocked List' buttons. A table lists IP ranges and access permissions:

IP Range	Index	IP Range	Access	Delete
	0	192.168.1.0 - 192.168.1.255	Accept	
	1	10.0.0.0 - 10.255.255.255	Deny	

On the right side, there is a 'Helpful Hints...' section with additional information and a 'Note' at the bottom regarding connection limits.

**Allowed / Allowed List:** IP addresses in this list can always access your NVR.

**Blocked List:** IP addresses in this list will always be blocked

**Note:** When setting Maximum Connections in Live Streaming Server settings, 1 connection means that 1 user can connect to 1 camera only. If the maximum number of connections is 16 and if each user connects to 4 cameras, then the maximum number of connected users is 4 and not 16.

# Recording Schedule

## Set Recording Mode

**No Record:** Turn off recording.

**Record by Schedule:** Record according to the schedule.

**Manual Record:** Manual record will record video by default as it has the highest priority. It can be enabled/disabled at the Live Video page.

**Automatic Overwrite:** Select this option to automatically empty disk space when the disk space is full. This will overwrite the earliest recorded video with the latest video one day at a time.

**Store Videos by Schedule:** Set the duration to store recorded video clips. After the duration, the clips will be purged.

**D-Link**

DNR-326 // LIVE VIDEO | PLAYBACK | **SETUP** | MAINTENANCE | STATUS | SUPPORT

Wizard  
Network Setup  
Camera Search  
Camera Setup  
Audio and Video  
Live & Playback Setup  
Recording Schedule  
Auto-Backup Setup  
Event Setup  
E-Mail Setup  
Time and Date  
Logout

**RECORDING SCHEDULE**

You can set up individual cameras to record at specific times, day or night, one time or each day of the week.

Save Settings | Don't Save Settings

**RECORDING MODE**

No Record  
 Record by Schedule

Manual Record: **Enabled**

**VIDEO DATA**

Automatic Overwrite  Enable  
Store Videos  Store Videos by Schedule  Days

**RECORDING SCHEDULE**

Camera List	Schedule
<input checked="" type="radio"/> Day <input type="radio"/> Week ...baby's room ...doorway (DCS-34) ...Aisle (DCS-5605) ...2F (DCS-6113) ...Camera5 ...Camera6 ...Camera7 ...Camera8 ...Camera9	00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 Cam1 [Schedule bar] Cam2 [Schedule bar] Cam3 [Schedule bar] Cam4 [Schedule bar] Cam5 [Schedule bar] Cam6 [Schedule bar] Cam7 [Schedule bar] Cam8 [Schedule bar] Cam9 [Schedule bar]

Insert | Delete | Configure | Copy

Start Time	End Time	Record	Audio
04:00	23:00	Always	Disabled

**Helpful Hints..**

The following list briefly describes the **Recording Schedule** menu items:

**Automatic Overwrite:** Select this option to automatically empty disk space when the disk space is full. This will overwrite the earliest recorded video with the latest video one day at a time.

**Store Videos by Schedule:** Set duration to store recorded video clips. After the duration, the clips will be purged and cannot be recovered.

**Insert:** Insert new schedules.

**Delete:** Delete the selected schedule.

**Configure:** Modify the schedule and recording mode setting.

**Notes**

- The **Always Record** option will start recording immediately.
- When configuring the **Motion Detection** event, ensure to setup the motion detection function in your camera first.
- When changing the motion detection settings of your camera, ensure to disconnect the NVR and then re-connect to update the settings in your NVR.
- When setting up an event, a video motion or digital input can be used to trigger the other cameras. This means that when motion is detected by a camera, it can send out warning signals to the other connected cameras.
- An alternative option is to drag the time bar to change the recording time period. The red bar represents the **Always**

## Set Recording Schedule

### Set Recording Schedule

**Day:** Schedule the cameras to turn the recorder on and off at the same time every day according to your preference.

**Week:** Schedule the cameras differently for each day of the week.

**Setup the Schedule:**

**Step 1:** Click the schedule of the camera which needs to be modified.

**Step 2:** Click the column at the bottom of the page.

**Step 3:** The default recording schedule is from 00:00 to 24:00. If you would like to modify the time slot, click the **Configure** button to modify the default settings first.

**Insert:** Insert new schedules.

**Delete:** Delete the selected schedule.

**Configure:** Modify the schedule and recording mode setting.

**Copy:** Copy the current Day Schedule to other channel(s); copy the current Week Schedule to other day(s) of a week or to other channel(s).

**D-Link**

DNR-326 // LIVE VIDEO | PLAYBACK | **SETUP** | MAINTENANCE | STATUS | SUPPORT

Wizard  
Network Setup  
Camera Search  
Camera Setup  
Audio and Video  
Live & Playback Setup  
Recording Schedule  
Auto-Backup Setup  
Event Setup  
E-Mail Setup  
Time and Date  
Logout

**RECORDING SCHEDULE**

You can set up individual cameras to record at specific times, day or night, one time or each day of the week.

Save Settings | Don't Save Settings

**RECORDING MODE**

No Record  
 Record by Schedule

Manual Record: **Enabled**

**VIDEO DATA**

Automatic Overwrite  Enable  
Store Videos  Store Videos by Schedule  Days

**RECORDING SCHEDULE**

Camera List	Schedule
<input type="checkbox"/> Camera List <input type="checkbox"/> baby's room <input type="checkbox"/> doorway (DCS-34) <input type="checkbox"/> Aisle (DCS-5605) <input checked="" type="checkbox"/> 2F (DCS-6113) <input type="checkbox"/> Camera5 <input type="checkbox"/> Camera6 <input type="checkbox"/> Camera7 <input type="checkbox"/> Camera8 <input type="checkbox"/> Camera9	<input checked="" type="radio"/> Day <input type="radio"/> Week 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 Cam1 Cam2 Cam3 Cam4 Cam5 Cam6 Cam7 Cam8 Cam9 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 Insert   Delete   Configure   Copy Start Time    End Time    Record    Audio 04:00            23:00        Always    Disabled

**Helpful Hints..**

The following list briefly describes the **Recording Schedule** menu items:

**Automatic Overwrite:** Select this option to automatically empty disk space when the disk space is full. This will overwrite the earliest recorded video with the latest video one day at a time.

**Store Videos by Schedule:** Set duration to store recorded video clips. After the duration, the clips will be purged and cannot be recovered.

**Insert:** Insert new schedules.

**Delete:** Delete the selected schedule.

**Configure:** Modify the schedule and recording mode setting.

**Notes**

- The **Always Record** option will start recording immediately.
- When configuring the **Motion Detection** event, ensure to setup the motion detection function in your camera first.
- When changing the motion detection settings of your camera, ensure to disconnect the NVR and then re-connect to update the settings in your NVR.
- When setting up an event, a video motion or digital input can be used to trigger the other cameras. This means that when motion is detected by a camera, it can send out warning signals to the other connected cameras.
- An alternative option is to drag the time bar to change the recording time period. The red bar represents the **Always**

## Recording Schedule

### Set Recording Schedule Configuration

**Step 1:** Enter the desired **Start Time** and **End Time**.

**Step 2:** Enter pre-record period and post-record for event trigger recording.

**Step 3:** Check the enable audio box to record audio from your camera (if supported).

**Step 4:** Choose the recording mode and the trigger source.

**Step 5:** Click **OK** to add this new schedule.

**Step 6:** If you would like to add another new schedule, click the **Insert** button.

The screenshot shows a 'Schedule Configuration' dialog box with the following settings:

- Time:** Start Time: 00:00, End Time: 08:00, Pre-record: 5 sec. (Max: 180), Post-record: 5 sec. (Max: 180)
- Audio:**  Enable Audio
- Mode:**  Always Record,  Record on Event
- Motion:**  Motion on baby's room,  Motion on doorway (DCS-34),  Motion on Aisle (DCS-5605)

Buttons: Ok, Cancel

### Note:

- When configuring the Motion Detection event, be sure to set up the motion detection function on your camera first.
- After changing the motion detection settings of your camera, be sure to disconnect the camera from the NVR and then re-connect it to update all new changes.
- Alternatively users can drag the time bar to change the recording period. The red bar represents the **Always Record** feature and the blue bar represents the **Event Recording** feature.

# Event Setup

**Step 1:** Select an event below.

**Hard Disk Space Full:** When the Overwrite function is not enabled, NVR will stop recording when HDD full.

**Step 2:** Click the **Add** button to setup the actions of the event.

**E-mail:** If the event occurs, the system will send an e-mail to the pre-set contacts.

**Step 3:** Click the action, and then click the **Configure** button to modify the details of that action if necessary.

**Step 4:** Repeat step 2 through 3 to add more actions.

The screenshot displays the D-Link NVR web interface. At the top, the D-Link logo is visible. Below it, a navigation menu includes 'DNR-326 //', 'LIVE VIDEO', 'PLAYBACK', 'SETUP', 'MAINTENANCE', 'STATUS', and 'SUPPORT'. The 'SETUP' tab is active, and the 'EVENT SETUP' section is highlighted. The main content area contains the following text: 'Select the camera from the **Camera List**, and enable the event by selecting the checkbox of **Hard Disk Space Full**. Then, select **Add** and then **Email**. Last, select the pre-set email address/ contact who will receive the email notification (action)'. Below this text are two buttons: 'Save Settings' and 'Don't Save Settings'. To the right of the main content is a 'Helpful Hints..' section with two entries: 'Hard Disk Space Full: When the hard disk space is full, the NVR triggers an action.' and 'E-Mail: When an event occurs, the system will send out e-mail notifications. Please do ensure that you have configured the E-Mail Setup first.' Below the main content is the 'EVENT ACTION MANAGER' section, which is divided into two columns: 'Camera List' and 'Event & Action'. The 'Camera List' column shows a tree view with 'System' expanded and 'Hard Disk Space Full' selected. The 'Event & Action' column shows a table with the following data:

Action	Options
Email	operator,normal user

At the bottom of the interface, the text 'NVR' is displayed.



# Auto Backup

This feature enables you to automatically back up the recorded video from the previous date to an FTP site. There are two ways to enable this function. One is to set up a Backup Schedule and the other is to set up a Backup Server.

**Auto Backup:** Check the Enable option to enable this function.

**Daily Backup Time:** The daily scheduled time to start backup process.

**Start Time:** The start time of recorded video of the previous date.

**End Time:** The end time of recorded video of the previous date.

**Camera:** Select the channel(s) to backup.

## Note:

The system backs up recorded video files one by one. If the connection between the unit and FTP server is normal, but there are some FTP problems that are preventing the system from being able to write files on FTP, the system will to back up each file three times before starting to back up the next file. If the connection is lost, the system will wait for the connection to be resumed so no file would be skipped.

The screenshot shows the D-Link NVR configuration interface for the DNR-326 model. The interface is divided into several sections:

- Navigation Menu:** LIVE VIDEO, PLAYBACK, SETUP (selected), MAINTENANCE, STATUS, SUPPORT.
- Left Sidebar:** Wizard, Network Setup, Camera Search, Camera Setup, Audio and Video, Live & Playback Setup, Recording Schedule, Auto-Backup Setup (selected), Event Setup, E-Mail Setup, Time and Date, Logout.
- Header:** D-Link logo.
- Section: AUTO-BACKUP SETUP**
  - Backup the recorded data to remote server in a pre-defined daily schedule.
  - Important: The performance of live view and recording will be impacted during backup.
  - Buttons: Save Settings, Don't Save Settings
- Section: AUTO-BACKUP SCHEDULE**
  - Auto Backup:  Enable
  - Daily Backup Time: 22 : 00
  - Start Time: 08 : 00
  - End Time: 17 : 00
  - select: all / none
  - Camera selection:
    - Camera 1  Camera 2  Camera 3  Camera 4
    - Camera 5  Camera 6  Camera 7  Camera 8
    - Camera 9
- Section: BACKUP SERVER**
  - FTP Site: ftp.mytest.com
  - FTP Port: 21
  - User Name: mytestftp
  - Password: ••••••
  - Backup to Remote Folder: /mybackup
  - Test Backup Server: Test
- Right Sidebar: Helpful Hints..**
  - To backup recorded video to remote server require certain amount of upload bandwidth. It varies with camera numbers and recorded data size.
  - Daily Backup Time: Begin to backup the recorded data of prior day from this time.
  - Start Time: Backup the data of recorded video/audio from start time to end time.
  - Camera: Only selected camera(s) will be backup.
  - Important: During uploading data, NVR performance might be affected with network traffic.
  - If it's not able to backup data of prior day within 24 hours, new backup schedule will start and ignore the rest of data.
- Footer:** NVR

## Backup Server

**FTP Site:** The IP or domain name of the remote FTP server.

**FTP Port:** The remote FTP site port number, the default FTP port is 21.

**User Name:** The user name to log in to the FTP server.

**Password:** The password to log in to the FTP server.

**Folder:** The folder format is "FolderName", "FolderName/SubFolderName", and so on.

**Test Backup Server:** After setting up all the information, click the Test FTP button and the system will create a folder to FTP.

# E-mail Setup

**Server Address:** SMTP (Simple Mail Transport Protocol) server IP address.

**Port:** Specify the port number of email server.  
The default number is 25.

**Use SSL:** Check this if your email server use SSL protocol.

**Sender:** Enter the sender's name.

**Subject:** Enter the e-mail subject.

**Body of Message:** Enter the e-mail content.

**SMTP Authentication:** Provide the user name and password to the SMTP server for identification before sending e-mail.

**User Name:** Input the SMTP server login user name.

**Password:** Input the SMTP server login user password.

**Send Testing Mail:** Click this button and the system will send a test mail to the sender. Please check it after testing.

## Add Contacts

**Step 1:** Insert the name of a new contact.

**Step 2:** Insert the e-mail address of this new contact.

**Step 3:** Click the **Add Contact** button.

**Step 4:** Click the **Save Settings** button to save the new contact list.

Product Page : DNR-326 Firmware Version: 1.0

**D-Link**

DNR-326 // LIVE VIDEO PLAYBACK **SETUP** MAINTENANCE STATUS SUPPORT

**E-MAIL SETUP**

You can set up your SMTP server to send e-mail alerts to notify you when an event occurs.

Save Settings Don't Save Settings

**SMTP SERVER**

Server Address

Port   use SSL

Sender

Subject

Body of Message

SMTP Authentication

User Name  Password

Send Testing Mail

**CONTACT**

User Name  Email

Name	Email	Delete

NVR

**Helpful Hints..**

The following list briefly describes the **SMTP Server** settings menu items:

**Body of Message:** Enter your e-mail message.

**SMTP Authentication:** Before sending out an e-mail, enter the user name and password for SMTP authentication.

**Add Contact:** Add a new contact into the contact list.

# Time and Date Setup

There are three options to set the time in Time and Date Setup.

**Manually Set the Time and Date:** Enter the complete time and date settings manually. Click **Save Settings** to apply the settings.

**Set Time From My Computer:** Click **Set Time** to have the NVR set its own clock according to the time on your computer.

**Time Zone Settings:** Select your time zone from the pull-down list. Click **Save Settings** to apply the settings.

**NTP Server:** Select or enter an **NTP Server** here. An **NTP Server** is a server on the Internet that maintains time. The NVR will contact the server you entered and receive the correct time. Click **Save Settings** after entering an **NTP Server**.

The screenshot shows the D-Link NVR web interface. The top navigation bar includes 'LIVE VIDEO', 'PLAYBACK', 'SETUP', 'MAINTENANCE', 'STATUS', and 'SUPPORT'. The left sidebar lists various setup options, with 'Time and Date' selected. The main content area is titled 'SYSTEM TIME SETTINGS' and contains the following sections:

- SYSTEM TIME SETTINGS:** A text block explaining the time configuration options. Below it, the 'Current Time' is displayed as '04:58:55 AM 03/08/2005' and the 'Current Time Zone' is '(GMT+08:00) Beijing, Chongqing, Hong Kong, Taipei'.
- SET THE DATE AND TIME MANUALLY:** A section with input fields for 'Date: 03/08/2005' and 'Time: 4:57:27'. It includes buttons for 'Set Time From My Computer' and 'Save Settings'.
- TIMEZONE:** A section with a dropdown menu for 'Time Zone' set to '(GMT+08:00) Beijing, Chongqing, Hong Kong, Taipei' and a 'Save Settings' button.
- NTP SERVER:** A section with an 'NTP Server' input field containing 'ntp1.dlink.com' and a dropdown menu also set to 'ntp1.dlink.com'. It includes a 'Save Settings' button.

On the right side, there is a 'Helpful Hints...' section with text: 'Using the NTP option will guarantee the time to be accurate provided that the DNR-322L is connected to the Internet and your DNS values (in SETUP > Network Setup) are valid.'

The bottom of the page is labeled 'NVR'.

# Maintenance

## User Management

User Management enables you to create user accounts to access your NAS device and set user privileges for them.

### Add New User

**Step 1:** Input the new user name.

**Step 2:** Input the password. Type the password again to confirm.

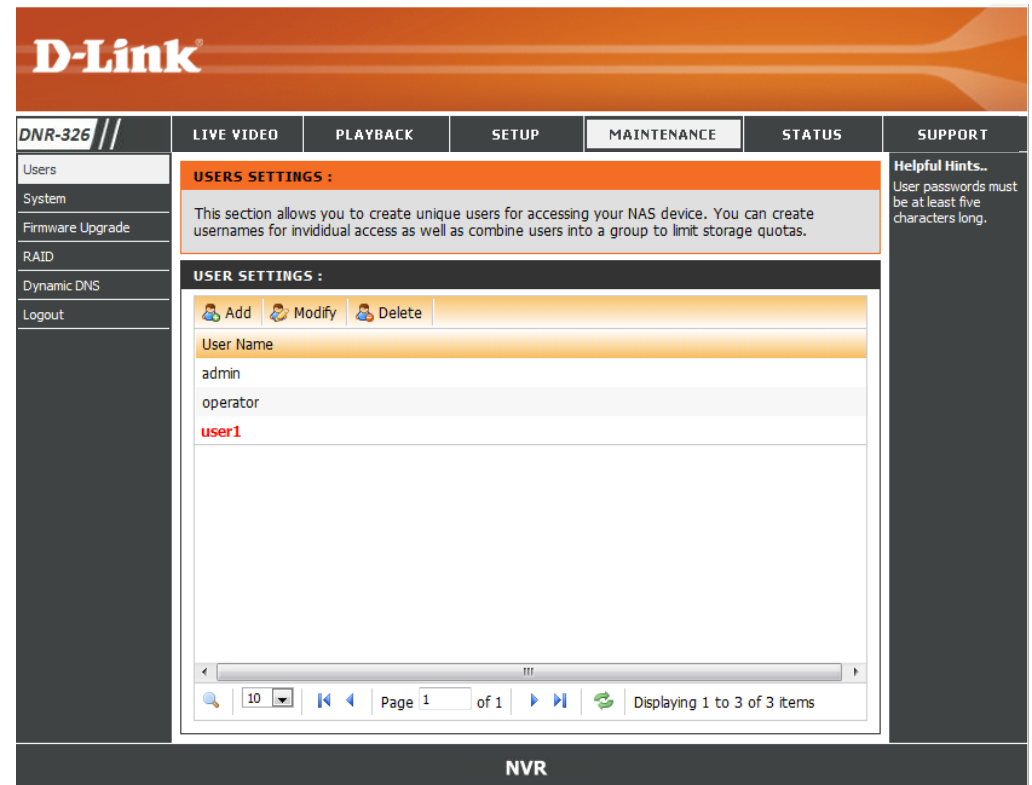
**Step 3:** Select the live view cameras and **PTZ/ IO Control** functions which this user can access.

**Step 4:** Select the playback channels and **Backup Data** function which this user can access.

**Step 5:** Click the **Finish** button to create a new user.

### Note:

The Administrator account can configure all functions of the NVR. This account cannot be deleted. The default password for "admin" is blank. Setting a password after the first login is strongly recommended. If the administrator password is lost, you may hold the reset button on the rear panel of the device to reset the NVR to factory defaults. Please note this will erase all the previously saved settings.



## User List

### Change A User's Password

**Step 1:** Select the user name and click the **Modify** button.

**Step 2:** Input the password of the user. Type the password again to confirm.

**Step 3:** Click the **Finish** button to save. Click **Exit** to abort.

### Delete A User

**Step 1:** Select the user name you want to delete and click **Delete** button.

**Step 2:** In the confirmation box, click the **OK** button.

### Step 2: Setup User Privileges ✕

Live View Privileges	<input checked="" type="checkbox"/> Channel 1	<input checked="" type="checkbox"/> Channel 2
	<input checked="" type="checkbox"/> Channel 3	<input checked="" type="checkbox"/> Channel 4
	<input checked="" type="checkbox"/> Channel 5	<input checked="" type="checkbox"/> Channel 6
	<input checked="" type="checkbox"/> Channel 7	<input checked="" type="checkbox"/> Channel 8
	<input checked="" type="checkbox"/> Channel 9	<input checked="" type="checkbox"/> PTZ Control
Playback Privileges	<input checked="" type="checkbox"/> Channel 1	<input checked="" type="checkbox"/> Channel 2
	<input checked="" type="checkbox"/> Channel 3	<input checked="" type="checkbox"/> Channel 4
	<input checked="" type="checkbox"/> Channel 5	<input checked="" type="checkbox"/> Channel 6
	<input checked="" type="checkbox"/> Channel 7	<input checked="" type="checkbox"/> Channel 8
	<input checked="" type="checkbox"/> Channel 9	<input type="checkbox"/> Backup Data

Back Next Exit

# System

Users can save the NVR configuration to a file and restore it when necessary. Occasionally, restarting the NVR can keep the system running smoothly. Reset the NVR to restore all configurations to factory default.

**Restart:** If the NVR is malfunctioning or crashes unexpectedly, click the **Restart** button on the NVR. Restarting the NVR will take about one and a half minutes.

**Default:** This will reset all configurations to factory default.

**Shutdown:** This will shut down the NVR.

**Save Configuration:** All the configurations can be saved as a file to the specified location. Click the **Save** button to save the file.

**Load Configuration File:** User can restore the configuration file if they have reset the system to the factory default file. Click the **Browse** button to select the configuration file and restore it by clicking the **Load** button.

**Idle Time:** When the administrator enters the Setup pages, except the Live Video and Playback pages, the NVR will keep track of the idle time when there is no action taken by the user. After a certain period of time, it will then force the user to log out and request the user to log in again for security concerns. Change the idle time period here.

**D-Link**

DNR-326 // LIVE VIDEO PLAYBACK SETUP MAINTENANCE STATUS SUPPORT

Users  
System  
Firmware Upgrade  
RAID  
Dynamic DNS  
Logout

**SYSTEM SETTINGS :**

The System Settings section allows you to restart the system, shutdown the system, or restore the device to the factory default setting. Restoring the unit to factory settings will erase all settings, including any rules that you have created.

The current system settings can be saved as a file onto the local hard drive. The saved file can be uploaded into the unit.

**RESTART :**

System Restart.

**DEFAULTS :**

Restore To Factory Default Settings.

**SHUTDOWN :**

System Shutdown.

**CONFIGURATION SETTINGS :**

Save Configuration Settings.

Load Configuration Settings.

**IDLE TIME :**

Account Inactivity Timer 5 (Minutes)

Helpful Hints..  
If you restore to factory defaults, all current settings will be erased.

NVR

# Firmware Update

The device firmware can be upgraded from this page. The firmware update must be saved on the local hard drive of your computer. Click the **Browse** button to search the local hard drive for the firmware update file. Click **Apply** to upgrade. You can check for firmware updates on the D-Link Support Page at <http://support.dlink.com>.

The screenshot displays the D-Link web interface for an NVR. The top navigation bar includes 'D-Link' and a menu with 'DNR-326 //', 'LIVE VIDEO', 'PLAYBACK', 'SETUP', 'MAINTENANCE', 'STATUS', and 'SUPPORT'. The 'MAINTENANCE' tab is active. On the left, a sidebar menu lists 'Users', 'System', 'Firmware Upgrade', 'RAID', 'Dynamic DNS', and 'Logout'. The main content area is titled 'FIRMWARE UPGRADE :'. It contains two paragraphs of text: the first explains that a new firmware upgrade may be available and recommends keeping the device up-to-date; the second provides instructions on how to download the latest firmware from the D-Link Support Page, save it to a local hard drive, and then use the 'Browse' button to select the file and the 'Apply' button to start the upgrade. Below this text is a section titled 'CURRENT FIRMWARE INFORMATION :'. This section displays 'Current NVR Firmware Version : 1.00', 'Firmware Date : 11/01/2011', and 'Firmware Path : Choose File no file selected'. There is an 'Apply' button next to the path. To the right of the main content area, there is a 'Helpful Hints..' section with text about periodic firmware updates and a link to the support site. The bottom of the interface shows 'NVR'.



# RAID

RAID Configuration enables you to format a newly inserted hard drive or set up a RAID configuration on your current hard drive. You can choose from four different hard drive configurations.

**Step 1:** Begin by clicking the **Set RAID Type and Re-Format** button. Information about the installed HDD will then be displayed.

**Step 2:** Click **Next** to select a new RAID configuration.

**Note:** All data will be lost during this process.

The screenshot shows the RAID configuration page in the D-Link NVR web interface. The page has a dark grey sidebar on the left with navigation options: Users, System, Firmware Upgrade, RAID (highlighted), Dynamic DNS, and Logout. The main content area is divided into several sections:

- Navigation Bar:** D-Link logo, DNR-326, and tabs for LIVE VIDEO, PLAYBACK, SETUP, MAINTENANCE (active), STATUS, and SUPPORT.
- HARD DRIVE CONFIGURATION :** Contains introductory text and a note about data loss during formatting.
- AUTO-REBUILD CONFIGURATION :** Explains the Auto-Rebuild feature and provides a 'Manually Rebuild Now' button.
- RAID CONFIGURATION :** Shows the 'Current RAID Type' as 'Volume\_1 : Standard' and 'Volume\_2 : Standard'. A 'Set RAID Type and Re-Format' button is visible.
- Helpful Hints..** A sidebar note explaining that a RAID 1 array will degrade if a drive fails and that Auto-Rebuild allows for automatic recovery.
- Footer:** NVR

The four RAID configurations are:

**Standard:** Creates two separate volumes (or one volume if only one hard drive is present). The second volume will function as a File Server. Each hard drive has its own volume.

**Note:**

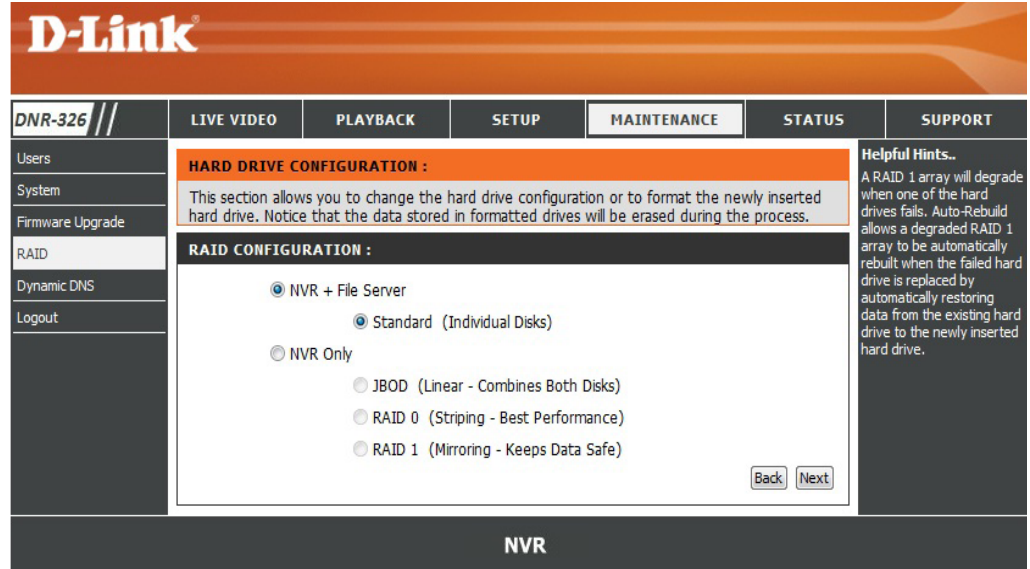
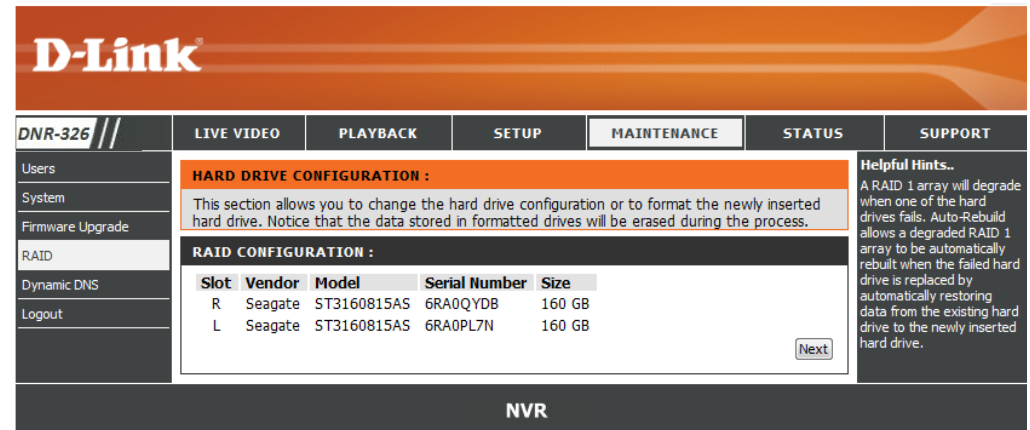
Only Standard mode can create the Volume2, which is available as a File (Samba) Server. Use the NVR Search utility to mount the File Server to your Windows system.

**JBOD:** Combines both hard drives in a linear fashion which will create one large volume geared towards maximum available space.

**RAID 0:** Combines both hard drives in a striped fashion which will create one large volume geared towards maximum performance.

**Note:** If one drive fails, all the data will be lost.

**RAID 1:** Mirrors the hard drives for redundancy. If one hard drive fails, the other still has all of the data. Replace the failed hard drive and it will re-mirror, restoring maximum data protection.



The main RAID page has an Auto-Rebuild Configuration that allows you to enable or disable the Auto-Rebuild feature. Please see the image on page 37. You can also manually rebuild by clicking the Rebuild button in the RAID Configuration section.

**Note:** Rebuilding the volume will erase all data on the newly inserted drive.

# Dynamic DNS

Enable this option only if you have purchased a domain name and registered with a dynamic DNS service provider. The following parameters are displayed when the option is enabled.

**Server Address:** Select a dynamic DNS service provider from the pull-down list.

**Host Name:** Enter your host name. For example: myhost.mydomain.net.

**Username or Key:** Enter the username or key provided by your service provider. If the Dynamic DNS provider supplies only a key, enter that key in all three fields.

**Password or Key:** Enter the password or key provided by your service provider.

**Verify Password or Key:** Re-type the password or key provided by your service provider.

**Status:** Displays the current status of connection to the DDNS server.

**D-Link**

**DNR-326** // LIVE VIDEO PLAYBACK SETUP MAINTENANCE STATUS SUPPORT

Users  
System  
Firmware Upgrade  
RAID  
Dynamic DNS  
Logout

**DDNS SETTINGS :**

The Dynamic DNS feature allows you to host a server (Web, FTP, Game Server, etc...) using a domain name that you have purchased (www.whateveryounameis.com) with your dynamically assigned IP address. Most broadband Internet Service Providers assign dynamic (changing) IP addresses. Using a DDNS service provider, your friends can enter your host name to connect to your NAS no matter what your IP address is.

Sign up for D-Link's Free DDNS service at [www.DLinkDDNS.com](http://www.DLinkDDNS.com).

Save Settings Don't Save Settings

**DDNS SETTINGS :**

Dynamic DNS  Enable  Disable  
 Server Address  <<   
 Host Name   
 Username or Key   
 Password or Key   
 Verify Password or Key   
 Status

**Helpful Hints..**  
To use this feature, you must first have a Dynamic DNS account from one of the providers in the drop down menu.

**NVR**

# Status

## Camera Status

This page displays the connection and recording status of your cameras.

**Connection Status:** Shows the camera connection status. The user can click **Connect** or **Disconnect** to change the connection status.

**Recording Status:** Shows the recording schedule and current recording status of the cameras. Please note that if the camera is disconnected, the recording may continue but will produce blank video.

**Frame Rate:** Displays the frame rate of the camera.

**Bit Rate:** Displays the transmission bit rate of the camera.

**Note:** If the Frame Rate or Bit Rate is too low, please check your network configuration between the cameras and the NVR. If the bit rate is too high, it will cause the Live Video display to slow or lag. Please modify the quality or bitrate setting in the camera web GUI accordingly.

**Disk Status:** Shows the hard drive space and estimated remaining recording time status.

**Note:** The recording time information is estimated by current bit rate. This may change each time a user refreshes this page.

**D-Link**

DNR-326 // LIVE VIDEO PLAYBACK SETUP MAINTENANCE STATUS SUPPORT

Camera Status

**CAMERA STATUS**

This page displays the camera and recording status of the camera.

Helpful Hints...  
The following list briefly describes the Camera and Recording Status menu items:  
**Connection Status:** Click Connect or Disconnect to change the connection status.  
**Recording Status:** Set the recording schedule of the camera.  
**Frame Rate:** Displays the frame rate of the camera.  
**Bit Rate:** Displays the transmission bit rate of the camera.

Index	Name	Address	Connection Status	Recording Status	Frame Rate	Bit Rate
1	baby's	192.168.1.7	Connected Disconnect	Manual Recording Recording	30.5 fps	2833.3 Kbps
2	doorwa	192.168.1.3	Connected Disconnect	Manual Recording Recording	9.4 fps	881.8 Kbps
3	Aisle (C	192.168.1.8	Connected Disconnect	Manual Recording Recording	9.9 fps	981.9 Kbps
4	2F (DC:	192.168.1.5	Connected Disconnect	Manual Recording Recording	1.0 fps	1092.0 Kbps
5			Disconnect Connect	Manual Recording Recording	0.0 fps	0.0 Kbps
6			Disconnect Connect	Manual Recording Recording	0.0 fps	0.0 Kbps
7			Disconnect Connect	Manual Recording Recording	0.0 fps	0.0 Kbps
8			Disconnect Connect	Manual Recording Recording	0.0 fps	0.0 Kbps
9			Disconnect Connect	Manual Recording Recording	0.0 fps	0.0 Kbps
						5789.1 Kbps

Last Update at Monday, July 11, 2011 6:10:57 PM

**DISK STATUS**

Total Hard Drive Capacity: 152805 MB  
Unused Space: 143548 MB  
Estimated Total Recording Time: 2 day(s) and 14 hour(s)  
Estimated Remaining Recording Time: 2 day(s) and 10 hour(s)

# System Info

This section displays the summary information of your NVR.

**LAN Information:** Displays the local network settings of the NVR.

**Device Information:** Displays the device name and current temperature of the NVR.

**Hard Drive Information:** Displays the hard drive information, including the disk mode, total size, used and remaining drive space.

The screenshot shows the D-Link NVR web interface. The top navigation bar includes 'LIVE VIDEO', 'PLAYBACK', 'SETUP', 'MAINTENANCE', 'STATUS', and 'SUPPORT'. The 'STATUS' tab is active. On the left, a sidebar menu shows 'System Info' selected. The main content area displays the following information:

SYSTEM INFORMATION :	
View a summary of the device information here.	
LAN INFORMATION :	
IP Address : 192.168.1.9	
Subnet Mask : 255.255.255.0	
Gateway IP Address : 192.168.1.1	
Mac Address : 00:32:20:00:01:01	
DNS1 : 192.168.1.1	
DNS2 :	
DEVICE INFORMATION :	
Workgroup : workgroup	
Name : dlink-000101	
Description : DNR-322L	
System Temperature : 113°F/45°C	
Current Rx/Tx : 2207206/1771648	
System Up Time : 0 Day 0 Hours 51 Minutes	
VOLUME INFORMATION :	
Volume Name : Volume_1	
Volume Type : Standard	
Total Hard Drive Capacity : 156474 MB	
Used Space : 9486 MB	
Unused Space : 146988 MB	
Volume Name : Volume_2	
Volume Type : Standard	
Total Hard Drive Capacity : 155440 MB	
Used Space : 148237 MB	
Unused Space : 7203 MB	

# System Log

This page displays the system event list of your NVR. The **System Log** is different from the **NVR Log** as it includes the following items:

1. User login/logout
2. Modify/delete account
3. System restart
4. System reset to default
5. System firmware update

**D-Link**

DNR-326 // LIVE VIDEO PLAYBACK SETUP MAINTENANCE STATUS SUPPORT

Camera Status  
System Info  
Logs  
NVR log  
Logout

**LOGS :**  
The screen displays the system event list of your DNR-322L.

**LOGS :**  
Clear Log

Date	Time	Info
Mar 7	20:13:56	System has been restored to factory default settings.
Mar 7	20:15:03	System Time Is Updated By RTC.
Mar 7	20:15:15	Set Fan Speed To "Stop".
Mar 7	20:15:27	System is rebooted or power up successfully.
Mar 7	20:16:59	admin logged in.
Mar 7	20:19:37	Set System Time.
Mar 8	04:20:32	admin logged in.
Mar 8	04:21:35	Set Fan Speed To "Low".
Mar 8	04:44:39	admin logged in.
Mar 8	04:44:59	Admin password has been modified.

Helpful Hints... We recommend that you frequently check the logs for system/hard drive errors and/or unauthorized NAS usage.

10 Page 1 of 2 Displaying 1 to 10 of 14 items

NVR

# NVR Log

The NVR Log displays the event log information for your NVR device.

**NVR Log:** Displays the NVR log information such as stop recording or NVR system start.

**NVR Event Log:** Displays the event log information such as motion detection or lost camera connection.

The screenshot shows the D-Link NVR web interface. The top navigation bar includes 'DNR-326', 'LIVE VIDEO', 'PLAYBACK', 'SETUP', 'MAINTENANCE', 'STATUS', and 'SUPPORT'. The left sidebar contains 'Camera Status', 'System Info', 'Logs', 'NVR log', and 'Logout'. The main content area is divided into two sections: 'NVR LOG' and 'NVR EVENT LOG INFORMATION'. The 'NVR LOG' section shows a table with two entries: 'Start manual recording' and 'NVS System Started'. The 'NVR EVENT LOG INFORMATION' section shows a message 'There are no NVR logs yet...'. A 'Helpful Hints..' sidebar on the right provides additional context for the logs.

**D-Link**

DNR-326 // LIVE VIDEO PLAYBACK SETUP MAINTENANCE STATUS SUPPORT

Camera Status  
System Info  
Logs  
NVR log  
Logout

**NVR LOG**  
The screen displays the system event list of your NVR.

**NVR LOG INFORMATION**  
20110711 Query  
<< 1 >>  

Date	Time	Log
2011-07-11	18:12:07	Start manual recording
2011-07-11	18:12:05	NVS System Started

 << 1 >>

**NVR EVENT LOG INFORMATION**  
20110711 Query  
<< >>  

Date	Time	Log
There are no NVR logs yet...		

 << >>

**Helpful Hints..**  
The following list briefly describes the NVR Event list items:  
**NVR Log:** Displays the log information of NVR, for example stop recording or NVR system start.  
**NVR Event Log:** Displays the event log information, for example motion detection or when a camera connection is lost.

NVR

# Support

The NVR Help page provides a list of support topics.

The screenshot displays the D-Link NVR web interface. At the top, the D-Link logo is visible. Below it, a navigation bar contains the following tabs: DNR-326, LIVE VIDEO, PLAYBACK, SETUP, MAINTENANCE, STATUS, and SUPPORT. The SUPPORT tab is currently selected. On the left side, there is a vertical menu with the following items: Menu, Live Video, Playback, Setup, Maintenance, Status, and Logout. The main content area is titled "HELP MENU" and contains a list of support topics organized into sections:

- HELP MENU**
  - Live Video
  - Playback
  - Setup
  - Maintenance
  - Status
- LIVE VIDEO**
  - Live Video
- PLAYBACK**
  - Playback
- SETUP**
  - Wizard
  - Network Setup
  - Camera Search
  - Camera Setup
  - Audio and Video
  - Live & Playback Setup
  - Recording Schedule
  - Auto-Backup Setup
  - Event Setup
  - E-Mail Setup
  - Time and Date
- MAINTENANCE**
  - Users
  - System
  - Firmware Upgrade
  - RAID
  - Dynamic DNS
- STATUS**
  - Camera Status
  - System Info
  - Logs
  - NVR log

At the bottom of the page, the text "NVR" is displayed.



# Live Video

This section will enable you to configure and view the live video from your network cameras.

## Set Up Live View

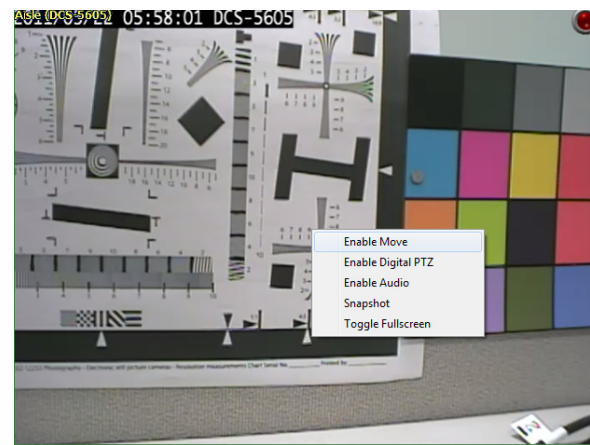
**Step 1:** Click the **LIVE VIDEO** button at the top of the menu.

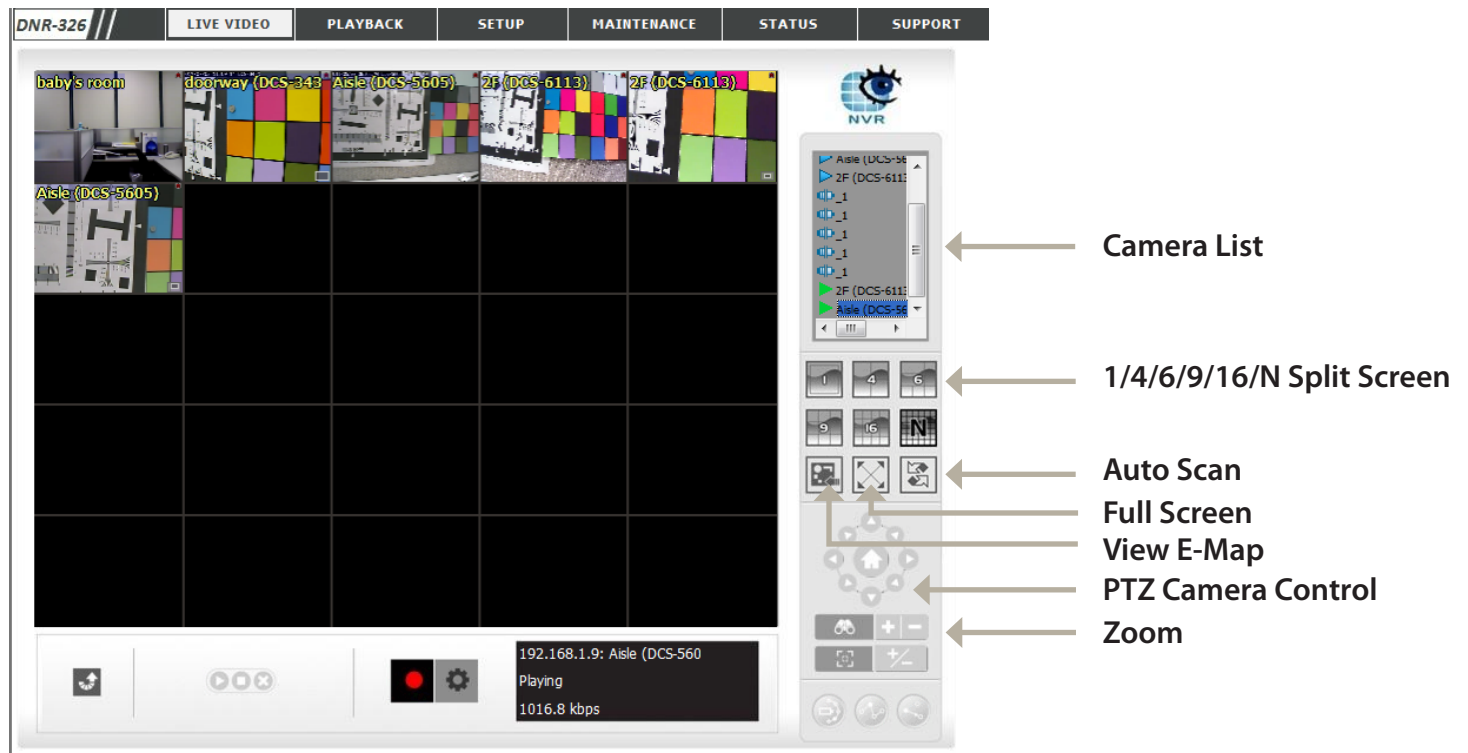
**Step 2:** Select a camera(s) from the camera list on the right and then drag it to the location to where you wish the image to be displayed.

**Step 3:** Users can change the video display position by drag it to another position.

### Note

1. The selected video will be marked with a green line.
2. Enable Digital PTZ: Right-click on the video and enable Digital PTZ, then click the + or – button to zoom in or zoom out the view. The lower right square flashing on the video grid indicates the correspondent view of the camera.
3. If the camera supports PTZ, users can control the selected camera from the PTZ panel. Users can also right-click on the video and check **Enable Move** to control the PTZ function directly. Please note that when **Enable Move** is checked, the video will be marked with a red outline. This indicates that another camera cannot be adjusted until the PTZ function has been deactivated.
4. If the camera supports audio, users can check **Enable Audio** from the right click menu and listen to live audio of this channel.
5. Snapshot: Right click on the video and select the snapshot function to capture a specific video image immediately.
6. Right clicking on the video will show the option to **Toggle to Full Screen**. Press the ESC button on the keyboard to return to normal display.





**1/4/6/9/16/N Split Screen:**

User can choose to view 1/4/6/9/16 or NxN cameras at a time.

**Note:** Maximum physical cameras only supports 9 channels, other channels are the “Duplicated channel”.

**View E-Map:**

Display your emap file. The file has a max. size of 20 KB and is in a BMP or JPG file format.

**Auto Scan:**

Activate auto scan to rotate the channels on the display screen. For instance, you may select to show only 4-split screen on the liveview, while connecting 16 channels to the system. With auto scan function, you are able to see all 16 channels by turns.

**Full Screen:**

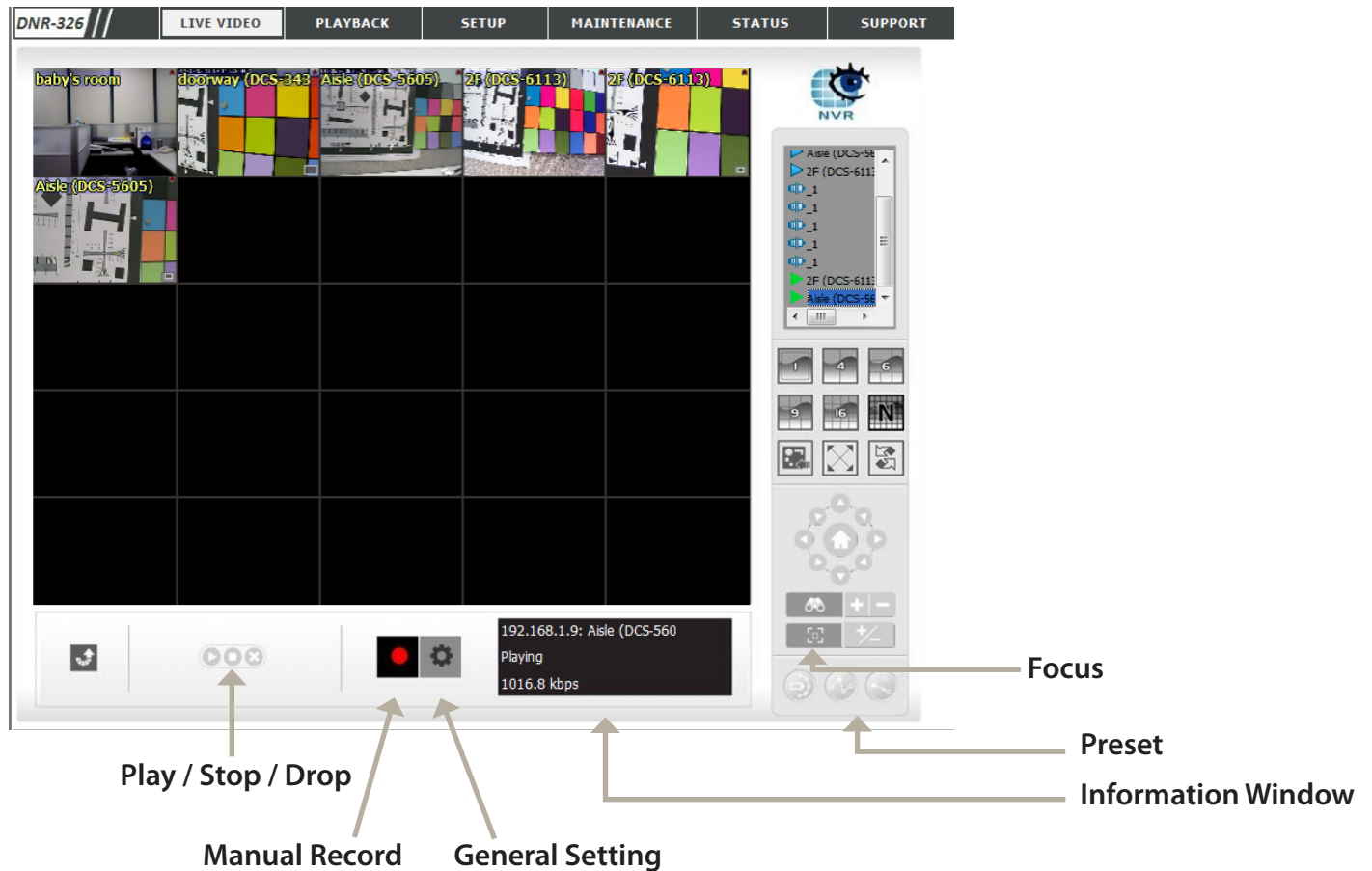
Select to display the video with full screen. Press **ESC** button on the keyboard to return to normal display.

**PTZ Camera Control:**

You may control the camera view by utilizing the PTZ camera control panel to adjust the camera’s view. This is only available with cameras that support the PTZ function.

**Zoom:**

Click the + or - button to zoom in or zoom out. This option is only available with cameras that support the optical zoom function.



**Preset:** Click the **Set** button to set a preset position for a camera with PTZ support. Users can give the specified position a name and store it in the preset position list. Click the **Go** button to go to the preset position. This is only available with cameras that support the PTZ function.

**Focus:** Click the +/- button to adjust focus or select the auto focus.

**Play/Stop/Drop:** Select a camera/ video and click this button to play/stop/disconnect a particular channel.

**Information Display Window:** Display video information including camera name, video status, and bit rate for a selected channel.

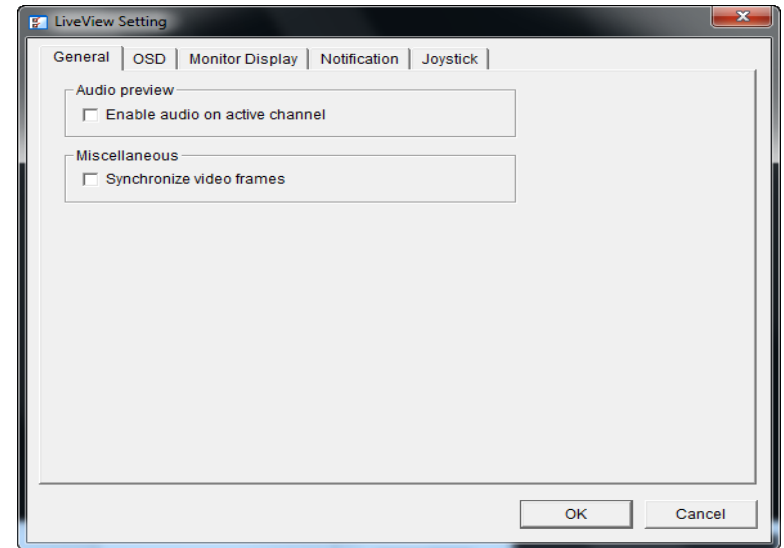
**Manual Record:** Click to start recording immediately. Click again to stop recording.

# LiveView Setting

The LiveView Setting enables you to configure options including audio, monitor display, notification. To access this setting, click on the General Setting icon on the Live Video screen.

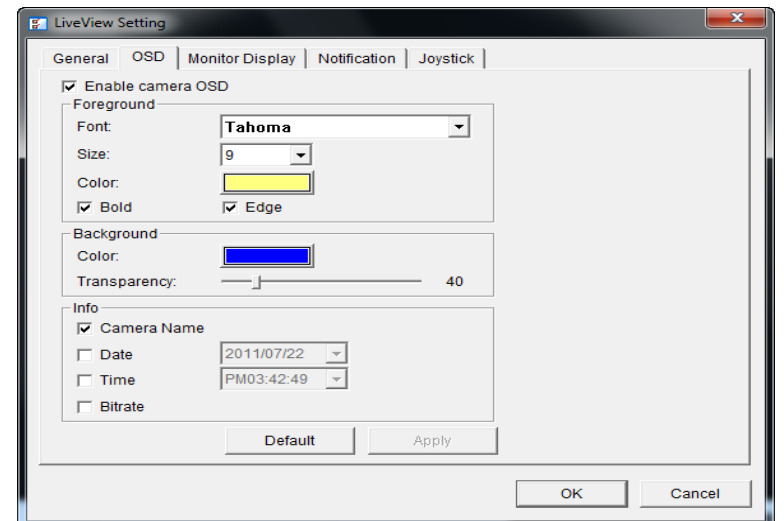
## General

1. Check the Enable audio on the active channel option to enable audio streaming on active channel. This function synchronizes with right click on camera to enable audio.
2. Check Synchronize video frames to avoid the tearing problem occurring in video display while increasing the CPU loading.



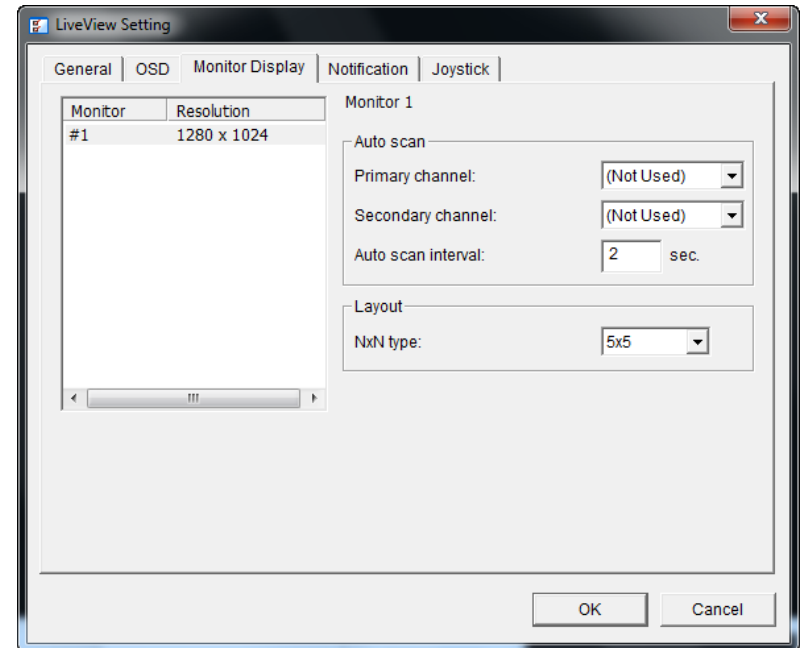
## OSD (On-screen display) Setting

1. Check the Enable camera OSD option.
2. Set the foreground and background settings of the OSD.
3. Select which kinds of information will be displayed on the screen.
4. Click the **Apply** button to preview the result.
5. Click the **Default** button to back to the default settings if necessary.



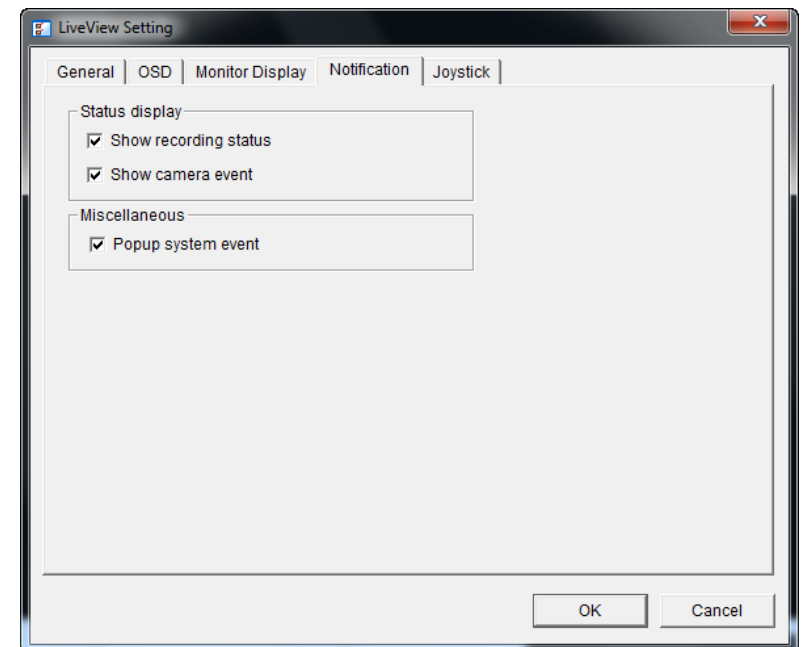
## Monitor Display Setting

1. Select Primary channel which will always be on the screen when activating auto scan; then select Secondary channel which has second priority when activating auto scan. Enter the time interval for auto scan.
2. Select the screen division of NxN type.



## Notification

1. Check **Show recording** status to show the crystal ball with recording status on monitor display.
2. Check **Show camera** event to display the words of detected camera events on the correspondent screen.
3. Check **Popup** system event to pop up system event message dialog as a warning when a system event occurred.



## Set up Joystick Control

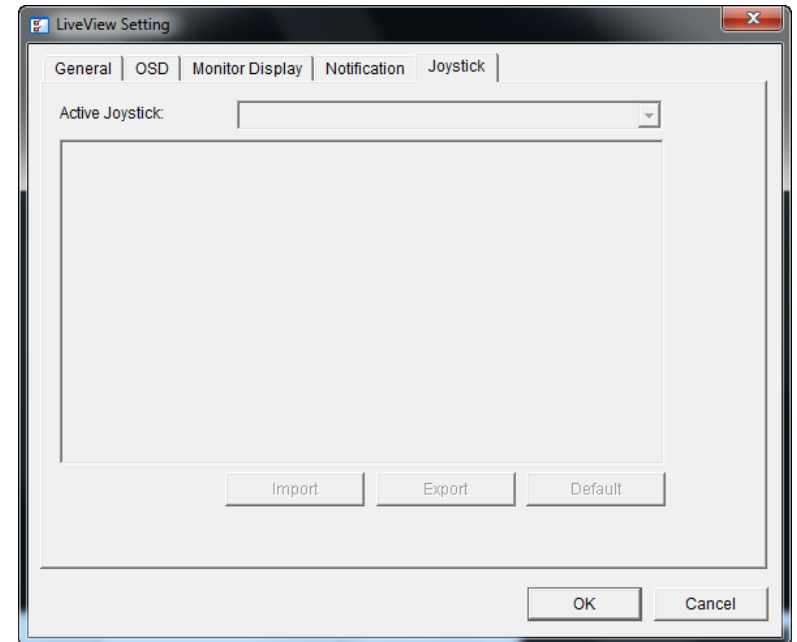
**Function:** You can choose the function from the drop-down menu for the button of the joystick.

**Parameter:** Choose the preset point from the drop-down menu.

**Default:** Click to go back to default settings.

**Import:** Click to import the settings.

**Export:** Click to export the settings.



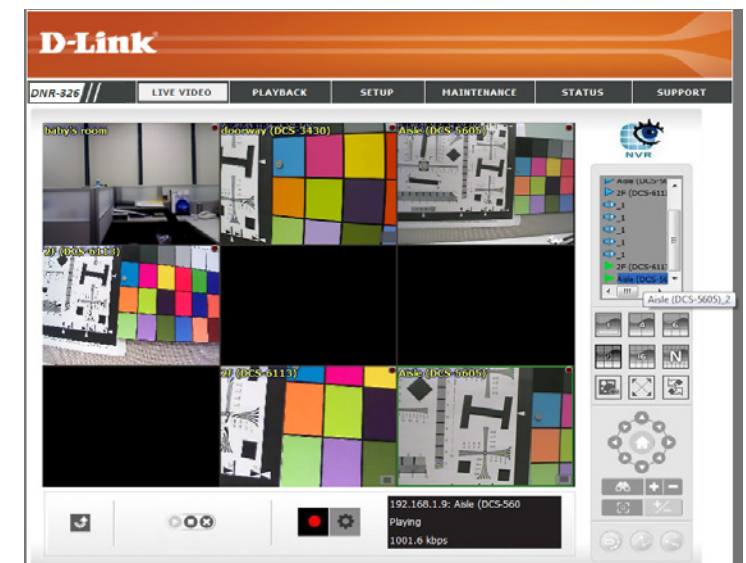
# Multiple View

You can right-click on camera list to duplicate and connect/disconnect designate cameras, and do other functions.

**Duplicate Camera:** Select the duplicate camera function to create multiple views. The duplicated camera will be shown with a green indicator. If you combine this function with digital PTZ, users are able to enlarge different spots and view them in different channels while recording the whole view.

**Connect/Disconnect:** Click to connect or disconnect the designated camera.

**Connect All/Disconnect All:** Click to connect or disconnect all cameras.



# Playback

This feature allows you to search and playback the recorded video.

## Play the Recorded Video

Step 1: Be sure that you have set the schedule/recording event first.

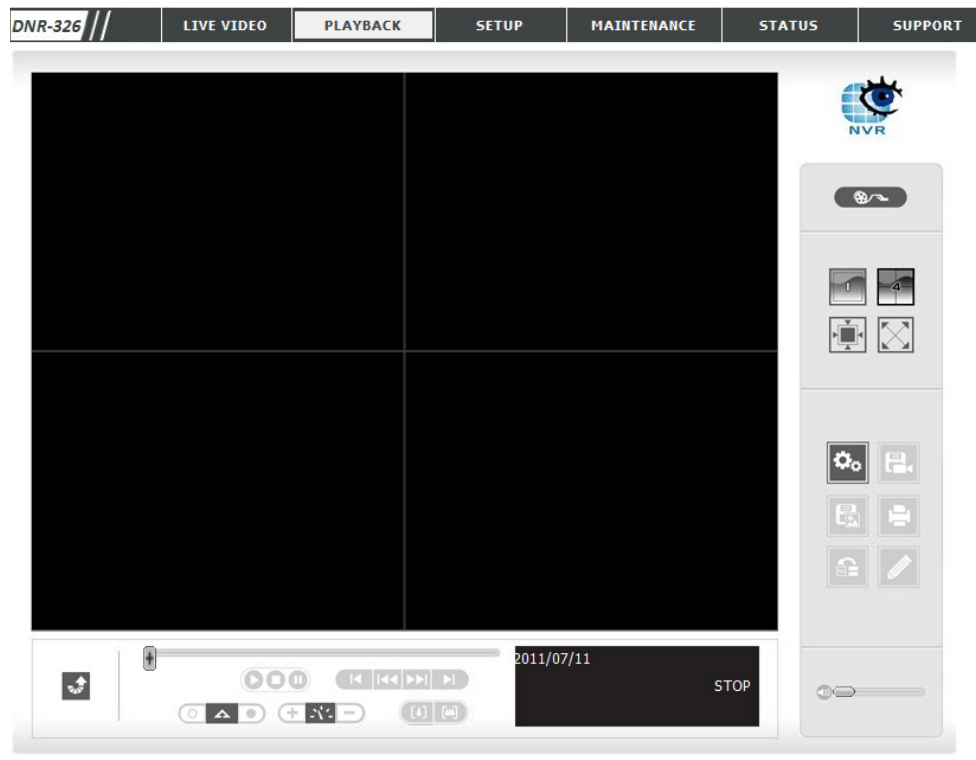
Step 2: Click the **PLAYBACK** tab at the top of the menu.

Step 3: Click the **Open Record** button.

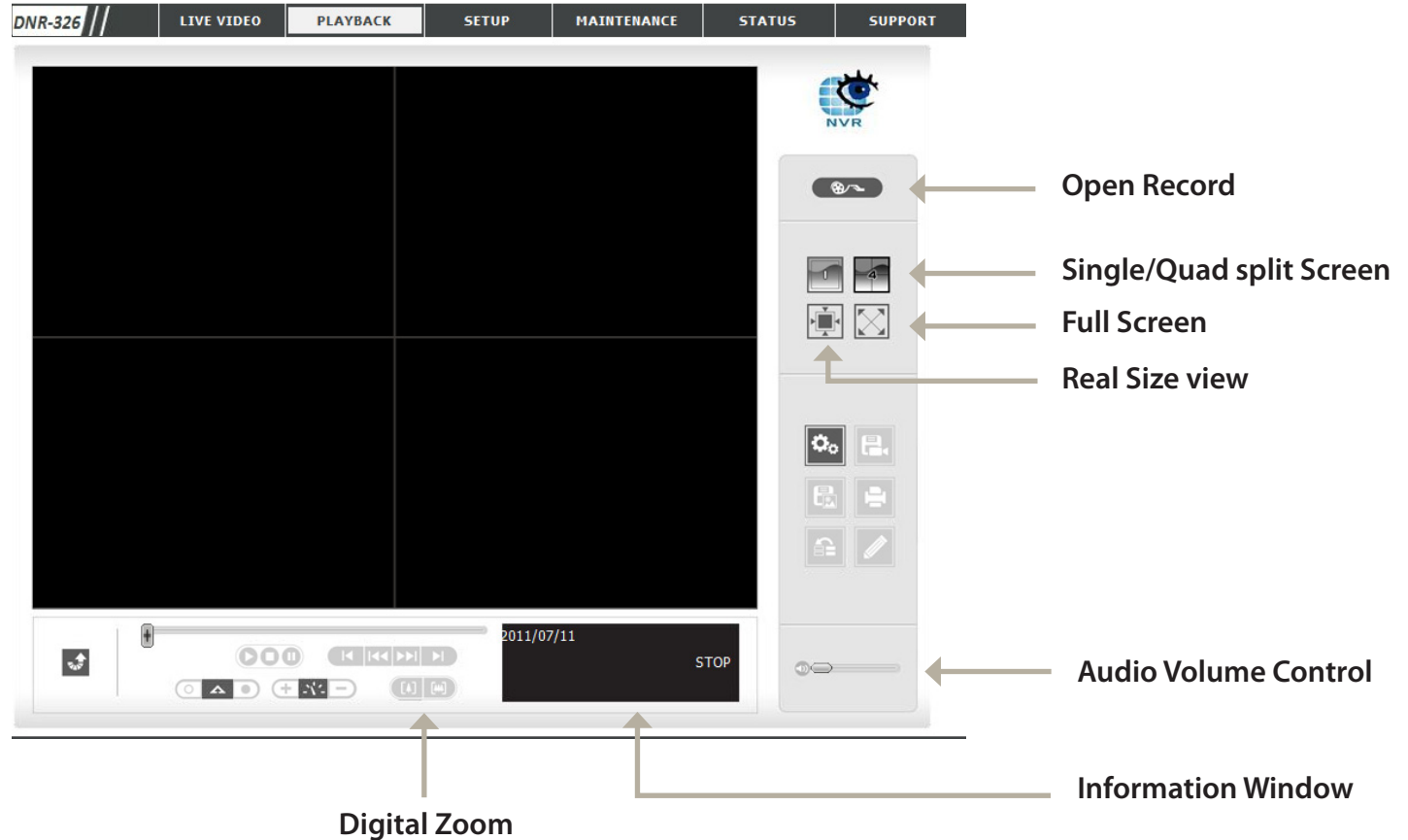
Step 4: The **Record Display Window** will show information about the available video clips. Select the date you would like to find the video records.

Step 5: Highlight the video records that you would like to review.

Step 6: Click the **OK** button.







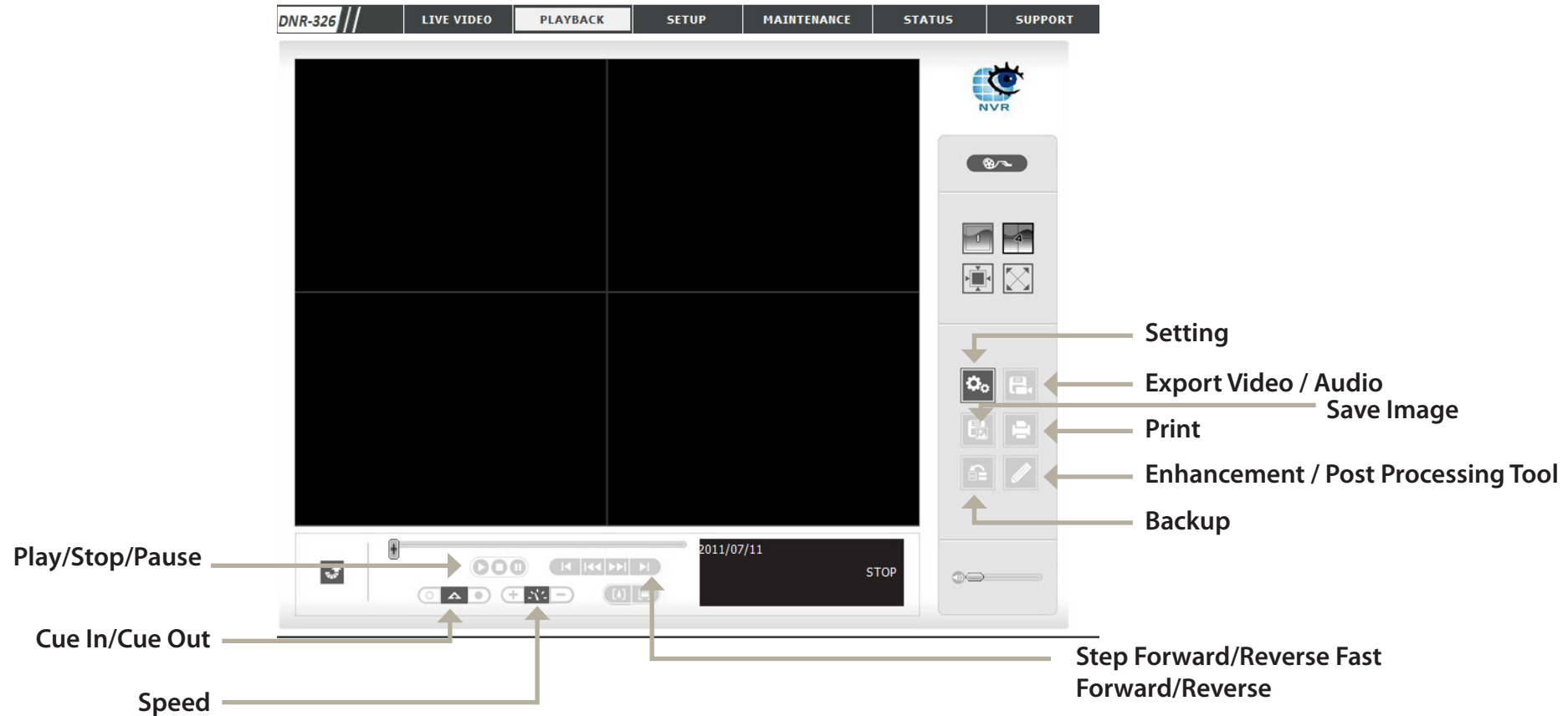
**Single/Quad split Screen:** Users may view a single camera or 4 cameras at a time.

**Full Screen:** Select to display the video with full screen. Press the **ESC** key on the keyboard to return to normal display.

**Information Window:** Display video date and time, cue in/ out points, time and speed.

**Audio Volume Control :** Adjust the sound level.

**Digital Zoom:** Click the icon to digitally zoom in or out. Every camera can use this function.



**Play/Stop/Pause:** Select a camera/video and click this button to play/stop/pause a particular channel.

**Speed:** Click the + or - button to increase or decrease the playback speed.

**Cue In/Cue out:** Click the **Cue In** or **Cue Out** button to set the period for Save Video.

**Step Forward/Reverse:** Click to pause the playback and move to next frame or last frame.

**Fast Forward/Reverse:** Click to pause the playback and move to next minute or last minute.

# Record and Playback Settings

Click the **Setting** icon to access and change the Playback settings.

## Record Display

**Calendar View:** Recordings are displayed as a calendar.

**List Control:** Recordings are displayed as a list.

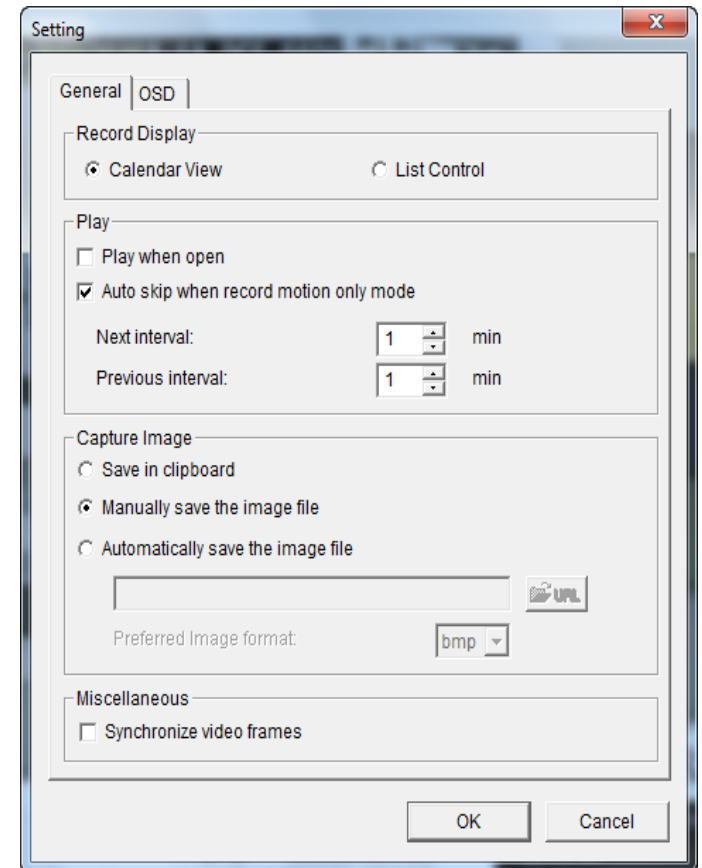
## Play

**Play when open:** When selecting this option, the system will start playing the video clip whenever a record is withdrawn.

**Auto skip when record motion only mode:** Check the option to set up the system to automatically skip to the points where motion is recorded.

**Next Interval:** Set the interval for the video to go forward when you click the **Forward** button on the control panel.

**Previous Interval:** Set the interval for the video to go back when you click the **Reverse** button on the control panel.



## Capture Image

**Save in Clipboard:** The image will be saved in the clipboard and can be pasted to other applications.

**Manually save the image file:** You can manually select where you would like to save the image, name the saved file, and choose the desired format for the image.

**Automatically save the image file:** By pre-setting a path/URL and the image format, the system will automatically save the image accordingly when you click the **Save Image** button in the control panel.

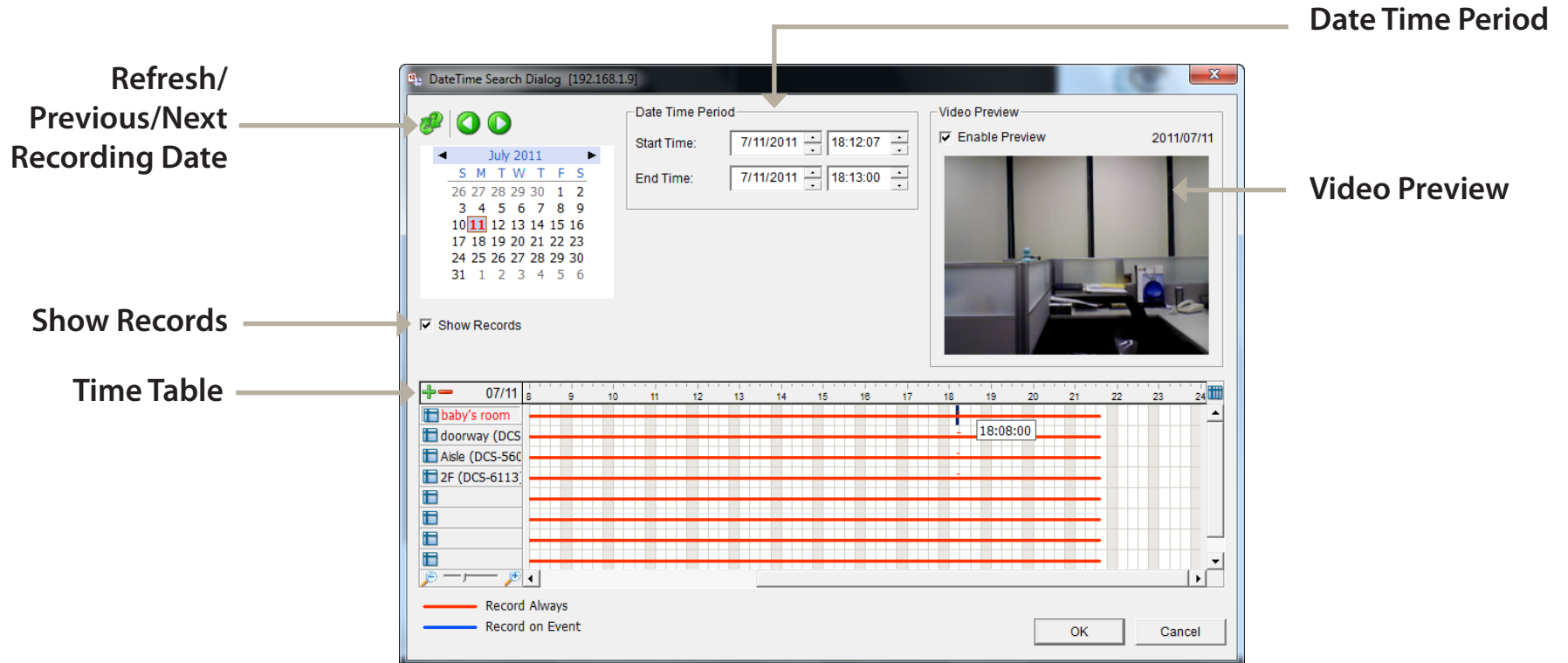
## Miscellaneous

Check Synchronize video frames to avoid the tearing problem occurring in video display while increasing the CPU loading.

## Search the Recorded Video For Playback

Click the **Open Record** button to access the Date-Time Panel and select the video records which you would like to review.

Users can refresh the **Date Time Search Dialog Window** or go to the previous or next recording date by clicking the upper left corner buttons.



**Record Display Window:** Display the available recorded video records.

**Date Time Period:** Select the start and end points that indicate the time period you would like to view.

**Video Preview:** Check the **Enable Preview** option to view the selected video.

**Time Table (pre-set recording schedule):** Click the icon “+” to select all channels, or click the icon “-” to deselect all channels. The scale bar can be used to modify the scale of the time table. There are two recording modes: **Record Always** and **Record on Event**. The timetable will display these two modes in different colors.

**Show Records:** Displays the recording data in a timetable.

**Step 1:** From the **Record Display Window** at the top left of the **Date Time Panel**, select the date you would like to search the record from. The red lines shown on the timetable indicate available recorded video records.

**Step 2:** Use color bars to differentiate recording types from each other. This will help you select video clips.

**Step 3:** Highlight the video clip you would like to review by left-clicking and dragging the time period. You may also utilize the **Start Time** and **End Time** in the **Date Time Period Section** after choosing the camera. The scale of the timetable can be modified using the icon at the bottom left corner.

**Step 4:** Select the **Enable Preview** option to get the preview of the video you select.

**Step 5:** Click the camera name to select the cameras you would like to play back.

**Step 6:** Click the **OK** button to begin playback.

**Note:**

The Record Display Window can be shown in (a) calendar view or (b) list control view. To modify the settings of the record display window, click the **Setting** button at the right of the page.

## Smart Search from the Recorded Video

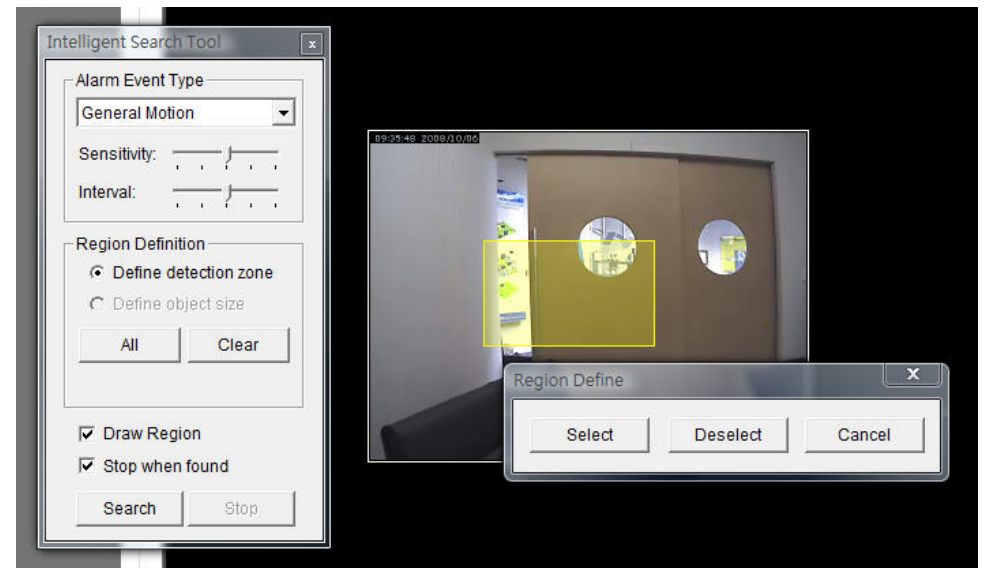
Smart Search allows users to search for specific unusual events based on certain criteria.

There are 5 types of unusual events: **General Motion**, **Foreign Object**, **Missing Object**, **Lose Focus**, and **Camera Occlusion**. Users can refresh the **Date Time Search Dialog Window** or go to the previous or next recording date by pressing the upper left corner buttons. After opening the recorded video, click the **Search Mode** button to obtain the **Intelligent Search Tool** panel and select the type of event in the **Alarm Event Type** pulldown menu you would like to search for.

### General Motion

Detect all movements in the defined area.

1. Define a detection zone by clicking and dragging to draw an area on the image. You may define more than one zone by repeating this step.
2. Modify the sensitivity setting by adjusting the slider control. Moving the slider toward the right will increase the sensitivity level, which means a relatively small movement will trigger the alarm.
3. Set the interval. Moving the slider toward the right will increase the time interval so that the alarm will only be triggered when the movement lasts for a longer period of time.
4. Select the **Stop when found** option. If unchecked, the search tool will list all the events it found, instead of stopping at the moment the event was found.
5. Click the **Search** button.



### **Foreign Object**

The alarm triggers when any additional object appears in the defined area on the screen.

1. Define the detection zone by clicking and dragging to draw an area on the image.
2. Modify the sensitivity setting.
3. Set the Interval.
4. Select the **Stop when found** option. If unchecked, the search tool will list all the events it found, instead of stopping at the moment an event is found.
5. Click the **Search** button.

### **Missing Object**

The alarm triggers when the selected object is removed from the defined area on the screen.

1. Define the detection object by clicking and dragging to draw an area on the image.
2. Modify the sensitivity setting.
3. Set the Interval.
4. Check the **Stop when found** option. If unchecked, the search tool will list all the events it found, instead of stopping at the moment the event found.
5. Click the **Search** button.

### **Lose Focus**

The system will inform you when the camera(s) loses focus.

### **Camera Occlusion**

The alarm triggers when the camera is blocked.



# Recorded Video Enhancement

During playback, users can click the **Enhancement** button to enable post processing of the selected video.

## General Setting

**Apply active channel:** The settings will be only applied to the selected channel.

**Apply all channels:** The settings will be only applied to those currently shown on the screen.

## Filter Setting

**Visibility:** Select this option and adjust the gamma to change the luminance.

**Sharpen:** Select this option to activate the function. Move the slider control to the right to sharpen the image, to the left to soften it.

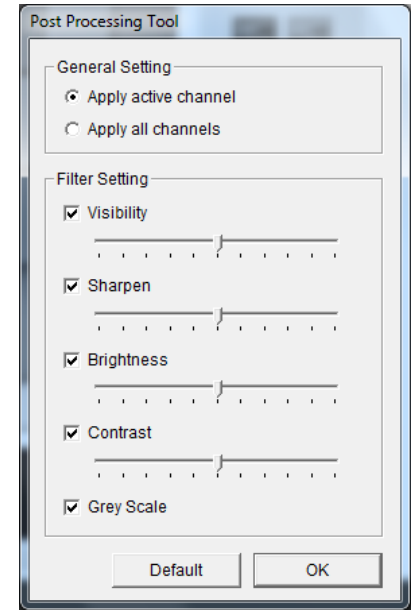
**Brightness:** Select this option and move the slider control to the right or left to make the image brighter or dimmer.

**Contrast:** Select this option and move the slider control to the right or left to increase or decrease the contrast.

**Greyscale:** Select this option to display the image in black and white.

**Default:** Reset settings to their defaults.

**OK:** Apply the modifications.



## Save Video

**Step 1:** During playback, users can choose the camera where they would like to save a video clip from.

**Step 2:** Set the cue in and cue out points; the cue in and cue out time will be shown on the information window. Then click the **Save Video** button.

**Step 3:** Choose the folder where you would like to save the file.

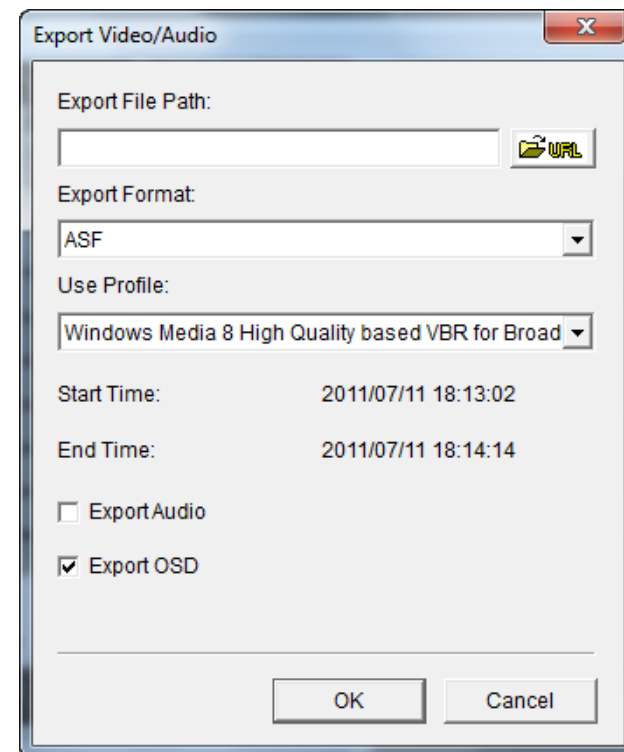
**Step 4:** Input the file name and click the **Save** button.

**Step 5:** Choose the export format.

**Step 6:** Choose the use profile.

**Step 7:** Select the **Export Audio** option if the video has audio and you would like to export the audio with the video.

**Step 8:** Click the **OK** button.



**Note:** The .asf format is recommended for exporting video.

## Save Image

**Step 1:** During playback, users can choose to save an image from a selected camera.

**Step 2:** Click the **Save Image** button when the desired image is shown on the screen.

**Step 3:** Click the **Save Image** button again to choose the folder where you would like to save the file to.

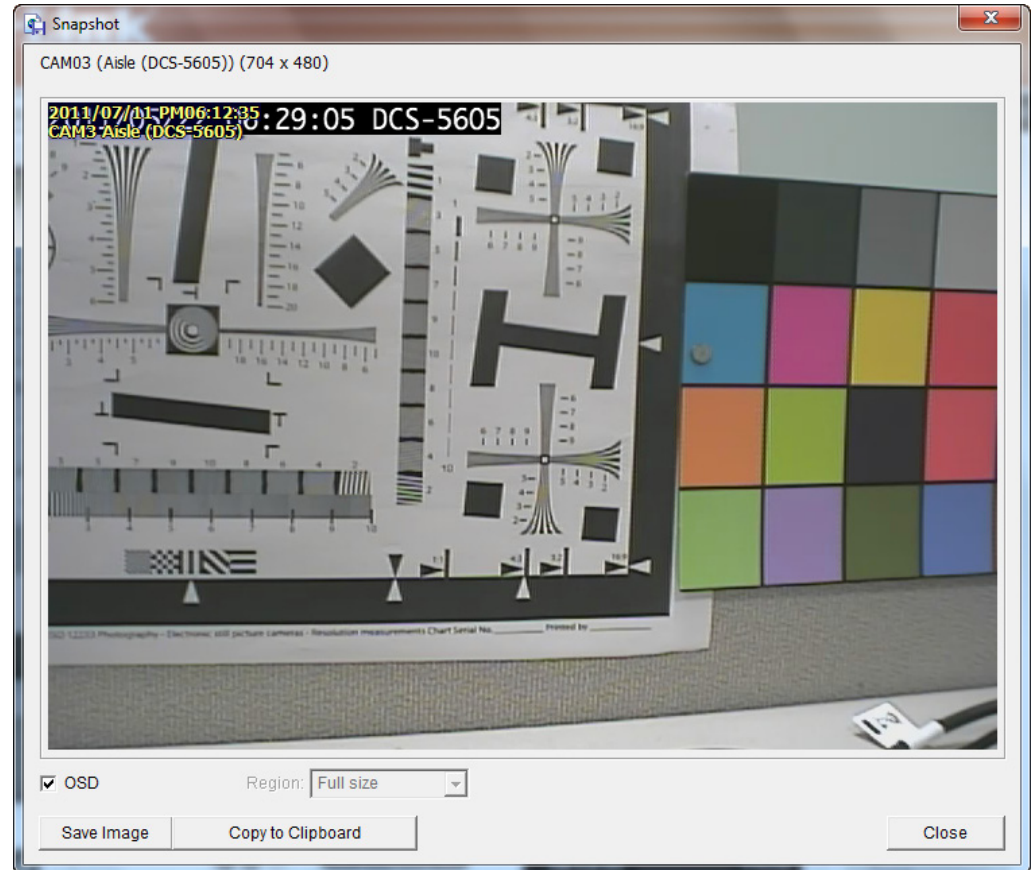
**Step 4:** Choose the desired image format (BMP or JPEG).

**Step 5:** Input the file name.

**Step 6:** Click the **Save** button.

**Note:**

You may skip step 3 by pre-selecting a folder and format for images. See the **Setting** option for more details.



# Print Image

**Step 1:** During playback, the user can choose to print a selected image.

**Step 2:** Click the **Print** button when the desired image is shown on the screen.

**Step 3:** Select desired print settings.

## Print Setup

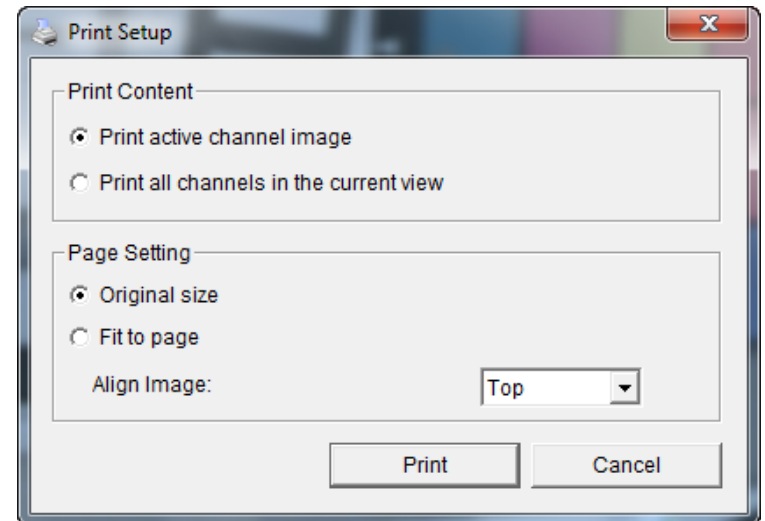
**Print Content:** Print the image from the currently selected channel or all the channels shown on the screen.

**Print in original size:** Select this option to have the image print in the original size.

**Fit the page:** Select this option to fit the image to the page.

**Align Image:** Align to the top, center, or bottom of the page.

**Step 4:** Click the **Print** button.



## Backup Recorded Video

Unlike the Save Video function, the Backup function will save all the recorded videos during the time period you select, instead of a single video clip.

**Step 1:** Use **Open Record** to select the desired data.

**Step 2:** Click the **Backup** button.

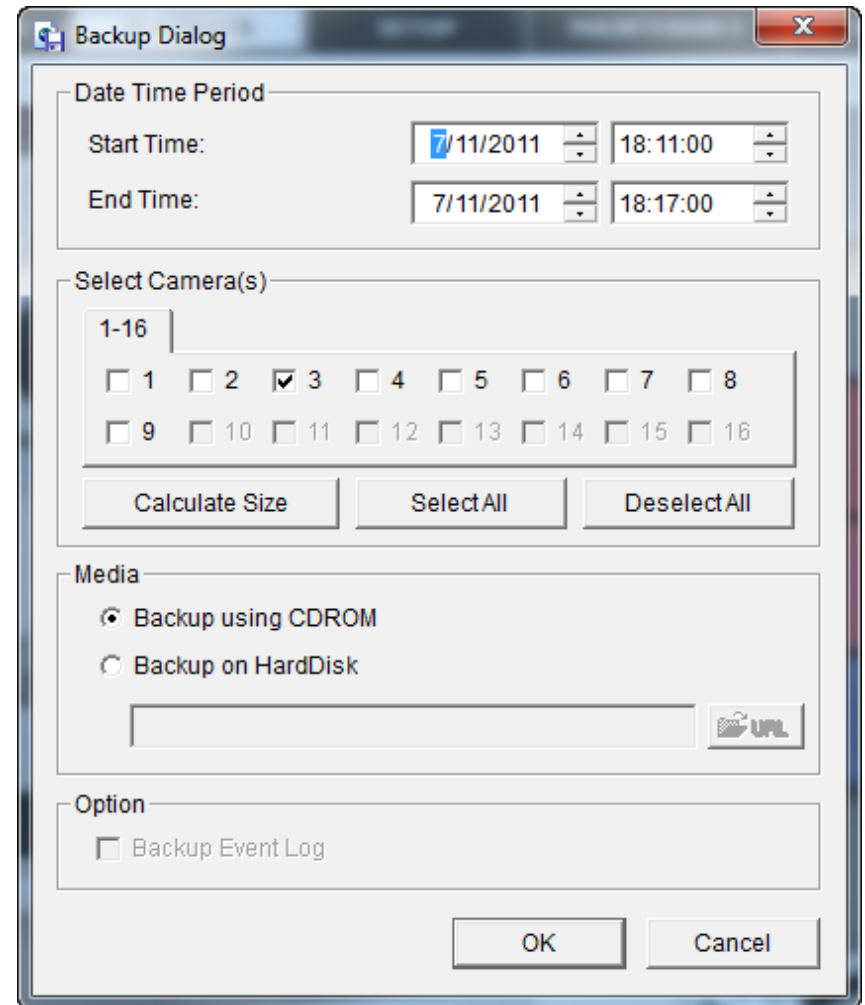
**Step 3:** Set the **Start Time** and **End Time** that you would like to backup.

**Step 4:** Select the cameras that you would like to backup.

**Step 5:** Select the directory where you would like to backup the data to.

**Step 6:** Click the **Backup** button.

The system will then begin the backup process automatically.



# Multi-NVR Viewer Application

**Step 1:** Please insert the product CD.

**Step 2:** Install the **D-ViewCam NVR Pro** application from the CD.

**Step 3:** Run the **Multi-NVR Viewer** application from Start -> Programs -> D-Link -> D-ViewCam NVR Pro -> Multi-NVR Viewer

## PTZ Camera

**Control:** Control the camera view by utilizing the PTZ camera control panel to adjust the camera's view. This is only available with cameras that support the PTZ function.

**Zoom:** Click the + or - button to zoom in or zoom out the view.

**Minimize:** Minimize the Remote Live Viewer window.

**Exit:** Shut down the application.

**Digital Zoom:** Click the icon to digitally zoom in or out.

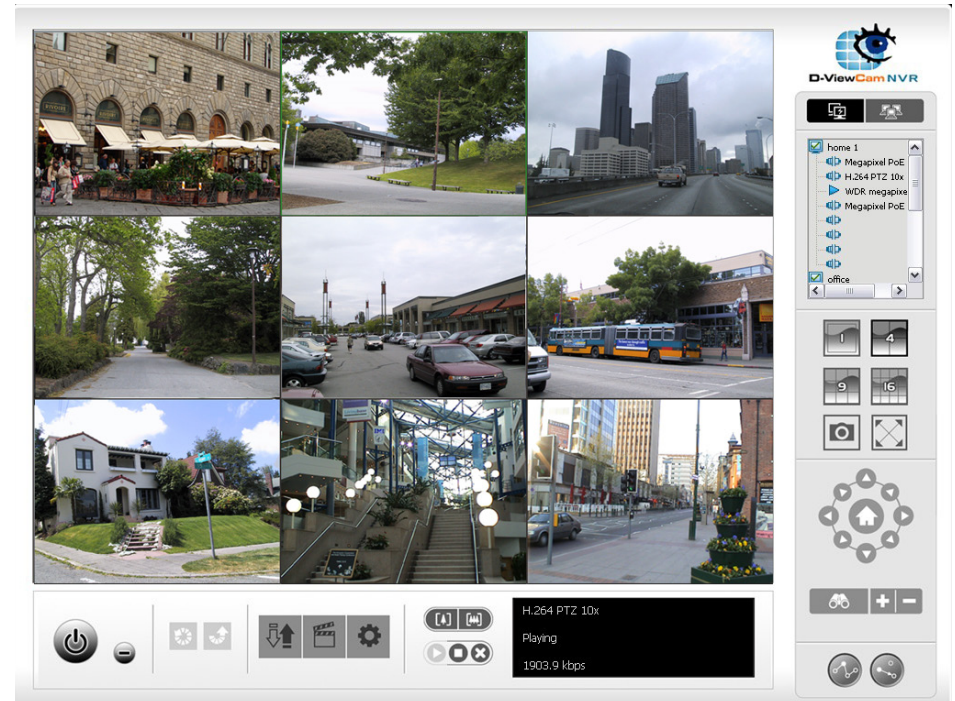
**Play/Stop/ Drop:** Select the camera/video and click this button to play/ stop/disconnect a particular channel.

**Information Display Window:** Display video information including server name, video current status, and bit rate for a selected channel.

**Playback:** View playback video remotely.

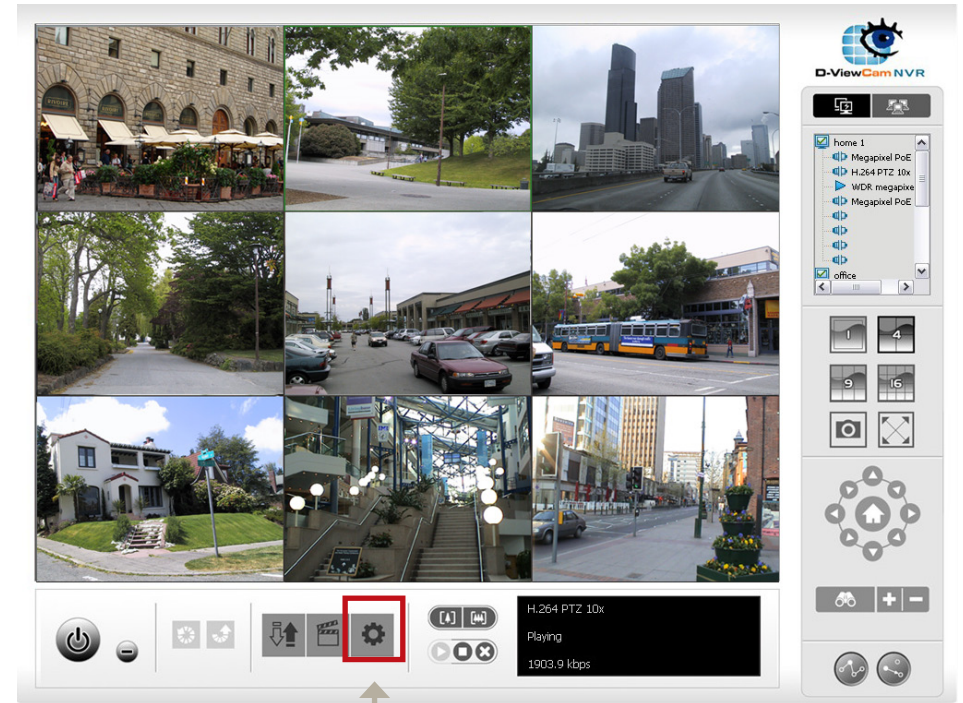
**Snapshot:** Select the snapshot function to capture a specific video image immediately.

**Remote I/O:** Users can remotely adjust the external I/O device.



## Set Connections to the Units

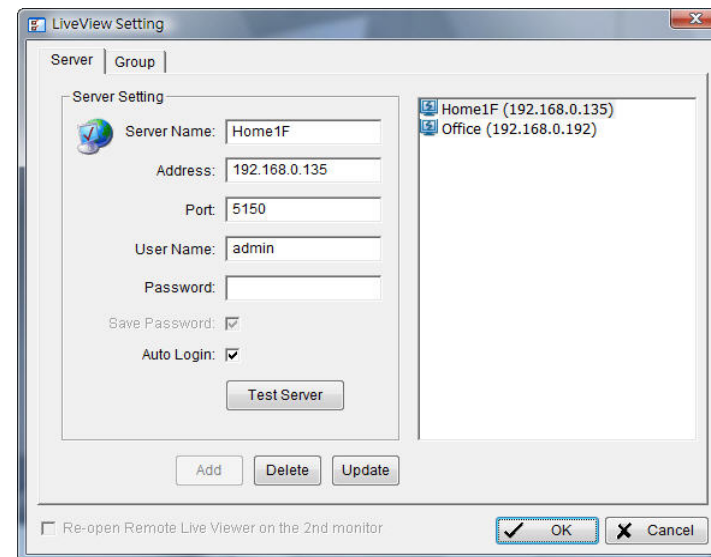
- Step 1:** Click the **Site Setup** button.
- Step 2:** Input the unit name.
- Step 3:** Input the IP address.
- Step 4:** Modify the port if necessary.
- Step 5:** Input the user name.
- Step 6:** Input the password.
- Step 7:** Check the **Save Password/ Auto Login** option.
- Step 8:** Click the **Test Server** button to test the connection between the local application and the remote unit.
- Step 9:** Click the **Add** button to add this unit into your remote server list.
- Step 10:** Click the **OK** button.



Site Setup

## Set Groups for Cameras

- Step 1:** Click the **Group** tab.
- Step 2:** Log in to all the servers that contain the camera(s) you would like to put into group(s).
- Step 3:** Click the **Insert** button to create a new group.
- Step 4:** Name this group.
- Step 5:** Highlight the camera(s) that you would like to add into this group and then click the **<-** button.
- Step 6:** Repeat step 4 to establish the group.
- Step 7:** Repeat steps 1 through 6 to establish other groups.
- Step 8:** Click the **OK** button.



# Playback Manager Application

**Step 1:** Please insert the product CD.

**Step 2:** Install the **D-ViewCam NVR Pro** application from CD.

**Step 3:** Run the **Playback Manager** application from the Start  
-> Programs -> D-Link -> D-ViewCam NVR Pro ->  
Playback Manager

The Playback System control panel is similar to the playback panel in Internet Explorer. See pages 52-54 for more details about those buttons.

**1/4/9/16 Split Screen:** Users can select to view a single camera or 4 cameras at a time.

**Full Screen:** Select to display the video with full screen. Press ESC button on the keyboard to return to normal display.

**Information Window:** Display video date and time, cue in/out points, time, and speed.

**Audio Volume Control :** Adjust the sound level.

**Digital Zoom:** Click the icon to digital zoom in or digital zoom out the view. Every camera can use this function.

**Play/Stop/Pause:** Select a camera/video and click this button to play/stop/pause a particular channel.

**Speed:** Click the + or - button to increase or decrease the playback speed.



Remote Server



**Cue in/Cue out:** Click the Cue In or Cue Out button to set the time period for Save Video.

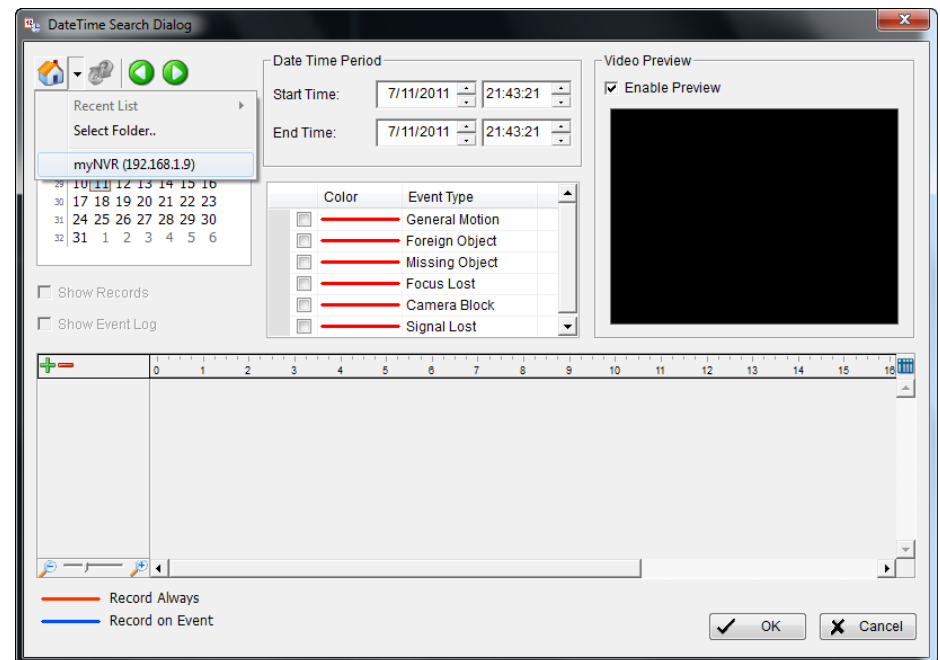
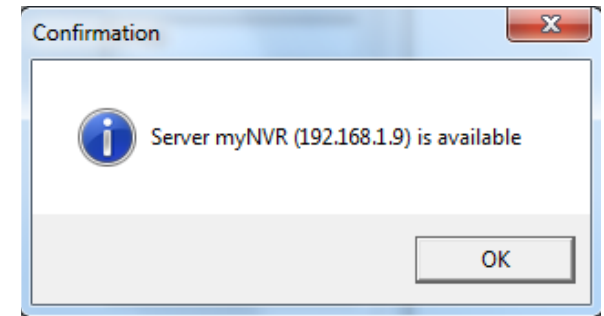
**Step forward/Reverse:** Click to pause the playback and move to the next frame or last frame.

**Fast forward/Reverse:** Click to pause the playback and move to the next minute or last minute.

## Set Connections to the Units

- Step 1:** Click the **Remote Server** button.
- Step 2:** Input the name of your unit.
- Step 3:** Input the IP address of that unit.
- Step 4:** Modify the port if necessary.
- Step 5:** Input the user name.
- Step 6:** Input the password.
- Step 7:** Check the **Save Password** option.
- Step 8:** Click the **Test Server** button to test the connection between the local application and the remote unit.
- Step 9:** Click the **Add** button to add this unit into the remote server list.
- Step 10:** Click the **OK** button.

The Search, Playback, Video Enhancement, Print Image, Save Video, Save Image, Backup functions are the same as the steps for the Internet Explorer, please see pages 52-65.



# Backup and File Manager Application

In addition to the ways mentioned in the previous chapters, you can apply the application to backup your files.

Run the Backup and File Manager application from the **Start -> Programs -> D-Link -> D-ViewCam NVR Pro -> Backup and File Manager**

**Step 1:** Input the IP address of your unit.

**Step 2:** Input the user name.

**Step 3:** Input the password.

**Step 4:** Click the **OK** button.

**Step 5:** Click the **New Period** button.

**Step 6:** Select the record date.

**Step 7:** Set the **Start Time** and **End Time** you would like to backup (or highlight the video records that you would like to backup).

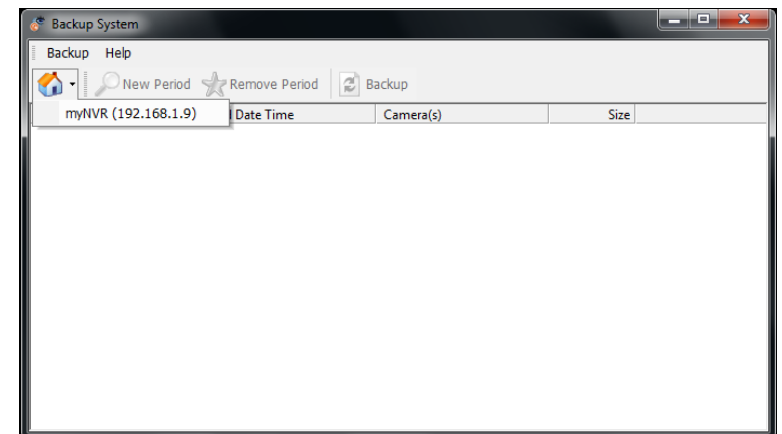
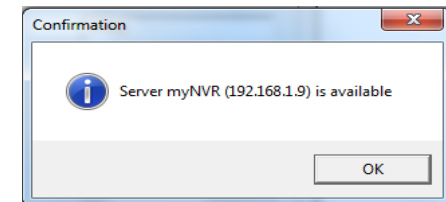
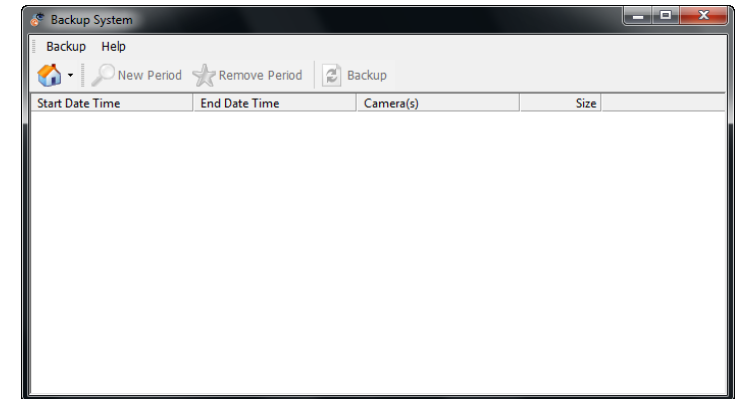
**Step 8:** Select the cameras you would like to backup.

**Step 9:** Click the **OK** button.

**Step 10:** Select the time slot which you would like to backup.

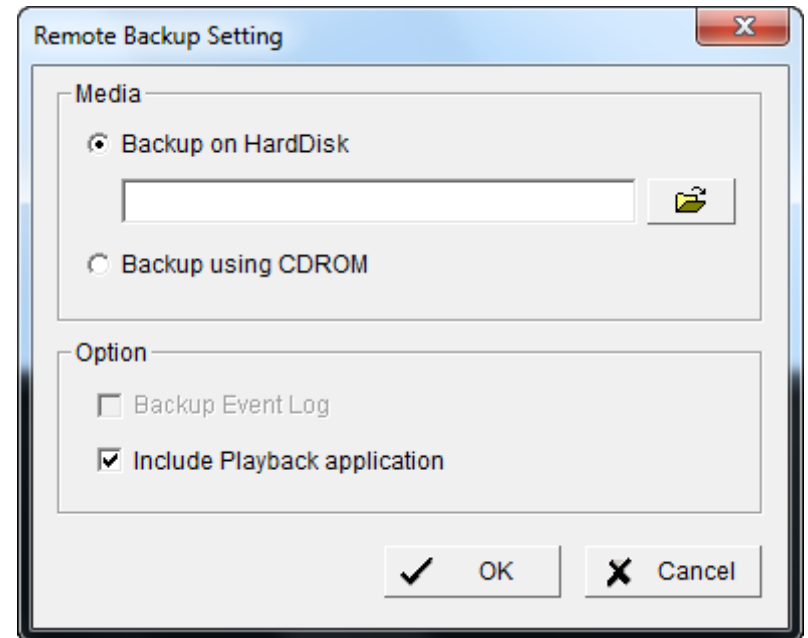
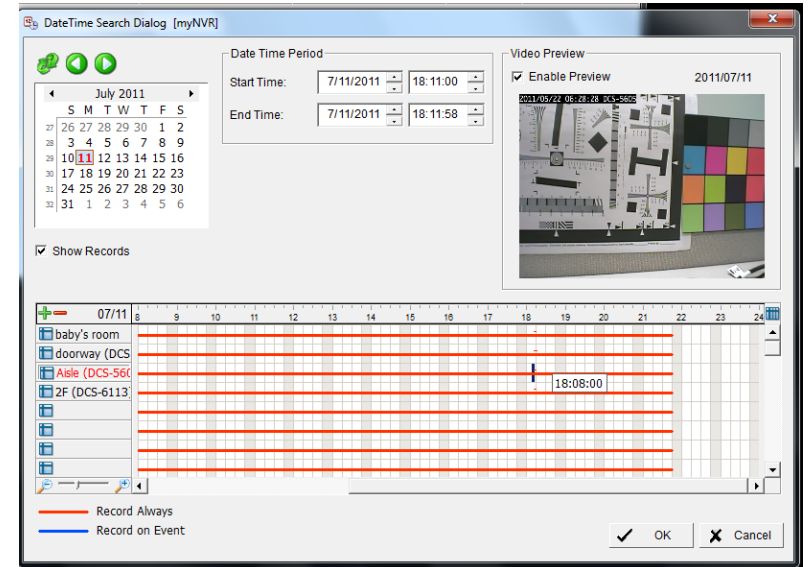
**Step 11:** Click the **Backup** button.

**Step 12:** Select the location where you would like to save the backup data.



**Step 13:** Check the **Include Playback application** option, which will add **Playback** application into the backup folder.

**Step 14:** Click the **OK** button.



# Verification Tool

The Verification Tool verifies whether the data created by the system has been tampered with. It's the process by which a digital watermark (a digital signature) is added to each recorded video frame to ensure its authenticity.

There are two types of data that can be verified by Verification Tool:

1. File in (.avi) (.asf).
2. File in (.bmp) (.jpg).

**Add File:** Insert the single file to list for verification.

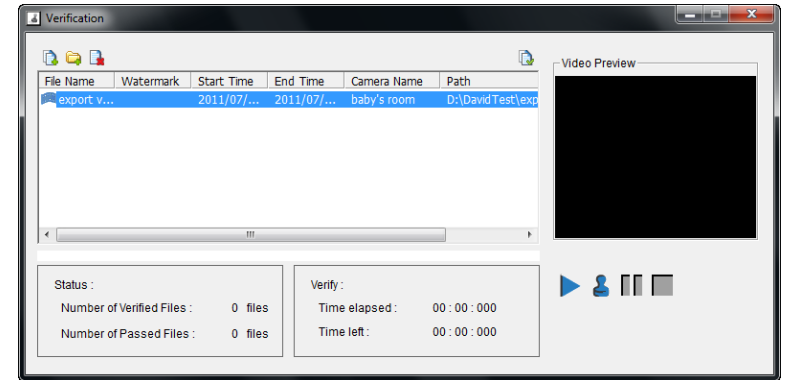
**Add Folder:** Choose the folder with multiple files to list for verification.

**Remove File:** Remove indicated file(s) from list.




**Select All:** Select all files in the list for verification.

**Note:**

Choose the file type first before selecting files.



## Verify Image / Video

1. Select single or multiple files for verification.
2. Click the Verify  button to start verification.
3. The verification result will show on watermark column. If a file was tampered with, it will show  ; if a file passed verification, it will show .

# Troubleshooting

## Check Disk Status LEDs to verify condition of the NVR

The disk status LEDs report the condition of the disk drives:

These lights will be solid BLUE when drives are connected but inactive.

The lights will blink when the drives are being accessed, formatted or synchronized.

They will illuminate AMBER if a drive has failed.

## Replace a Failed Disk Drive

If a disk drive fails, the Disk Status LED will turn amber. If the disk drive belongs to a RAID Volume, the Volume will go Critical or Offline.

Replace the failed disk drive with a new disk drive of the same or slightly greater capacity. Please make sure you have powered down the unit.

Step 1: Open the unit's front cover.

Step 2: Pull out the failed disk drive.

Step 3: Install a new disk drive into the slot.

If the failed drive belonged to a RAID Volume, the RAID Volume will begin rebuilding as soon as the new drive is installed. During the rebuild, the Disk Status LED will blink. If the replacement drive is free, i.e. not assigned to a RAID Volume or as a spare, the Disk Status LED remains dark after you install the new drive.

## Respond to a Critical RAID Volume

How the unit responds to a critical RAID Volume depends on the RAID level of your Volume and whether you have a spare drive available:

For **RAID 1** Volumes, if a spare drive is available, the RAID Volume will begin rebuilding itself automatically.

For **RAID 1** Volumes, when no spare drive is available, you must replace the failed disk drive. The RAID Volume will begin rebuilding itself when you install the new disk drive.

For **RAID 0** Volumes go offline after a disk drive failure. A **RAID 0** volume cannot be rebuilt. All data on the volume will be lost.

### **Restore the Default Administrator's Password**

If you forget the password, you can reset the password for "admin" to the default password: **<empty>**. Press and hold the reset button for 5 seconds until the Power LED flashes three times. The Administrator password will now be blank.

### **Caution when resetting or recovering unit**

When you reset or recover your unit, sometimes it will cause data corruption. Backup your recorded data before resetting your unit.

### **Install ActiveX**

If you cannot see the complete page of the system when using Internet Explorer, the ActiveX installation process may not be complete.

Step 1: Click the **Live View/Playback** button on the top right.

Step 2: The browser will ask whether to install ActiveX.

Step 3: Click the upper bar to begin the installation process.

Step 4: Click the **Install** button to complete the process.

### **Cannot Login to the Unit through Internet Explorer**

1. Check the settings of your anti-virus software.
2. Adjust the settings of or disable anti-virus software.



# Choose a RAID Level

There are several issues to consider when choosing the RAID level. The following summarizes some advantages, disadvantages and applications for each choice.

## RAID 0

### Advantage

- Implements a striped disk RAID Volume, meaning the data is broken down into blocks, and each block is written to a separate disk drive
- I/O performance is greatly improved by spreading the I/O load across many channels and drives
- No parity calculation overhead is involved

### Disadvantage

- Not a true RAID because it is not fault tolerant
- The failure of just one drive will result in all data in an RAID Volume being lost
- Should not be used in mission critical environments

## RAID 1

### Advantage

- Simplest RAID storage subsystem design
- Can increase read performance by processing data requests in parallel since the same data resides on two different drives

### Disadvantage

- Very high disk overhead - uses only 50% of total capacity

## What is RAID?

RAID, short for Redundant Array of Independent Disks, is a combination of two or more disks with the aim of providing fault tolerance and improving performance. There are several different levels of RAID, with each providing a different method of sharing or distributing data amongst the drives. The NVR supports RAID levels 0 and 1.

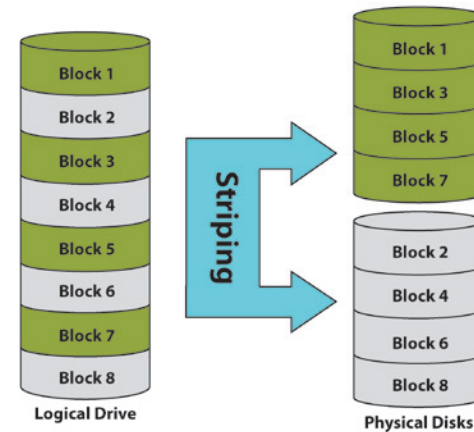
**RAID 0** RAID 0 provides data striping, which spreads out blocks of data over both drives, but does not provide data redundancy.

Although performance is improved, the lack of fault tolerance means that if one drive fails, all data in the array will be lost.

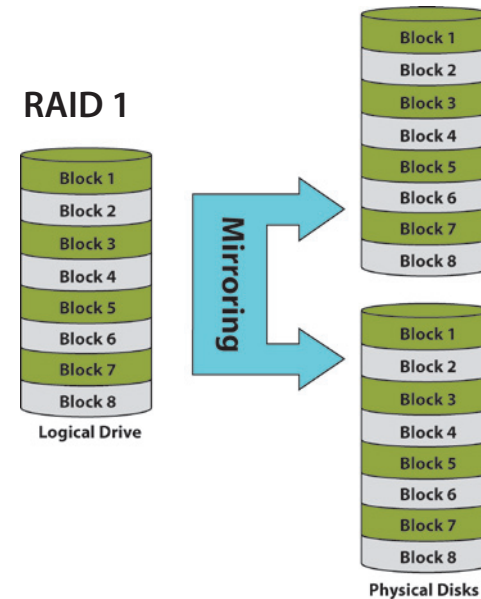
**RAID 1** RAID 1 provides mirroring over both disks, with the same read/write speed of a single disk. A RAID 1 array can only be as large as its smallest member disk.

Because the data is stored on both disks, RAID 1 provides fault tolerance and protection, in addition to performance advantages.

### RAID 0



### RAID 1



# Replacing or Adding a New Hard Drive

It is recommended that you backup your important files before replacing or adding a new hard drive to the NVR.

## Replacing a Hard Drive:

Please make sure the power is off before replacing a hard drive. After you have installed the new drive, turn on the NVR and then connect to the Web UI. The NVR will prompt you to format the new drive (Standard, RAID 1 mode) or both drives (JBOD, RAID 0 mode).

## Adding a New Hard Drive:

The NVR is able to work with one single hard drive under Standard mode. Please make sure the power is off before installing a second hard drive.

After you have installed the new drive, turn on the NVR and then connect to the Web UI. The NVR will prompt you to format the new drive.

**Note: Formatting a hard drive will erase the data stored on the hard drive. Please backup important data before formatting a hard drive.**

# Technical Specifications

## Firmware Specifications

### OS

- Linux

### CAMERAS SUPPORT

- Supports all D-Link network cameras as well as those for Axis, Panasonic, Sony, Mobotix, Arecont Vision, IQinVision, Cisco, and ACTi. Includes support for auto-discovery, and megapixel resolution.

### RECORDING PERFORMANCE

#### Max. capacity (NVR mode only):

- H.264 1080P (bitrate): 90 Mbps
- H.264 720P (bitrate): 90 Mbps
- MJPEG 1080P (frame rate): 90 fps
- MJPEG 720P (frame rate): 192 fps

#### Max. capacity (NVR+File Server mode):

- H.264 1080P (bitrate): 68 Mbps
- H.264 720P (bitrate): 68 Mbps
- MJPEG 1080P (frame rate): 70 fps
- MJPEG 720P (frame rate): 150 fps

Note: To enable the File Server function will affect the recording performance. It also differs by video compression.

### CAMERA SEARCH

- UPnP

### AUDIO & VIDEO RECORDING

- Synchronized audio & video recording.

### COMPRESSION FORMAT

- H.264, MPEG-4, M-JPEG (for supported network cameras)

### VIDEO SETTING

- Resolution, quality, frame rate, enable audio, go to camera interface

### RECORDING TYPE

- Record by schedule, manual record and event recording (DI trigger, motion detection from camera)

### REMOTE LIVE VIEW

- Supported via IE remote live viewer (Max. 9 simultaneous channels)

### REMOTE LIVE VIEW CONTROL

- Live view, preset/go, patrol, focus, PTZ functions, snapshot, full screen, digital zoom

### REMOTE PLAYBACK

- Supported via IE and NVR client
- Playback system with timeline GUI, search by event, area, cameras, date and time
- IE & NVR client support four channel simultaneous playback

### REMOTE PLAYBACK CONTROL

- Playback with normal, fast forward/rewind and step forward/rewind
- Smart Search Intelligent detection function with general motion, missing object, foreign object, camera occlusion, lose focus

### OVERWRITE RECORDING

- Auto recycling when disk storage is full

### FILE EXPORT

- Export videos to AVI or ASF file
- Export images to BMP or JPG file

### USER ACCOUNT

- Additional accounts can be created to allow user access to the system, and specify authorization for the camera channels, PTZ, etc.

## DDNS

- D-Link DDNS server support

## SYSTEM TIME

- Set the system time (D-Link NTP, Input time, Sync with computer, Daylight Saving Time)

## REMOTE BACKUP

- Remote software can backup raw data to redundant storage
- Auto backup recorded video to remote FTP server by daily schedule

## SYSTEM STATUS

- Camera status, System status

## NETWORK SERVICE PROTOCOLS

- IPV4, ARP, TCP, UDP, ICMP
- DHCP Client
- DHCP Server
- NTP Client (D-Link)
- DNS Client
- DDNS Client (D-Link)
- SMTP Client
- HTTP Server
- PPPoE
- UPnP
- IP filtering
- Samba Server

## USER INTERFACE

- HTTP Web browser - Internet Explorer 7 or later (32 bit OS only)
- NVR Search Utility
- Multiple language GUI

## Hardware Specifications

### STANDARDS

- IEEE 802.3/u/z
- Auto MDI/MDI-X
- SATA I, II

### HARD DISK<sup>1</sup>

- Hard Disk control & manage via PC
- Reformat Disk
- RAID 0
- RAID 1<sup>2</sup>
- JBOD

### TWO RESET MODES

- Reset firmware GUI button
- HW reset button (press over 5 seconds)

### FLASH ROM

- 128 MB

### RAM

- 256 MB DDR II

### NIC

- Gigabit Ethernet LAN port (10/100/1000 Mbps)

### I/O PORTS

- RJ45 port
- DC-in jack
- USB port for UPS status update (optional)

### POWER ADAPTER

- DC 12 V/4 A

### RESET BUTTON

- Reset to factory default

### SECURITY

- Security lock
- Cover lock

### POWER CONSUMPTION

- Max. power consumption: 25.20 W
- Standby state max. power consumption: 0.23 W

### DIMENSION (W x D x H)

- 178.5 x 146.4 x 115 mm (7.03 x 5.76 x 4.53 inches)

### WEIGHT

- 875.1 g (1.93 lbs)

### OPERATING TEMPERATURE

- Operating: 0 to 55 °C (32 to 131 °F)
- Storage: -20 to 70 °C (-4 to 158 °F)

### HUMIDITY

- Operating: 5% to 90% (non-condensing)

### PACKAGE CONTENTS

- 2-Bay NVR
- Power Adapter
- Ethernet Cable
- Quick Installation Guide
- Power Cable Holder
- CD-ROM with:
  - Software
  - Product Documentation

<sup>1</sup> An external SATA drive is required to store or share files. (Not included.)

<sup>2</sup> RAID1 mirroring requires the use of two internal SATA drives. To avoid data incompatibility in RAID 1 operation, use identical SATA drives from the same manufacturer. Formatted drive capacity for RAID 1 operation is dependant on the drive capacity of the lowest-sized drive. Some older generation SATA drives may not be compatible. For a list of SATA drives that have been tested to work with the NVR, visit the D-Link support web site.