



Digital Video Recorder

User Manual

User Manual

About this Manual

This Manual is applicable to HD Digital Video Recorder (DVR).

The Manual includes instructions for using and managing the product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version in the company website.

Please use this user manual under the guidance of professionals.

Legal Disclaimer

REGARDING TO THE PRODUCT WITH INTERNET ACCESS, THE USE OF PRODUCT SHALL BE WHOLLY AT YOUR OWN RISKS. OUR COMPANY SHALL NOT TAKE ANY RESPONSIBILITIES FOR ABNORMAL OPERATION, PRIVACY LEAKAGE OR OTHER DAMAGES RESULTING FROM CYBER ATTACK, HACKER ATTACK, VIRUS INSPECTION, OR OTHER INTERNET SECURITY RISKS; HOWEVER, OUR COMPANY WILL PROVIDE TIMELY TECHNICAL SUPPORT IF REQUIRED.

SURVEILLANCE LAWS VARY BY JURISDICTION. PLEASE CHECK ALL RELEVANT LAWS IN YOUR JURISDICTION BEFORE USING THIS PRODUCT IN ORDER TO ENSURE THAT YOUR USE CONFORMS THE APPLICABLE LAW. OUR COMPANY SHALL NOT BE LIABLE IN THE EVENT THAT THIS PRODUCT IS USED WITH ILLEGITIMATE PURPOSES.

IN THE EVENT OF ANY CONFLICTS BETWEEN THIS MANUAL AND THE APPLICABLE LAW, THE LATER PREVAILS.

Regulatory Information

FCC Information

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC compliance: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity Statement



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 2014/30/EU, the LVD Directive 2014/35/EU, the RoHS Directive 2011/65/EU.



2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info



2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info

Industry Canada ICES-003 Compliance

This device meets the CAN ICES-3 (A)/NMB-3(A) standards requirements.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
 NOTE	Provides additional information to emphasize or supplement important points of the main text.
 WARNING	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
 DANGER	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.

Safety Instructions

- Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.
- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region. Please refer to technical specifications for detailed information.
- Input voltage should meet both the SELV (Safety Extra Low Voltage) and the Limited Power Source with 100~240 VAC or 12 VDC according to the IEC60950-1 standard. Please refer to technical specifications for detailed information.
- Do not connect several devices to one power adapter as adapter overload may cause over-heating or a fire hazard.
- Please make sure that the plug is firmly connected to the power socket.
- If smoke, odor or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.

Preventive and Cautionary Tips

Before connecting and operating your device, please be advised of the following tips:

- Ensure unit is installed in a well-ventilated, dust-free environment.
- Unit is designed for indoor use only.
- Keep all liquids away from the device.
- Ensure environmental conditions meet factory specifications.
- Ensure unit is properly secured to a rack or shelf. Major shocks or jolts to the unit as a result of dropping it may cause damage to the sensitive electronics within the unit.
- Use the device in conjunction with an UPS if possible.
- Power down the unit before connecting and disconnecting accessories and peripherals.
- A factory recommended HDD should be used for this device.
- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.

Product Key Features

General

- Connectable to HDTVI and analog cameras
- Connectable to AHD cameras



- Each channel supports dual stream. And sub-stream supports up to WD1 resolution;
- The main stream of 720P DVR supports up to 720p resolution, and the 1080P DVR supports up to 1080p lite (960×1080) resolution when 1080p Lite mode is enabled;
- Independent configuration for each channel, including resolution, frame rate, bit rate, image quality, etc.
- Encoding for both video stream and video & audio stream; audio and video synchronization during composite stream encoding;
- Support enabling H.264+ to ensure high video quality with lowered bitrate;
- Watermark technology.

Local Monitoring

- HDMI/VGA output
- 4/8 screen live view is supported, and the display sequence of screens is adjustable

- Live view screen can be switched in group and manual switch and automatic cycle live view are also provided, the interval of automatic cycle can be adjusted;
- Quick setting menu is provided for live view;
- The selected live view channel can be shielded;
- Motion detection, video-tampering detection, video exception alarm, video loss alarm and VCA alarm functions;
- Privacy mask;
- Several PTZ protocols supported; PTZ preset, patrol and pattern;
- Zooming in/out by clicking the mouse and PTZ tracing by dragging mouse

HDD Management

- 1 SATA hard disk can be connected;
- Each disk with a maximum of 6 TB storage capacity

Recording and Playback

- Holiday recording schedule configuration;
- Cycle and non-cycle recording modes;
- Normal and event video encoding parameters;
- Multiple recording types: manual, continuous, alarm, motion, motion | alarm, motion & alarm and Event;
- 8 recording time periods with separated recording types;
- Support Channel-Zero encoding;
- Main stream and sub-stream configurable for simultaneous recording;
- Pre-record and post-record for motion detection triggered recording, and pre-record time for schedule and manual recording;
- Searching record files by events (alarm input/motion detection);
- Customization of tags, searching and playing back by tags;
- Locking and unlocking of record files;
- Local redundant recording;
- Searching and playing back record files by camera number, recording type, start time, end time, etc.;
- Smart playback to go through less effective information;
- Main stream and sub-stream selectable for local/remote playback;
- Zooming in for any area when playback;
- Multi-channel reverse playback;
- Supports pause, fast forward, slow forward, skip forward, and skip backward when playback, locating by dragging the mouse on the progress bar;
- 4/8-ch synchronous playback;

Backup

- Export data by a USB, and SATA device;
- Export video clips when playback;
- Management and maintenance of backup devices.

Alarm and Exception

- Configurable arming time of alarm input/output;
- Alarm for video loss, motion detection, video tampering, abnormal signal, video input/recording resolution mismatch, illegal login, network disconnected, IP confliction, record exception, HDD error, and HDD full, etc.;
- Alarm triggers full screen monitoring, audio alarm, notifying surveillance center, sending email and alarm output;
- Support coaxial alarm;
- Automatic restore when system is abnormal.

Other Local Functions

- Manual and automatic video quality diagnostics;
- Operable by mouse and remote control;
- Three-level user management; admin user can create many operating account and define their operating permission, which includes the permission to access any channel;
- Completeness of operation, alarm, exceptions and log writing and searching;
- Manually triggering and clearing alarms;
- Importing and exporting of configuration file of devices;
- Getting cameras type information automatically.

Network Functions

- 1 self-adaptive 10M/100M/1000M network interface or 1 self-adaptive 10M/100Mbps network interface provided;
- IPv6 is supported;
- TCP/IP protocol, PPPoE, DHCP, DNS, DDNS, NTP, SADP, SMTP, NFS, iSCSI, UPnP™ and HTTPS are supported;

- Extranet access by DDNS;
- Support access by Cloud P2P;
- TCP, UDP and RTP for unicast;
- Auto/Manual port mapping by UPnP™;
- Remote search, playback, download, locking and unlocking the record files, and downloading files broken transfer resume;
- Remote parameters setup; remote import/export of device parameters;
- Remote viewing of the device status, system logs and alarm status;
- Remote keyboard operation;
- Remote HDD formatting and program upgrading;
- Remote system restart and shutdown;
- Support upgrading via remote FTP server;
- RS-485 transparent channel transmission;
- Alarm and exception information can be sent to the remote host;
- Remotely start/stop recording;
- Remotely start/stop alarm output;
- Remote PTZ control;
- Two-way audio and voice broadcasting;
- Embedded WEB server.

Development Scalability

- SDK for Windows and Linux system;
- Source code of application software for demo;
- Development support and training for application system.

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Chapter 1 Introduction

1.1 Front Panel

Front Panel 1:

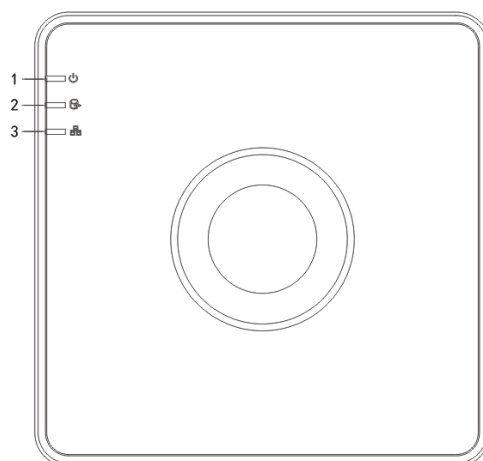


Figure 1-1 Front Panel

Table 1-1 Description of Front Panel

No.	Icon	Description
1		Turns red when DVR is powered up.
2		Turns red when data is being read from or written to HDD.
3		Flickers blue when network connection is functioning properly.

1.2 USB Mouse Operation

A regular 3-button (Left/Right/Scroll-wheel) USB mouse can also be used with this DVR. To use a USB mouse:

Step 1 Plug USB mouse into one of the USB interfaces on the front panel of the DVR.

Step 2 The mouse should automatically be detected. If in a rare case that the mouse is not detected, the possible reason may be that the two devices are not compatible, please refer to the recommended the device list from your provider.

The operation of the mouse:

Table 1-2 Description of the Mouse Control

Name	Action	Description
Left-Click	Single-Click	Live view: Select channel and show the quick set menu. Menu: Select and enter.
	Double-Click	Live view: Switch between single-screen and multi-screen.
	Drag	PTZ control: Wheeling. Privacy mask and motion detection: Select target area. Digital zoom-in: Drag and select target area. Live view: Drag channel/time bar.
Right-Click	Single-Click	Live view: Show menu. Menu: Exit current menu to upper level menu.
Scroll-Wheel	Scrolling up	Live view: Previous screen. Menu: Previous item.
	Scrolling down	Live view: Next screen. Menu: Next item.

1.3 Rear Panel

Rear Panel 1:

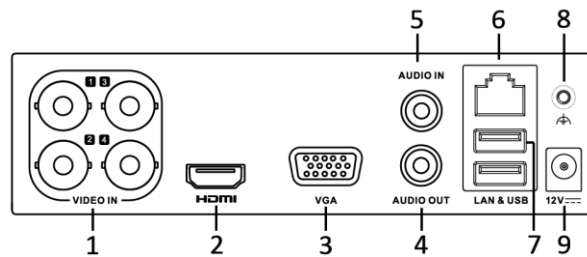


Figure 1-2 Rear Panel (4-channel)

Table 1-3 Description of Rear Panel

No.	Item	Description
1	VIDEO IN	BNC interface for TVI, and analog video input.
2	HDMI	HDMI video output connector.
3	VGA	DB15 connector for VGA output. Display local video output and menu.
4	AUDIO OUT	RCA connector.
5	AUDIO IN	RCA connector.
6	Network Interface	Connector for network
7	USB Port	Universal Serial Bus (USB) port for additional devices.
8	GND	Ground
9	Power Supply	12 VDC power supply.

Chapter 2 Getting Started

2.1 Starting Up and Shutting Down the DVR

Purpose

Proper startup and shutdown procedures are crucial to expanding the life of the DVR.

Before you start

Check that the voltage of the extra power supply is the same with the DVR's requirement, and the ground connection is working properly.

Starting up the DVR

Step 1 Check the power supply is plugged into an electrical outlet. It is **HIGHLY** recommended that an Uninterruptible Power Supply (UPS) be used in conjunction with the device.

Step 2 Turn on the power switch on the rear panel, and the Power indicator LED should turn on indicating that the unit begins to start up.

Step 3 After startup, the Power indicator LED remains on.

Shutting down the DVR

There are two proper ways to shut down the DVR. To shut down the DVR:

- **OPTION 1: Standard shutdown**

Step 1 Enter the Shutdown menu.

Menu > Shutdown

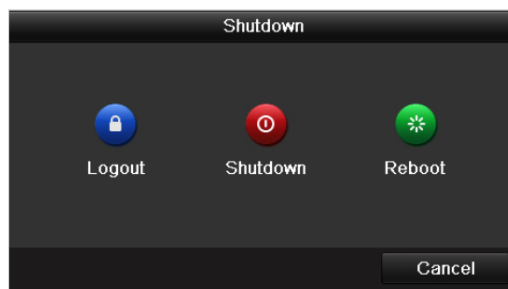


Figure 2-1 Shutdown Menu

Step 2 Select the **Shutdown** button.

Step 3 Click the **Yes** button.

Step 4 Turn off the power switch on the rear panel when the note appears.

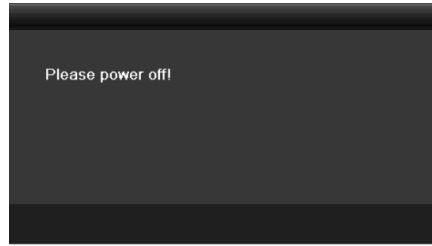


Figure 2-2 Shutdown Tips

Rebooting the DVR

While in the Shutdown menu (Figure 2-1), you can also reboot the DVR.

Step 1 Enter the **Shutdown** menu by clicking Menu > Shutdown.

Step 2 Click the **Logout** button to log out or the **Reboot** button to reboot the DVR.

2.2 Activating the Device

Purpose

For the first-time access, you need to activate the device by setting an admin password. No operation is allowed before activation. You can also activate the device via Web Browser, SADP or Client Software.

Step 1 Input the same password in the text field of **Create New Password** and **Confirm New Password**.

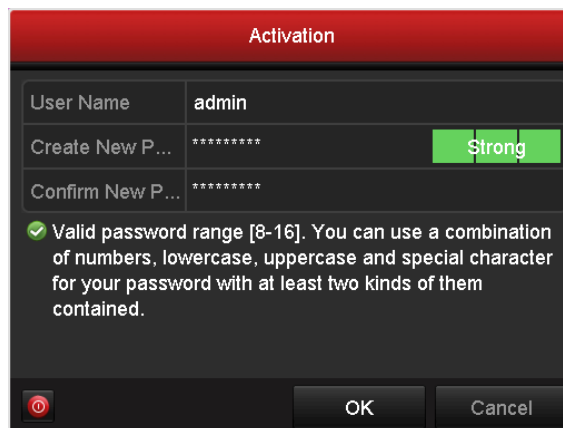


Figure 2-3 Settings Admin Password



WARNING

We highly recommend you create a strong password of your own choosing (Using a minimum of 8 characters, including at least three of the following categories: upper case letters, lower case letters, numbers, and special characters.) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

Step 2 Click **OK** to save the password and activate the device.



NOTE

For the old version device, if you update it to the new version, the following dialog box will pop up once the device starts up. You can click **YES** and follow the wizard to set a strong password.

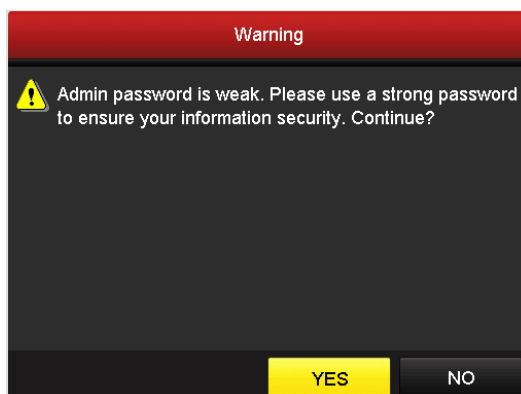


Figure 2-4 Warning

2.3 Basic Configuration in Startup Wizard

2.3.1 Configuring the Signal Input Channel

Purpose

For some series, after the startup and login, the device system enters the Wizard for configuring the signal input.

You can also click **Menu > Camera > Signal Input Status** to configure the signal input.

Step 1 Check the checkbox to select different signal input types: TVI/CVBS, AHD

Step 2 Click **Apply** to save the settings.



NOTE

- Each two video channels are grouped in sequence, e.g., CH01 and CH02, CH03 and CH04..., and each two channels in the same group must be connected with the same type of video source selected on GUI. For example, when the HDTVI/CVBS signal mode is selected, then either HDTVI or CVBS signal input can be connected to the channels in the same group; and when the AHD signal mode is selected, only the AHD signal input can be connected.
- In the live view interface, when there is no video signal of the analog channel, the corresponding connectable video signal type message can be displayed on the screen.

2.3.2 Using the Wizard for Basic Configuration

Purpose

By default, the **Setup Wizard** starts once the device has loaded. You can follow it to complete the basic configuration.

Selecting the language:

Step 1 Select the language from the dropdown list.

Step 2 Click **Apply** button.

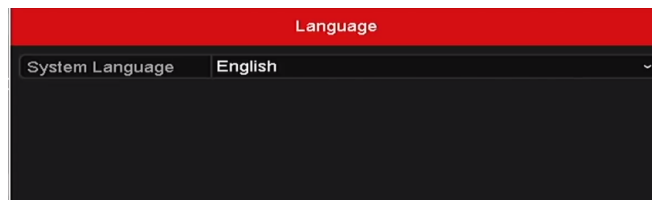


Figure 2-5 Language Configuration

Operating the Setup Wizard:

Step 1 The **Start Wizard** can walk you through some important settings of the device. If you don't want to use the **Start Wizard** at that moment, click **Exit**. You can also choose to use the **Start Wizard** next time by leaving the "Start wizard when device starts?" checkbox checked.

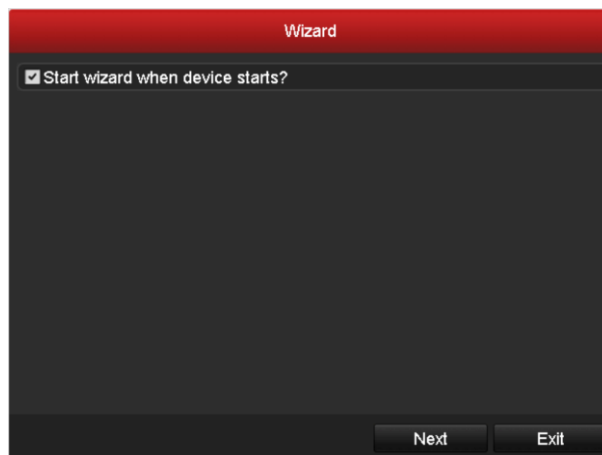
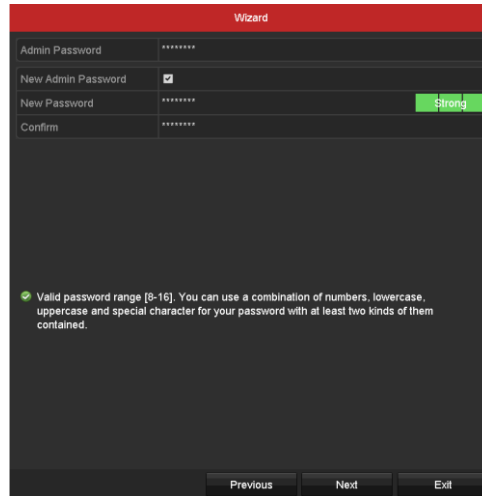


Figure 2-6 Start Wizard Interface

Step 2 Click **Next** button to enter the **Change the Password** interface. Input the **Admin Password** or change the password.



Wizard	
Admin Password	*****
New Admin Password	☒
New Password	***** Strong
Confirm	*****

Valid password range [8-16]. You can use a combination of numbers, lowercase, uppercase and special character for your password with at least two kinds of them contained.

Previous Next Exit

Figure 2-7 Change the Password

Step 3 Click **Next** button to enter the **Date and Time Settings** interface.



Wizard	
Time Zone	(GMT+08:00) Beijing, Urumqi, Singapore
Date Format	MM-DD-YYYY
System Date	05-08-2013
System Time	15:22:59

Previous Next Exit

Figure 2-8 Date and Time Settings

Step 4 After the time settings, click **Next** button to enter the **General Network Setup Wizard** interface, as shown in Figure 2.9.

Wizard	
Working Mode	Net Fault-tolerance
Select NIC	bond0
NIC Type	10M/100M/1000M Self-adaptive
Enable DHCP	☐
IPv4 Address	10.16.2.104
IPv4 Subnet Mask	255.255.255.0
IPv4 Default Gateway	10.16.2.254
Preferred DNS Serv...	10.1.7.88
Alternate DNS Server	10.1.7.77
Main NIC	LAN1
Previous Next Exit	

Figure 2-9 General Network Configuration

Step 5 Click **Next** button after you configured the basic network parameters. Then you will enter the **Cloud P2P** interface. Configure the Cloud P2P according to your need.

Wizard	
Enable	☒
Access Type	Cloud P2P
Server Address	Custom
Enable Stream Encr...	☐
Verification Code	
Status	Offline
Previous Next Exit	

Figure 2-10 Cloud P2P Interface

Step 6 Click **Next** button to enter the **Advanced Network Parameters** interface. You can enable DDNS and set other ports according to your need.

Wizard	
Server Port	8000
HTTP Port	80
RTSP Port	554
Enable UPnP	☐
Enable DDNS	☒
DDNS Type	
Area/Country	Custom
Server Address	
Device Domain Name	
Status	DDNS status is normal.
User Name	
Password	
Previous Next Exit	

Figure 2-11 Set Advanced Network Parameters

Step 7 Click **Next** button after configuring the advanced network parameters, which will take you to the **HDD Management** interface as shown in Figure 2.12.

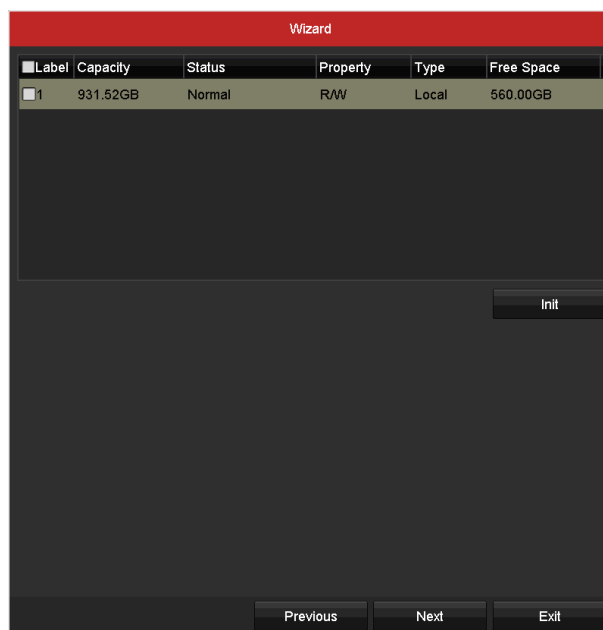


Figure 2-12 HDD Management

Step 8 To initialize the HDD, click the **Init** button. Initialization will remove all the data saved in the HDD.

Step 9 Click **Next** button to enter the **IP Camera Management** interface.

Step 10 Add the IP camera.

- 1) Click **Search** to search the online IP Camera. The **Security** status shows whether it is active or inactive. Before adding the camera, make sure the IP camera to be added is in active status. If the camera is in inactive status, you can click the inactive icon of the camera to set the password to activate it. You can also select multiple cameras from the list and click the **One-touch Activate** to activate the cameras in batch.
- 2) Click the **Add** to add the camera.

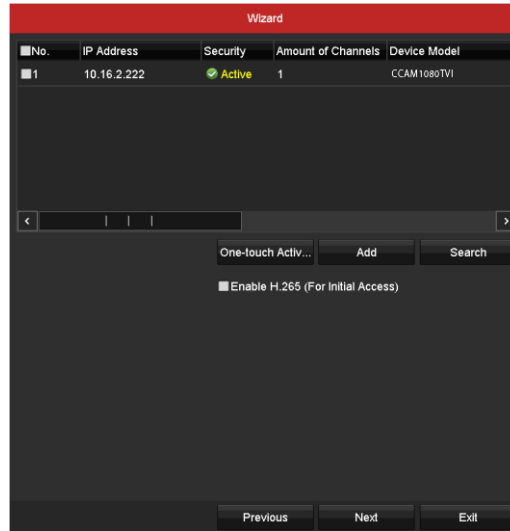


Figure 2-13 IP Camera Management

Step 11 After finishing IP Camera settings, click **Next** to enter the **Record Settings** interface.

Step 12 Click the icon , and you can enable the continuous recording or motion detection recording for all channels of the device.

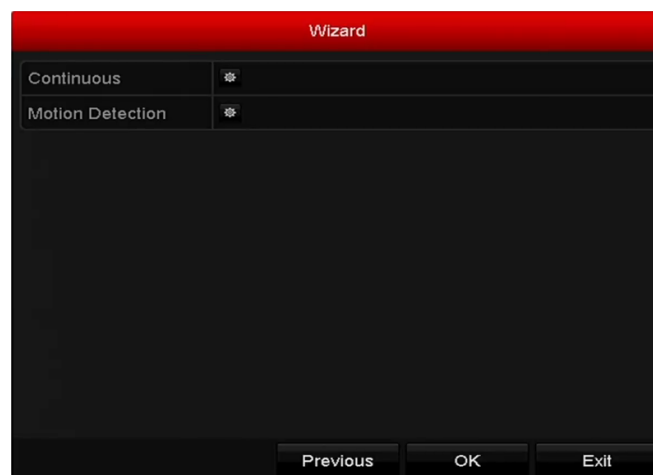


Figure 2-14 Record Settings

Step 13 Click **OK** to complete the wizard settings.

2.4 Login and Logout

2.4.1 User Login

Purpose

You have to log in to the device before operating the menu and other functions

Step 1 Select the **User Name** in the dropdown list.

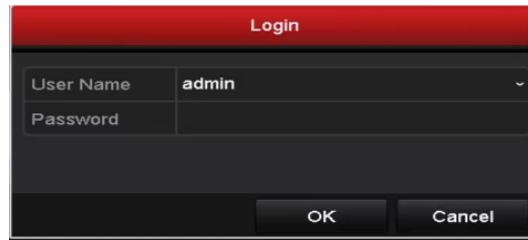


Figure 2-15 Login Interface

Step 2 Input Password.

Step 3 Click **OK** to log in.



NOTE

In the Login interface, for the admin, if you have entered the wrong password for 7 times, the account will be locked for 60 seconds. For the operator, if you have entered the wrong password for 5 times, the account will be locked for 60 seconds.

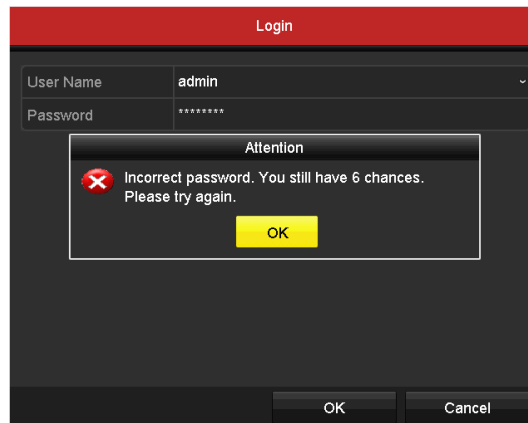


Figure 2-16 User Account Protection for the Admin

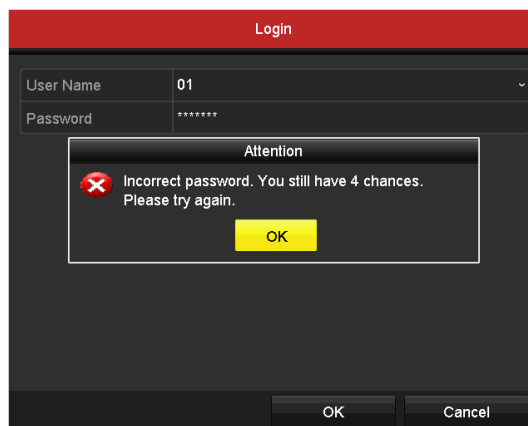


Figure 2-17 User Account Protection for the Operator

2.4.2 User Logout

Purpose

After logging out, the monitor turns to the live view mode and if you want to perform some operations, you need to enter the user name and password to log in again.

Step 1 Enter the **Shutdown** menu.

Menu > Shutdown

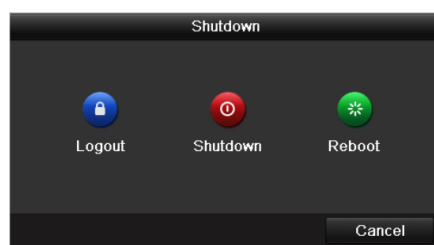


Figure 2-18 Logout

Step 2 Click **Logout**.



NOTE

After you have logged out of the system, menu operation on the screen is invalid. It is required to input a user name and password to unlock the system.

2.5 Configuring the Signal Input Channel

Purpose

You must define the signal input type of each analog channel before connecting the camera. And the channel must be connected with the same video input type which you configure on the menu.

Step 1 Enter the **Signal Input Status** interface.

Menu > Camera > Signal Input Status

Step 2 Check the checkbox to select different signal input types: TVI/CVBS, AHD

Camera	TVI/CVBS	AHD	IP
A1	☒	☐	☐
A2	☒	☐	☐
A3	☒	☐	☐
A4	☒	☐	☐
A5	☒	☐	☐
A6	☒	☐	☐
A7	☒	☐	☐
A8	☒	☐	☐
A9	☒	☐	☐
A10	☒	☐	☐
A11	☒	☐	☐
A12	☒	☐	☐
A13	☒	☐	☐
A14	☒	☐	☐
A15	☒	☐	☐
A16	☒	☐	☐
D1	☐	☐	☒
D2	☐	☐	☒

Each two video channels are grouped in sequence, e.g., CH01 and CH02, CH03 and CH04..., and the two channels in the same group must be connected with the same type of video source, i.e., the analog or HD-TVI or AHD video input.

Apply Back

Figure 2-19 Configure Signal Input Type

Step 3 Click **Apply** to save the settings.

NOTE

- Each two video channels are grouped in sequence, e.g., CH01 and CH02, CH03 and CH04..., and each two channels in the same group must be connected with the same type of video source selected on GUI. For example, when the HDTV/CVBS signal mode is selected, then either HDTV or CVBS signal input can be connected to the channels in the same group; and when the AHD signal mode is selected, only the AHD signal input can be connected.
- In the live view interface, when there is no video signal of the analog channel, the corresponding connectable video signal type message can be displayed on the screen.

Chapter 3 Live View

3.1 Introduction of Live View

Live view shows you the video image getting from each camera in real time. The DVR will automatically enter Live View mode when powered on. It is also at the very top of the menu hierarchy, thus hitting the ESC many times (depending on which menu you're on) will bring you to the Live View mode.

Live View Icons

In the live view mode, there are icons at the right top of the screen for each channel, showing the status of the record and alarm in the channel, so that you can know whether the channel is recorded, or whether there are alarms occur as soon as possible.

Table 3-1 Description of Live View Icons

Icons	Description
	Alarm (video loss, tampering, motion detection, VCA or sensor alarm)
	Record (manual record, schedule record, motion detection or alarm triggered record)
	Alarm & Record
	Event/Exception (motion detection, sensor alarm or exception information. For details, see <i>Chapter "Handling Exceptions".</i>)

3.2 Operations in Live View Mode

In live view mode, there are many functions provided. The functions are listed below.

- **Single Screen:** show only one screen on the monitor.
- **Multi-screen:** show multiple screens on the monitor simultaneously.
- **Auto-switch:** the screen is auto switched to the next one. And you must set the dwell time for each screen on the configuration menu before enabling the auto-switch.
Menu>Configuration>Live View>Dwell Time.
- **Start Recording:** normal record and motion detection record are supported.
- **Quick Set:** select the output mode to Standard, Bright, Gentle or Vivid.
- **Playback:** play back the recorded videos for current day.
- **Aux/Main output switch:** the DVR checks the connection of the output interfaces to define the main and auxiliary output interfaces. When the aux output is enabled, the main output cannot do any operation, and you can do some basic operation on the live view mode for the Aux output.

The priority level for the main and aux output is HDMI/VGA>CVBS. See the table below.

Table 3-2 Priorities of Interfaces

S.N	VGA/HDMI	CVBS	Main output	Auxiliary output
1	√	√	VGA/HDMI	CVBS
2	√	×	VGA/HDMI	
3	×	√	CVBS	



NOTE

- √ means the interface is in use, × means the interface is out of use or the connection is invalid. And the HDMI, VGA and CVBS can be used at the same time.

3.2.1 Using the Mouse in Live View

You can refer to Table 3-3 for the description of mouse operation in live view mode.

Table 3-3 Mouse Operation in Live View

Name	Description
Menu	Enter the main menu of the system by right clicking the mouse.
Single Screen	Switch to the single full screen by choosing channel number from the dropdown list.
Multi-Screen	Adjust the screen layout by selecting from the dropdown list.
Previous Screen	Switch to the previous screen.
Next Screen	Switch to the next screen.
Start/Stop Auto-Switch	Enable/disable the auto-switch of the screens.  NOTE The <i>dwel time</i> of the live view configuration must be set before using Start Auto-Switch.
Start Recording	Start recording of all channels, Continuous Record and Motion Detection Record are selectable from the dropdown

	list.
Output Mode	Output Mode is configurable with Standard, Bright, Gentle and Vivid options.
Playback	Enter the playback interface and start playing back the video of the selected channel immediately.
PTZ Control	A shortcut to enter the PTZ control interface of the selected camera.

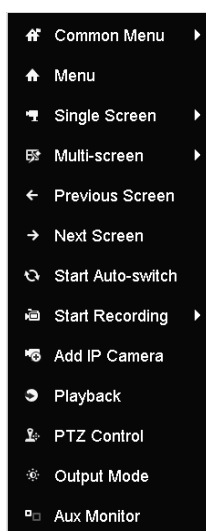


Figure 3-1 Right-click Menu

3.2.2 Quick Setting Toolbar in Live View Mode

On the screen of each channel, there is a quick setting toolbar which shows when you click the screen.



Figure 3-2 Quick Setting Toolbar

You can refer to Table 3.4 for the description of Quick Setting Toolbar icons.

Table 3-4 Description of Quick Setting Toolbar Icons

Icons	Description	Icons	Description	Icons	Description
	Enable/Disable Manual Record		Instant Playback		Mute/Audio on
	PTZ Control		Digital Zoom		Image Settings
	Close Live View		Face Detection		Information



Instant Playback only shows the record in last five minutes. If no record is found, it means there is no record during the last five minutes.



Digital Zoom can zoom in the selected area to the full screen. Click and draw to select the area to zoom in, as shown in Figure 3-3.



Figure 3-3 Digital Zoom



Image Settings icon can be selected to enter the Image Settings menu. You can drag the mouse or click  to adjust the image parameters, including brightness, contrast, and saturation.

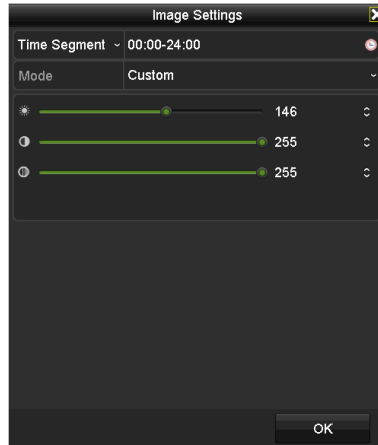


Figure 3-4 Image Settings

 Face Detection can be enabled if you click the icon. The dialog pops up as shown in Figure 3.5. Click **Yes** and the full-screen live view of the channel is enabled. You can click  to exit from the full-screen mode.



Figure 3-5 Enable Face Detection

NOTE

You can configure face detection only when it is supported by the connected camera.

 Move the mouse onto the Information icon to show the real-time stream information, including the frame rate, bit rate, resolution and stream type.



Figure 3-6 Information

3.3 Channel-Zero Encoding

NOTE

This section is not applicable to 720P series DVR.

Purpose

Sometimes you need to get a remote view of many channels in real time from web browser or CMS (Client Management System) software, in order to decrease the bandwidth requirement without affecting the image quality, channel-zero encoding is supported as an option for you.

Step 1 Enter the **Live View** Settings interface.

Menu> Configuration> Live View

Step 2 Select the Channel-Zero Encoding tab.

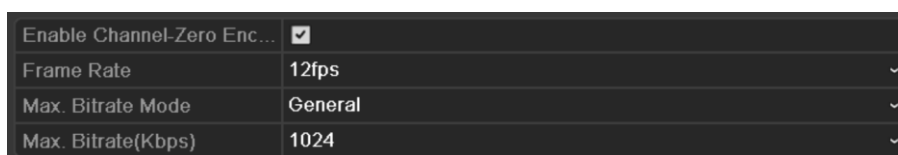


Figure 3-7 Live View- Channel-Zero Encoding

Step 3 Check the checkbox after Enable Channel-Zero Encoding.

Step 4 Configure the Frame Rate, Max. Bitrate Mode and Max. Bitrate.

Step 5 Click the **Apply** button to activate the settings.

Step 6 After you set the Channel-Zero encoding, you can get a view in the remote client or web browser of 16 channels in one screen.

3.4 Adjusting Live View Settings

Purpose

Live View settings can be customized according to different needs. You can configure the output interface, dwell time for screen to be shown, mute or turning on the audio, the screen number for each channel, etc.

Step 1 Enter the **Live View** Settings interface.

Menu> Configuration> Live View



Figure 3-8 Live View-

General The settings available in this menu include:

- **Video Output Interface:** Selects the output to configure the settings. Provides HDMI/VGA and Channel-Zero outputs for selection.

- **Live View Mode:** Selects the display mode to be used for Live View.
- **Dwell Time:** The time in seconds to *dwell* between switching of channels when enabling auto-switch in Live View.
- **Enable Audio Output:** Enables/disables audio output for the selected camera in the live view mode.
- **Volume:** Adjust the volume of the audio output.
- **Event Output:** Designates the output to show event video.
- **Full Screen Monitoring Dwell Time:** The time in seconds to show alarm event screen.

3.5 Manual Video Quality Diagnostics

Purpose

The video quality of the analog channels can be diagnosed manually and you can view the diagnostic results from a list.

Step 1 Enter the Manual **Video Quality Diagnostics** interface.

Menu> Manual >Manual Video Quality Diagnostics

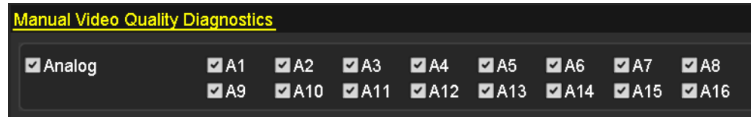


Figure 3-9 Video Quality Diagnostics

Step 2 Check the checkboxes to select the channels for diagnostics.

Step 3 Click the button **Diagnose**, and the results will be displayed on a list. You can view the video status and diagnostics time of the selected channels.

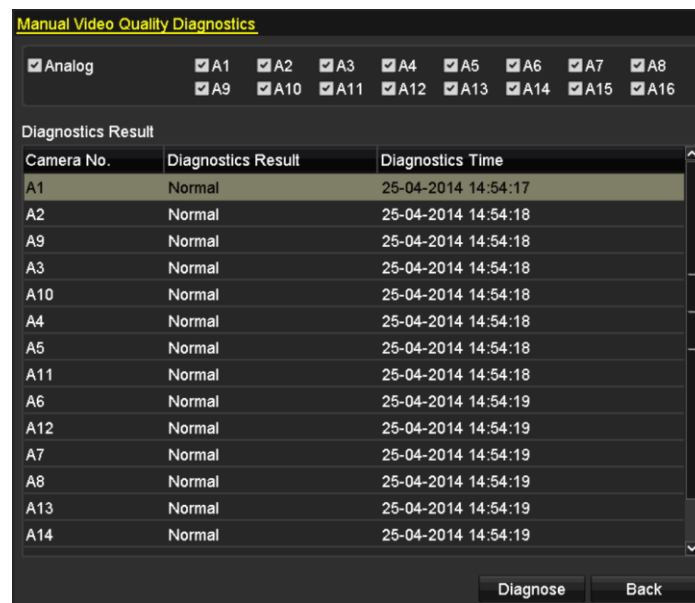


Figure 3-10 Diagnostics Result

NOTE

- Connect the camera to the device for the video quality diagnostics.
- Three exception types can be diagnosed: Blurred Image, Abnormal Brightness and Color Cast.

Chapter 4 PTZ Controls

4.1 Configuring PTZ Settings

Purpose

Follow the procedure to set the parameters for PTZ. The configuring of the PTZ parameters should be done before you control the PTZ camera.

Step 1 Enter the **PTZ Settings** interface.

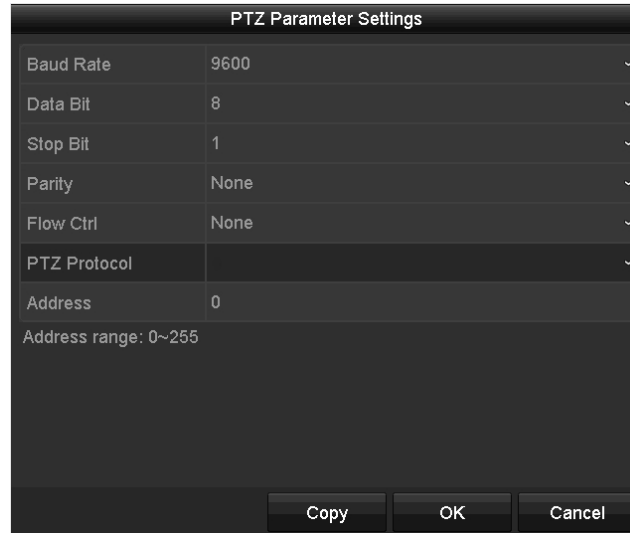
Menu >Camera> PTZ



Figure 4-1 PTZ Settings

Step 2 Choose the camera for PTZ setting in the **Camera** dropdown list.

Step 3 Click the **PTZ Parameters** button to set the PTZ parameters.



The PTZ Parameter Settings dialog box contains the following fields and controls:

Parameter	Value	Type
Baud Rate	9600	Dropdown
Data Bit	8	Dropdown
Stop Bit	1	Dropdown
Parity	None	Dropdown
Flow Ctrl	None	Dropdown
PTZ Protocol		Dropdown
Address	0	Text
Address range: 0~255		

Buttons: Copy, OK, Cancel

Figure 4-2 PTZ- General

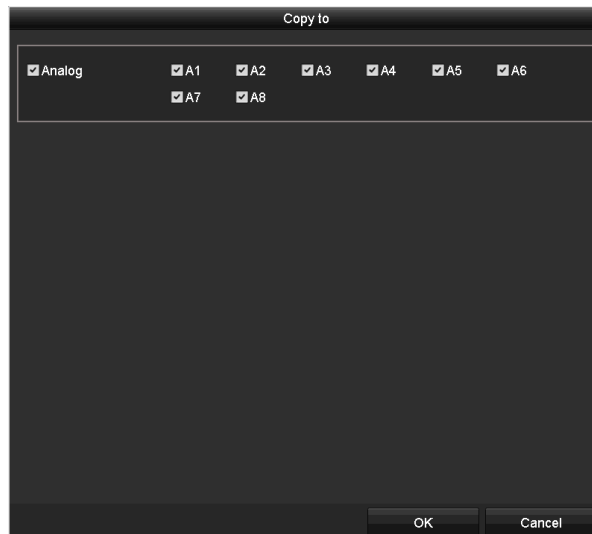
Step 4 Select the parameters of the PTZ camera from the dropdown list.



NOTE

- All the parameters should be exactly the same as the PTZ camera parameters.

Step 5 (Optional) Click **Copy** button to copy the settings to the other channels. Select the channels you want to copy to and click **OK** to return to the **PTZ Parameters Settings** interface.



The Copy to dialog box contains the following controls:

Channel	Selected
Analog	☒
A1	☒
A2	☒
A3	☒
A4	☒
A5	☒
A6	☒
A7	☒
A8	☒

Buttons: OK, Cancel

Figure 4-3 Copy to Other Channels

Step 6 Click **OK** to save the settings.

4.2 Setting PTZ Presets, Patrols and Patterns

Before you start:

Please make sure that the presets, patrols and patterns should be supported by PTZ protocols.

4.2.1 Customizing Presets

Purpose

Follow the steps to set the Preset location which you want the PTZ camera to point to when an event takes place.

Step 1 Enter the **PTZ Settings** interface.

Menu>Camera>PTZ



Figure 4-4 PTZ Settings

Step 2 Use the directional button to wheel the camera to the location where you want to set preset; and the zoom and focus operations can be recorded in the preset as well.

Step 3 Enter the preset No. (1~255) in the preset text field, and click the **Set** button to link the location to the preset.

Repeat the steps from 2 to 3 to save more presets.

You can click the **Clear** button to clear the location information of the preset, or click the **Clear All** button to clear the location information of all the presets.

4.2.2 Calling Presets

Purpose

This feature enables the camera to point to a specified position such as a window when an event takes place.

Step 1 Click the button **PTZ** in the lower-right corner of the PTZ setting interface;

Or press the PTZ button on the front panel or click the PTZ Control icon  in the quick setting bar, or select the PTZ option in the right-click menu to show the PTZ control panel.

Step 2 Choose **Camera** in the dropdown list.

Step 3 Click the **General** tab to show the general settings of the PTZ control.

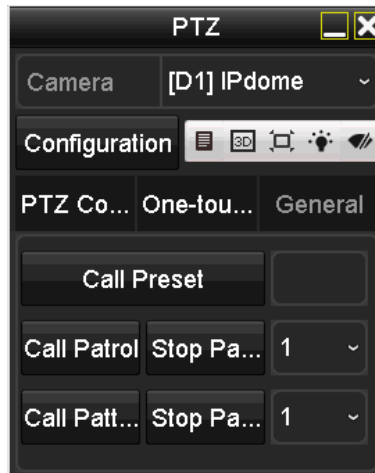


Figure 4-5 PTZ Panel - General

Step 4 Click to enter the preset No. in the corresponding text field.

Step 5 Click the **Call Preset** button to call it.

4.2.3 Customizing Patrols

Purpose

Patrols can be set to move the PTZ to different key points and have it stay there for a set duration before moving on to the next key point. The key points are corresponding to the presets. The presets can be set following the steps above in *Customizing Presets*.

Step 1 Enter the **PTZ Settings** interface.

Menu>Camera>PTZ



Figure 4-6 PTZ Settings

Step 2 Select patrol No. in the drop-down list of patrol.

Step 3 Click the **Set** button to add key points for the patrol.

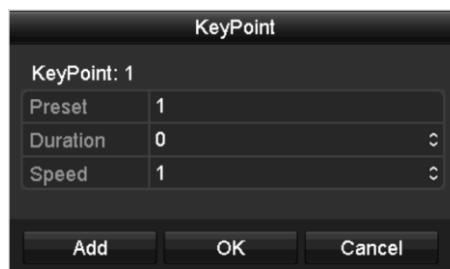


Figure 4-7 Key point Configuration

Step 4 Configure key point parameters, such as the key point No., duration of staying for one key point and speed of patrol. The key point is corresponding to the preset. The **Key Point No.** determines the order at which the PTZ will follow while cycling through the patrol. The **Duration** refers to the time span to stay at the corresponding key point. The **Speed** defines the speed at which the PTZ will move from one key point to the next.

Step 5 Click the **Add** button to add the next key point to the patrol, or you can click the **OK** button to save the key point to the patrol.

You can delete all the key points by clicking the **Clear** button for the selected patrol, or click the **Clear All** button to delete all the key pints for all patrols.

4.2.4 Calling Patrols

Purpose

Calling a patrol makes the PTZ to move according the predefined patrol path.

Step 1 Click the button **PTZ** in the lower-right corner of the **PTZ Settings** interface;

Or press the PTZ button on the front panel or click the PTZ Control icon  in the quick setting bar, or select the PTZ option in the right-click menu to show the PTZ control panel.

Step 2 Click the **General** tab to show the general settings of the PTZ control.

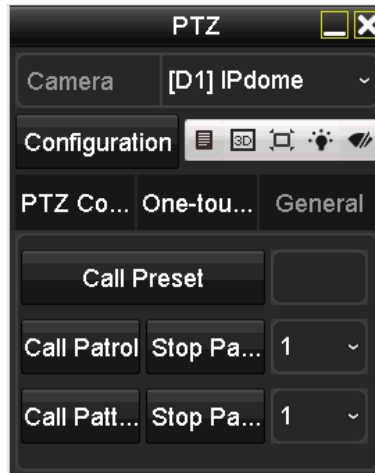


Figure 4-8 PTZ Panel - General

Step 3 Select a patrol in the dropdown list and click the **Call Patrol** button to call it.

Step 4 You can click the **Stop Patrol** button to stop calling it.

4.2.5 Customizing Patterns

Purpose

Patterns can be set by recording the movement of the PTZ. You can call the pattern to make the PTZ movement according to the predefined path.

Step 1 Enter the **PTZ Settings** interface.

Menu > Camera > PTZ



Figure 4-9 PTZ Settings

Step 2 Choose pattern number in the dropdown list.

Step 3 Click the **Start** button and click corresponding buttons in the control panel to move the PTZ camera, and click the **Stop** button to stop it.

The movement of the PTZ is recorded as the pattern.

4.2.6 Calling Patterns

Purpose

Follow the procedure to move the PTZ camera according to the predefined patterns.

Step 1 Click the button **PTZ** in the lower-right corner of the **PTZ Settings** interface;

Or press the PTZ button on the front panel or click the PTZ Control icon  in the quick setting bar, or select the PTZ option in the right-click menu to show the PTZ control panel.

Step 2 Click the **General** tab to show the general settings of the PTZ control.

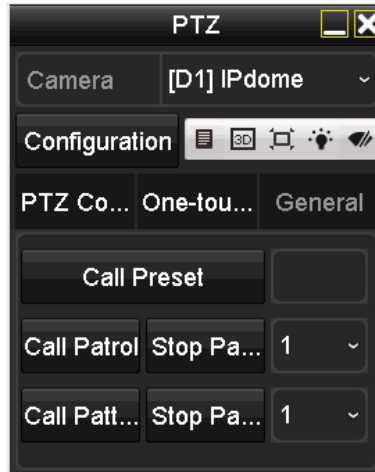


Figure 4-10 PTZ Panel - General

Step 3 Click the **Call Pattern** button to call it.

Step 4 Click the **Stop Pattern** button to stop calling it.

4.2.7 Customizing Linear Scan Limit

Purpose

The Linear Scan can be enabled to trigger the scan in the horizontal direction in the predefined range.



NOTE

This function is supported by some certain models.

Step 1 Enter the **PTZ Settings** interface.

Menu > Camera > PTZ



Figure 4-11 PTZ Settings

Step 2 Use the directional button to wheel the camera to the location where you want to set the limit, and click the **Left Limit** or **Right Limit** button to link the location to the corresponding limit.

 NOTE

The speed dome starts linear scan from the left limit to the right limit, and you must set the left limit on the left side of the right limit, as well the angle from the left limit to the right limit should be no more than 180°.

4.2.8 Calling Linear Scan

Purpose

Follow the procedure to call the linear scan in the predefined scan range.

Step 1 Click the button **PTZ** in the lower-right corner of the **PTZ Settings** interface;

Or press the PTZ button on the front panel or click the PTZ Control icon  in the quick setting bar to enter the PTZ setting menu in live view mode.

Step 2 Click the **One-touch** tab to show the one-touch function of the PTZ control.



Figure 4-12 PTZ Panel - One-touch

Step 3 Click **Linear Scan** button to start the linear scan and click the **Linear Scan** button again to stop it.

You can click the **Restore** button to clear the defined left limit and right limit data and the dome needs to reboot to make settings take effect.

4.2.9 One-touch Park

Purpose

For some certain model of the speed dome, it can be configured to start a predefined park action (scan, preset, patrol and etc.) automatically after a period of inactivity (park time).

Step 1 Click the button **PTZ** in the lower-right corner of the **PTZ Settings** interface;

Or press the PTZ button on the front panel or click the PTZ Control icon  in the quick setting bar to enter the PTZ setting menu in live view mode.

Step 2 Click the **One-touch** tab to show the one-touch function of the PTZ control.



Figure 4-13 PTZ Panel - One-touch

Step 3 There are 3 one-touch park types selectable. Click the corresponding button to activate the park action.

Park (Quick Patrol): The dome starts patrol from the predefined preset 1 to preset 32 in order after the park time. The undefined preset will be skipped.

Park (Patrol 1): The dome starts moving according to the predefined patrol 1 path after the park time.

Park (Preset 1): The dome moves to the predefined preset 1 location after the park time.



NOTE

The park time can only be set through the speed dome configuration interface. The default value is 5s.

Step 4 Click the button again to inactivate it.

4.3 PTZ Control Panel

To enter the PTZ control panel, there are two ways supported.

OPTION 1:

In the **PTZ Settings** interface, click the **PTZ** button on the lower-right corner which is next to the **Back** button.

OPTION 2:

In the Live View mode, you can press the PTZ Control button on the front panel or on the remote control, or choose the PTZ Control icon  in the quick setting bar, or select the PTZ Control option in the right-click menu.

Click the **Configuration** button on the control panel, and you can enter the **PTZ Settings** interface.



NOTE

In PTZ control mode, the PTZ panel will be displayed when a mouse is connected with the device. If no mouse is connected, the **PTZ** icon appears in the lower-left corner of the window, indicating that this camera is in PTZ control mode.

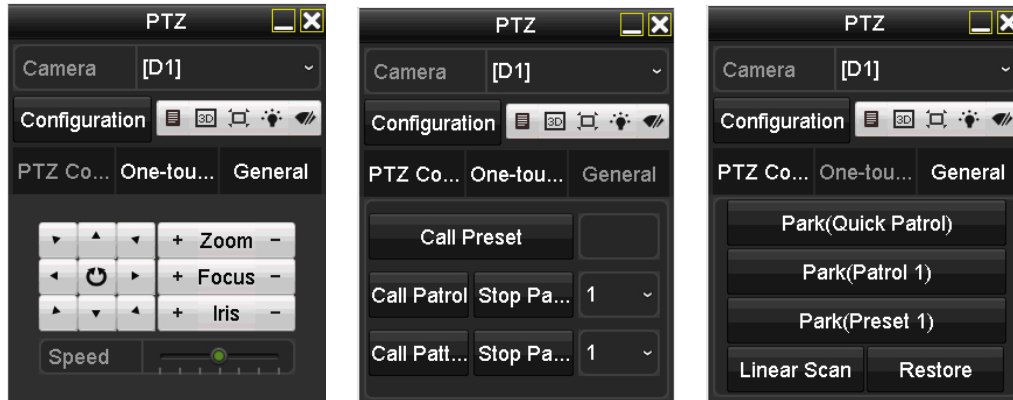


Figure 4-14 PTZ Control Panel

You can refer to Table 4-1 for the description of the PTZ panel icons.

Table 4-1 Description of the PTZ panel icons

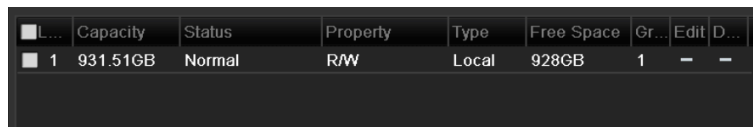
Icon	Description	Icon	Description	Icon	Description
	Direction button and the auto-cycle button		Zoom+, Focus+, Iris+		Zoom-, Focus-, Iris-
	The speed of the PTZ movement		Light on/off		Wiper on/off
	3D-Zoom		Image Centralization		Menu
	Switch to the PTZ control interface		Switch to the one-touch control interface		Switch to the general settings interface
	Exit		Minimize windows		

Chapter 5 Recording Settings

5.1 Configuring Parameters

Before you start

Step 1 Make sure that the HDD has already been installed. If not, please install a HDD and initialize it. (Menu>HDD>General)



L...	Capacity	Status	Property	Type	Free Space	Gr...	Edit	D...
1	931.51GB	Normal	R/W	Local	928GB	1	-	-

Figure 5-1 HDD- General

Step 2 Click **Advanced** tab to check the storage mode of the HDD. (Menu>HDD>Advanced>Storage Mode)

- 1) If the HDD mode is *Quota*, please set the maximum record capacity. For detailed information, see *Chapter "Configuring Quota Mode"*.
- 2) If the HDD mode is *Group*, you should set the HDD group. For detailed information, see *Chapter "Configuring HDD"*.

Mode		Group															
Record on HDD Group		1															
☒ Analog	☒ A1	☒ A2	☒ A3	☒ A4	☒ A5	☒ A6	☒ A7	☒ A8	☒ A9	☒ A10	☒ A11	☒ A12	☒ A13	☒ A14	☒ A15	☒ A16	
☒ IP Camera	☒ D1	☒ D2	☒ D3	☒ D4	☒ D5	☒ D6	☒ D7	☒ D8	☒ D9	☒ D10	☒ D11	☒ D12	☒ D13	☒ D14	☒ D15	☒ D16	
	☒ D17	☒ D18	☒ D19	☒ D20	☒ D21	☒ D22	☒ D23	☒ D24	☒ D25	☒ D26	☒ D27	☒ D28	☒ D29	☒ D30	☒ D31	☒ D32	

Figure 5-2 HDD- Advanced

Steps

Step 1 Enter the **Record Parameters** interface to configure the encoding parameters.

Menu>Record>Parameters

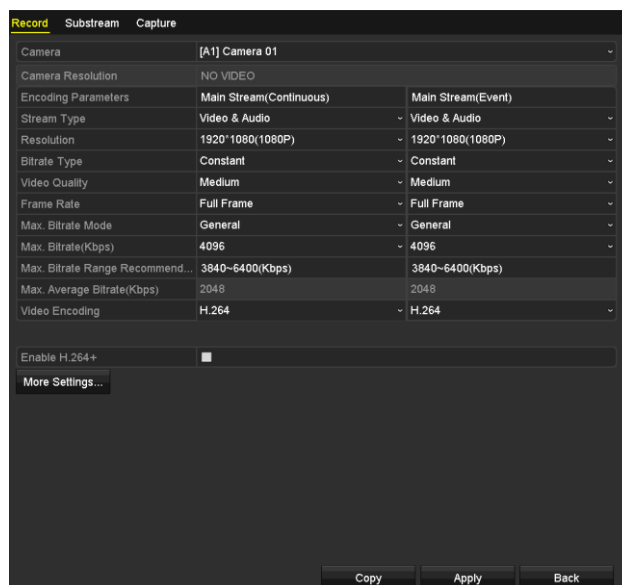


Figure 5-3 Record Parameters

Step 2 Set the parameters for recording.

- 1) Select the **Record** tab to configure.
- 2) Select a camera from the camera dropdown list.
- 3) Configure the following parameters for the **Main Stream (Continuous)** and the **Main Stream (Event)**: **Stream Type**: Set the stream type to be Video or Video & Audio.

Resolution: Set recording resolution.

NOTE

- Supports up to 1080p lite (960 × 1080) resolution.
- If the configured encoding resolution conflicts with the resolution of the front-end camera, the encoding parameters will adjust automatically to meet the front-end camera. E.g., if the resolution of the front-end camera is 720p, then the encoding resolution of the main stream will adjust to 720p automatically.
- The resolution of 960 × 1080 (1080P Lite) is available when the 1080P Lite is enabled in the Record>Advanced Settings interface (refer to *Chapter "Configuring 1080P Lite"*).

Video Quality: Set the video quality of recording, with 6 levels configurable.

Frame Rate: Set the frame rate of recording.

Max. Bitrate Mode: Set the mode to General or Custom.

Max Bitrate (Kbps): Select or customize the maximum bit rate for recording.

Max. Bitrate Range Recommended: A recommended max. bit rate range is provided for reference.

Max. Average Bitrate (Kbps): Set the max. average bit rate which refers to the average amount of data transferred per unit of time.

Step 3 Check the checkbox of **Enable H.264+** to enable this function. Enabling it helps to ensure the high video quality with a lowered bitrate.

- After enabling the H.264+ , the **Bitrate Type, Video Quality, Max. Bitrate Mode, Max. Bitrate(Kbps)** and **Max. Bitrate Range Recommend** are not configurable.
- The H.264+ cannot be used with the SVC at the same time.
- You should reboot the device to activate the new settings after enabling the H.264+.

Step 4 Click **More Settings** to configure more parameters.



Figure 5-4 More Settings of Record Parameters

- **Pre-record:** The time you set to record before the scheduled time or event. For example, when an alarm triggered the recording at 10:00, if you set the pre-record time as 5 seconds, the camera records it at 9:59:55.
- **Post-record:** The time you set to record after the event or the scheduled time. For example, when an alarm triggered the recording ends at 11:00, if you set the post-record time as 5 seconds, it records till 11:00:05.
- **Expired Time:** The time for keeping the record files in the HDDs, once exceeded, the files will be deleted. The files will be saved permanently if the value is set as 0. The actual keeping time for the files should be determined by the capacity of the HDDs.
- **Redundant Record:** Enabling redundant record means you save the record in the redundant HDD. See *Chapter "Configuring Redundant Recording"*.
- **Record Audio:** Enable this feature to record the sound and disable it to record the video without sound.
- **Video Stream:** Main stream, sub-stream and dual stream are selectable for recording. When you select sub-stream, you can record for a longer time with the same storage space.



NOTE

- The **Redundant Record** option is only available when the HDD mode is *Group*.
- Redundant HDD is required for the redundant record function. For detailed information, see *Chapter "Setting HDD Property"*.
- For network cameras, the parameters of Main Stream (Event) are not editable.

Step 5 Click **Apply** to save the settings.

Step 6 Optionally, you can click **Copy** to copy the settings to other analog channels if needed.



NOTE

You can copy the same settings to the cameras with the same signal, e.g., the channel No. 1-3 connect to the TVI cameras, and the channel No.4 connects to an analog camera, and then the settings of channel No. 1 can be only copied to channel 2 and 3.

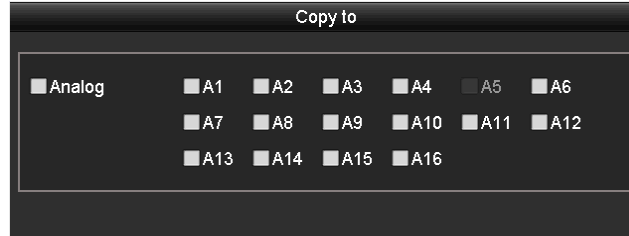


Figure 5-5 Copy Camera Settings

Step 7 Set encoding parameters for sub-stream.

- 1) Select the **Sub-Stream** tab.

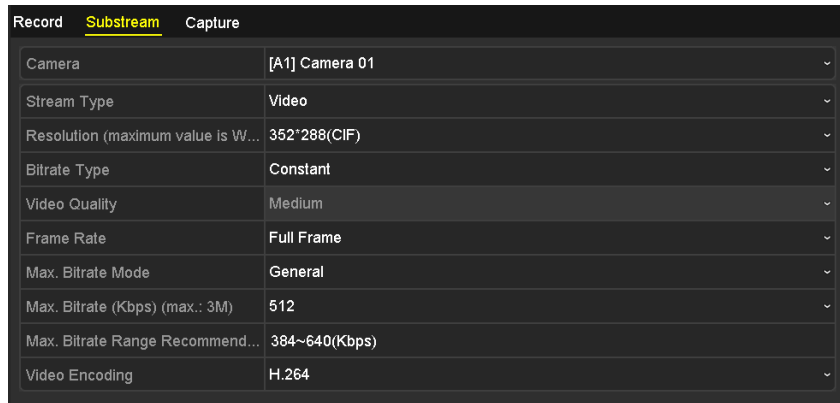


Figure 5-6 Sub-Stream Encoding

- 2) Select a camera in the camera dropdown list.
- 3) Configure the parameters.
- 4) Click **Apply** to save the settings.

5.2 Configuring Recording Schedule



- Supports continuous, motion and event triggered recording types.

Purpose

Set the record schedule, and then the camera will automatically start/stop recording according to the configured schedule.

Step 1 Enter the **Record Schedule** interface.

Menu> Record > Schedule

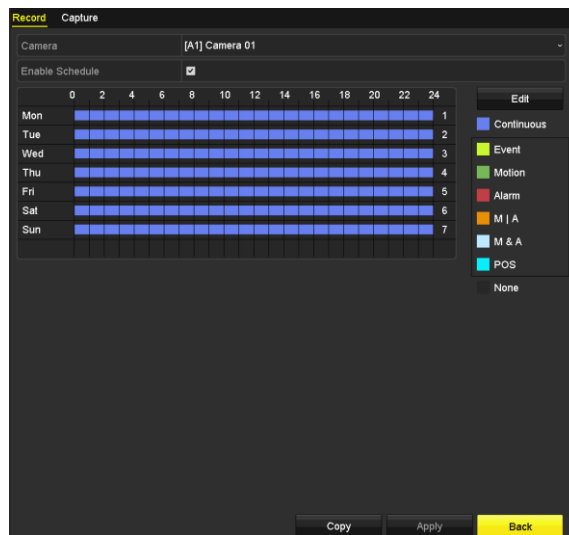


Figure 5-7 Record Schedule

Different recording types are marked in different color icons.

Continuous: scheduled recording.

Event: recording triggered by all event triggered alarm.

Motion: recording triggered by motion detection.

Alarm: recording triggered by alarm.

M/A: recording triggered by either motion detection or alarm.

M&A: recording triggered by motion detection and alarm.

Step 2 Choose the camera you want to configure in the **Camera** dropdown list.

Step 3 Check the checkbox of **Enable Schedule**.

Step 4 Configure the record schedule.

Edit the schedule

- 1) Click **Edit**.
- 2) In the message box, you can choose the day to which you want to set schedule.
- 3) To schedule an all-day recording, check the checkbox after the **All Day** item.

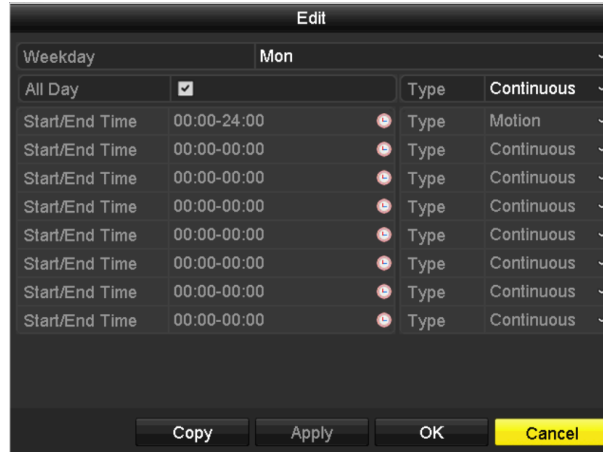


Figure 5-8 Edit Schedule- All Day

- 4) To arrange other schedule, leave the **All Day** checkbox blank and set the Start/End time.



Figure 5-9 Edit Schedule- Set Time Period

NOTE

- Up to 8 periods can be configured for each day. And the time periods cannot be overlapped with each other.
- To enable Event, Motion, Alarm, M | A (motion or alarm), M & A (motion and alarm) and POS triggered recording, you must configure the motion detection settings, alarm input settings or VCA settings as well.
- The VCA settings are only available to the smart IP cameras.

Repeat the above steps 1)-4) to schedule recording for other days in the week. If the schedule can also be set to other days, click **Copy**.

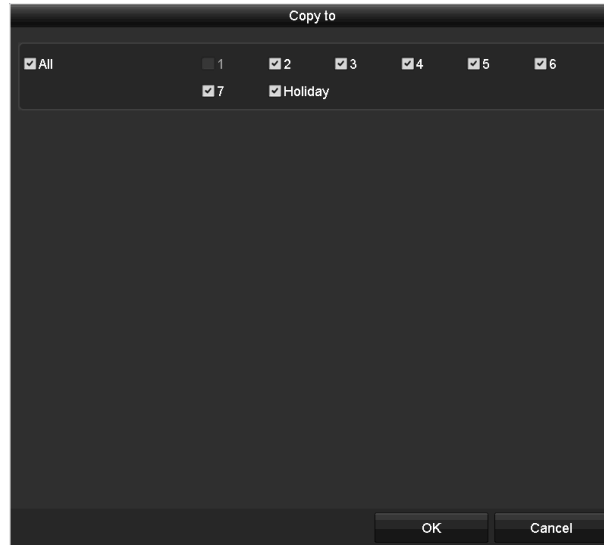


Figure 5-10 Copy Schedule to Other Days



NOTE

The **Holiday** option is available when you enable holiday schedule in **Holiday settings**. Refer to *Chapter "Configuring Holiday Recording"*.

- 5) Click **OK** to save setting and back to upper level menu.

Draw the schedule

- 1) Click on the color icon to select a record type in the event list on the right-side of the interface.



Figure 5-11 Draw the Recording Schedule

- 2) Click and drag the mouse on the schedule.
- 3) Click on the other area except for the schedule table to finish and exit from the drawing.

You can repeat step 4 to set schedule for other channels. If the settings can also be used to other channels, click **Copy**, and then choose the channel to which you want to copy to.

Step 5 Click **Apply** in the **Record Schedule** interface to save the settings.

5.3 Configuring Motion Detection Recording

Purpose

Follow the steps to set the motion detection parameters. In the live view mode, once a motion detection event takes place, the DVR can analyze it and do many actions to handle it. Enabling motion detection function can trigger certain channels to start recording, or trigger full screen monitoring, audio warning, notifying the surveillance center, sending email and so on.

Step 1 Enter the **Motion Detection** interface.

Menu>Camera>Motion

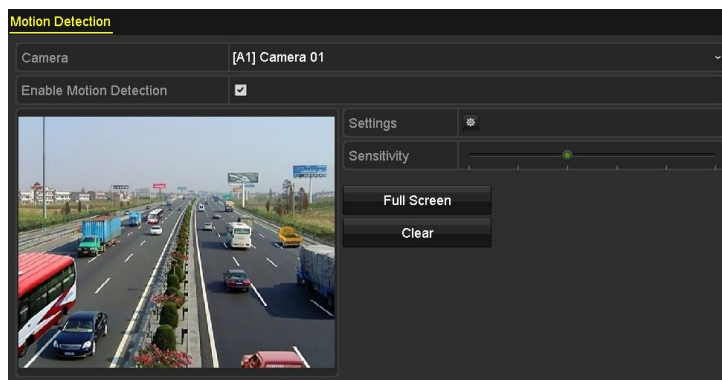


Figure 5-12 Motion Detection

Step 2 Configure Motion Detection:

- 1) Choose camera you want to configure.
- 2) Check the checkbox after **Enable Motion Detection**.
- 3) Drag and draw the area for motion detection by mouse. If you want to set the motion detection for all the area shot by the camera, click **Full Screen**. To clear the motion detection area, click **Clear**.

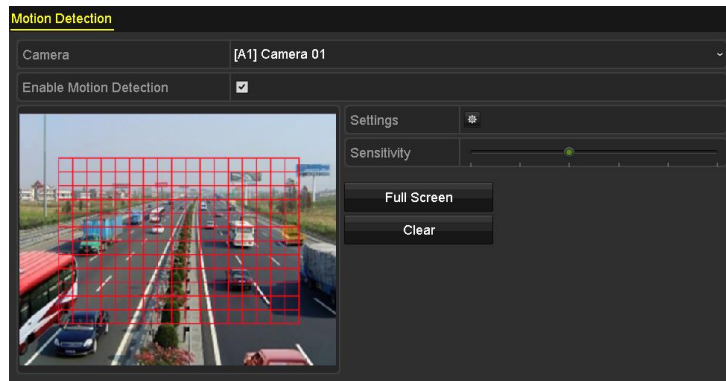


Figure 5-13 Motion Detection- Mask

- 4) Click the , and the message box for channel information pops up.

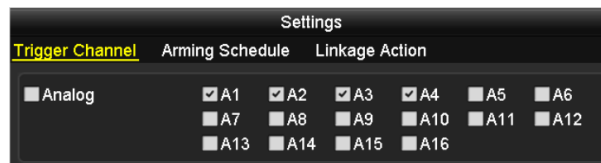


Figure 5-14 Motion Detection Settings

- 5) Select the channels which you want the motion detection event to trigger recording.
- 6) Click **Apply** to save the settings.
- 7) Click **OK** to back to the upper level menu.
- 8) Exit the **Motion Detection** menu.

Step 3 Configure the schedule.

Please refer to the step 4 of *Chapter "Configuring Recording"*, while you may choose Motion as the record type.

5.4 Configuring Alarm Triggered Recording

Purpose

Follow the procedure to configure alarm triggered recording.

Step 1 Enter the **Alarm Setting** interface.

Menu> Configuration> Alarm

Alarm Status Alarm Input Alarm Output		
Alarm Input List		
Alarm Input No.	Alarm Name	Alarm Type
Local-<1	1	N.C
Local-<2		N.O
Local-<3		N.O
Local-<4		N.O
Local-<5		N.O
Local-<6		N.O
Local-<7		N.O
Alarm Output List		
Alarm Output No.	Alarm Name	Dwell Time
Local->1		5s
Local->2		5s
Local->3		5s
Local->4		5s

Figure 5-15 Alarm Settings

Step 2 Click the **Alarm Input** tab.

Alarm Status Alarm Input Alarm Output	
Alarm Input No.	Local-<1
Alarm Name	1
Type	N.C
Enable	☒
Settings	

Figure 5-16 Alarm Settings- Alarm Input

- 1) Select Alarm Input number and configure alarm parameters.
- 2) Choose N.O (normally open) or N.C (normally closed) for alarm type.
- 3) Check the checkbox of Setting.
- 4) Click the  button.

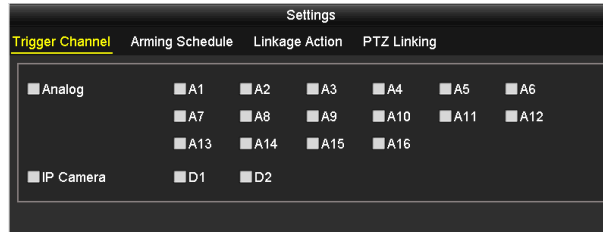


Figure 5-17 Alarm Handling

- 5) Choose the alarm triggered recording channel.
- 6) Check the checkbox ☒ to select channel.
- 7) Click **Apply** to save settings.
- 8) Click **OK** to back to the upper level menu.

Repeat the steps from 1) to 8) to configure other alarm input parameters.

If the setting can also be applied to other alarm inputs, click **Copy** and choose the alarm input number.

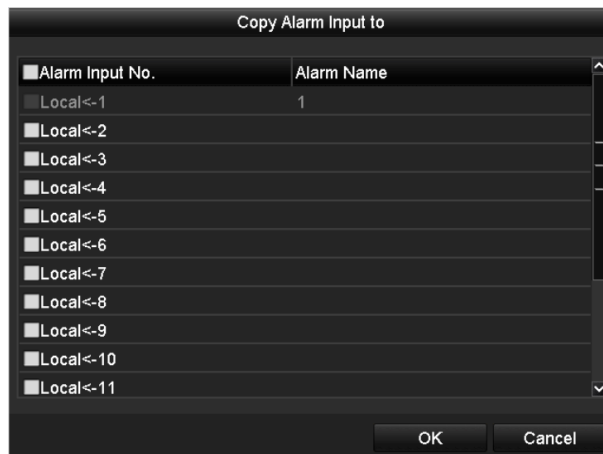


Figure 5-18 Copy Alarm Input

Step 3 Configure the schedule.

Please refer to the step 4 of *Chapter "Configuring Recording Schedule"*, while you may choose Alarm as the record type.

5.5 Configuring Manual Recording

Purpose

Follow the steps to set parameters for the manual recording. Using manual recording, you need to manually cancel the record. The manual recording is prior to the scheduled recording.

Step 1 Enter the **Manual Record** interface.

Menu> Manual

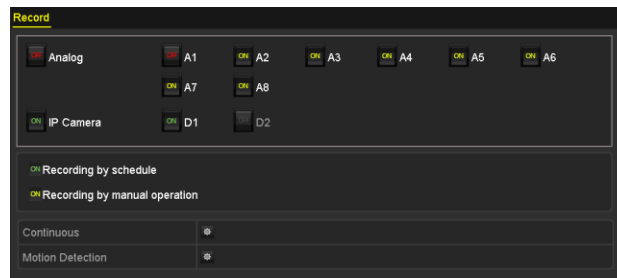


Figure 5-19 Manual Record

Step 2 Enable manual record.

Click the status icon **OFF** before camera number to change it to **ON**.

Or click the status icon **OFF** of **Analog** to enable manual record of all channels.

Step 3 Disable manual record.

Click the status icon **ON** to change it to **OFF**.

Or click the status icon **ON** of **Analog** to disable manual record of all channels.



NOTE

After rebooting all the manual records enabled are canceled.

5.6 Configuring Holiday Recording

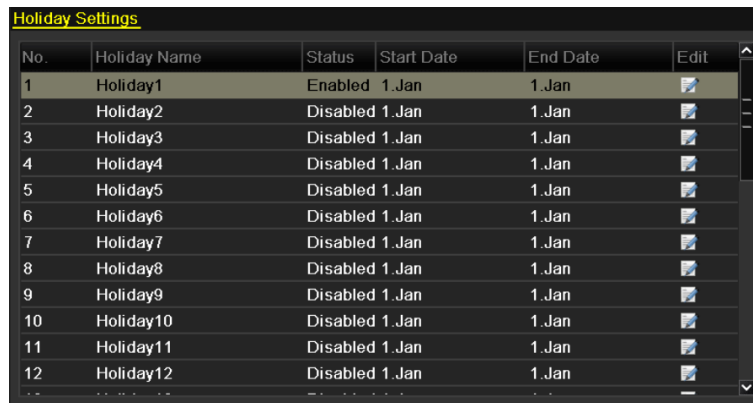
Purpose

Follow the steps to configure the record schedule on holiday for that year. You may want to have different plan for recording on holiday.

Step 1 Enter the Record setting interface.

Menu>Record

Step 2 Choose **Holiday** on the left bar.



No.	Holiday Name	Status	Start Date	End Date	Edit
1	Holiday1	Enabled	1.Jan	1.Jan	
2	Holiday2	Disabled	1.Jan	1.Jan	
3	Holiday3	Disabled	1.Jan	1.Jan	
4	Holiday4	Disabled	1.Jan	1.Jan	
5	Holiday5	Disabled	1.Jan	1.Jan	
6	Holiday6	Disabled	1.Jan	1.Jan	
7	Holiday7	Disabled	1.Jan	1.Jan	
8	Holiday8	Disabled	1.Jan	1.Jan	
9	Holiday9	Disabled	1.Jan	1.Jan	
10	Holiday10	Disabled	1.Jan	1.Jan	
11	Holiday11	Disabled	1.Jan	1.Jan	
12	Holiday12	Disabled	1.Jan	1.Jan	

Figure 5-20 Holiday Settings

Step 3 Enable Edit Holiday schedule.

- 1) Click  to enter the Edit interface.

Holiday Name		Holiday1	
Enable	☐		
Mode	By Month		
Start Date	Jan	1	
End Date	Jan	1	

Apply OK Cancel

Figure 5-21 Edit Holiday Settings

2) Check the checkbox of **Enable**.

3) Select Mode from the dropdown list.

There are three different modes for the date format to configure holiday schedule. By Month, By Week, and By Date are selectable.

4) Set the start and end date.

5) Click **Apply** to save settings.

6) Click **OK** to exit the Edit interface.

Step 4 Configure the record schedule.

Please refer to the *Chapter "Configuring Recording Schedule"*, while you may choose Holiday in the Schedule dropdown list, or you can draw the schedule on the timeline of Holiday.

Schedule		Holiday	
All Day	☐		
Start/End Time	00:00-24:00	Type	Motion
Start/End Time	00:00-00:00	Type	Motion Alarr
Start/End Time	00:00-00:00	Type	Continuous
Start/End Time	00:00-00:00	Type	Continuous
Start/End Time	00:00-00:00	Type	Continuous
Start/End Time	00:00-00:00	Type	Continuous
Start/End Time	00:00-00:00	Type	Continuous
Start/End Time	00:00-00:00	Type	Continuous
Start/End Time	00:00-00:00	Type	Continuous

Copy Apply OK Cancel

Figure 5-22 Edit Schedule- Holiday

 NOTE

- Up to 8 periods can be configured for each day. And the time periods cannot be overlapped each other.
- In the time table of the channel, both holiday schedule and normal day schedule are displayed.
- Repeat the above step 4 to set Holiday schedule for other channels. If the holiday schedule can also be used to other channels, click **Copy** and choose the channel you want to apply the settings.

5.7 Configuring Redundant Recording

Purpose

Enabling redundant recording, which means saving the record files not only in the R/W HDD but also in the redundant HDD, will effectively enhance the data safety and reliability.

Before you start

You must set the Storage mode in the HDD advanced settings to *Group* before you set the HDD property to Redundant. For detailed information, please refer to *Chapter "Managing HDD Group"*. There should be at least another HDD which is in Read/Write status.

Step 1 Enter HDD Information interface.

Menu> HDD

☐	Label	Capacity	Status	Property	Type	Free Space	Group	Edit	Delete
☒	1	931.51GB	Normal	R/W	Local	865GB	1		—
☒	3	931.51GB	Normal	R/W	Local	931GB	1		—

Figure 5-23 HDD General

Step 2 Select the **HDD** and click  to enter the Local HDD Settings interface.

- 1) Set the HDD property to Redundant.



Figure 5-24 HDD General-Editing

- 2) Click **Apply** to save the settings.
- 3) Click **OK** to back to the upper level menu.

Step 3 Enter the Record setting interface.

Menu> Record> Parameters

- 1) Select the **Record** tab.
- 2) Select Camera you want to configure.
- 3) Click **More Settings** to enter the following interface.



Figure 5-25 Record Parameters

- 4) Check the checkbox of **Redundant Record**.
- 5) Click **Apply** to save settings.
- 6) If the encoding parameters can also be used to other channels, click **Copy** and choose the channel you want to apply the settings.

5.8 Configuring HDD Group

Purpose

You can group the HDDs and save the record files in certain HDD group.

Step 1 Enter HDD setting interface.

Menu>HDD>Advanced

Step 2 Select Storage Mode tab.

Check whether the storage mode of the HDD is Group. If not, set it to Group. For detailed information, please refer to *Chapter "Managing HDD Group"*.

Step 3 Select **General** in the left bar.

Click  to enter editing interface.

Step 4 Configuring HDD group.

- 1) Choose a group number for the HDD group.
- 2) Click **Apply** to save your settings.
- 3) Click **OK** to back to the upper level menu.

Step 5 Repeat the above steps to configure more HDD groups.

Step 6 Choose the Channels which you want to save the record files in the HDD group.

- 1) Enter **Storage Mode** interface.

Menu>HDD>Advanced> Storage Mode

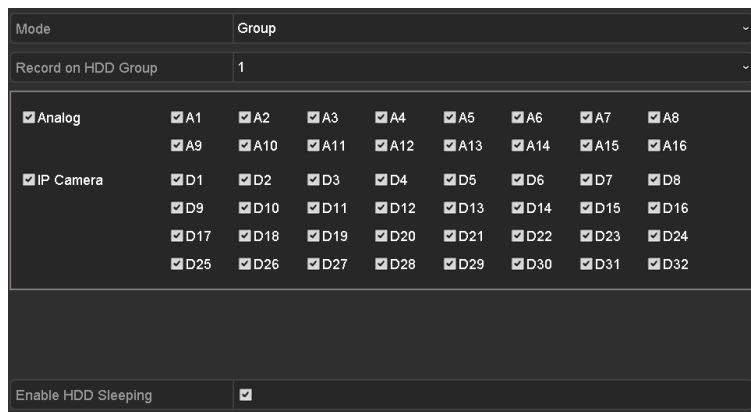


Figure 5-26 HDD Advanced

- 2) Choose Group number in the dropdown list of **Record on HDD Group**
- 3) Check the channels you want to save in this group.

- 4) Click **Apply** to save settings.



NOTE

After you have configured the HDD groups, you can configure the Recording settings following the procedure provided in *Chapter 5.2-5.7*.

5.9 Files Protection

Purpose

You can lock the recorded files or set the HDD property to Read-only to protect the record files from being overwritten.

Protect file by locking the record files

Step 1 Enter **Export Settings** interface.

Menu> Export

Normal

☒ Analog	☒ A1	☒ A2	☒ A3	☒ A4	☒ A5	☒ A6	☒ A7	☒ A8
	☒ A9	☒ A10	☒ A11	☒ A12	☒ A13	☒ A14	☒ A15	☒ A16
☒ IP Camera	☒ D1	☒ D2	☒ D3	☒ D4	☒ D5	☒ D6	☒ D7	☒ D8
	☒ D9	☒ D10	☒ D11	☒ D12	☒ D13	☒ D14	☒ D15	☒ D16
	☒ D17	☒ D18						

Start/End time of record	02-04-2016 13:40:49 -- 02-17-2016 10:23:16	
Record Mode	Main Stream	
Record Type	All	
File Type	All	
Start Time	02-17-2016	00:00:00
End Time	02-17-2016	23:59:59

Figure 5-27 Export

Step 2 Select the channels you want to investigate by checking the checkbox to ☒.

Step 3 Configure the record mode, record type, file type, start time and end time.

Step 4 Click **Search** to show the results.

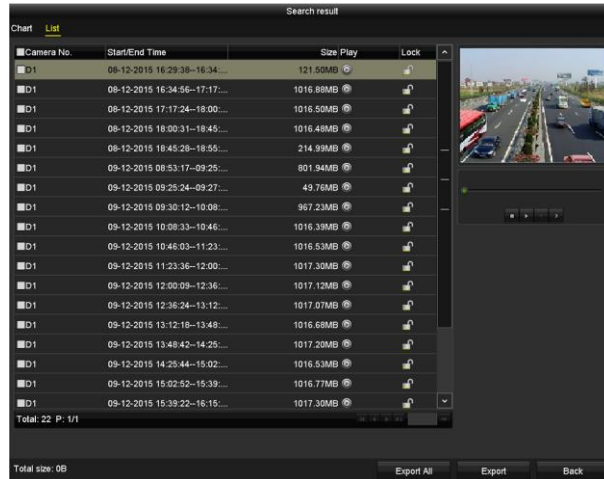


Figure 5-28 Export-Search Result

Step 5 Protect the record files.

- 1) Find the record files you want to protect, and then click the  icon which will turn to , indicating that the file is locked.



NOTE

The record files of which the recording is still not completed cannot be locked.

- 2) Click  to change it to  to unlock the file and the file is not protected.

Protect file by setting HDD property to Read-only

Before you start

To edit HDD property, you need to set the storage mode of the HDD to Group. See *Chapter "Managing HDD Group"*.

Step 1 Enter HDD setting interface.

Menu> HDD

Label	Capacity	Status	Property	Type	Free Space	Group	Edit	Delete
1	931.51GB	Normal	R/W	Local	865GB	1		—
3	931.51GB	Normal	R/W	Local	931GB	1		—

Figure 5-29 HDD General

Step 2 Click  to edit the HDD you want to protect.

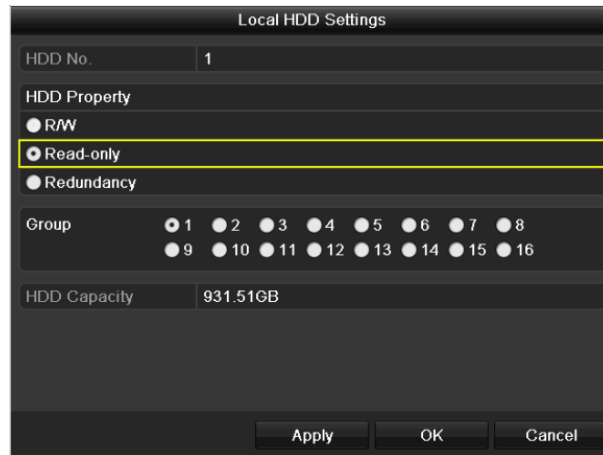


Figure 5-30 HDD General- Editing

Step 3 Set the HDD to Read-only.

Step 4 Click **OK** to save settings and back to the upper level menu.

NOTE

- You cannot save any files in a Read-only HDD. If you want to save files in the HDD, change the property to R/W.
- If there is only one HDD and is set to Read-only, the DVR cannot record any files. Only live view mode is available.
- If you set the HDD to Read-only when the DVR is saving files in it, then the file will be saved in next R/W HDD. If there is only one HDD, the recording will be stopped.

5.10 Configuring 1080P Lite

Purpose

When the 1080P Lite Mode is enabled, the encoding resolution at 1080P Lite (real-time) is supported. If not, up to 1080P (non-real-time) is supported.

Task1: Enabling the 1080P Lite Mode

Step 1 Enter the **Record** menu

Menu > Record

Step 2 Click **Advanced** to enter the advanced interface.

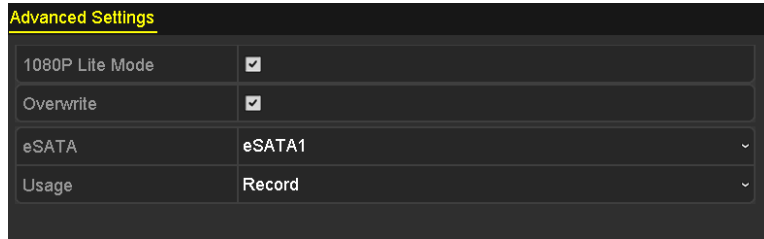


Figure 5-31 Advanced Interface

Step 3 Check the checkbox of **1080 Lite Mode** and click **Apply** to pop up the attention box.

Step 4 Click **Yes** to reboot the device to have new settings taken effect.

Task2: Disabling the 1080P Lite Mode

Step 1 Enter the **Record** menu

Menu > Record

Step 2 Click **Advanced** to enter the advanced interface.

Step 3 Uncheck the checkbox of **1080 Lite Mode** and click **Apply**. The following attention box pops up.



Figure 5-32 Attention

Step 4 Click **Yes** to reboot the device to activate the new settings or **No** to restore the old settings.

Chapter 6 Playback

6.1 Playing Back Record Files

6.1.1 Instant Playback

Purpose

Play back the recorded video files of a specific channel in the live view mode. Channel switch is supported.

Instant playback by channel

Choose a channel in live view mode and click the  button in the quick setting toolbar.



NOTE

In the instant playback mode, only record files recorded during the last five minutes on this channel will be played back.



Figure 6-1 Instant Playback Interface

6.1.2 Playing Back by Normal Search

Playback by Channel

Enter the **Playback** interface.

Right click a channel in live view mode and select **Playback** from the menu, as shown in the following figure:

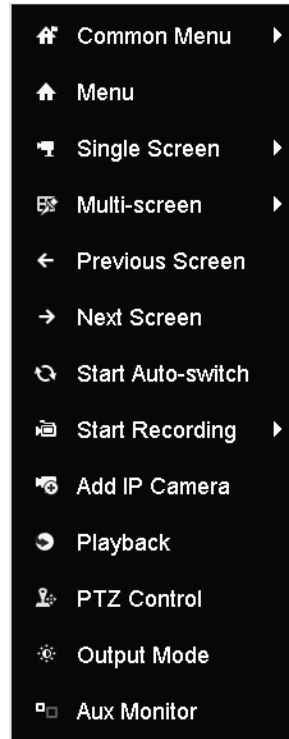


Figure 6-2 Right-click Menu under Live View

Playback by Time

Purpose

Play back video files recorded in specified time duration. Multi-channel simultaneous playback and channel switch are supported.

Step 1 Enter **Playback** interface.

Menu>Playback

Step 2 Check the checkbox of channel(s) in the channel list and then double-click to select a date on the calendar.



Figure 6-3 Playback Calendar

NOTE

If there are record files for that camera in that day, in the calendar, the icon for that day is displayed as . Otherwise it is displayed as .

Playback Interface

You can select the main stream or sub stream from the dropdown list for playback.

You can also use the toolbar in the bottom part of **Playback** interface to control playing progress, as shown in the following figure.



Figure 6-4 Playback Interface

Select the channel(s) if you want to switch playback to another channel or execute simultaneous playback of multiple channels.



Figure 6-5 Toolbar of Playback

Table 6-1 Detailed Explanation of Playback Toolbar

Button	Operation	Button	Operation	Button	Operation
	Audio on/Mute		Start/Stop clipping		Lock File
	Add default tag		Add customized tag		File management for video clips, locked files and tags
	Reverse play/Pause		Stop		Digital Zoom
	30s forward		30s reverse		Pause/Play
	Fast forward		Previous day		Slow forward
	Full Screen		Exit		Next day
	Save the clips		Process bar		Scaling up/down the time line


NOTE

- The **01-01-2015 00:00:23 -- 14-07-2015 16:10:27** indicates the start time and end time of the record files.
-  represents normal recording (manual or schedule);  represents event recording (motion, alarm, motion | alarm, motion & alarm).
- Playback progress bar: use the mouse to click any point of the progress bar to locate special frames.

6.1.3 Playing Back by Event Search

Purpose

Play back record files on one or several channels searched out by restricting event type (motion detection, alarm input or VCA). Channel switch is supported.

Step 1 Enter the **Playback** interface.

Menu>Playback

Step 2 Click  and select  to enter the **Event Playback** interface.

Step 3 Select **Alarm Input**, **Motion**, **VCA** as the event type, and specify the start time and end time for search.

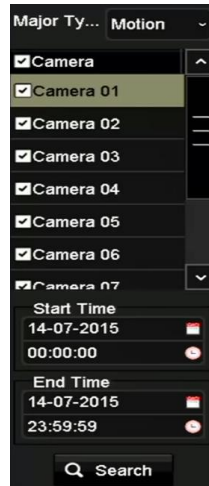


Figure 6-6 Video Search by Motion Detection

Step 4 Click **Search**, and the record files matching the search conditions will be displayed on a list.

Step 5 Select and click  button to play back the record files.

You can click **Back** button to return to the search interface.

If there is only one channel triggered, clicking  button takes you to **Full-screen Playback** interface of this channel.

If several channels are triggered, clicking  button takes you to the **Synchronous Playback** interface. Check ☒ checkbox to select one channel for playback or select multiple channels for synchronous playback.



NOTE

The maximum number of channels for synchronous playback supported varies to different models.



Figure 6-7 Select Channels for Synchronous Playback

Step 6 On the **Event Playback** interface, you can select the main stream or sub-stream from the dropdown list for playback.

The toolbar in the bottom part of **Playback** interface can be used to control playing process.



Figure 6-8 Interface of Playback by Event

Pre-play and post-play can be configured for the playback of event triggered record files.

Pre-play: The time you set to play back before the event. For example, when an alarm triggered the recording at 10:00, if you set the pre-play time as 5 seconds, the video plays back from 9:59:55.

Post-play: The time you set to play back after the event. For example, when an alarm triggered the recording ends at 11:00, if you set the post-play time as 5 seconds, the video plays back till 11:00:05.

Step 7 You can click  or  button to select the previous or next event. Please refer to Table 6.1 for the description of buttons on the toolbar.

6.1.4 Playing Back by Tag

Purpose

Video tag allows you to record related information like people and location of a certain time point during playback. You are also allowed to use video tag(s) to search for record files and position time point.

Before playing back by tag

Step 1 Enter Playback interface.

Menu>Playback

Step 2 Search and play back the record file(s). Refer to *Chapter "Play Back by Channel"* for the detailed information about searching and playback of the record files.



Figure 6-9 Interface of Playback by Time

Click  button to add default tag.

Click  button to add customized tag and input tag name.

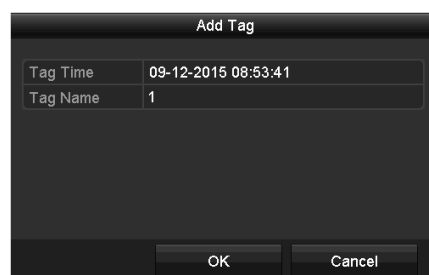


Figure 6-10 Add Tag



NOTE

Max. 64 tags can be added to a single video file.

Step 3 Tag management.

Click  button to check, edit and delete tag(s).



Figure 6-11 Tag Management Interface

Step 4 Select **Tag** from the drop-down list in the **Playback** interface.

Step 5 Choose channels, edit start time and end time, and then click **Search** to enter **Search Result** interface.



NOTE

You can enter keyword in the textbox to search the tag on your command.



Figure 6-12 Video Search by Tag

Step 6 Click  button to play back the file.

You can click the **Back** button to return to the search interface.

 NOTE

- Pre-play and post-play can be configured.
- You can click  or  button to select the previous or next tag. Please refer to Table 6.1 for the description of buttons on the toolbar.

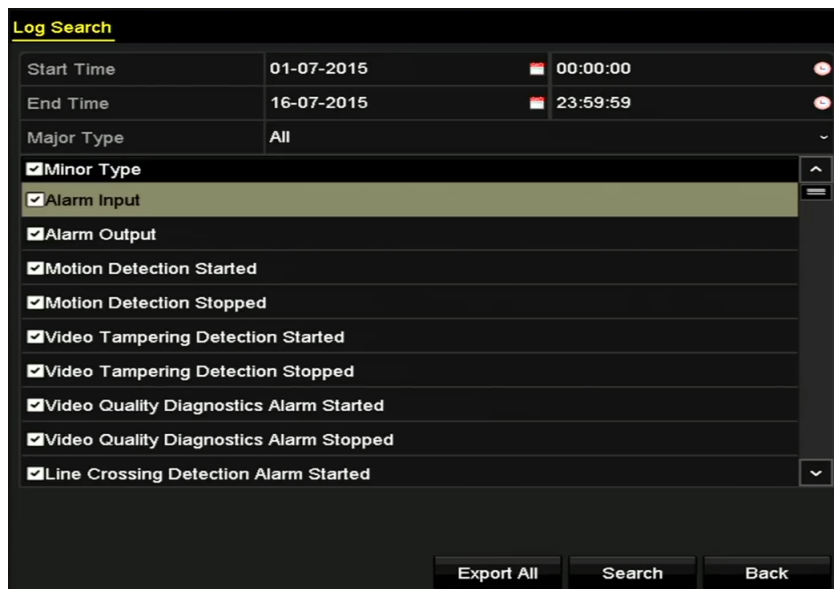
6.1.5 Playing Back by System Logs

Purpose

Play back record file(s) associated with channels after searching system logs.

Step 1 Enter **Log Information** interface.

Menu>Maintenance>Log Information



Log Search			
Start Time	01-07-2015	00:00:00	
End Time	16-07-2015	23:59:59	
Major Type	All		
☒ Minor Type			
☒ Alarm Input			
☒ Alarm Output			
☒ Motion Detection Started			
☒ Motion Detection Stopped			
☒ Video Tampering Detection Started			
☒ Video Tampering Detection Stopped			
☒ Video Quality Diagnostics Alarm Started			
☒ Video Quality Diagnostics Alarm Stopped			
☒ Line Crossing Detection Alarm Started			

Export All Search Back

Figure 6-13 System Log Search Interface

Step 2 Click **Log Search** tab to enter **System Log Search** interface.

Set search time and type and click **Search** button.

Search Result						
No.	Major Type	Time	Minor Type	Parameter	Play	Details
1	Information	10-07-2015 09:53:59	Local HDD Infor...	N/A	—	✓
2	Operation	10-07-2015 09:53:59	Power On	N/A	—	✓
3	Information	10-07-2015 09:54:05	Start Recording	N/A	⏮	✓
4	Operation	10-07-2015 09:54:08	Local Operation:...	N/A	—	✓
5	Information	10-07-2015 09:54:25	HDD S.M.A.R.T.	N/A	—	✓
6	Information	10-07-2015 09:54:32	Start Recording	N/A	⏮	✓
7	Operation	10-07-2015 09:54:32	Local Operation:...	N/A	⏮	✓
8	Operation	10-07-2015 09:54:32	Local Operation:...	N/A	⏮	✓
9	Exception	10-07-2015 09:55:32	IP Camera Disco...	N/A	⏮	✓
10	Information	10-07-2015 10:04:09	System Running...	N/A	—	✓
Total: 1690 P: 1/17						
				Export	Back	

Figure 6-14 Result of System Log Search

Step 3 Choose a log with record file and click  button to enter **Playback** interface.



NOTE

If there is no record file at the time point of the log, the message box “No result found” will pop up.

Step 4 Playback management.

The toolbar in the bottom part of Playback interface can be used to control playing process.



Figure 6-15 Interface of Playback by Log

6.1.6 Playing Back by Sub-Periods

Purpose

The video files can be played in multiple sub-periods simultaneously on the screens.

Step 1 Enter **Playback** interface.

Menu>Playback

Step 2 Select **Sub-periods** from the drop-down list in the upper-left corner of the page to enter the **Sub-periods Playback** interface.

Step 3 Select a date and start playing the video file.

Step 4 Select the **Split-screen Number** from the dropdown list. Up to 16 screens are configurable.

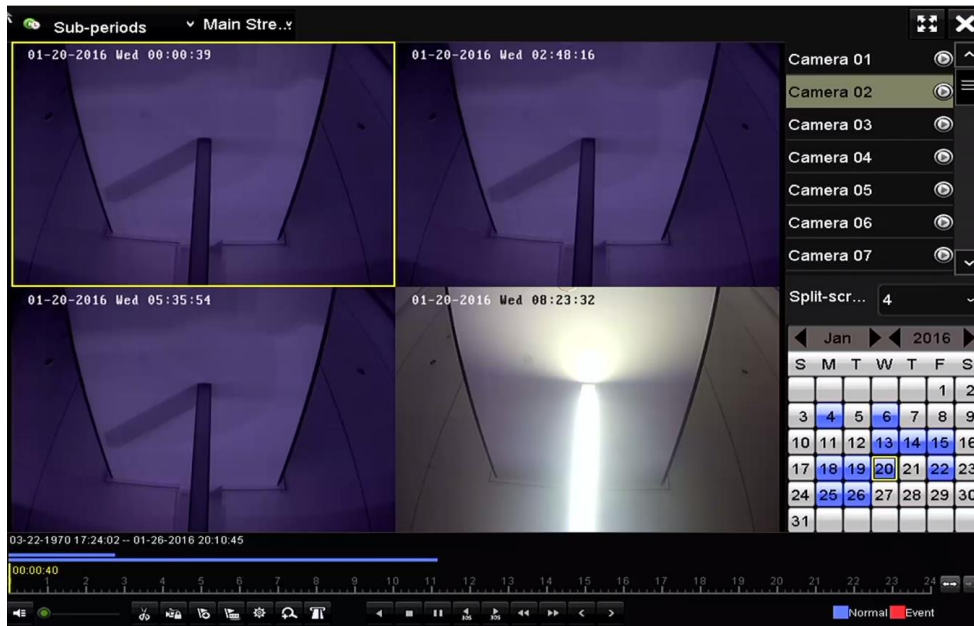


Figure 6-16 Interface of Sub-periods Playback

NOTE

According to the defined number of split-screens, the video files on the selected date can be divided into average segments for playback. E.g., if there are video files existing between 16:00 and 22:00, and the 6-screen display mode is selected, then it can play the video files for 1 hour on each screen simultaneously.

6.1.7 Playing Back External File

Purpose

Perform the following steps to look up and play back files in the external devices.

Step 1 Enter the Playback interface.

Menu>Playback

Step 2 Select the **External File** in the drop-down list on the top-left side.

The files are listed in the right-side list.

You can click the  **Refresh** button to refresh the file list.

Step 3 Select and click the  button to play back it.



Figure 6-17 Interface of External File Playback

6.2 Auxiliary Functions of Playback

6.2.1 Playing Back Frame by Frame

Purpose

Play video files frame by frame, in order to check image details of the video when abnormal events happen.

Step 1 Go to Playback interface and click button  until the speed changes to *Single* frame.

Step 2 One click on the playback screen represents playback or adverse playback of one frame. You can use button  in toolbar to stop the playing.

6.2.2 Digital Zoom

Step 1 Click the  button on the playback control bar to enter Digital Zoom interface.

Step 2 Use the mouse to draw a red rectangle and the image within it will be enlarged up to 16 times.



Figure 6-18 Draw Area for Digital

Zoom Step 3 Right-click the image to exit the digital zoom interface.

6.2.3 Reverse Playback of Multi-Channel

Purpose

You can play back record files of multi-channel reversely. Up to 16-ch simultaneous reverse playback is supported.

Step 1 Enter Playback interface.

Menu>Playback

Step 2 Check more than one checkboxes to select multiple channels and click to select a date on the calendar.



Figure 6-19 4-ch Synchronous Playback Interface

Step 3 Click  to play back the record files reversely.

Chapter 7 Backup

7.1 Backing up Record Files

Before you start

Please insert the backup device(s) into the device.

7.1.1 Backing up by Normal Video Search

Purpose

The record files can be backed up to various devices, such as USB devices (USB flash drives, USB HDDs, USB writer), SATA writer and e-SATA HDD.

Backup using USB flash drives and USB HDDs

Step 1 Enter Export interface.

Menu>Export>Normal

Step 2 Select the cameras to search.

Step 3 Set search condition and click **Search** button to enter the search result interface.

Normal	
☒ Analog	☒ A1 ☒ A2 ☒ A3 ☒ A4 ☒ A5 ☒ A6 ☒ A7 ☒ A8
☒ IP Camera	☒ D1 ☒ D2
Start/End time of record	01-01-2015 00:00:23 -- 16-07-2015 15:09:21
Record Mode	Main Stream
Record Type	All
File Type	All
Start Time	01-07-2015 00:00:00
End Time	16-07-2015 23:59:59
Search Back	

Figure 7-1 Normal Video Search for Backup

Step 4 The matched video files are displayed in **Chart** or **List** display mode.

Click  to play the record file if you want to check it.

Check the checkbox before the video files you want to back up.



NOTE

The size of the currently selected files is displayed in the lower-left corner of the window.



Figure 7-2 Result of Normal Video Search for Backup

Step 5 Select video files from the **Chart** or **List** to export, and click the button **Export** to enter the **Export** interface.

You can also click **Export All** to select all the video files for backup and enter the **Export** interface.

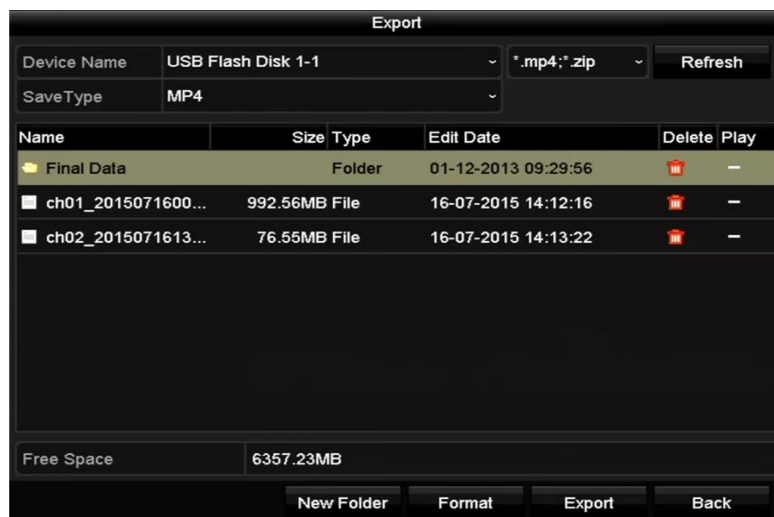


Figure 7-3 Export by Normal Video Search using USB Flash Drive

Step 6 Select the backup device from the drop-down list and you can also select the file format to filter the files existing in the backup device.

Step 7 Select the save type to MP4 or AVI

Step 8 Click the button **Export** on the Export interface to start the backup process. On the pop-up message box, select to export the video files or the player to the backup device. Click **OK** to confirm.

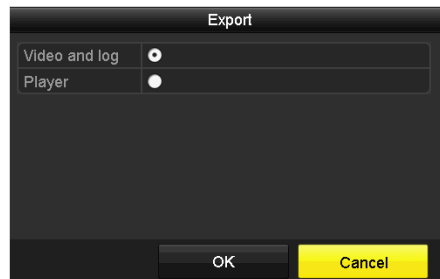


Figure 7-4 Select File or Player for Backup

Step 9 A prompt message will pop up after the backup process is complete. Click **OK** to confirm.

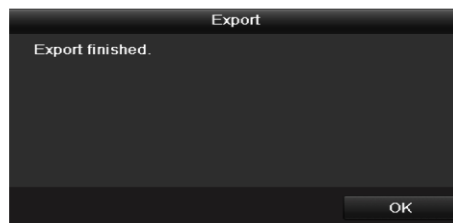


Figure 7-5 Export Finished

NOTE

The backup of video files using USB writer or SATA writer has the same operating instructions. Please refer to steps described above.

7.1.2 Backing up by Event Search

Purpose

Back up event-related record files using USB devices (USB flash drives, USB HDDs, USB writer), SATA writer or eSATA HDD. Quick Backup and Normal Backup are supported.

Step 1 Enter **Export** interface.

Menu > Export > Event

Step 2 Select the cameras to search.

Step 3 Select the event type to alarm input, motion, VCA

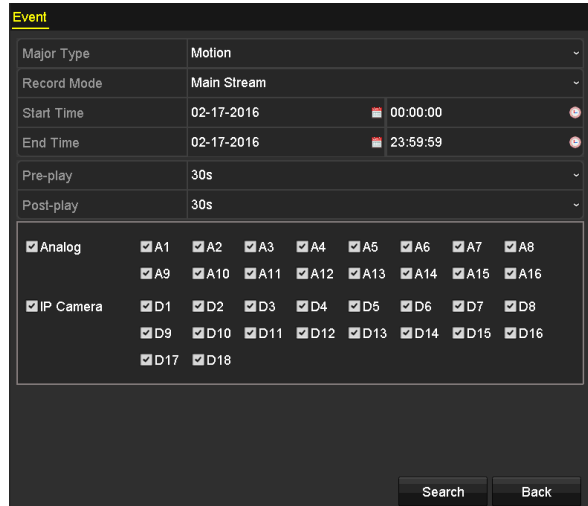


Figure 7-6 Event Search for Backup

Step 4 Set search condition and click **Search** button to enter the search result interface. The matched video files are displayed in **Chart** or **List** display mode.

Step 5 Select video files from the **Chart** or **List** interface to export.

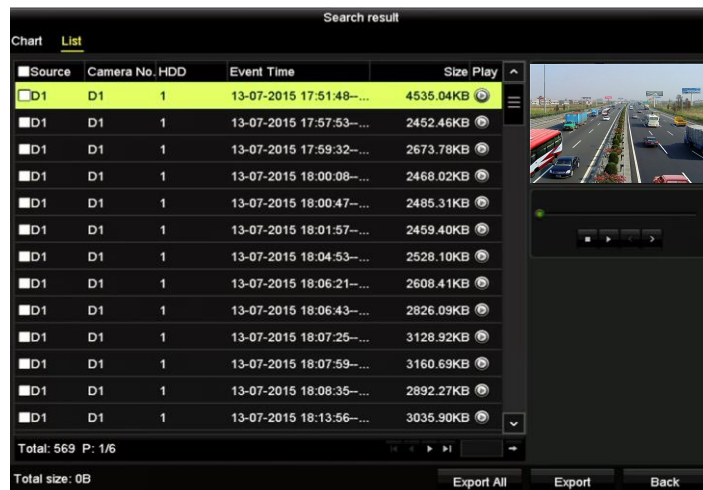


Figure 7-7 Result of Event Search

Step 6 Export the video files. Please refer to Chapter "Backing up by Normal Video Search" for details.

7.1.3 Backing up Video Clips

Purpose

You may also select video clips in playback mode to export directly during Playback, using USB devices (USB flash drives, USB HDDs, USB writer), or SATA writer.

Step 1 Enter **Playback** interface.

Step 2 During playback, use buttons  or  in the playback toolbar to start or stop clipping record file(s).

Step 3 Click the  to enter the file management interface.

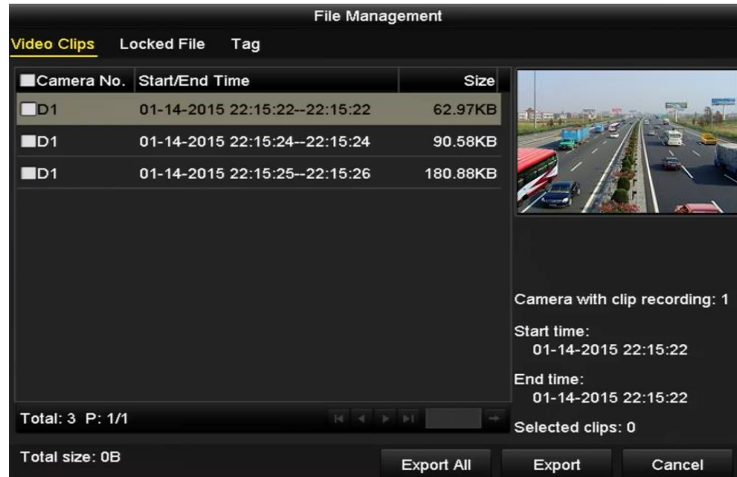


Figure 7-8 Video Clips Export Interface

Step 4 Export the video clips in playback. Please refer to Chapter "Backing up by Normal Video Search" for details.

7.2 Managing Backup Devices

Management of USB flash drives, USB HDDs and eSATA HDDs

Step 1 Enter the **Export** interface.



Figure 7-9 Storage Device Management

Step 2 Backup device management.

Click **New Folder** button if you want to create a new folder in the backup device.

Select a record file or folder in the backup device and click  button if you want to delete it.

Click **Erase** button if you want to erase the files from a re-writable CD/DVD.

Click **Format** button to format the backup device.



NOTE

If the inserted storage device is not recognized:

- Click the **Refresh** button.
- Reconnect device.
- Check for compatibility from vendor.

Chapter 8 Alarm Settings

8.1 Setting Motion Detection

Step 1 Enter **Motion Detection** interface of Camera Management and choose a camera you want to set up motion detection.

Menu> Camera> Motion

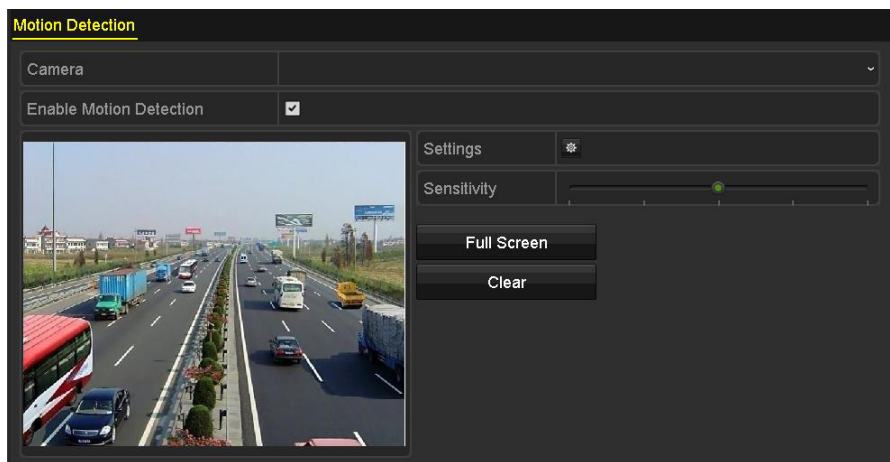


Figure 8-1 Motion Detection Setup Interface

Step 2 Set detection area and sensitivity.

Check ☒ checkbox to enable motion detection. Use the mouse to draw detection area(s) or click **Full Screen** to set the detection area to be the full screen and drag the sensitivity bar to set sensitivity.

Click  to set alarm response actions.

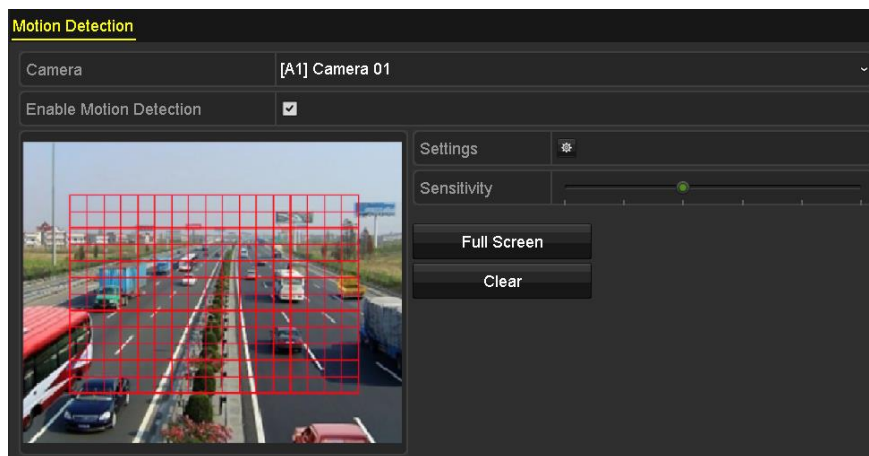


Figure 8-2 Set Detection Area and Sensitivity

Step 3 Click **Trigger Channel** tab and select one or more channels which will start to record or become full-screen monitoring when motion alarm is triggered.

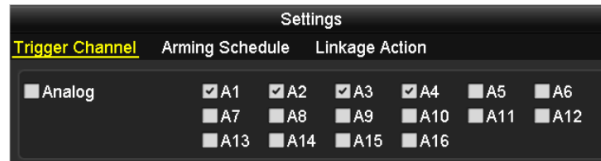


Figure 8-3 Set Trigger Camera of Motion Detection

Step 4 Set arming schedule of the channel.

Select **Arming Schedule** tab to set the channel's arming schedule.

Choose one day of a week and up to eight time periods can be set within each day. Or you can click the **Copy** button to copy the time period settings to other day(s).



NOTE

Time periods shall not be repeated or overlapped.



Figure 8-4 Set Arming Schedule of Motion Detection

Step 5 Click **Linkage Action** tab to set up alarm response actions of motion alarm (please refer to Chapter "Setting Alarm Response Actions").

Repeat the above steps to set up arming schedule of other days of a week.

Click the **OK** button to complete the motion detection settings of the channel.

Step 6 If you want to set motion detection for another channel, repeat the above steps or just copy the above settings to it.



NOTE

You are not allowed to copy the "Trigger Channel" action.

8.2 Setting Sensor Alarms

Purpose

Set up handling method of an external sensor alarm.

Step 1 Enter Alarm Settings of System Configuration and select an alarm input.

Menu> Configuration> Alarm

Select **Alarm Input** tab to enter **Alarm Input Settings** interface.

Alarm Status	Alarm Input	Alarm Output
Alarm Input List		
Alarm Input No.	Alarm Name	Alarm Type
10.16.1.250:8000<-1		N.O
10.16.1.250:8000<-2		N.O
10.16.1.250:8000<-3		N.O
10.16.1.250:8000<-4		N.O
10.16.1.250:8000<-5		N.O
Alarm Output List		
Alarm Output No.	Alarm Name	Dwell Time
10.16.1.250:8000->1		5s
10.16.1.250:8000->2		5s

Figure 8-5 Alarm Status Interface of System Configuration

Step 2 Set the handling method of the selected alarm input.

Check the **Enable** checkbox and click  button to set its alarm response actions.

Alarm Input No.	10.16.1.250:8000<-1
Alarm Name	
Type	N.O
Enable	☒
Settings	

Figure 8-6 Alarm Input Settings Interface

Step 3 Select **Trigger Channel** tab and select one or more channels which will start to record or become full-screen monitoring when an external alarm input is triggered. Step 4

Select **Arming Schedule** tab to set the channel's arming schedule.

Choose one day of a week and max. eight time periods can be set within each day.



NOTE

Time periods shall not be repeated or overlapped.



Figure 8-7 Set Arming Schedule of Alarm Input

Step 5 Select **Linkage Action** tab to set up alarm response actions of the alarm input (please refer to Chapter "Setting Alarm Response Actions").

Repeat the above steps to set up arming schedule of other days of a week. You can also use **Copy** button to copy an arming schedule to other days.

Step 6 If necessary, select **PTZ Linking** tab and set PTZ linkage of the alarm input.

Set PTZ linking parameters and click the **OK** button to complete the settings of the alarm input.



NOTE

Please check whether the PTZ or speed dome supports PTZ linkage.

One alarm input can trigger presets, patrol or pattern of more than one channel. But presets, patrols and patterns are exclusive.

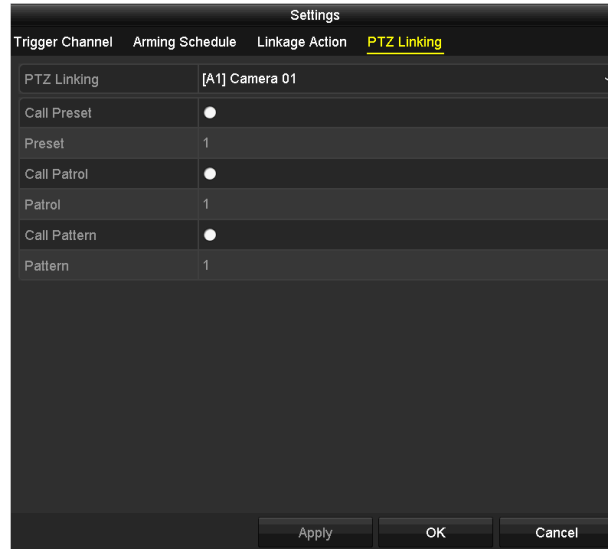


Figure 8-8 Set PTZ Linking of Alarm Input

Step 7 If you want to set handling action of another alarm input, repeat the above steps or just copy the above settings to it.



Figure 8-9 Copy Settings of Alarm Input

8.3 Detecting Video Loss

Purpose

Detect video loss of a channel and take alarm response action(s).

Step 1 Enter **Video Loss** interface of Camera Management and select a channel you want to detect.

Menu> Camera> Video Loss

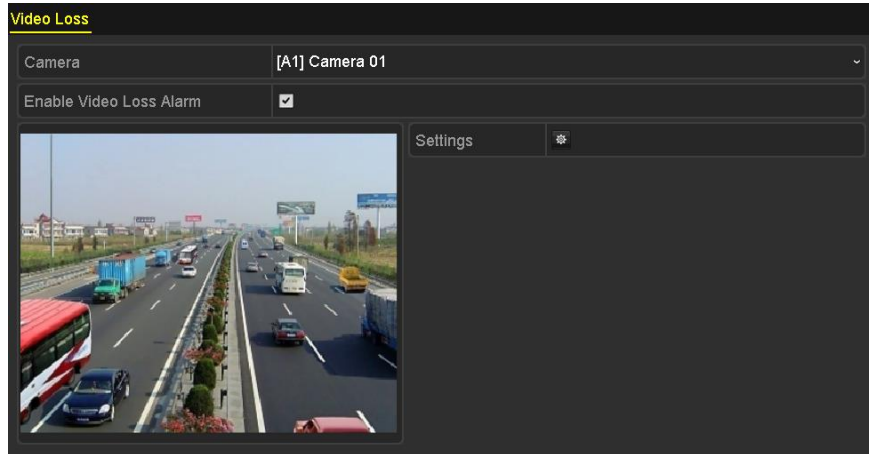


Figure 8-10 Video Loss Setup Interface

Step 2 Set up handling method of video loss.

Check the checkbox of **Enable Video Loss Alarm**.

Click  button to set up handling method of video loss.

Step 3 Set arming schedule of the channel.

Select **Arming Schedule** tab to set the channel's arming schedule.

Choose one day of a week and up to eight time periods can be set within each day. Or you can click the **Copy** button to copy the time period settings to other day(s).



NOTE

Time periods shall not be repeated or overlapped.

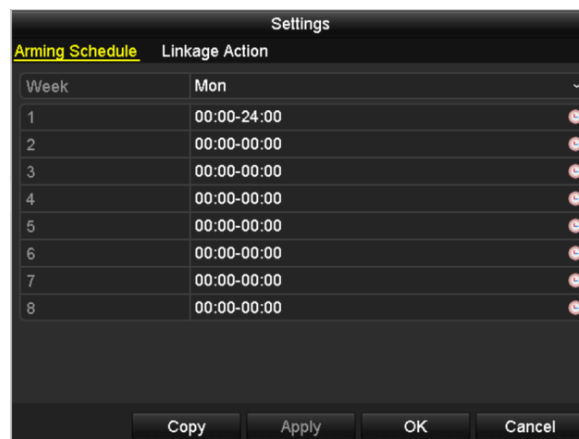


Figure 8-11 Set Arming Schedule of Video Loss

Repeat the above steps to set arming schedule of other days of a week. You can also use **Copy** button to copy an arming schedule to other days.

Step 4 Select **Linkage Action** tab to set up alarm response action of video loss (please refer to Chapter "Setting Alarm Response Actions").

Step 5 Click the **OK** button to complete the video loss settings of the channel.

Step 6 Repeat the above steps to finish settings of other channels, or click the **Copy** button copy the above settings to them.

8.4 Detecting Video Tampering

Purpose

Trigger alarm when the lens is covered and take alarm response action(s).

Step 1 Enter **Video Tampering** interface of Camera Management and select a channel you want to detect video tampering.

Menu> Camera> Video Tampering Detection

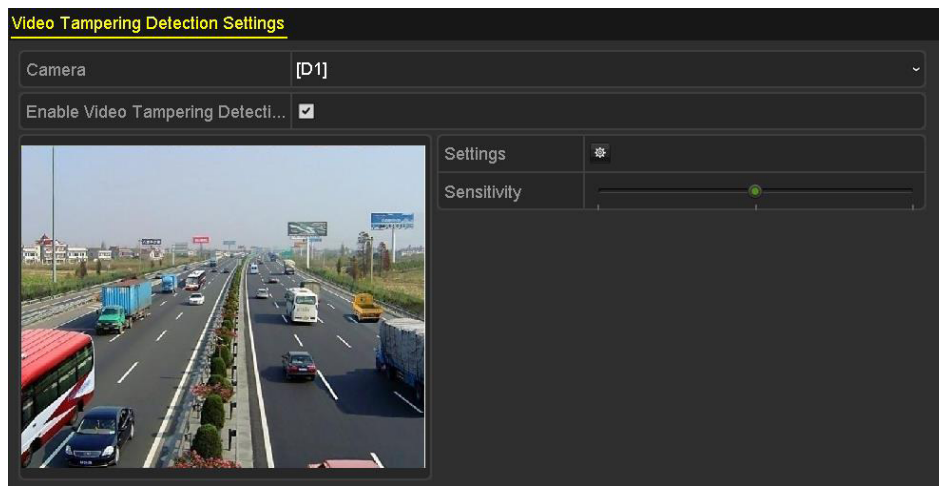


Figure 8-12 Video Tampering Interface

Step 2 Check the checkbox of Enable Video Tampering Detection.

Step 3 Drag the sensitivity bar and choose a proper sensitivity level.

Step 4 Click  to set handling method of video tampering. Set arming schedule and alarm response actions of the channel.

- 1) Click **Arming Schedule** tab to set the arming schedule of response action.
- 2) Choose one day of a week and up to eight time periods can be set within each day.



NOTE

Time periods shall not be repeated or overlapped.

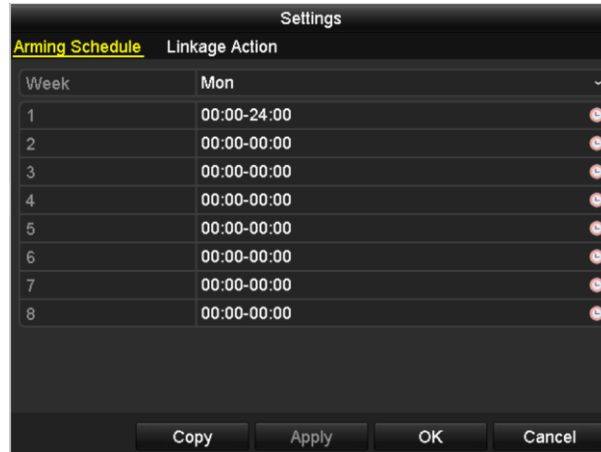


Figure 8-13 Set Arming Schedule of Video Tampering

- 3) Select **Linkage Action** tab to set alarm response actions of video tampering alarm (please refer to *Chapter "Setting Alarm Response Actions"*).

Repeat the above steps to set arming schedule of other days of a week. You can also use **Copy** button to copy an arming schedule to other days.

- 4) Click the **OK** button to complete the video tampering settings of the channel.

Repeat the above steps to finish settings of other channels, or click the **Copy** button copy the above settings to them.

Step 5 Click the **Apply** button to save and activate the settings.

8.5 Setting All-day Video Quality Diagnostics

Purpose

The device provides two ways to diagnose the video quality: manual and all-day. Perform the following steps to set the threshold of the diagnosing and the linkage actions.

- Step 1 Enter **Video Quality Diagnostics Settings** interface of Camera Management and select a channel you want to detect video tampering.

Menu> Camera> Video Quality Diagnostics

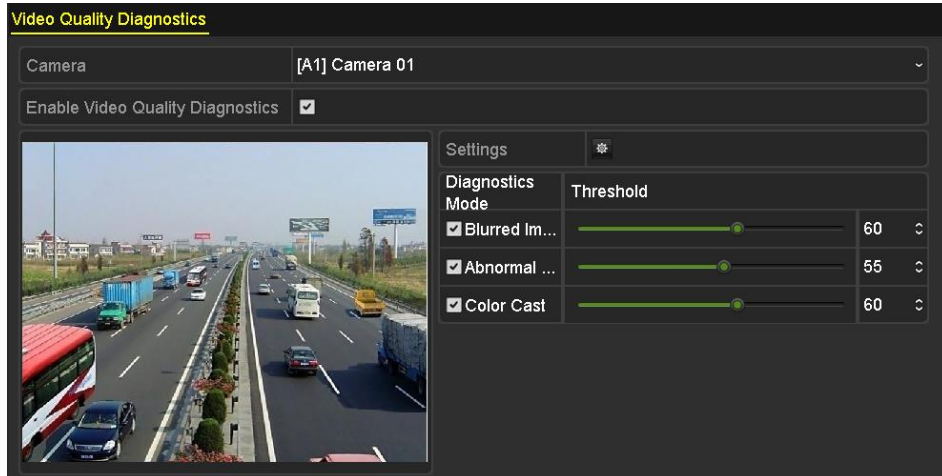


Figure 8-14 Video Quality Diagnostics Interface

Step 2 Check the checkbox of Enable Video Quality Diagnostics.



To enable video quality diagnostics, the function should be supported by the selected camera.

Step 3 Enable and set the threshold of the diagnostic types, there are **Blurred Image**, **Abnormal Brightness**, and **Color Cast**.

Check the corresponding checkbox of the diagnostic type, and adjust the threshold of it by dragging the bar.



The higher the threshold you set, the harder the exception will be detected.

Step 4 Click  to set handling method of video quality diagnostics. Set arming schedule and alarm response actions of the channel.

- 1) Click **Arming Schedule** tab to set the arming schedule of response action.
- 2) Choose one day of a week and up to eight time periods can be set within each day.



Time periods shall not be repeated or overlapped.

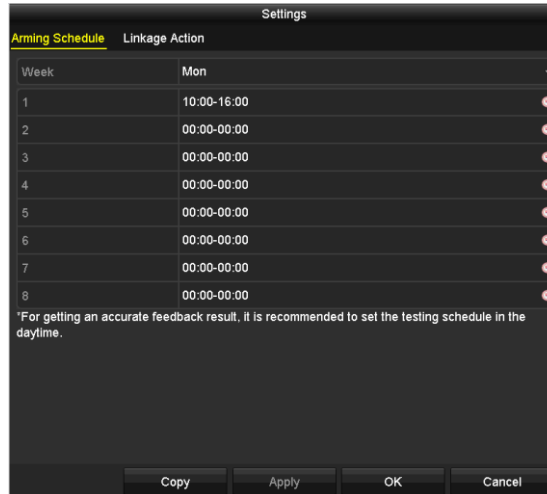


Figure 8-15 Set Arming Schedule of Video Quality Diagnostics

- 3) Select **Linkage Action** tab to set alarm response actions of video quality diagnostics alarm (please refer to *Chapter "Setting Alarm Response Actions"*).

Repeat the above steps to set arming schedule of other days of a week. You can also use **Copy** button to copy an arming schedule to other days.

- 4) Click the **OK** button to complete the video quality diagnostics settings of the channel.

Step 5 Click the **Apply** button to save and activate settings.

Step 6 (Optional) you can copy the same settings to other cameras by clicking the **Copy** button.

8.6 Handling Exceptions

Purpose

Exception settings refer to the handling method of various exceptions, e.g.

- **HDD Full:** The HDD is full.
- **HDD Error:** Writing HDD error, unformatted HDD, etc.
- **Network Disconnected:** Disconnected network cable.
- **IP Conflicted:** Duplicated IP address.
- **Illegal Login:** Incorrect user ID or password.
- **Input/Recording Resolution Mismatch:** The input resolution is smaller than the recording resolution.
- **Record Exception:** No space for saving recorded files.

Step 1 Enter **Exceptions** interface and handle various exceptions.

Menu> Configuration> Exceptions



Figure 8-16 Exception Settings Interface

Step 2 Check the checkbox of **Enable Event Hint** to display the  (Event/Exception icon) when an exceptional event occurs. And click the icon  to select the detailed event hint for display.

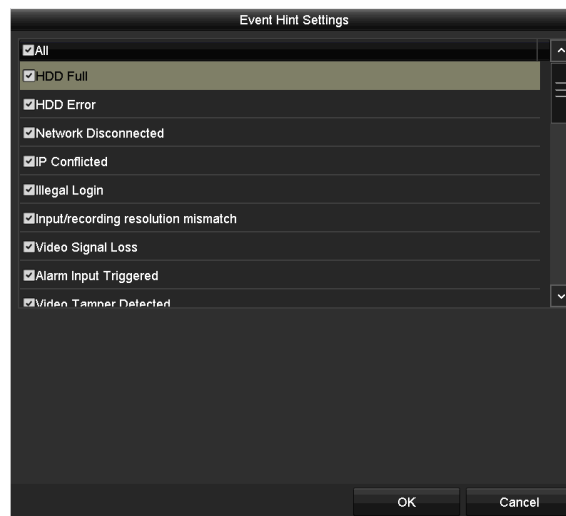


Figure 8-17 Event Hint Settings

NOTE

Click the icon  appears in the live view interface, and you can view the detailed information of the exceptional event. Click the button **Set**, and then you can select the detailed event hint for display.

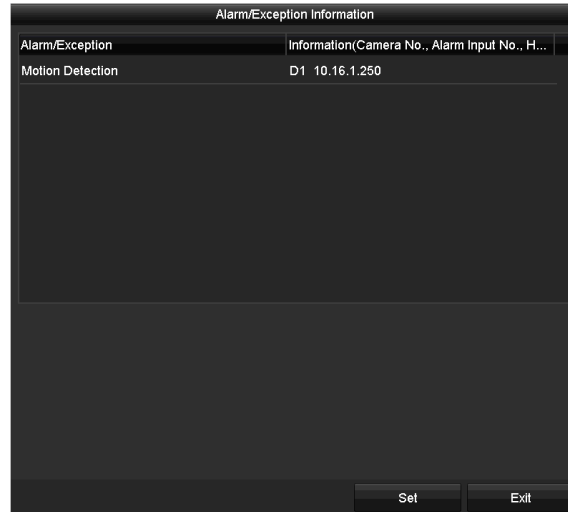


Figure 8-18 Detailed Event

Step 3 Set the alarm linkage actions. For details, see Chapter "Setting Alarm Response Actions".

Step 4 Click **Apply** to save the settings.

8.7 Setting Alarm Response Actions

Purpose

Alarm response actions will be activated when an alarm or exception occurs, including Full Screen Monitoring, Audible Warning (buzzer), Notify Surveillance Center, Send Email and Trigger Alarm Output.

Full Screen Monitoring

When an alarm is triggered, the local monitor (HDMI, VGA or CVBS monitor) displays in full screen the video image from the alarming channel configured for full screen monitoring.

If alarms are triggered simultaneously in several channels, their full-screen images will be switched at an interval of 10 seconds (default dwell time). A different dwell time can be set by going to Menu > Configuration > Live View.

Auto-switch will terminate once the alarm stops and you will be taken back to the Live View interface.

Audible Warning

Trigger an audible *beep* when an alarm is detected.

Notify Surveillance Center

Sends an exception or alarm signal to remote alarm host when an event occurs. The alarm host refers to the PC installed with Remote Client.



The alarm signal will be transmitted automatically at detection mode when remote alarm host is configured. Please refer to *Chapter "Configuring More Settings"* for details of alarm host configuration.

Send Email

Send an email with alarm information to a user or users when an alarm is detected.

Please refer to *Chapter "Configuring Email"* for details of Email configuration.

Trigger Alarm Output

Trigger an alarm output when an alarm is triggered.

Step 1 Enter Alarm Output interface.

Menu> Configuration> Alarm> Alarm Output

Select an alarm output and set alarm name and dwell time.

Alarm Status	Alarm Input	Alarm Output
Alarm Output No.	10.16.1.250:8000->1	
Alarm Name		
Dwell Time	5s	
Settings		

Figure 8-19 Alarm Output Settings Interface



NOTE

If **Manually Clear** is selected in the dropdown list of **Dwell Time**, you can clear it only by going to Menu> Manual> Alarm.

Step 2 Click button to set the arming schedule of alarm output.

Choose one day of a week and up to 8 time periods can be set within each day.



NOTE

Time periods shall not be repeated or overlapped.

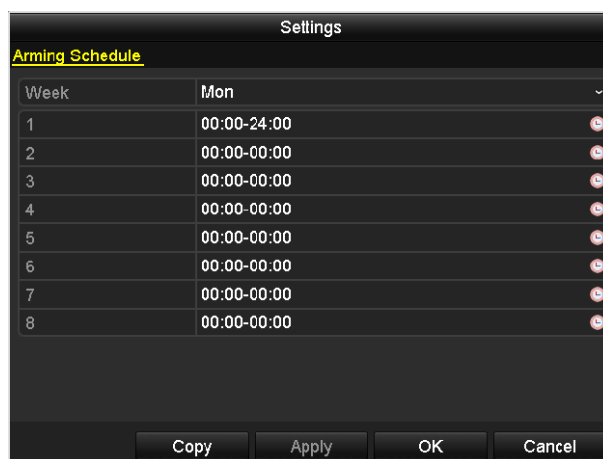


Figure 8-20 Set Arming Schedule of Alarm Output

Step 3 Repeat the above steps to set arming schedule of other days of a week. You can also click **Copy** button to copy an arming schedule to other days.

Click the **OK** button to complete the arming schedule setting of alarm output.

Step 4 Click the **Apply** button to save the settings.

Chapter 9 Network Settings

9.1 Configuring General Settings

Purpose

Network settings must be properly configured before you operate DVR over network.

Step 1 Enter the Network Settings interface.

Menu > Configuration > Network

Working Mode	Net Fault-tolerance		
Select NIC	bond0		
NIC Type	10M/100M/1000M Self-adaptive		
Enable DHCP	☒		
IPv4 Address	10 .16 .1 .16	IPv6 Address	fe80::240:43ff:fe2f:7cfb/64
IPv4 Subnet	255 .255 .255 .0	IPv6 Address	
IPv4 Default	10 .16 .1 .254	IPv6 Default	
MAC Address	00:40:43:2f:7c:fb		
MTU(Bytes)	1500		
Preferred DNS Server	10.1.7.88		
Alternate DNS Server	10.1.7.77		
Main NIC	LAN1		
Apply Back			

Figure 9-1 Network Settings Interface



NOTE

1 self-adaptive 10M/100M/1000M network interface or 1 self-adaptive 10M/100Mbps network interface provided.

Step 2 Select the **General** tab.

Step 3 In the **General Settings** interface, you can configure the following settings:
NIC Type, IPv4 Address, IPv4 Gateway, MTU and DNS Server.

Multi-address Mode: The parameters of the two NIC cards can be configured independently. You can select LAN1 or LAN2 in the NIC type field for parameter settings.

You can select one NIC card as default route. And then the system is connecting with the extranet the data will be forwarded through the default route.

Net-fault Tolerance Mode: The two NIC cards use the same IP address, and you can select the Main NIC to LAN1 or LAN2. By this way, in case of one NIC card failure, the device will automatically enable the other standby NIC card so as to ensure the normal running of the whole system.

Load Balance Mode: By using the same IP address and two NIC cards share the load of the total bandwidth, which enables the system to provide two Gigabit network capacity.

**NOTE**

- The valid value of MTU is from 500 to 1500.
- If the DHCP server is available, you can check the checkbox of **DHCP** to automatically obtain an IP address and other network settings from that server.

Step 4 After having configured the general settings, click the **Apply** button to save the settings.

9.2 Configuring Advanced Settings

9.2.1 Configuring PPPoE Settings

Purpose

The DVR also allows access by Point-to-Point Protocol over Ethernet (PPPoE).

Step 1 Enter the **Network Settings** interface.

Menu > Configuration > Network

Step 2 Select the **PPPoE** tab to enter the **PPPoE Settings** interface.

Enable PPPOE	☒
User Name	
Password	

Figure 9-2 PPPoE Settings

Interface Step 3 Check the **Enable PPPoE** checkbox to enable this feature. Step 4 Enter **User Name** and **Password** for PPPoE access.



NOTE

The User Name and Password should be assigned by your ISP.

Step 5 Click the **Apply** button to save the settings.

Step 6 After successful settings, the system asks you to reboot the device to enable the new settings, and the PPPoE dial-up is automatically connected after reboot.

You can go to Menu > Maintenance > System Info > Network interface to view the status of PPPoE connection.

9.2.2 Configuring Cloud P2P (mobile access)

Purpose

Cloud P2P provides the mobile phone application and as well the service platform page to access and manage your connected DVR, which enables you to get a convenient remote access to the surveillance system.

Step 1 Enter the **Network Settings** interface.

Menu > Configuration > Network

Step 2 Select the **Platform Access** tab to enter the Cloud P2P Settings interface.

Step 3 Check the **Enable** checkbox to activate this feature.

Step 4 If required, select the checkbox of **Custom** and input the **Server Address**.

Step 5 To turn the **Enable Stream Encryption** on, you can select its checkbox.

Step 6 Enter the **Verification Code** of the device.



NOTE

The verification code consists of 6 capital letters and is located at the bottom of the DVR. You can also use the scanning tool of your phone to quickly get the code by scanning the QR code below.

Enable	☒
Access Type	Cloud P2P
Server Address	dev.hicloudcam.com ☒ Custom
Enable Stream Encryption	☐
Verification Code	
Status	Offline



Figure 9-3 Cloud P2P Settings Interface

Step 7 Click the **Apply** button to save and exit the interface.

After configuration, you can access and manage the DVR by your mobile phone on which the Cloud P2P application is installed (download "Guarding Vision" through Google Play (Android) or the Apple Store (Apple iOS)).

9.2.3 Configuring DDNS

Purpose

If your DVR is set to use PPPoE as its default network connection, you may set Dynamic DNS (DDNS) to be used for network access.

Prior registration with your ISP is required before configuring the system to use DDNS.

Step 1 Enter the **Network Settings** interface.

Menu > Configuration > Network

Step 2 Select the **DDNS** tab to enter the DDNS Settings interface.

Step 3 Check the **Enable DDNS** checkbox to enable this feature.

Step 4 Select **DDNS Type**. Five different DDNS types are selectable: IPServer, DynDNS, PeanutHull, NO-IP and HiDDNS.

- **IPServer:** Input Server Address for IPServer.

Enable DDNS	☒
DDNS Type	IPServer
Area/Country	Custom
Server Address	172.1.1.1
Device Domain Name	
Status	DDNS is disabled.
User Name	
Password	

Figure 9-4 IPServer Settings Interface

- **DynDNS:**
 - 1) Enter **Server Address** for DynDNS (i.e. members.dyndns.org).
 - 2) In the **Device Domain Name** text field, enter the domain obtained from the DynDNS website.
 - 3) Enter the **User Name** and **Password** registered in the DynDNS website.

Enable DDNS	☒
DDNS Type	DynDNS
Area/Country	Custom
Server Address	members.dyndns.org
Device Domain Name	123.dyndns.com
Status	DDNS is disabled.
User Name	test
Password	*****

Figure 9-5 DynDNS Settings Interface

- **PeanutHull:** Enter the **User Name** and **Password** obtained from the PeanutHull website.

Enable DDNS	☒
DDNS Type	PeanutHull
Area/Country	Custom
Server Address	
Device Domain Name	
Status	DDNS is disabled.
User Name	123.gcip.net
Password	*****

Figure 9-6 PeanutHull Settings Interface

- **NO-IP:**

Enter the account information in the corresponding fields. Refer to the DynDNS settings.

- 1) Enter **Server Address** for NO-IP.
- 2) In the **Device Domain Name** text field, enter the domain obtained from the NO-IP website (www.no-ip.com).
- 3) Enter the **User Name** and **Password** registered in the NO-IP website.

Enable DDNS	☒
DDNS Type	NO-IP
Area/Country	Custom
Server Address	no-ip.org
Device Domain Name	123.no-ip.org
Status	DDNS is disabled.
User Name	test
Password	*****

Figure 9-7 NO-IP Settings Interface

- **HiDDNS:**

- 1) The **Server Address** of the HiDDNS server appears by default: www.hiddns.com.
- 2) Select your **Area/Country** in the dropdown list.

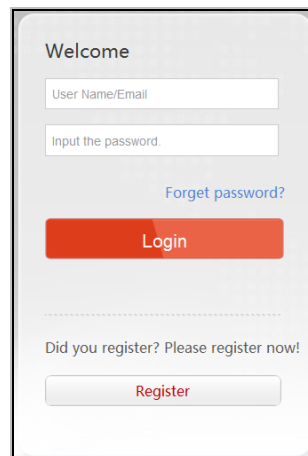
- 3) Enter the **Device Domain Name**. You can use the alias you registered in the HiDDNS server or define a new device domain name. If a new alias of the device domain name is defined in the DVR, it will replace the old one registered on the server. You can register the alias of the device domain name in the HiDDNS server first and then enter the alias to the **Device Domain Name** in the DVR. You can also enter the domain name directly on the DVR to create a new one.

Enable DDNS	☒
DDNS Type	HIDDNS
Area/Country	Custom
Server Address	www.hiddns.com
Device Domain Name	
Status	DDNS is disabled.
User Name	
Password	

Figure 9-8 HiDDNS Settings Interface

➤ **Register the device on the HiDDNS server.**

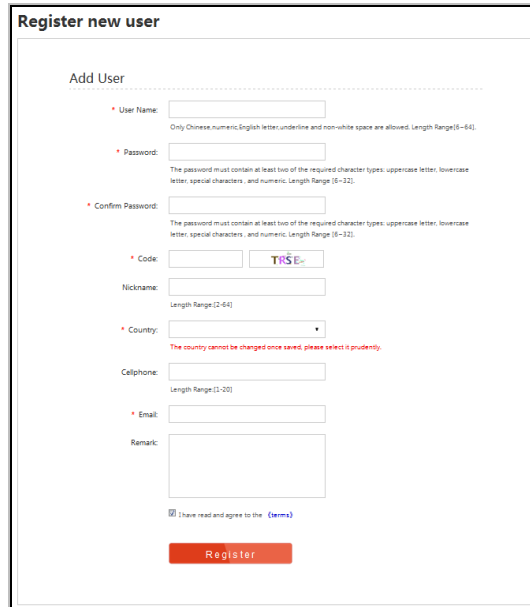
- 1) Go to the HiDDNS website: www.hiddns.com.



The login interface features a 'Welcome' header, input fields for 'User Name/Email' and 'Input the password.', a 'Forgot password?' link, a red 'Login' button, a horizontal separator line, the text 'Did you register? Please register now!', and a 'Register' button.

Figure 9-9 Login Interface

- 2) Click **Register** to register an account if you do not have one and use the account to log in.



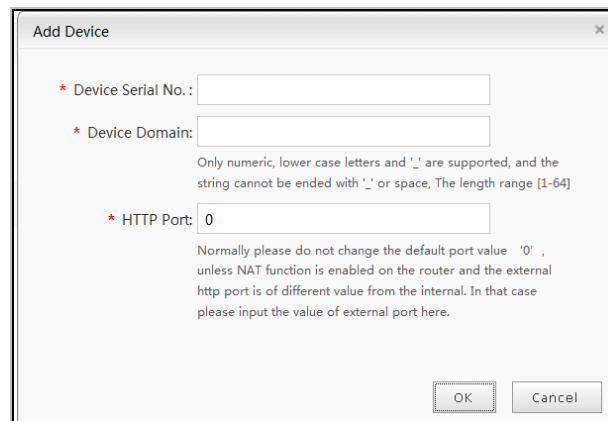
The 'Register new user' form contains the following fields and instructions:

- User Name:** Only Chinese, numeric, English letter, underline and non-white space are allowed. Length Range [8-64].
- Password:** The password must contain at least two of the required character types: uppercase letter, lowercase letter, special characters, and numeric. Length Range [8-32].
- Confirm Password:** The password must contain at least two of the required character types: uppercase letter, lowercase letter, special characters, and numeric. Length Range [8-32].
- Code:** Includes a CAPTCHA image showing 'TMS E'.
- Nickname:** Length Range [2-64].
- Country:** A dropdown menu with a warning: 'The country cannot be changed once saved, please select it prudently.'
- Cellphone:** Length Range [11-20].
- Email:**
- Remark:**

At the bottom, there is a checkbox for 'I have read and agree to the [Terms](#)' and a red 'Register' button.

Figure 9-10 Register an Account

3) In the Device Management interface, click  to register the device.



The 'Add Device' dialog box contains the following fields and instructions:

- Device Serial No.:**
- Device Domain:** Only numeric, lower case letters and '.' are supported, and the string cannot be ended with '.' or space. The length range [1-64].
- HTTP Port:** 0. Normally please do not change the default port value '0', unless NAT function is enabled on the router and the external http port is of different value from the internal. In that case please input the value of external port here.

At the bottom right, there are 'OK' and 'Cancel' buttons.

Figure 9-11 Register the Device

4) Input **Device Serial No.**, **Device Domain (Device Name)** and **HTTP Port**. And click **OK** to add the device.

➤ Access the Device via Web Browser or Client Software

After having successfully registered the device on the HiDDNS server, you can access your device via web browser or Client Software with the Device Domain (Device Name).

● OPTION 1: Access the Device via Web Browser

Open a web browser, and enter *http://www.hiddns.com/alias* in the address bar. Alias refers to the **Device Domain** on the device or the **Device Name** on the HiDDNS server.

Example: *http://www.hiddns.com/nvr*



If you mapped the HTTP port on your router and changed it to port No. except 80, you have to enter *http://www.hiddns.com/alias:HTTP port* in the address bar to access the device. You can refer to *Chapter "Configuring HTTPS Port"* for the mapped HTTP port No..

● **OPTION 2: Access the devices via Guarding Expert**

For Guarding Expert, in the New Device window, select Register mode, and then edit the device select information.

Alias: Edit a name for the device as you want.

Server Address: www.hiddns.com

Device Domain Name: It refers to the **Device Domain Name** on the device or the **Device Name** on the HiDDNS server you created.

User Name: Enter the user name of the device.

Password: Enter the password of the device.

Figure 9-12 Access Device

Step 5 Click the **Apply** button to save and exit the interface.

9.2.4 Configuring NTP Server

Purpose

A Network Time Protocol (NTP) Server can be configured on your DVR to ensure the accuracy of system date/time.

Step 1 Enter the **Network Settings** interface.

Menu > Configuration > Network

Step 2 Select the **NTP** tab to enter the **NTP Settings** interface.

Enable NTP	☒
Interval (min)	60
NTP Server	210.72.145.44
NTP Port	123

Figure 9-13 NTP Settings Interface

Step 3 Check the **Enable NTP** checkbox to enable this feature.

Step 4 Configure the following NTP settings:

- **Interval:** Time interval between the two synchronizing actions with NTP server. The unit is minute.
- **NTP Server:** IP address of NTP server.
- **NTP Port:** Port of NTP server.

Step 5 Click the **Apply** button to save and exit the interface.



NOTE

The time synchronization interval can be set from 1 to 10080 minutes, and the default value is 60 minutes. If the DVR is connected to a public network, you should use a NTP server that has a time synchronization function, such as the server at the National Time Center (IP Address: 210.72.145.44). If the DVR is set in a more customized network, NTP software can be used to establish a NTP server used for time synchronization.

9.2.5 Configuring NAT

Purpose

Universal Plug and Play (UPnP™) can permit the device seamlessly discover the presence of other network devices on the network and establish functional network services for data sharing, communications, etc. You can use the UPnP™ function to enable the fast connection of the device to the WAN via a router without port mapping.

Before you start

If you want to enable the UPnP™ function of the device, you must enable the UPnP™ function of the router to which your device is connected. When the network working mode of the device is set as multi-address, the Default Route of the device should be in the same network segment as that of the LAN IP address of the router.

Step 1 Enter the **Network Settings** interface.

Menu > Configuration > Network

Step 2 Select the **NAT** tab to enter the **UPnP™ Settings** interface.

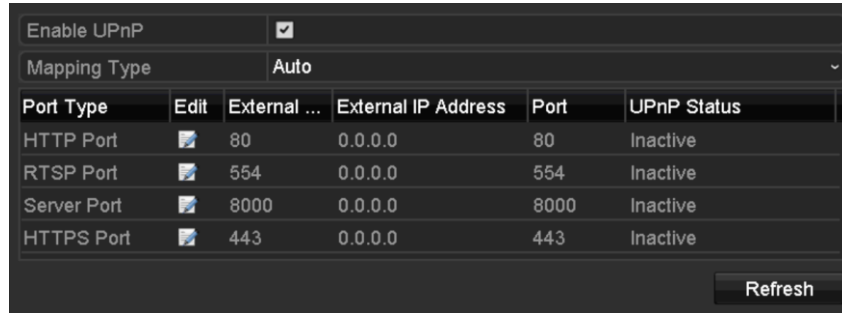


Figure 9-14 UPnP™ Settings Interface

Step 3 Check **Enable UPnP** checkbox to enable UPnP™.

Step 4 Select the **Mapping Type** as Manual or Auto in the drop-down list.

OPTION 1: Auto

If you select **Auto**, the Port Mapping items are read-only, and the external ports are set by the router automatically.

- 1) Click **Apply** button to save the settings.
- 2) You can click **Refresh** button to get the latest status of the port mapping.

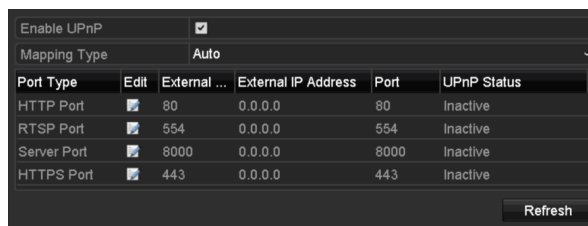


Figure 9-15 UPnP™ Settings Finished-Auto

OPTION 2: Manual

If you select **Manual** as the mapping type, you can edit the external port on your demand by clicking to activate the **External Port Settings** dialog box.

- 1) Click to activate the **External Port Settings** dialog box. Configure the external port No. for server port, http port and RTSP port respectively.

 NOTE

- You can use the default port No., or change it according to actual requirements.
- External Port indicates the port No. for port mapping in the router.
- The value of the RTSP port No. should be 554 or between 1024 and 65535, while the value of the other ports should be between 1 and 65535 and the value must be different from each other. If multiple devices are configured for the UPnP™ settings under the same router, the value of the port No. for each device should be unique.

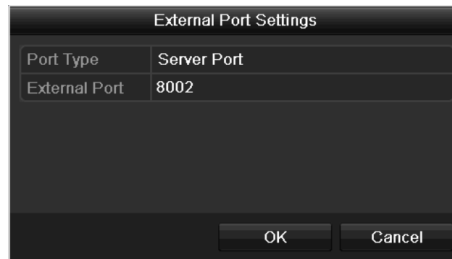


Figure 9-16 External Port Settings Dialog Box

- 2) Click **Apply** button to save the settings.
- 3) You can click **Refresh** button to get the latest status of the port mapping.

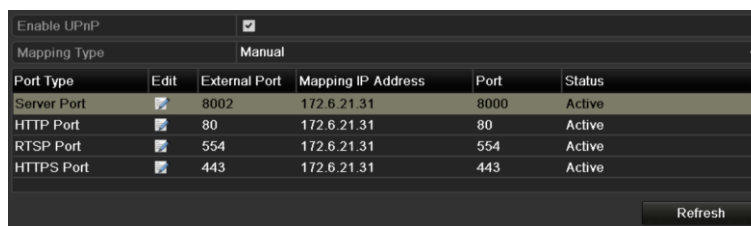


Figure 9-17 UPnP™ Settings Finished-Manual

9.2.6 Configuring More Settings

Step 1 Enter the **Network Settings** interface.

Menu > Configuration > Network

Step 2 Select the **More Settings** tab to enter the **More Settings** interface.



Figure 9-18 More Settings Interface

Step 3 Configure the remote alarm host, server port, HTTP port, multicast, and RTSP port.

- **Alarm Host IP/Port:** With a remote alarm host configured, the device will send the alarm event or exception message to the host when an alarm is triggered. The remote alarm host must have the CMS (Client Management System) software installed.

The **Alarm Host IP** refers to the IP address of the remote PC on which the CMS (Client Management System) software (e.g., Guarding Expert) is installed, and the **Alarm Host Port** must be the same as the alarm monitoring port configured in the software (default port is 7200).

- **Multicast IP:** The multicast can be configured to realize live view for more than the maximum number of cameras through network. A multicast address spans the Class-D IP range of 224.0.0.0 to 239.255.255.255. It is recommended to use the IP address ranging from 239.252.0.0 to 239.255.255.255.

When adding a device to the CMS (Client Management System) software, the multicast address must be the same as the device's multicast IP.

- **RTSP Port:** The RTSP (Real Time Streaming Protocol) is a network control protocol designed for use in entertainment and communications systems to control streaming media servers.

Enter the RTSP port in the text field of **RTSP Port**. The default RTSP port is 554, and you can change it according to different requirements.

- **Server Port and HTTP Port:** Enter the **Server Port** and **HTTP Port** in the text fields. The default Server Port is 8000 and the HTTP Port is 80, and you can change them according to different requirements.



NOTE

The Server Port should be set to the range of 2000-65535 and it is used for remote client software access. The HTTP port is used for remote IE access.

Alarm Host IP	192.0.0.10
Alarm Host Port	7200
Server Port	8000
HTTP Port	80
Multicast IP	239.252.2.50
RTSP Port	554

Figure 9-19 Configure More Settings

Step 4 Click the **Apply** button to save and exit the interface.

9.2.7 Configuring HTTPS Port

Purpose

HTTPS provides authentication of the web site and associated web server that one is communicating with, which protects against Man-in-the-middle attacks. Perform the following steps to set the port number of https.

Example

If you set the port number as 443 and the IP address is 192.0.0.64, you may access the device by inputting `https://192.0.0.64:443` via the web browser.



NOTE

The HTTPS port can be only configured through the web browser.

Step 1 Open web browser, input the IP address of device, and the web server will select the language automatically according to the system language and maximize the web browser.

Step 2 Input the correct user name and password, and click **Login** button to log in the device.

Step 3 Enter the HTTPS settings interface.

Configuration > Remote Configuration > Network Settings > HTTPS

Step 4 Create the self-signed certificate or authorized certificate.

Figure 9-20 HTTPS Settings

OPTION 1: Create the self-signed certificate

1) Click the **Create** button to create the following dialog box.

Figure 9-21 Create Self-signed Certificate

2) Enter the country, host name/IP, validity and other information.

3) Click **OK** to save the settings.

OPTION 2: Create the authorized certificate

1) Click the **Create** button to create the certificate request.

- 2) Download the certificate request and submit it to the trusted certificate authority for signature.
- 3) After receiving the signed valid certificate, import the certificate to the device.

Step 5 There will be the certificate information after you successfully create and install the certificate.

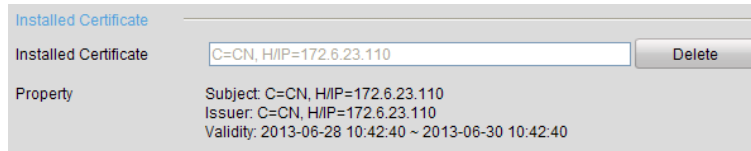


Figure 9-22 Installed Certificate

Property Step 6 Check the checkbox to enable the HTTPS function.

Step 7 Click the **Save** button to save the settings.

9.2.8 Configuring Email

Purpose

The system can be configured to send an Email notification to all designated users if an event is detected, e.g. an alarm or motion event is detected, etc.

Before configuring the Email settings, the DVR must be connected to a local area network (LAN) that maintains an SMTP mail server. The network must also be connected to either an intranet or the Internet depending on the location of the e-mail accounts to which you want to send notification. Additional, the Preferred DNS server must be configured.

Before you start

Make sure you have configured the IPv4 Address, IPv4 Subnet Mask, IPv4 Gateway and the Preferred DNS Server in the Network Settings menu. Please refer to *Chapter "Configuring General Settings"* for detailed information.

Step 1 Enter the **Network Settings** interface.

Menu > Configuration > Network

Step 2 Select the **Email** tab to enter the **Email Settings** interface.

Enable Server...	☐	SMTP Server	
User Name		SMTP Port	25
Password		Enable SSL	☐
Sender			
Sender's Address			
Select Receivers	Receiver 1		
Receiver			
Receiver's Address			
Enable Attached Picture	☐		
Interval	2s		

Figure 9-23 Email Settings Interface

Step 3 Configure the following Email settings:

Enable Server Authentication (optional): Check the checkbox to enable the server authentication feature.

User Name: The user account of sender's Email for SMTP server authentication.

Password: The password of sender's Email for SMTP server authentication.

SMTP Server: The SMTP Server IP address or host name (e.g., smtp.263xmail.com).

SMTP Port: The SMTP port. The default TCP/IP port used for SMTP is 25.

Enable SSL (optional): Click the checkbox to enable SSL if required by the SMTP server.

Sender: The name of sender.

Sender's Address: The Email address of sender.

Select Receivers: Select the receiver. Up to 3 receivers can be configured.

Receiver: The name of the receiver of the Email.

Receiver's Address: The Email address of the receiver.

NOTE

- For the IP cameras, the alarm images are directly sent as the attached pictures by Email. Up to one picture can be sent for one IP camera. The attached pictures of the linked cameras cannot be sent.
- For analog cameras, 3 attached pictures can be sent for one analog camera when the alarm is triggered.

Interval: The interval refers to the time between two actions of sending attached pictures.

E-mail Test: Sends a test message to verify that the SMTP server can be reached.

Step 4 Click the **Apply** button to save the Email settings.

Step 5 You can click the **Test** button to test whether your Email settings work. The corresponding Attention message box pops up.

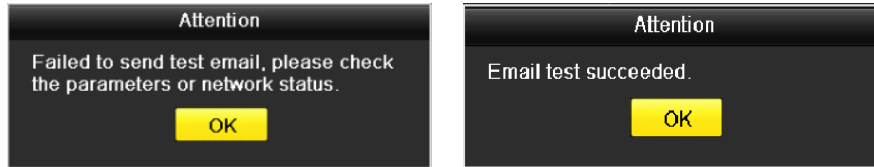


Figure 9-24 Email Testing Attention

9.3 Checking Network Traffic

Purpose

You can check the network traffic to obtain real-time information of DVR such as linking status, MTU, sending/receiving rate, etc.

Step 1 Enter the **Network Traffic** interface.

Menu > Maintenance > Net Detect

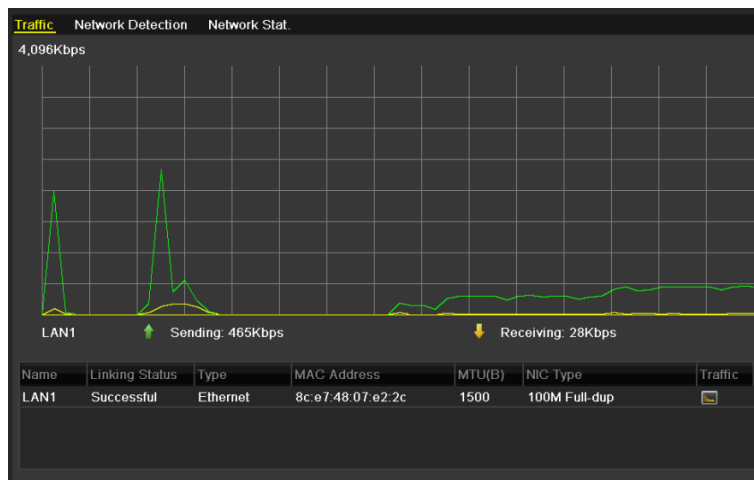


Figure 9-25 Network Traffic Interface

Step 2 You can view the sending rate and receiving rate information on the interface. The traffic data is refreshed every 1 second.

9.4 Configuring Network Detection

Purpose

You can obtain network connecting status of DVR through the network detection function, including network delay, packet loss, etc.

9.4.1 Testing Network Delay and Packet Loss

Step 1 Enter the **Network Traffic** interface.

Menu > Maintenance > Net Detect

Step 2 Click the **Network Detection** tab to enter the **Network Detection** interface.

The screenshot shows the 'Network Detection' interface with three tabs: 'Traffic', 'Network Detection' (selected), and 'Network Stat.'. The interface is divided into two main sections: 'Network Delay, Packet Loss Test' and 'Network Packet Export'. In the first section, 'Select NIC' is set to 'LAN1' and 'Destination Address' is empty. In the second section, 'Device Name' is set to 'USB Flash Disk 1-1'. At the bottom, a table shows 'LAN1' with IP '10.16.1.102' and speed '827Kbps'. On the right, there are buttons for 'Test', 'Refresh', and 'Export'.

Figure 9-26 Network Detection Interface

Step 3 Select a NIC to test network delay and packet loss.

Step 4 Enter the destination address in the text field of **Destination Address**.

Step 5 Click the **Test** button to start testing network delay and packet loss.

9.4.2 Exporting Network Packet

Purpose

By connecting the DVR to network, the captured network data packet can be exported to USB-flash disk, SATA and other local backup devices.

Step 1 Enter the Network Traffic interface.

Menu > Maintenance > Net Detect

Step 2 Click the **Network Detection** tab to enter the **Network Detection** interface.

Step 3 Select the backup device from the dropdown list of **Device Name**.



NOTE

Click the Refresh button if the connected local backup device cannot be displayed. When it fails to detect the backup device, please check whether it is compatible with the DVR. You can format the backup device if the format is incorrect.

Network Delay, Packet Loss Test		
Select NIC	LAN1	
Destination Address		

Network Packet Export		
Device Name	USB Flash Disk 1-1	

LAN1	10.16.1.102	827Kbps
------	-------------	---------

Figure 9-27 Export Network Packet

Step 4 Click the **Export** button to start exporting.

Step 5 After the exporting is complete, click **OK** to finish the packet export.

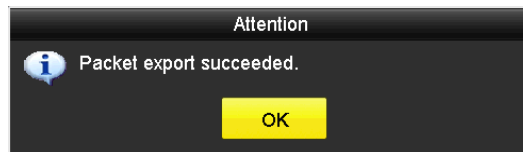


Figure 9-28 Packet Export Attention

**NOTE**

Up to 1M data can be exported each time.

9.4.3 Checking Network Status

Purpose

You can also check the network status and quick set the network parameters in this interface.

Step 1 Enter the Network Traffic interface.

Menu > Maintenance > Net Detect

Step 2 Click the **Network Detection** tab to enter the **Network Detection** interface.

Step 3 Click **Status** on the right bottom of the interface.

Network Delay, Packet Loss Test		
Select NIC	LAN1	
Destination Address		

Network Packet Export		
Device Name	USB Flash Disk 1-1	

LAN1	10.16.2.18	4,671Kbps
------	------------	-----------

Figure 9-29 Checking Network Status

If the network is normal the following message box pops out.

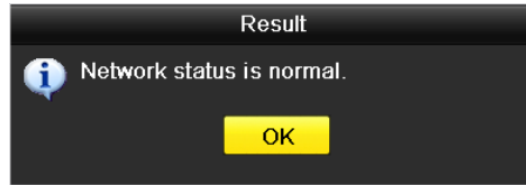


Figure 9-30 Network Status Checking Result

If the message box pops out with other information instead of this one, you can click **Network** button to show the quick setting interface of the network parameters.

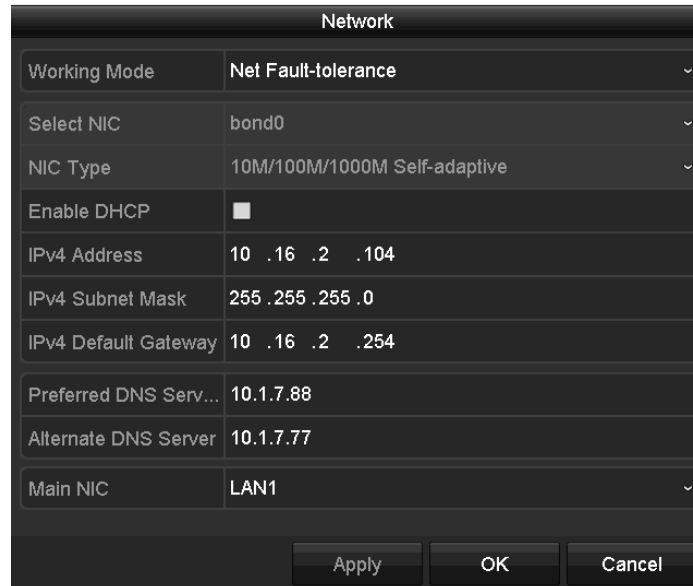


Figure 9-31 Network Parameters Configuration

9.4.4 Checking Network Statistics

Purpose

You can check the network statistics to obtain the real-time information of the device.

Step 1 Enter the **Network Statistics** interface.

Menu > Maintenance> Net Detect

Step 2 Click the **Network Stat.** tab to enter the **Network Statistics** interface.

Type	Bandwidth
IP Camera	8,192Kbps
Remote Live View	0bps
Remote Playback	0bps
Net Total Idle	88Mbps
Refresh	

Figure 9-32 Network Stat. Interface

Step 3 View the bandwidth of Remote Live View, bandwidth of Remote Playback, and bandwidth of Net Total Idle.

Step 4 Click **Refresh** button to get the latest bandwidth statistics.

Chapter 10 HDD Management

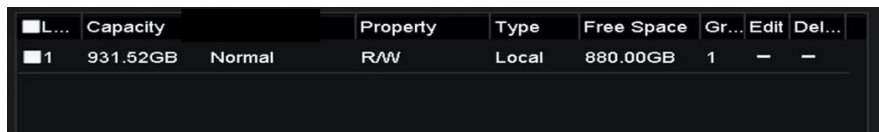
10.1 Initializing HDDs

Purpose

A newly installed hard disk drive (HDD) must be initialized before it can be used with your DVR.

Step 1 Enter the **HDD Information** interface.

Menu > HDD > General



L...	Capacity	Property	Type	Free Space	Gr...	Edit	Del...
1	931.52GB	Normal	R/W	Local	880.00GB	1	-

Figure 10-1 HDD Information

Interface Step 2 Select HDD to be initialized.

Step 3 Click the **Init** button.

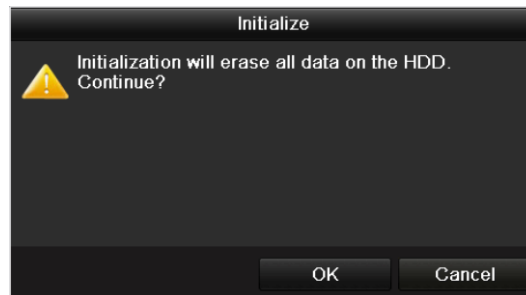
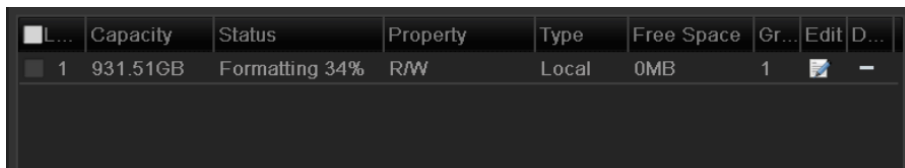


Figure 10-2 Confirm Initialization

Step 4 Select the **OK** button to start initialization.



L...	Capacity	Status	Property	Type	Free Space	Gr...	Edit	D...
1	931.51GB	Formatting 34%	R/W	Local	0MB	1		-

Figure 10-3 Start Initialization

Step 5 After the HDD has been initialized, the status of the HDD will change from *Uninitialized* to *Normal*.

☐ L...	Capacity	Status	Property	Type	Free Space	Gr...	Edit	D...
☐ 1	931.51GB	Normal	R/W	Local	927GB	1		-

Figure 10-4 HDD Status Changes to Normal



NOTE

Initializing the HDD will erase all data on it.

The HDDs which are free of working for a long time can be enabled to sleep, thus to decrease the power consumption of the device and extend the life of the HDDs.

Click Menu > HDD > Advanced.

Enable HDD Sleeping	☒
---------------------	-------------------------------------

Figure 10-5 Enable HDD Sleeping

Check the checkbox of **Enable HDD Sleeping** (by default), and the HDDs which are free of working for a long time will be set to sleep.

Uncheck the checkbox of **Enable HDD Sleeping**, and the HDDs will be set to work for all time.

10.2 Managing Network HDD

Purpose

You can add the allocated NAS or disk of IP SAN to DVR, and use it as network HDD.

Step 1 Enter the HDD Information interface.

Menu > HDD>General

☐ L...	Capacity	Property	Type	Free Space	Gr...	Edit	D...
☐ 1	931.51GB	Normal	R/W	Local	927GB	1	

Figure 10-6 HDD Information Interface

Step 2 Click the **Add** button to enter the **Add NetHDD** interface, as shown in Figure 10-7.

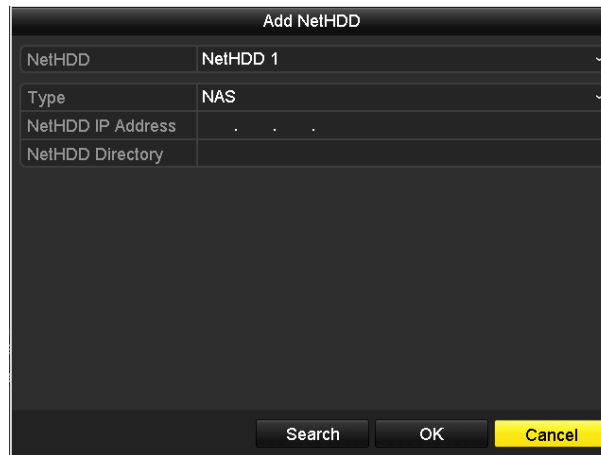


Figure 10-7 HDD Information Interface

Step 3 Add the allocated NetHDD.

Step 4 Select the type to NAS or IP SAN.

Step 5 Configure the NAS or IP SAN settings.

- **Add NAS disk:**

- 1) Enter the NetHDD IP address in the text field.
- 2) Click **Search** to search the available NAS disks.
- 3) Select the NAS disk from the list shown below.

Or you can just manually enter the directory in the text field of **NetHDD Directory**.

- 4) Click **OK** to add the configured NAS disk.



NOTE

Up to 8 NAS disks can be added.

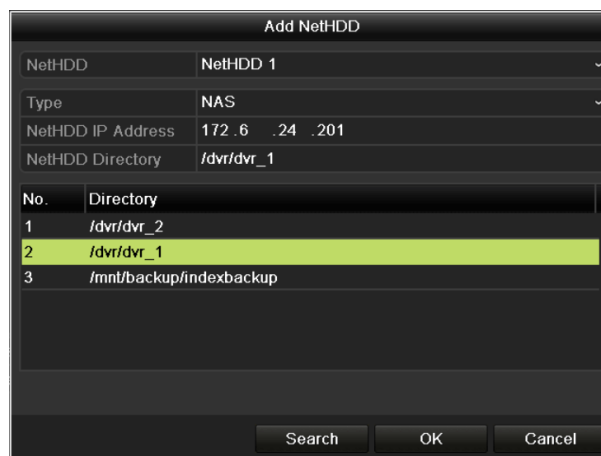


Figure 10-8 Add NAS Disk

- **Add IP SAN:**

- 1) Enter the NetHDD IP address in the text field.
- 2) Click the **Search** button to the available IP SAN disks.
- 3) Select the IP SAN disk from the list shown below.
- 4) Click the **OK** button to add the selected IP SAN disk.



NOTE

Up to 8 IP SAN disks can be added.

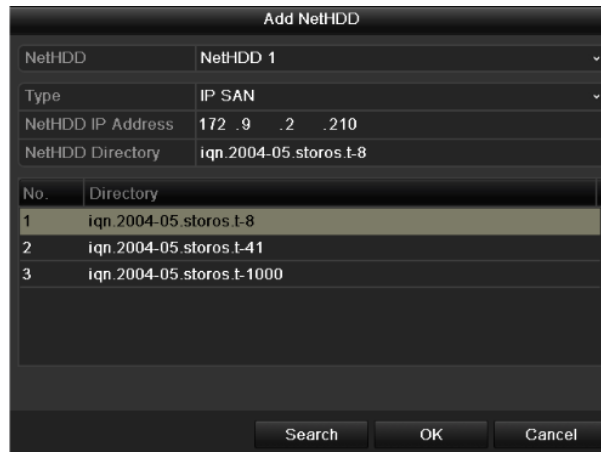


Figure 10-9 Add IP SAN Disk

- 5) After having successfully added the NAS or IP SAN disk, return to the HDD Information menu. The added NetHDD will be displayed in the list.



NOTE

If the added NetHDD is uninitialized, please select it and click the **Init** button for initialization.

☐ L...	Capacity	Status	Property	Type	Free Space	Gr...	Edit	D...
☒ 1	931.51GB	Normal	R/W	Local	906GB	1		
☒ 17	40,000MB	Normal	R/W	IP SAN	22,528MB	1		

Figure 10-10 Initialize Added NetHDD

10.3 Managing HDD Group

10.3.1 Setting HDD Groups

Purpose

Multiple HDDs can be managed in groups. Video from specified channels can be recorded onto a particular HDD group through HDD settings.

Step 1 Enter the Storage Mode interface.

Menu > HDD > Advanced

Step 2 Set the **Mode** to Group, as shown in Figure 10-11.

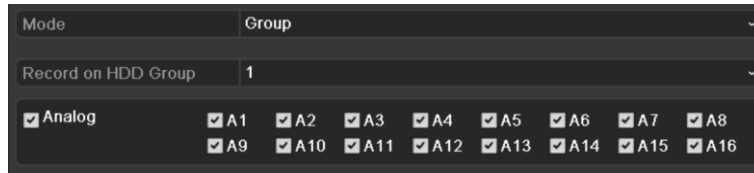


Figure 10-11 Storage Mode Interface

Step 3 Click the **Apply** button and the following Attention box will pop up.

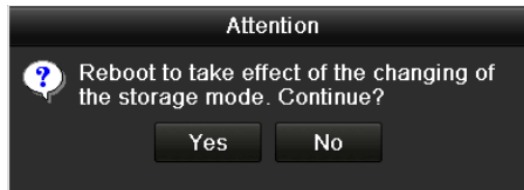


Figure 10-12 Attention for Reboot

Step 4 Click the **Yes** button to reboot the device to activate the changes.

Step 5 After reboot of device, enter the HDD Information interface.

Menu > HDD > General

Step 6 Select HDD from the list and click the  icon to enter the **Local HDD Settings** interface, as shown in Figure 10-13.



Figure 10-13 Local HDD Settings Interface

Step 7 Select the Group number for the current HDD.



NOTE

The default group No. for each HDD is 1.

Step 8 Click the **OK** button to confirm the settings.

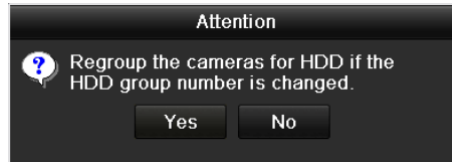


Figure 10-14 Confirm HDD Group Settings

Step 9 In the pop-up Attention box, click the **Yes** button to finish the settings.

10.3.2 Setting HDD Property

Purpose

The HDD property can be set to redundancy, read-only or read/write (R/W). Before setting the HDD property, please set the storage mode to Group (refer to *Chapter "Setting HDD Groups"*).

A HDD can be set to read-only to prevent important recorded files from being overwritten when the HDD becomes full in overwrite recording mode.

When the HDD property is set to redundancy, the video can be recorded both onto the redundancy HDD and the R/W HDD simultaneously so as to ensure high security and reliability of video data.

Step 1 Enter the HDD Information interface.

Menu > HDD > General

Step 2 Select HDD from the list and click the  icon to enter the **Local HDD Settings** interface, as shown in Figure 10-15 .

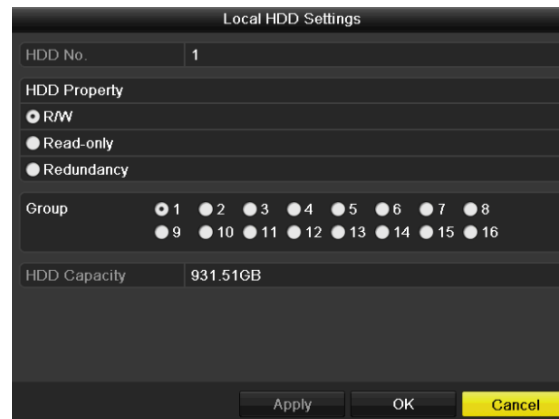


Figure 10-15 Set HDD Property

Step 3 Set the HDD property to R/W, Read-only or Redundancy.

Step 4 Click the **OK** button to save the settings and exit the interface.

Step 5 In the HDD Information menu, the HDD property will be displayed in the list.

**NOTE**

At least 2 hard disks must be added on your DVR when you want to set a HDD to Redundancy, and there is one HDD with R/W property.

10.4 Configuring Quota Mode

Purpose

Each camera can be configured with allocated quota for the storage of recorded files.

Step 1 Enter the **Storage Mode** interface.

Menu > HDD > Advanced

Step 2 Click the **Storage Mode** tab.

Step 3 Set the **Mode** to Quota, as shown in Figure 10-16.

**NOTE**

The DVR must be rebooted to enable the changes to take effect.

Mode	Quota
Camera	[A1] Camera 01
Used Record Capacity	51.00GB
Used Picture Capacity	2048.00MB
HDD Capacity (GB)	931
Max. Record Capacity (G...	0
Max. Picture Capacity (GB)	0
▲ Free Quota Space 931 GB	
Enable HDD Sleeping	☒

Figure 10-16 Storage Mode Settings Interface

Step 4 Select a camera for which you want to configure quota.

Step 5 Enter the storage capacity in the text field of **Max. Record Capacity (GB)**.

Step 6 You can copy the quota settings of the current camera to other cameras if required. Click the **Copy** button to enter the **Copy Camera** interface, as shown in Figure 10-17.



Figure 10-17 Copy Settings to Other Camera(s)

Step 7 Select the camera (s) to be configured with the same quota settings. You can also click the checkbox of Analog to select all cameras.

Step 8 Click the **OK** button to finish the Copy settings and back to the Storage Mode interface.

Step 9 Click the **Apply** button to apply the settings.



If the quota capacity is set to 0, then all cameras will use the total capacity of HDD for record.

10.5 Configuring Cloud Storage

Purpose

The cloud storage facilitates you to upload and download the recorded files at any time and any place, which can highly enhance the efficiency.



Cloud storage is only applicable to 1080P series DVR.

Step 1 Enter the Cloud Storage interface

Menu > HDD > General > Cloud Storage

Step 2 Check the **Enable Cloud** checkbox to enable the feature.

Step 3 Select the **Cloud Type** from the dropdown list to One Drive, Google Drive or Drop Box.



Figure 10-18 Cloud Storage Interface

Step 4 According to the prompts, you are required to use a mobile browser to scan the QR code to log in the selected cloud to get the authentication code. And then copy the authentication code to the **Authentication Code** text filed.

Step 5 Click **Apply** and then back to the main menu.

Step 6 Enter the cloud storage interface again about 20s later. When the **Status** shows online, it indicates the successful registration.

Step 7 Configure the recording schedule.

Step 8 Back to enter the record interface, choose a certain camera from the **Camera** dropdown list and check the **Enable Schedule** checkbox to enable the schedule recording. For detailed recording schedule, refer to *Chapter "Configuring Recording Schedule"*.

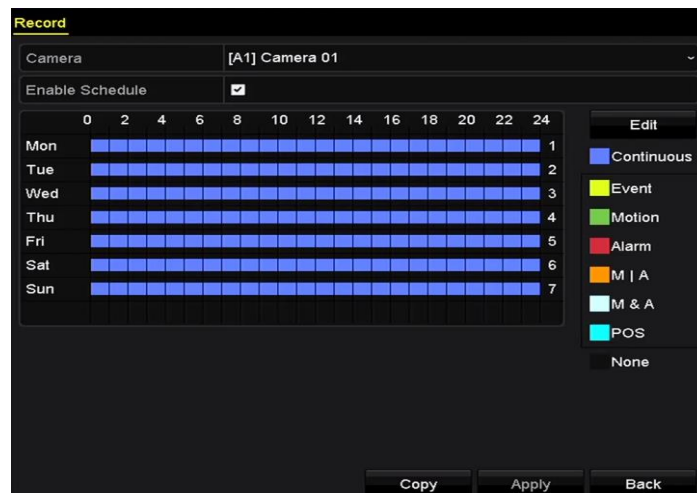


Figure 10-19 Record Schedule

Step 9 Upload the event triggered recording files to the cloud storage.

- 1) Back to enter the cloud storage interface, and select the camera you have set in the recording schedule interface.
- 2) Select the upload type in the **Upload Type** text filed.
- 3) Check the **Enable Event Upload** checkbox.
- 4) Click **Apply** to finish the settings.

The screenshot shows a web interface for configuring cloud storage. At the top, there are two tabs: 'HDD Information' and 'Cloud Storage', with 'Cloud Storage' being the active tab. Below the tabs, there are several settings:

- Enable Cloud:** A checkbox that is checked.
- Cloud Type:** A dropdown menu set to 'OneDrive'.
- Authorization Code:** A text field containing 'ABCDE'.
- Status:** A text field containing 'Offline'.

Below these settings, there is a message: 'Use a mobile browser to scan the QR code to log in the selected cloud to get the authorization code.' followed by a QR code.

At the bottom, there are more settings:

- Camera:** A dropdown menu set to '[A1] Camera 01'.
- Upload Type:** A dropdown menu set to 'Record'.
- Enable Event Upload:** A checkbox that is checked.

Below these settings, there is a note: 'Note: Only sub-stream recorded files can be uploaded to the Cloud Storage. Please configure the event triggered recording schedule and enable the corresponding event type.'

At the very bottom, there are three buttons: 'Copy', 'Apply', and 'Back'.

Figure 10-20 Upload to Cloud Storage Interface



NOTE

- Only the sub-stream recorded files can be uploaded to the Cloud Storage.
- Please configure the event triggered recording schedule and enable the corresponding event type.

Step 10 (Optional) You can click the **Copy** button to copy the cloud storage settings to other cameras. You can also click the checkbox of Analog Camera to select all cameras.

Click **OK** button to back to the cloud storage interface and click **Apply** to finish the settings.



Figure 10-21 Copy to Interface

10.6 Configuring Disk Clone



NOTE

This chapter is only applicable to the DVR with eSATA.

Purpose

If the S.M.A.R.T. detection result declares the HDD is abnormal, you can choose to clone all the data on the HDD to an inserted eSATA disk manually. Refer to *Chapter "Checking S.M.A.R.T. Information"* for details of S.M.A.R.T detection.

Before you start

An eSATA disk should be connected to the device.

Step 1 Enter the HDD Advanced Setting interface:

Menu > HDD > Advanced

Step 2 Click the **Disk Clone** tab to enter the disk clone configuring interface.

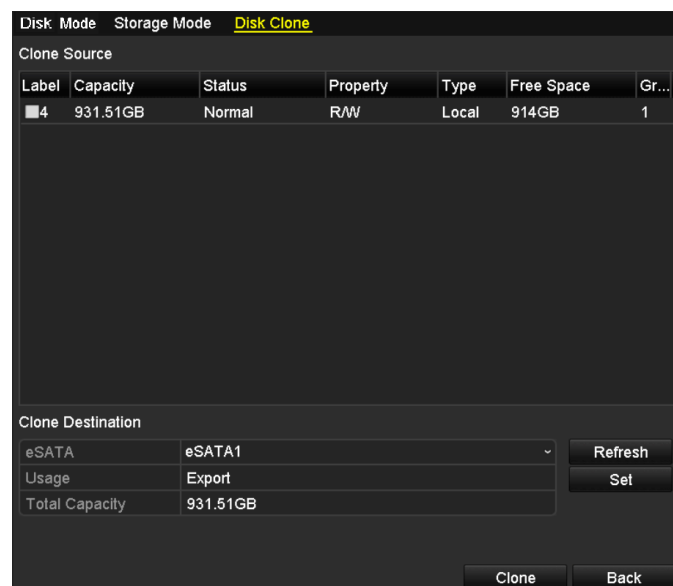


Figure 10-22 Disk Clone Configuration Interface

Step 3 Make sure the usage of the eSATA disk is set as Export.

If not, click the **Set** button to set it. Choose Export and click the **OK** button.

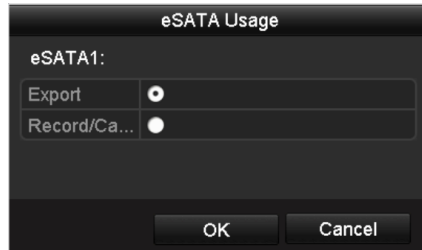


Figure 10-23 Setting eSATA Usage



NOTE

The capacity of destination disk must be the same as that of the clone source disk.

Step 4 Check the checkbox of the HDD to be cloned in the Clone Source list.

Step 5 Click the **Clone** button and a message box pops up.

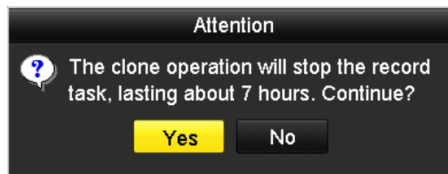


Figure 10-24 Message Box for Disk Clone

Step 6 Click the **Yes** button to continue.

You can check the clone progress in the HDD status.

Label	Capacity	Status	Property	Type	Free Space	Gr...
4	931.51GB	Cloning 01%	R/W	Local	0MB	1

Figure 10-25 Check Disk Clone Progress

10.7 Checking HDD Status

Purpose

You may check the status of the installed HDDs on DVR so as to take immediate check and maintenance in case of HDD failure.

Checking HDD Status in HDD Information Interface

Step 1 Enter the HDD Information interface.

Menu > HDD > General

Step 2 Check the status of each HDD which is displayed on the list, as shown in Figure 10-26.

☐ L...	Capacity	Status	Property	Type	Free Space	Gr...	Edit	D...
☐ 1	931.51GB	Normal	R/W	Local	900GB	1		—
☐ 17	199.97GB	Normal	Redundancy	NAS	182GB	1		

Figure 10-26 View HDD Status (1)

**NOTE**

If the status of HDD is *Normal* or *Sleeping*, it works normally. If the status is *Uninitialized* or *Abnormal*, please initialize the HDD before use. And if the HDD initialization is failed, please replace it with a new one.

Checking HDD Status in System Information Interface

Step 1 Enter the **System Information** interface.

Menu > Maintenance > System Info

Step 2 Click the **HDD** tab to view the status of each HDD displayed on the list, as shown in Figure 10-27.

Label	Status	Capacity	Free Space	Property	Type	Group
1	Normal	931.51GB	900GB	R/W	Local	1
17	Normal	199.97GB	182GB	Redundancy	NAS	1

Figure 10-27 View HDD Status (2)

10.8 Checking S.M.A.R.T Information

Purpose

The S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology) is a monitoring system for HDD to detect and report on various indicators of reliability in the hopes of anticipating failures.

Step 1 Enter the **HDD Detect** interface.

Menu > Maintenance > HDD Detect

Step 2 Click the **S.M.A.R.T. Settings** tab to enter the interface.

Step 3 Select the HDD to view its S.M.A.R.T. information list, as shown in Figure 10-28.

**NOTE**

If you want to use the HDD even when the S.M.A.R.T. checking is failed, you can check the checkbox before the **Continue to use this disk when self-evaluation is failed** item.

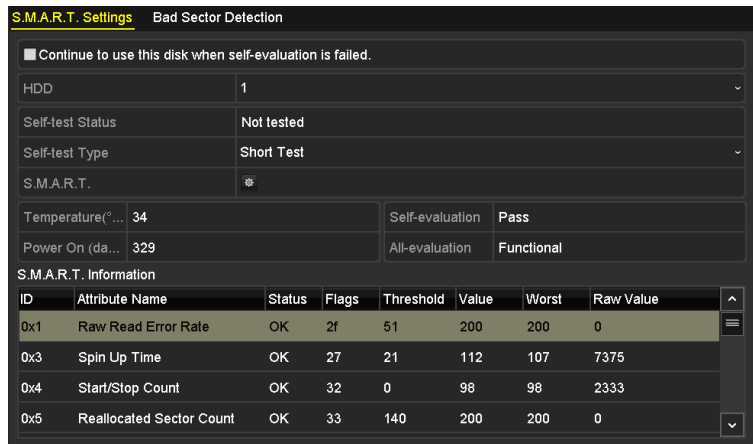


Figure 10-28 S.M.A.R.T Settings Interface

10.9 Detecting Bad Sector

Purpose

You can detect the bad sector of the HDD to check the status of the HDD.

Step 1 Enter the **HDD Detect** interface.

Menu>HDD>HDD Detect

Step 2 Click the **Bad Sector Detection** tab to enter the interface.

Step 3 Select a HDD and click the **Detect** button to start detecting.

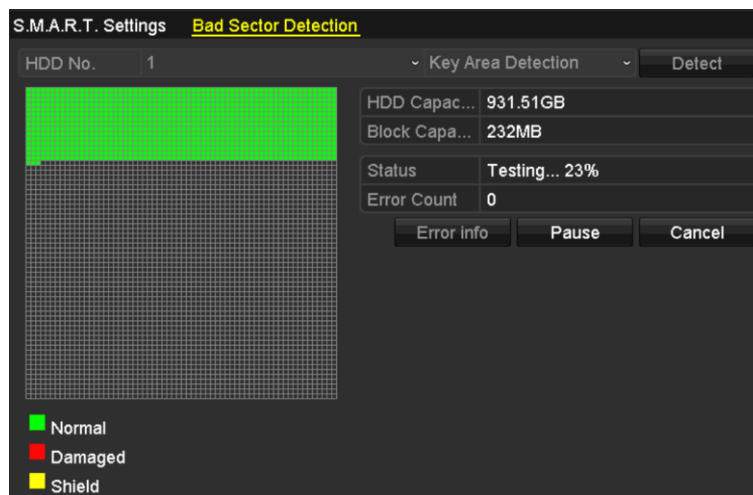


Figure 10-29 Bad Sector Detecting

Step 4 You can click the **Pause** button to pause the detection and click the **Resume** button to resume the detection.

Step 5 If there is error information about the HDD, you can click the **Error Info** button to view the information.

10.10 Configuring HDD Error Alarms

Purpose

You can configure the HDD error alarms when the HDD status is *Uninitialized* or *Abnormal*.

Step 1 Enter the Exception interface.

Menu > Configuration > Exceptions

Step 2 Select the Exception Type to **HDD Error** from the dropdown list.

Step 3 Check the checkbox(s) below to select the linkage action(s) for HDD error, as shown in Figure 10-30.

The linkage actions can be selected to: Audible Warning, Notify Surveillance Center, Send Email and Trigger Alarm Output.

Exception	
Enable Event Hint	☒
Event Hint Settings	
Exception Type	HDD Error
Audible Warning	☒
Notify Surveillance Center	☒
Send Email	☒
Trigger Alarm Output	☒
☐ Alarm Output No.	Alarm Name
☒ 10.16.1.250:8000->1	
☐ 10.16.1.250:8000->2	
Apply Back	

Figure 10-30 Configure HDD Error Alarm

Step 4 When the **Trigger Alarm Output** is selected, you can also select the alarm output to be triggered from the list below.

Step 5 Click the **Apply** button to save the settings.

Chapter 11 Camera Settings

11.1 Configuring OSD Settings

Purpose

You can configure the OSD (On-Screen Display) settings for the camera, including date/time, camera name, etc.

Step 1 Enter the **OSD Configuration** interface.

Menu > Camera > OSD

Step 2 Select the camera to configure OSD settings.

Step 3 Edit the **Camera Name** in the text field.

Step 4 Configure the **Display Name**, **Display Date** and **Display Week** by checking the checkbox.

Step 5 Select the **Date Format**, **Time Format**, **Display Mode** and the **OSD font**.

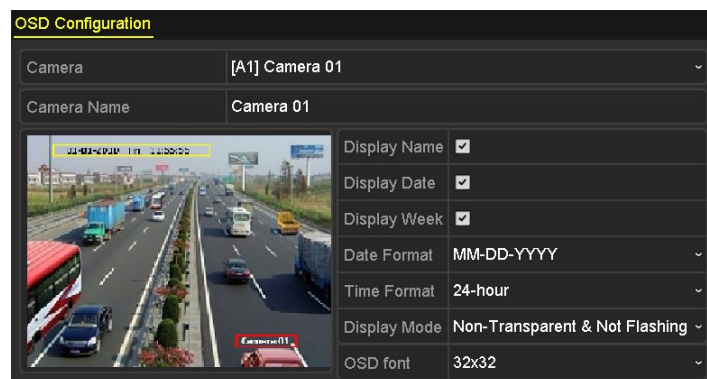


Figure 11-1 OSD Configuration Interface

Step 6 You can use the mouse to drag the text frame on the preview window to adjust the OSD position.

Step 7 Copy Camera Settings

- 1) If you want to copy the OSD settings of the current camera to other cameras, click the **Copy** button to enter the **Copy Camera** interface, as shown in Figure 11-2.

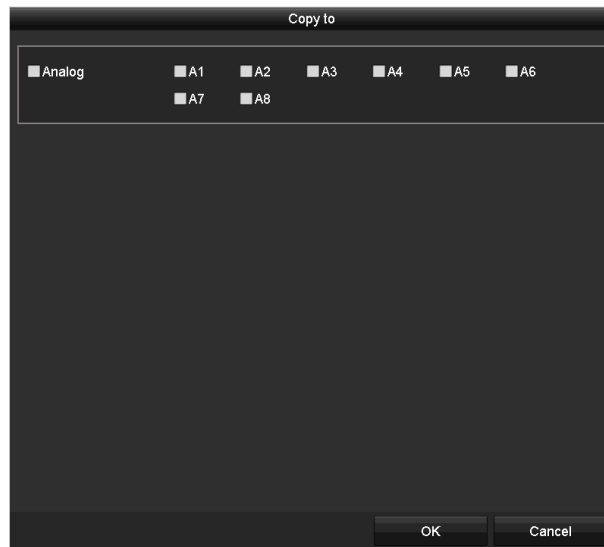


Figure 11-2 Copy Settings to Other Cameras

- 2) Select the camera (s) to be configured with the same OSD settings. You can also check the checkbox of **Analog** to select all cameras.
- 3) Click the **OK** button to finish the **Copy** settings and back to the **OSD Configuration** interface.

Step 8 Click the **Apply** button to apply the settings.

11.2 Configuring Privacy Mask

Purpose

You are allowed to configure the four-sided privacy mask zones that cannot be viewed or recorded by the operator.

Step 1 Enter the **Privacy Mask Settings** interface.

Menu > Camera > Privacy Mask

Step 2 Select the camera to set privacy mask.

Step 3 Check the checkbox of **Enable Privacy Mask** to enable this feature.



Figure 11-3 Privacy Mask Settings Interface

Step 4 Use the mouse to draw a zone on the window. The zones will be marked with different frame colors.



NOTE

Up to 4 privacy mask zones can be configured, and the size of each area can be adjusted.

Step 5 The configured privacy mask zones on the window can be cleared by clicking the corresponding **Clear Zone1-4** icons on the right side of the window, or click **Clear All** to clear all zones.



Figure 11-4 Set Privacy Mask Area

Step 6 You can click the **Copy** button to copy the privacy mask settings of the current camera to other cameras.

Please refer to *Chapter "Configuring OSD Settings"*.

Step 7 Click the **Apply** button to save the settings.

11.3 Configuring Video Parameters

Step 1 Enter the Image Settings interface.

Menu > Camera > Image

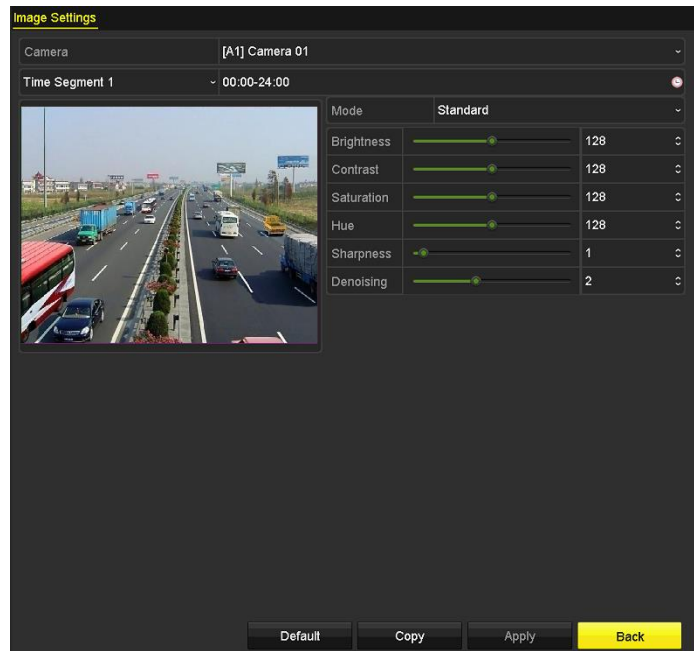


Figure 11-5 Image Settings Interface (Analog Camera)

Step 2 Select the camera to set image parameters.

Step 3 Two periods for different image settings are provided, select the period name in the dropdown list.



NOTE

The time periods cannot be overlapped with each other.

Step 4 Select the mode from the drop-down list of **Mode**, there are four modes selectable for the analog cameras: Standard, Indoor, Dim Light and Outdoor.

Step 5 Adjust the image parameters according to actual needs. The parameters include Brightness, Contrast, Saturation, Hue, Sharpness and Denoising for the analog cameras. You can also click **Restore** to set the parameters to the default settings.

Step 6 You can click **Copy** to copy the image settings of the current camera to other analog cameras.

Step 7 Click **Apply** to save the settings.

Chapter 12 DVR Management and Maintenance

12.1 Viewing System Information

Step 1 Enter the **System Information** interface.

Menu > Maintenance > System Info

Step 2 You can click the **Device Info**, **Camera**, **Record**, **Alarm**, **Network** and **HDD** tabs to view the system information of the device.

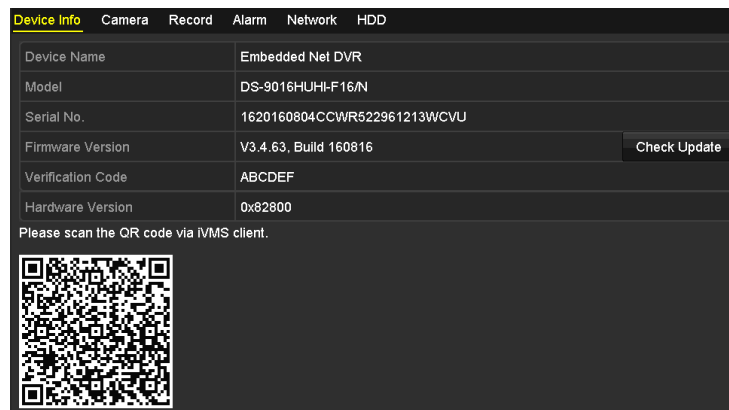


Figure 12-1 System Information Interface



NOTE

- This alarm information is not available for 720P series DVR.

12.2 Searching Log Files

Purpose

The operation, alarm, exception and information of the DVR can be stored in log files, which can be viewed and exported at any time.

Step 1 Enter the **Log Search** interface.

Menu > Maintenance > Log Information



Figure 12-2 Log Search Interface

Step 2 Set the log search conditions to refine your search, including the Start Time, End Time, Major Type and Minor Type.

Step 3 Click the **Search** button to start search log files.

Step 4 The matched log files will be displayed on the list shown below.



NOTE

Up to 2000 log files can be displayed each time.

No.	Major Type	Time	Minor Type	Parameter	Play	Details
1	Information	10-07-2015 09:53:59	Local HDD Infor...	N/A	—	✓
2	Operation	10-07-2015 09:53:59	Power On	N/A	—	✓
3	Information	10-07-2015 09:54:05	Start Recording	N/A	⏮	✓
4	Operation	10-07-2015 09:54:08	Local Operation:...	N/A	—	✓
5	Information	10-07-2015 09:54:25	HDD S.M.A.R.T.	N/A	—	✓
6	Information	10-07-2015 09:54:32	Start Recording	N/A	⏮	✓
7	Operation	10-07-2015 09:54:32	Local Operation:...	N/A	⏮	✓
8	Operation	10-07-2015 09:54:32	Local Operation:...	N/A	⏮	✓
9	Exception	10-07-2015 09:55:32	IP Camera Disco...	N/A	⏮	✓
10	Information	10-07-2015 10:04:09	System Running...	N/A	—	✓
Total: 2000 P: 1/20						

Figure 12-3 Log Search Results

Step 5 You can click the  button of each log or double-click it to view its detailed information. And you can also click the  button to view the related video files if available.

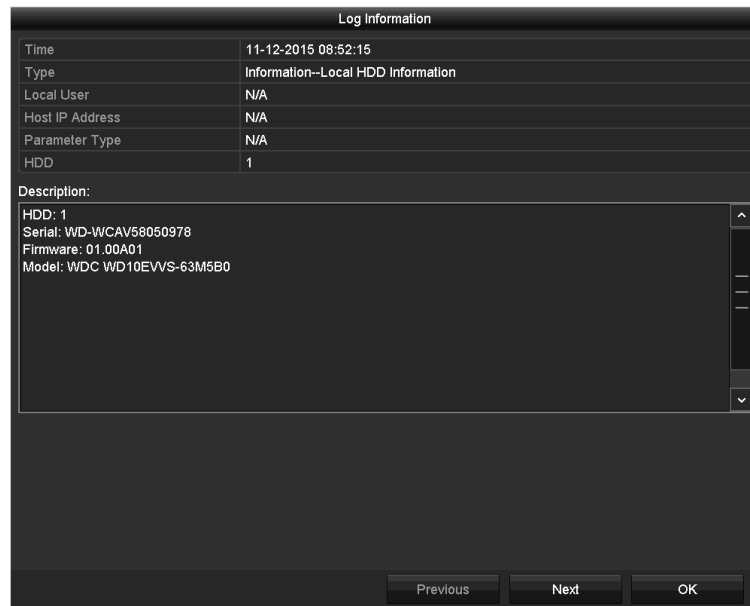


Figure 12-4 Log Information Interface

Step 6 If you want to export the log files, click the **Export** button to enter the Export menu, as shown in Figure 12.5.



Figure 12-5 Export Log Files

Step 7 Select the backup device from the dropdown list of **Device Name**.

Step 8 Click the **Export** to export the log files to the selected backup device.

You can click the **New Folder** button to create new folder in the backup device, or click the **Format** button to format the backup device before log export.

NOTE

- Please connect the backup device to DVR before operating log export.
- The log files exported to the backup device are named by exporting time, e.g., *20110514124841logBack.txt*.

12.3 Importing/Exporting Configuration Files

Purpose

The configuration files of the DVR can be exported to local device for backup; and the configuration files of one DVR can be imported to multiple DVR devices if they are to be configured with the same parameters.

Step 1 Enter the Import/Export Configuration File interface.

Menu > Maintenance > Import/Export

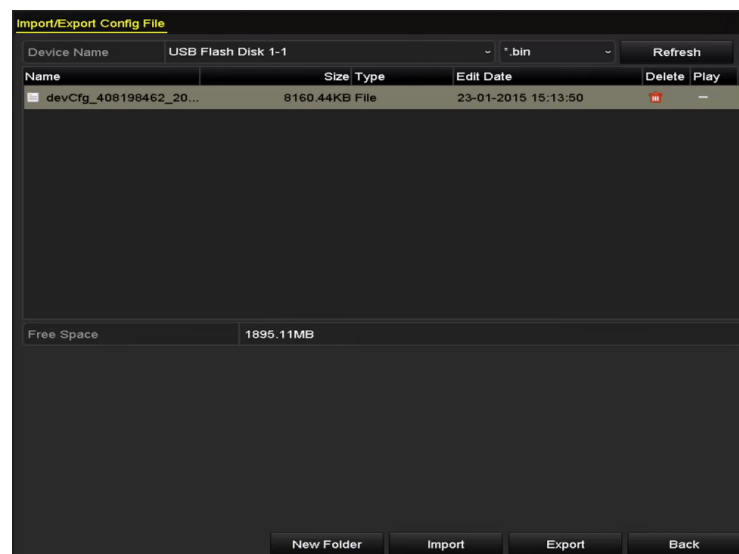


Figure 12-6 Import/Export Configuration File

Step 2 Click the **Export** button to export configuration files to the selected local backup device.

Step 3 To import a configuration file, select the file from the selected backup device and click the **Import** button. After the import process is completed, you must reboot the DVR.



NOTE

After having finished the import of configuration files, the device will reboot automatically.

12.4 Upgrading System

Purpose

The firmware on your DVR can be upgraded by local backup device or remote FTP server.

12.4.1 Upgrading by Local Backup Device

Step 1 Connect your DVR with a local backup device where the update firmware file is located.

Step 2 Enter the **Upgrade** interface.

Menu > Maintenance > Upgrade

Step 3 Click the **Local Upgrade** tab to enter the **Local Upgrade** interface, as shown in Figure 12-7.

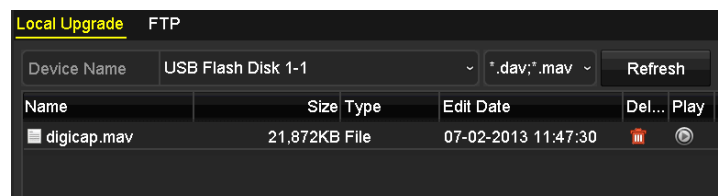


Figure 12-7 Local Upgrade Interface

Step 4 Select the update file from the backup device.

Step 5 Click the **Upgrade** button to start upgrading.

Step 6 After the upgrading is complete, reboot the DVR to activate the new firmware.

12.4.2 Upgrading by FTP

Before you start

Configure PC (running FTP server) and DVR to the same Local Area Network. Run the 3rd-party TFTP software on the PC and copy the firmware into the root directory of TFTP.

Step 1 Enter the **Upgrade** interface.

Menu > Maintenance > Upgrade

Step 2 Click the **FTP** tab to enter the **Local Upgrade** interface, as shown in Figure 12.8.

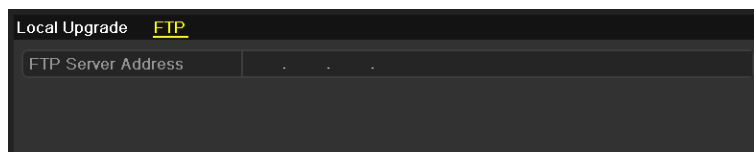


Figure 12-8 FTP Upgrade Interface

Step 3 Enter the FTP Server Address in the text field.

Step 4 Click the **Upgrade** button to start upgrading.

Step 5 After the upgrading is complete, reboot the DVR to activate the new firmware.

12.5 Restoring Default Settings

Step 1 Enter the **Default** interface.

Menu > Maintenance > Default

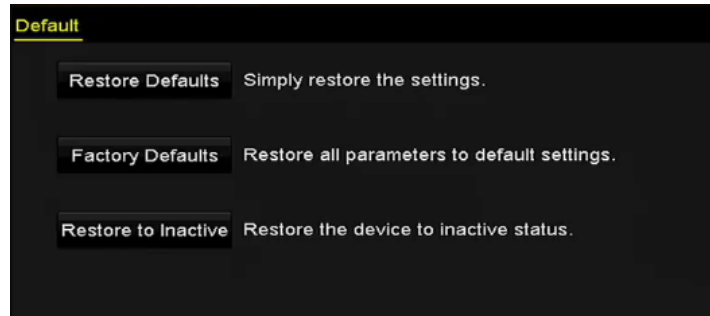


Figure 12-9 Restore Defaults

Step 2 Select the restoring type from the following three options.

Restore Defaults: Restore all parameters, except the network (including IP address, subnet mask, gateway, MTU, NIC working mode, default route, server port, etc.) and user account parameters, to the factory default settings.

Factory Defaults: Restore all parameters to the factory default settings.

Restore to Inactive: Restore the device to the inactive status.

Step 3 Click the **OK** button to restore the default settings.



NOTE

The device will reboot automatically after restoring to the default settings.

Chapter 13 Others

13.1 Configuring General Settings

Purpose

You can configure the output resolution, system time, mouse pointer speed, etc.

Step 1 Enter the **General Settings** interface.

Menu > Configuration > General

Step 2 Select the **General** tab.

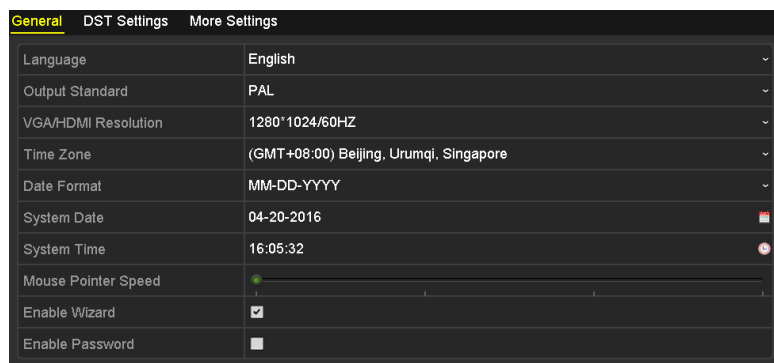


Figure 13-1 General Settings Interface

Step 3 Configure the following settings:

- **Language:** The default language used is *English*.
- **Output Standard:** Select the output standard to be PAL or NTSC.
- **VGA/HDMI Resolution:** Select the output resolution, which must be the same with the resolution of the VGA/HDMI display.

- **Time Zone:** Select the time zone.
- **Date Format:** Select the date format.
- **System Date:** Select the system date.
- **System Time:** Select the system time.
- **Mouse Pointer Speed:** Set the speed of mouse pointer; 4 levels are configurable.
- **Enable Wizard:** Enable/disable the Wizard when the device starts up.
- **Enable Password:** Enable/disable the use of the login password.

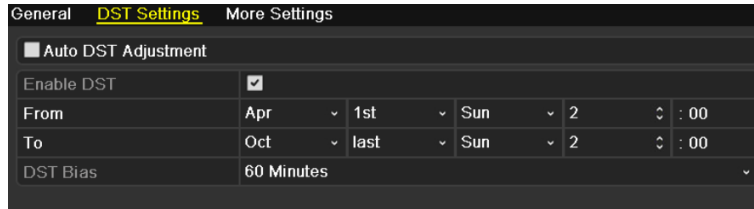
Step 4 Click the **Apply** button to save the settings.

13.2 Configuring DST Settings

Step 1 Enter the **General Settings** interface.

Menu > Configuration > General

Step 2 Choose **DST Settings** tab.



General			DST Settings			More Settings		
☒ Auto DST Adjustment								
Enable DST ☒								
From	Apr	1st	Sun	2	:	00		
To	Oct	last	Sun	2	:	00		
DST Bias	60 Minutes							

Figure 13-2 DST Settings Interface

You can check the checkbox before the **Auto DST Adjustment** item.

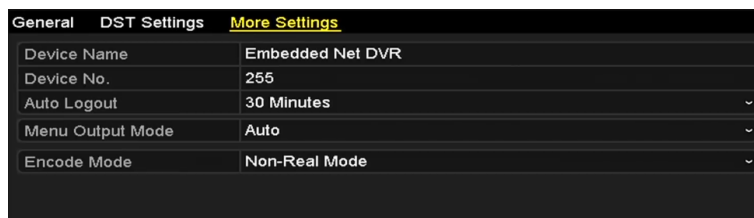
Or you can manually check the **Enable DST** checkbox, and then you choose the date of the DST period.

13.3 Configuring More Settings

Step 1 Enter the General Settings interface.

Menu > Configuration > General

Step 2 Click the **More Settings** tab to enter the **More Settings** interface, as shown below.



General		DST Settings		More Settings	
Device Name	Embedded Net DVR				
Device No.	255				
Auto Logout	30 Minutes				
Menu Output Mode	Auto				
Encode Mode	Non-Real Mode				

Figure 13-3 More Settings Interface (1)

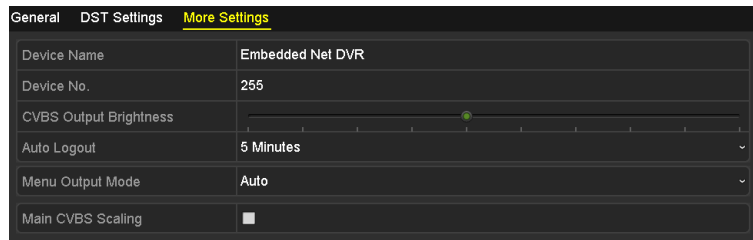


Figure 13-4 More Settings Interface (2)

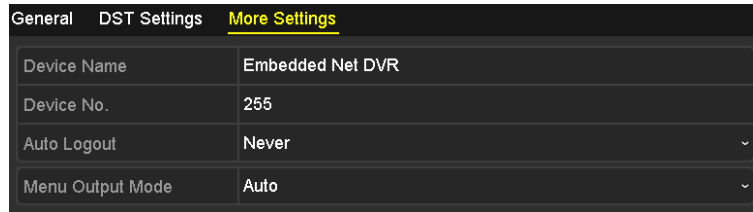


Figure 13-5 More Settings Interface (3)

Step 3 Configure the following settings:

- **Device Name:** Edit the name of DVR.
- **Device No.:** Edit the serial number of DVR. The Device No. can be set in the range of 1~255, and the default No. is 255.
- **Auto Logout:** Set timeout time for menu inactivity. E.g., when the timeout time is set to *5 Minutes*, then the system will exit from the current operation menu to live view screen after 5 minutes of menu inactivity.
- **Menu Output Mode:** You can choose the menu display on different video output.
- **Encode Mode:** 720P series DVR, you can select the encode mode or non-real mode. When the non-real mode is selected, the max. frame rate (Menu>Record>Parameters) can be set to 15fps only.
- **Main CVBS Scaling:** You can check the checkbox to enable main CVBS scaling.

Step 4 Click the **Apply** button to save the settings.

13.4 Managing User Accounts

Purpose

There is a default account in the DVR: *Administrator*. The *Administrator* user name is *admin* and the password is set when you start the device for the first time. The *Administrator* has the permission to add and delete user and configure user parameters.

13.4.1 Adding a User

Step 1 Enter the **User Management** interface.

Menu >Configuration>User

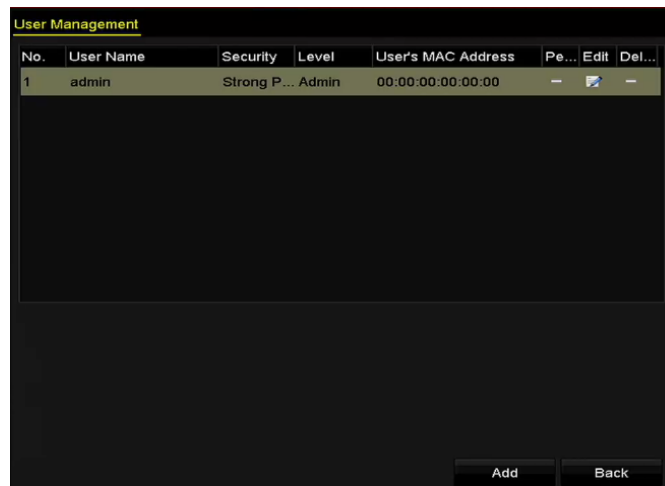


Figure 13-6 User Management Interface

Step 2 Click the **Add** button to enter the **Add User** interface.

The screenshot shows the 'Add User' interface. It has a title bar 'Add User'. Below it are form fields: 'User Name' with value 'example1', 'Password' with masked characters and a green 'Strong' indicator, 'Confirm' with masked characters, 'Level' with a dropdown menu showing 'Operator', and 'User's MAC Address' with value '00 : 00 : 00 : 00 : 00 : 00'. At the bottom, there's a green checkmark icon and a message: 'Valid password range [8-16]. You can use a combination of numbers, lowercase, uppercase and special character for your password with at least two kinds of them contained.' Below the message are 'OK' and 'Cancel' buttons.

Figure 13-7 Add User Menu

Step 3 Enter the information for new user, including **User Name**, **Password**, **Confirm**, **Level** and **User's MAC Address**.

Password: Set the password for the user account.



WARNING

STRONG PASSWORD RECOMMENDED—We highly recommend you create a strong password of your own choosing (Using a minimum of 8 characters, including at least three of the following categories: upper case letters, lower case letters, numbers, and special characters.) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

Level: Set the user level to Operator or Guest. Different user levels have different operating permission.

- **Operator:** The *Operator* user level has permission of Two-way Audio in Remote Configuration and all operating permission in Camera Configuration by default.
- **Guest:** The *Guest* user has no permission of Two-way Audio in Remote Configuration and only has the local/remote playback in the Camera Configuration by default.

User's MAC Address: The MAC address of the remote PC which logs onto the DVR. If it is configured and enabled, it only allows the remote user with this MAC address to access the DVR.

Step 4 Click the **OK** button to save the settings and go back to the **User Management** interface. The added new user will be displayed on the list, as shown in Figure 13-8.

No.	User Name	Level	User's MAC Address	Pe...	Edit	Del...
1	admin	Admin	00:00:00:00:00:00	—		—
2	01	Operator	00:00:00:00:00:00			

Figure 13-8 Added User Listed in User Management

Interface Step 5 You can assign permissions for the added user.

- 1) Select the user from the list and then click to enter the **Permission Settings** interface, as shown in Figure 13-9.

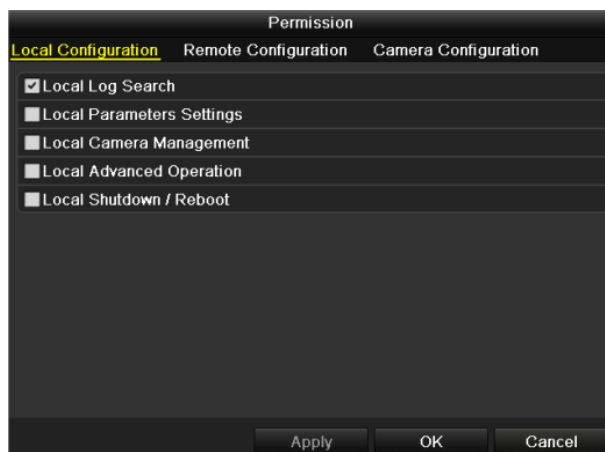


Figure 13-9 User Permission Settings Interface

- 2) Set the operating permission of Local Configuration, Remote Configuration and Camera Configuration for the user.

Local Configuration

- Local Log Search: Searching and viewing logs and system information of device.
- Local Parameters Settings: Configuring parameters, restoring factory default parameters and importing/exporting configuration files.
- Local Advanced Operation: Operating HDD management (initializing HDD, setting HDD property), upgrading system firmware.
- Local Shutdown /Reboot: Shutting down or rebooting the device.

Remote Configuration

- Remote Log Search: Remotely viewing logs that are saved on the device.
- Remote Parameters Settings: Remotely configuring parameters, restoring factory default parameters and importing/exporting configuration files.
- Remote Serial Port Control: Configuring settings for RS-485 port.
- Remote Video Output Control: Sending remote control panel signal.
- Two-way Audio: Realizing two-way radio between the remote client and the device.

- Remote Alarm Control: Remotely arming (notify alarm and exception message to the remote client) and controlling the alarm output.
- Remote Advanced Operation: Remotely operating HDD management (initializing HDD, setting HDD property), upgrading system firmware.
- Remote Shutdown/Reboot: Remotely shutting down or rebooting the device.

Camera Configuration

- Remote Live View: Remotely viewing live video of the selected camera (s).
- Local Manual Operation: Locally starting/stopping manual recording, picture capturing and alarm output of the selected camera (s).
- Remote Manual Operation: Remotely starting/stopping manual recording, picture capturing and alarm output of the selected camera (s).
- Local Playback: Locally playing back recorded files of the selected camera (s).
- Remote Playback: Remotely playing back recorded files of the selected camera (s).
- Local Video Export: Locally exporting recorded files of the selected camera (s).

3) Click **OK** to save the settings and exit.

13.4.2 Deleting a User

Step 1 Enter the **User Management** interface.

Menu >Configuration>User

Step 2 Select the user to be deleted from the list, as shown in Figure 13-10.

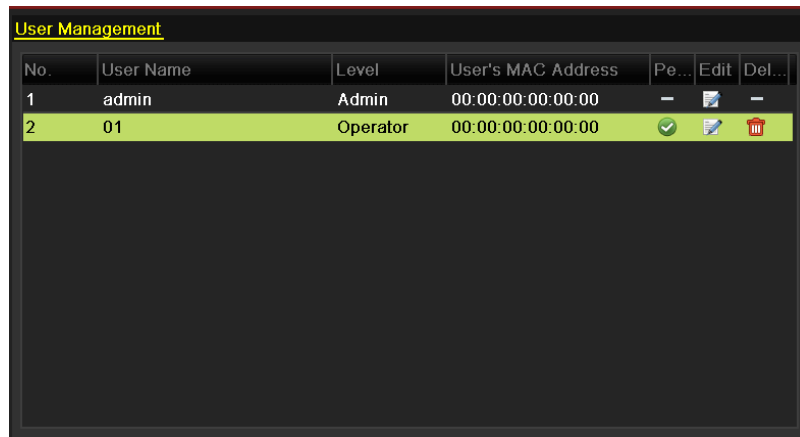


Figure 13-10 User List

Step 3 Click  to delete the selected user account.

13.4.3 Editing a User

For the added user accounts, you can edit the parameters.

Step 1 Enter the **User Management** interface.

Menu >Configuration>User

Step 2 Select the user to be edited from the list, as shown in Figure 13-10.

Step 3 Click the  icon to enter the **Edit User** interface, as shown in Figure 13-11.

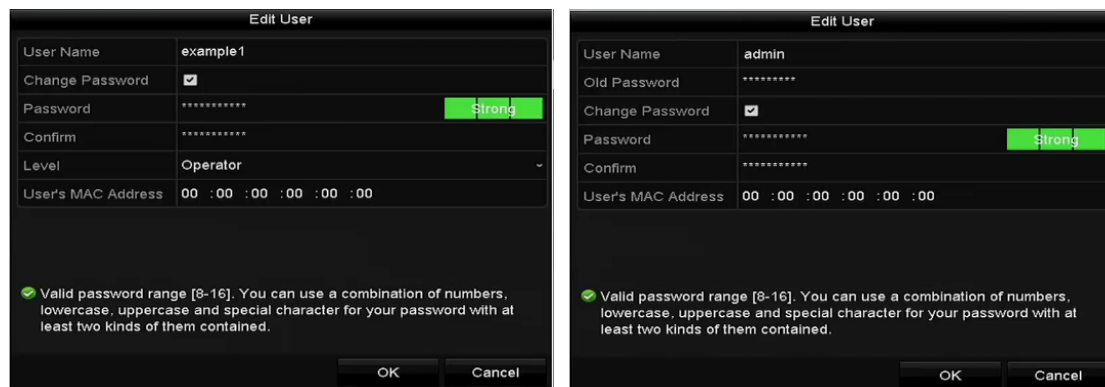


Figure 13-11 Edit User

Interface Step 4 Edit the corresponding parameters.

- **Operator and Guest**

You can edit the user information, including user name, password, permission level and MAC address. Check the checkbox of **Change Password** if you want to change the password, and input the new password in the text field of **Password** and **Confirm**. A strong password is recommended.

- **Admin**

You are only allowed to edit the password and MAC address. Check the checkbox of **Change Password** if you want to change the password, and the input the correct old password, and the new password in the text field of **Password** and **Confirm**.



WARNING

STRONG PASSWORD RECOMMENDED—We highly recommend you create a strong password of your own choosing (Using a minimum of 8 characters, including at least three of the following categories: upper case letters, lower case letters, numbers, and special characters.) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

Step 5 Click the **OK** button to save the settings and exit the menu.

Step 6 For the **Operator** or **Guest** user account, you can also click the  button on the **User Management** interface to edit the permission.

Chapter 14 Appendix

14.1 Glossary

- **Dual Stream:** Dual stream is a technology used to record high resolution video locally while transmitting a lower resolution stream over the network. The two streams are generated by the DVR, with the main stream having a maximum resolution of 1080P and the sub-stream having a maximum resolution of CIF.
- **DVR:** Acronym for Digital Video Recorder. A DVR is device that is able to accept video signals from analog cameras, compress the signal and store it on its hard drives.
- **HDD:** Acronym for Hard Disk Drive. A storage medium which stores digitally encoded data on platters with magnetic surfaces.
- **DHCP:** Dynamic Host Configuration Protocol (DHCP) is a network application protocol used by devices (DHCP clients) to obtain configuration information for operation in an Internet Protocol network.
- **HTTP:** Acronym for Hypertext Transfer Protocol. A protocol to transfer hypertext request and information between servers and browsers over a network
- **PPPoE:** PPPoE, Point-to-Point Protocol over Ethernet, is a network protocol for encapsulating Point-to-Point Protocol (PPP) frames inside Ethernet frames. It is used mainly with ADSL services where individual users connect to the ADSL transceiver (modem) over Ethernet and in plain Metro Ethernet networks.
- **DDNS:** Dynamic DNS is a method, protocol, or network service that provides the capability for a networked device, such as a router or computer system using the Internet Protocol Suite, to notify a domain name server to change, in real time (ad-hoc) the active DNS configuration of its configured hostnames, addresses or other information stored in DNS.
- **NTP:** Acronym for Network Time Protocol. A protocol designed to synchronize the clocks of computers over a network.

- **NTSC:** Acronym for National Television System Committee. NTSC is an analog television standard used in such countries as the United States and Japan. Each frame of an NTSC signal contains 525 scan lines at 60Hz.
- **PAL:** Acronym for Phase Alternating Line. PAL is also another video standard used in broadcast televisions systems in large parts of the world. PAL signal contains 625 scan lines at 50Hz.
- **USB:** Acronym for Universal Serial Bus. USB is a plug-and-play serial bus standard to interface devices to a host computer.

14.2 Troubleshooting

- **No image displayed on the monitor after the device is starting up normally.**

Possible Reasons:

- No VGA or HDMI connections.
- Connection cable is damaged.
- Input mode of the monitor is incorrect.

Step 1 Verify the device is connected with the monitor via HDMI or VGA cable.

If not, please connect the device with the monitor and reboot.

Step 2 Verify the connection cable is good.

If there is still no image display on the monitor after rebooting, please check if the connection cable is good, and change a cable to connect again.

Step 3 Verify Input mode of the monitor is correct.

Please check the input mode of the monitor matches with the output mode of the device (e.g. if the output mode of DVR is HDMI output, then the input mode of monitor must be the HDMI input). And if not, please modify the input mode of monitor.

Step 4 Check if the fault is solved by the step 1 to step 3.

If it is solved, finish the process.

If not, please contact the engineer from our company to do the further process.

● **There is a beep sound after a new bought device starts up.**

Possible Reasons:

- No HDD is installed in the device.
- The installed HDD has not been initialized.
- The installed HDD is not compatible with the device or is broken-down.

Step 5 Verify at least one HDD is installed in the device.

- 1) If not, please install the compatible HDD.



NOTE

Please refer to the “Quick Installation Guide” for the HDD installation steps.

- 2) If you do not want to install a HDD, select “Menu>Configuration > Exceptions”, and uncheck the Audible Warning checkbox of “HDD Error”.

Step 6 Verify the HDD is initialized.

- 1) Select “Menu>HDD>General”.
- 2) If the status of the HDD is “Uninitialized”, please check the checkbox of corresponding HDD and click the “Init” button.

Step 7 Verify the HDD is detected or is in good condition.

- 1) Select “Menu>HDD>General”.
- 2) If the HDD is not detected or the status is “Abnormal”, please replace the dedicated HDD according to the requirement.

Step 8 Check if the fault is solved by the step 1 to step 3.

- 1) If it is solved, finish the process.
- 2) If not, please contact the engineer from our company to do the further process.

● **Live view stuck when video outputs locally.**

Possible Reasons:

- The frame rate has not reached the real-time frame rate.

Step 1 Check the parameters of Main Stream (Continuous) and Main Stream (Event).

Select “Menu > Record > Parameters > Record”, and set the resolution of Main Stream (Event) the same as the one of Main Stream (Continuous).

Step 2 Verify the frame rate is real-time frame rate.

Select “Menu > Record > Parameters > Record”, and set the Frame Rate to Full Frame.

Step 3 Check if the fault is solved by the above steps.

If it is solved, finish the process.

If not, please contact the engineer from our company to do the further process.

- **When using the device to get the live view audio, there is no sound or there is too much noise, or the volume is too low.**

Possible Reasons:

- Cable between the pickup and camera is not connected well; impedance mismatches or incompatible.
- The stream type is not set as "Video & Audio".

Step 1 Verify the cable between the pickup and camera is connected well; impedance matches and compatible.

Step 2 Verify the setting parameters are correct.

Select "Menu > Record > Parameters > Record", and set the Stream Type as "Audio & Video".

Step 3 Check if the fault is solved by the above steps.

If it is solved, finish the process.

If not, please contact the engineer from our company to do the further process.

- **The image gets stuck when DVR is playing back by single or multi-channel cameras.**

Possible Reasons:

- The frame rate is not the real-time frame rate.

Step 1 Verify the frame rate is real-time frame rate.

Select "Menu > Record > Parameters > Record", and set the Frame Rate to "Full Frame".

Step 2 Verify the hardware can afford the playback.

Reduce the channel number of playback.

Select "Menu > Record > Encoding > Record", and set the resolution and bitrate to a lower level.

Reduce the number of local playback channel.

Select “Menu > Playback”, and uncheck the checkbox of unnecessary channels.

Step 3 Check if the fault is solved by the above steps.

If it is solved, finish the process.

If not, please contact the engineer from our company to do the further process.

- **No record file found in the device local HDD, and the prompt “No record file found” pops up when you search the record files.**

Possible Reasons:

- The time setting of system is incorrect.
- The search condition is incorrect.
- The HDD is error or not detected.

Step 1 Verify the system time setting is correct.

Select “Menu > Configuration > General > General”, and verify the “System Time” is correct.

Step 2 Verify the search condition is correct.

Select “Playback”, and verify the channel and time are correct.

Step 3 Verify the HDD status is normal.

Select “Menu > HDD > General” to view the HDD status, and verify the HDD is detected and can be read and written normally.

Step 4 Check if the fault is solved by the above steps.

If it is solved, finish the process.

If not, please contact the engineer from our company to do the further process.