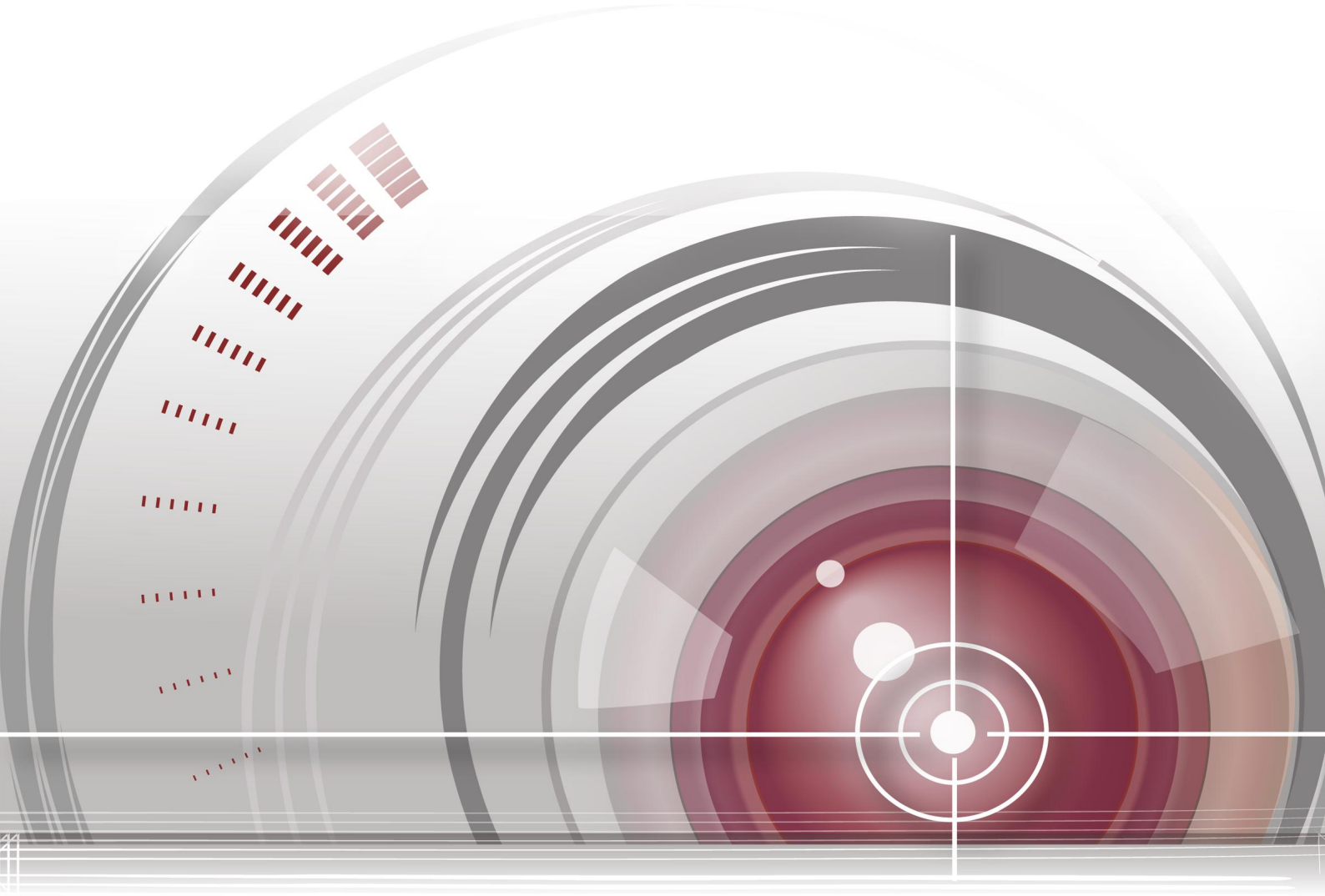

Digital Video Recorder

User Manual

User Manual

About this Manual

This Manual is applicable to Turbo 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 RESPONSIBILITES 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

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 2004/108/EC, 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.

Safety Instruction

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into “Warnings” and “Cautions”

Warnings: Serious injury or death may occur if any of the warnings are neglected.

Cautions: Injury or equipment damage may occur if any of the cautions are neglected.

Warnings Follow these safeguards to prevent serious injury or death.	**Cautions** Follow these precautions to prevent potential injury or material damage.

Warnings

- 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 to 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.

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Chapter 1 Introduction

1.1 Front Panels

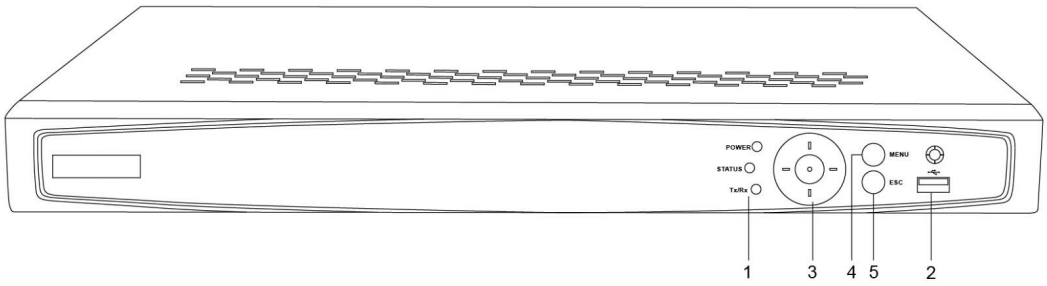


Figure 1. 1 Front Panel of DT41Y

Table 1. 1 Description of Front Panel

No.	Name		Description
1	Status Indicator	Power	Power indicator turns yellow when system is running.
		Status	Status indicator blinks red when data is being read from or written to HDD.
		Tx/Rx	Tx/Rx indictor blinks yellow when network connection is functioning properly.
2	USB Interface		Universal Serial Bus (USB) ports for additional devices such as USB mouse and USB Hard Disk Drive (HDD).
3	Control Buttons	DIRECTION	In menu mode, the direction buttons are used to navigate between different fields and items and select setting parameters.
			In playback mode, the Up and Down buttons are used to speed up and slow down record playing, and the Left and Right buttons are used to move the recording 30s forwards or backwards.
			In the image setting interface, the up and down button can adjust the level bar of the image parameters. In live view mode, these buttons can be used to switch channels.
			The Enter button is used to confirm selection in menu mode; or used to check check box fields and ON/OFF switch.
		ENTER	In playback mode, it can be used to play or pause the video.
			In single-frame play mode, pressing the Enter button will play the video by a single frame.
			In auto sequence view mode, the buttons can be used to pause or resume auto sequence.
4	MENU		Press the button will help you return to the Main menu (after successful login).
			In Playback mode, it is used to show/hide the control interface.
5	ESC		Back to the previous menu.
			Press for Arming/disarming the device in Live View mode.

1.2 IR Remote Control Operations

The DVR may also be controlled with the included IR remote control, shown in Figure 1. 3.

NOTE

Batteries (2×AAA) must be installed before operation.

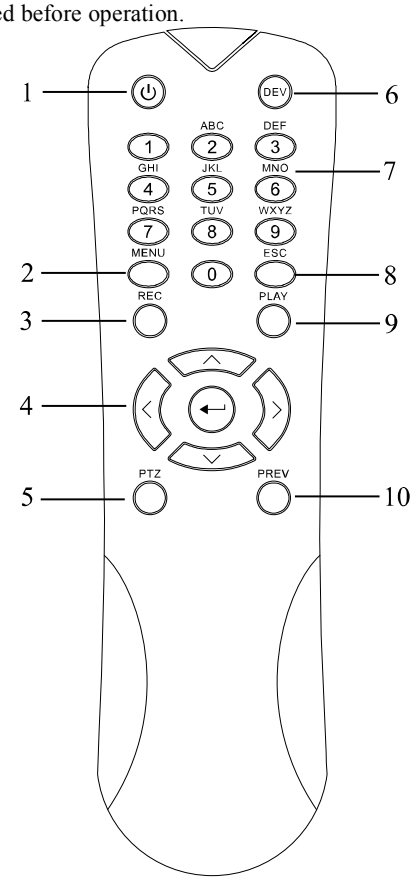


Figure 1. 2 Remote Control

The keys on the remote control closely resemble the ones found on the front panel. Refer to Table 1. 3, they include:

Table 1. 2 Description of the IR Remote Control Buttons

No.	Name	Description
1	POWER	Power on/off the device.
		Power on/off the device by pressing and holding the button for 3 seconds.
2	MENU Button	Press the button to return to the main menu (after successful login).
		Press and hold the button for 5 seconds will turn off audible key beep.
		In PTZ Control mode, the MENU button will start wiper (if applicable).
		In Playback mode, it is used to show/hide the control interface.
3	REC Button	Enter the Manual Record setting menu.
		In PTZ control settings, press the button and then you can call a PTZ preset by pressing Numeric button.
		It is also used to turn audio on/off in the Playback mode.
4	DIRECTION Button	Navigate between different fields and items in menus.
		In the Playback mode, the Up and Down button is used to speed up and

No.	Name	Description
		slow down recorded video. The Left and Right button will select the next and previous record files.
		In Live View mode, these buttons can be used to cycle through channels.
		In PTZ control mode, it can control the movement of the PTZ camera.
	ENTER Button	Confirm selection in any of the menu modes.
		It can also be used to *tick* checkbox fields.
		In Playback mode, it can be used to play or pause the video.
		In single-frame Playback mode, pressing the button will advance the video by a single frame.
5	**PTZ Button**	In Auto-switch mode, it can be used to stop /start auto switch.
6	**DEV**	Enables/Disables Remote Control.
7	**Alphanumeric Buttons**	Switch to the corresponding channel in Live view or PTZ Control mode.
		Input numbers and characters in Edit mode.
		Switch between different channels in the Playback mode.
8	**ESC Button**	Back to the previous menu.
		Press for Arming/disarming the device in Live View mode.
9	**PLAY Button**	The button is used to enter the All-day Playback mode.
		It is also used to auto scan in the PTZ Control menu.
10	**PREV Button**	Switch between single screen and multi-screen mode.
		In PTZ Control mode, it is used to adjust the focus in conjunction with the A/FOCUS+ button.

Troubleshooting Remote Control:

Make sure you have install batteries properly in the remote control. And you have to aim the remote control at the IR receiver in the front panel.

If there is no response after you press any button on the remote, follow the procedure below to troubleshoot.

Steps:

1. Go into Menu > Settings > General > More Settings by operating the front control panel or the mouse.
2. Check and remember the DVR No.. The default DVR No. is 255. This number valid for all IR remote controls.
3. Press the DEV button on the remote control.
4. Enter the DVR No. in step 2.
5. Press the ENTER button on the remote.

If the Status indicator on the front panel turns blue, the remote control is operating properly. If the Status indicator does not turn blue and there is still no response from the remote, please check the following:

1. Batteries are installed correctly and the polarities of the batteries are not reversed.
2. Batteries are fresh and not out of charge.
3. IR receiver is not obstructed.

If the remote still cannot function properly, please change the remote and try again, or contact the device provider.

1.3 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:

Steps:

1. Plug USB mouse into one of the USB interfaces on the front panel of the DVR.
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. 3 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.
	Click and 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.

1.4 Input Method Description

Figure 1. 3 Soft Keyboard

Description of the buttons on the soft keyboard:

Table 1. 4 Description of the Soft Keyboard Icons

Icon	Description	Icon	Description
0 … 9	Number	A … Z	English letter
	Lowercase/Uppercase		Backspace
123/., ABC	Switch the keyboard		Space
	Positioning the cursor		Exit
#+=	Symbols		Reserved

1.5 Rear Panel

The rear panel various according to different models. Please refer to the actual product. The following figures are for reference only.

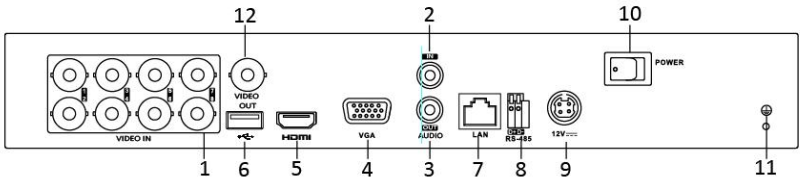


Figure 1. 4 DT81Y

Table 1. 5 Description of Rear Panel

No.	Item	Description
1	**VIDEO IN**	BNC interface for TVI and analog video input.
2	**AUDIO IN**	RCA connector
3	**AUDIO OUT**	RCA connector
4	**VGA**	DB15 connector for VGA output. Display local video output and menu.
5	**HDMI**	HDMI video output connector.
6	**USB Port**	Universal Serial Bus (USB) port for additional devices.
7	**Network Interface**	Connector for network
8	**RS-485 Interface**	Connector for RS-485 devices.
9	**Power Supply**	12VDC power supply.
10	**Power Switch**	Switch for turning on/off the device.
11	**GND**	Ground
12	**VIDEO OUT**	BNC connector for video output.

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
Steps:

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.
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.

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

Shutting down the DVR

Steps:

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

- **OPTION 1: Standard shutdown**
  1. Enter the Shutdown menu.
     Menu > Shutdown

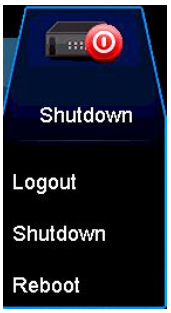


Figure 2. 1 Shutdown Menu

2. Select the **Shutdown** button.
3. Click the **Yes** button.
4. Turn off the power switch on the rear panel when the note appears.

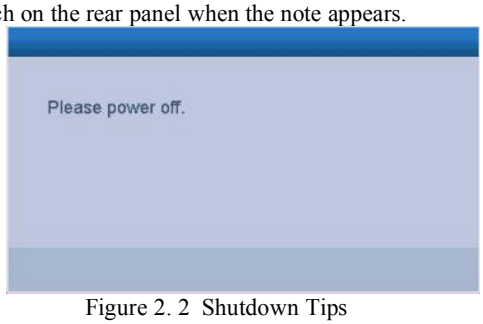


Figure 2. 2 Shutdown Tips

Rebooting the DVR

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

Steps:

1. Enter the **Shutdown** menu by clicking Menu > Shutdown.
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.
Steps:

1. Input the same password in the text field of **Create New Password** and **Confirm New Password**.
   Please keep the password well and don't forget it.

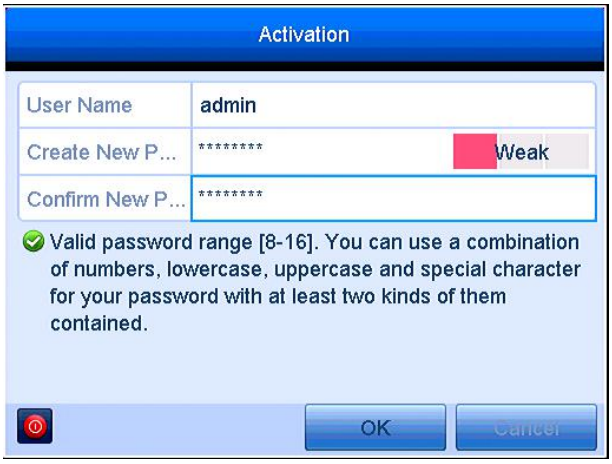


Figure 2. 3 Settings Admin Password

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.*

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

2.3 Basic Configuration in Startup Wizard

2.3.1 Configuring the Signal Input Channel

After the startup and login, the device system enters the Wizard for configuring the signal input.

NOTE

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

1. Check the checkbox to select different signal input types: TVI, or AHD/CVBS.
2. Click **Apply** to save the settings.

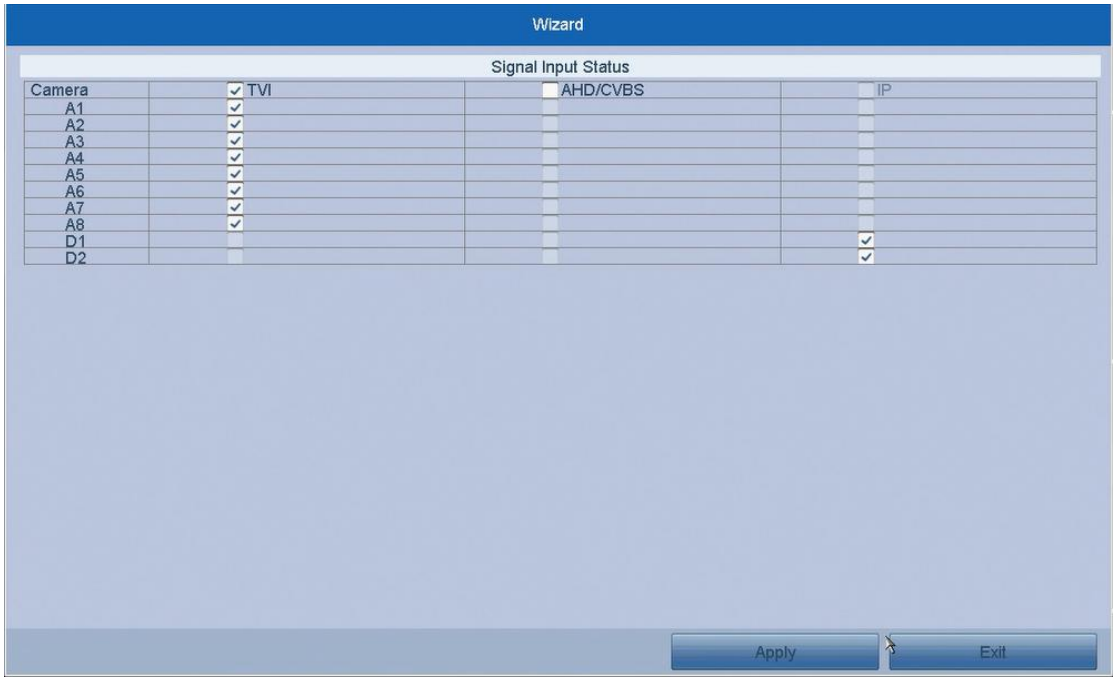


Figure 2. 4 Configure Signal Input Type

NOTE

- Picture is for reference only,please consult with the real products.
- The AHD signal input is supported by some series DVR only.
- For some series DVR, 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. And for some series DVR, each four video channels are grouped in sequence.
- 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

By default, the Setup Wizard starts once the device has loaded.

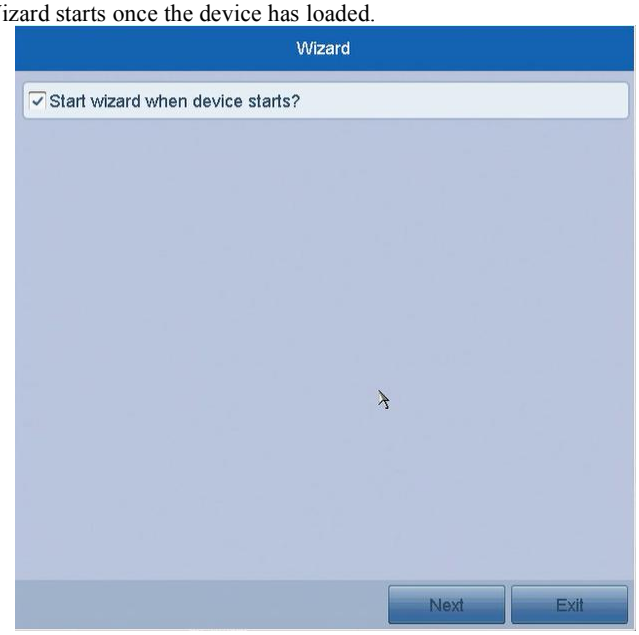


Figure 2. 5 Start Wizard Interface

Operating the Setup Wizard:

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.
2. Click **Next** to enter the date and time settings window.

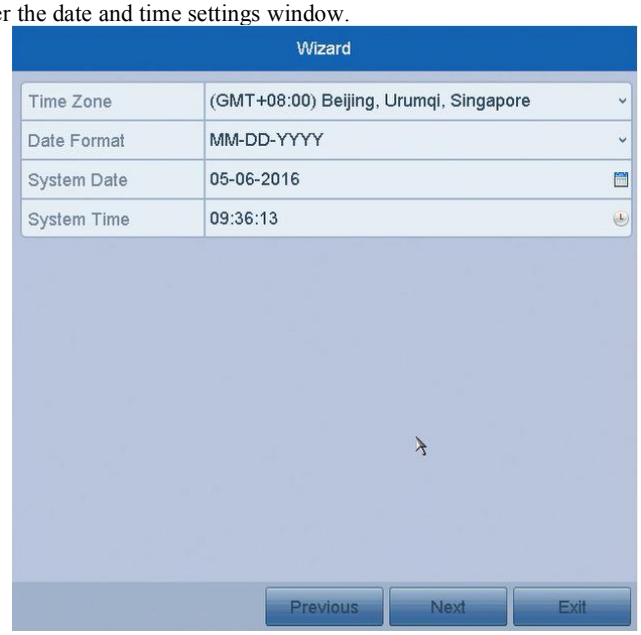


Figure 2. 6 Date and Time Settings

3. After the time settings, click **Next** button which will take you back to the General Network Setup Wizard window.

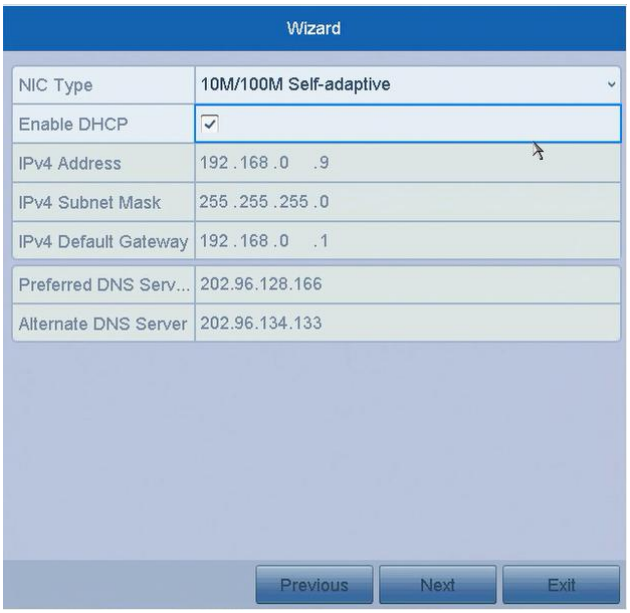


Figure 2. 7 General Network Configuration

4. 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.

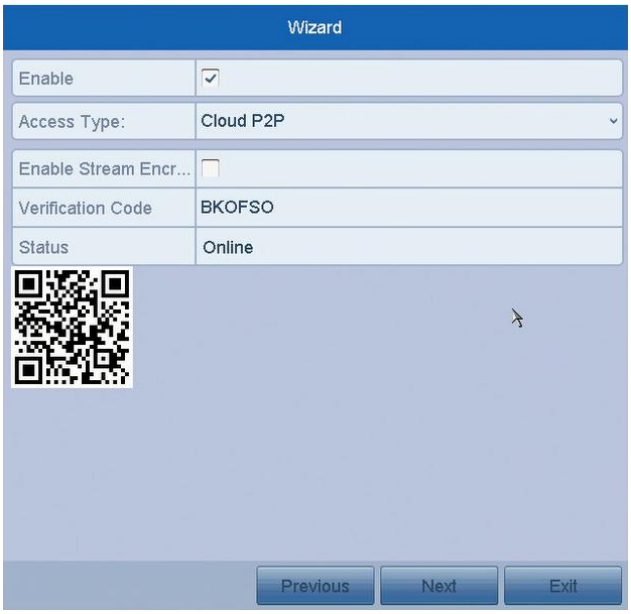


Figure 2. 8 Advanced Network Configuration

5. Click **Next** button to enter the **Advanced Network Parameter** interface. You can enable PPPoE, enable DDNS and set other ports according to your need.

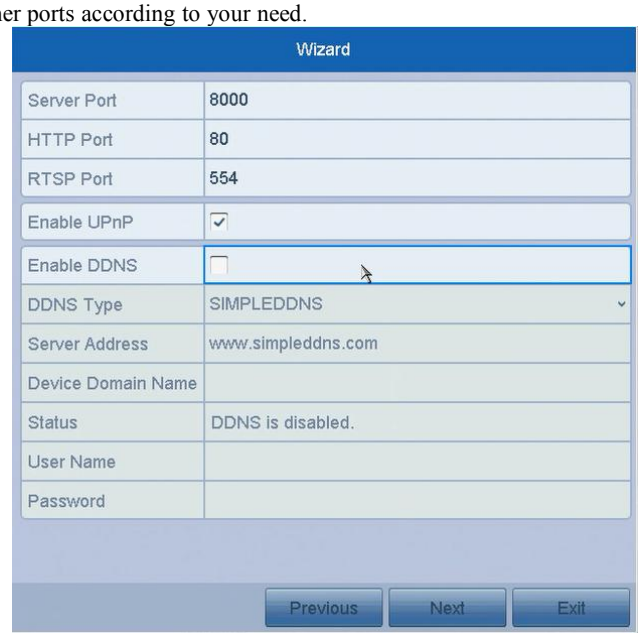


Figure 2. 9 Advanced Network Parameters

6. Click **Next** button after configuring the advanced network parameters, which will take you to the **HDD Management** window

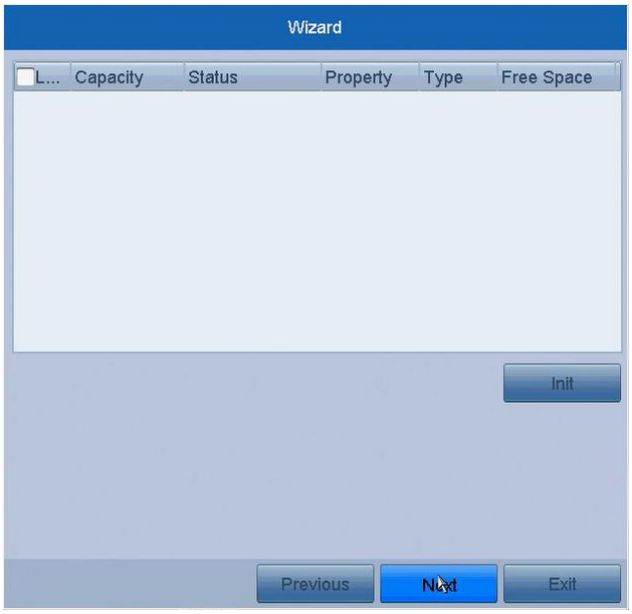


Figure 2. 10 HDD Management

7. To initialize the HDD, click the **Init** button. Initialization will remove all the data saved in the HDD.
8. Click **Next** to enter the **IP Camera Management** window.
9. 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.

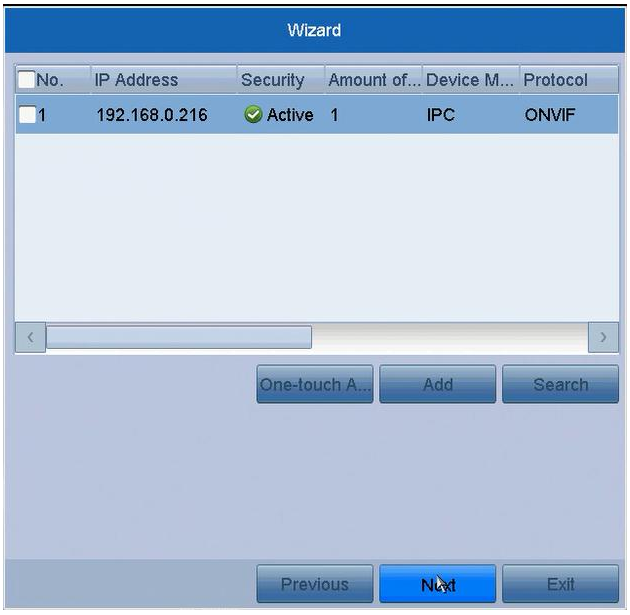


Figure 2. 11 IP Camera Management

10. After finishing IP Camera settings, click **Next** to enter the **Record Settings** window.
11. Click the icon , and you can enable the continuous recording or motion Detection recording for all channels of the device.

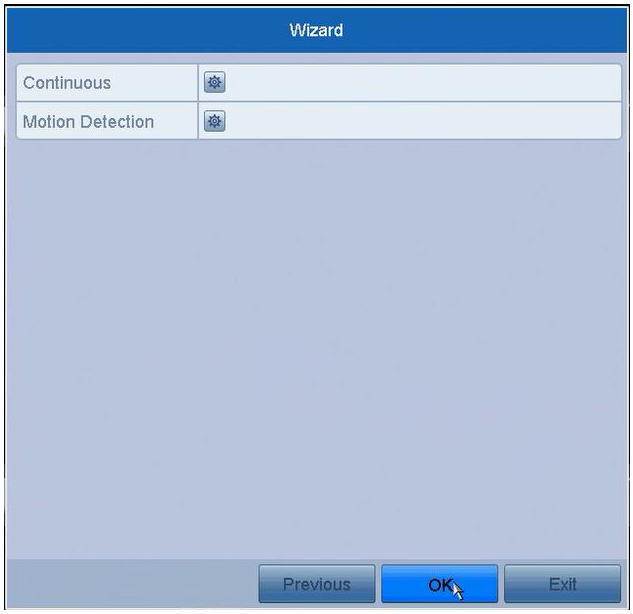


Figure 2. 12 Record Settings

12. 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

Steps:

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

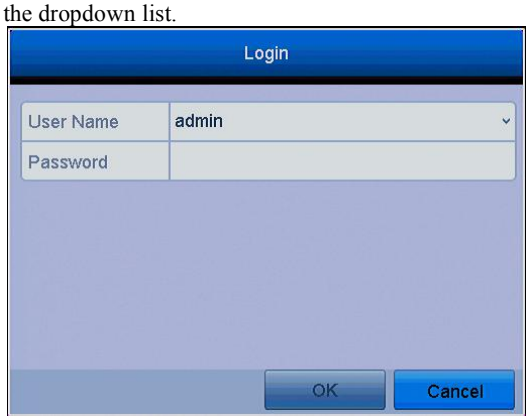


Figure 2. 13 Login Interface

2. Input **Password**.
3. Click **OK** to log in.

NOTE

In the Login dialog box, if you have entered the wrong password for 7 times, the current user account will be locked for 60 seconds.

2.4.2 User Logout

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

1. Enter the Shutdown menu.
   Menu > Shutdown

Figure 2. 14 Logout

2. Click **Logout**.

NOTE

After you have logged out 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 Adding and Connecting the IP Cameras

2.5.1 Activating the IP Camera

Purpose:
Before adding the camera, make sure the IP camera to be added is in active status. Most kinds of camera are active already,just go to 2.5.2 if the IP cameras are active.
Steps:

1. Select the **Add IP Camera** option from the right-click menu in live view mode or click Menu> Camera> Camera to enter the IP camera management interface.
   For the IP camera detected online in the same network segment, the **Security** status shows whether it is active or inactive.

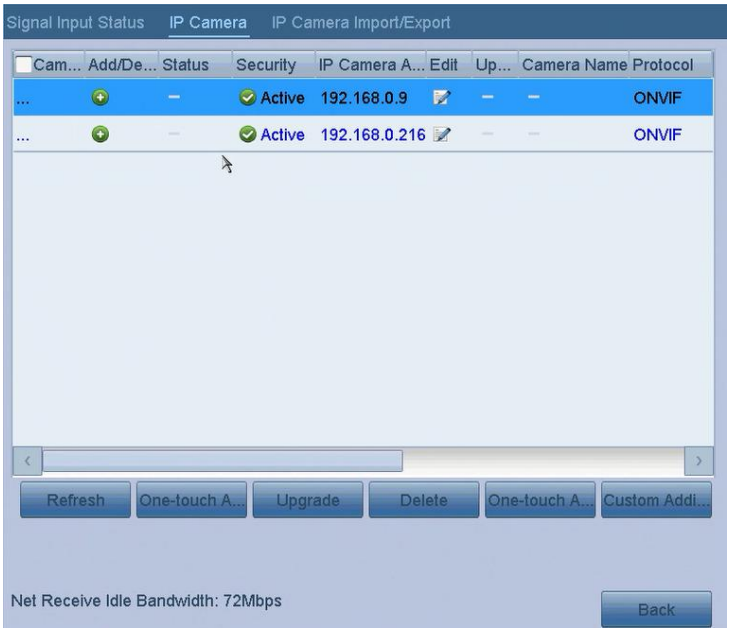


Figure 2. 15 IP Camera Management Interface

2. Click the inactive icon of the camera to enter the following interface to activate it. You can also select multiple cameras from the list and click the **One-touch Activate** to activate the cameras in batch.

3. Set the password of the camera to activate it.
   Use Admin Password: when you check the checkbox, the camera (s) will be configured with the same admin password of the operating DVR.

   Create New Password: If the admin password is not used, you must create the new password for the camera and confirm it.

   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.*

4. Click **OK** to finish the acitavting of the IP camera. And the security status of camera will be changed to **Active**.

2.5.2 Adding the Online IP Cameras

Purpose:
Before you can get a live view or record of the video, you should add the network cameras to the connection list of the device.
Before you start:
Ensure the network connection is valid and correct. For detailed checking and configuring of the network, please see *Chapter 11*.

- **OPTION 1:**

Steps:
1. Select the **Add IP Camera** option from the right-click menu in live view mode or click Menu> Camera> Camera to enter the IP camera management interface.

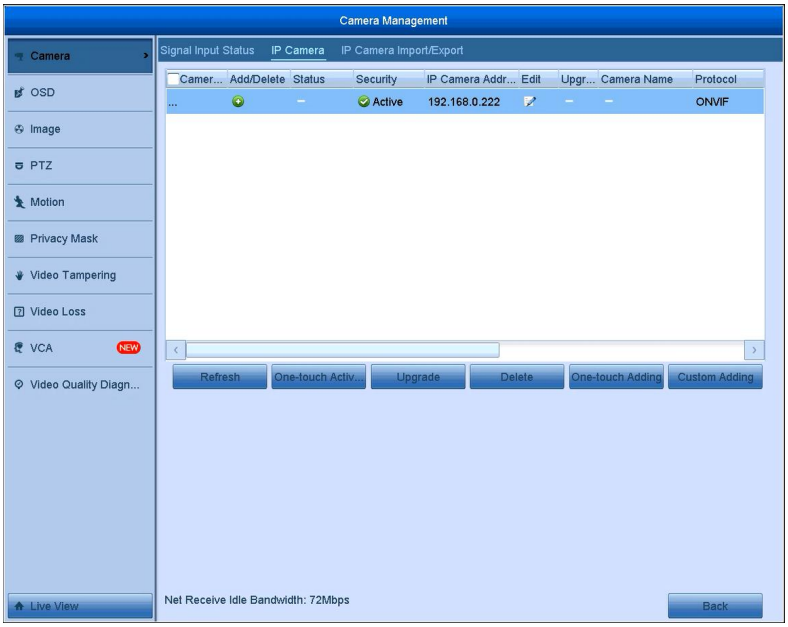


Figure 2. 16 Adding IP Camera Interface

2. The online cameras with same network segment will be detected and displayed in the camera list.
3. Select the IP camera from the list and click the button to add the camera (with the same admin password of the DVR's). Or you can click the **One-touch Adding** button to add all cameras (with the same admin password) from the list.

NOTE

Make sure the camera to add has already been actiavted by setting the admin password, and the admin password of the camera is the same with the DVR's.

- **OPTION 2:**

Steps:

1) On the IP Camera Management interface, click the **Custom Adding** button to pop up the Add IP Camera (Custom) interface.

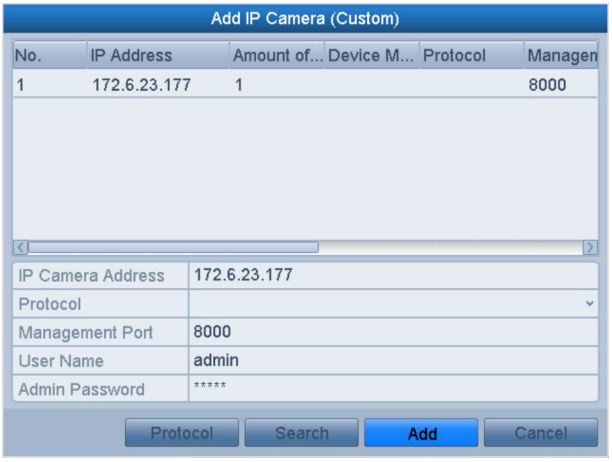


Figure 2. 17 Custom Adding IP Camera Interface

2) You can edit the IP address, protocol, management port, and other information of the IP camera to be added.

NOTE

If the IP camera to add has not been actiavated, you can activate it from the IP camera list on the camera management interface.

3) Click **Add** to add the camera.

For the successfully added IP cameras, the Security status shows the security level of the password of camera: strong password, weak password and risk password.

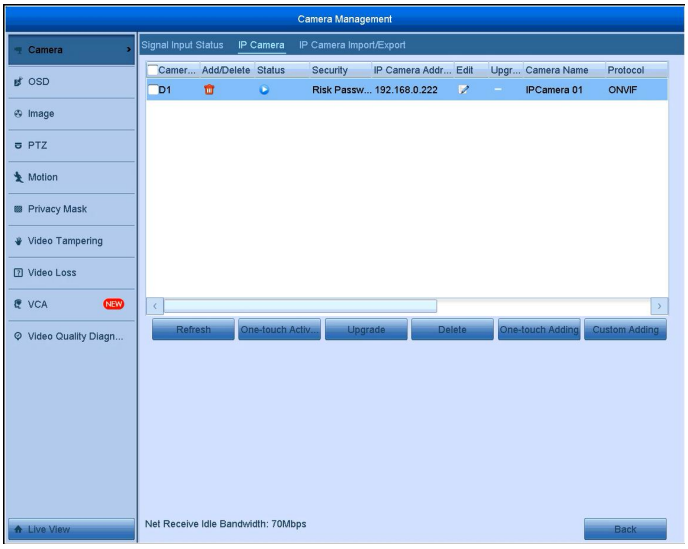


Figure 2. 18 Successfully Added IP Cameras

Please refer to the following table for the number of connectable IP cameras for different models.

Table 2. 1 Explanation of the icons

Icon	Explanation	Icon	Explanation
	Edit basic parameters of the camera		Add the detected IP camera.
	The camera is disconnected; you can click the icon to get the exception information of camera.		Delete the IP camera
	Play the live video of the connected camera.		Advanced settings of the camera.
	Upgrade the connected IP camera.	**Security**	Show the security status of the camera to be active/inactive or the password strength (strong/medium/weak/risk)

2.5.3 Editing the Connected IP Cameras

After the adding of the IP cameras, the basic information of the camera lists in the page, you can configure the basic setting of the IP cameras.

Steps:

1. Click the icon to edit the parameters; you can edit the IP address, protocol and other parameters.

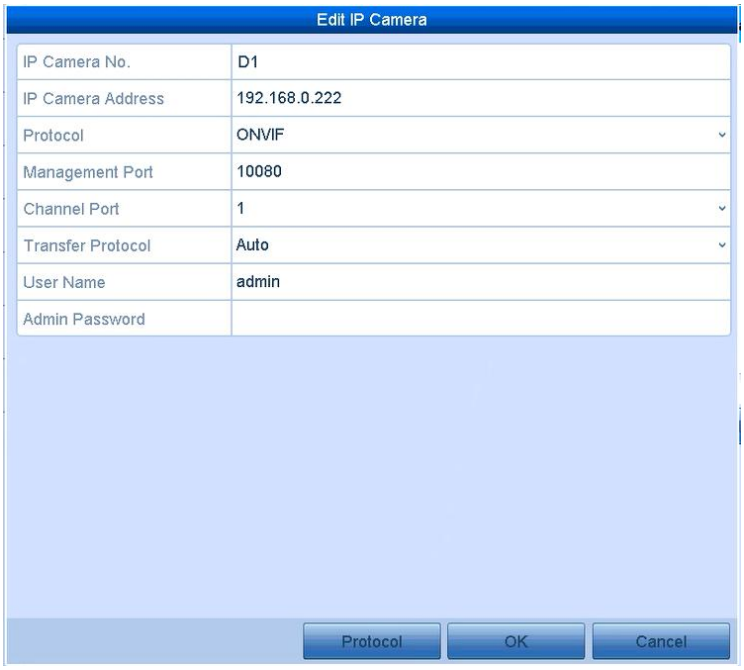


Figure 2. 19 Edit the Parameters

Channel Port: If the connected device is an encoding device with multiple channels, you can choose the channel to connect by selecting the channel port No. in the dropdown list.

2. Click **OK** to save the settings and exit the editing interface.

2.6 Configuring the Signal Input Channel

The F1/F2 series DVR supports the AHD video input. You must define each analog channel to TVI or AHD/CVBS signal input before connecting the camera. And the channel must be connected with the same video input type which you configure on the menu.

Steps:

1. Enter the signal input status interface.
   Menu > **Camera** > **Signal Input Status**
2. Check the checkbox to select different signal input types: TVI, or AHD/CVBS.

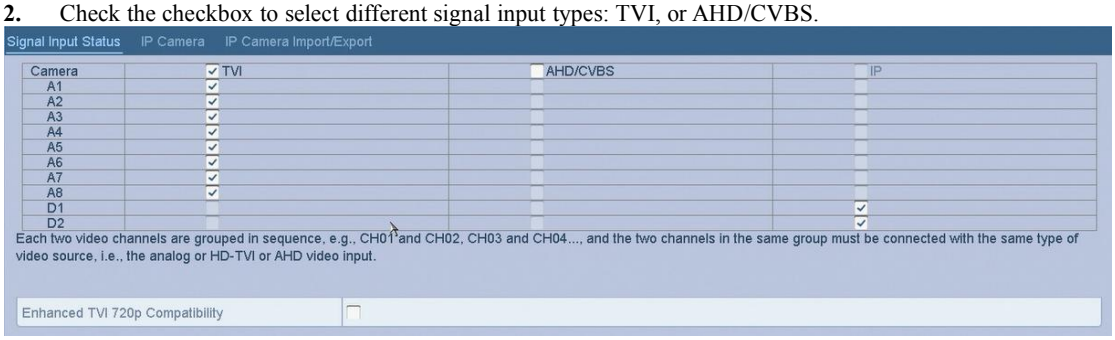


Figure 2. 20 Configure Signal Input Type

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 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.
- 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 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 *Chapter 8.6 Handling Exceptions.*)

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

Figure 3. 2 Right-click Menu

Table 3. 3 Mouse Operation in Live View

Name	Description
Menu	Enter the main menu of the system by right clicking the mouse.
	Switch to the single full screen by choosing channel number from the dropdown list.
	Adjust the screen layout by clicking the specific icon.
	Switch to the previous/next screen.
	Enable/disable the auto-switch of the screens.
	Start continuous recording or motion detection recording of all channels.
	Add IP camera manually.
	Enter the playback interface and start playing back the video of the selected channel immediately.
	Four modes of output supported, including Standard, Bright, Gentle and Vivid.
	Auto hide/ lock the live view toolbar.

NOTE

- The *dwell time* of the live view configuration must be set before using **Auto-switch**.
- If the corresponding camera supports intelligent function, the Reboot Intelligence option is included when right-clicking mouse on this camera.

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 point the mouse to the bottom of the screen.

Figure 3. 3 Quick Setting Toolbar

Table 3. 4 Description of Quick Setting Toolbar Icons

Icon	Description	Icon	Description	Icon	Description
	Enable/Disable Manual Record		Instant Playback		Mute/Audio on
	PTZ Control		Digital Zoom		Image Settings
	Live View Strategy		Close		

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.

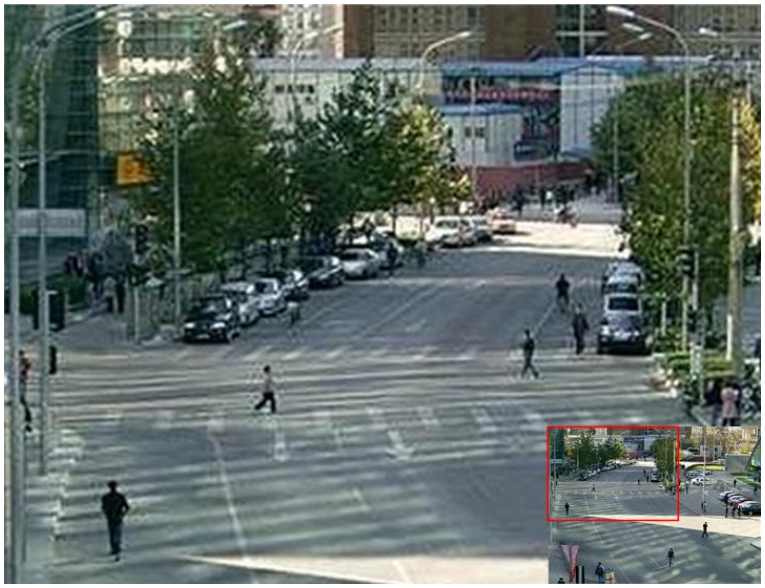


Figure 3. 4 Digital Zoom

Image Settings icon can be selected to enter the Image Settings menu.
Four modes are selectable according to the real situation:

- **Standard:** for general lighting conditions (default).
- **Indoor:** the image is relatively smoother.
- **Dim Light:** the image is smoother than the other two modes.
- **Outdoor:** the image is relatively clearer and sharper. The degree of contrast and saturation is high.

Figure 3. 5 Image Settings

You can adjust the image parameters, including brightness, contrast, saturation, hue, sharpness and denoising. You can also click **Default** to restore the default settings and click **Copy** to copy the image settings to other analog cameras.
Refer to the *Chapter 13.3 Configuring Video Parameters* for details.

3.3 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.
Steps:

1. Enter the Live View Settings interface.
   Menu> Configuration> Live View

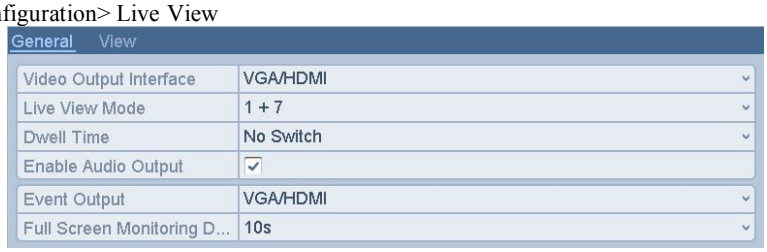
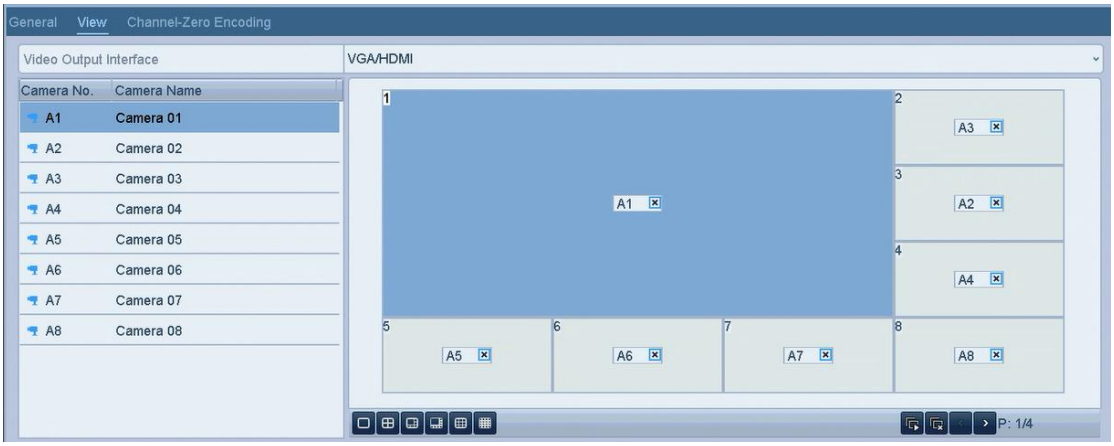


Figure 3. 6 Live View-General

The settings available in this menu include:

- **Video Output Interface:** Selects the output to configure the settings for.
- **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; if available, you can select a different video output interface from the Video Output Interface when an event occurs.
- **Full Screen Monitoring Dwell Time:** The time in seconds to show alarm event screen.

2. Set the camera order.



1) Select **View** tab.

Figure 3. 7 Live View- Camera Order

2) Select a **View** mode in .
3) Select the small window, and double-click on the channel number to display the channel on the window.
   If you do not want the camera to be displayed on the live view interface, click the corresponding to stop it.
   You can also click button to start live view for all the channels and click to stop all the live view.
4) Click the **Apply** button to save the setting.

3.4 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.
Steps:

1. Enter the Manual Video Quality Diagnostics interface.
   Menu> Manual >Manual Video Quality Diagnostics

Figure 3. 8 Video Quality Diagnostics

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

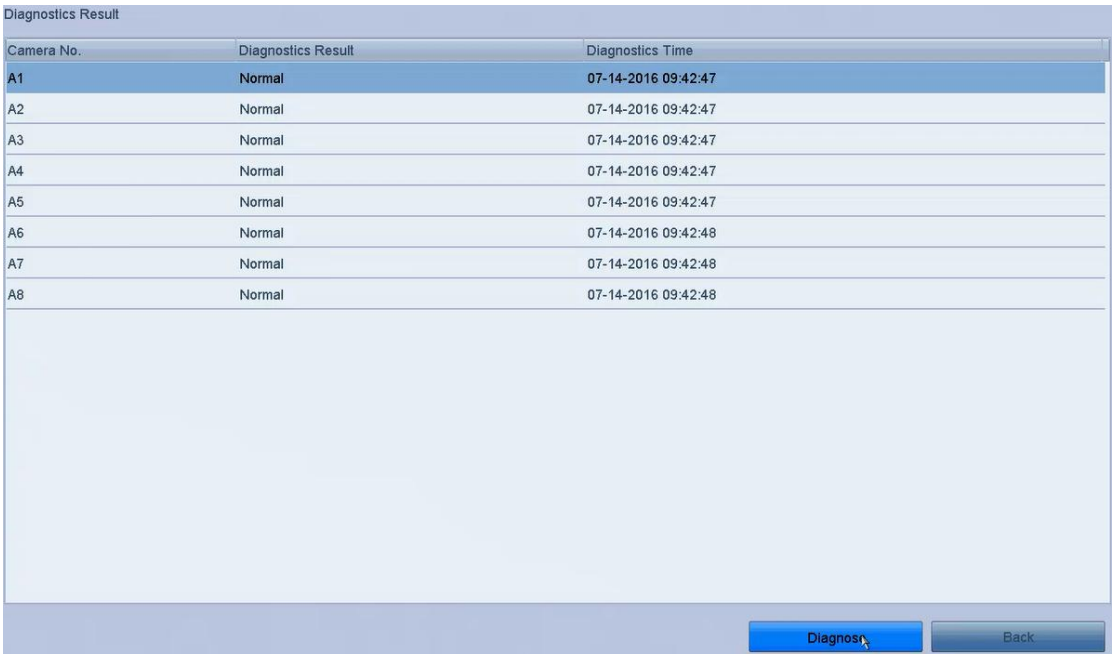


Figure 3. 9 Diagnostics Result

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.

Steps:

1. Enter the PTZ Settings interface.
   Menu > Camera > PTZ

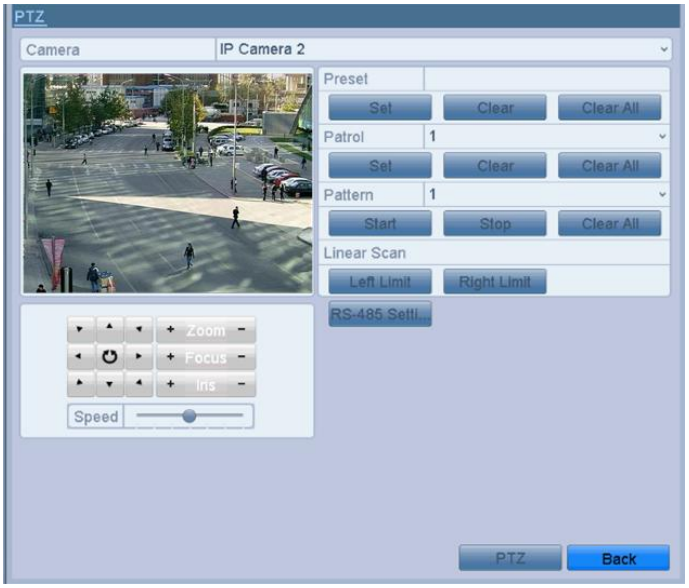


Figure 4. 1 PTZ Settings

2. Click the RS-485 Settings button to set the RS-485 parameters.

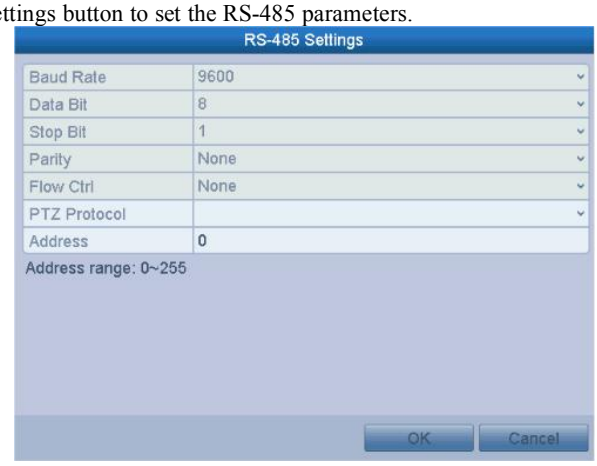


Figure 4. 2 PTZ- General

3. Choose the camera for PTZ setting in the **Camera** dropdown list.
4. Enter the parameters of the PTZ camera.

NOTE

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

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

4.2 Setting PTZ Presets, Patrols & 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.

Steps:

1. Enter the PTZ Control interface.
   Menu > Camera > PTZ

Figure 4. 3 PTZ Settings

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.
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 steps2-3 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.

Steps:

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.

2. Choose C**amera** in the dropdown list.
3. Click the button to show the general settings of the PTZ control.

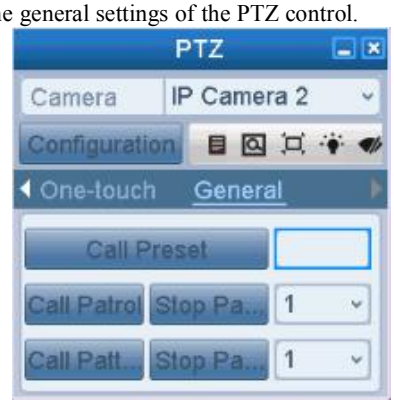


Figure 4. 4 PTZ Panel - General

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

Steps:

1. Enter the PTZ Control interface.
   Menu > Camera > PTZ

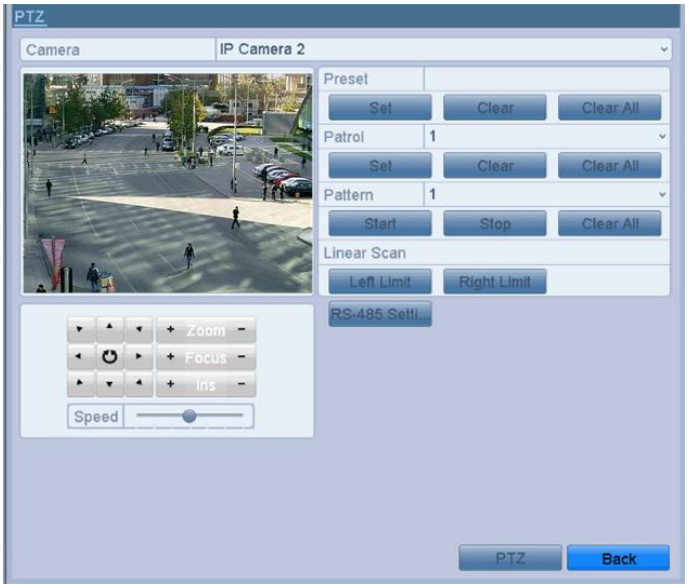


Figure 4. 5 PTZ Settings

2. Select patrol No. in the drop-down list of patrol.
3. Click the **Set** button to add key points for the patrol.

Figure 4. 6 Key point Configuration

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.
5. Click the **Add** button to add the next key point to the patrol, and 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.
Steps:

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.
2. Click the button to show the general settings of the PTZ control.

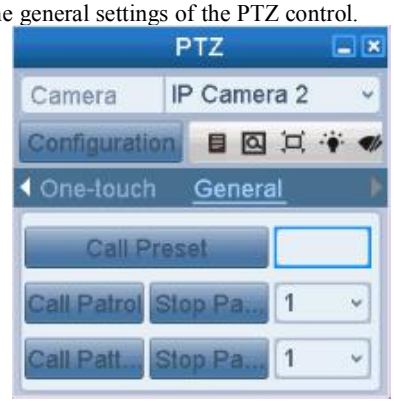


Figure 4. 7 PTZ Panel - General

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

1. Enter the PTZ Control interface.
   Menu > Camera > PTZ

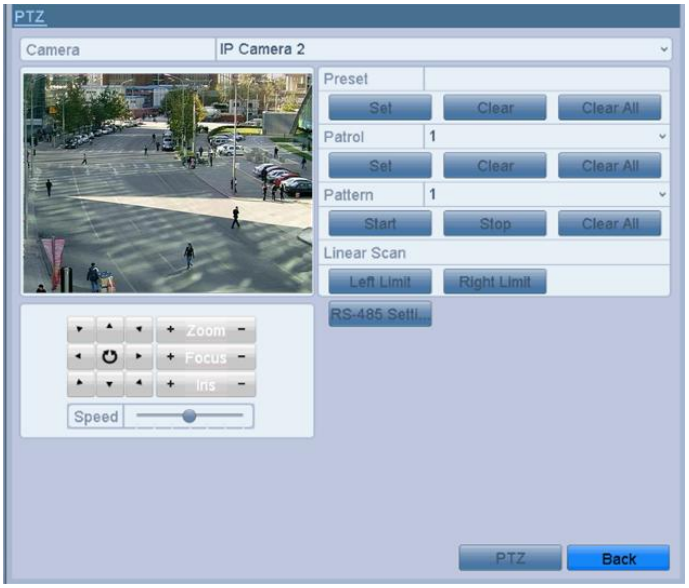


Figure 4. 8 PTZ Settings

2. Choose pattern number in the dropdown list.
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.

Steps:

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.
2. Click the button to show the general settings of the PTZ control.

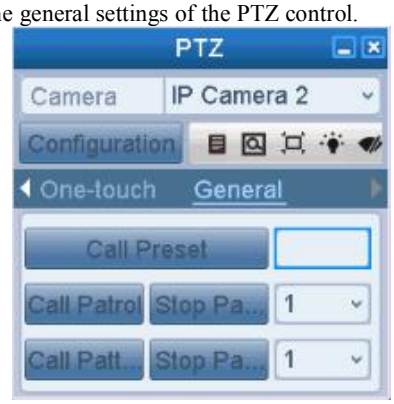


Figure 4. 9 PTZ Panel - General

3. Click the **Call Pattern** button to call it.
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 horizantal direction in the predefined range.

NOTE

This function is supported by some certain models.

Steps:

1. Enter the PTZ Control interface.
   Menu > Camera > PTZ

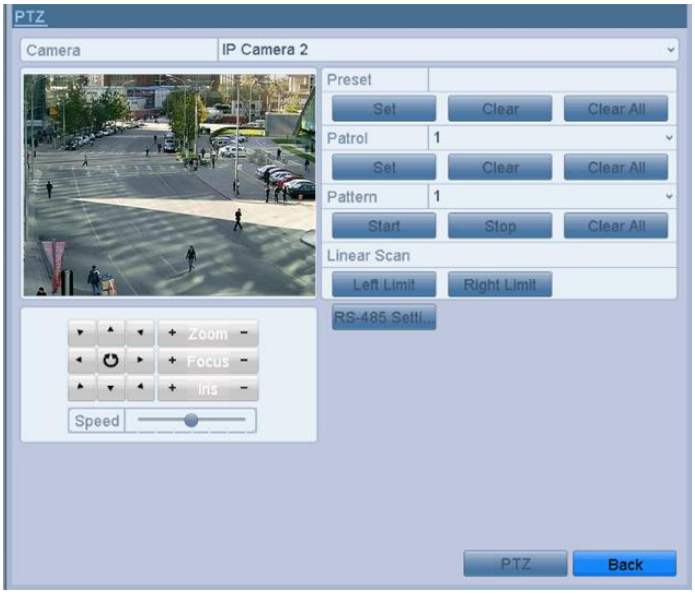


Figure 4. 10 PTZ Settings

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 180º.

4.2.8 Calling Linear Scan

Purpose:

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

Steps:

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 to enter the PTZ setting menu in live view mode.
2. Click the button to show the one-touch function of the PTZ control.

Figure 4. 11 PTZ Panel - One-touch

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).

Steps:

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 to enter the PTZ setting menu in live view mode.
2. Click the button to show the one-touch function of the PTZ control.

Figure 4. 12 PTZ Panel - One-touch

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 move 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, by default the value is 5s.
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 , or select the PTZ 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. 13 PTZ Panel

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
PTZ Control	Switch to the PTZ control interface	One-touch	Switch to the one-touch control interface	General	Switch to the general settings interface
	Previous item		Next item		Exit
	Minimize windows				

Chapter 5 Recording Settings

5.1 Configuring Encoding Parameters

Before you start:

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

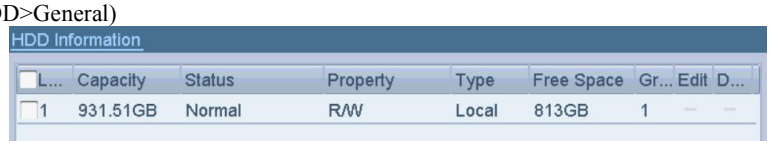


Figure 5. 1 HDD- General

2. Click **Advanced** to check the storage mode of the HDD.
   1) Whether the HDD mode is *Quota*, please set the maximum record capacity. For detailed information, see *Chapter 12.4 Configuring Quota Mode*.
   2) If the HDD mode is *Group*, you should set the HDD group. For detailed information, see *Chapter 5.9 Configuring HDD Group for Recording*.

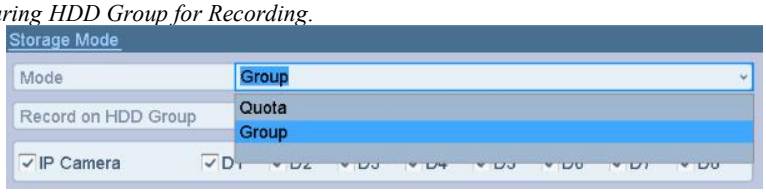


Figure 5. 2 HDD- Advanced

Steps:

1. Enter the Record settings interface to configure the encoding parameters:
   Menu>Record>Parameters

Figure 5. 3 Record Parameters

2. Set the parameters for recording.
   1) Select the **Record** tab to configure.

2) Select a camera number in 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 at resolution.
Bitrate Type: Set the bitrate type to be Variable or Constant.
Video Quality: Set the video quality of recording, with 6 levels configurable.

NOTE

The Stream Type, Resolution, Bitrate Type and Video Quality are not configurable for the Main Stream (Event) of the IP Camera.

Frame Rate: Set the frame rate of recording.
Max. Bitrate Mode: Set the mode to General or Customize (32-3072Kbps).
Max Bitrate (Kbps): Select or customize the maximum bit rate for recording.
Max. Bitrate Range Recommended: A recommended max. bitrate range is provided for reference.
Max. Average Bitrate (Kbps): Set the max. average bitrate which refers to the average amount of data transferred per unit of time.

NOTE

- The resolution of 960*1080 (1080P Lite) is avaiable when the 1080P Lite is enabled in the Record>Advanced settings interface (refer to Chapter5.11 Configuring 1080P Lite).
- Please refer to the *Appendix-Specifications* for the supported resolutions of different models.

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.

NOTE

- After enabling the H.264+, the **Max. Bitrate Mode**, **Max. Bitrate(Kbps)** and **Max. Bitrate Range Recommend** are not configurable.
- The H.264+ can not be used with the SVC at the same time.
- For the connnected IP camera, the H.264+ should be supported by the camera and added to the DVR with the HIKVISION protocol.
- You should reboot the device to activate the new settings after enabling the H.264+.

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

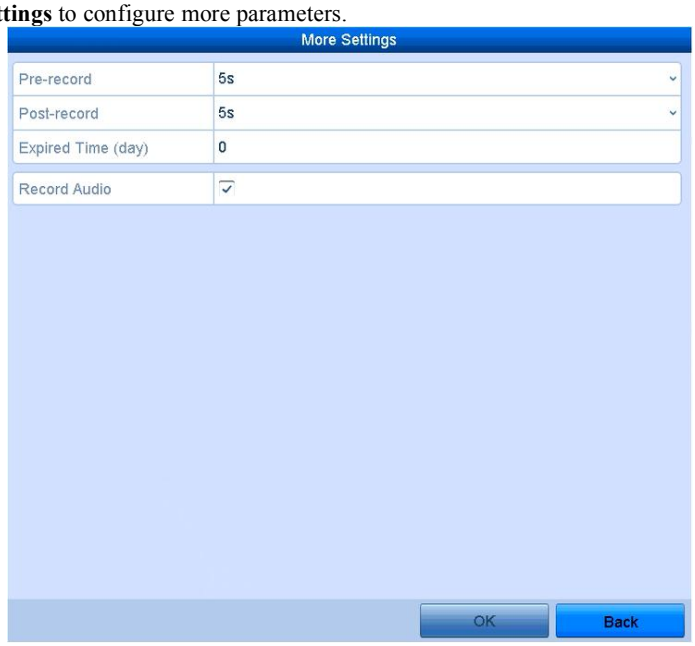


Figure 5. 4 More Settings of Record Parameters

- **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 5.8 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 and sub-stream are selectable for recording. When you select sub-stream, you can record for a longer time with the same storage space.
- **Enable 960 Mode:** The option is supported by analog cameras. Enabling the 960 mode to enable the WD1 resolution for the main stream, otherwise, the resolution supports up to 4CIF. And the option does not supported by TVI cameras, while the WD1 resolution is available all the time.

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 11.4.2 Setting HDD Property*.
- For network cameras, the parameters of Main Stream (Event) are not editable.

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

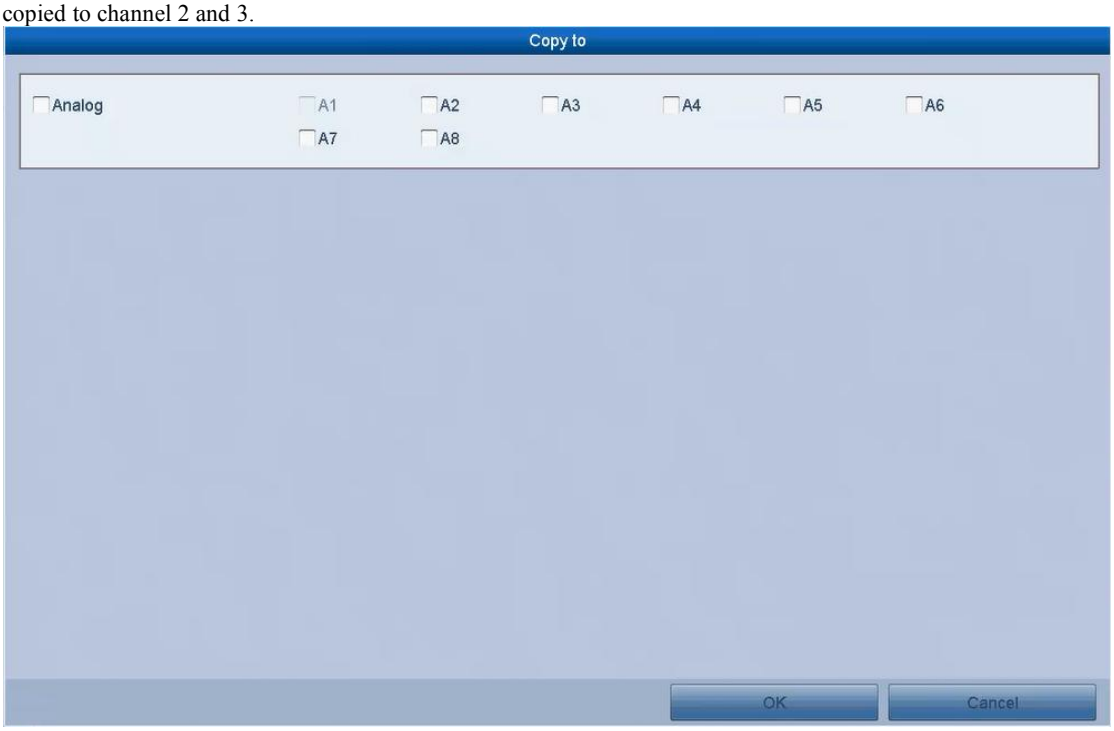


Figure 5. 5 Copy Camera Settings

7. Set encoding parameters for sub-stream.
   1) Select the **Substream** tab.

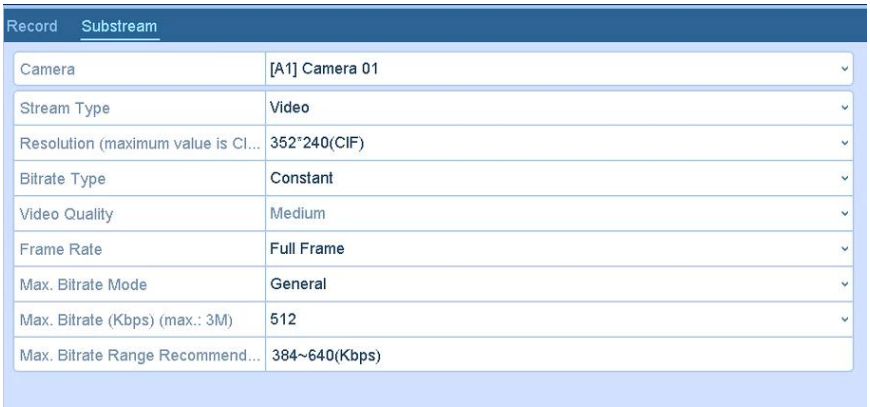


Figure 5. 6 Sub-stream Encoding

2) Select a camera in the camera dropdown list.
3) Configure the parameters.
4) Click **Apply** to save the settings.
5) (Optional) If the parameters can also be used to other cameras, click **Copy** to copy the settings to other channels.

5.2 Configuring Recording Schedule

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

1. Enter the Record Schedule interface.
   Menu> Record> Schedule

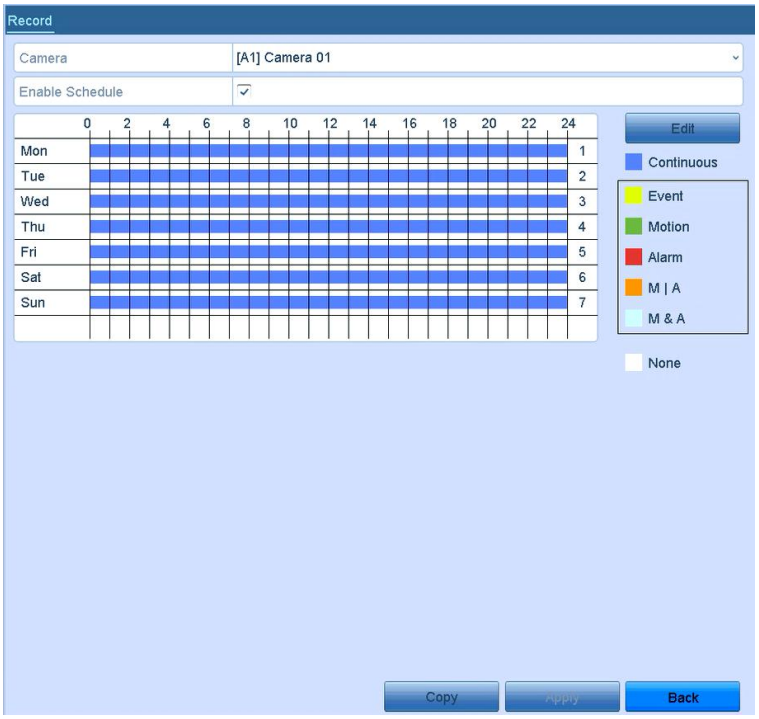


Figure 5. 7 Record Schedule

Different recording types are marked in different color icons.
Continous: 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.

2. Choose the camera you want to configure in the Camera dropdown list.
3. Check the checkbox of **Enable Schedule**.
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.

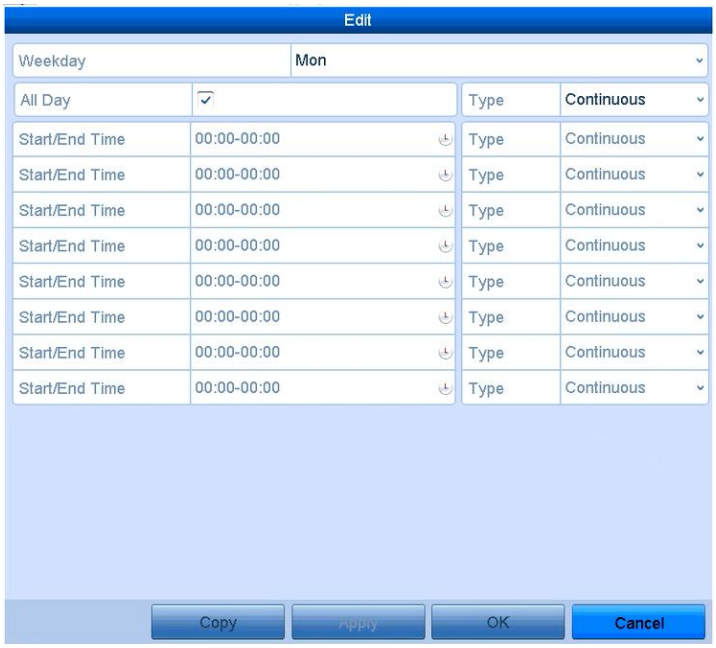


Figure 5. 8 Edit Schedule- All Day

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

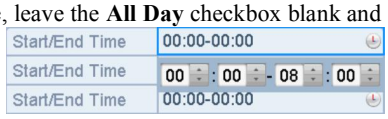


Figure 5. 9 Edit Schedule- Set Time Period

NOTE

Up to 8 periods can be configured for each day. And the time periods cannot be overlapped with each other.

NOTE

- To enable Event, Motion, Alarm, M | A (motion or alarm) and M & A (motion and alarm) triggered recording, you must configure the motion detection settings, alarm input settings or VCA settings as well. For detailed information, refer to *Chapter 8.1, Chapter 8.8 and Chapter 9.*
- 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**.

NOTE

The **Holiday** option is available when you enable holiday schedule in **Holiday settings**. See C*hapter 5.7 Configuring Holiday Record.*

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.

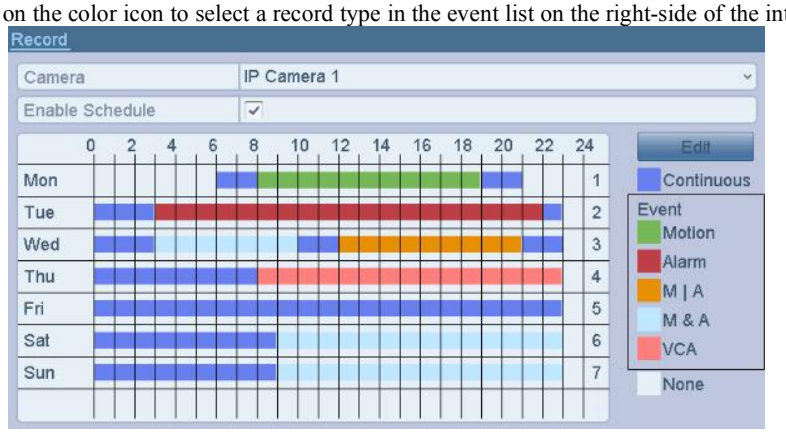


Figure 5. 10 Draw the Schedule

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

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.

Steps:

1. Enter the Motion Detection interface.
   Menu>Camera>Motion
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**.

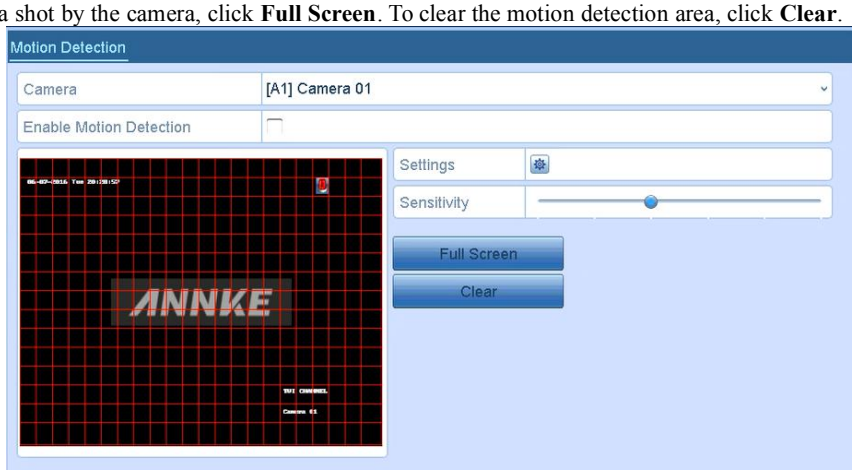


Figure 5. 11 Motion Detection- Mask

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

Figure 5. 12 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.

3. Configure the schedule.
   Please refer to the step 4 of *Chapter 5.2 Configuring Recording* Schedule, while you may choose Motion as the record type.

5.4 Configuring Event Recording

Purpose:

The event triggered recording can be configured through the menu. Then events include the motion detection, alarm and VCA events (face detection/face capture, line crossing detection, intrusion detection, region entrance detection, region exiting detection, loitering detection, people gathering detection, fast moving detection, parking detection, unattended baggage detection, object removal detection, audio loss exception detection, sudden change of sound intensity detection, and defocus detection).

NOTE

- Only one analog camera supports the VCA settings and VCA alarm of line crossing detection, intrusion detection, sudden scene change detection and audio exception detection.

Steps:

1. Enter the VCA settings interface and select a camera for the VCA settings.
   Menu > Camera > VCA

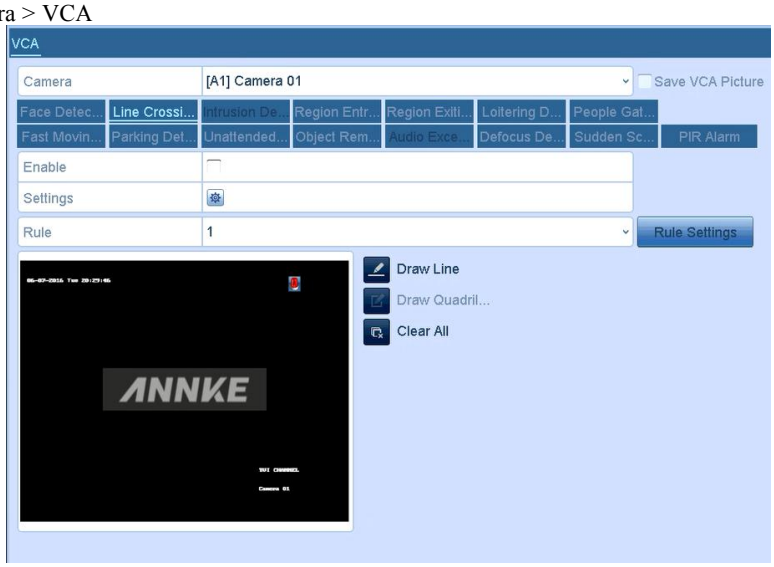


Figure 5. 13 VCA Settings

2. Configure the detection rules for VCA events. For details, see the step 2 in *Chapter 8.5 Detecting VCA Alarm*.
3. Click the icon to configure the alarm linkage actions for the VCA events.
   Select **Trigger Channel** tab and select one or more channels which will start to record when VCA alarm is triggered.
4. Click **Apply** to save the settings

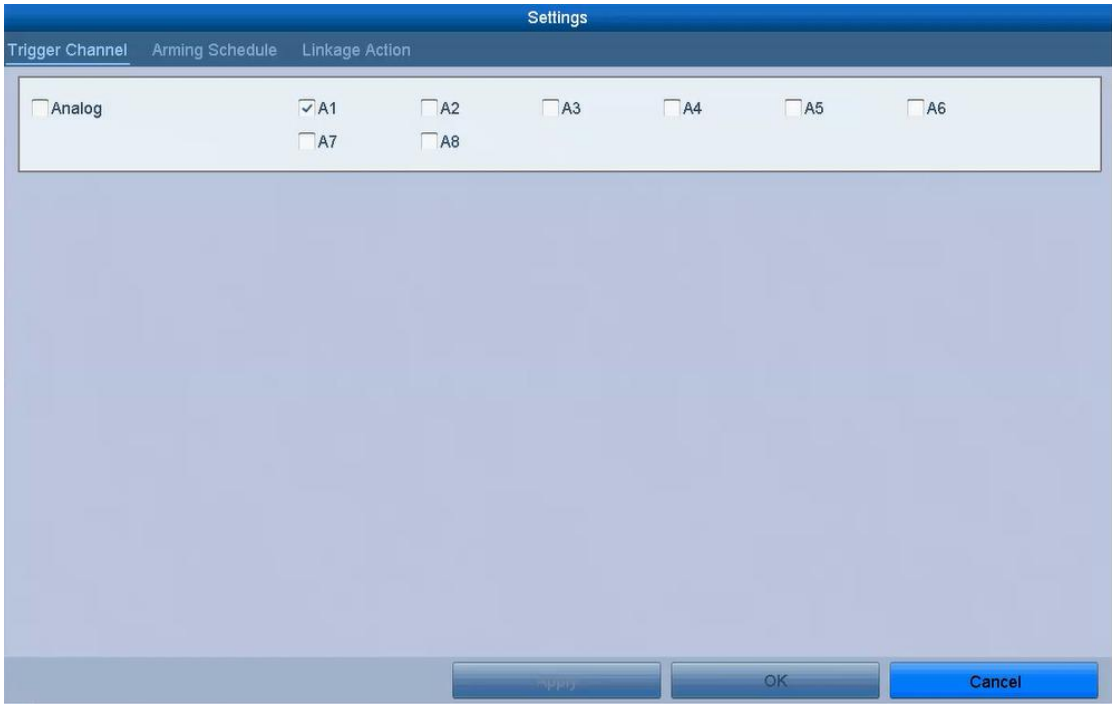


Figure 5. 14 Set Trigger Camera of VCA Alarm

NOTE

The PTZ Linking function is only available for the VCA settings of IP cameras.

5. Enter Record Schedule settings interface (Menu> Record> Schedule>Record Schedule), and then set Event as the record type. For details, see step 2 in *Chapter 5.2 Configuring Record Schedule.*

5.5 Configuring Manual Recording

Purpose:

Follow the steps to set parameters for the manual record. Using manual record, you don't need to set a schedule for recording.

Steps:

1. Enter the Manual settings interface.
   Menu> Manual

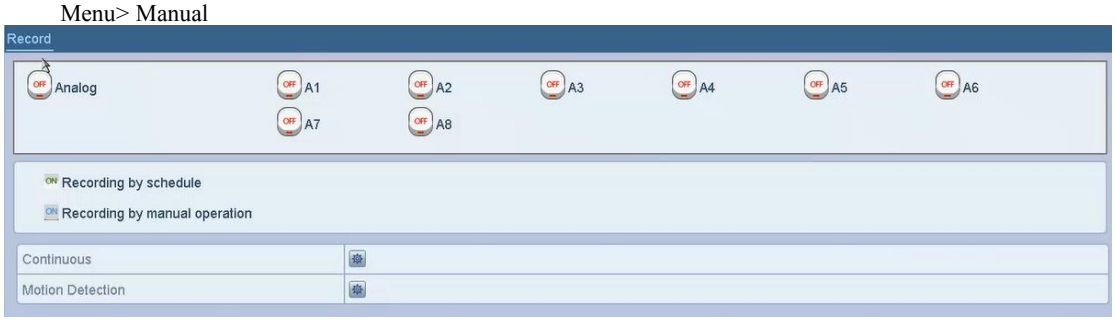


Figure 5. 15 Manual Record

2. Enable the Manual Record.
   1) Select **Record** on the left bar.
   2) Click the status button before camera number to change to .
3. Disable manual record.
   Click the status button to change to .

NOTE

Green icon means that the channel is configured the record schedule. After rebooting, all the

manual records enabled will be 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.
Steps:

1. Enter the Record setting interface.
   Menu>Record
2. Choose **Holiday** on the left bar.

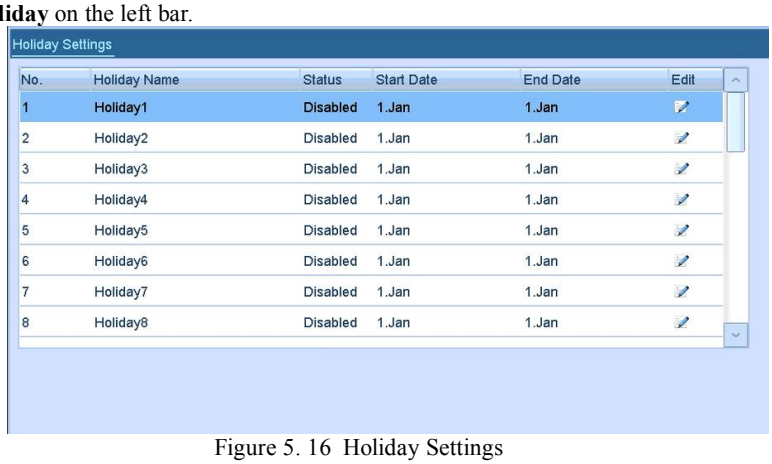


Figure 5. 16 Holiday Settings

3. Enable Edit Holiday schedule.
   1) Click to enter the Edit interface.

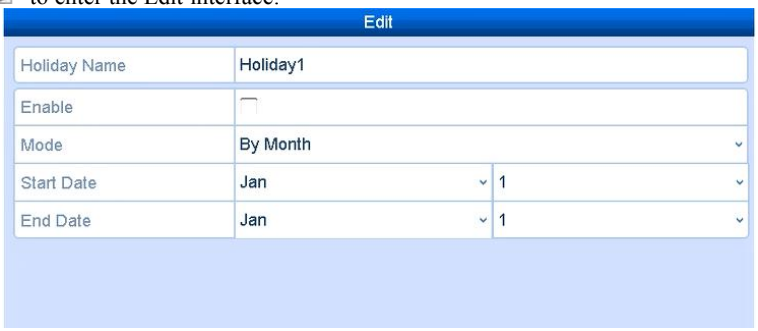


Figure 5. 17 Edit Holiday Settings

   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.
4. Configure the record schedule.
   Please refer to the *Chapter 5.2 Configuring Record Schedule*, while you may choose Holiday in the Schedule dropdown list, or you can draw the schedule on the timeline of Holiday.

Figure 5. 18 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 channel. 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 HDD Group

Purpose:

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

Steps:

1. Enter HDD setting interface.
   Menu>HDD>Advanced
2. Select **Advanced** on the left bar.
   Check whether the storage mode of the HDD is Group. If not, set it to Group. For detailed information, please refer to *Chapter 12.3 Managing HDD Group*.
3. Select **General** in the left bar.
   Click to enter editing interface.
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.

   Repeat the above steps to configure more HDD groups.
5. Choose the Channels which you want to save the record files in the HDD group.
   1) Select **Advanced** on the left bar.

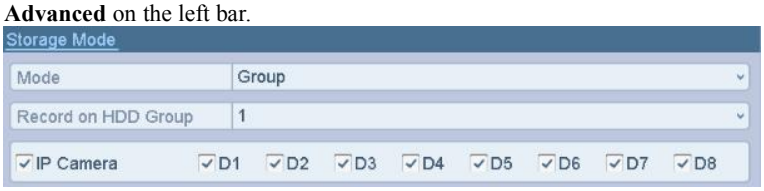


Figure 5. 19 HDD Advanced

   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*.

5.8 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

Steps:

1. Enter Playback setting interface.
   Menu> Export

Figure 5. 20 Export

2. Select the channels you want to investigate by checking the checkbox to .
3. Configure the record type, file type, start time and end time.
4. Click **Search** to show the results.

Figure 5. 21 Export-Search Result

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 12.3 Managing HDD Group.*

Steps:

1. Enter HDD setting interface.
   Menu> HDD

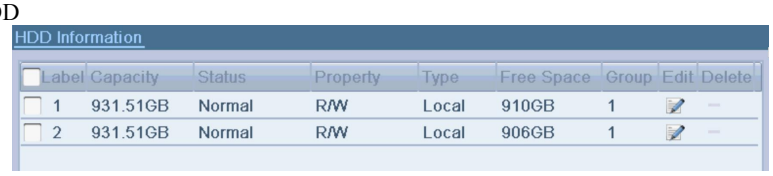


Figure 5. 22 HDD General

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

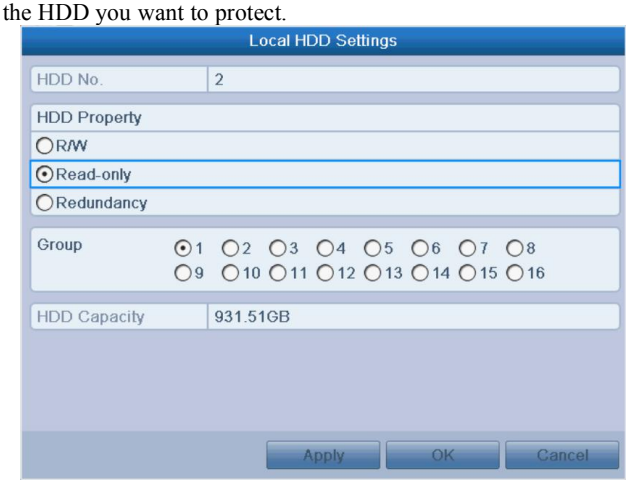


Figure 5. 23 HDD General- Editing

3. Set the HDD to Read-only.
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.

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

Steps:

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:

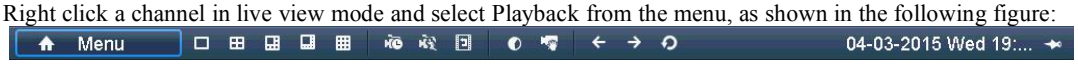


Figure 6. 2 Right-click Menu under Live View

Playback by Time

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

1. Enter playback interface.
   Menu>Playback
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 9. Otherwise it is displayed as 9

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.

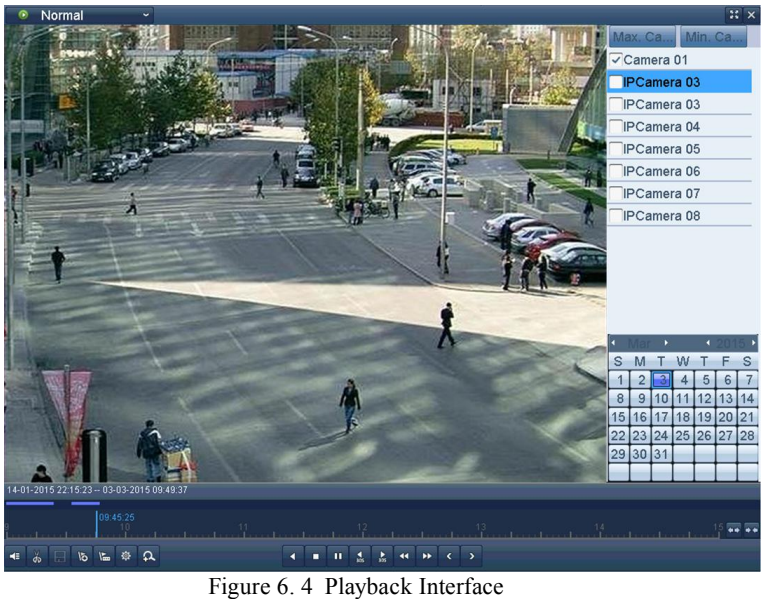


Figure 6. 4 Playback Interface

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

Toolbar of Playback

Table 6. 1 Detailed Explanation of Playback Toolbar

Button	Operation	Button	Operation	Button	Operation
	Audio on/ Mute		Start/Stop clipping		30s forward
	30s reverse		Add default tag		Add customized tag
	Tag management		Speed down		Pause reverse play/ Reverse play/ Single-frame reverse play
	Pause play/ Play/ Single-frame play		Scaling up/down the time line		Speed up
	Previous day		Next day		Full Screen
	Exit		Stop		Digital Zoom
	Save the clips		Process bar	Normal	Video type

NOTE

- The 14-01-2015 22:15:23 -- 03-03-2015 09:49:37 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.

Steps:

1. Enter the playback interface.
   Menu>Playback
2. Click Normal and select Event to enter the Event Playback interface.
3. Select **Alarm Input**, **Motion**, **Line Crossing Detection**, **Intrusion Detection** as the event type, and specify the start time and end time for search.

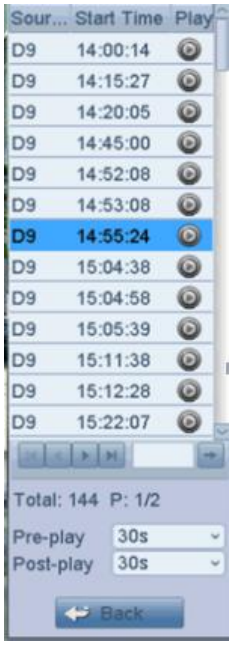


Figure 6. 5 Video Search by Motion Detection

4. Click **Search**, and the record files matching the search conditions will be displayed on a list.
5. Select and click button to play back the record files.
   You can click **Back** 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 synch 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.

6. 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.

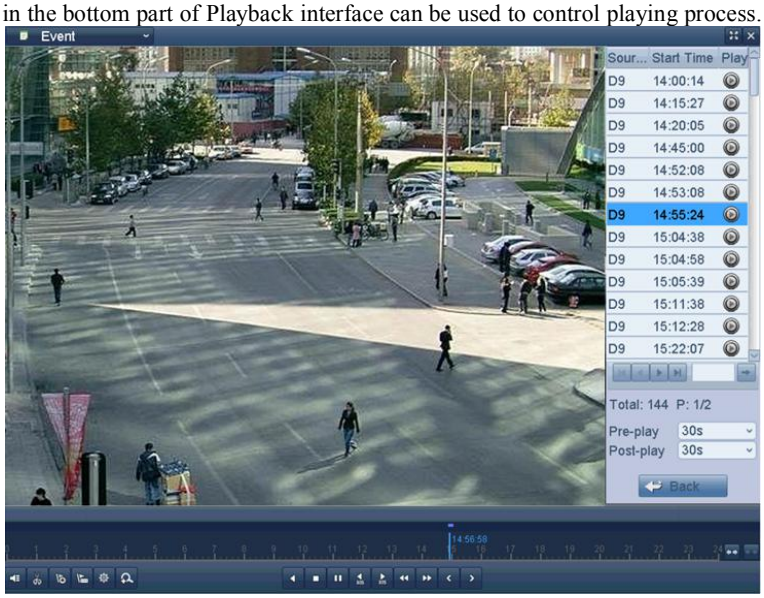


Figure 6. 6 Interface of Playback by Event

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.

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:

1. Enter Playback interface.
   Menu>Playback
2. Search and play back the record file(s). Refer to *Chapter 6.1.2 Playing Back by Channel* for the detailed information about searching and playback of the record files.

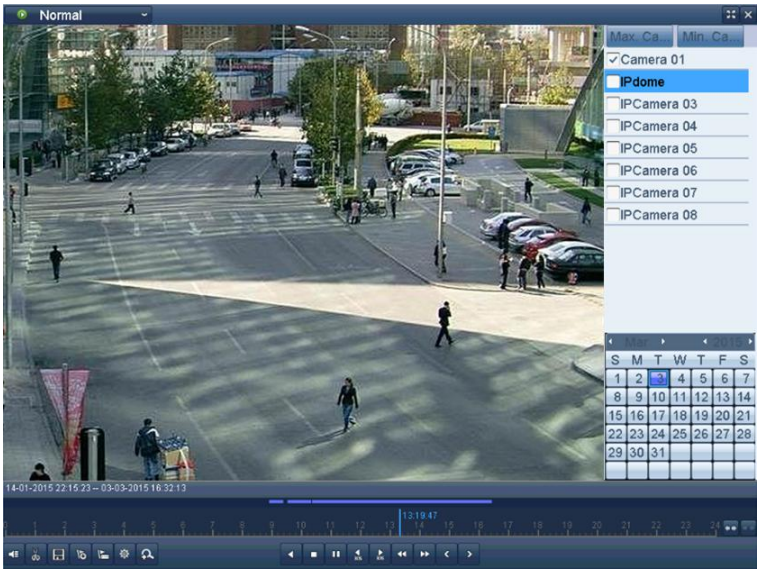


Figure 6. 7 Interface of Playback by Time

Click button to add default tag.

Click button to add customized tag and input tag name.

NOTE

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

3. Tag management.

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

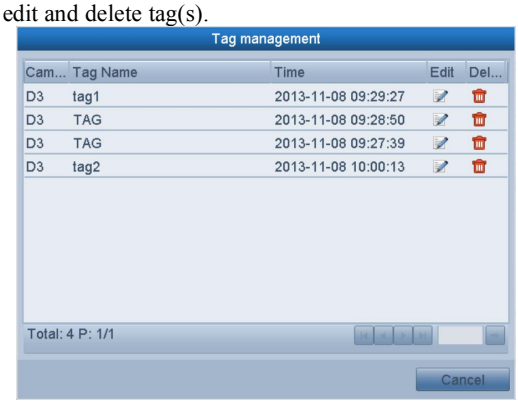


Figure 6. 8 Tag Management Interface

Steps:

1. Select the **Tag** from the drop-down list in the Playback interface.
2. 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.

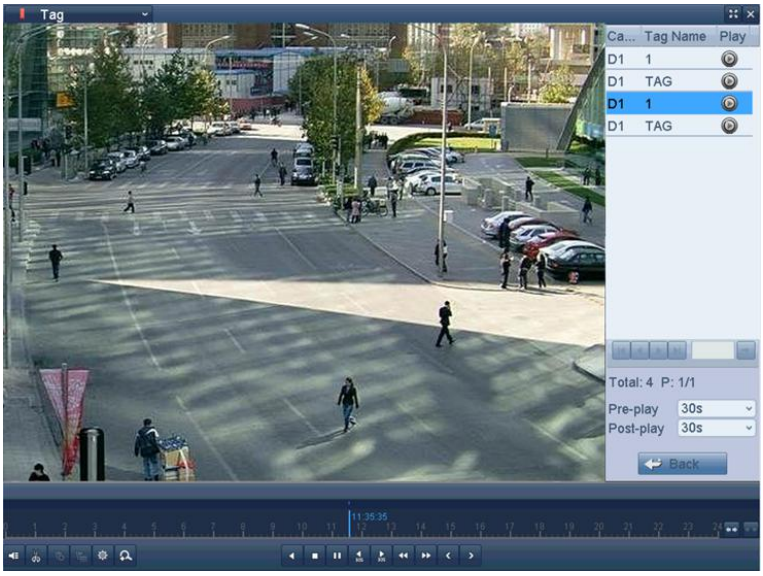


Figure 6. 9 Video Search by Tag

3. Click button to play back the file.
   You can click the **Back** button to back 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 Smart Search

Purpose:

The smart playback function provides an easy way to get through the less effective information. When you select the smart playback mode, the system will analyze the video containing the motion or VCA information, mark it with green color and play it in the normal speed while the video without motion will be played in the 16-time speed. The smart playback rules and areas are configurable.

Before you start:

To get the smart search result, the corresponding event type must be enabled and configured on the IP camera. Here we take the intrusion detection as an example.

1. Log in the IP camera by the web browser, and enable the intrusion detection by checking the checkbox of it.
   You may enter the motion detection configuration interface by Configuration > Advanced Configuration > Events > Intrusion Detection.

Figure 6. 10 Setting Intrusion Detection on IP Camera

2. Configure the required parameters of intrusion detection, including area, arming schedule and linkage methods. Refer to the user manual of smart IP camera for detailed instructions.

Steps:

1. Enter the Playback interface.
   Menu>Playback
2. Select the **Smart** in the drop-down list on the top-left side.
3. Select a camera in the camera list.

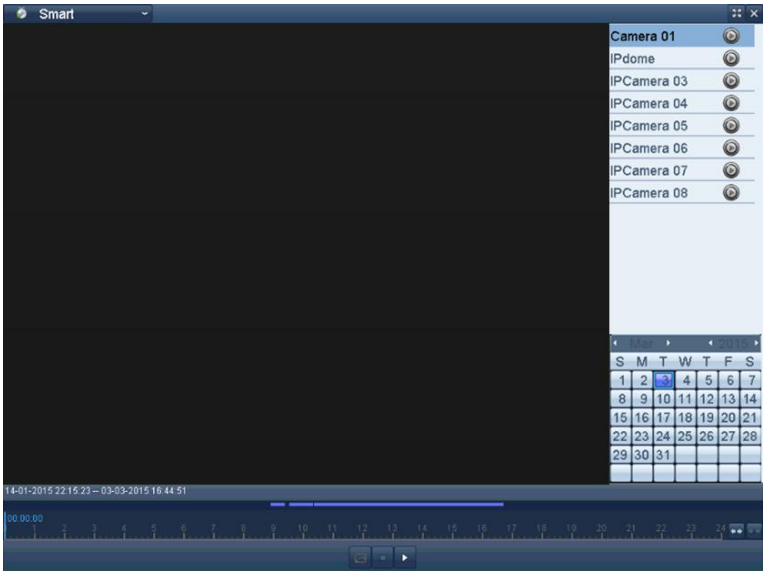


Figure 6. 11 Smart Playback Interface

4. Select a date in the calendar and click the button to play.

Table 6. 2 Detailed Explanation of Smart Playback Toolbar

Button	Operation	Button	Operation	Button	Operation
	Draw line for the line crossing detection		Draw quadrilateral for the intrusion detection		Draw rectangle for the intrusion detection
	Set full screen for motion detection		Clear all	/	Start/Stop clipping
	File management for video clips		Stop playing	/	Pause playing / Play
	Smart settings		Search matched video files		Filter video files by setting the target characters

1. Set the rules and areas for smart search of VCA event or motion event
   - **Line Crossing Detection**

   Select the button , and click on the image to specify the start point and end point of the line.
   - **Intrusion Detection**

   Click the button, and specify 4 points to set a quadrilateral region for intrusion detection. Only one region can be set.
   - **Motion Detection**

   Click the button and then click and draw the mouse to set the detection area manually. You can also click the button to set the full screen as the detection area.
2. Click to configure the smart settings.
   Skip the Non-Related Video: The non-related video will not be played if this function is enabled.
   Play Non-Related Video at: Set the speed to play the non-related video. Max./8/4/1 are selectable.
   Play Related Video at: Set the speed to play the related video. Max./8/4/1 are selectable.

   NOTE

   Pre-play and post-play is not available for the motion event type.
3. Click to search and play the matched video files.
4. (Optional) You can click to filter the searched video files by setting the target characters, including the gender and age of the human and whether he/she wears glasses.

6.1.6 Playing Back by System Logs

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

Steps:

1. Enter Log Information interface.
   Menu>Maintenance>Log Information

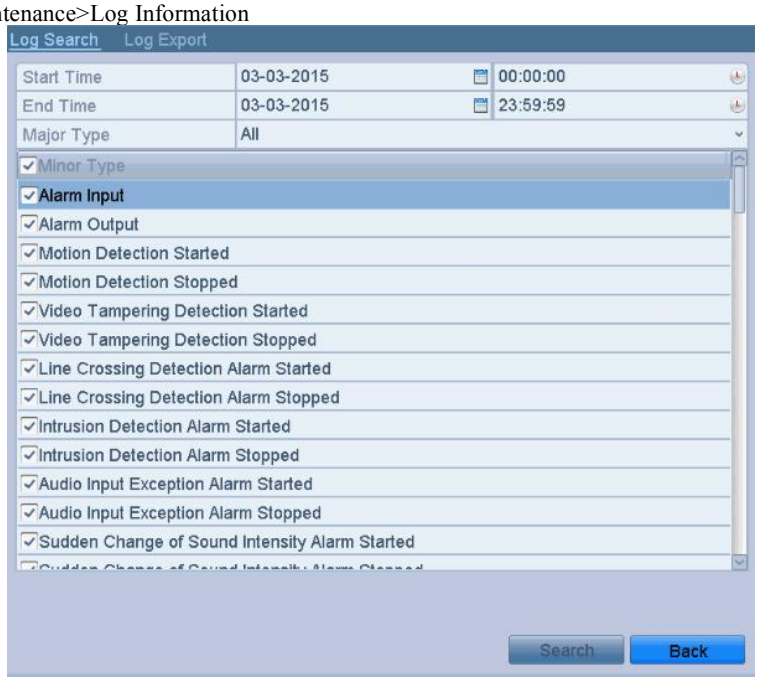


Figure 6. 12 System Log Search Interface

2. Click **Log Search** tab to enter Playback by System Logs.
   Set search time and type and click **Search** button.

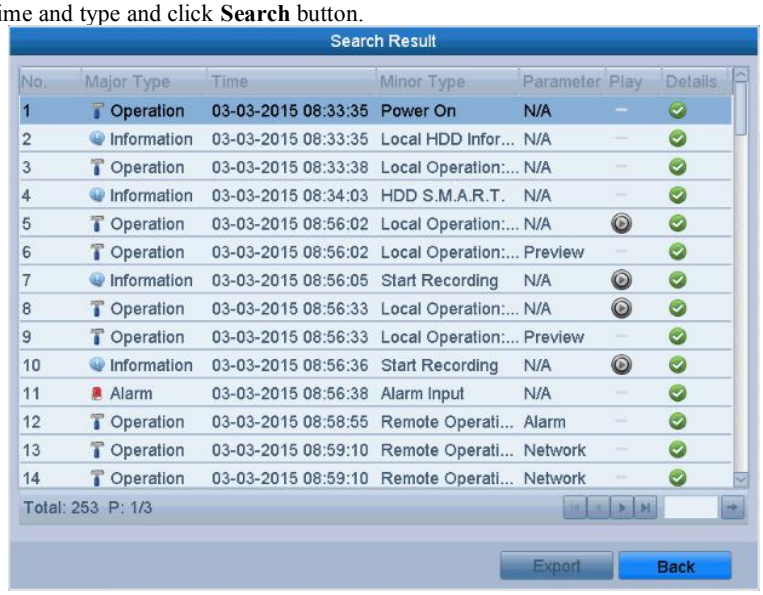


Figure 6. 13 Result of System Log Search

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

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

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

Figure 6. 14 Interface of Playback by Log

6.1.7 Playing Back by Sub-periods

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

1. Enter Playback interface.
   Menu>Playback
2. Select **Sub-periods** from the drop-down list in the upper-left corner of the page to enter the Sub-periods Playback interface.
3. Select a date and start playing the video file.
4. Select the Split-screen Number from the dropdown list. Up to 16 screens are configurable.

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.

6.1.8 Playing Back External File

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

1. Enter the Playback interface.
   Menu>Playback
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.
3. Select and click the button to play back it.

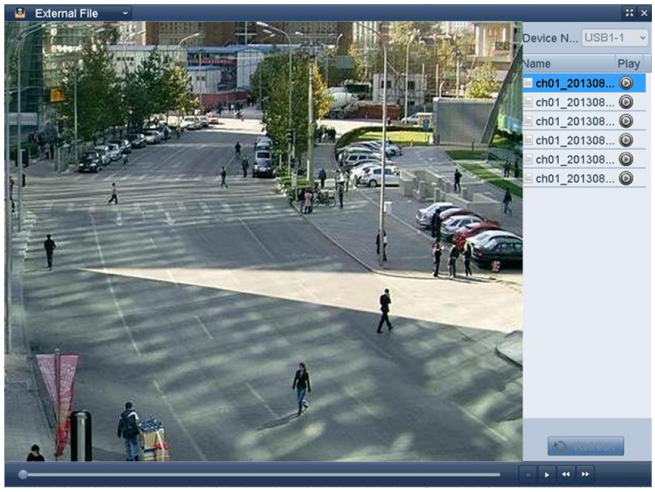


Figure 6. 15 Interface of External File Playback

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.

Steps:

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

Steps:

1. Click the button on the playback control bar to enter Digital Zoom interface.
2. Use the mouse to draw a red rectangle and the image within it will be enlarged up to 16 times.

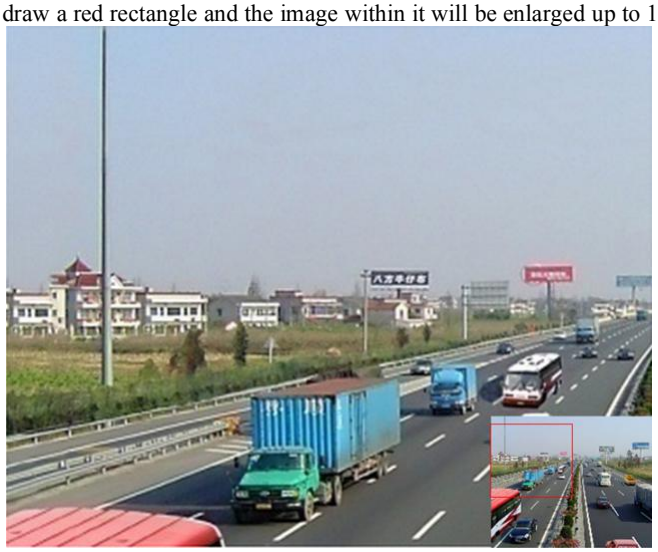


Figure 6. 16 Draw Area for Digital Zoom

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

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 backup 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
Steps:

1. Enter Export interface.
   Menu>Export>Normal
2. Select the cameras to search.
3. Set search condition and click **Search** button to enter the search result interface.

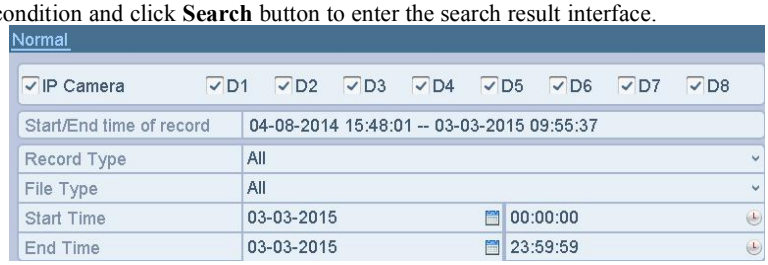


Figure 7. 1 Normal Video Search for Backup

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.

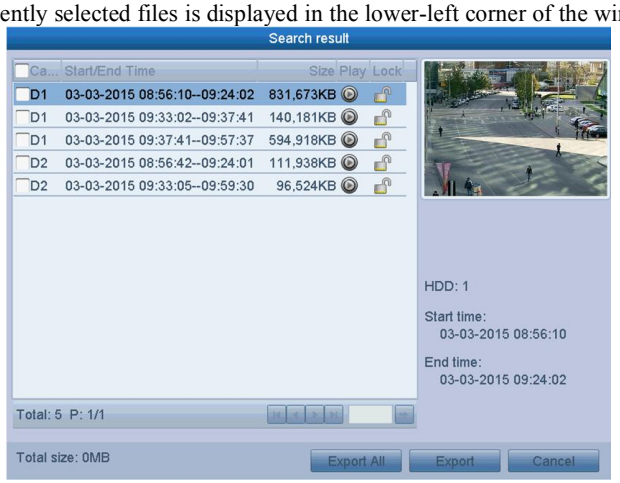


Figure 7. 2 Result of Normal Video Search for Backup

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

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.
7. Select the save type to MP4 or AVI
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.
9. A prompt message will pop up after the backup process is complete. Click **OK** to confirm.

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.

Steps:

1. Enter Export interface.
   Menu > Export > Event
2. Select the cameras to search.
3. Select the event type to alarm input, motion or VCA.

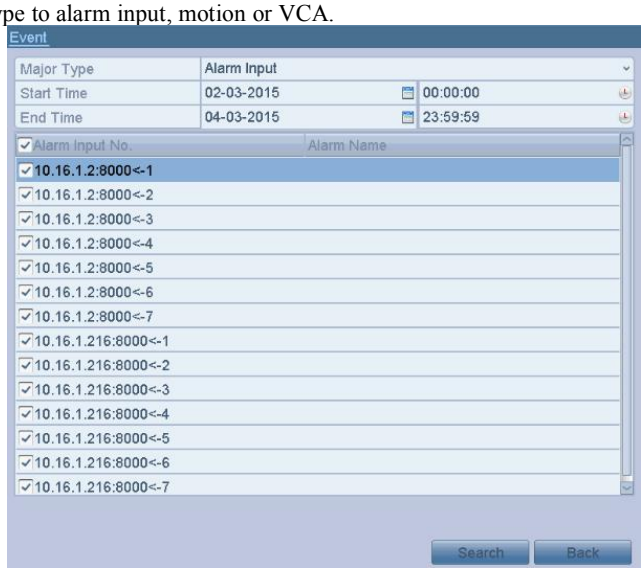


Figure 7. 4 Event Search for Backup

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.

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

7.2 Managing Backup Devices

Management of USB flash drives, USB HDDs and eSATA HDDs

Steps:

1. Enter the Export interface.

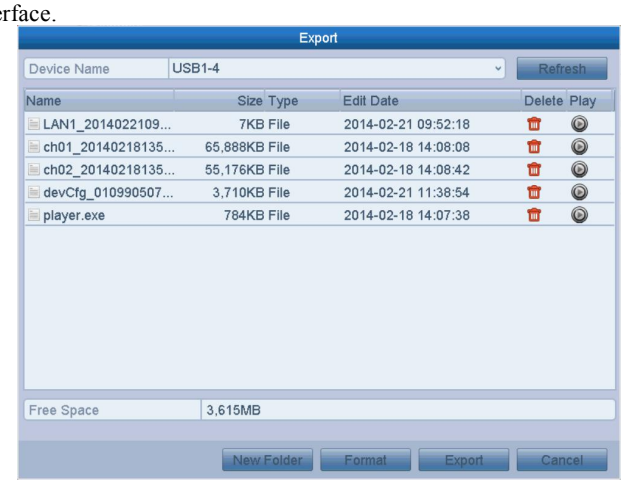


Figure 7. 5 Storage Device Management

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

Steps:

1. Enter Motion Detection interface of Camera Management and choose a camera you want to set up motion detection.
   Menu> Camera> Motion
2. Set detection area and sensitivity.
   Check ☑ checkbox to enable motion detection, use the mouse to draw detection area(s) and drag the sensitivity bar to set sensitivity.
   Click ⚙ to set alarm response actions.

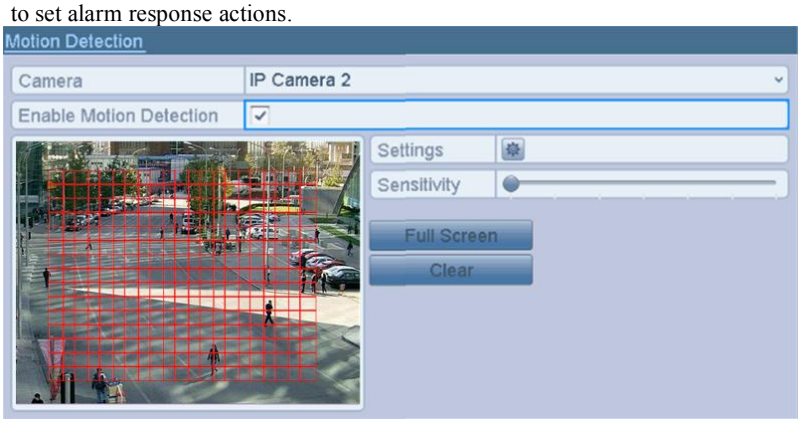


Figure 8. 1 Set Detection Area and Sensitivity

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.

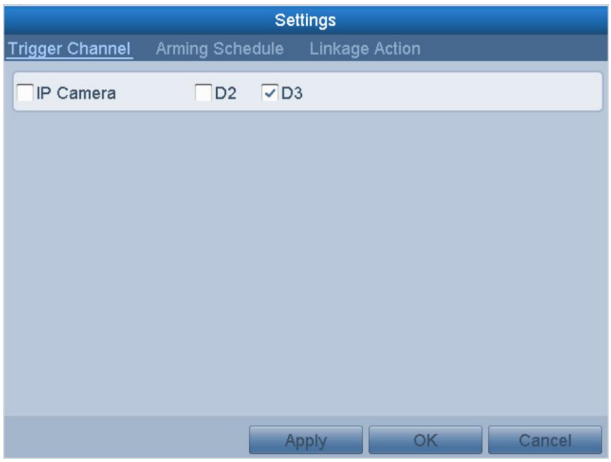


Figure 8. 2 Set Trigger Camera of Motion Detection

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.

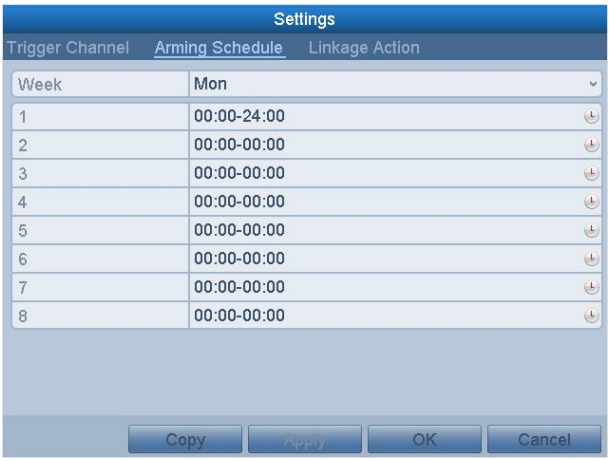


Figure 8. 3 Set Arming Schedule of Motion Detection

5. Click **Linkage Action** tab to set up alarm response actions of motion alarm (please refer to *Chapter 8.7 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.
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 Detecting Video Loss

Purpose:

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

Steps:

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

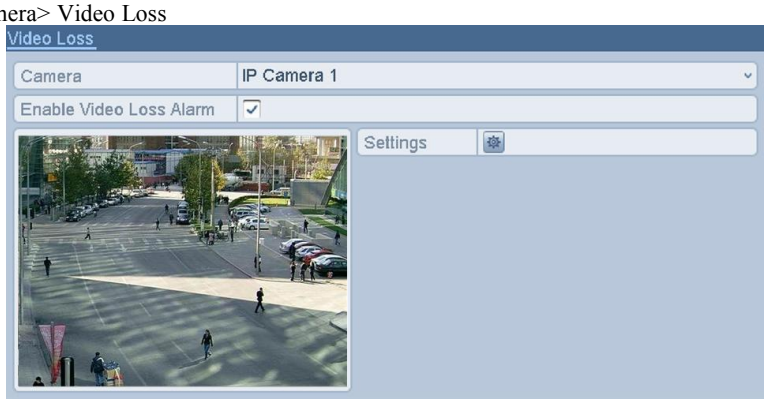


Figure 8. 4 Video Loss Setup Interface

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.
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.

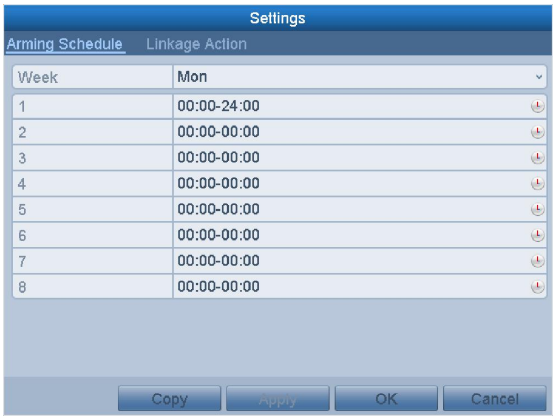


Figure 8. 5 Set Arming Schedule of Video Loss

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.

4. Select **Linkage Action** tab to set up alarm response action of video loss (please refer to *Chapter 8.7 Setting Alarm Response Actions*).
5. Click the **OK** button to complete the video loss 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.

8.3 Detecting Video Tampering

Purpose:

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

Steps:

1. Enter Video Tampering interface of Camera Management and select a channel you want to detect video tampering.
   Menu> Camera> Video Tampering Detection

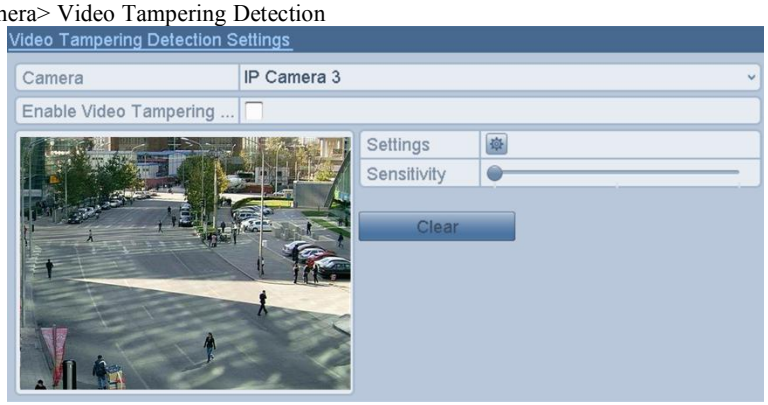


Figure 8. 6 Video Tempering Interface

2. Check the checkbox of "Enable Video Tampering".
3. Drag the sensitivity bar and choose a proper sensitivity level.
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.

Time periods shall not be repeated or overlapped.

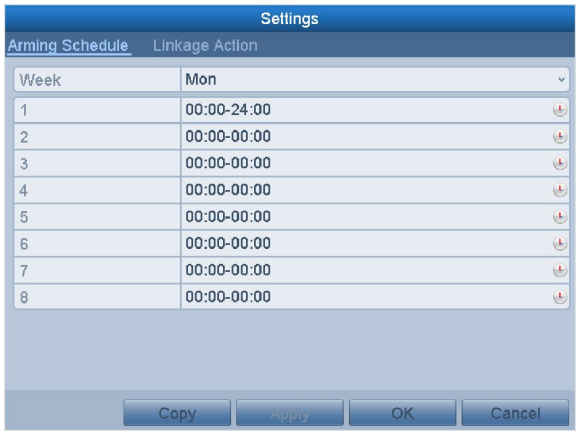


Figure 8. 7 Set Arming Schedule of Video Tampering

3) Select **Linkage Action** tab to set alarm response actions of video tampering alarm (please refer to *Chapter 8.7 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.

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

8.4 Handling Exceptions

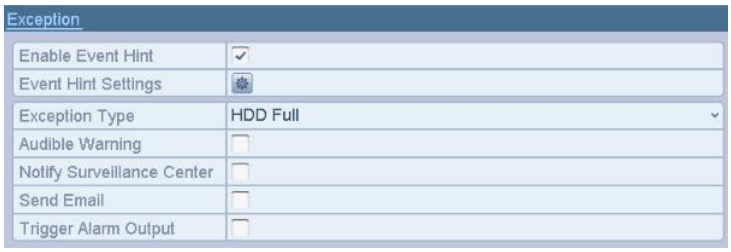
Purpose:

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.

Steps:

1. Enter Exceptions interface and handle various exceptions.
Menu> Configuration> Exceptions



Other Models

Figure 8. 8 Exception Settings Interface

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.

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.

3. Set the alarm linkage actions. For details, see *Chapter 8.7 Setting Alarm Response Actions*.
4. Click **Apply** to save the settings.

Chapter 9 VCA Alarm

Purpose:
The DVR can receive the VCA alarm (line crossing detection, intrusion detection, sudden scene change detection and audio exception detection) sent by analog camera, and the VCA detection must be enabled and configured on the camera settings interface first. All other VCA detection features must be supported by the connected IP camera.

- Only one analog camera supports the VCA settings and VCA alarm of line crossing detection, intrusion detection, sudden scene change detection and audio exception detection.

9.1 Line Crossing Detection

Purpose:
This function can be used for detecting people, vehicles and objects cross a set virtual line. The line crossing direction can be set as bidirectional, from left to right or from right to left. And you can set the duration for the alarm response actions, such as full screen monitoring, audible warning, etc.

Steps:
1. Enter the VCA settings interface.
   Menu> Camera> VCA
2. Select the camera to configure the VCA.
   You can click the checkbox of **Save VCA Picture** to save the captured pictures of VCA detection.
3. Select the VCA detection type to **Line Crossing Detection**.
4. Check the **Enable** checkbox to enable this function.
5. Click to configure the trigger channel, arming schedule and linkage actions for the line crossing detection alarm.
6. Click the **Rule Settings** button to set the line crossing detection rules.
   1) Select the direction to A<->B, A->B or A<-B.
      A<->B: Only the arrow on the B side shows; when an object going across the configured line with both direction can be detected and alarms are triggered.
      A->B: Only the object crossing the configured line from the A side to the B side can be detected.
      B->A: Only the object crossing the configured line from the B side to the A side can be detected.
   2) Click-and-drag the slider to set the detection sensitivity.
      Sensitivity: Range [1-100]. The higher the value is, the more easily the detection alarm can be triggered.
   3) Click-**OK** to save the rule settings and back to the line crossing detection settings interface.

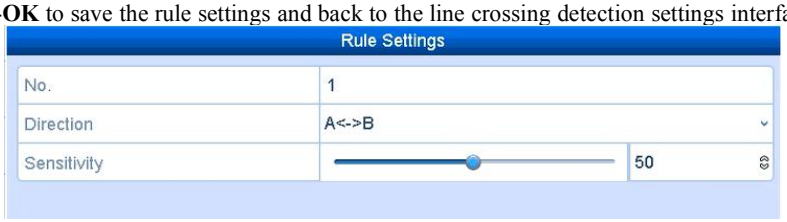


Figure 9. 1 Set Line Crossing Detection Rules

7. Click and set two points in the preview window to draw a virtual line.
   You can use the to clear the existing virtual line and re-draw it.

NOTE
Up to 4 rules can be configured.

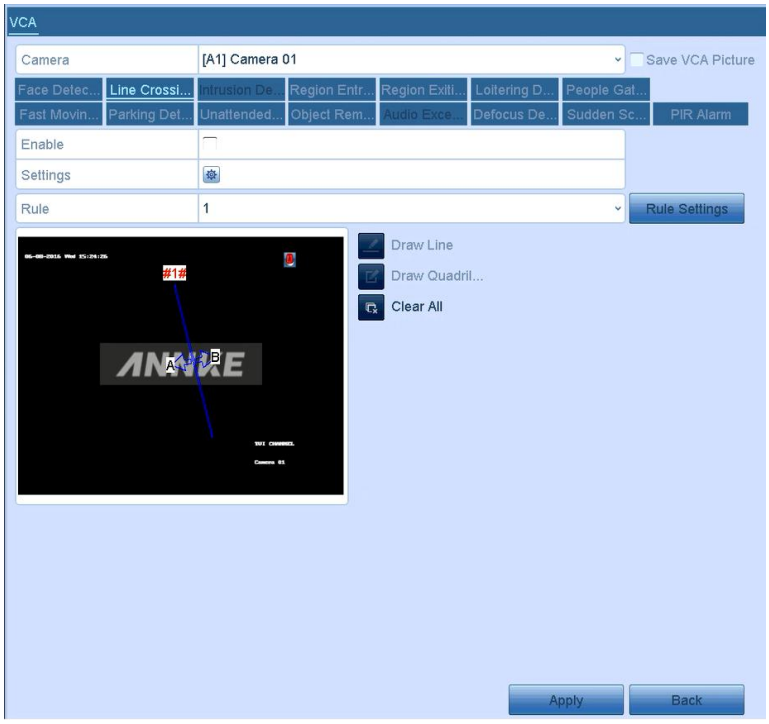


Figure 9. 2 Draw Line for Line Crossing Detection

8. Click **Apply** to activate the settings.

NOTE

The sudden scene change detection and the line crossing detection cannot be enabled at the same channel.

9.2 Intrusion Detection

Purpose:

Intrusion detection function detects people, vehicle or other objects which enter and loiter in a pre-defined virtual region, and some certain actions can be taken when the alarm is triggered.

Steps:

1. Enter the VCA settings interface.
   Menu> Camera> VCA
2. Select the camera to configure the VCA.
   You can click the checkbox of **Save VCA Picture** to save the captured pictures of VCA detection.
3. Select the VCA detection type to **Intrusion Detection**.
4. Check the **Enable** checkbox to enable this function.
5. Click to configure the trigger channel, arming schedule and linkage actions for the line crossing detection alarm.
6. Click the **Rule Settings** button to set the intrusion detection rules. Set the following parameters.
   1) **Threshold:** Range [1s-10s], the threshold for the time of the object loitering in the region. When the duration of the object in the defined detection area is longer than the set time, the alarm will be triggered.
   2) Click-and-drag the slider to set the detection sensitivity.
      Sensitivity: Range [1-100]. The value of the sensitivity defines the size of the object which can trigger the alarm. The higher the value is, the more easily the detection alarm can be triggered.
   3) **Percentage:** Range [1-100]. Percentage defines the ratio of the in-region part of the object which can trigger the alarm. For example, if the percentage is set as 50%, when the object enters the region and occupies half of the whole region, the alarm is triggered.

Figure 9. 3 Set Intrusion Crossing Detection Rules

4) Click-**OK** to save the rule settings and back to the line crossing detection settings interface.

7. Click and draw a quadrilateral in the preview window by specifying four vertexes of the detection region, and right click to complete drawing. Only one region can be configured.

You can use the to clear the existing virtual line and re-draw it.

NOTE

Up to 4 rules can be configured.

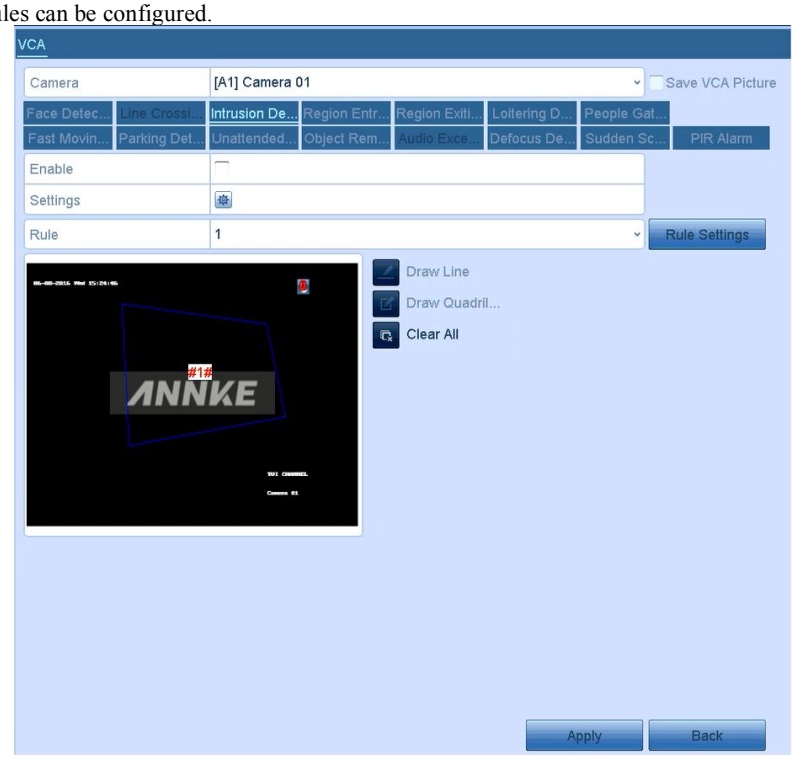


Figure 9. 4 Draw Area for Intrusion Detection

8. Click **Apply** to save the settings.

NOTE

The sudden scene change detection and the intrusion detection cannot be enabled at the same channel.

9.3 Audio Exception Detection

Purpose:

Audio exception detection function detects the abnormal sounds in the surveillance scene, such as the sudden increase/decrease of the sound intensity, and some certain actions can be taken when the alarm is triggered.

NOTE

The audio exception detection is supported by all analog channels.

Steps:

1. Enter the VCA settings interface.
   Menu> Camera> VCA
2. Select the camera to configure the VCA.
   You can click the checkbox of **Save VCA Picture** to save the captured pictures of VCA detection.
3. Select the VCA detection type to **Audio Exception Detection**.
4. Click to configure the trigger channel, arming schedule and linkage action for the face detection alarm.
5. Click the **Rule Settings** button to set the audio exception rules.

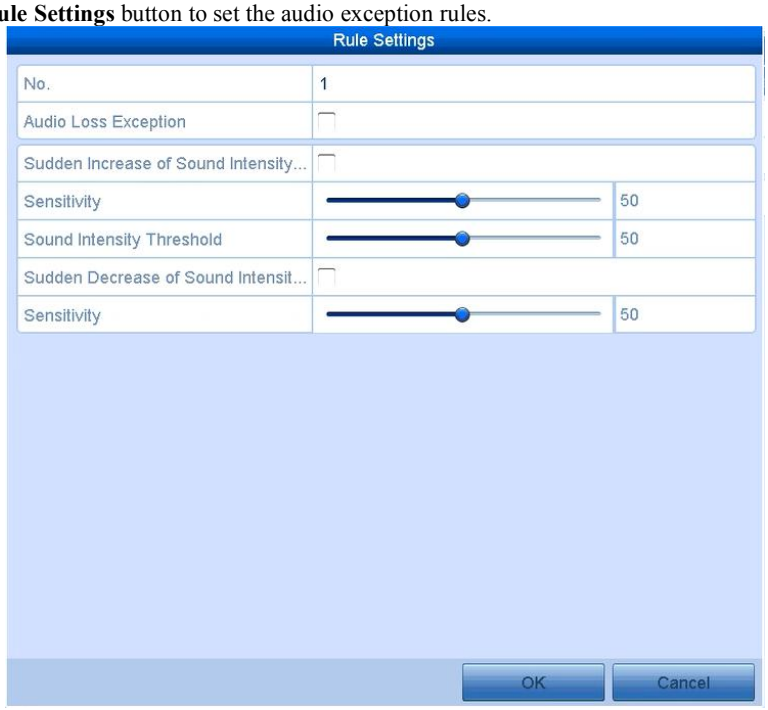


Figure 9. 5 Set Audio Exception Detection Rules

1) Check the checkbox of **Audio Input Exception** to enable the audio loss detection function.
2) Check the checkbox of **Sudden Increase of Sound Intensity Detection** to detect the sound steep rise in the surveillance scene. You can set the detection sensitivity and threshold for sound steep rise.
   Sensitivity: Range [1-100], the smaller the value is, the more severe the change should be to trigger the detection.
   Sound Intensity Threshold: Range [1-100], it can filter the sound in the environment, the louder the environment sound, the higher the value should be. You can adjust it according to the real environment.
3) Check the checkbox of **Sudden Decrease of Sound Intensity Detection** to detect the sound steep drop in the surveillance scene. You can set the detection sensitivity [1-100] for sound steep drop.

6. Click **Apply** to activate the settings.

Chapter 10 Network Settings

10.1 Configuring General Settings

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

1. Enter the Network Settings interface.
   Menu > Configuration > Network

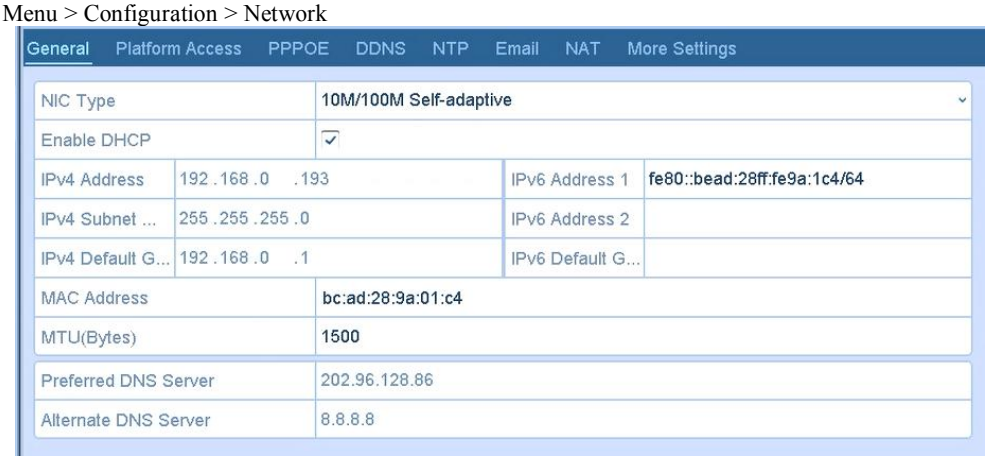


Figure 10. 1 Network Settings Interface

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

NOTE

The valid value of MTU is from 500 to 1500.

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

10.2 Configuring Advanced Settings

10.2.1 Configuring PPPoE Settings

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

1. Enter the **Network Settings** interface.
   Menu > Configuration > Network
2. Select the **PPPoE** tab to enter the PPPoE Settings interface.

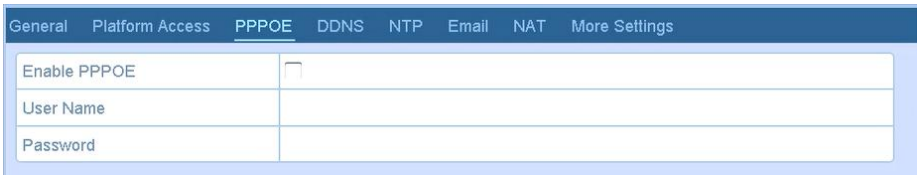


Figure 10. 2 PPPoE Settings Interface

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

NOTE

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

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

10.2.2 Configuring Cloud P2P

Purpose:

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

Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **Platform Access** tab to enter the Cloud P2P Settings interface.
3. Check the **Enable** checkbox to activate this feature.
4. If required, select the checkbox of **Custom** and input the **Server Address**.
5. To turn the **Enable Stream Encryption** on, you can select its checkbox.
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.

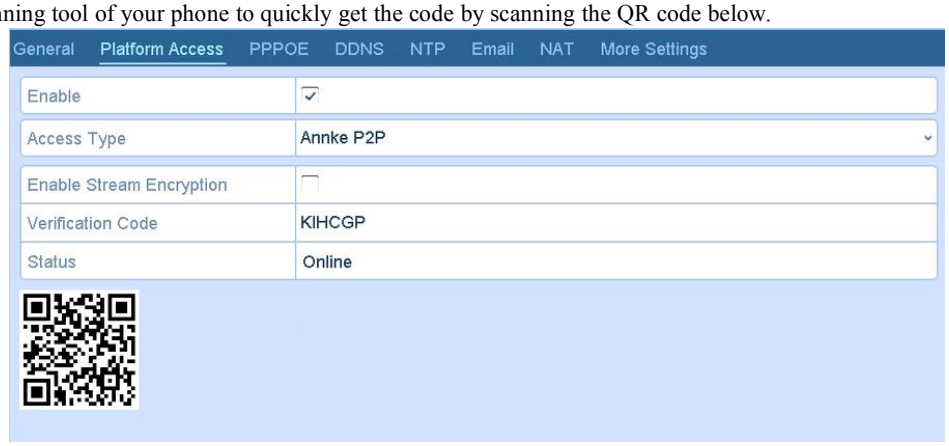


Figure 10. 3 Cloud P2P Settings Interface

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

After configuration, you can access and manage the NVR by your mobile phone on which the Cloud P2P application is installed or by the website (http://www. hicloudcam.com).

NOTE

For more operation instructions, please refer to the help file on the official website (http://www. hicloudcam.com).

10.2.3 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.
Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **DDNS** tab to enter the DDNS Settings interface.
3. Check the **DDNS** checkbox to enable this feature.
4. Select **DDNS Type**. Five different DDNS types are selectable: IPServer, DynDNS, PeanutHull, NO-IP and SIMPLEDDNS.
   - **IPServer:** Input **Server Address** for IPServer.

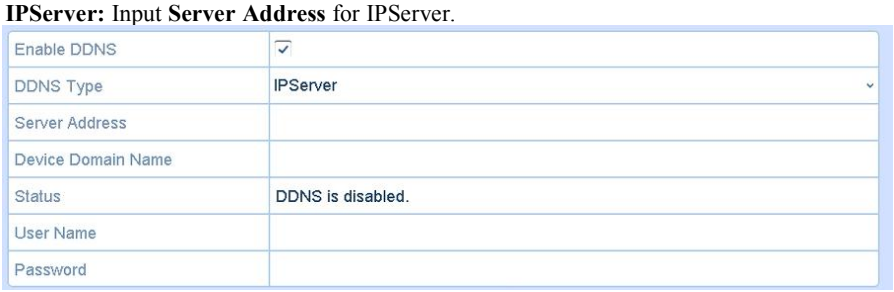


Figure 10. 4 IPServer Settings Interface

   - **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.

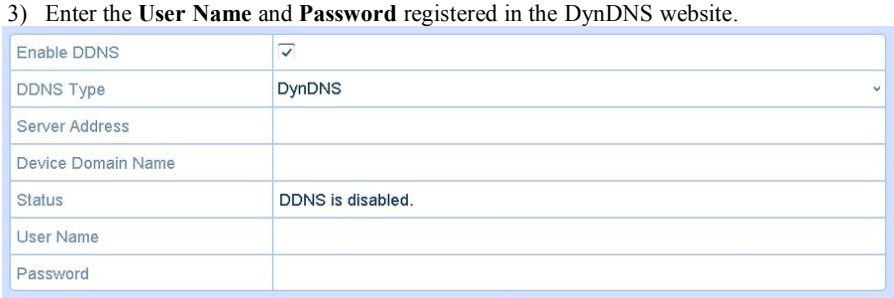


Figure 10. 5 DynDNS Settings Interface

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

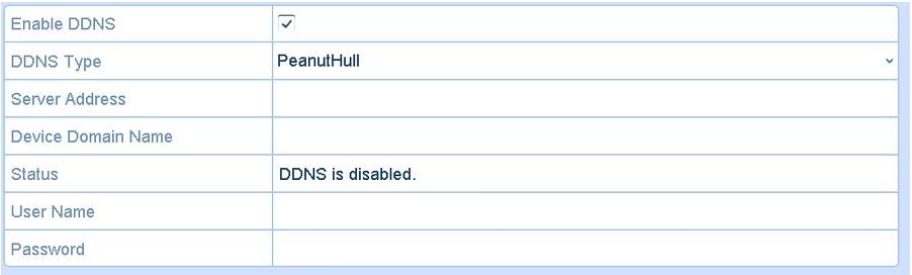


Figure 10. 6 PeanutHull Settings Interface

   - **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.

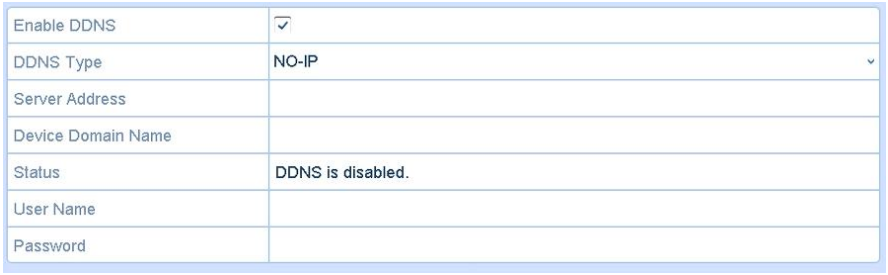


Figure 10. 7 NO-IP Settings Interface

- **SIMPLEDDNS:**
  1) Select the continent/country of the server on which the device is registered.
  2) The **Server Address** of the SIMPLEDDNS server appears by default: http://http://www.simpleddns.com/
  3) Enter the **Device Domain Name.** You can use the alias you registered in the SIMPLEDDNS server or define a new device domain name. If a new alias of the device domain name is defined in the NVR, it will replace the old one registered on the server. You can register the alias of the device domain name in the SIMPLEDDNS server first and then enter the alias to the **Device Domain Name** in the NVR; you can also enter the domain name directly on the NVR to create a new one.

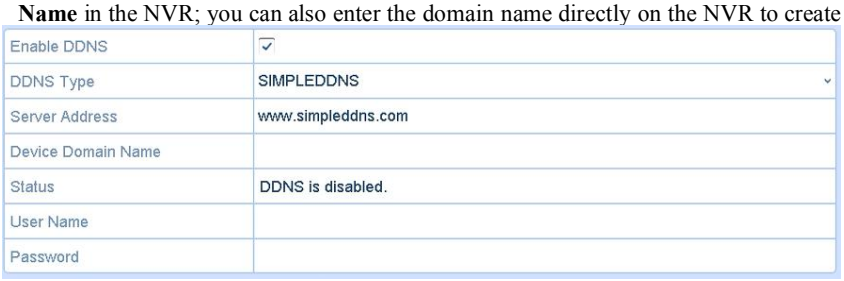


Figure 10. 8 SIMPLEDDNS Settings Interface

➢ **Register the device on the SIMPLEDDNS server.**

1) Go to the SIMPLEDDNS website: http://http://www.simpleddns.com//.

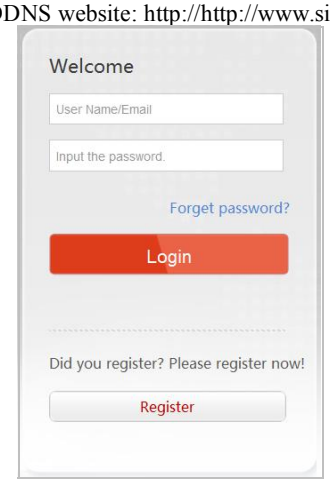


Figure 10. 9 Register an Account

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

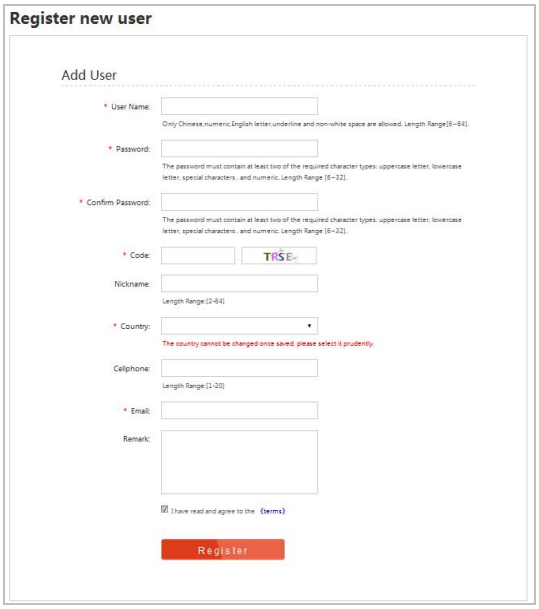


Figure 10. 10 Register an Account

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

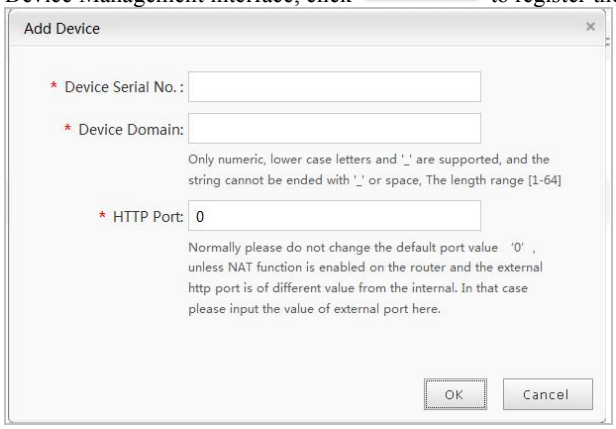


Figure 10. 11 Register the Device

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 SIMPLEDDNS server, you can access your device via web browser or Client Software with the **Device Domain Name** (**Device Name**).

- **OPTION 1: Access the Device via Web Browser**

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

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

NOTE

If you mapped the HTTP port on your router and changed it to port No. except 80, you have to enter *http:// http://www.simpleddns.com//alias:HTTP port* in the address bar to access the device. You can refer to *Chapter 9.2.11* for the mapped HTTP port No.

- **OPTION 2: Access the devices via iVMS-4200**

For iVMS-4200, in the Add Device window, select HiDDNS and then edit the device information.

Nickname: Edit a name for the device as you want.
Server Address: http://www.simpleddns.com/
Device Domain Name: It refers to the **Device Domain Name** on the device or the **Device Name** on the SIMPLEDDNS server you created**.**
User Name: Enter the user name of the device.
Password: Enter the password of the device.

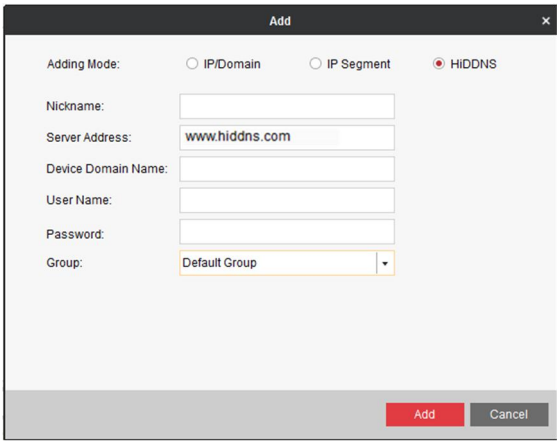


Figure 10. 12 Access Device via iVMS-4200

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

After setting all the required parameters for the DDNS, you can view the connecting status of the device by checking the **Status** information.

10.2.4 Configuring NTP Server

Purpose:

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

Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **NTP** tab to enter the NTP Settings interface.

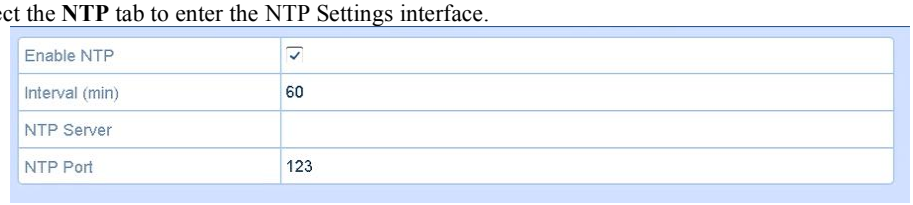


Figure 10. 13 NTP Settings Interface

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

10.2.5 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.

Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **NAT** tab to enter the UPnP™ settings interface.

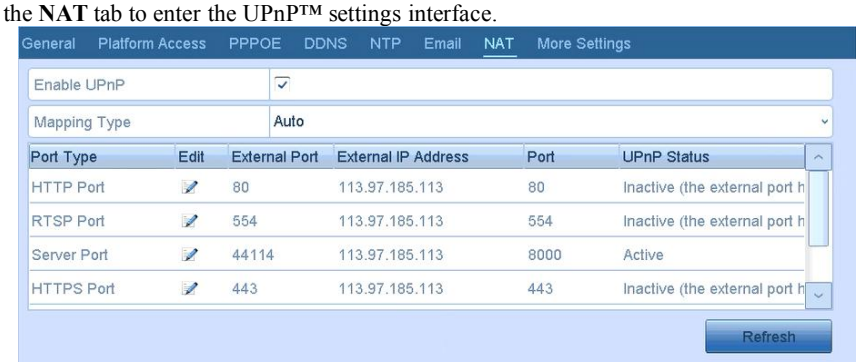


Figure 10. 14 UPnP™ Settings Interface

3. Check checkbox to enable UPnP™.
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.

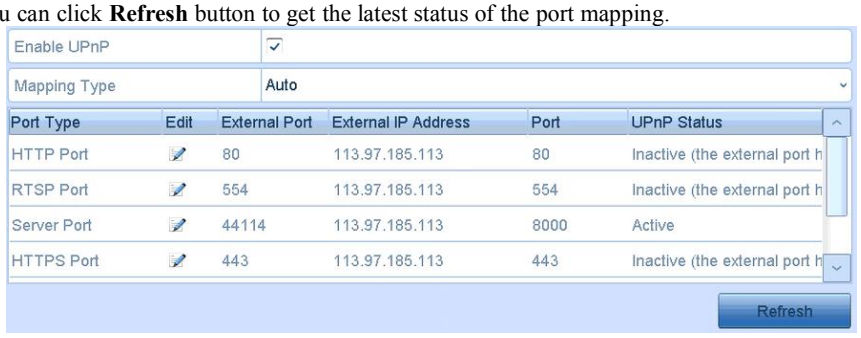


Figure 10. 15 UPnP™ Settings Finished-Auto

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.

Steps:

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.

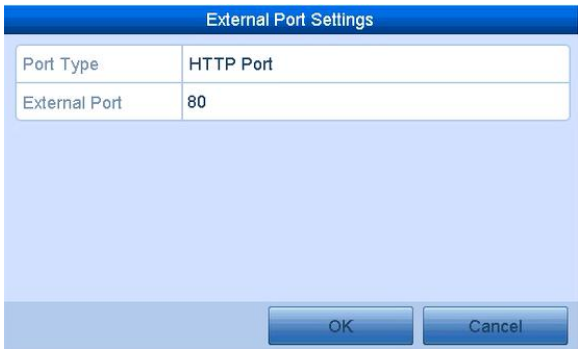


Figure 10. 16 External Port Settings Dialog Box

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

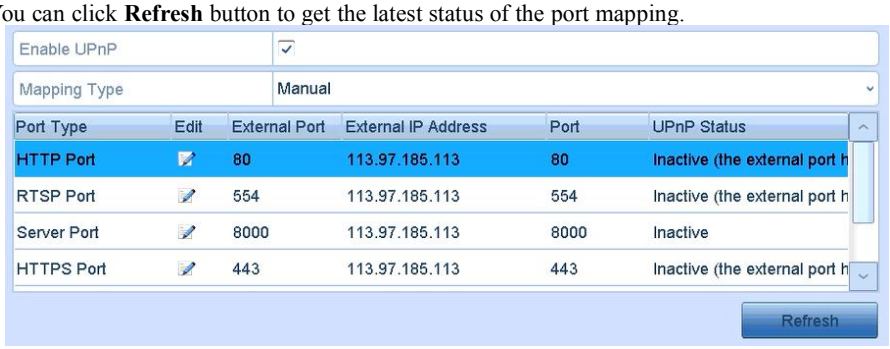


Figure 10. 17 UPnP™ Settings Finished-Manual

10.2.6 Configuring More Settings

Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **More Settings** tab to enter the More Settings interface.

Figure 10. 18 More Settings Interface

3. Configure the remote alarm host, server port, HTTP port, multicast, 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., iVMS-4200) 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.

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.

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

10.2.7 Configuring HTTPS Port

Purpose:
You can change the server and HTTP ports in the Network Settings menu. The default server port is 8000 and the default HTTP port is 80.
Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **More Settings** tab to enter the More Settings interface, as shown below.
3. Enter new **Server Port** and **HTTP Port**.

Server Port	8000
HTTP Port	80

Figure 9.18 Host/Others Settings Menu

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

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 web browser access.

10.2.8 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 11.1 Configuring General Settings* for detailed information.
Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **Email** tab to enter the Email Settings interface.

Figure 10. 19 Email Settings Interface

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.gmail.com).
   SMTP Port No.: 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.
   Enable Attached Pictures: Check the checkbox of **Enable Attached Picture** if you want to send email with attached alarm images. The interval is the time between two captures of the alarm images.
   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.
4. Click the **Apply** button to save the Email settings.
5. You can click the **Test** button to test whether your Email settings work. The corresponding Attention message box pops up.

10.3 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.
Steps:
1. Enter the Network Traffic interface.
   Menu > Maintenance > Net Detect

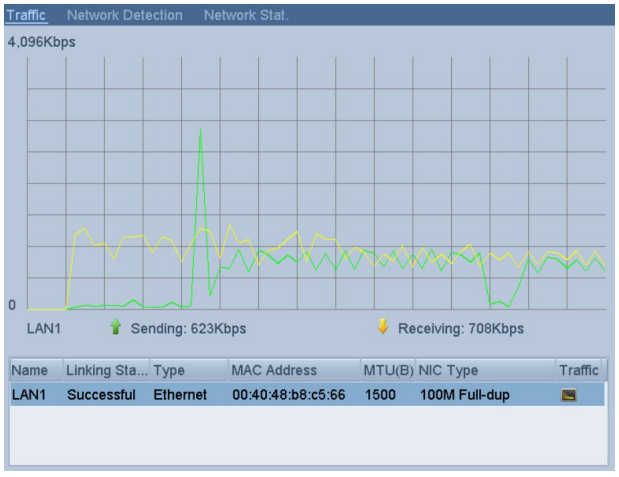


Figure 10. 20 Network Traffic Interface

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

10.4 Configuring Network Detection

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

10.4.1 Testing Network Delay and Packet Loss

Steps:
1. Enter the Network Traffic interface.
   Menu > Maintenance > Net Detect
2. Click the **Network Detection** tab to enter the Network Detection menu.

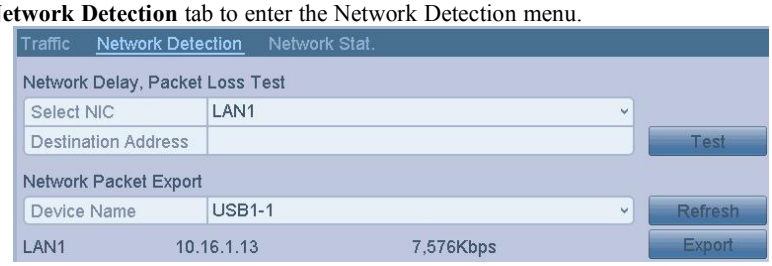


Figure 10. 21 Network Detection Interface

3. Select a NIC to test network delay and packet loss.
4. Enter the destination address in the text field of **Destination Address**.
5. Click the **Test** button to start testing network delay and packet loss.

10.4.2 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.
Steps:
1. Enter the Network Traffic interface.
   Menu > Maintenance > Net Detect
2. Click the **Network Detection** tab to enter the Network Detection interface.
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.

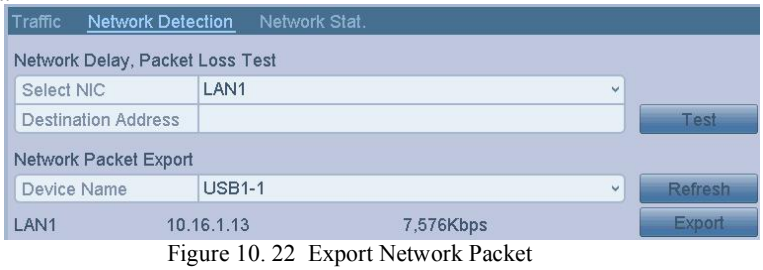


Figure 10. 22 Export Network Packet

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

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

NOTE

Up to 1M data can be exported each time.

10.4.3 Checking Network Status

Purpose:

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

Steps:

Click Status on the right bottom of the page.

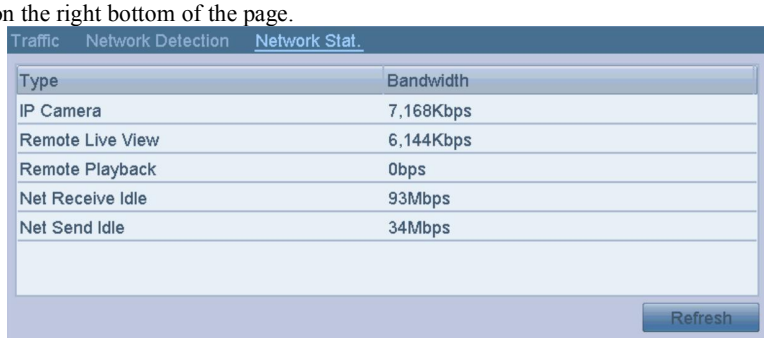


Figure 10. 23 Checking Network Status

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

Figure 10. 24 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.

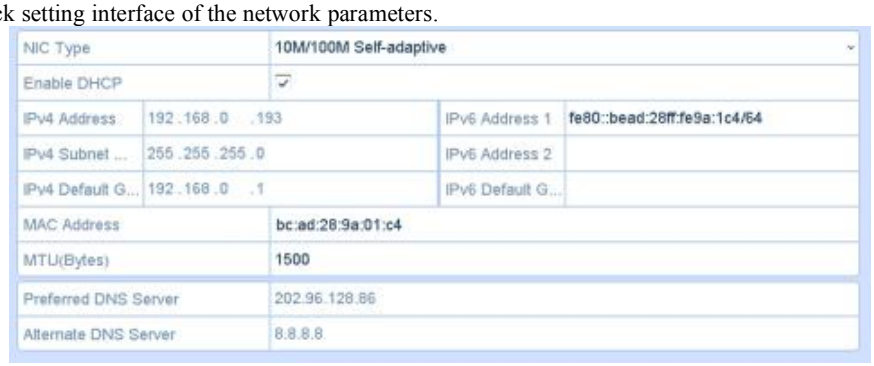


Figure 10. 25 Network Parameters Configuration

10.4.4 Checking Network Statistics

Purpose:

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

Steps:

1. Enter the Network Statistics interface.
   Menu > Maintenance> Net Detect
2. Click the **Network Stat.** tab to enter the Network Statistics menu.

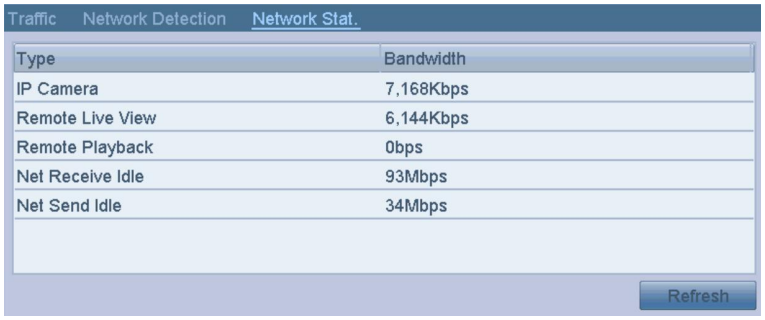


Figure 10. 26 Network Stat. Interface

3. View the bandwidth of Remote Live View, bandwidth of Remote Playback, and bandwidth of Net Total Idle.
4. Click **Refresh** button to get the latest bandwidth statistics.

Chapter 11 HDD Management

11.1 Initializing HDDs

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

1. Enter the HDD Information interface.
   Menu > HDD > General.

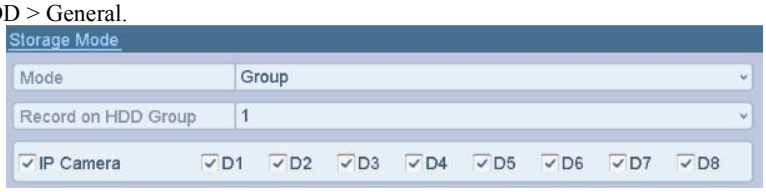


Figure 11. 1 HDD Information Interface

2. Select HDD to be initialized.
3. Click the **Init** button.

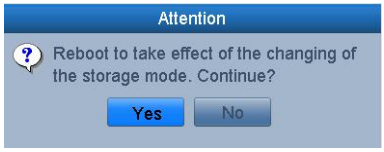


Figure 11. 2 Confirm Initialization

4. Select the **OK** button to start initialization.
5. After the HDD has been initialized, the status of the HDD will change from *Uninitialized* to *Normal*.

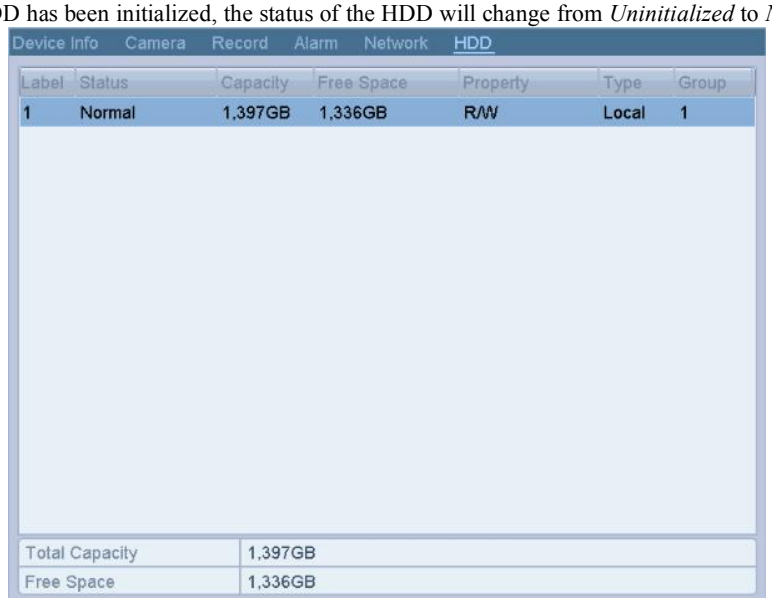


Figure 11. 3 HDD Status Changes to Normal

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.
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.

11.2 Managing HDD Group

11.2.1Setting 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.
Steps:

1. Enter the Storage Mode interface.
   Menu > HDD > Advanced
2. Set the **Mode** to Group.

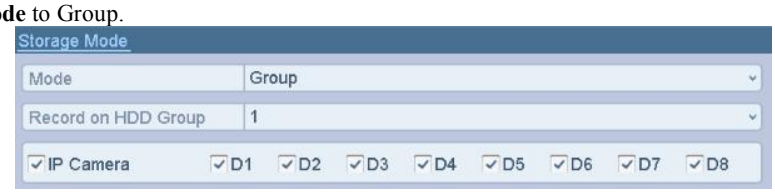


Figure 11. 4 Storage Mode Interface

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

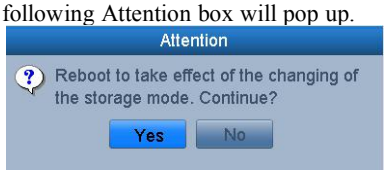


Figure 11. 5 Attention for Reboot

4. Click the **Yes** button to reboot the device to activate the changes.
5. After reboot of device, enter the HDD Information interface.
   Menu > HDD > General
6. Select HDD from the list and click the icon to enter the Local HDD Settings interface.

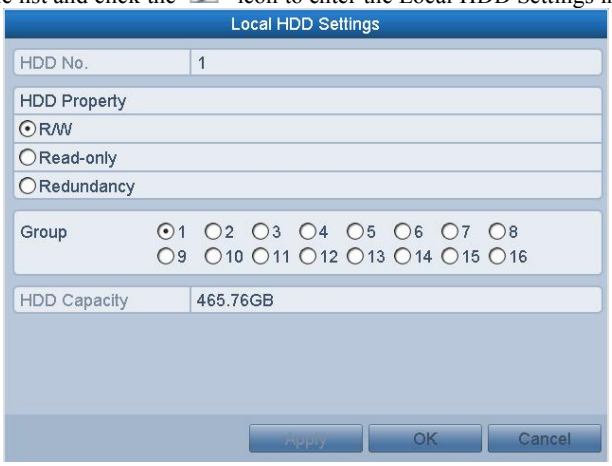


Figure 11. 6 Local HDD Settings Interface

7. Select the Group number for the current HDD.

NOTE
The default group No. for each HDD is 1.

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

Figure 11. 7 Confirm HDD Group Settings

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

11.2.2 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 step1-4 of *Chapter 12.3.1 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.

Steps:

1. Enter the HDD Information interface.
   Menu > HDD > General
2. Select HDD from the list and click the icon to enter the Local HDD Settings interface.

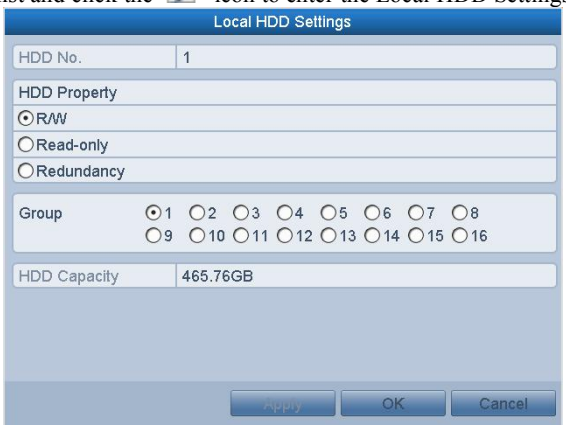


Figure 11. 8 Set HDD Property

3. Set the HDD property to R/W, Read-only or Redundancy.
4. Click the **OK** button to save the settings and exit the interface.
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.

11.3 Configuring Quota Mode

Purpose

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

Steps

1. Enter the Storage Mode interface.
   Menu > HDD > Advanced
2. Set the **Mode** to Quota.

NOTE

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

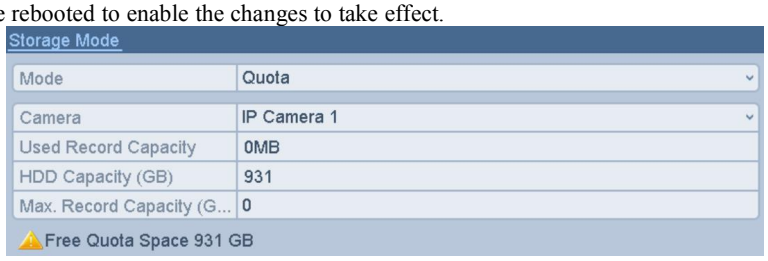


Figure 11. 9 Storage Mode Settings Interface

3. Select a camera for which you want to configure quota.
4. Enter the storage capacity in the text field of **Max. Record Capacity (GB)**.
5. 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.

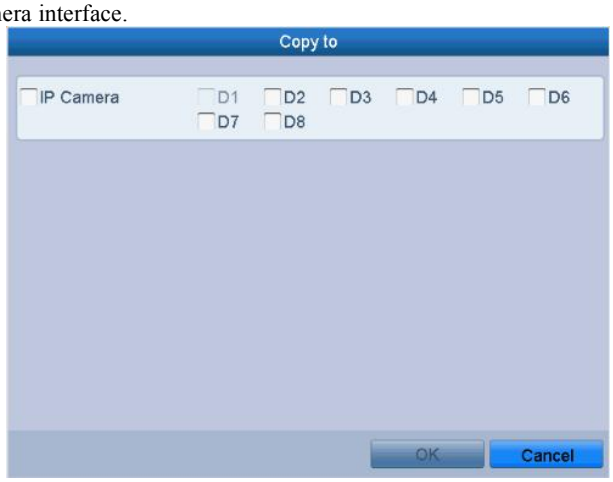


Figure 11. 10 Copy Settings to Other Camera(s)

6. Select the camera (s) to be configured with the same quota settings. You can also click the checkbox of Analog to select all cameras.
7. Click the **OK** button to finish the Copy settings and back to the Storage Mode interface.
8. Click the **Apply** button to apply the settings.

NOTE

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

11.4 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

Steps:

1. Enter the HDD Information interface.
   Menu > HDD>General
2. Check the status of each HDD which is displayed on the list.

Figure 11. 11 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

Steps:

1. Enter the System Information interface.
   Menu > Maintenance > System Info
2. Click the **HDD** tab to view the status of each HDD displayed on the list.

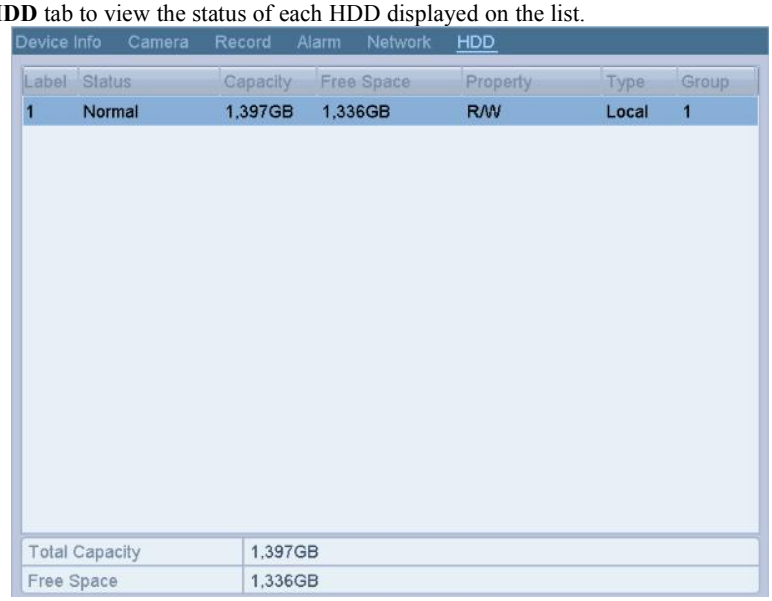


Figure 11. 12 View HDD Status (2)

11.5 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 *a*nd report on various indicators of reliability in the hopes of anticipating failures.

Steps:

1. Enter the HDD Detect interface.
   Menu > Maintenance > HDD Detect
2. Click the S.M.A.R.T. Settings tab to enter the interface.
3. Select the HDD to view its S.M.A.R.T. information list,

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.

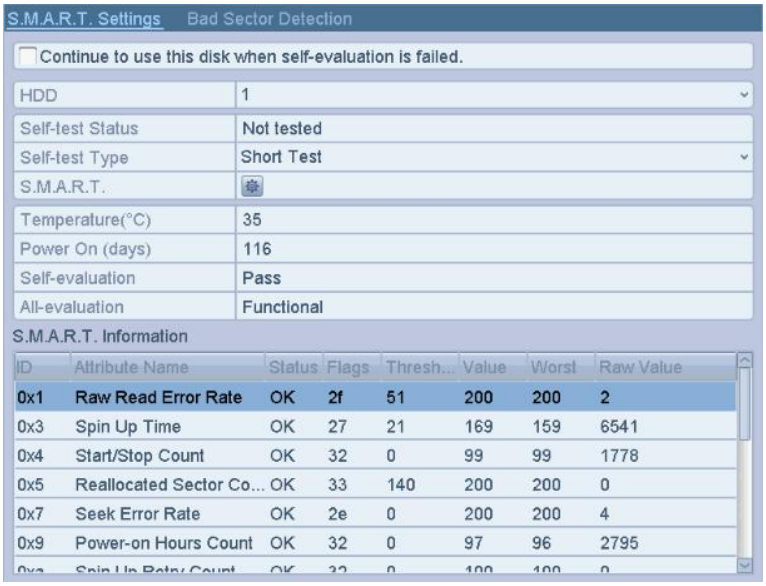


Figure 11. 13 S.M.A.R.T Settings Interface

11.6 Detecting Bad Sector

Purpose:

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

Steps:

1. Enter the HDD Detect interface.
   Menu>HDD>HDD Detect

2. Click the Bad Sector Detection tab to enter the interface.
3. Select a HDD and click the **Detect** button to start detecting.

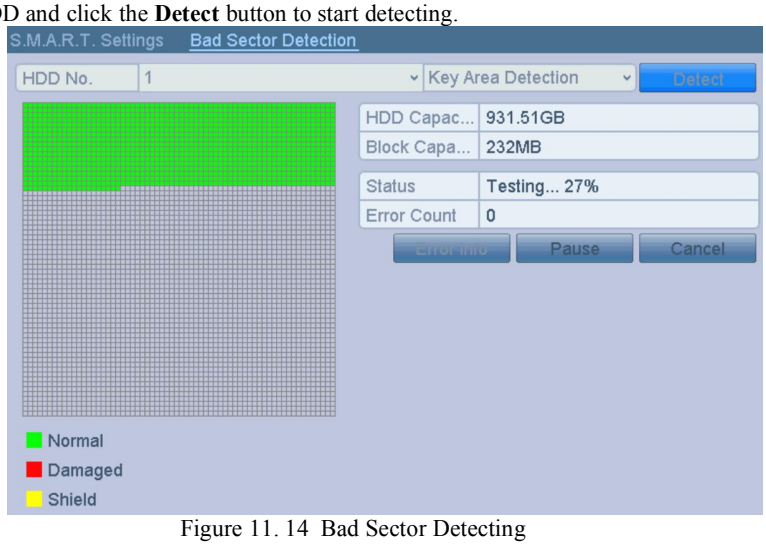


Figure 11. 14 Bad Sector Detecting

4. You can click the **Pause** button to pause the detection and click the **Resume** button to resume the detection.
5. If there is error information about the HDD, you can click the **Error Info** button to view the information.

11.7 Configuring HDD Error Alarms

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

1. Enter the Exception interface.
   Menu > Configuration > Exceptions
2. Select the Exception Type to **HDD Error** from the dropdown list.
3. Check the checkbox(s) below to select the linkage action(s) for HDD error.
   The linkage actions can be selected to: Audible Warning, Notify Surveillance Center, Send Email and Trigger Alarm Output.

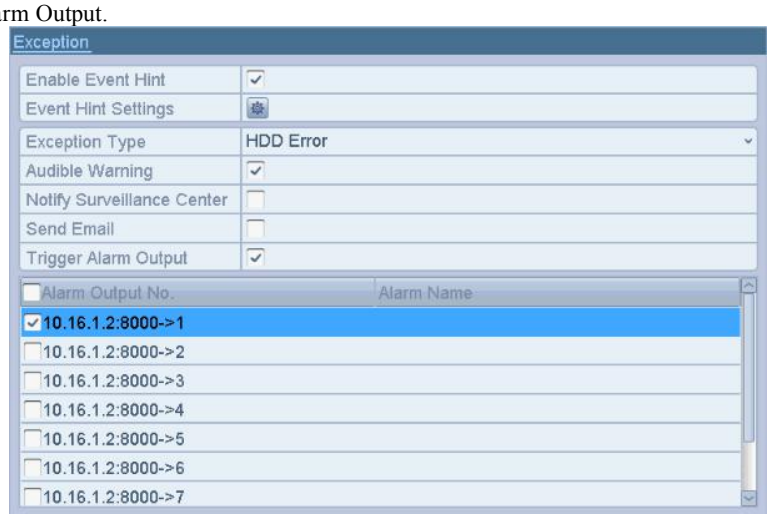


Figure 11. 15 Configure HDD Error Alarm

4. When the Trigger Alarm Output is selected, you can also select the alarm output to be triggered from the list below.
5. Click the **Apply** button to save the settings.

Chapter 12 Camera Settings

12.1 Configuring OSD Settings

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

1. Enter the OSD Configuration interface.
   Menu > Camera > OSD
2. Select the camera to configure OSD settings.
3. Edit the Camera Name in the text field.
4. Configure the Display Name, Display Date and Display Week by checking the checkbox.
5. Select the Date Format, Time Format, Display Mode and the OSD font.

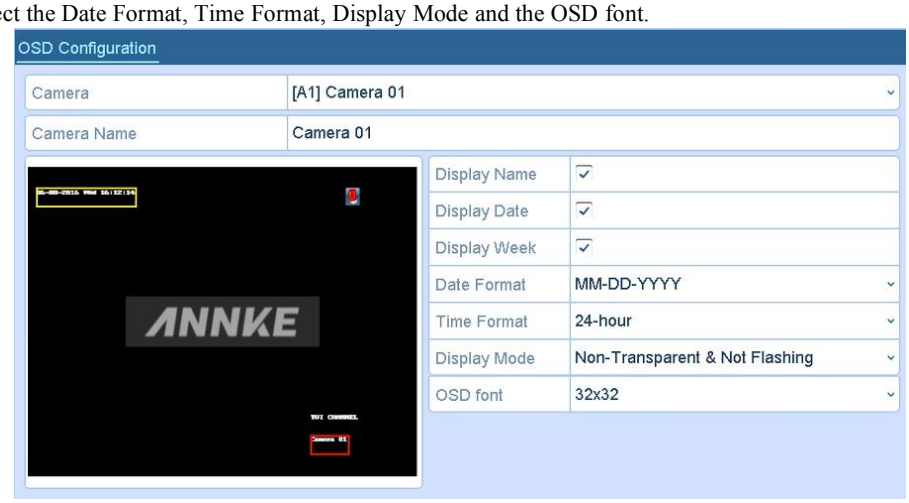


Figure 12. 1 OSD Configuration Interface

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

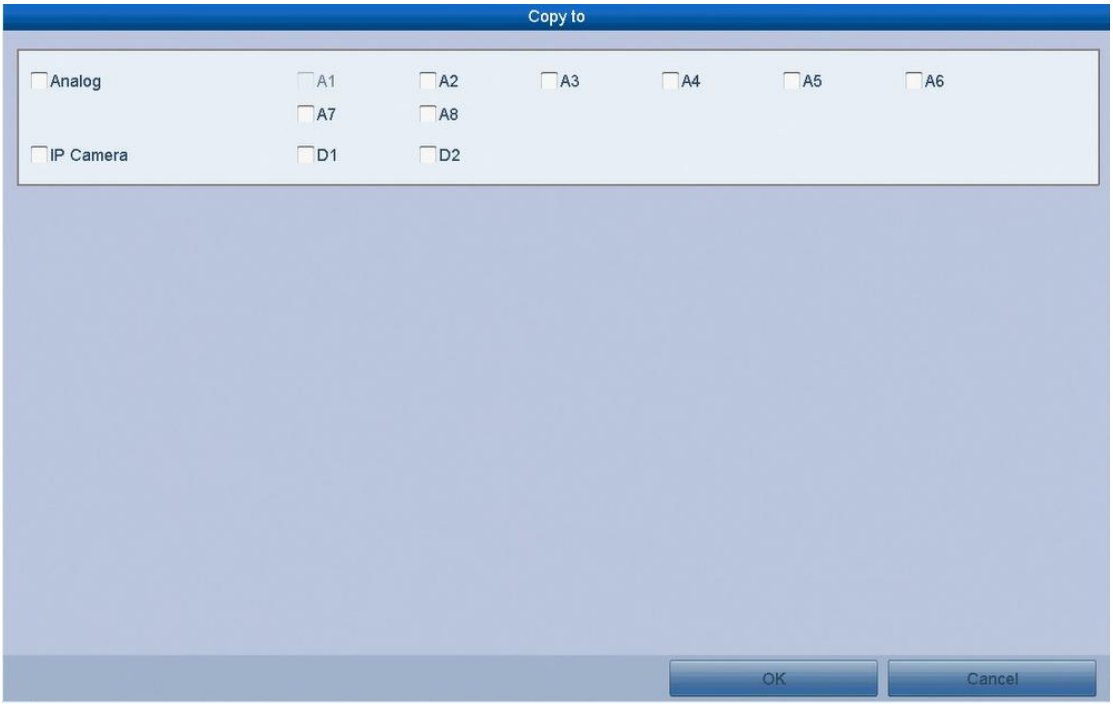


Figure 12. 2 Copy Settings to Other Cameras

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.

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

12.2 Configuring Privacy Mask

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

1. Enter the Privacy Mask Settings interface.
   Menu > Camera > Privacy Mask
2. Select the camera to set privacy mask.
3. Check the checkbox of **Enable Privacy Mask** to enable this feature.

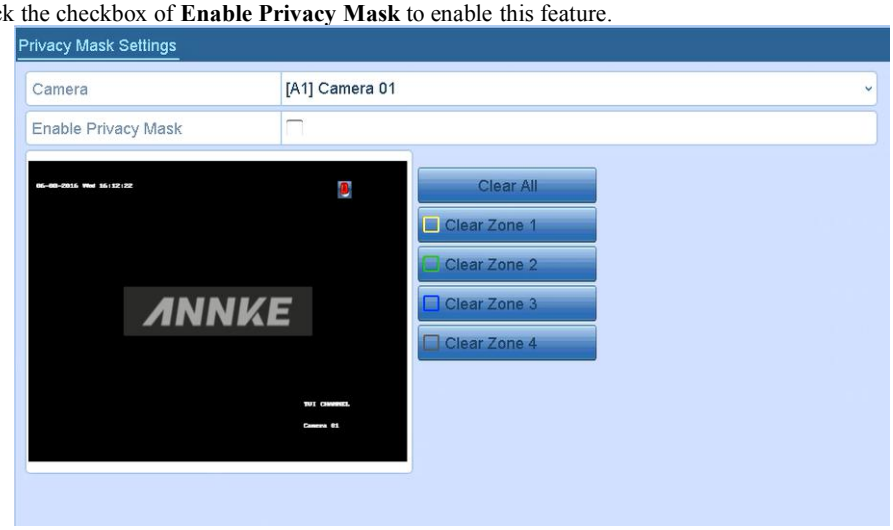


Figure 12. 3 Privacy Mask Settings Interface

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.

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.

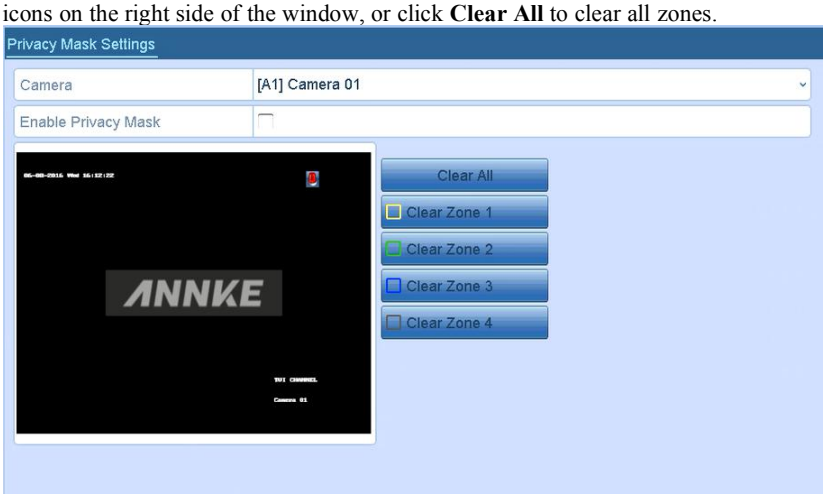


Figure 12. 4 Set Privacy Mask Area

6. You can click the **Copy** button to copy the privacy mask settings of the current camera to other cameras. Please refer to step 7 of *Chapter 13.1Configuring OSD Settings*.
7. Click the **Apply** button to save the settings.

12.3 Configuring Video Parameters

Steps:

1. Enter the Image Settings interface.
   Menu > Camera > Image

Figure 12. 5 Image Settings Interface (AnalogCamera)

2. Select the camera to set image parameters.
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.

4. Select the mode from the drop-down list of **Mode**, there are four modes selectable: Standard, Indoor, Dim Light and Outdoor.
5. Adjust the image parameters according to actual needs. The parameters include Brightness, Contrast, Saturation, Hue, Sharpness and Denoising. You can also click **Restore** to set the parameters to the default settings.
6. You can click **Copy** to copy the image settings of the current camera to other analog cameras.
7. Click **Apply** to save the settings.

Chapter 13 DVR Management and Maintenance

13.1 Viewing System Information

Steps:

1. Enter the System Information interface.
   Menu > Maintenance > System Info
2. You can click the **Device Info**, **Camera**, **Record**, **Alarm**, **Network** and **HDD** tabs to view the system information of the device.

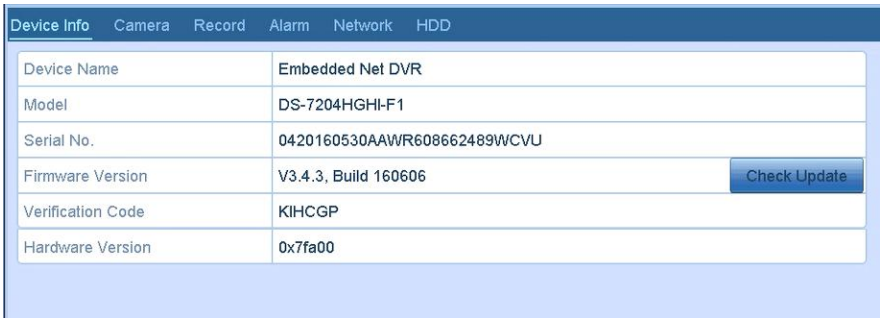


Figure 13. 1 System Information Interface

13.2 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.
Steps:

1. Enter the Log Search interface.
   Menu > Maintenance > Log Information

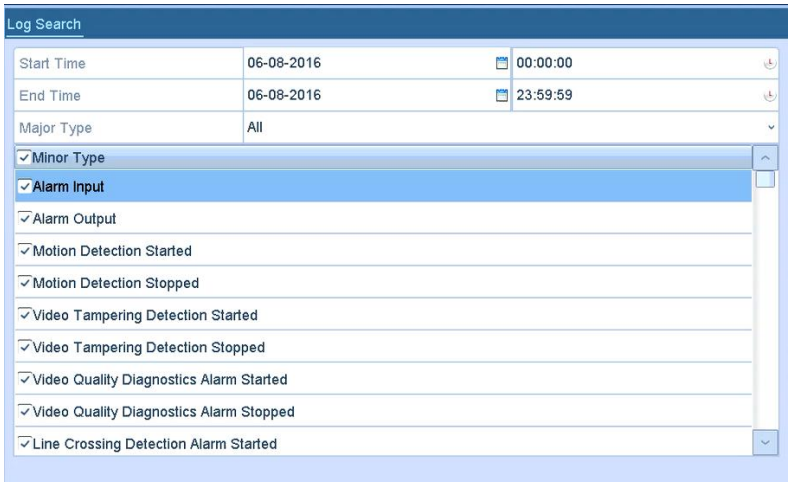
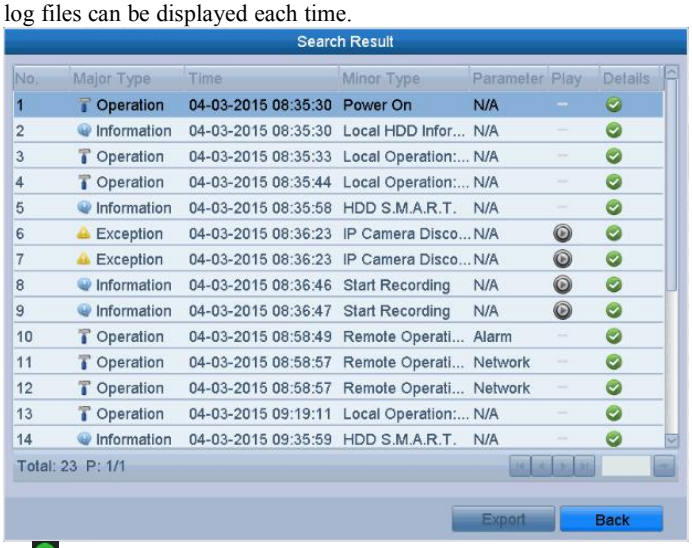


Figure 13. 2 Log Search Interface

2. Set the log search conditions to refine your search, including the Start Time, End Time, Major Type and Minor Type.
3. Click the **Search** button to start search log files.
4. The matched log files will be displayed on the list shown below.

NOTE

Up to 2000 log files can be displayed each time.



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.
6. If you want to export the log files, click the **Export** button to enter the Export menu.

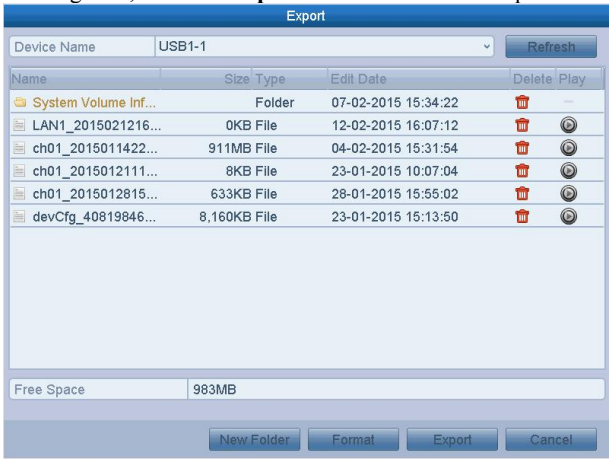


Figure 13. 3 Export Log Files

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

- 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*.

13.3 Importing/Exporting IP Camera Info

Purpose:
The information of added IP camera can be generated into an excel file and exported to the local device for backup, including the IP address, manage port, password of admin, etc. And the exported file can be edited on your PC, like adding or deleting the content, and copy the setting to other devices by importing the excel file to it.
Steps:

1. Enter the camera management interface.
   Menu > Camera > IP Camera Import/Export
2. Click the IP Camera Import/Export tab, the content of detected plugged external device appears.
3. Click the **Export** button to export configuration files to the selected local backup device.
4. To import a configuration file, select the file from the selected backup device and click the **Import** button. After the importing process is completed, you must reboot the DVR.

13.4 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.
Steps:

1. Enter the Import/Export Configuration File interface.
   Menu > Maintenance > Import/Export
2. Click the **Export** button to export configuration files to the selected local backup device.
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.

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

13.5 Upgrading System

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

13.5.1 Upgrading by Local Backup Device

Steps:

1. Connect your DVR with a local backup device where the update firmware file is located.
2. Enter the Upgrade interface.
   Menu > Maintenance > Upgrade
3. Click the **Local Upgrade** tab to enter the local upgrade menu.

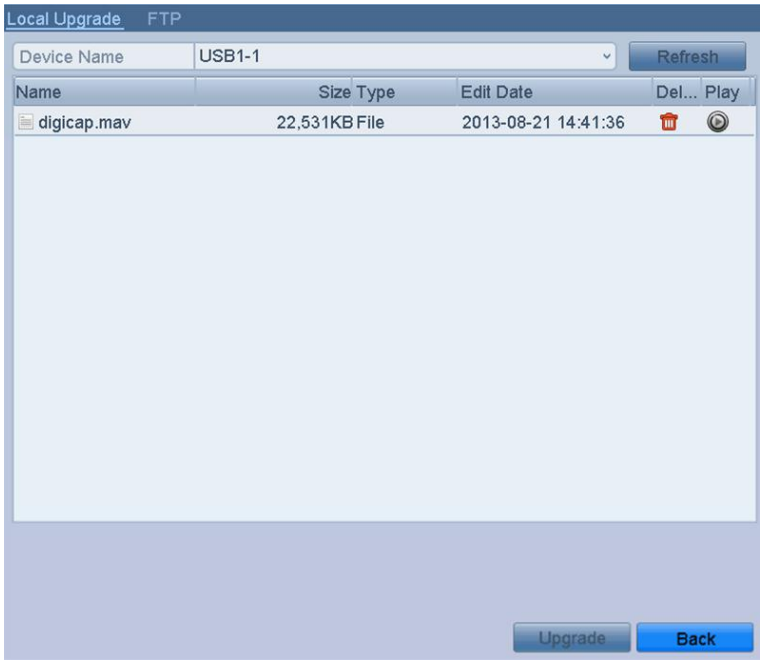


Figure 13. 4 Local Upgrade Interface

4. Select the update file from the backup device.
5. Click the **Upgrade** button to start upgrading.
6. After the upgrading is complete, reboot the DVR to activate the new firmware.

13.5.2 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.

Steps:

1. Enter the Upgrade interface.
   Menu > Maintenance > Upgrade
2. Click the **FTP** tab to enter the local upgrade interface.

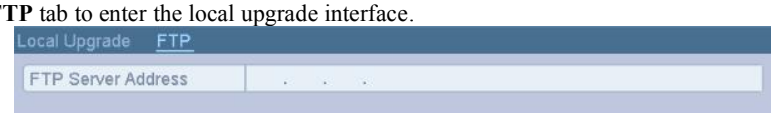


Figure 13. 5 FTP Upgrade Interface

3. Enter the FTP Server Address in the text field.
4. Click the **Upgrade** button to start upgrading.
5. After the upgrading is complete, reboot the DVR to activate the new firmware.

13.6 Restoring Default Settings

Steps:

1. Enter the Default interface.
   Menu > Maintenance > Default

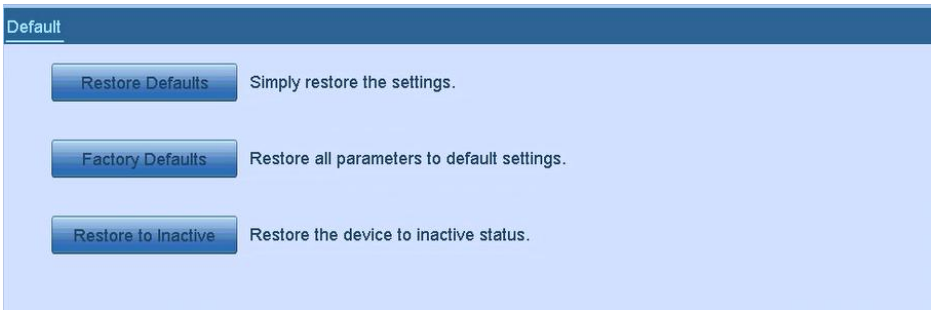


Figure 13. 6 Restore Defaults

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.
3. Click the **OK** button to restore the default settings.

NOTE

The device will reboot automatically after restoring to the default settings.

Chapter 14 Others

14.1 Configuring General Settings

Purpose:
You can configure the output resolution, system time, mouse pointer speed, etc.
Steps:

1. Enter the General Settings interface.
   Menu > Configuration > General
2. Select the **General** tab.

Figure 14. 1 General Settings Interface

3. Configure the following settings:
   - **Language:** The default language used is *English*.
   - **CVBS Output Standard:** Select the CVBS output standard to NTSC or PAL, which must be the same with the video input standard.
   - **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.
4. Click the **Apply** button to save the settings.

14.2 Configuring DST Settings

Steps:

1. Enter the General Settings interface.
   Menu >Configuration>General
2. Choose **DST Settings** tab.

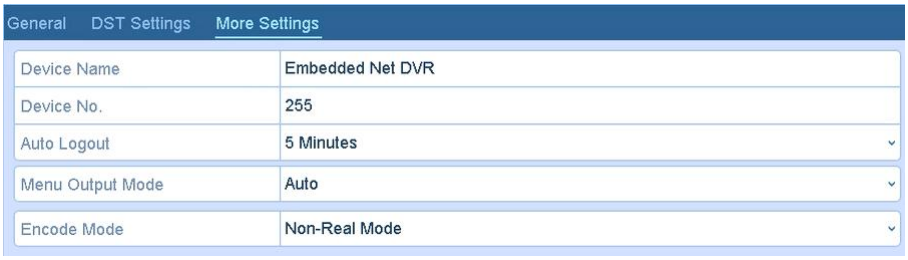
Figure 14. 2 DST Settings Interface

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.

14.3 Configuring More Settings

Steps:

1. Enter the General Settings interface.
   Menu > Configuration > General
2. Click the **More Settings** tab to enter the More Settings interface.



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.
   - **CVBS Output Brightness:** Adjust the video output brightness via the CVBS interface.
   - **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.
   - Click the **Apply** button to save the settings.

14.4 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.

14.4.1Adding a User

Steps:

1. Enter the User Management interface.
   Menu >Configuration>User

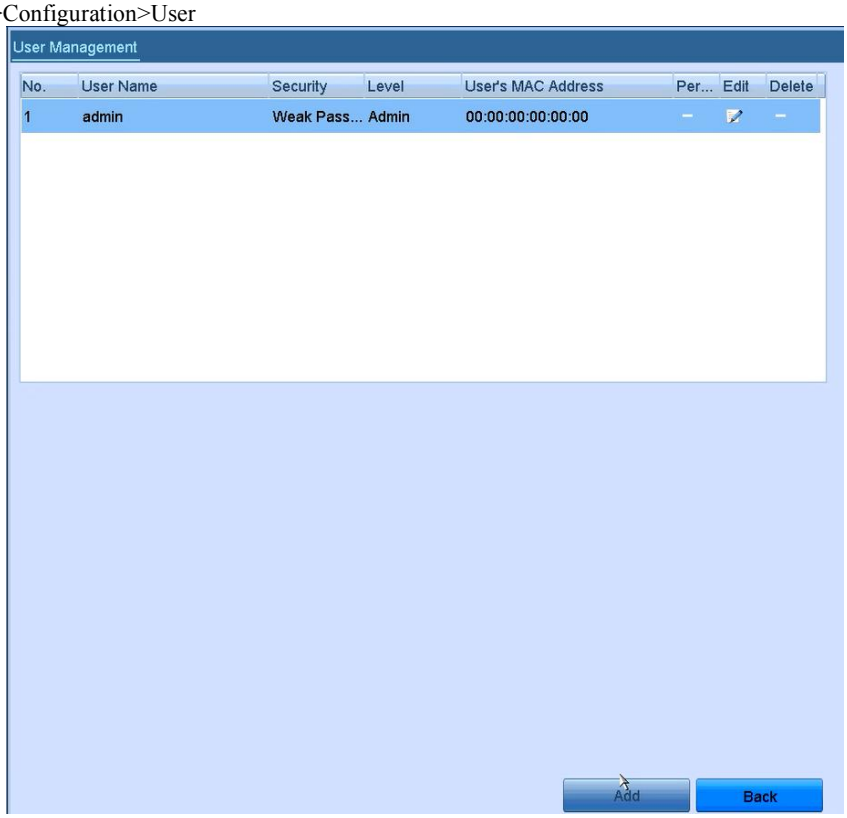


Figure 14. 3 User Management Interface

2. Click the **Add** button to enter the Add User interface.

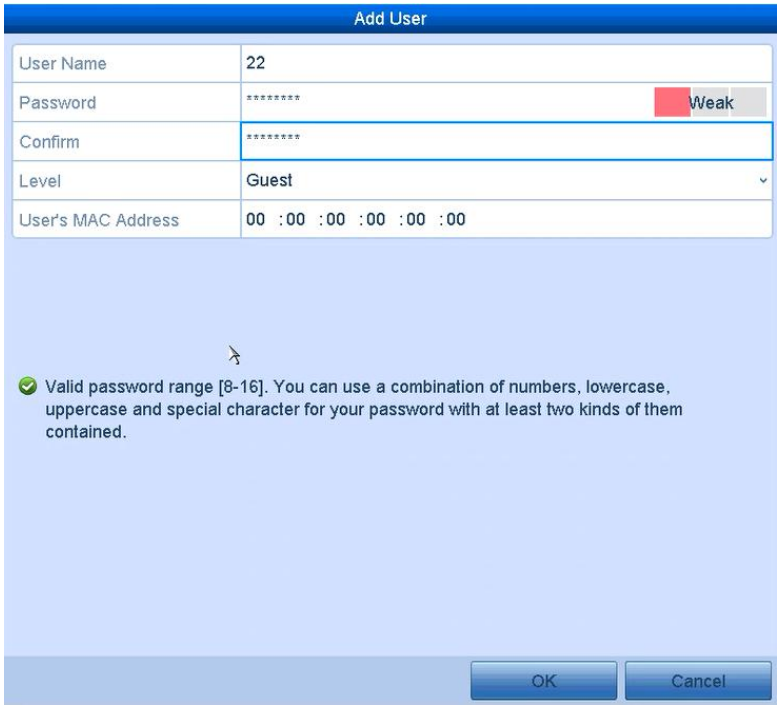


Figure 14. 4 Add User Menu

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.

STRONG PASSWORD RECOMMENDED– *We highly recommend you create a strong password of your own choosing (using a minimum of 8 characters, including 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.

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..

Figure 14. 5 Added User Listed in User Management Interface

5. You can assign permissions for the added user.

(1) Select the user from the list and then click the button to enter the Permission settings interface

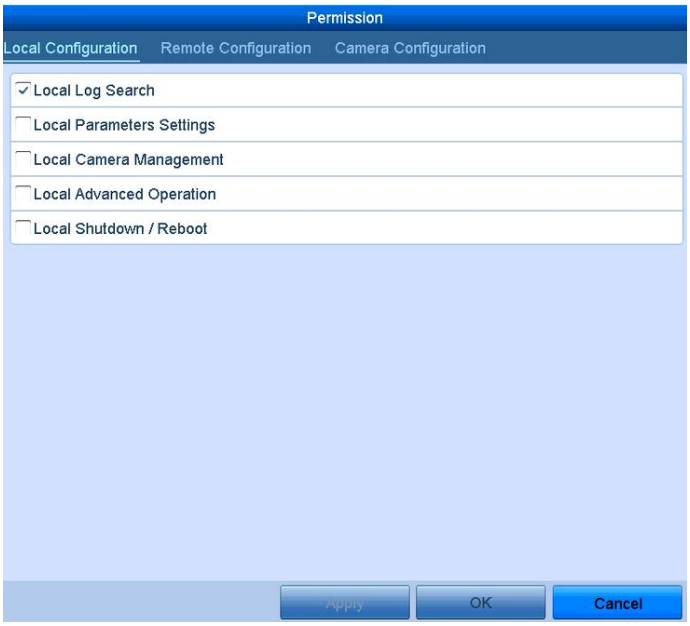


Figure 14. 6 User Permission Settings Interface

(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 Camera Management: Enabling and disabling analog camera (s). Adding, deleting and editing of network camera (s). This function is supported by HDVR series.
- 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 Camera Management: Remotely enabling and disabling analog camera (s), and adding, deleting and editing of network camera (s). This function is supported by HDVR series.
- 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 PTZ Control: Locally controlling PTZ movement of the selected camera (s).
- Remote PTZ Control: Remotely controlling PTZ movement of the selected camera (s).
- Local Video Export: Locally exporting recorded files of the selected camera (s).

Local Camera Management is provided for the IP cameras only.

(3) Click **OK** to save the settings and exit.

14.4.2 Deleting a User

Steps:

1. Enter the User Management interface.
   Menu >Configuration>User
2. Select the user to be deleted from the list.

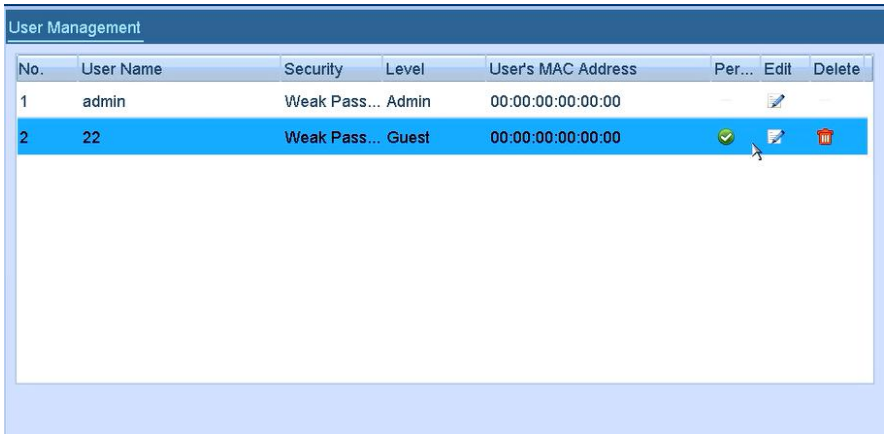


Figure 14. 7 User List

3. Click the icon to delete the selected user account.

14.4.3 Editing a User

For the added user accounts, you can edit the parameters.

Steps:

1. Enter the User Management interface.
   Menu >Configuration>User
2. Select the user to be edited from the list.
3. Click the icon to enter the Edit User interface.

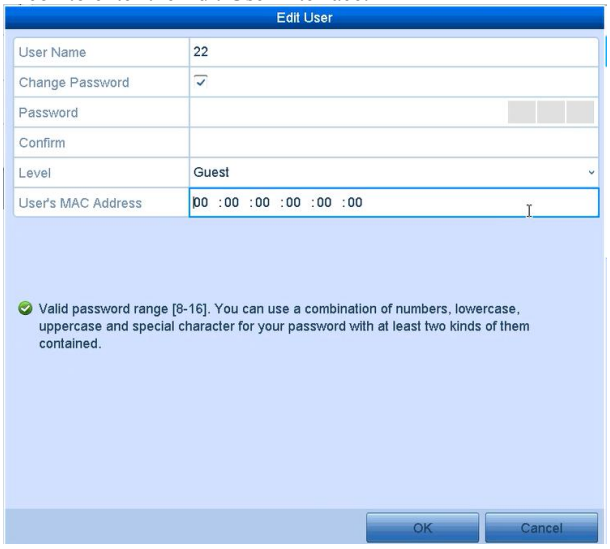


Figure 14. 8 Edit User Interface

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 te 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**.

STRONG PASSWORD RECOMMENDED– *We highly recommend you create a strong password of your own choosing (using a minimum of 8 characters, including 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.*

5. Click the **OK** button to save the settings and exit the menu.
6. For the **Operator** or **Guest** user account, you can also click the button on te user management interface to edit the permission.

Chapter 15 Appendix

15.1 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.
- **Hybrid DVR:** A hybrid DVR is a combination of a DVR and NVR.
- **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.
- **NVR:** Acronym for Network Video Recorder. An NVR can be a PC-based or embedded system used for centralized management and storage for IP cameras, IP Domes and other DVRs.
- **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.
- **PTZ:** Acronym for Pan, Tilt, Zoom. PTZ cameras are motor driven systems that allow the camera to pan left and right, tilt up and down and zoom in and out.
- **USB:** Acronym for Universal Serial Bus. USB is a plug-and-play serial bus standard to interface devices to a host computer.

15.2 Troubleshooting

- **No image displayed on the monitor after the device is starting up normally.**

  Possible Reasons:

  a) No VGA or HDMI connections.

  b) Connection cable is damaged.

  c) Input mode of the monitor is incorrect.

  Steps:

  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.

  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.

  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.

  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:

  a) No HDD is installed in the device.

  b) The installed HDD has not been initialized.

  c) The installed HDD is not compatible with the device or is broken-down.

  Steps:

  1. Verify at least one HDD is installed in the device.

  1) If not, please install the compatible HDD.

  NOTE

  Please refer to the "Quick Operation 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".

  2. 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.

  3. 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.

  4. 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:

  a) The frame rate has not reached the real-time frame rate.

  Steps:

1. Check the parameters of Main Stream (Normal) and Main Stream (Event).

   Select "Menu > Record > Encoding > Record", and set the resolution of Main Stream (Event) the same as the one of Main Stream (Normal).
2. Verify the frame rate is real-time frame rate.

   Select "Menu > Record > Parameters > Record", and set the Frame rate to Full Frame.
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:

  a) Cable between the pickup and camera is not connected well; impedance mismatches or incompatible.

  b) The stream type is not set as "Video & Audio".

  Steps:

  1. Verify the cable between the pickup and camera is connected well; impedance matches and compatible.
  2. Verify the setting parameters are correct.

     Select "Menu > Record > Parameters > Record", and set the Stream Type as "Audio & Video".
  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:

  a) The frame rate is not the real-time frame rate.

  b) The DVR supports up to 16-channel synchronize playback at the resolution of 4CIF, if you want a 16-channel synchronize playback at the resolution of 720p, the frame extracting may occur, which leads to a slight stuck.

  Steps:

  1. Verify the frame rate is real-time frame rate.

     Select "Menu > Record > Parameters > Record", and set the Frame Rate to "Full Frame".
  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.
  3. Reduce the number of local playback channel.

     Select "Menu > Playback", and uncheck the checkbox of unnecessary channels.
  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.

- **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:

  a) The time setting of system is incorrect.

  b) The search condition is incorrect.

  c) The HDD is error or not detected.

  Steps:

  1. Verify the system time setting is correct.

     Select "Menu > Configuration > General > General", and verify the "Device Time" is correct.
  2. Verify the search condition is correct.

     Select "Playback", and verify the channel and time are correct.

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.

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.