# ATM Digital Video Recorder

User Manual

UD08845B

## User Manual

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### About this Manual

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

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

Please use this user manual under the guidance of professionals.

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## FCC Information

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

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

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1. This device may not cause harmful interference.

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

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

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

# Applicable Models

This manual is applicable to the models listed in the following table.

| Series | Model |
|---|---|
| ATM DVR | DS-8104AHQI-E4 |
|  | DS-8104AHQLI-E4 |
|  | iDS-8104AHQXLI-E4 |

# Symbol Conventions

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

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

## Safety Instructions

- Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.
- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region. Please refer to technical specifications for detailed information.
- Input voltage should meet both the SELV (Safety Extra Low Voltage) and the Limited Power Source with 100 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.
- Ensure to use the attached power adaptor only and not to change the adaptor randomly.

# Product Key Features

**General**

- Connectable to HDTVI, IP and analog cameras.
- Up to 8 IP cameras can be added.
- Connectable to third-party IP cameras that adopt ONVIF or custom protocol.
- PAL/NTSC adaptive video inputs.
- H.264 video compression with high reliability and superior definition.
- H.264+ compression improves encoding efficiency by up to 50% and reduces data storage costs.
- Supports dual-stream compression.
- The main stream supports up to 3 MP resolution.
- Independent configuration for each channel, including resolution, frame rate, bitrate, image quality, etc.
- The quality of the input and output video is configurable.
- Each channel supports two kinds of compression parameters, the normal continuous and event. Sub-stream can be configured locally.
- Encoding for both audio/video composite stream and video stream; audio and video synchronization during composite stream encoding.
- Supports channel-zero encoding to decrease the bandwidth requirement when viewing multiple cameras.
- Supports enabling H.264+ to ensure high video quality with lowered bit rate.
- One-key enable or disable H.264+.
- Supports command recording / capture triggered by ATM transaction.
- Supports real-time text overlay of transaction information including transaction card No., transaction amount, transaction behavior, etc., with the text position configurable.
- Provides multiple modes and protocols for ATM transaction information text overlay.
- Manually hide/display the transaction information in live view and playback.
- Supports custom ATM text overlay protocol by analyzing data package and transaction information.
- For iDS-8104AHQXLI-E4, four smart ATM modes are supported: panel mode, environment mode, human face mode, and safety cabin mode. You can set rules and alarm response actions once the configured rule is triggered.
- Night to day sensitivity, day to night sensitivity, and IR light brightness configurable for the connected analog cameras supporting these parameters.
- Watermark technology.

**Local Monitoring**

- 7-inch LCD display at 1024 × 600 resolution (available for DS-8104AHQLI-E4 and iDS-8104AHQXLI-E4 series)
- HDMI, VGA, CVBS and LCD display outputs.
- Simultaneous output of VGA and HDMI with up to 1080p resolution of VGA output and up to 4K (3840 × 2160) resolution of HDMI output.
- 1/4/6/8/9-division live view is supported, and the display sequence of screens is adjustable.
- Live view screen can be switched in group. Manual switch and auto-switch are provided and the auto-switch interval is configurable.
- Quick setting menu is provided for live view.
- The selected live view channel can be shielded.
- Motion detection, video tampering detection, video exception alarm and video loss alarm functions.
- Privacy mask.
- Several PTZ protocols supported; PTZ preset, patrol and pattern.
- Zooming in by clicking the mouse and PTZ tracing by dragging mouse.

**HDD Management**

- Up to 4 SATA hard disks can be connected, each disk with a maximum of 8 TB storage capacity.
- 8 network disks (8 NAS disks, 8 IP SAN disks or n NAS disks + m IP SAN disks (n+m ≤ 8)) can be connected.
- HDD group management.
- HDD property: redundancy, read-only, read/write (R/W).
- HDD quota management; different capacity can be assigned to different channel.
- Supports S.M.A.R.T. and bad sector detection.
- Supports RAID 0, RAID 1, RAID 5, and RAID 10.

**Recording, Capture and Playback**

- Provides new playback interface with easy and flexible operation.
- Holiday recording schedule configuration.
- Normal and event video encoding parameters.
- Multiple recording types: manual, continuous, alarm, motion, motion | alarm, motion & alarm, command, and smart ATM.
- 8 recording time periods with separated recording types.
- Pre-record and post-record for recording types including alarm, motion, motion | alarm, motion & alarm, command, and smart ATM; pre-record for continuous and manual recording.
- Searching and playing back record files by transaction card No., transaction amount, transaction behavior, etc.

- Searching and playing back record files by events (alarm input/motion detection/smart ATM alarm).
- Customization of tags, searching and playing back by tags.
- Locking and unlocking record files.
- Local redundant recording and capture.
- Searching and playing back record files and captured files by camera No., record / picture type, start time, end time, etc.
- Zooming in when playback.
- Reverse playback for multi-channel.
- Supports pause, fast forward, slow forward, skip forward, and skip backward when playback, locating by dragging the mouse.
- Up to 4-ch synchronous playback.
- Manual capture, continuous capture of video images and playback of captured pictures.

**Backup**

- Exports video data by USB device.
- Exports video data in batch
- Exports video clips when playback.
- Management and maintenance of backup devices.
- Support NTFS and FAT32 formatted backup devices.

**Alarm and Exception**

- Configurable arming time of alarm input/output.
- Alarms for video loss, motion detection, video tampering detection, video signal exception, input/output video standard mismatch, illegal login, network disconnected, IP conflicted, abnormal record/capture, HDD error, and HDD full, etc.
- Alarm triggers full screen monitoring, audible warning, notifying surveillance center, sending email and alarm output.
- Automatic restore when system is abnormal.

**Other Local Functions**

- Users can operate the device by front panel, mouse, remote control, and LCD display.
- Three-level user management; admin user is allowed to create many operating accounts and define their operating permission, which includes the limit to access any camera.
- Operation, alarm, exceptions and log recording and searching.
- Manually triggering and clearing alarms.
- Importing and exporting of device configuration file.
- Unlock pattern for device login for the *admin*.

- Clear-text password available.
- GUID file can be exported for password resetting.
- Multiple connected analog cameras supporting HDTVI signal can be upgraded simultaneously via DVR.

**Network Functions**

- 2 self-adaptive 10M/100M/1000M network interfaces, and three working modes are configurable: multi-address, load balance and network fault tolerance.
- IPv6 is supported.
- TCP/IP protocol, PPPoE, DHCP, DNS, DDNS, NTP, SADP, SMTP, SNMP, NFS and ISCSI are supported.
- TCP, UDP and RTP for unicast.
- Auto/Manual port mapping and automatically discovered by NAT.
- Remote web browser access by HTTPS ensures high security.
- Remote reverse playback by RTSP.
- Supports accessing by the platform by ONVIF.
- Remote search, playback, download, locking and unlocking the record files.
- Remote parameters setup; remote import/export of device parameters.
- Remote viewing of the device status, system logs and alarm status.
- Remote keyboard operation.
- Remote locking and unlocking of control panel and mouse.
- Remote HDD formatting and program upgrading.
- Remote system restart.
- RS-232, RS-485 transparent channel transmission.
- Alarm and exception information can be sent to the remote host
- Remotely start/stop recording.
- Remotely start/stop alarm output.
- Upgraded by remote FTP server is supported.
- Remote PTZ control.
- Remote JPEG capture.
- Two-way audio and voice broadcasting.
- Configurable output bandwidth limit.
- If DHCP is enabled, you can enable DNS DHCP or disable it and configure the Preferred DNS Server and Alternate DNS Server.
- Embedded WEB server.

**Development Scalability**

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

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# Chapter 1 Introduction

## 1.1 Front Panel

Refer to Figure 1-1 for the front panel of DS-8104AHQLI-E4 and iDS-8104AHQXLI-E4.

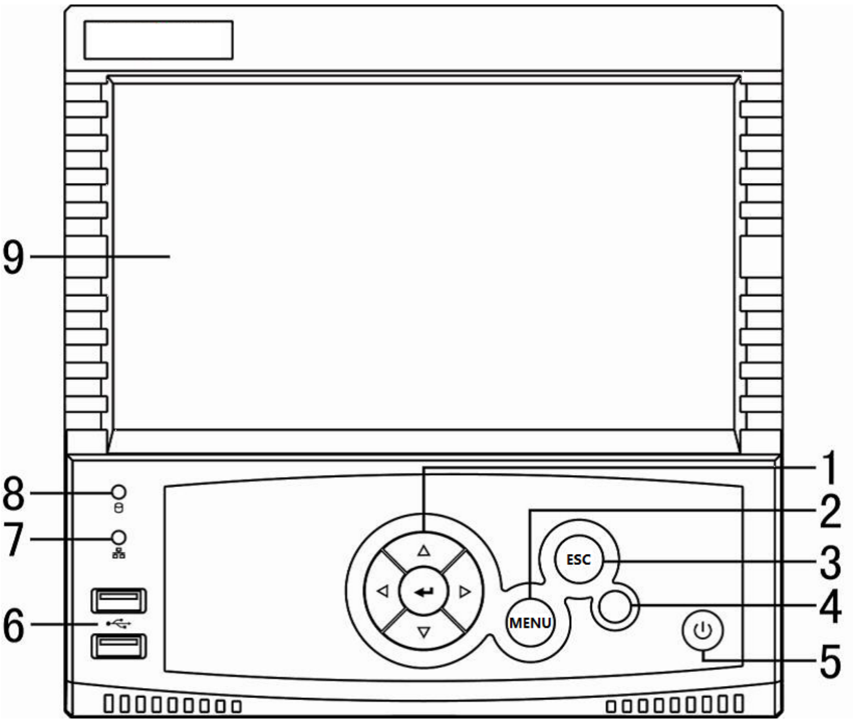


Figure 1-1 Front Panel

**NOTE**

There is no LCD screen for DS-8104AHQI-E4 series ATM DVR.

Table 1-1 Description of Front Panel

| No. | Name | Function Description |
|---|---|---|
| 1 | DIRECTION | The DIRECTION buttons are used to navigate between different fields and items in menus. |
| | | In the Playback mode, the Up and Down button is used to speed up and 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 | The ↵ button is used to 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. |
| | | In Auto-switch mode, it can be used to stop /start auto switch. |
| 2 | MENU | Access the main menu interface. |
| | | Switch the channels in PTZ control. |
| | | Select/deselect the HDD in HDD management interface. |
| 3 | ESC | Exit from the current interface. |
| | | Enter the PTZ control interface in live view mode. |
| 4 | IR Receiver | Receiver for IR remote control. |
| 5 | POWER<br>(Power indicator) | Turn on/off the device.<br>Power indicator stays red when the device is powered on but is not turned on.<br>Power indicator turns pink when the device is being turned on.<br>Power indicator stays blue when the device has been turned on. |
| 6 | USB Interface | Universal Serial Bus (USB) ports for additional devices such as USB mouse and USB Hard Disk Drive (HDD). |
| 7 | Tx/Rx | Tx/Rx indictor blinks blue when network connection is functioning properly. |
| 8 | HDD | HDD indicator blinks red when data is being read from or written to HDD normally and stays red when the HDD is abnormal. |
| 9 | LCD Screen | 7-inch LCD touch screen to display local menu and live view. |

## 1.2 IR Remote Control Operations

The device may also be controlled with the included IR remote control. Direct the remote control at the IR receiver on the front panel of DVR for the operations.

**NOTE**

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

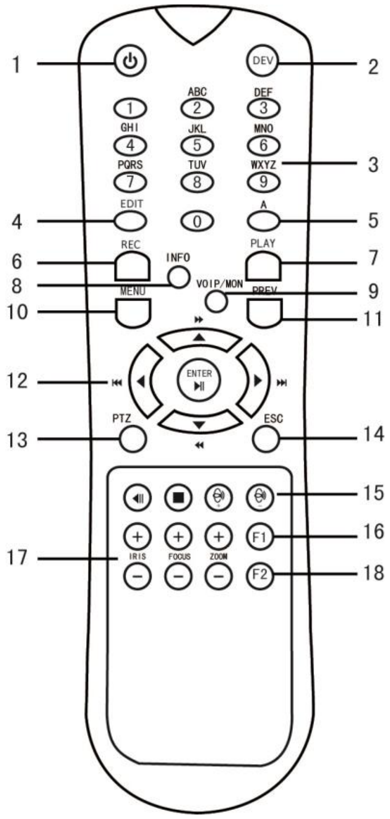


Figure 1-2 Remote Control

The keys on the remote control closely resemble the ones found on the front panel. Refer to Table 1-2, they include:

Table 1-2 Description of the IR Remote Control Buttons

| No. | Name | Description |
|---|---|---|
| 1 | POWER | Power on/off the device. |
| 2 | DEV | Enable/Disable Remote Control. |
| 3 | Alphanumeric Buttons: | Switch to the corresponding channel in Live view or PTZ Control mode. |
| | | Input numbers and characters in Edit mode. |
| | | Switch channels in Playback mode. |
| 4 | EDIT Button | Edit text fields. When editing text fields, it will also function as a Backspace button to delete the character in front of the cursor. |
| | | Check the checkbox or switch the ON/OFF status. |
| | | In PTZ Control mode, the button adjusts the iris of the camera. |
| | | In Playback mode, it can be used to generate video clips for backup. |

| | | |
|---|---|---|
| | | Enter/exit the folder of USB device and HDD. |
| 5 | A Button | Adjust focus in the PTZ Control menu. |
| | | It is also used to switch input methods (upper and lowercase alphabet, symbols and numeric input). |
| 6 | 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. |
| 7 | PLAY Button | The button is used to enter the Playback mode. |
| | | It is also used to auto scan in the PTZ Control menu. |
| 8 | INFO Button | Reserved for future usage. |
| 9 | VOIP/MON Button | Switch main and spot output. |
| | | In PTZ Control mode, it can be used to zoom out the image. |
| 10 | MENU Button | Press the button will help you 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/WIPER button will start wiper (if applicable). |
| | | In Playback mode, it is used to show/hide the control toolbar. |
| 11 | PREV Button | Switch single screen and multi-screen mode. |
| | | In PTZ Control mode, it is used to adjust the focus in conjunction with the A/FOCUS+ button. |
| 12 | DIRECTION/ENTER Buttons | The DIRECTION buttons are used to navigate between different fields and items in menus. |
| | | In the time/date editing mode: the UP button is used to add "1"; the DOWN button is used to reduce "1". |
| | | In the Live View mode: the UP button is used to switch the screen layout mode; the DOWN button is used to enter the Playback interface; the LEFT button is used to enter the Manual interface; the RIGHT button is used to go to the next screen for live view. |
| | | In the Playback mode: the UP button is used to speed up the playback; the DOWN button is used to slow down the playback; the |

| | | |
|---|---|---|
| | | LEFT button is used to jump 30s backward; the RIGHT button is used to jump 30s forward. |
| | | In PTZ control mode, the DIRECTION buttons are used to control the movement of PTZ camera. |
| | | The ENTER button is used to confirm the selection in menu mode. |
| | | The ENTER button is used to check the checkbox or switch the ON/OFF. |
| | | The ENTER button is used to play/pause the video in Playback mode or advance the video by a single frame in single-frame Playback mode. |
| | | The ENTER button is used to stop/start the auto switch in Auto-switch mode. |
| 13 | PTZ Button | Enter the PTZ Control mode. |
| | | In the PTZ Control mode, it is used to adjust the iris of the PTZ camera. |
| 14 | ESC Button | Back to the previous menu. |
| | | Enter the PTZ control interface in live view mode. |
| 15 | RESERVED | Reserved for future usage. |
| 16 | F1 Button | Select all items on the list when used in a list field. |
| | | In PTZ Control mode, it will turn on/off PTZ light (if applicable). |
| | | In Playback mode, it is used to switch play and reverse play. |
| 17 | PTZ Control Buttons | Buttons to adjust the iris, focus and zoom of a PTZ camera. |
| 18 | F2 Button | Cycle through tab pages. |
| | | In synchronous playback mode, it is used to switch channels. |

**Troubleshooting Remote Control:**

**NOTE**

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.

Step 1 Go into Menu > Configuration > General > More Settings by operating the front control panel or the mouse.

Step 2 Check and remember the DVR No. The default DVR No. is 255. This number valid for all IR remote controls.

Step 3 Press the DEV button on the remote control.

Step 4 Enter the DVR No. in step 2.

Step 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:

Step 1 Batteries are installed correctly and the polarities of the batteries are not reversed.

Step 2 Batteries are fresh and not out of charge.

Step 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:

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

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

The operation of the mouse:

Table 1-3 Description of the Mouse Control

| Name | Action | Description |
|---|---|---|
| **Left-Click** | **Single-Click** | Live view: Select channel and show the quick set menu.<br>Menu: Select and enter. |
| | **Double-Click** | Live view: Switch between single-screen and multi-screen. |
| | **Drag** | PTZ control: Wheeling.<br>Privacy mask and motion detection: Select target area.<br>Digital zoom-in: Drag and select target area.<br>Live view: Drag channel/time bar. |

| | | |
|---|---|---|
| **Right-Click** | **Single-Click** | Live view: Show menu.<br>Menu: Exit current menu to upper level menu. |
| **Scroll-Wheel** | **Scrolling up** | Live view: Previous screen.<br>Menu: Previous item. |
| | **Scrolling down** | Live view: Next screen.<br>Menu: Next item. |

## 1.4 Input Method Description

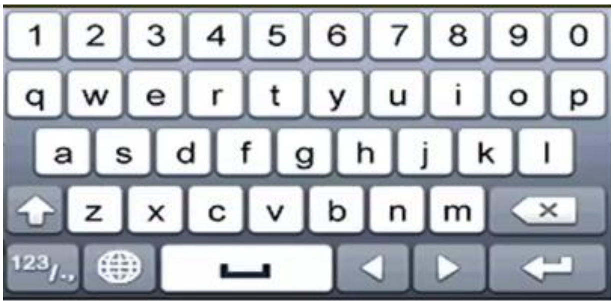


Figure 1-3 Soft Keyboard

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 | ↵ | Enter |
| #+= | Symbols | 🌐 | Reserved |

## 1.5 Rear Panel

Refer to Figure 1-4 for the rear panel of DS-8104AHQ(L)I-E4 and iDS-8104AHQXLI-E4.

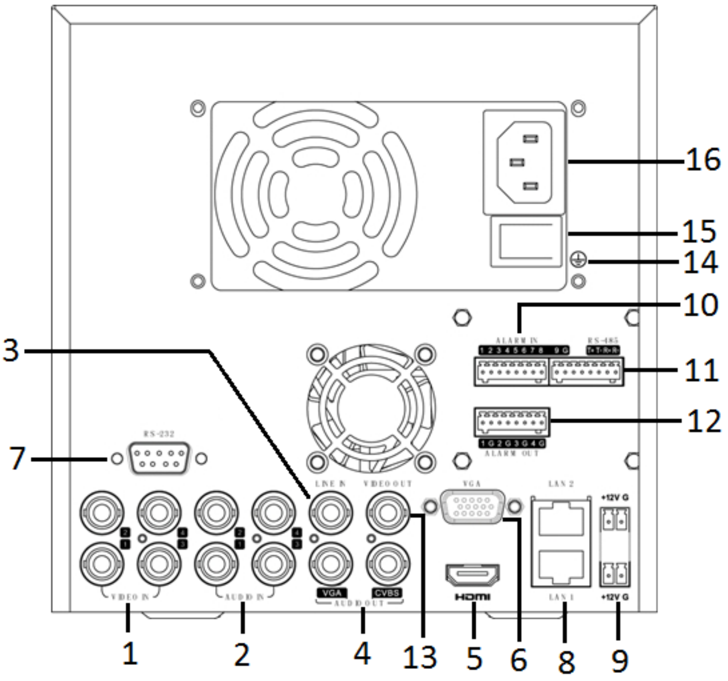


Figure 1-4 Rear Panel

Table 1-5 Description of Rear Panel

| No. | Item | Description |
|---|---|---|
| 1 | VIDEO IN | BNC connector for analog video input. |
| 2 | AUDIO IN | BNC connector for audio input. |
| 3 | LINE IN | BNC connector for two-way audio. |
| 4 | AUDIO OUT | BNC connector for audio output. |
| 5 | HDMI | HDMI video output connector. |
| 6 | VGA | DB15 connector for VGA output. Display local video output and menu. |
| 7 | RS-232 Interface | Connector for RS-232 devices. |
| 8 | LAN Interface | RJ45 10M/100M/1000M Ethernet interface. |
| 9 | DC Output | 12 VDC output. |
| 10 | ALARM IN | Connector for alarm input. |
| 11 | RS-485 Interface | Connector for RS-485 devices. |
| 12 | ALARM OUT | Connector for alarm output. |
| 13 | VIDEO OUT | BNC connector for analog video output. |
| 14 | GND | Ground |

| | | |
|---|---|---|
| 15 | Power Switch | Switch for turning on/off the device. |
| 16 | Power Supply | 100 to 240 VAC power supply. |

# Chapter 2 Getting Started

## 2.1 Starting Up and Shutting Down the DVR

***Purpose***

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

***Before you start***

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

**Starting up the DVR**

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

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

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

**Shutting down the DVR**

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

- **OPTION 1: Standard shutdown**

Step 1 Enter the Shutdown menu.

Menu > Shutdown

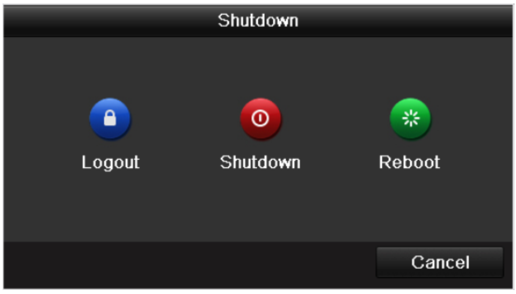


Figure 2-1 Shutdown Menu

Step 2 Select the **Shutdown** button.

Step 3 Click the **Yes** button.

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

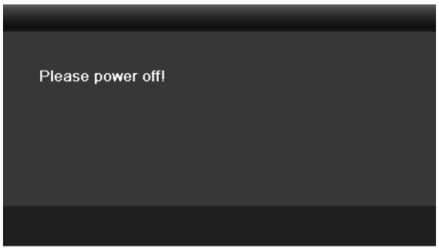

Please power off!

Figure 2-2 Shutdown Tips

**Rebooting the DVR**

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

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

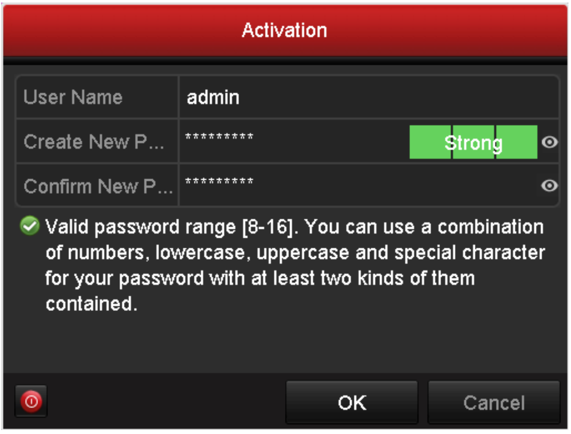
Step 2 Click the **Logout** button to log out or the **Reboot** button to reboot the DVR.

## 2.2 Activating the Device

***Purpose***

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

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



User Name admin

Create New P... ********* Strong

Confirm New P... *********

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

Figure 2-3 Settings Admin Password

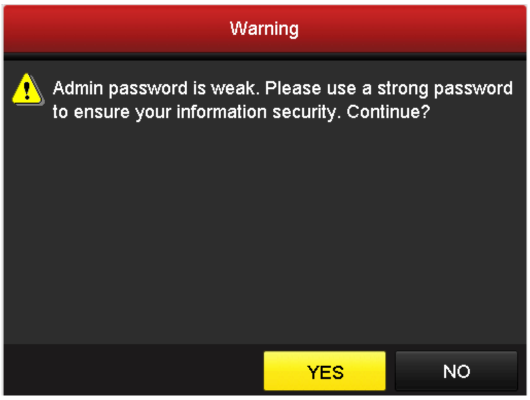
**WARNING**

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

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

**NOTE**

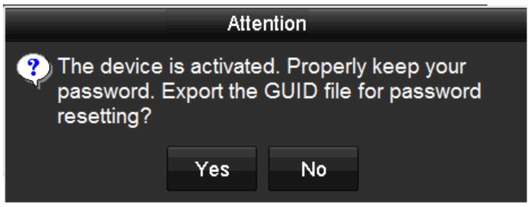
- Clear-text password is supported. Click the 👁 icon and you can see the clear text of the password. Click the icon again and the content of the password restores invisible.
- For the old version device, if you update it to the new version, the following dialog box will pop up once the device starts up. You can click **YES** and follow the wizard to set a strong password.



Admin password is weak. Please use a strong password to ensure your information security. Continue?

Figure 2-4 Warning

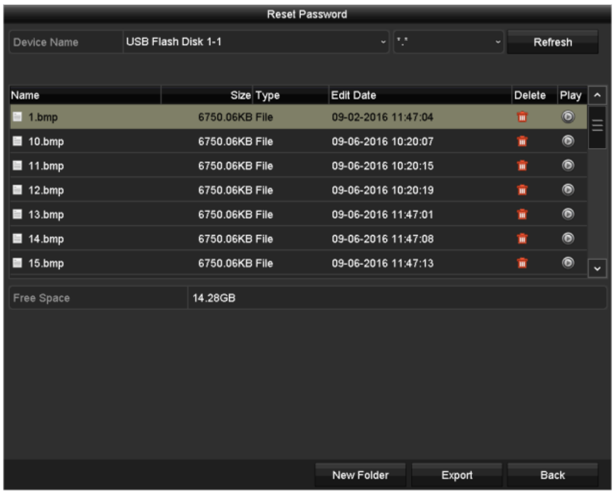
Step 3 After the device is activated, the Attention box pops up as below.



The device is activated. Properly keep your password. Export the GUID file for password resetting?

Figure 2-5 Attention

Step 4 (Optional) Click **Yes** to export GUID. The Reset Password interface pops up. Click **Export** to export GUID to the USB flash disk for password resetting.



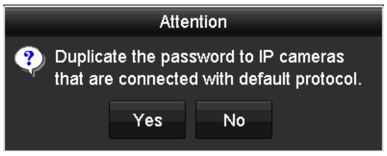
Device Name: USB Flash Disk 1-1 | *.*

| Name | Size | Type | Edit Date | Delete | Play |
|---|---|---|---|---|---|
| 1.bmp | 6750.06KB | File | 09-02-2016 11:47:04 | 🗑 | ⊙ |
| 10.bmp | 6750.06KB | File | 09-06-2016 10:20:07 | 🗑 | ⊙ |
| 11.bmp | 6750.06KB | File | 09-06-2016 10:20:15 | 🗑 | ⊙ |
| 12.bmp | 6750.06KB | File | 09-06-2016 10:20:19 | 🗑 | ⊙ |
| 13.bmp | 6750.06KB | File | 09-06-2016 11:47:01 | 🗑 | ⊙ |
| 14.bmp | 6750.06KB | File | 09-06-2016 11:47:08 | 🗑 | ⊙ |
| 15.bmp | 6750.06KB | File | 09-06-2016 11:47:13 | 🗑 | ⊙ |

Free Space: 14.28GB

Figure 2-6 Export GUID

Step 5 After exporting GUID, the Attention box pops up as below. Click **Yes** to duplicate the password or **No** to cancel it.



Attention

Duplicate the password to IP cameras that are connected with default protocol.

Figure 2-7 Duplicate the Password

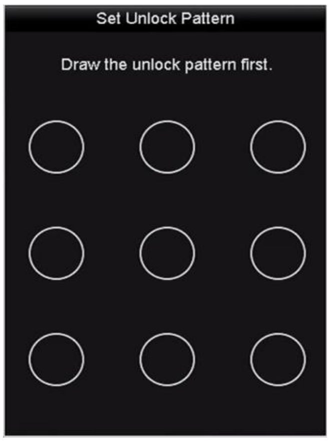
## 2.3 Using the Unlock Pattern for Login

***Purpose***

For the *admin*, you can configure the unlock pattern for device login.

### 2.3.1 Configuring the Unlock Pattern

After the device is activated, you can enter the following interface to configure the device unlock pattern.

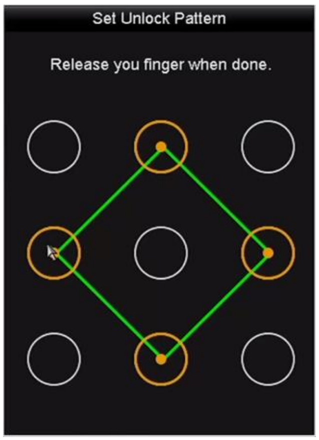


Set Unlock Pattern

Draw the unlock pattern first.

Figure 2-8 Set Unlock Pattern

Step 1 Use the mouse to draw a pattern among the 9 dots on the screen. Release the mouse when the pattern is done.



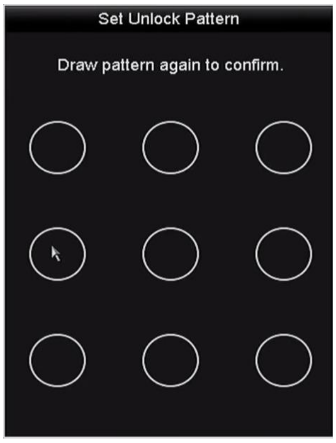
Release you finger when done.

Figure 2-9 Draw the Pattern

**NOTE**

- Connect at least 4 dots to draw the pattern.
- Each dot can be connected for once only.

Step 2 Draw the same pattern again to confirm it. When the two patterns match, the pattern is configured successfully.

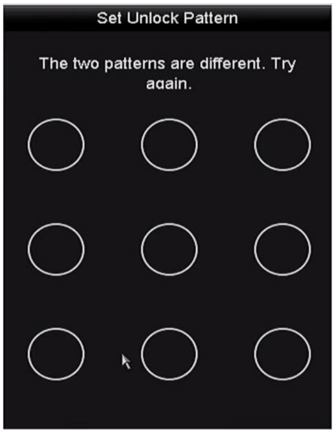


Draw pattern again to confirm.

Figure 2-10 Confirm the Pattern

**NOTE**

If the two patterns are different, you must set the pattern again.



The two patterns are different. Try again.

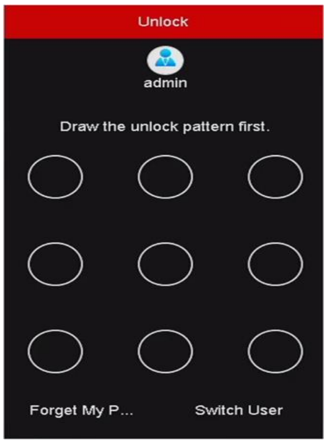
Figure 2-11 Reset the Pattern

## 2.3.2 Logging in via Unlock Pattern

**NOTE**

- Only the *admin* user has the permission to unlock the device.
- Please configure the pattern first before unlocking. Please refer to *Chapter 2.3.1 Configuring the Unlock Pattern*.

Step 1 Right click the mouse on the screen and select the menu to enter the interface.



Draw the unlock pattern first.

Figure 2-12 Draw the Unlock Pattern

Step 2 Draw the pre-defined pattern to unlock to enter the menu operation.

**NOTE**

- You can right click the mouse to log in via the normal mode.
- If you have forgotten your pattern, you can select the **Forget My Pattern** or **Switch User** option to enter the normal login dialog box.
- When the pattern you draw is different from the pattern you have configured, you should try again.
- If you have drawn the wrong pattern for 7 times, the account will be locked for 1 minute.

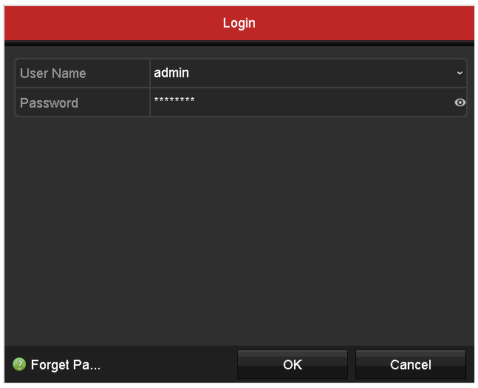
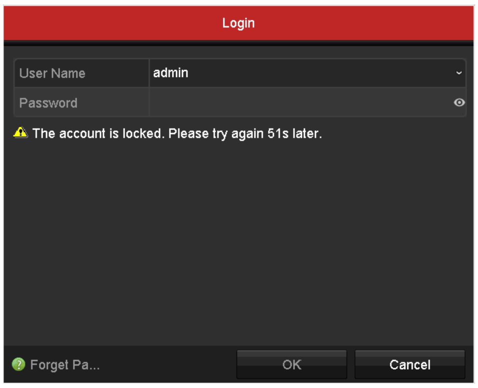


Figure 2-13 Normal Login Dialog Box



The account is locked. Please try again 51s later.

Figure 2-14 Lock the Account

# 2.4 Basic Configuration in Startup Wizard

## 2.4.1 Configuring the Signal Input Wizard

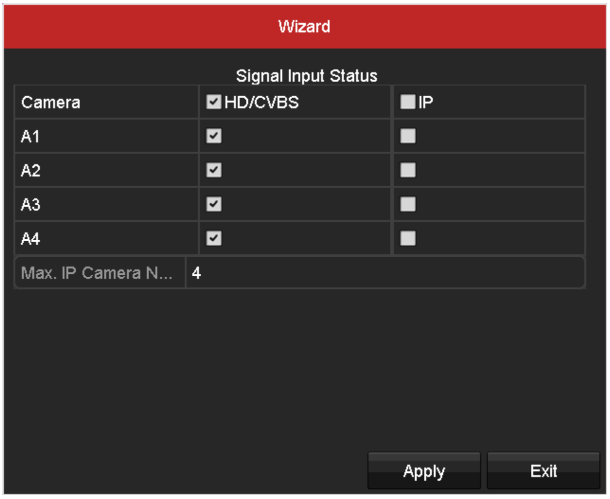
***Purpose***

You can configure the analog and IP signal input types and the connectable maximum IP camera number.

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

Step 1 Check the checkbox to select different signal input types: HD/CVBS and IP.

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



Signal Input Status

| Camera | ☑ HD/CVBS | ☐ IP |
|---|---|---|
| A1 | ☑ | ☐ |
| A2 | ☑ | ☐ |
| A3 | ☑ | ☐ |
| A4 | ☑ | ☐ |

Max. IP Camera N... 4

Figure 2-15 Configure Signal Input Type

**NOTE**

For detailed information of signal input, you can refer to *Chapter 2.9 Configuring Signal Input Channel* for reference.

## 2.4.2 Using the Wizard for Basic Configuration

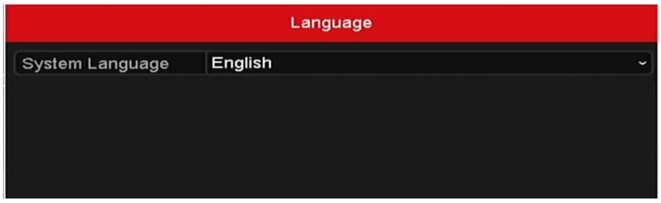
***Purpose***

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

**Selecting the language:**

Step 1 Select the language from the drop-down list.

Step 2 Click **Apply** button.

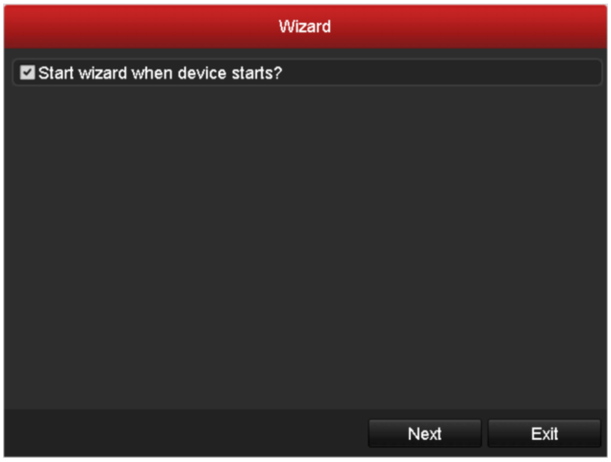


System Language: English

Figure 2-16 Language Configuration

**Operating the Setup Wizard:**

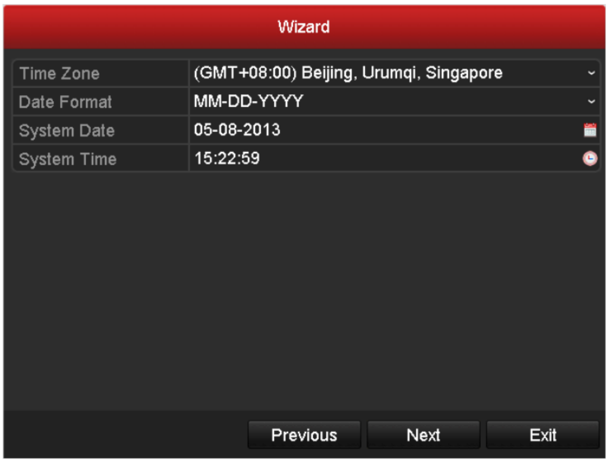
Step 1 The **Start Wizard** can walk you through some important settings of the device. If you don’t want to use the **Start Wizard** at that moment, click **Exit**. You can also choose to use the **Start Wizard** next time by leaving the “Start wizard when device starts?” checkbox checked.



☑ Start wizard when device starts?

Figure 2-17 Start Wizard Interface

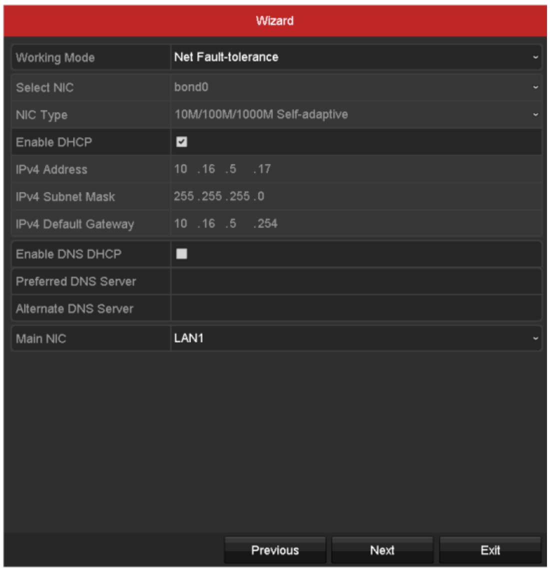
Step 2 Click **Next** button to enter the **Date and Time Settings** interface.



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

Figure 2-18 Date and Time Settings

Step 3 After the time settings, click **Next** button to enter the **General Network Setup Wizard** interface as shown below.



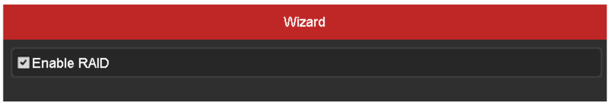
Working Mode: Net Fault-tolerance
Select NIC: bond0
NIC Type: 10M/100M/1000M Self-adaptive
Enable DHCP: ☑
IPv4 Address: 10 .16 .5 .17
IPv4 Subnet Mask: 255 .255 .255 .0
IPv4 Default Gateway: 10 .16 .5 .254
Enable DNS DHCP: ☐
Preferred DNS Server:
Alternate DNS Server:
Main NIC: LAN1

Figure 2-19 General Network Configuration

**NOTE**

If DHCP is enabled, you can check the checkbox of **Enable DNS DHCP** or uncheck it and edit the **Preferred DNS Server** and **Alternate DNS Server**.

Step 4 Click **Next** button and you can enter the RAID configuration interface. Check the checkbox of **Enable RAID** to take this function into effect.

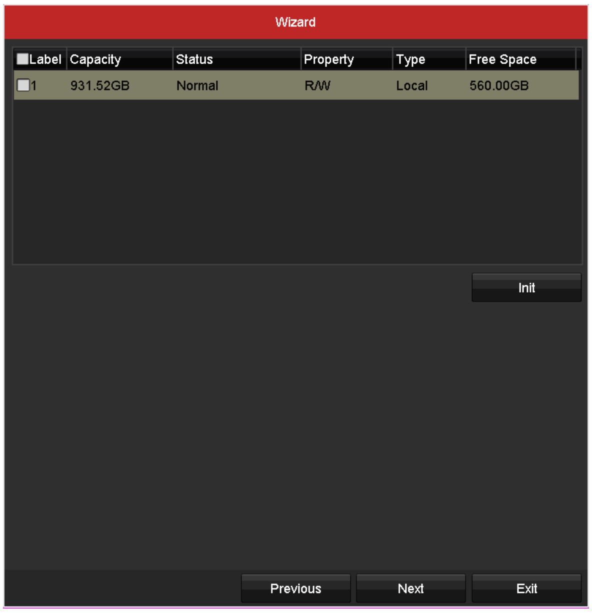


☑ Enable RAID

Figure 2-20 RAID Configuration

Step 5 Click **Next** button to enter the **HDD Management** interface as shown below.

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



| ☐Label | Capacity | Status | Property | Type | Free Space |
|---|---|---|---|---|---|
| ☐1 | 931.52GB | Normal | R/W | Local | 560.00GB |

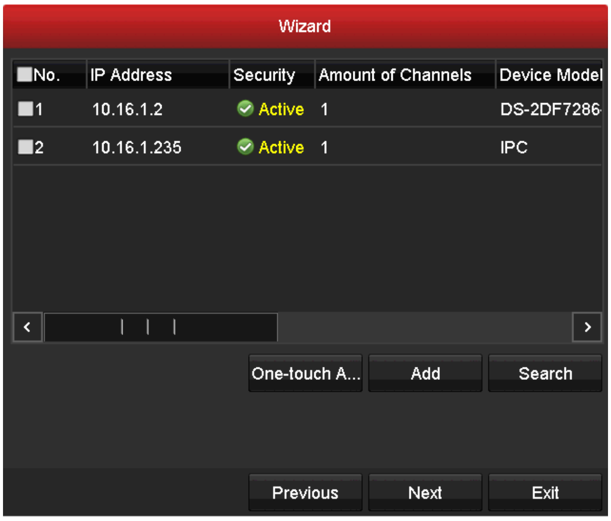
Figure 2-21 HDD Management

Step 6 Click **Next** button to enter the **IP Camera Management** interface.

Step 7 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 **Add** to add the camera.



| ☐No. | IP Address | Security | Amount of Channels | Device Model |
|---|---|---|---|---|
| ☐1 | 10.16.1.2 | ✓ Active | 1 | DS-2DF7286 |
| ☐2 | 10.16.1.235 | ✓ Active | 1 | IPC |

Figure 2-22 IP Camera Management

Step 8 After finishing IP Camera settings, click **Next** to enter the **Record Settings** interface.

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

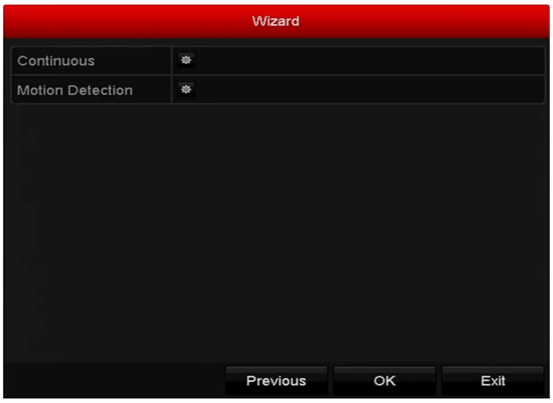


Figure 2-23 Record Settings

Step 9 Click **OK** to complete the wizard settings.

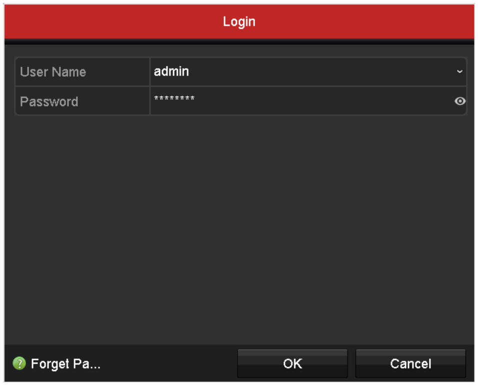
# 2.5 Login and Logout

## 2.5.1 User Login

***Purpose***

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

Step 1 Select the **User Name** in the drop-down list.



User Name: admin

Password: ********

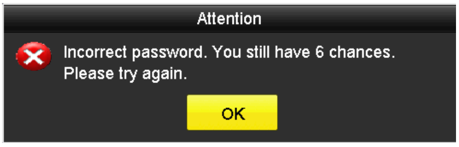
Figure 2-24 Login Interface

Step 2 Input the **Password**.

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

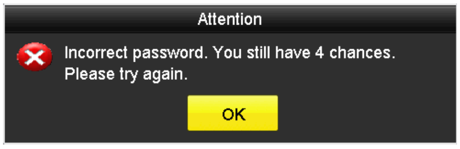
**NOTE**

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



Incorrect password. You still have 6 chances.
Please try again.

Figure 2-25 User Account Protection for the Admin



Incorrect password. You still have 4 chances.
Please try again.

Figure 2-26 User Account Protection for the Operator

## 2.5.2 User Logout

***Purpose***

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

Step 1 Enter the **Shutdown** menu.

Menu > Shutdown

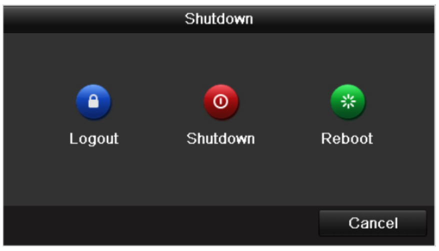


Figure 2-27 Logout

Step 2 Click **Logout**.

**NOTE**

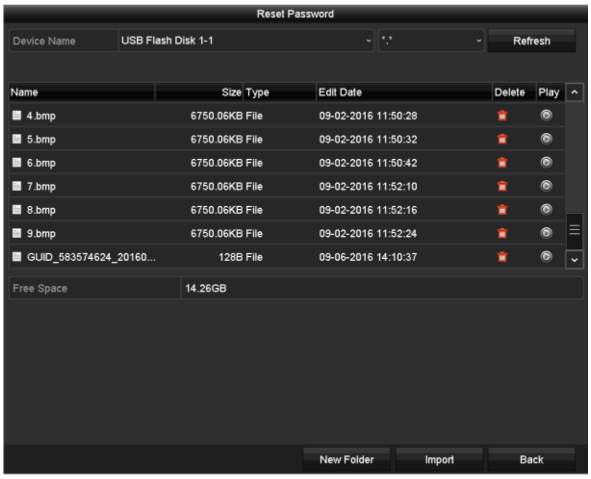
After you have logged out of the system, menu operation on the screen is invalid. It is required to input a user name and password to unlock the system.

# 2.6 Resetting Your Password

***Purpose***

When you forget the password of the *admin*, you can reset the password by importing the GUID file. The GUID file must be exported and saved in the local USB flash disk after you have activated the device (refer to *Chapter 2.2 Activating the Device*).

Step 1 On the user login interface, click **Forget Password** to pop up the Import GUID interface.



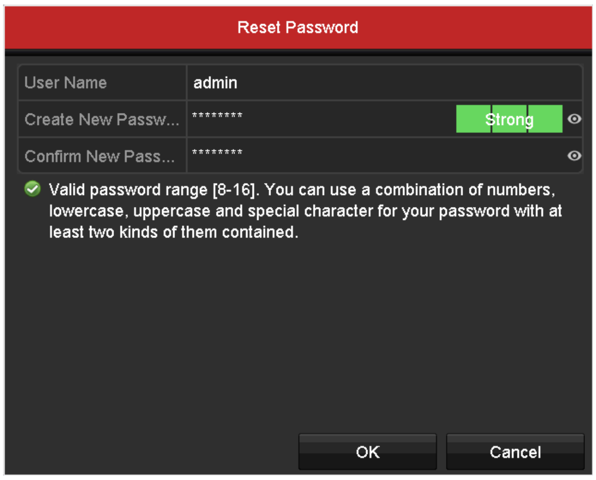
Device Name: USB Flash Disk 1-1 | *.*

| Name | Size | Type | Edit Date |
|---|---|---|---|
| 4.bmp | 6750.06KB | File | 09-02-2016 11:50:28 |
| 5.bmp | 6750.06KB | File | 09-02-2016 11:50:32 |
| 6.bmp | 6750.06KB | File | 09-02-2016 11:50:42 |
| 7.bmp | 6750.06KB | File | 09-02-2016 11:52:10 |
| 8.bmp | 6750.06KB | File | 09-02-2016 11:52:16 |
| 9.bmp | 6750.06KB | File | 09-02-2016 11:52:24 |
| GUID_583574624_20160... | 128B | File | 09-06-2016 14:10:37 |

Free Space: 14.26GB

Figure 2-28 Import GUID

Step 2 Select the GUID file from the USB flash disk and click **Import** button to pop up the Reset Password interface.



User Name: admin

Create New Passw...: ******** Strong

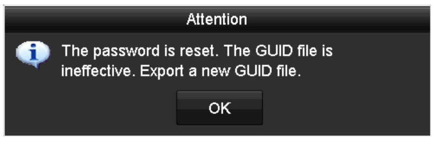
Confirm New Pass...: ********

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

Figure 2-29 Reset Password

Step 3 Input the new password and confirm the password.

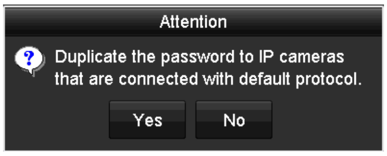
Step 4 Click **OK** to save the new password. Then the Attention box pops up as shown below.



The password is reset. The GUID file is ineffective. Export a new GUID file.

Figure 2-30 GUID File Imported

Step 5 Click **OK** and the Attention box as below pops up to remind you to duplicate the password of the device to IP cameras that are connected with default protocol. Click **Yes** to duplicate the password or **No** to cancel it.



Duplicate the password to IP cameras that are connected with default protocol.

Figure 2-31 Duplicate the Password

**NOTE**

- If you want to retrieve the password when you forget it, you must export the GUID file first.
- Once the password is reset, the GUID file will be invalid. You can export a new GUID file. Refer to *Chapter 17.5.3 Editing a User* for reference.

# 2.7 Adding and Connecting the IP Cameras

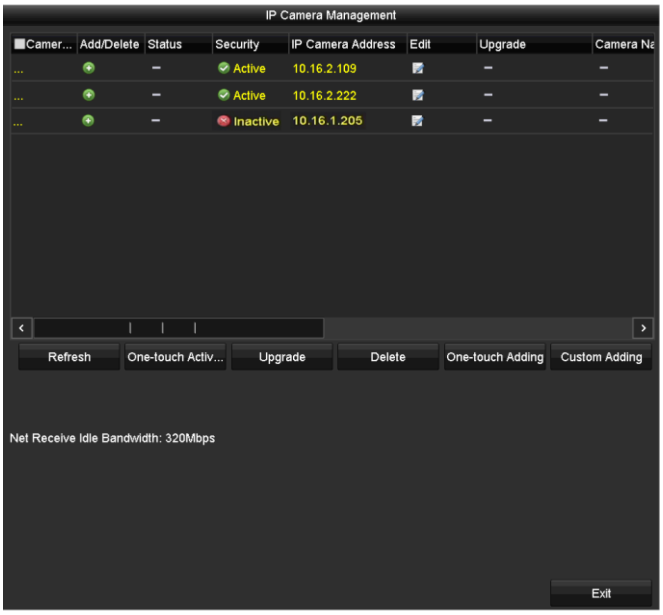
## 2.7.1 Activating the IP Camera

***Purpose***

Before adding the camera, make sure the IP camera to be added is in active status.

Step 1 Select the **Add IP Camera** option from the right-click menu in live view mode or click Menu> Camera> IP 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.

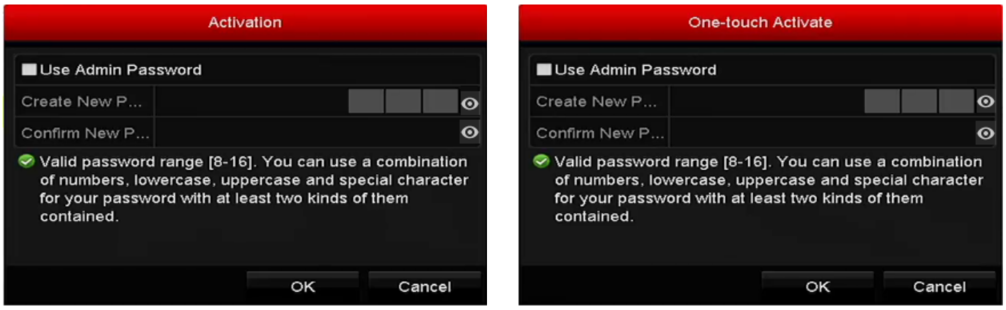


| ☐Camer... | Add/Delete | Status | Security | IP Camera Address | Edit | Upgrade | Camera Na |
|---|---|---|---|---|---|---|---|
| ... | ⊕ | – | ✓ Active | 10.16.2.109 | ✎ | – | – |
| ... | ⊕ | – | ✓ Active | 10.16.2.222 | ✎ | – | – |
| ... | ⊕ | – | ● Inactive | 10.16.1.205 | ✎ | – | – |

Net Receive Idle Bandwidth: 320Mbps

Figure 2-32 IP Camera Management Interface

Step 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.



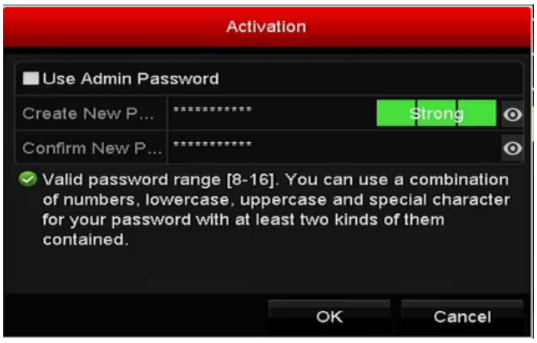
Valid password range [8-16]. You can use a combination of numbers, lowercase, uppercase and special character for your password with at least two kinds of them contained.

Figure 2-33 Activate the Camera

Step 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.



Create New P... ************

Confirm New P... ************

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

Figure 2-34 Set New Password

**WARNING**

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

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

## 2.7.2 Adding the Online IP Camera

***Purpose***

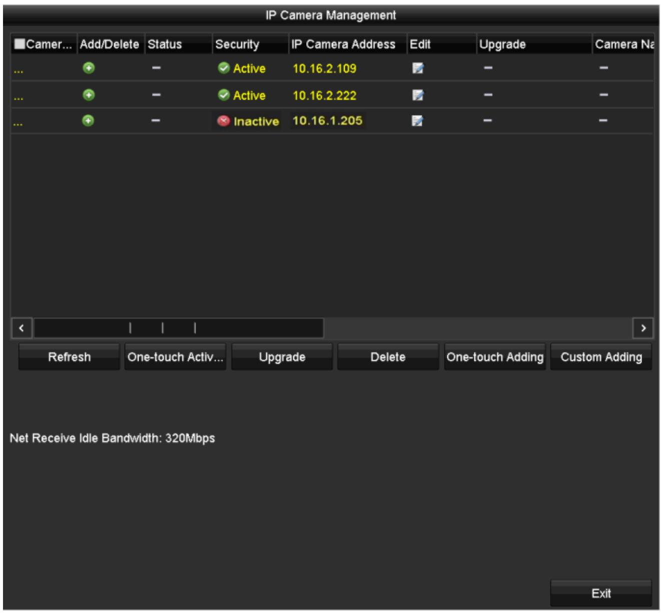
Before you can get a live view or record of the video, you should add the network cameras to the connection list of the device.

***Before you start***

Ensure the network connection is valid and correct. For detailed checking and configuring of the network, please see *Chapter 12 Network Settings.*

- **OPTION 1:**

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



| ☐Camer... | Add/Delete | Status | Security | IP Camera Address | Edit | Upgrade | Camera Na |
|---|---|---|---|---|---|---|---|
| ... | ⊕ | – | ✓ Active | 10.16.2.109 | ✎ | – | – |
| ... | ⊕ | – | ✓ Active | 10.16.2.222 | ✎ | – | – |
| ... | ⊕ | – | ✗ Inactive | 10.16.1.205 | ✎ | – | – |

Net Receive Idle Bandwidth: 320Mbps

Figure 2-35 IP Camera Management Interface

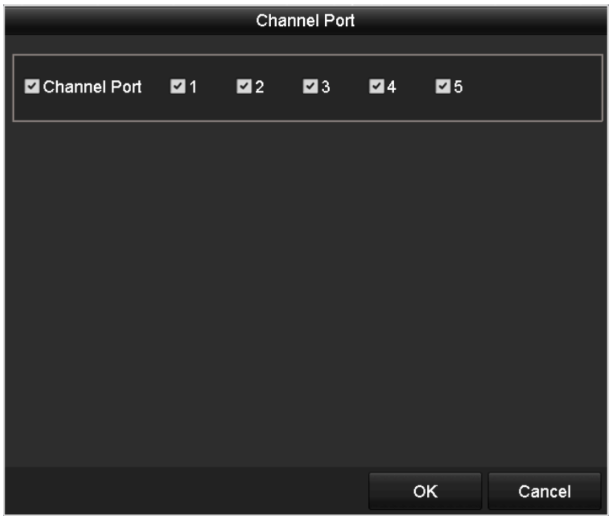
Step 2 The online cameras with same network segment will be detected and displayed in the camera list.

Step 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.

Step 4 (For the encoders with multiple channels only) check the checkbox of Channel Port in the pop-up window, as shown in the following figure, and click **OK** to add multiple channels.

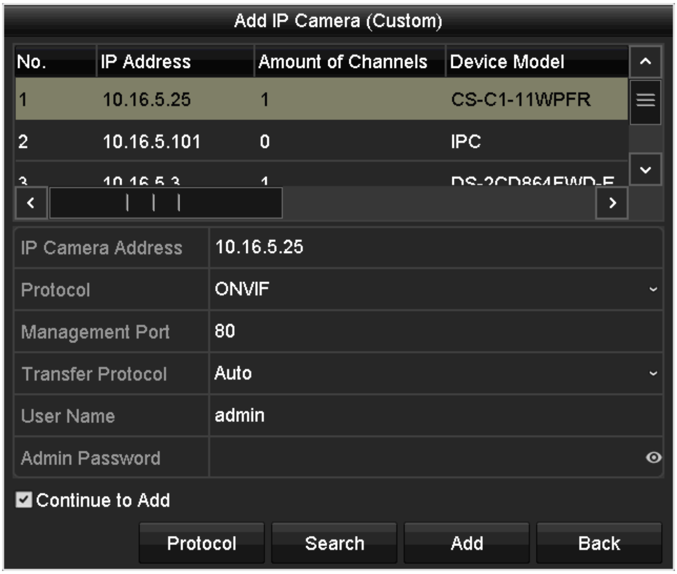


☑ Channel Port ☑ 1 ☑ 2 ☑ 3 ☑ 4 ☑ 5

Figure 2-36 Select Multiple Channels

- **OPTION 2:**

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



| No. | IP Address | Amount of Channels | Device Model |
|---|---|---|---|
| 1 | 10.16.5.25 | 1 | CS-C1-11WPFR |
| 2 | 10.16.5.101 | 0 | IPC |
| 3 | 10.16.5.3 | 1 | DS-2CD864FWD-E |

| | |
|---|---|
| IP Camera Address | 10.16.5.25 |
| Protocol | ONVIF |
| Management Port | 80 |
| Transfer Protocol | Auto |
| User Name | admin |
| Admin Password | |

☑ Continue to Add

Figure 2-37 Custom Adding IP Camera Interface

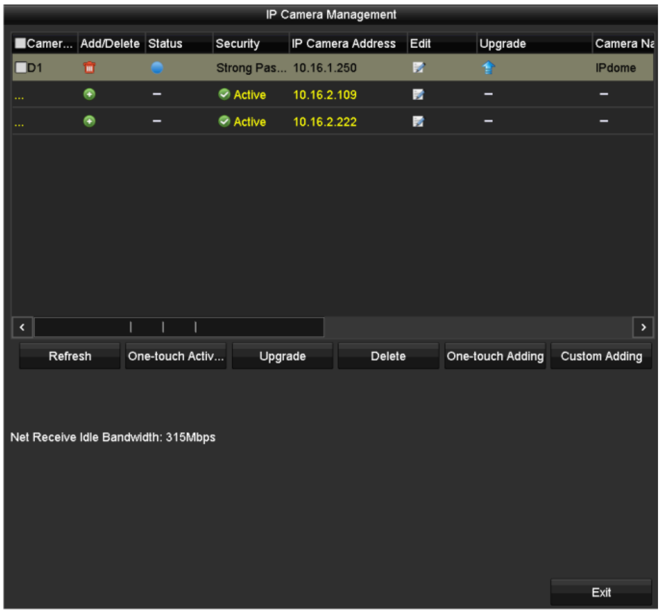
Step 2 You can edit the IP address, protocol, management port, and other information of the IP camera to be added.

**NOTE**

- If the IP camera to add has not been actiavated, you can activate it from the IP camera list on the **IP Camera Management** interface.
- You can select Custom 1-16 as the protocol. Then the **Management Port** and **Transfer Protocol** are not configurable. Input the **User Name** and **Admin Password** to add.

Step 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 risky password.



IP Camera Management

| ☐Camer... | Add/Delete | Status | Security | IP Camera Address | Edit | Upgrade | Camera Na |
|---|---|---|---|---|---|---|---|
| ☐D1 | 🗑 | ● | Strong Pas... | 10.16.1.250 | ✎ | ⬆ | IPdome |
| ... | ⊕ | – | ✓ Active | 10.16.2.109 | ✎ | – | – |
| ... | ⊕ | – | ✓ Active | 10.16.2.222 | ✎ | – | – |

Net Receive Idle Bandwidth: 315Mbps

Figure 2-38 Successfully Added IP Cameras

Please refer to specifications for the number of connectable IP cameras.

Table 2-1 Explanation of the Icons

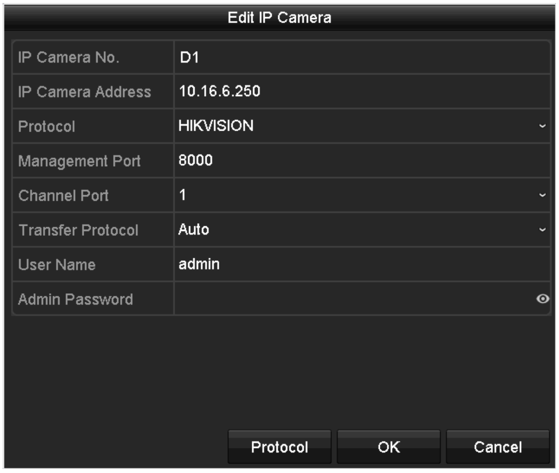
| Icon | Explanation | Icon | Explanation |
|---|---|---|---|
| ✎ | Edit basic parameters of the camera | ⊕ | Add the detected IP camera. |
| ⚠ | The camera is disconnected; You can click the icon to get the exception information of camera. | 🗑 | Delete the IP camera |
| ▶ | Play the live video of the connected camera. | ⚙ | Advanced settings of the camera. |
| ⬆ | Upgrade the connected IP camera. | **Security** | Shows the security status of the camera to be active/inactive or the password strength (strong/medium/weak/risky) |

## 2.7.3 Editing the Connected IP Camera

***Purpose***

After the adding of the IP cameras, the basic information of the camera is listed on the interface, and you can configure the basic settings of the IP cameras.

Step 1 Click the 📝 icon to edit the parameters. You can edit the IP address, protocol and other parameters.



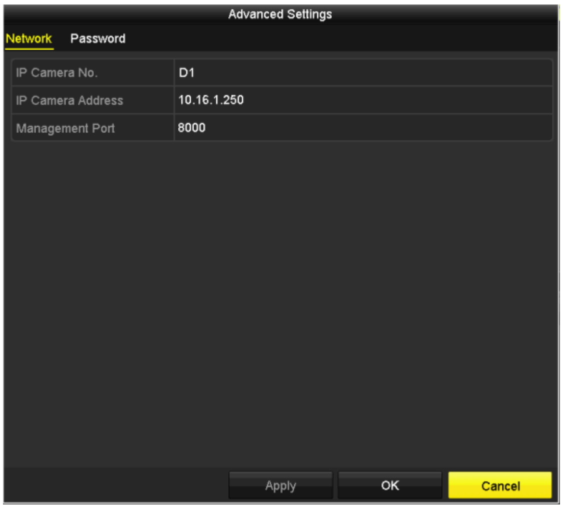
| | |
|---|---|
| IP Camera No. | D1 |
| IP Camera Address | 10.16.6.250 |
| Protocol | HIKVISION |
| Management Port | 8000 |
| Channel Port | 1 |
| Transfer Protocol | Auto |
| User Name | admin |
| Admin Password | |

Figure 2-39 Edit IP Camera

**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 drop-down list.

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

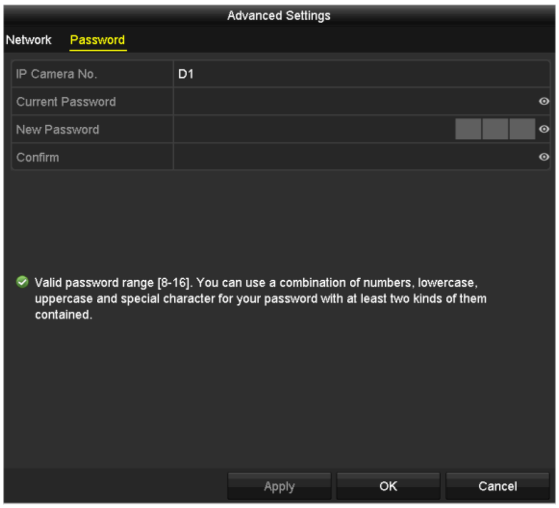
Step 3 Drag the horizontal scroll bar to the right side and click the ⚙ icon to edit the advanced parameters.



| | |
|---|---|
| IP Camera No. | D1 |
| IP Camera Address | 10.16.1.250 |
| Management Port | 8000 |

Figure 2-40 Network Configuration of the Camera

Step 4 You can edit the network information and the password of the camera.



IP Camera No. D1

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

Figure 2-41 Password Configuration of the Camera

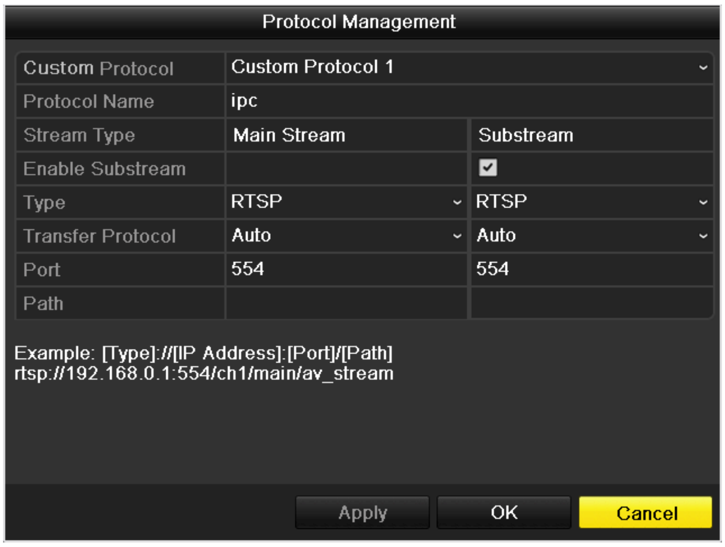
Step 5 Click **OK** to save the settings and exit the interface.

## 2.8 Configuring Custom Protocols

***Purpose***

Custom protocols can be set for the network cameras which are not configured with the standard protocols.

Step 1 Click **Protocol** on the Custom Adding interface to enter the Protocol Management interface.



| | | |
|---|---|---|
| Custom Protocol | Custom Protocol 1 | |
| Protocol Name | ipc | |
| Stream Type | Main Stream | Substream |
| Enable Substream | | ☑ |
| Type | RTSP | RTSP |
| Transfer Protocol | Auto | Auto |
| Port | 554 | 554 |
| Path | | |

Example: [Type]://[IP Address]:[Port]/[Path]
rtsp://192.168.0.1:554/ch1/main/av_stream

Figure 2-42 Protocol Management

Step 2 Select a custom protocol from the drop-down list, and configure its corresponding parameters.

- **Protocol Name**: Edit the name for the custom protocol.

- **Enable Sub-stream**: If the network camera does not support sub-stream or the sub-stream is not needed, leave the checkbox empty.
- **Type**: The network camera adopting custom protocol must support getting stream through standard RTSP.
- **Transfer Protocol**: Select the transfer protocol for the custom protocol.
- **Port**: Set the port No. for the custom protocol.
- **Path**: Set the resource path for the custom protocol. E.g., ch1/main/av_stream.

**NOTE**

Before customizing the protocol for the network camera, you have to contact the manufacturer of the network camera to consult the URL (uniform resource locator) for getting main stream and sub-stream.

***Example***: The format of the URL is: *[Type]://[IP Address of the network camera]:[Port]/[Path]. E.g., rtsp://192.168.1.55:554/ch1/main/av_stream*.

Step 3 Click **Apply** to save the settings and click **OK** to exit.

After added successfully, the custom protocol will be displayed in the drop-down list of protocol on the Custom Adding interface.

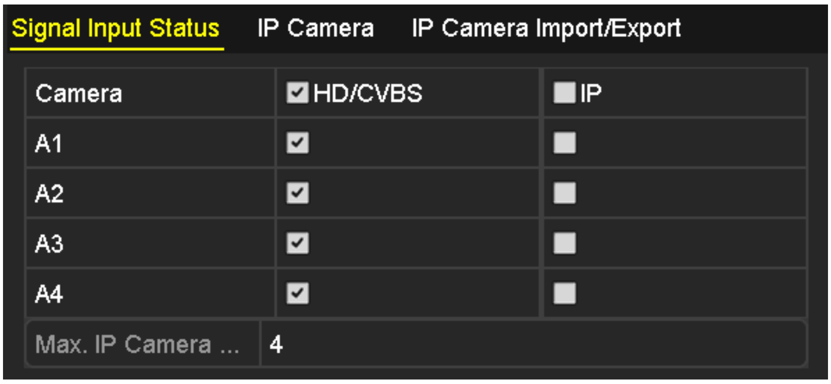
## 2.9 Configuring Signal Input Channel

***Purpose***

You can configure the analog and IP signal input types and the connectable maximum IP camera number.

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

Menu > Camera > Signal Input Status



| Camera | ☑ HD/CVBS | ☐ IP |
|---|---|---|
| A1 | ☑ | ☐ |
| A2 | ☑ | ☐ |
| A3 | ☑ | ☐ |
| A4 | ☑ | ☐ |
| Max. IP Camera ... | 4 | |

Figure 2-43 View Signal Input Type

Step 2 Check the checkbox to select different signal input types: HD/CVBS and IP.

If you select HD/CVBS, the analog signal inputs can be connected randomly for the selected channel. If you select IP, IP camera can be connected for the selected channel.

Step 3 View the **Max. IP Camera Number**.

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

**NOTE**

Disabling one analog channel will add one IP channel. Up to 8 IP cameras can be added.

# Chapter 3 Live View

## 3.1 Introduction of Live View

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

**Live View Icons**

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

Table 3-1 Description of Live View Icons

| Icons | Description |
|---|---|
| 🔔 | Alarm (video loss, tampering, motion detection, VCA or sensor alarm) |
| ⏺ | Record (manual record, schedule record, motion detection or alarm triggered record) |
| 🔔⏺ | Alarm & Record |
| ⚠ | Event/Exception (motion detection, sensor alarm or exception information. For details, see *Chapter 8.6 Handling Exceptions.*) |
| 🏠 | Right-click Menu (Use the mouse to click the icon or tap the icon on the LCD screen, and then the right-click menu will be displayed.) |

## 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.

- **Start 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.
- **Add IP Camera**: the shortcut to the IP camera management interface.
- **Output Mode:** select the output mode to Standard, Bright, Gentle or Vivid.
- **Playback:** play back the recorded videos for current day.
- **Aux/Main Monitor:** 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.

  For DS-8104AHQLI-E4 and iDS-8104AHQXLI-E4, the main output priority is HDMI/VGA > LCD. For DS-8104AHQI-E4, the main output is HDMI/VGA. The priority relationship is shown as Table 3-2.

Table 3-2 Priorities of Outputs

| Model | HDMI/VGA | CVBS | Main output | Auxiliary output |
|---|---|---|---|---|
| DS-8104AHQLI-E4/iDS-8104AHQXLI-E4 | √ | √/× | HDMI/VGA | LCD |
| | × | √/× | LCD | HDMI/VGA |
| DS-8104AHQI-E4 | √ | √/× | HDMI/VGA | |
| | × | √/× | HDMI/VGA | |

**NOTE**

- **√** means the interface is in use, **×** means the interface is out of use or the connection is invalid.
- The HDMI, VGA and main CVBS can be used at the same time.
- The main CVBS output does not support menu display.

- **Display/Hide Transaction Information**: display/hide the transaction information including the transaction card No., transaction amount, transaction behavior on the live view window.

## 3.2.1 Using the Mouse in Live View

You can refer to Table 3-4 for the description of mouse operation in live view mode.

Table 3-3 Mouse Operation in Live View

| Name | Description |
|---|---|
| Menu | Enter the main menu of the system by right-clicking the mouse. |
| Single Screen | Switch to the single full screen by choosing channel number from the drop-down list. |
| Multi-Screen | Adjust the screen layout by selecting from the drop-down list. |
| Previous Screen | Switch to the previous screen. |
| Next Screen | Switch to the next screen. |
| Start/Stop Auto-Switch | Enable/disable the auto-switch of the screens.<br>**NOTE**<br>The *dwell time* of the live view configuration must be set before using **Start Auto-Switch**. |
| Start Recording | Start recording of all channels, Continuous Record and Motion Detection Record are selectable from the drop-down list. |
| Add IP Camera | A shortcut to enter the IP camera management interface. |
| Playback | Enter the playback interface and start playing back the video of the selected channel immediately. |
| PTZ Control | A shortcut to enter the PTZ control interface of the selected camera. |
| Output Mode | Output Mode is configurable with Standard, Bright, Gentle and Vivid options. |
| Aux Monitor | Switch to the auxiliary output mode and the operation for the main output is disabled.<br>**NOTE**<br>If you enter Aux monitor mode and the Aux monitor is not connected, the mouse operation is disabled. You need to switch back to the Main output with the F1 button on front panel or **VOIP/MON** button on IR remote control and then press the Enter button. |

| | |
|---|---|
| Display/Hide Transaction Information | Enable/disable the overlay of transaction information. |

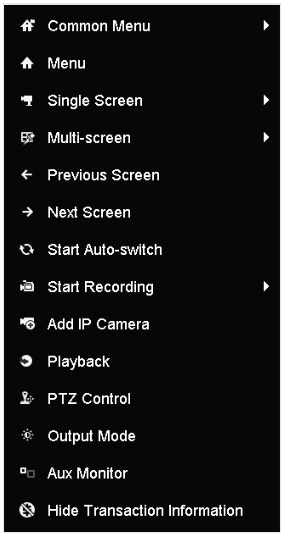


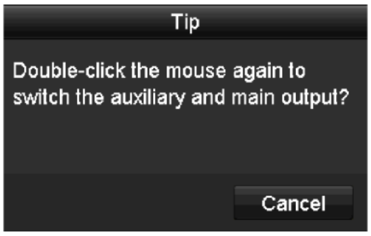
Figure 3-1 Right-Click Menu

### 3.2.2 Switching Main/Aux Output

***Purpose***

For DS-8104AHQLI-E4 and iDS-8104AHQXLI-E4, you can switch the main and auxiliary output.

Step 1 Use the mouse wheel to double-click on the HDMI/VGA output screen, and the following message box pops up.


Tip

Double-click the mouse again to switch the auxiliary and main output?

Figure 3-2 Switch Main and Aux Output

Step 2 Use the mouse wheel to double-click on the screen again to switch to the aux output, or click **Cancel** to cancel the operation.

Step 3 Select the **Menu Output Mode** to others from the right-click menu on the monitor.

Step 4 On the pop-up message box, click **Yes** to reboot the device to enable the selected menu output as the main output.

**NOTE**

You can select the **Menu Output Mode** under Menu>Configuration>General>More Settings to **Auto**, **HDMI/VGA** and **LCD** (for DS-8104AHQLI-E4 and iDS-8104AHQXLI-E4) or **Auto**, and **HDMI/VGA** (for DS-8104AHQI-E4), and then reboot the device to switch the main output.

### 3.2.3 Quick Setting Toolbar in Live View Mode

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

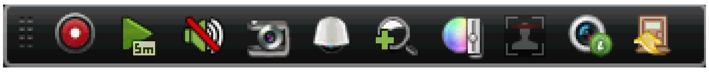


Figure 3-3 Quick Setting Toolbar

You can refer to Table 3-5 for the description of Quick Setting Toolbar icons.

Table 3-4 Description of Quick Setting Toolbar Icons

| Icons | Description | Icons | Description | Icons | Description |
|---|---|---|---|---|---|
| ◎/◉ | Enable/Disable Manual Record | 5m | Instant Playback | 🔇/🔊 | Mute/Audio on |
| ◓ | PTZ Control | 🔍 | Digital Zoom | ◐ | Image Settings |
| 🚪 | Close Live View | 📷 | Capture | ⓘ | Information |

5m Instant Playback only shows the record in last five minutes. If no record is found, it means there is no record during the last five minutes.

🔍 Digital Zoom can zoom in the selected area to the full screen. Click and draw to select the area to zoom in, as shown in Figure 3-4.

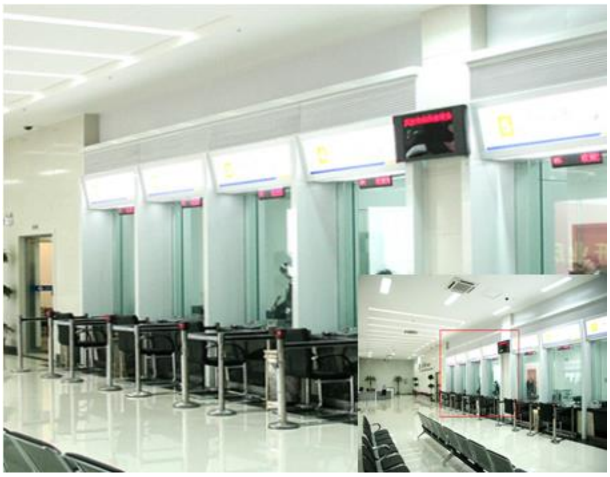
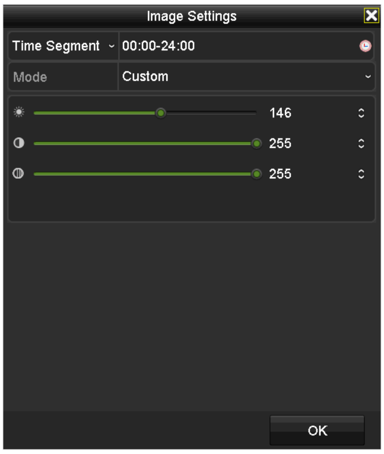


Figure 3-4 Digital Zoom

Image Settings icon can be selected to enter the Image Settings menu. You can drag the mouse or click ⇕ to adjust the image parameters, including brightness, contrast, and saturation. Refer to the *Chapter 14.3 Configuring Video Parameters* for details.



Time Segment 00:00-24:00

Mode Custom

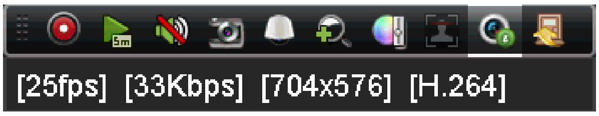
146

255

255

Figure 3-5 Image Settings

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



[25fps] [33Kbps] [704x576] [H.264]

Figure 3-6 Information

**NOTE**

When IP camera supporting H.264 is connected, the stream type is displayed as H.264. When IP camera supporting H.264+ is connected, the stream type is displayed as H.264+.

# 3.3 Channel-Zero Encoding

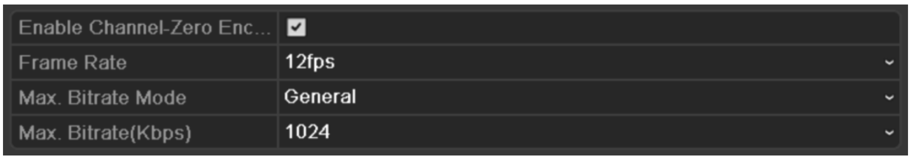
***Purpose***

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

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

Menu> Configuration> Live View

Step 2 Select the **Channel-Zero Encoding** tab.



| | |
|---|---|
| Enable Channel-Zero Enc... | ☑ |
| Frame Rate | 12fps |
| Max. Bitrate Mode | General |
| Max. Bitrate(Kbps) | 1024 |

Figure 3-7 Live View-Channel-Zero Encoding

Step 3 Check the checkbox of **Enable Channel-Zero Encoding.**

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

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

After you set the channel-zero encoding, you can get a view of all the channels in the remote client or web browser in only one screen.

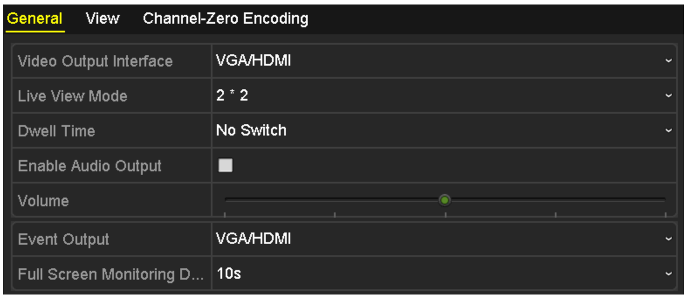
## 3.4 Adjusting Live View Settings

***Purpose***

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

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

Menu > Configuration > Live View > General



| | |
|---|---|
| Video Output Interface | VGA/HDMI |
| Live View Mode | 2 * 2 |
| Dwell Time | No Switch |
| Enable Audio Output | ☐ |
| Volume | |
| Event Output | VGA/HDMI |
| Full Screen Monitoring D... | 10s |

Figure 3-8 Live View-General

The settings available in this menu include:

- **Video Output Interface:** Selects the output to configure the settings.

  For DS-8104AHQI-E4, you can select **VGA/HDMI**, and **Main CVBS** for video output interface.

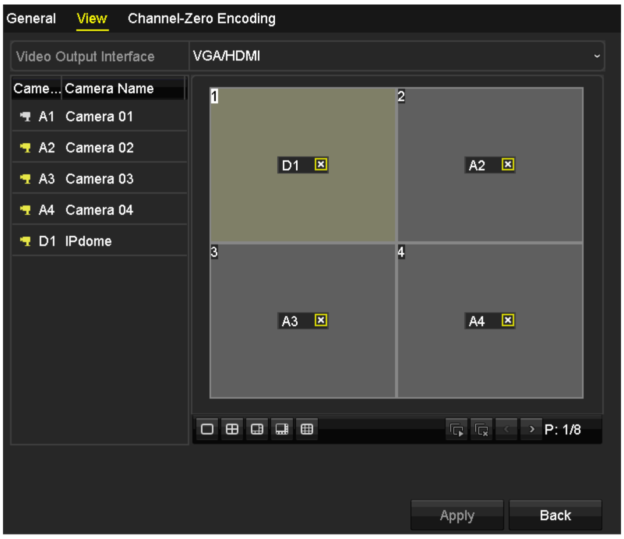
  For DS-8104AHQLI-E4 and iDS-8104AHQXLI-E4, you can select **VGA/HDMI**, **LCD**, and **Main CVBS** for video output interface.

- **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.

Step 2 Set the camera order.

1) Click **View** tab and select the **Video Output Interface** from the drop-down list.



Video Output Interface: VGA/HDMI

| Came... | Camera Name |
|---|---|
| A1 | Camera 01 |
| A2 | Camera 02 |
| A3 | Camera 03 |
| A4 | Camera 04 |
| D1 | IPdome |

Figure 3-9 Live View-Camera Order

2) Click a window, and then double-click a camera name in the camera list you would like to display. ‘X’ means the window will not display any camera.

3) You can also click ▣ to start live view of all channels in order and click ▣ to stop live view of all channels. Click ‹ or › to go to the previous or next page.

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

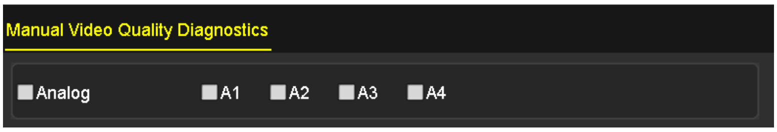
## 3.5 Manual Video Quality Diagnostics

### *Purpose*

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

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

Menu> Manual >Manual Video Quality Diagnostics



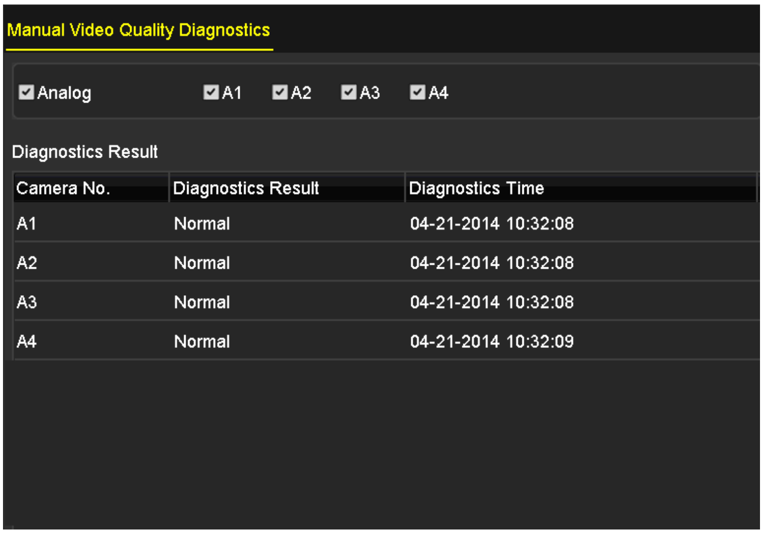
Manual Video Quality Diagnostics

☐ Analog ☐ A1 ☐ A2 ☐ A3 ☐ A4

Figure 3-10 Video Quality Diagnostics

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

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



Manual Video Quality Diagnostics

☑ Analog ☑ A1 ☑ A2 ☑ A3 ☑ A4

Diagnostics Result

| Camera No. | Diagnostics Result | Diagnostics Time |
|---|---|---|
| A1 | Normal | 04-21-2014 10:32:08 |
| A2 | Normal | 04-21-2014 10:32:08 |
| A3 | Normal | 04-21-2014 10:32:08 |
| A4 | Normal | 04-21-2014 10:32:09 |

Figure 3-11 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***

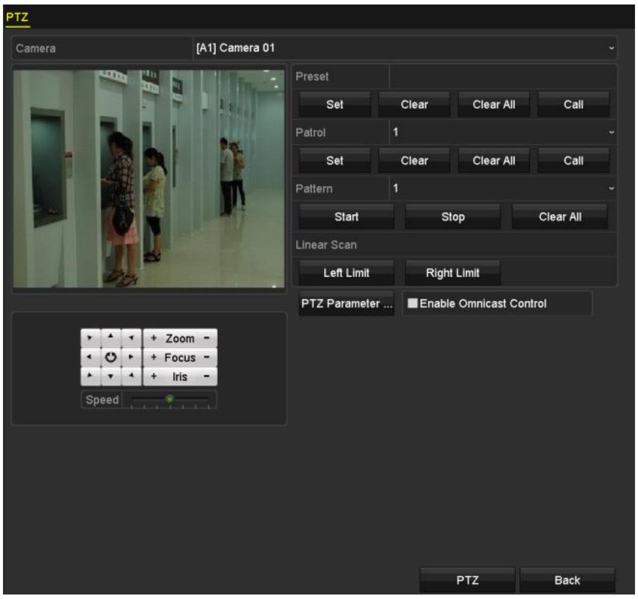
Follow the procedure to set the parameters for PTZ. The configuring of the PTZ parameters should be done before you control the PTZ camera.

***Before you start***

Make sure that the PTZ camera and the device are connected properly via RS-485 interface.

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

Menu >Camera> PTZ



Camera [A1] Camera 01

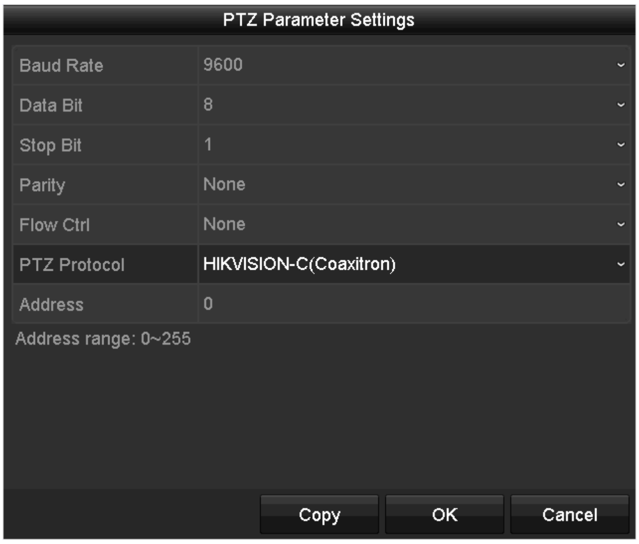
Patrol 1

Pattern 1

Figure 4-1 PTZ Settings

Step 2 Select the camera for PTZ setting in the **Camera** drop-down list.

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



Baud Rate: 9600

Data Bit: 8

Stop Bit: 1

Parity: None

Flow Ctrl: None

PTZ Protocol: HIKVISION-C(Coaxitron)

Address: 0

Address range: 0~255

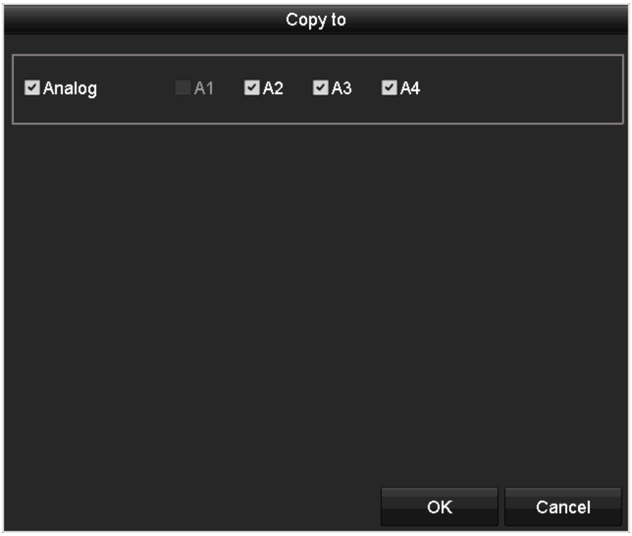
Figure 4-2 PTZ- General

Step 4 Select the parameters of the PTZ camera from the drop-down list.

**NOTE**

- All the parameters should be exactly the same as the PTZ camera parameters.
- For the Coaxitron camera/dome connected, you can select the PTZ protocol to HIKVISION-C (Coaxitron). Make sure the protocol selected here is supported by the connected camera/dome.
- When the Coaxitron protocol is selected, all the other parameters like the baud rate, data bit, stop bit, parity and flow control are not configurable.

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



☑ Analog ☐ A1 ☑ A2 ☑ A3 ☑ A4

Figure 4-3 Copy to Other Channels

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

Step 7 (Optional) Check the checkbox of **Enable Omnicast Control** to enable the PTZ control of the selected camera via Omnicast VMS of Genetec.

## 4.2 Setting PTZ Presets, Patrols and Patterns

***Before you start***

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

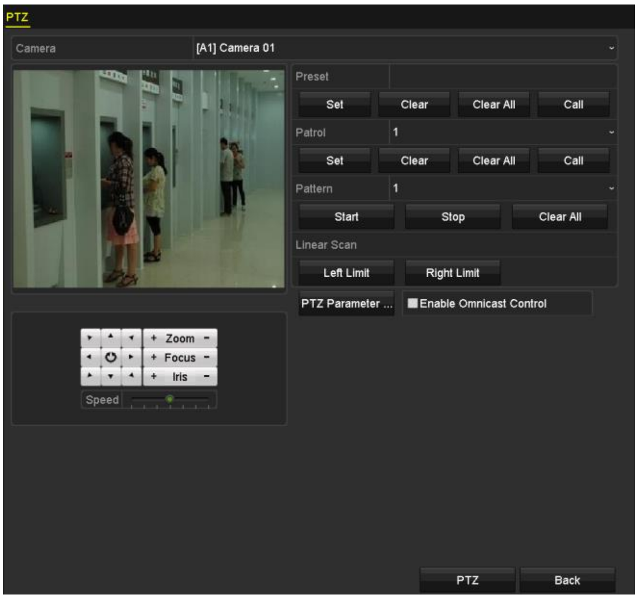
### 4.2.1 Customizing Presets

***Purpose***

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

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

Menu>Camera>PTZ



Camera [A1] Camera 01

Patrol 1

Pattern 1

Figure 4-4 PTZ Settings

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

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

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

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

## 4.2.2 Calling Presets

***Purpose***

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

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

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

Step 2 Choose C**amera** in the drop-down list.

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

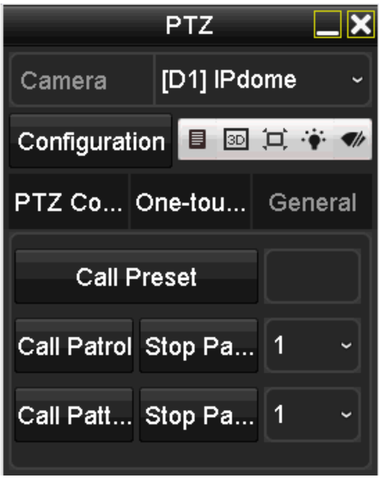


Figure 4-5 PTZ Panel-General

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

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

**NOTE**

When the Coaxitron camera/dome connected and the PTZ protocol is selected to HIKVISION-C (Coaxitron), you can call the preset 95 to enter the menu of the connected Coaxitron camera/dome. Use the directional buttons on the PTZ control panel to operate the menu.

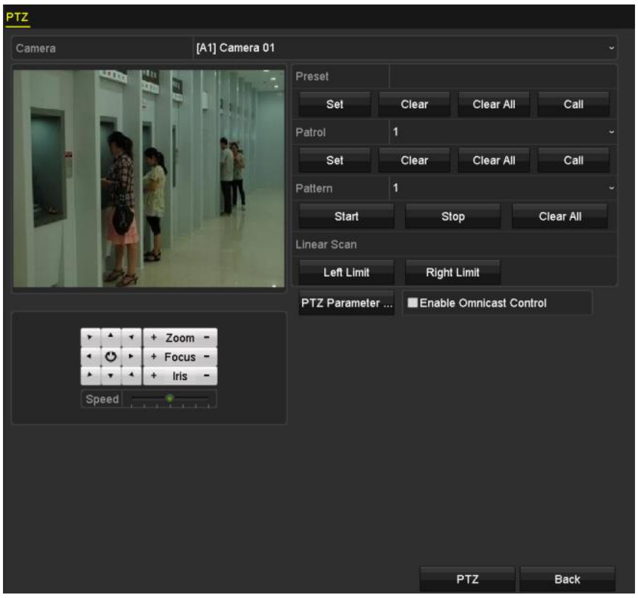
## 4.2.3 Customizing Patrols

***Purpose***

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

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

Menu>Camera>PTZ



Camera [A1] Camera 01

Preset

Patrol 1

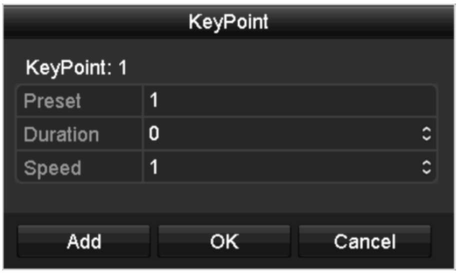
Pattern 1

☐ Enable Omnicast Control

Figure 4-6 PTZ Settings

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

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



KeyPoint: 1

Preset 1

Duration 0

Speed 1

Figure 4-7 Key point Configuration

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

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

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

## 4.2.4 Calling Patrols

***Purpose***

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

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

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

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

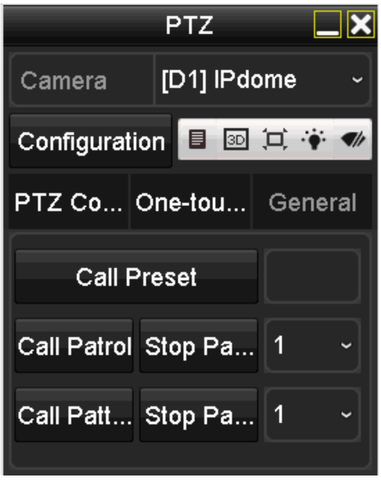


Figure 4-8 PTZ Panel - General

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

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

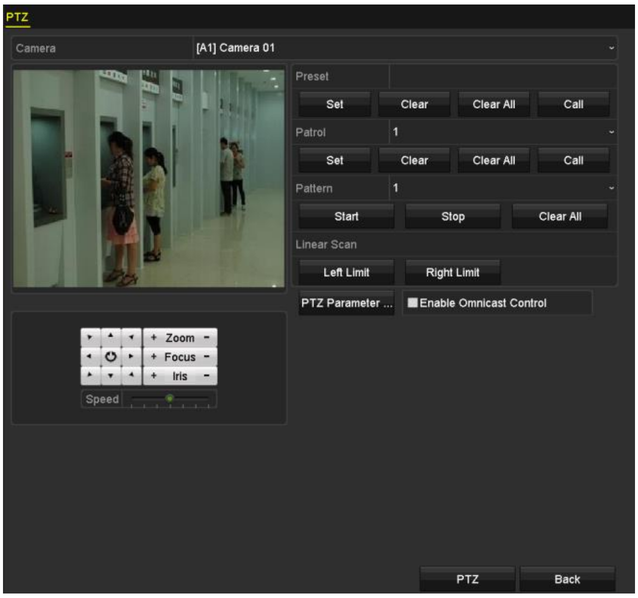
### 4.2.5 Customizing Patterns

***Purpose***

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

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

Menu > Camera > PTZ



Camera [A1] Camera 01

Patrol 1

Pattern 1

Figure 4-9 PTZ Settings

Step 2 Choose pattern number in the drop-down list.

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

The movement of the PTZ is recorded as the pattern.

### 4.2.6 Calling Patterns

***Purpose***

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

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

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

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

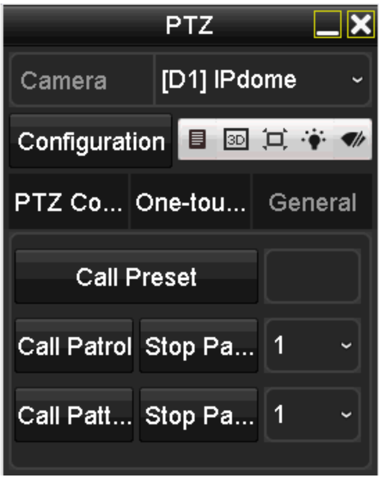


Figure 4-10 PTZ Panel - General

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

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

### 4.2.7 Customizing Linear Scan Limit

***Purpose***

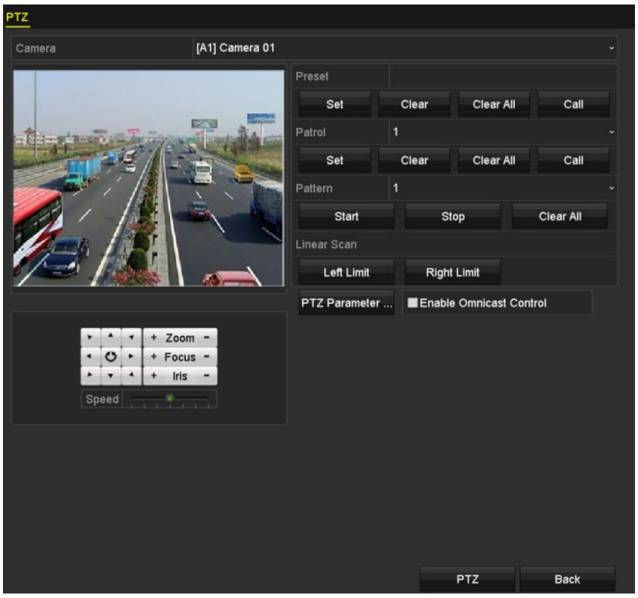
The Linear Scan can be enabled to trigger the scan in the horizantal direction in the predefined range.

**NOTE**

This function is supported by some certain models.

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

Menu > Camera > PTZ



Camera [A1] Camera 01

Patrol 1

Pattern 1

☐ Enable Omnicast Control

Figure 4-11 PTZ Settings

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

**NOTE**

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

## 4.2.8 Calling Linear Scan

***Purpose***

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

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

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

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

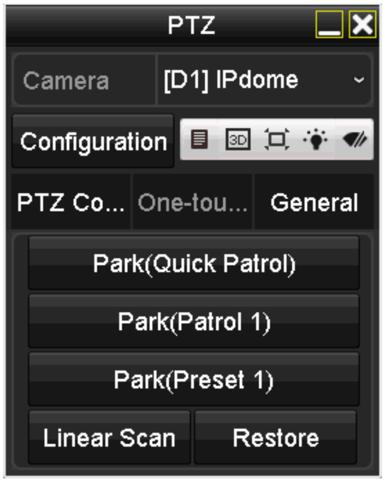


Figure 4-12 PTZ Panel - One-touch

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

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

## 4.2.9 One-Touch Park

***Purpose***

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

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

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

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

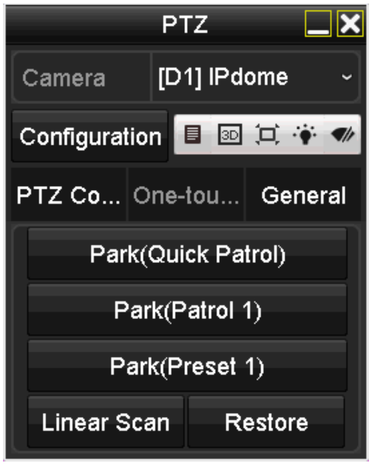


Figure 4-13 PTZ Panel - One-touch

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

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

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

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

**NOTE**

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

Step 4 Click the button again to inactivate it.

# 4.3 PTZ Control Panel

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

**OPTION 1:**

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

**OPTION 2:**

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

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

**NOTE**

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

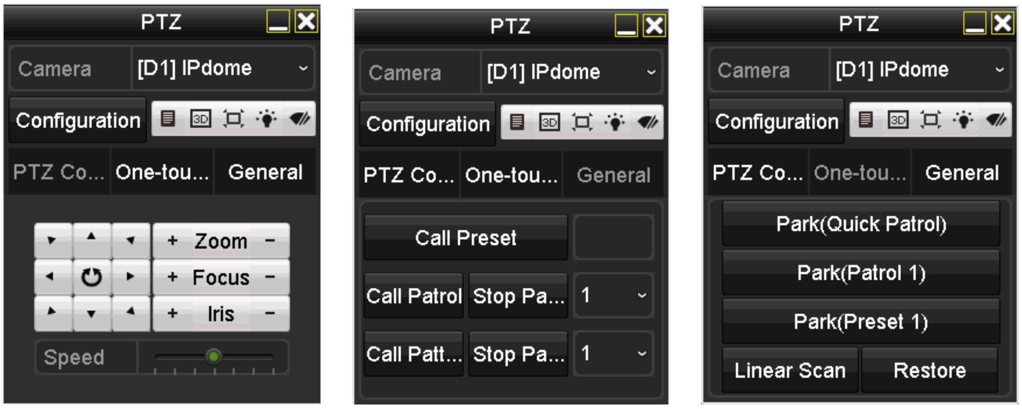


Figure 4-14 PTZ Control Panel

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

Table 4-1 Description of the PTZ Panel Icons

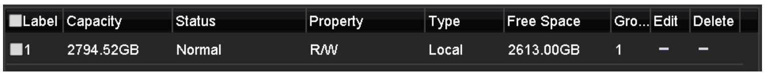
| Icon | Description | Icon | Description | Icon | Description |
|---|---|---|---|---|---|
| ▾ ▴ ◂<br>◂ ⟳ ▸<br>▸ ▾ ◂ | Direction button and the auto-cycle button | + | Zoom+, Focus+, Iris+ | – | Zoom-, Focus-, Iris- |
| ● | The speed of the PTZ movement | ☀ | Light on/off | ⫽ | Wiper on/off |
| 3D | 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 |
| ☒ | Exit | ▁ | Minimize windows | | |

# Chapter 5 Recording and Capture Settings

## 5.1 Configuring Encoding Parameters

***Before you start***

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



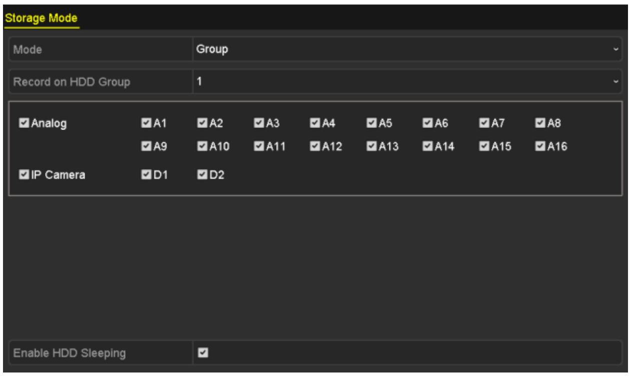
| ☐Label | Capacity | Status | Property | Type | Free Space | Gro... | Edit | Delete |
|---|---|---|---|---|---|---|---|---|
| ☐1 | 2794.52GB | Normal | R/W | Local | 2613.00GB | 1 | − | − |

Figure 5-1 HDD-General

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

1) If the HDD mode is *Quota*, please set the maximum record capacity. For detailed information, see *Chapter 13.4 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*.



Mode: Group

Record on HDD Group: 1

☑Analog ☑A1 ☑A2 ☑A3 ☑A4 ☑A5 ☑A6 ☑A7 ☑A8
☑A9 ☑A10 ☑A11 ☑A12 ☑A13 ☑A14 ☑A15 ☑A16

☑IP Camera ☑D1 ☑D2

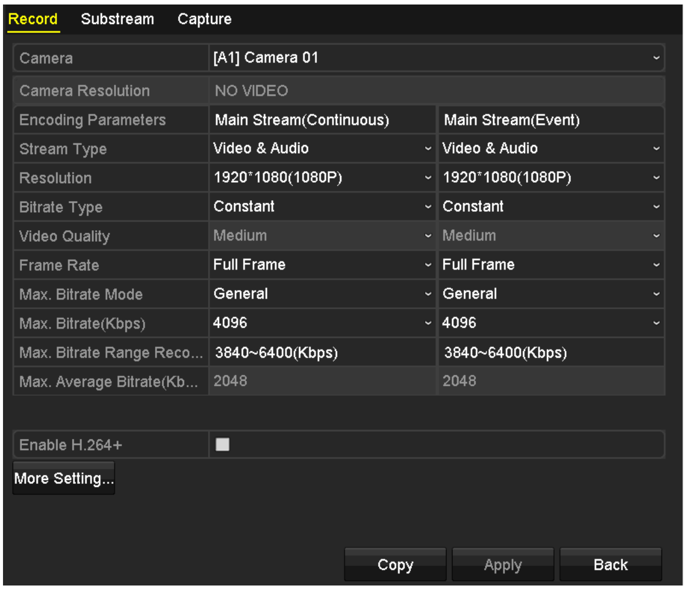
Enable HDD Sleeping ☑

Figure 5-2 HDD- Advanced

***Steps***

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

Menu>Record>Parameters



| | | |
|---|---|---|
| Camera | [A1] Camera 01 | |
| Camera Resolution | NO VIDEO | |
| Encoding Parameters | Main Stream(Continuous) | Main Stream(Event) |
| Stream Type | Video & Audio | Video & Audio |
| Resolution | 1920*1080(1080P) | 1920*1080(1080P) |
| Bitrate Type | Constant | Constant |
| Video Quality | Medium | Medium |
| Frame Rate | Full Frame | Full Frame |
| Max. Bitrate Mode | General | General |
| Max. Bitrate(Kbps) | 4096 | 4096 |
| Max. Bitrate Range Reco... | 3840~6400(Kbps) | 3840~6400(Kbps) |
| Max. Average Bitrate(Kb... | 2048 | 2048 |
| Enable H.264+ | ☐ | |

Figure 5-3 Record Parameters

Step 2 Set the parameters for recording.

1) Select the **Record** tab to configure.
2) Select a camera from the camera drop-down list.
3) View the **Camera Resolution**.
4) Configure the following parameters for the **Main Stream (Continuous)** and the **Main Stream (Event)**.

**Stream Type**: Set the stream type to be Video or Video & Audio.

**Resolution**: Set recording resolution.

**NOTE**

Up to 3 MP resultion is supported for the analog channels.

**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.

**NOTE**

When 3 MP analog signal input is connected, the frame rate of the main stream is 15 fps under any resolution.

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

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

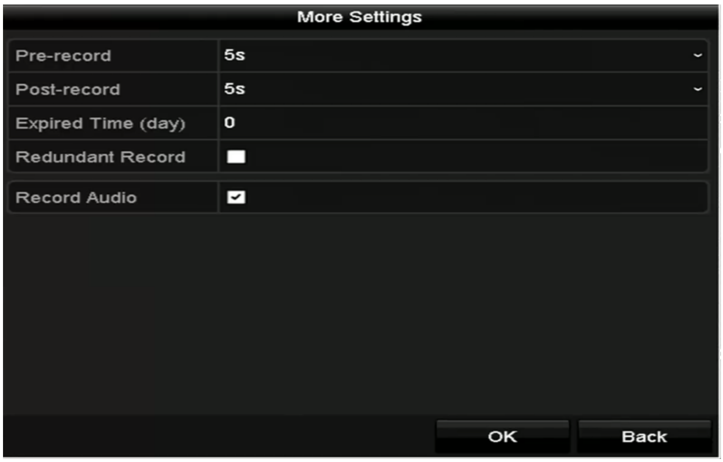
**Max. Bitrate Range Recommended:** A recommended max. bit rate range is provided for reference.

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

**NOTE**

- After enabling H.264+, the **Bitrate Type**, **Video Quality**, **Max. Bitrate Mode**, **Max. Bitrate(Kbps)** and **Max. Bitrate Range Recommend** are not configurable. The **Max. Average Bitrate (Kbps)** can be configured.
- For the connnected IP camera, the H.264+ should be supported by the camera and added to the DVR via the HIKVISION protocol.
- You should reboot the device to activate the new settings after enabling the H.264+.

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



Pre-record: 5s

Post-record: 5s

Expired Time (day): 0

Redundant Record: ☐

Record Audio: ☑

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.

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

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

Step 6 (Optional) Click **Copy** to copy the settings to other analog channels if needed.

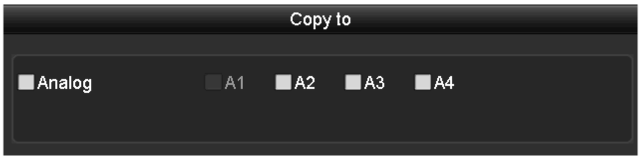
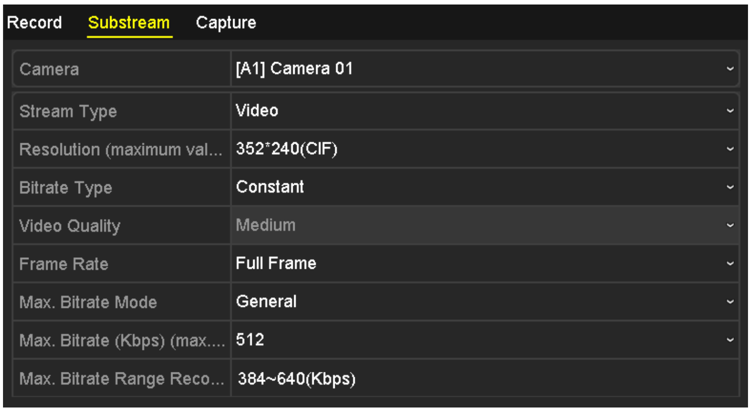


Figure 5-5 Copy Camera Settings

Step 7 Set encoding parameters for sub-stream.

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



| | |
|---|---|
| Camera | [A1] Camera 01 |
| Stream Type | Video |
| Resolution (maximum val... | 352*240(CIF) |
| Bitrate Type | Constant |
| Video Quality | Medium |
| Frame Rate | Full Frame |
| Max. Bitrate Mode | General |
| Max. Bitrate (Kbps) (max.... | 512 |
| Max. Bitrate Range Reco... | 384~640(Kbps) |

Figure 5-6 Sub-Stream Encoding

2) Select a camera in the camera drop-down list.

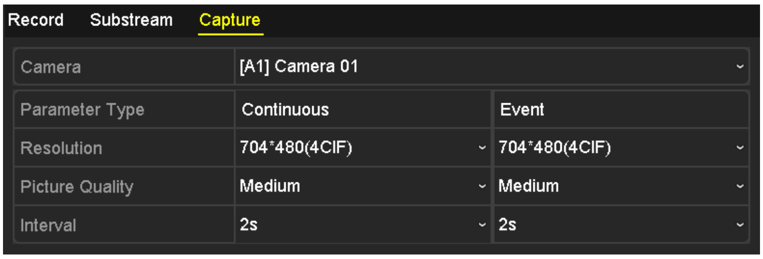
3) Configure the parameters.

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.

Step 8 Set parameters for capture.

1) Select the **Capture** tab.



| Camera | [A1] Camera 01 | |
|---|---|---|
| Parameter Type | Continuous | Event |
| Resolution | 704*480(4CIF) | 704*480(4CIF) |
| Picture Quality | Medium | Medium |
| Interval | 2s | 2s |

Figure 5-7 Capture Settings

2) Select a camera in the camera drop-down 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.

**NOTE**

The interval is the time period between two capturing actions. You can configure all the parameters on this menu on your demand.

## 5.2 Configuring Recording and Capture Schedule

**NOTE**

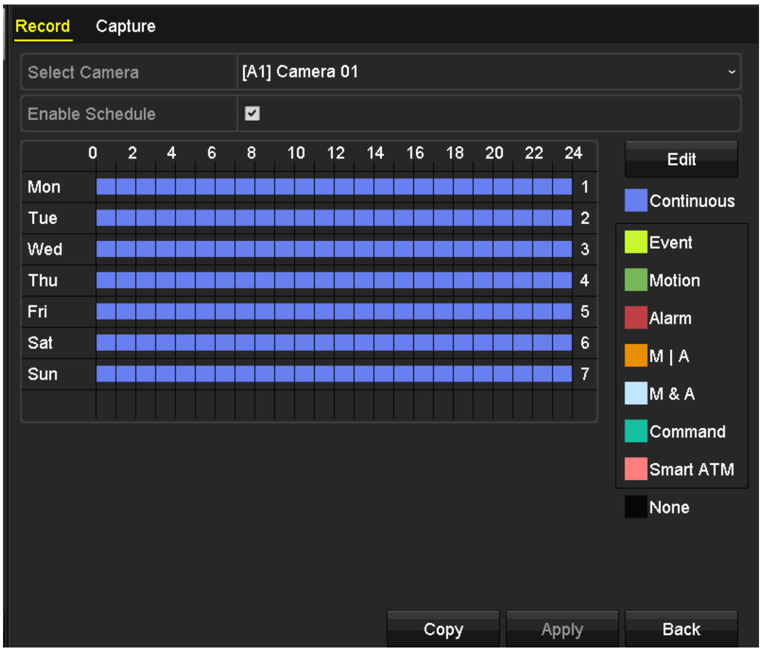
In this chapter, we take the record schedule procedure as an example, and the same procedure can be applied to configure schedule for both recording and capture. To schedule the automatic capture, you need to choose the **Capture** tab in the **Schedule** interface.

***Purpose***

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

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

Menu > Record/Capture > Schedule



Select Camera [A1] Camera 01

Enable Schedule ☑

Figure 5-8 Record Schedule

Different recording types are marked in different color icons.

**Continuous**: scheduled recording.

**Event**: recording triggered by all event triggered alarm.

**Motion**: recording triggered by motion detection.

**Alarm**: recording triggered by alarm.

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

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

**Command**: recording triggered by ATM command.

**Smart ATM**: recording triggered by smart ATM.

Step 2 Select the camera you want to configure in the **Camera** drop-down list.

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

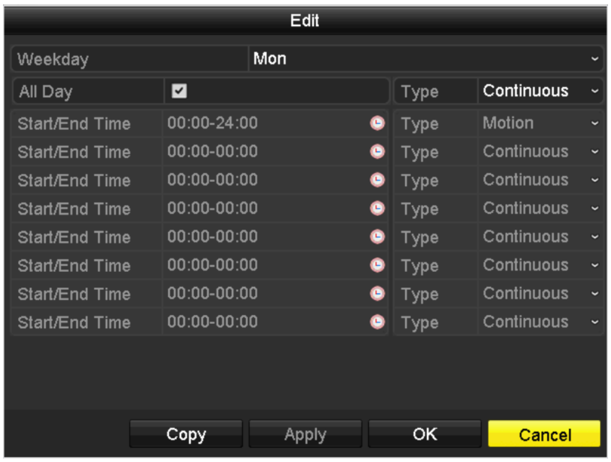
Step 4 Configure the record schedule.

**Edit the schedule**

1) Click **Edit**.

2) In the message box, you can select the day to which you want to set schedule.

3) To schedule an all-day recording, check the checkbox after the **All Day** item.


Edit

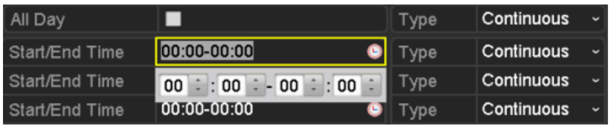
Weekday: Mon

All Day: ☑ Type: Continuous

| | | | |
|---|---|---|---|
| Start/End Time | 00:00-24:00 | Type | Motion |
| Start/End Time | 00:00-00:00 | Type | Continuous |
| Start/End Time | 00:00-00:00 | Type | Continuous |
| Start/End Time | 00:00-00:00 | Type | Continuous |
| Start/End Time | 00:00-00:00 | Type | Continuous |
| Start/End Time | 00:00-00:00 | Type | Continuous |
| Start/End Time | 00:00-00:00 | Type | Continuous |
| Start/End Time | 00:00-00:00 | Type | Continuous |

Figure 5-9 Edit Schedule- All Day

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


All Day: ☐ Type: Continuous

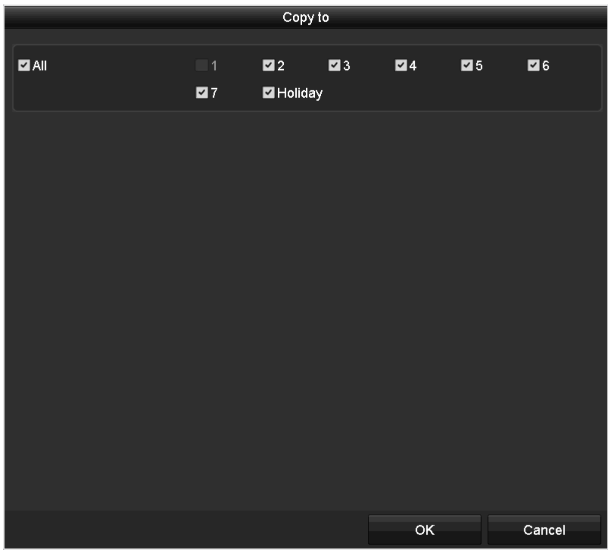
| | | | |
|---|---|---|---|
| Start/End Time | 00:00-00:00 | Type | Continuous |
| Start/End Time | 00 : 00 - 00 : 00 | Type | Continuous |
| Start/End Time | 00:00-00:00 | Type | Continuous |

Figure 5-10 Edit Schedule- Set Time Period

**NOTE**

- Up to 8 periods can be configured for each day. And the time periods cannot be overlapped with each other.
- To enable Event, Motion, Alarm, M | A (motion or alarm), M & A (motion and alarm) triggered recording, you must configure the motion detection settings, or alarm input settings as well. For detailed information, refer to *Chapter 8.1,* and *Chapter 8.7*.
- To enable smart ATM triggered recording, you must configure the smart ATM settings. Refer to *Chapter 9 Smart ATM Settings*.

5) 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**.



☑ All ☐ 1 ☑ 2 ☑ 3 ☑ 4 ☑ 5 ☑ 6
☑ 7 ☑ Holiday

Figure 5-11 Copy Schedule to Other Days

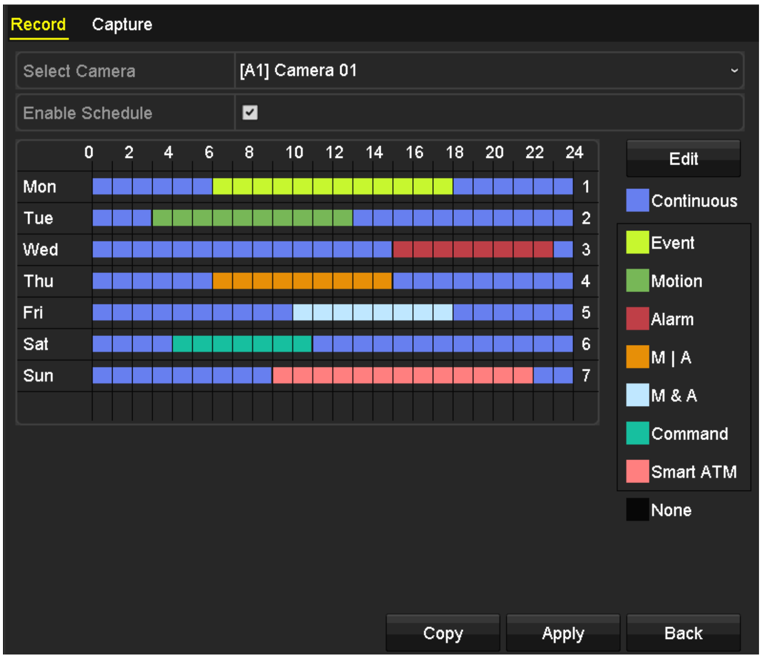
**NOTE**

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

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

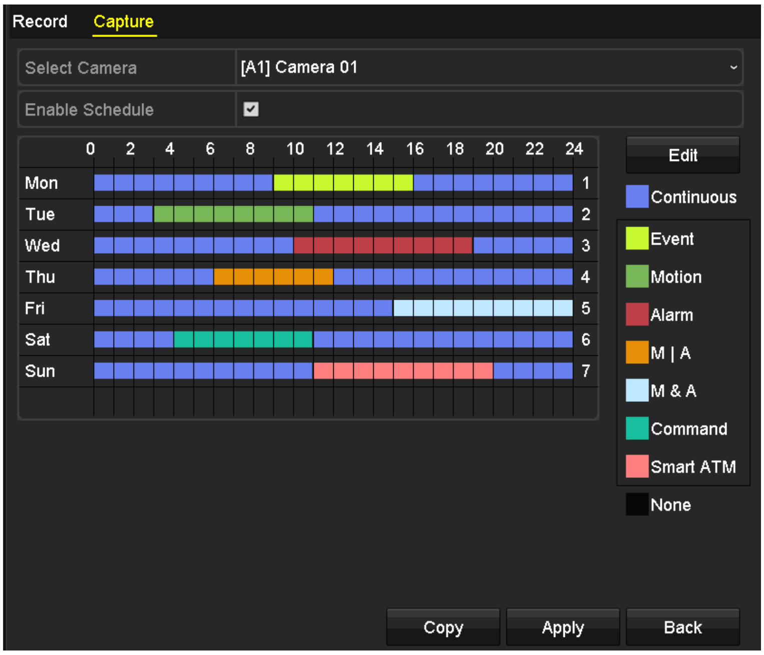
**Draw the schedule**

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



Select Camera: [A1] Camera 01
Enable Schedule: ☑

Figure 5-12 Draw the Recording Schedule



Select Camera: [A1] Camera 01

Enable Schedule: ☑

Figure 5-13 Draw the Capture Schedule

2) Drag the mouse on the schedule.

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

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

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

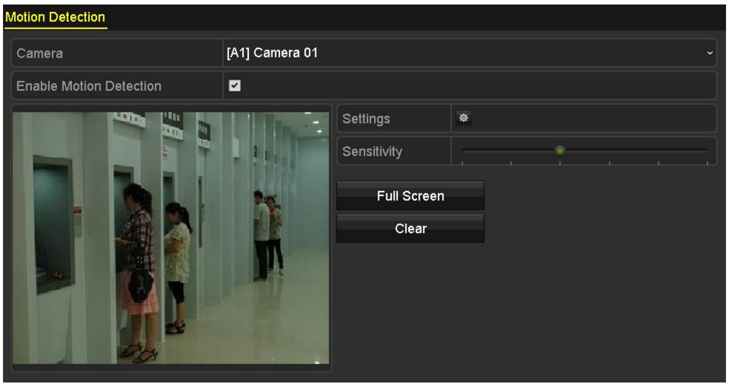
## 5.3 Configuring Motion Detection Recording and Capture

***Purpose***

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

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

Menu>Camera>Motion



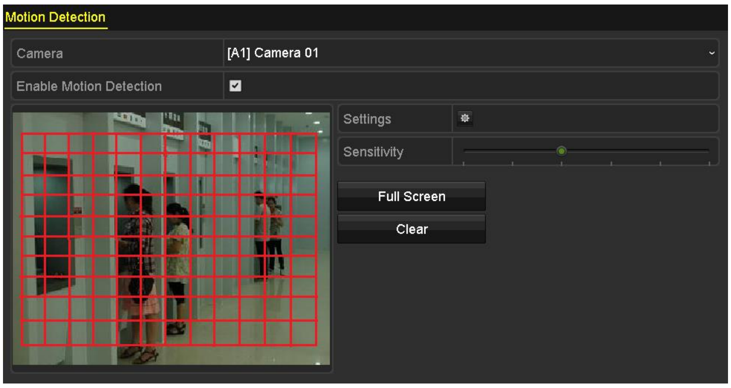
Camera: [A1] Camera 01

Enable Motion Detection: ☑

Figure 5-14 Motion Detection

Step 2 Configure Motion Detection:

1) Select the camera you want to configure.
2) Check the checkbox of **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**.



Camera: [A1] Camera 01

Enable Motion Detection: ☑

Figure 5-15 Motion Detection- Mask

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

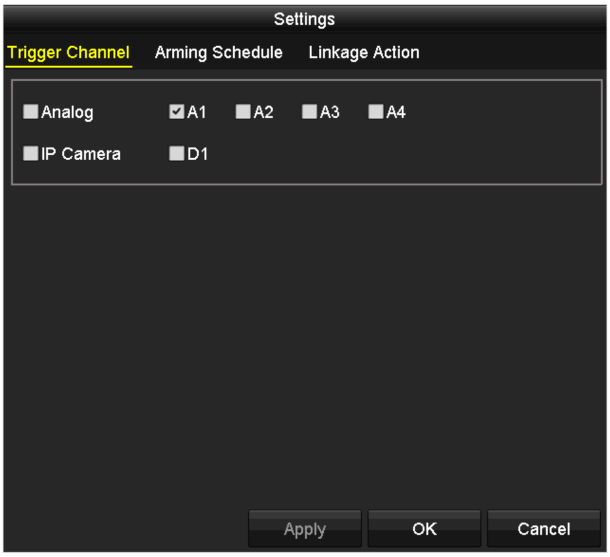


Figure 5-16 Motion Detection Settings

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 return to the upper level menu.

8) Click **Apply** in the Motion Detection interface to save the settings. Exit from the Motion Detection interface.

Step 3 Configure the schedule.

Please refer to the step 4 of *Chapter 5.2 Configuring Recording and Capture Schedule,* while you need to select **Motion** as the record type.

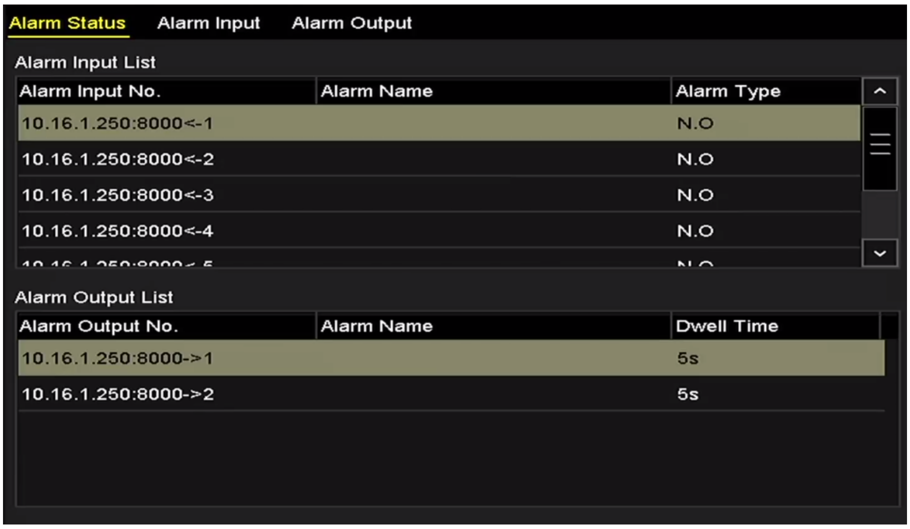
## 5.4 Configuring Alarm Triggered Recording and Capture

***Purpose***

Follow the procedure to configure alarm triggered recording or capture.

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

Menu > Configuration > Alarm



Alarm Input List

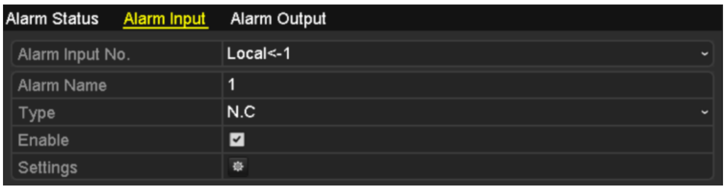
| Alarm Input No. | Alarm Name | Alarm Type |
|---|---|---|
| 10.16.1.250:8000<-1 | | N.O |
| 10.16.1.250:8000<-2 | | N.O |
| 10.16.1.250:8000<-3 | | N.O |
| 10.16.1.250:8000<-4 | | N.O |

Alarm Output List

| Alarm Output No. | Alarm Name | Dwell Time |
|---|---|---|
| 10.16.1.250:8000->1 | | 5s |
| 10.16.1.250:8000->2 | | 5s |

Figure 5-17 Alarm Settings

Step 2 Click **Alarm Input** tab.



| | |
|---|---|
| Alarm Input No. | Local<-1 |
| Alarm Name | 1 |
| Type | N.C |
| Enable | ☑ |
| Settings | ⚙ |

Figure 5-18 Alarm Settings- Alarm Input

Step 3 Select **Alarm Input No**.

Step 4 Input **Alarm Name**.

Step 5 Select **N.O** (normally open) or **N.C** (normally closed) for alarm type.

Step 6 Check the checkbox of **Enable** to enable alarm.

Step 7 Click ⚙ after **Settings** to set the triggered channels, arming schedule, linkage actions, PTZ linking, and camera of smart ATM mode. Refer to step 4 of *Chapter 5.2 Configuring Recording and Capture Schedule* for detailed operations.

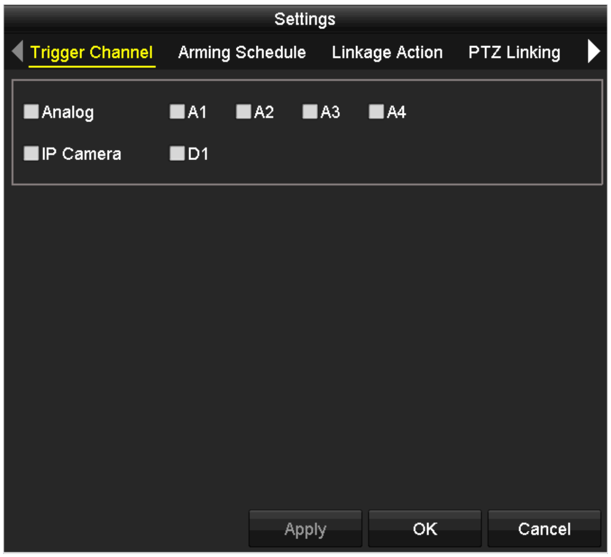


Figure 5-19 Alarm Handling

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

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

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

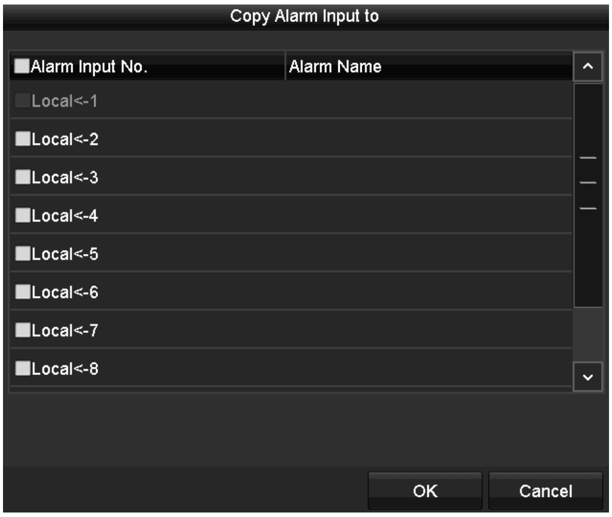


Figure 5-20 Copy Alarm Input

Step 9 Configure the schedule.

Please refer to the step 4 of *Chapter 5.2 Configuring Recording and Capture Schedule*, while you need to select **Alarm** as the record type.

## 5.5 Configuring Command Triggered Recording and Capture

***Before you start***

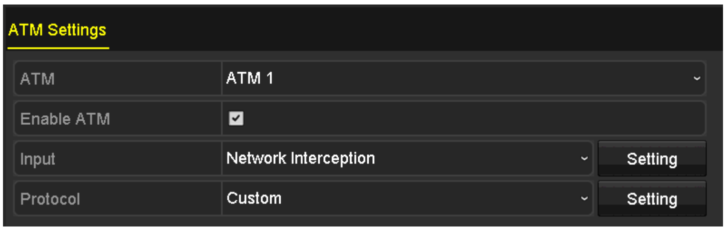
Connect the device to the ATM machine properly.

***Purpose***

When some transaction behaviors, such as Card In, Withdrawal, Query, etc., occur on the ATM machine, the recording/capture process will be triggered.

Step 1 Enter the ATM Settings interface.

Menu > Configuration > ATM



ATM: ATM 1

Enable ATM: ☑

Input: Network Interception

Protocol: Custom

Figure 5-21 ATM Settings

Step 2 Select the **ATM** from the drop-down list and check the checkbox of **Enable ATM**.

Step 3 Select the input mode and configure the protocol settings. For details, see *Chapter 10 ATM Settings.*

Step 4 Configure the schedule.

Please refer to the step 4 of *Chapter 5.2 Configuring Recording and Capture Schedule*, while you need to select **Command** as the record type.

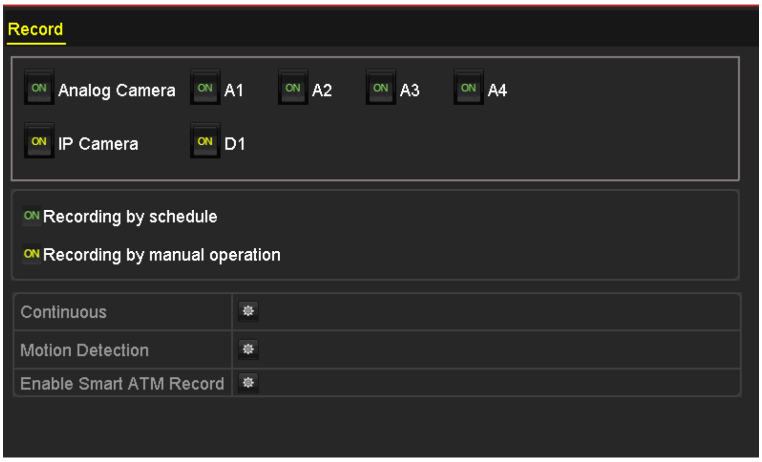
## 5.6 Configuring Manual Recording and Continous Capture

***Purpose***

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

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

Menu > Manual > Record



Record

ON Analog Camera ON A1 ON A2 ON A3 ON A4

ON IP Camera ON D1

ON Recording by schedule

ON Recording by manual operation

| | |
|---|---|
| Continuous | ⚙ |
| Motion Detection | ⚙ |
| Enable Smart ATM Record | ⚙ |

Figure 5-22 Manual Record

Step 2 Enable manual record.

Click the status icon OFF before camera No. to change it to ON.

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

Step 3 Disable manual record.

Click the status icon ON to change it to OFF.

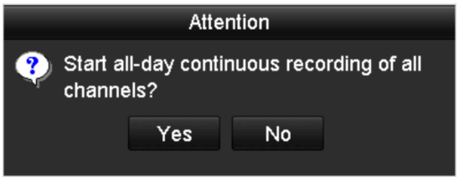
Or click the status icon ON of **Analog** or **IP Camera** to disable manual record of all channels.

**NOTE**

After rebooting all the manual records enabled are canceled.

Step 4 Start all-day normal recording, all-day motion detection recording, or all-day smart ATM recording of all channels.

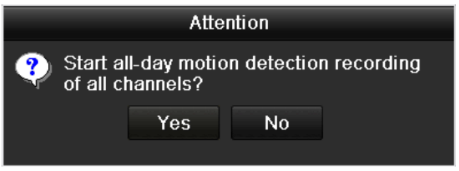
1) Click ⚙ of **Continuous**, **Motion Detection**, or **Enable Smart ATM Record**.



Attention

Start all-day continuous recording of all channels?

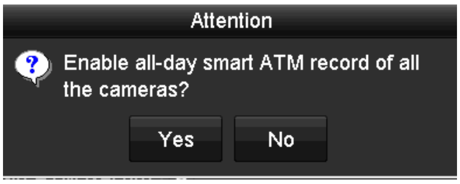
Figure 5-23 Continuous Recording



Attention

Start all-day motion detection recording of all channels?

Figure 5-24 Motion Detection Recording


Attention

Enable all-day smart ATM record of all the cameras?

Figure 5-25 Smart ATM Recording

2) Click **Yes** to enable all-day continuous recording, all-day motion detection recording, or all-day smart ATM recording of all channels.

Step 5 Configure continuous capture.

1) Click **Continuous Capture** tab on the left bar.

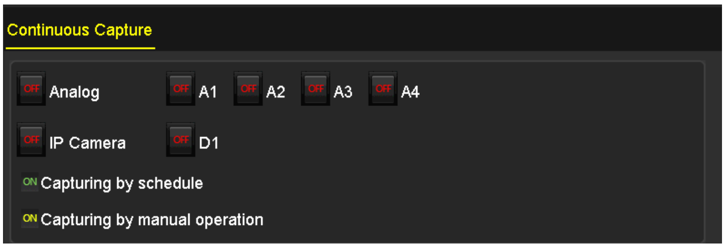


Figure 5-26 Continuous Capture

2) Click the status button before camera No. to change OFF to ON to enable continuous capture.

3) Click the status button to change ON to OFF to disable continuous capture.

**NOTE**

All the continuous capture will be canceled after device reboot.

## 5.7 Configuring Holiday Recording and Capture

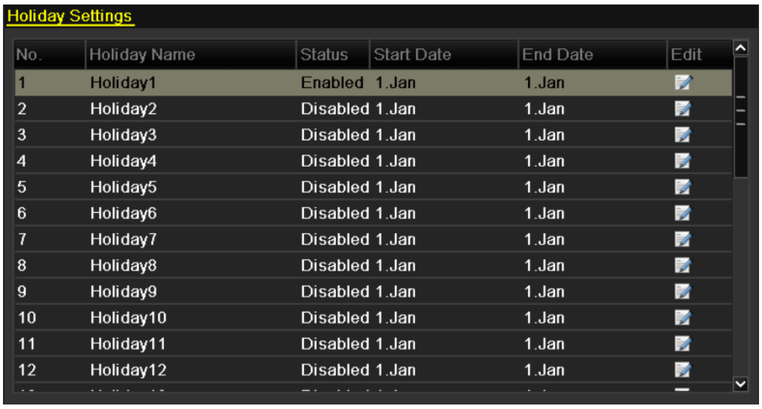
***Purpose***

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

Step 1 Enter the Record setting interface.

Menu > Record

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

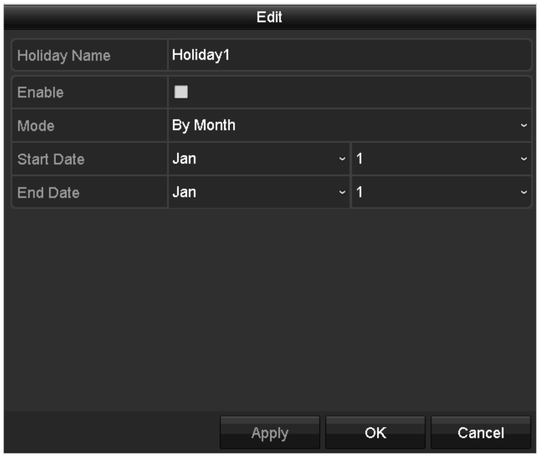


| No. | Holiday Name | Status | Start Date | End Date | Edit |
|---|---|---|---|---|---|
| 1 | Holiday1 | Enabled | 1.Jan | 1.Jan | ✎ |
| 2 | Holiday2 | Disabled | 1.Jan | 1.Jan | ✎ |
| 3 | Holiday3 | Disabled | 1.Jan | 1.Jan | ✎ |
| 4 | Holiday4 | Disabled | 1.Jan | 1.Jan | ✎ |
| 5 | Holiday5 | Disabled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

Figure 5-27 Holiday Settings

Step 3 Enable Edit Holiday schedule.

1) Click ✎ to enter the Edit interface.



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

Figure 5-28 Edit Holiday Settings

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

3) Select **Mode** from the drop-down list.

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

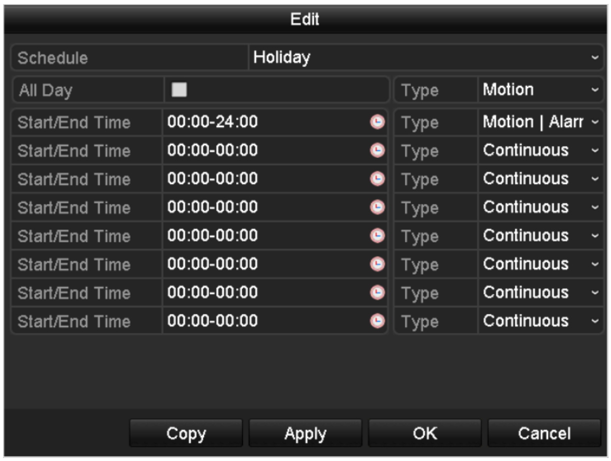
4) Set the start and end date.

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

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

Step 4 Configure the record schedule.

Please refer to the *Chapter 5.2 Configuring Recording and Capture Schedule*, while you may select **Holiday** in the Schedule drop-down list, or you can draw the schedule on the timeline of Holiday.



Schedule: Holiday

All Day: ☐ Type: Motion

| Start/End Time | Type |
|---|---|
| 00:00-24:00 | Motion \| Alarr |
| 00:00-00:00 | Continuous |
| 00:00-00:00 | Continuous |
| 00:00-00:00 | Continuous |
| 00:00-00:00 | Continuous |
| 00:00-00:00 | Continuous |
| 00:00-00:00 | Continuous |
| 00:00-00:00 | Continuous |

Figure 5-29 Edit Schedule- Holiday

**NOTE**

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

## 5.8 Configuring Redundant Recording and Capture

***Purpose***

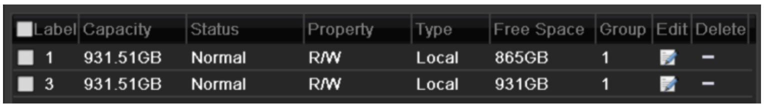
Enabling redundant recording and capture, which means saving the record files and captured pictures not only in the R/W HDD but also in the redundant HDD, will effectively enhance the data safety and reliability.

***Before you start***

You must set the Storage mode in the HDD advanced settings to *Group* before you set the HDD property to Redundant. For detailed information, please refer to *Chapter 13.3 Managing HDD Group.* There should be at least another HDD which is in Read/Write status.

Step 1 Enter HDD Information interface.

Menu> HDD

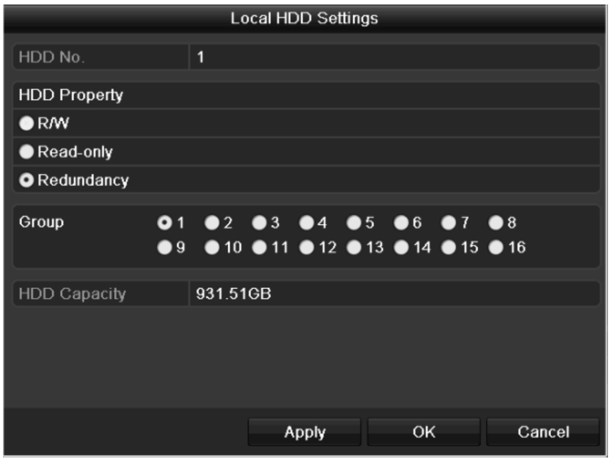


| ☐Label | Capacity | Status | Property | Type | Free Space | Group | Edit | Delete |
|---|---|---|---|---|---|---|---|---|
| ☐ 1 | 931.51GB | Normal | R/W | Local | 865GB | 1 | 📝 | − |
| ☐ 3 | 931.51GB | Normal | R/W | Local | 931GB | 1 | 📝 | − |

Figure 5-30 HDD General

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

1) Set the HDD property to Redundant.



HDD No. 1

HDD Property

○ R/W

○ Read-only

● Redundancy

Group ● 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10 ○ 11 ○ 12 ○ 13 ○ 14 ○ 15 ○ 16

HDD Capacity 931.51GB

Figure 5-31 HDD General-Editing

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

3) Click **OK** to back to the upper level menu.

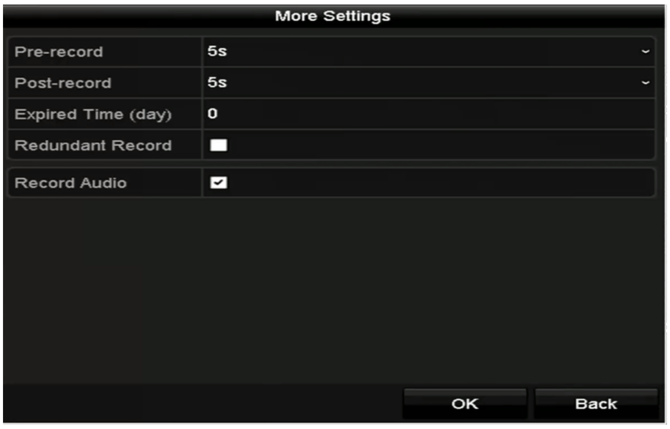
Step 3 Enter the Record setting interface.

Menu> Record> Parameters

1) Select the **Record** tab.

2) Select Camera you want to configure.

3) Click **More Settings** button.



Pre-record 5s

Post-record 5s

Expired Time (day) 0

Redundant Record ☐

Record Audio ☑

Figure 5-32 More Settings

4) Check the checkbox of **Redundant Record**.

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

6) If the encoding parameters can also be used to other channels, click **Copy** and choose the channel you want to apply the settings.

# 5.9 Configuring HDD Group

***Purpose***

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

Step 1 Enter HDD setting interface.

Menu>HDD>Advanced

Step 2 Select **Storage Mode** tab.

Check whether the storage mode of the HDD is Group. If not, set it to Group. For detailed information, please refer to *Chapter 13.3 Managing HDD Group*.

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

Click ✎ to enter editing interface.

Step 4 Configuring HDD group.

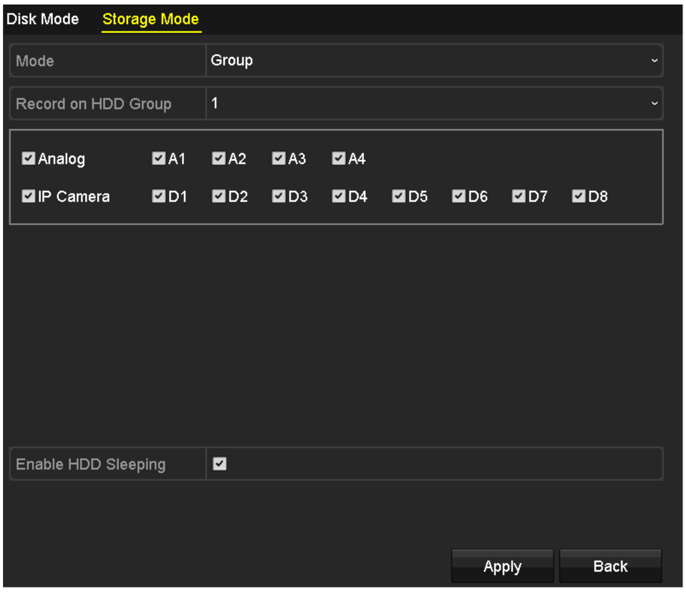
1) Choose a group number for the HDD group.
2) Click **Apply** to save your settings.
3) Click **OK** to back to the upper level menu.

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

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

1) Enter **Storage Mode** interface.

   Menu>HDD>Advanced> Storage Mode



Mode: Group

Record on HDD Group: 1

☑ Analog ☑ A1 ☑ A2 ☑ A3 ☑ A4

☑ IP Camera ☑ D1 ☑ D2 ☑ D3 ☑ D4 ☑ D5 ☑ D6 ☑ D7 ☑ D8

Enable HDD Sleeping ☑

Figure 5-33 HDD Advanced

2) Select Group number in the drop-down 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*.

# 5.10 Files Protection

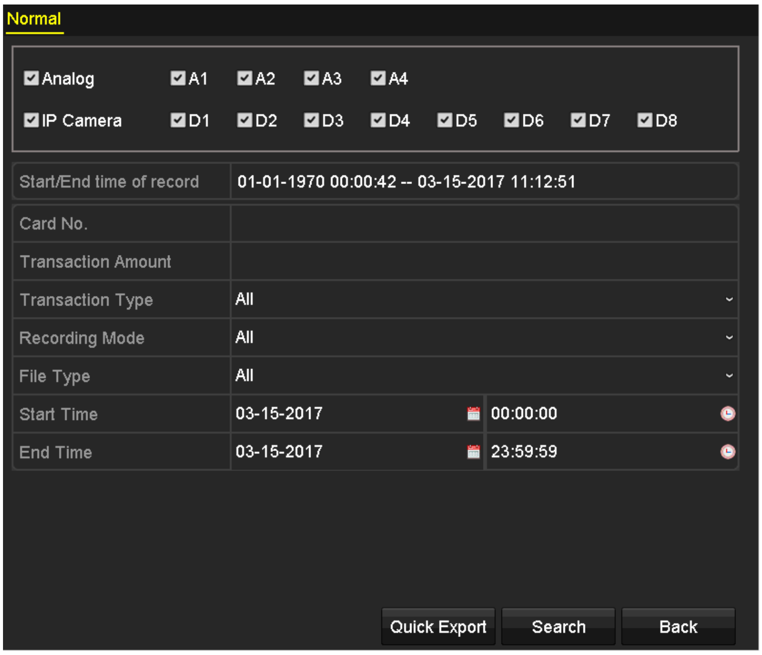
***Purpose***

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

**Protecting file by locking the record files**

Step 1 Enter **Export Settings** interface.

Menu> Export



☑ Analog ☑ A1 ☑ A2 ☑ A3 ☑ A4

☑ IP Camera ☑ D1 ☑ D2 ☑ D3 ☑ D4 ☑ D5 ☑ D6 ☑ D7 ☑ D8

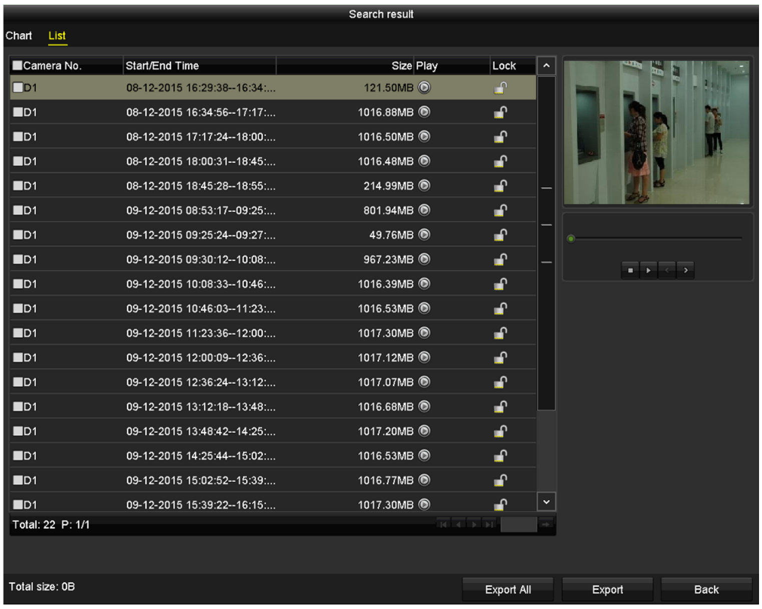
| | | |
|---|---|---|
| Start/End time of record | 01-01-1970 00:00:42 -- 03-15-2017 11:12:51 | |
| Card No. | | |
| Transaction Amount | | |
| Transaction Type | All | |
| Recording Mode | All | |
| File Type | All | |
| Start Time | 03-15-2017 | 00:00:00 |
| End Time | 03-15-2017 | 23:59:59 |

Figure 5-34 Export

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

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

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



| ☐Camera No. | Start/End Time | Size | Play | Lock |
|---|---|---|---|---|
| ☐D1 | 08-12-2015 16:29:38--16:34:... | 121.50MB | ⊙ | 🔓 |
| ☐D1 | 08-12-2015 16:34:56--17:17:... | 1016.88MB | ⊙ | 🔓 |
| ☐D1 | 08-12-2015 17:17:24--18:00:... | 1016.50MB | ⊙ | 🔓 |
| ☐D1 | 08-12-2015 18:00:31--18:45:... | 1016.48MB | ⊙ | 🔓 |
| ☐D1 | 08-12-2015 18:45:28--18:55:... | 214.99MB | ⊙ | 🔓 |
| ☐D1 | 09-12-2015 08:53:17--09:25:... | 801.94MB | ⊙ | 🔓 |
| ☐D1 | 09-12-2015 09:25:24--09:27:... | 49.76MB | ⊙ | 🔓 |
| ☐D1 | 09-12-2015 09:30:12--10:08:... | 967.23MB | ⊙ | 🔓 |
| ☐D1 | 09-12-2015 10:08:33--10:46:... | 1016.39MB | ⊙ | 🔓 |
| ☐D1 | 09-12-2015 10:46:03--11:23:... | 1016.53MB | ⊙ | 🔓 |
| ☐D1 | 09-12-2015 11:23:36--12:00:... | 1017.30MB | ⊙ | 🔓 |
| ☐D1 | 09-12-2015 12:00:09--12:36:... | 1017.12MB | ⊙ | 🔓 |
| ☐D1 | 09-12-2015 12:36:24--13:12:... | 1017.07MB | ⊙ | 🔓 |
| ☐D1 | 09-12-2015 13:12:18--13:48:... | 1016.68MB | ⊙ | 🔓 |
| ☐D1 | 09-12-2015 13:48:42--14:25:... | 1017.20MB | ⊙ | 🔓 |
| ☐D1 | 09-12-2015 14:25:44--15:02:... | 1016.53MB | ⊙ | 🔓 |
| ☐D1 | 09-12-2015 15:02:52--15:39:... | 1016.77MB | ⊙ | 🔓 |
| ☐D1 | 09-12-2015 15:39:22--16:15:... | 1017.30MB | ⊙ | 🔓 |

Total: 22 P: 1/1

Total size: 0B

Figure 5-35 Export-Search Result

Step 5 Protect the record files.

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

**NOTE**

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

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

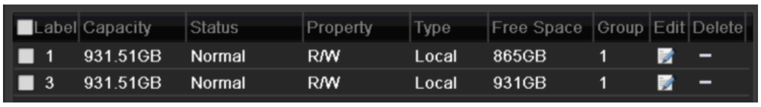
**Protecting file by setting HDD property to read-only**

***Before you start***

To edit HDD property, you need to set the storage mode of the HDD to Group. See *Chapter 13.3 Managing HDD Group.*

Step 1 Enter HDD setting interface.

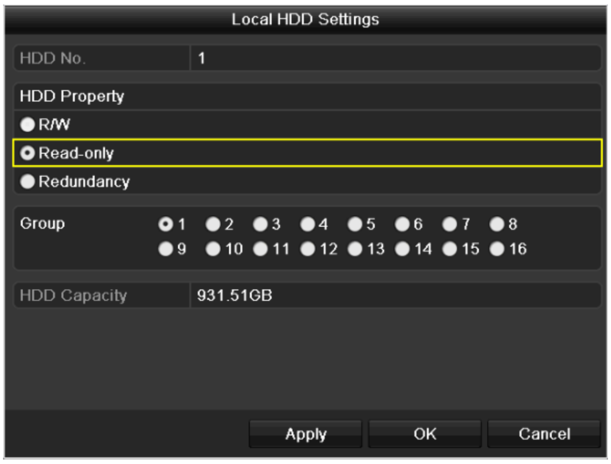
Menu> HDD



| ☐Label | Capacity | Status | Property | Type | Free Space | Group | Edit | Delete |
|---|---|---|---|---|---|---|---|---|
| ☐ 1 | 931.51GB | Normal | R/W | Local | 865GB | 1 | ✎ | − |
| ☐ 3 | 931.51GB | Normal | R/W | Local | 931GB | 1 | ✎ | − |

Figure 5-36 HDD General

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



Local HDD Settings

HDD No. 1

HDD Property

○ R/W

● Read-only

○ Redundancy

Group ● 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10 ○ 11 ○ 12 ○ 13 ○ 14 ○ 15 ○ 16

HDD Capacity 931.51GB

Figure 5-37 HDD General- Editing

Step 3 Set the HDD to Read-only.

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

**NOTE**

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

# 5.11 One-Key Enabling and Disabling H.264+ for Analog Cameras

***Purpose***

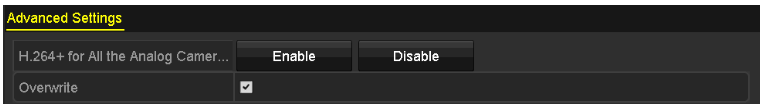
You can one-key enable or disable H.264+ for the analog cameras.

**Task 1: One-Key Enabling H.264+ for All Analog Cameras**

Step 1 Enter the **Record** menu

Menu > Record

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



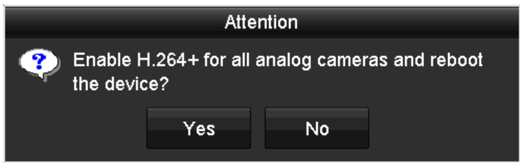
Advanced Settings

H.264+ for All the Analog Camer...

Overwrite ☑

Figure 5-38 Advanced Settings

Step 3 Click **Enable** to enable H.264+ for all the analog cameras and the following attention box pops up.



Attention

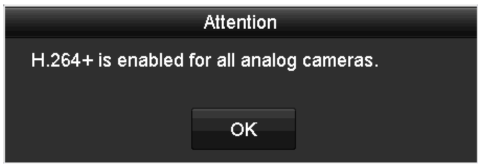
Enable H.264+ for all analog cameras and reboot the device?

Figure 5-39 Attention Box

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

**NOTE**

If H.264+ is already enabled for all the analog cameras, when you click **Enable** button, the following attention box pops up to remind you that H.264+ is already enabled for all analog cameras.



Attention

H.264+ is enabled for all analog cameras.

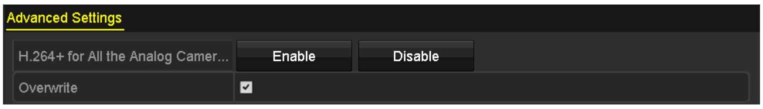
Figure 5-40 Attention Box

**Task 2: One-Key Disabling H.264+ for All Analog Cameras**

Step 1 Enter the **Record** menu

Menu > Record

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



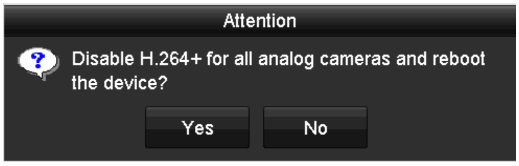
Advanced Settings

H.264+ for All the Analog Camer... Enable Disable

Overwrite ☑

Figure 5-41 Advanced Settings

Step 3 Click **Disable** to disable H.264+ for all the analog cameras and the following attention box pops up.



Attention

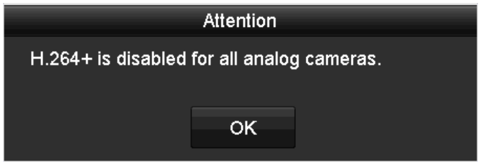
Disable H.264+ for all analog cameras and reboot the device?

Figure 5-42 Attention Box

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

**NOTE**

If H.264+ is already disabled for all the analog cameras, when you click **Disable** button, the following attention box pops up to remind you that H.264+ is already disabled for all analog cameras.



H.264+ is disabled for all analog cameras.

Figure 5-43 Attention Box

# 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**

Select 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.

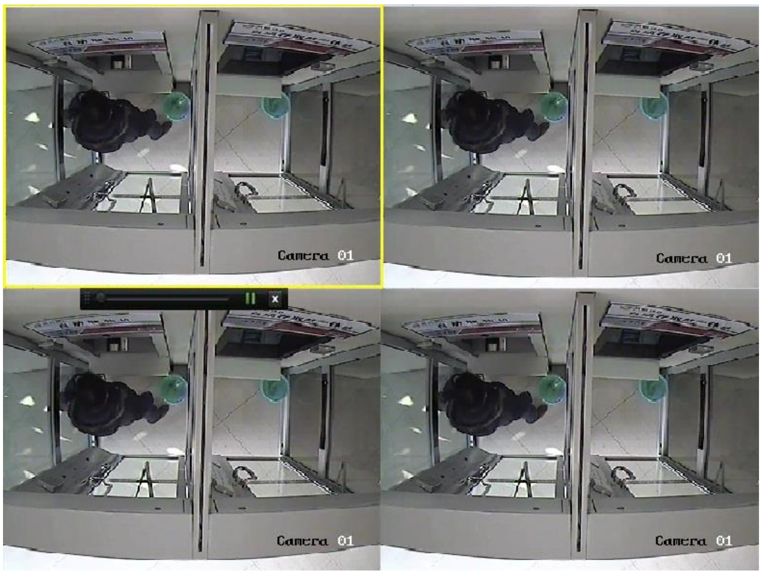


Figure 6-1 Instant Playback Interface

### 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.

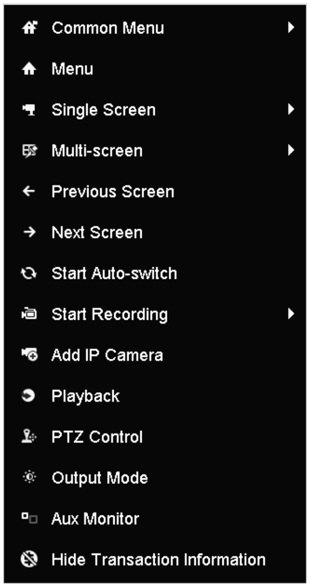


Figure 6-2 Right-Click Menu in Live View

## Playback by Time

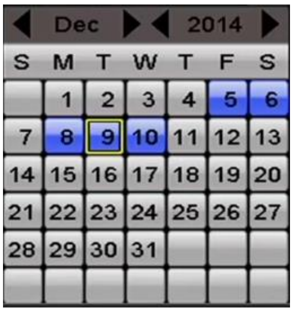
***Purpose***

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

Step 1 Enter **Playback** interface.

Menu>Playback

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



| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
|  | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 31 |  |  |  |
|  |  |  |  |  |  |  |

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 drop-down list for playback.

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

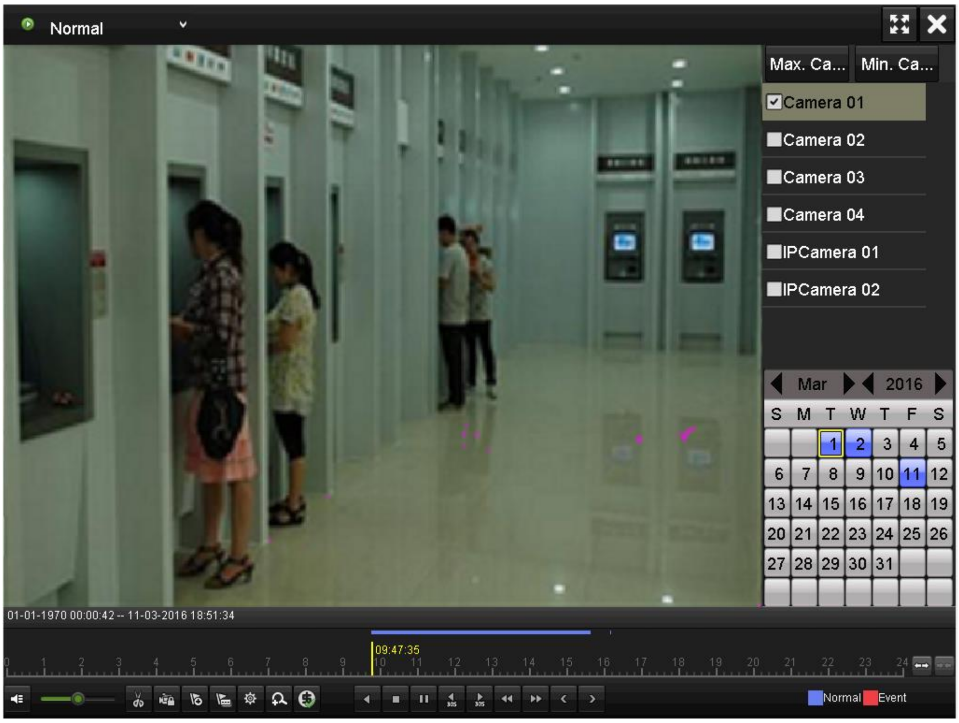


Figure 6-4 Playback Interface

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

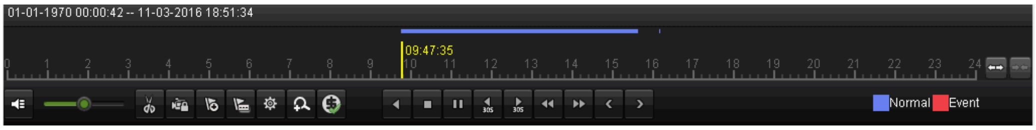


Figure 6-5 Toolbar of Playback

Table 6-1 Detailed Explanation of Playback Toolbar

| Button | Operation | Button | Operation | Button | Operation |
|---|---|---|---|---|---|
| 🔈/🔇 | Audio on/Mute | ✂/✂ | Start/Stop clipping | 🔒 | Lock File |
| 🏷 | Add default tag | 🏷 | Add customized tag | ⚙ | File management for video clips, locked files and tags |
| ◀/⏸ | Reverse | ■ | Stop | 🔍 | Digital Zoom |

| Button | Operation | Button | Operation | Button | Operation |
|---|---|---|---|---|---|
|  | play/Pause |  |  |  |  |
| ▶30S | 30s forward | ◀30S | 30s reverse | ❚❚/▶ | Pause/Play |
| ▶▶ | Fast forward | ‹ | Previous day | ◀◀ | Slow forward |
| ⛶ | Full Screen | ✕ | Exit | › | Next day |
| 🖫 | Save the clips | 10 11 12 | Process bar | ⟷/→← | Scaling up/down the time line |
| $/$ | Display/Hide transaction information |  |  |  |  |

**NOTE**

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

## 6.1.3 Playing Back by ATM Information

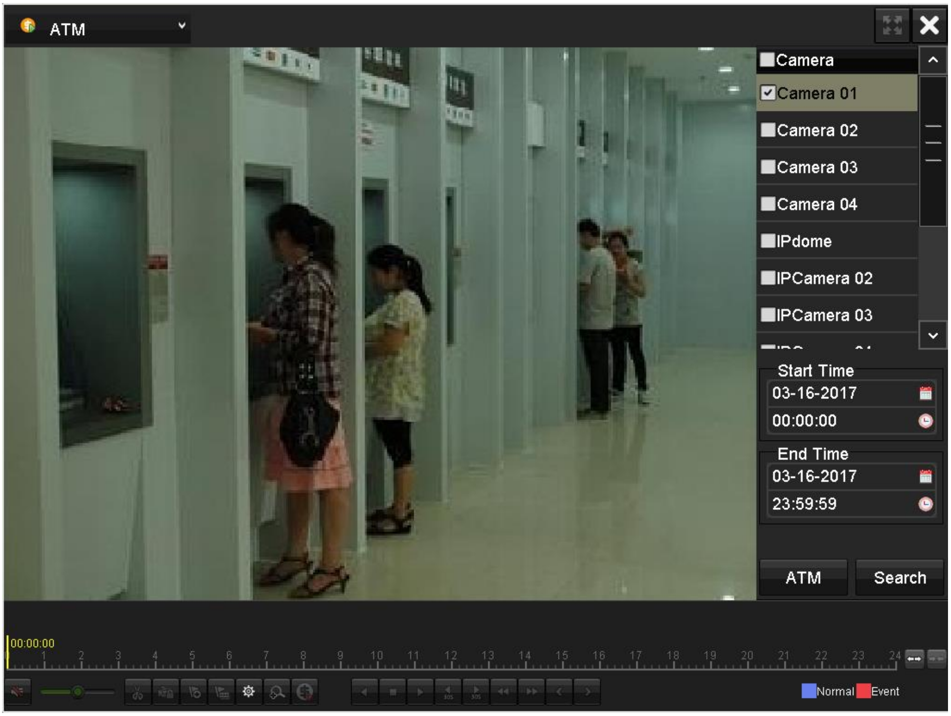
***Purpose***

You can play back the record files by the ATM information, including card No., transaction amount and transaction type.

Step 1 Enter the playback interface.

Menu>Playback

Step 2 Click Normal ⌄ and select ATM to enter the ATM Playback interface.



☐Camera
☑Camera 01
☐Camera 02
☐Camera 03
☐Camera 04
☐IPdome
☐IPCamera 02
☐IPCamera 03

Start Time
03-16-2017
00:00:00

End Time
03-16-2017
23:59:59

Figure 6-6 Video Search by ATM Information

Step 3 Check the checkbox of the channel in the channel list, and specify the start and end time for search.

Step 4 Click **ATM** in the lower-right corner to enter the ATM Settings interface.

1) Input the **Card No.**, **Transaction Amount** and then select the **Transaction Type** from the drop-down list for video search.
2) Click **OK** to save the settings.

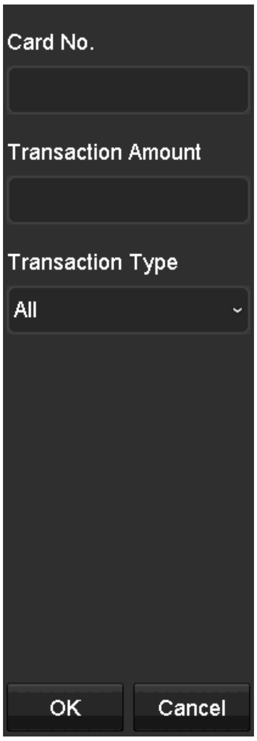


Figure 6-7 ATM Parameters

Step 5 Click **Search**, and the record files matching the search conditions will be displayed on a list.

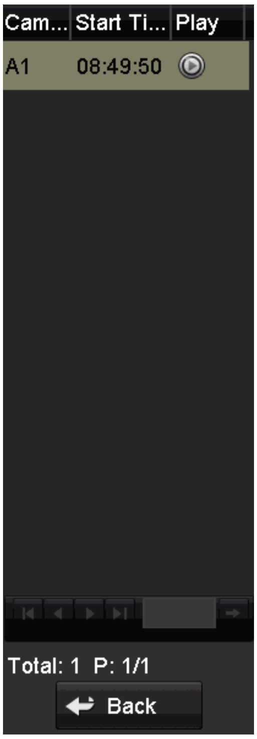
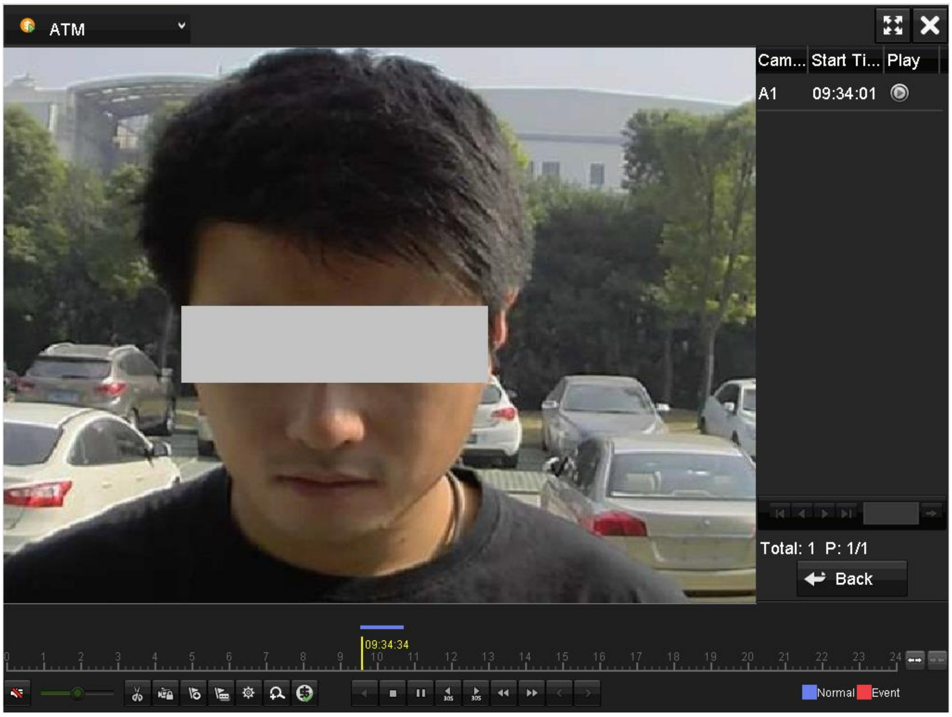


Figure 6-8 Result of Video Search by ATM Information

Step 6 Click ⊙ to play back the record files. You can click **Back** to return to the search interface.



| Cam... | Start Ti... | Play |
|---|---|---|
| A1 | 09:34:01 | ◉ |

Figure 6-9 Interface of Playback by ATM Information

## 6.1.4 Playing Back by Event Search

***Purpose***

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

**NOTE**

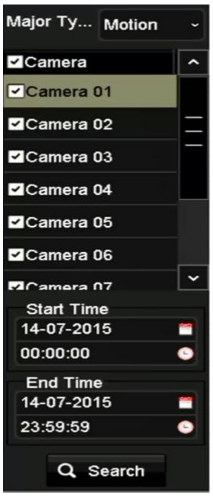
For DS-8104AHQ(L)I-E4, motion detection and alarm input can be selected for the event types. For iDS-8104AHQXLI-E4, motion detection, alarm input, and smart ATM alarm can be selected for the event types.

Step 1 Enter the **Playback** interface.

Menu>Playback

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

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



Major Ty... Motion

☑Camera
☑Camera 01
☑Camera 02
☑Camera 03
☑Camera 04
☑Camera 05
☑Camera 06
☑Camera 07

Start Time
14-07-2015
00:00:00

End Time
14-07-2015
23:59:59

Figure 6-10 Video Search by Motion Detection

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

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

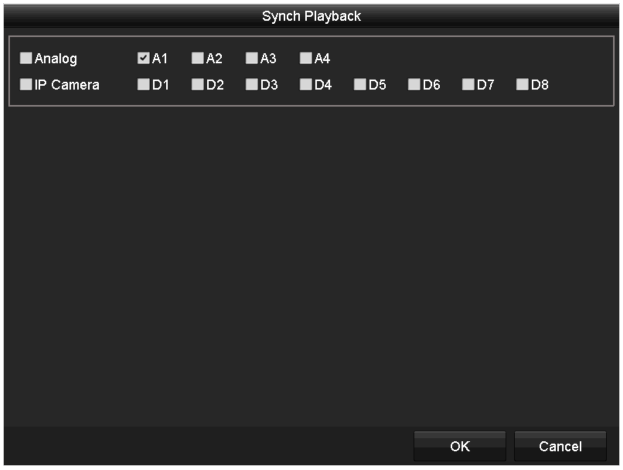
You can click **Back** button to return to the search interface.

If there is only one channel triggered, click ▶ to realize full-screen playback of this channel.

If several channels are triggered, click ▶ to enter the Synchronous Playback interface. Check the 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.

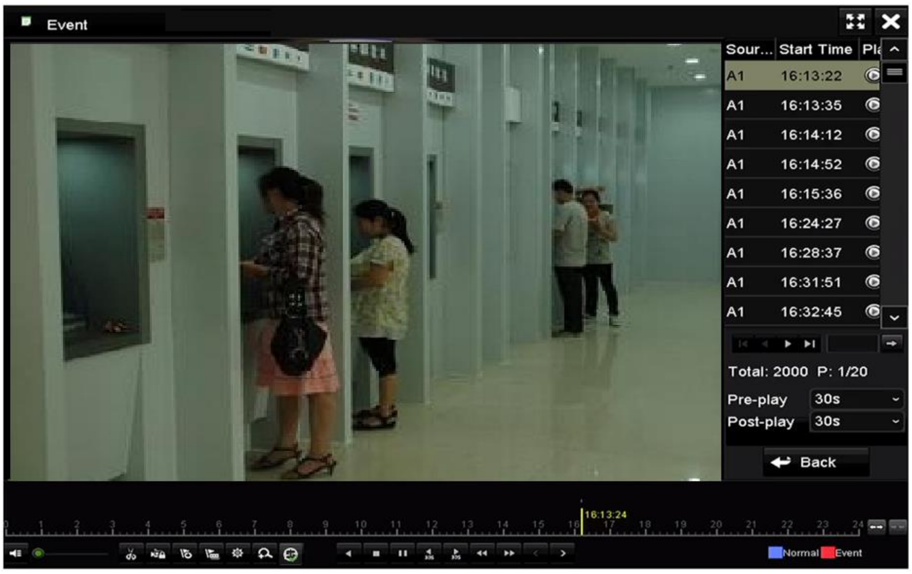


Synch Playback

☐Analog ☑A1 ☐A2 ☐A3 ☐A4
☐IP Camera ☐D1 ☐D2 ☐D3 ☐D4 ☐D5 ☐D6 ☐D7 ☐D8

Figure 6-11 Select Channels for Synchronous Playback

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



| Sour... | Start Time | Pl |
|---|---|---|
| A1 | 16:13:22 | |
| A1 | 16:13:35 | |
| A1 | 16:14:12 | |
| A1 | 16:14:52 | |
| A1 | 16:15:36 | |
| A1 | 16:24:27 | |
| A1 | 16:28:37 | |
| A1 | 16:31:51 | |
| A1 | 16:32:45 | |

Total: 2000 P: 1/20

Pre-play 30s

Post-play 30s

Figure 6-12 Interface of Playback by Event

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

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

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

Step 6 (Optional) Click ‹ or › to select the previous or next event.

Please refer to Table 6-1 for the description of buttons on the toolbar.

### 6.1.5 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 playback by tag***

Step 1 Enter Playback interface.

Menu>Playback

Step 2 Search and play back the record file(s).

Refer to *Chapter 6.1.2 Playing Back by Normal Search* for the detailed information about searching and playback of the record files.

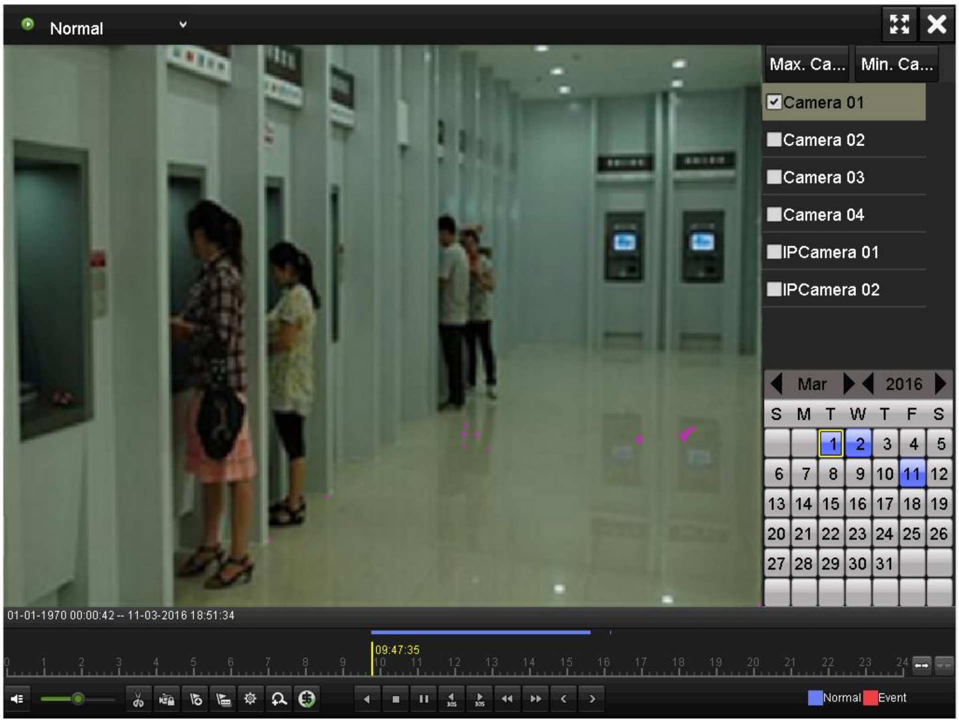
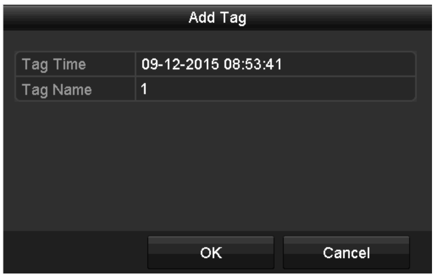


Figure 6-13 Interface of Playback by Time

Step 3 Click to add default tag.

Step 4 Click to add customized tag and input tag name.



Add Tag

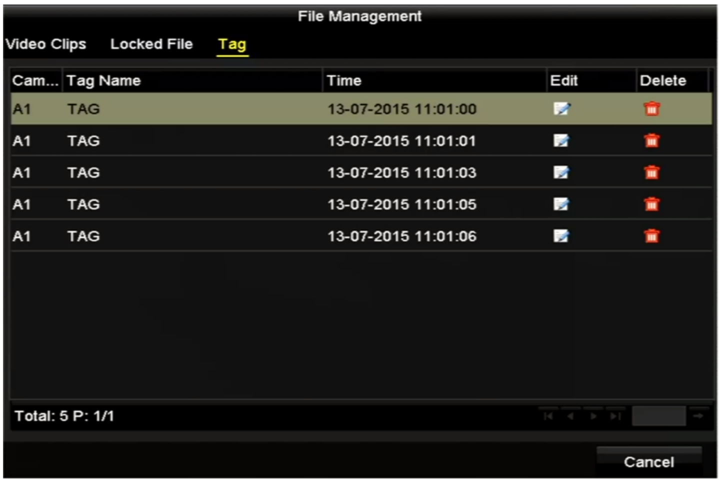
| | |
|---|---|
| Tag Time | 09-12-2015 08:53:41 |
| Tag Name | 1 |

Figure 6-14 Add Tag

**NOTE**

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

Step 5 Click to check, edit and delete tag(s).



| Cam... | Tag Name | Time | Edit | Delete |
|---|---|---|---|---|
| A1 | TAG | 13-07-2015 11:01:00 | ✎ | 🗑 |
| A1 | TAG | 13-07-2015 11:01:01 | ✎ | 🗑 |
| A1 | TAG | 13-07-2015 11:01:03 | ✎ | 🗑 |
| A1 | TAG | 13-07-2015 11:01:05 | ✎ | 🗑 |
| A1 | TAG | 13-07-2015 11:01:06 | ✎ | 🗑 |

Total: 5 P: 1/1

Figure 6-15 Tag Management Interface

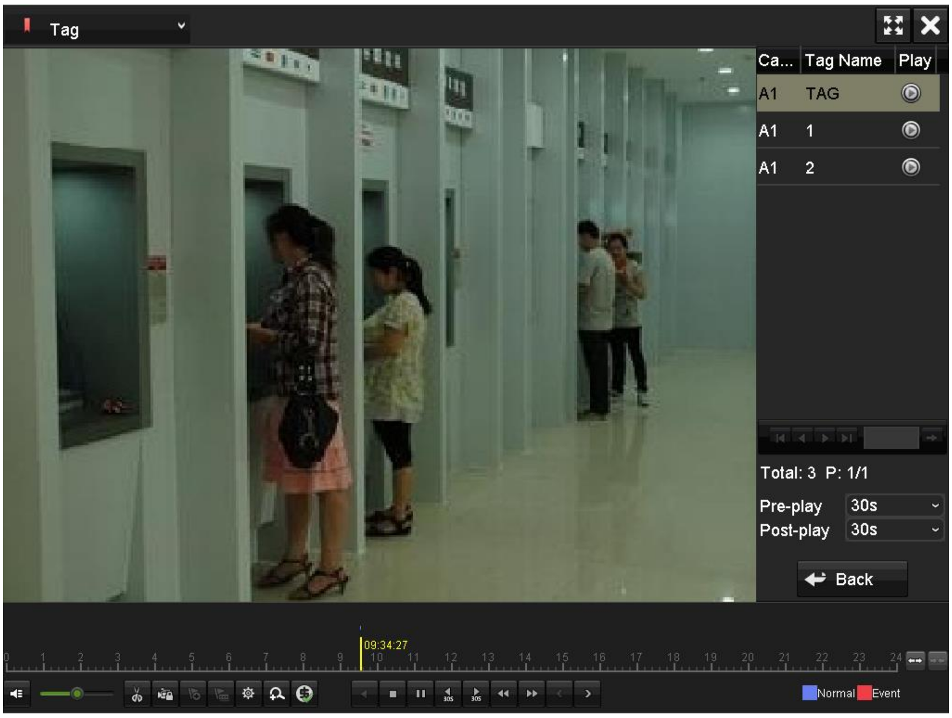
***Steps***

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

Step 2 Select channels, edit start time and end time, and then click **Search** to enter **Search Result** interface.

**NOTE**

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



| Ca... | Tag Name | Play |
|---|---|---|
| A1 | TAG | ⊙ |
| A1 | 1 | ⊙ |
| A1 | 2 | ⊙ |

Total: 3 P: 1/1

Pre-play 30s

Post-play 30s

Figure 6-16 Video Search by Tag

Step 3 Click ⊙ to play back the file.

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

**NOTE**

- Pre-play and post-play can be configured.
- You can click < or > to select the previous or next tag. Please refer to Table 6-1 for the description of buttons on the toolbar.

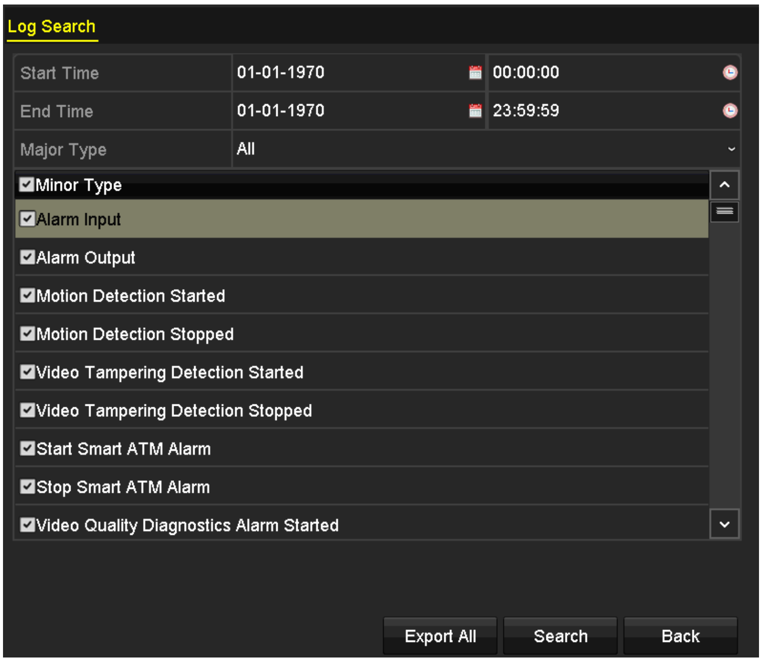
## 6.1.6 Playing Back by System Logs

***Purpose***

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

Step 1 Enter Log Search interface.

Menu>Maintenance>Log Information>Log Search



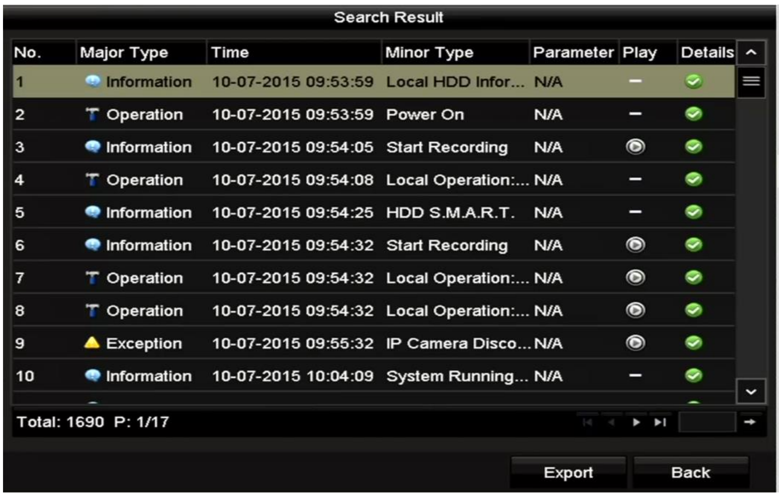
Log Search

| | | |
|---|---|---|
| Start Time | 01-01-1970 | 00:00:00 |
| End Time | 01-01-1970 | 23:59:59 |
| Major Type | All | |

☑Minor Type
☑Alarm Input
☑Alarm Output
☑Motion Detection Started
☑Motion Detection Stopped
☑Video Tampering Detection Started
☑Video Tampering Detection Stopped
☑Start Smart ATM Alarm
☑Stop Smart ATM Alarm
☑Video Quality Diagnostics Alarm Started

Figure 6-17 System Log Search Interface

Step 2 Set search time and type and click **Search**.



Search Result

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

Total: 1690 P: 1/17

Figure 6-18 Result of System Log Search

Step 3 Select a log with record file and click ▶ to enter **Playback** interface.

**NOTE**

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

Step 4 Playback management.

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

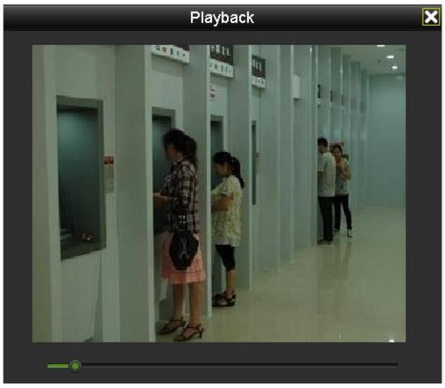


Figure 6-19 Interface of Playback by Log

## 6.1.7 Playing Back by Sub-Periods

***Purpose***

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

Step 1 Enter **Playback** interface.

Menu>Playback

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

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

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

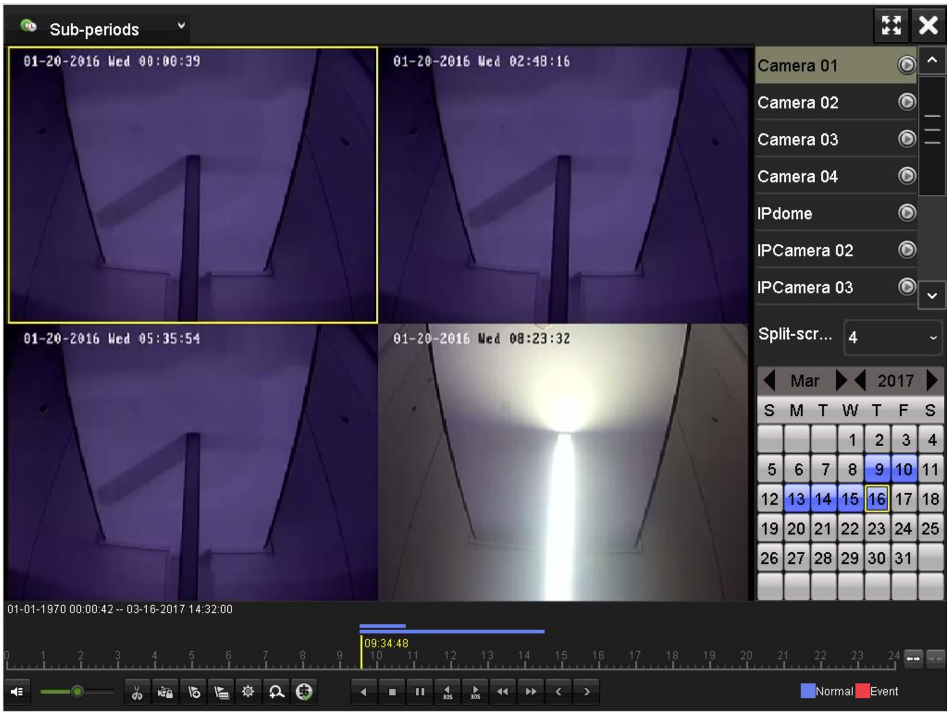


Figure 6-20 Interface of Sub-periods Playback

**NOTE**

According to the defined number of split-screens, the video files on the selected date can be divided into average segments for playback. E.g., if there are video files existing between 16:00 and 20:00, and the 4-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.

Step 1 Enter the Playback interface.

Menu>Playback

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

The files are listed in the right-side list.

You can click Refresh to refresh the file list.

Step 3 Select the file and click ◉ to play back it.

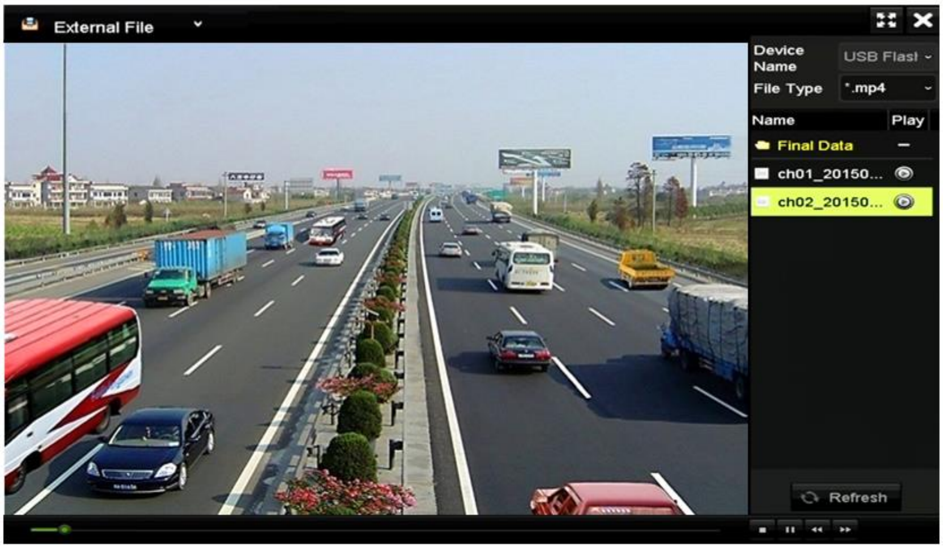


Figure 6-21 Interface of External File Playback

## 6.1.9 Playing Back Pictures

***Purpose***

The captured pictures stored in the HDDs of the device can be searched and viewed.

Step 1 Enter Playback interface.

Menu>Playback

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

Step 3 Check the checkbox to select the channel and specify the start time and end time for search.

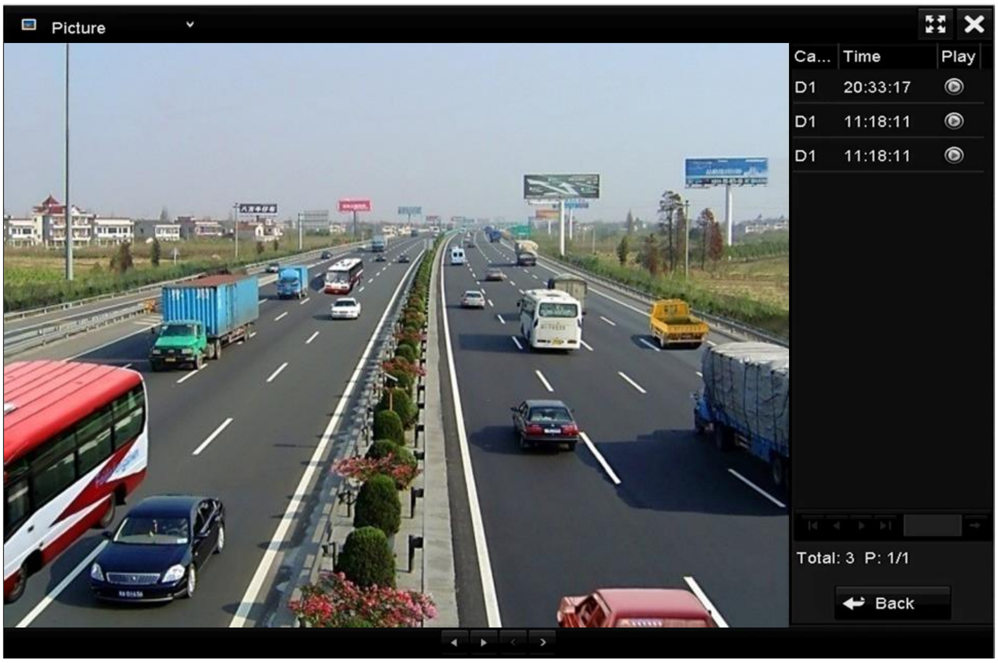
Step 4 Click **Search** to enter Search Result interface.

**NOTE**

Up to 4000 pictures can be displayed each time.

Step 5 Select a picture you want to view and click ▶.

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



| Ca... | Time | Play |
|---|---|---|
| D1 | 20:33:17 | ◉ |
| D1 | 11:18:11 | ◉ |
| D1 | 11:18:11 | ◉ |

Total: 3 P: 1/1

Figure 6-22 Result of Picture Playback

Step 6 The toolbar in the bottom part of Playback interface can be used to control playing process.

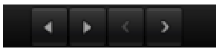


Figure 6-23 Picture Playback Toolbar

Table 6-2 Detailed Explanation of Picture-playback Toolbar

| Button | Function | Button | Function | Button | Function | Button | Function |
|---|---|---|---|---|---|---|---|
| ◀ | Play reverse | ▶ | Play | ‹ | Previous picture | › | Next picture |

## 6.2 Auxiliary Functions of Playback

### 6.2.1 Playing Back Frame by Frame

***Purpose***

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

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

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

### 6.2.2 Digital Zoom

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

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

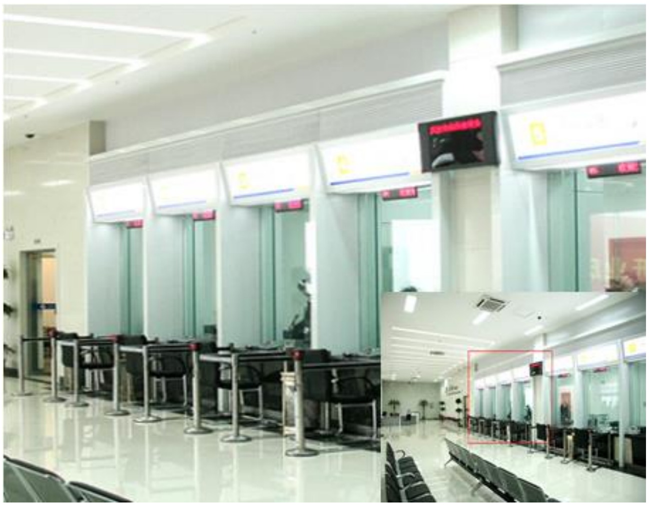


Figure 6-24 Draw Area for Digital Zoom

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

### 6.2.3 Reverse Playback of Multi-Channel

***Purpose***

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

Step 1 Enter Playback interface.

Menu>Playback

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

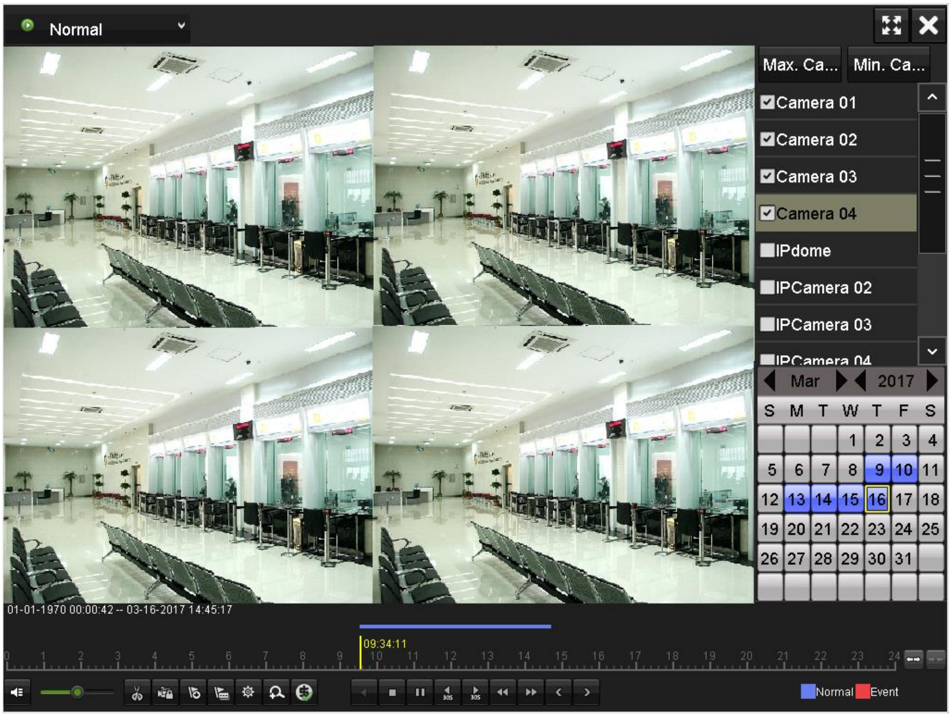


Figure 6-25 4-ch Synchronous Playback Interface

Step 3 Click ◀ to play back the record files reversely.

# Chapter 7 Backup

## 7.1 Backing up Record Files

***Before you start***

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

### 7.1.1 Quick Export

***Purpose***

Export record files to backup device(s) quickly.

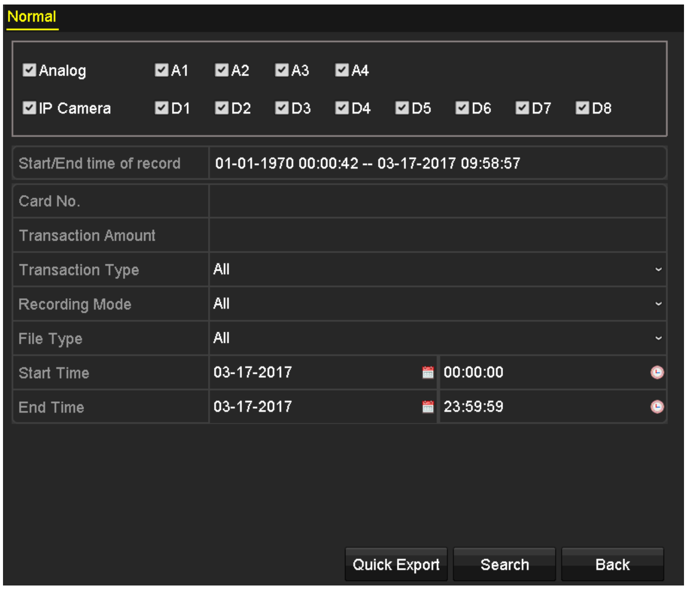
Step 1 Enter Normal Export interface.

Menu > Export > Normal

Step 2 Select the channel(s) you want to back up and set the search conditions.

**NOTE**

The start time and end time for search should be within the same day.



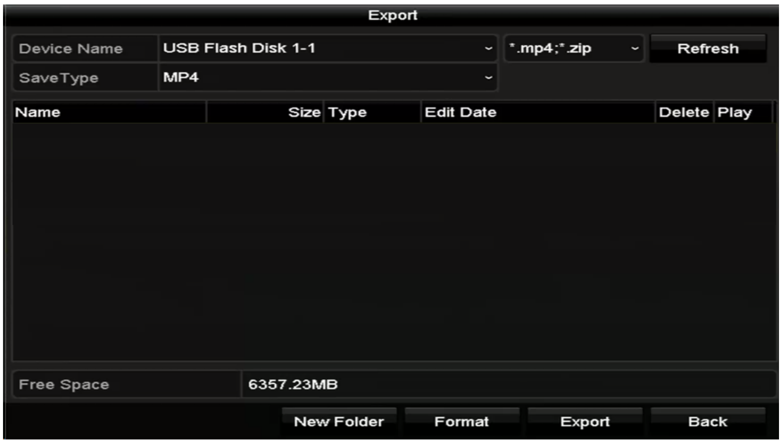
☑ Analog ☑ A1 ☑ A2 ☑ A3 ☑ A4

☑ IP Camera ☑ D1 ☑ D2 ☑ D3 ☑ D4 ☑ D5 ☑ D6 ☑ D7 ☑ D8

Start/End time of record: 01-01-1970 00:00:42 -- 03-17-2017 09:58:57
Card No.:
Transaction Amount:
Transaction Type: All
Recording Mode: All
File Type: All
Start Time: 03-17-2017 00:00:00
End Time: 03-17-2017 23:59:59

Figure 7-1 Quick Export Interface for DVR Series

Step 3 Click **Quick Export**, and the Export interface pops up.



Export

Device Name: USB Flash Disk 1-1 | *.mp4;*.zip

SaveType: MP4

| Name | Size | Type | Edit Date | Delete | Play |
|---|---|---|---|---|---|

Free Space: 6357.23MB

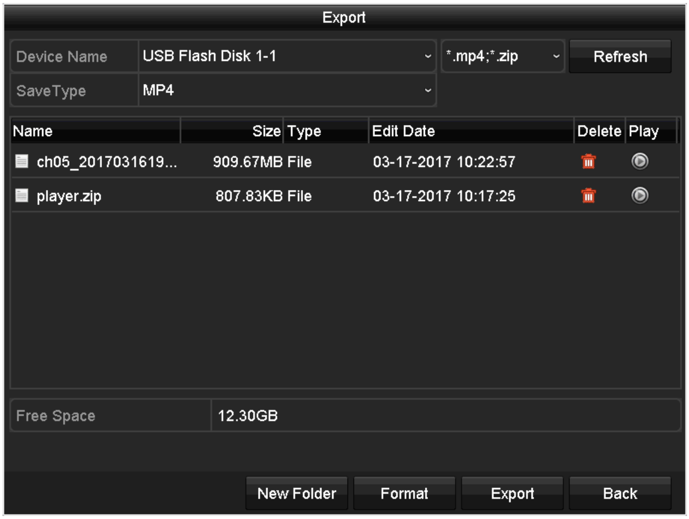
Figure 7-2 Quick Export Using USB1-1

Step 4 Select the backup device from the drop-down list and click **Export.**

The record files within the start time and end time will be exported to the external storage device (e.g., USB Flash Drive) after the backup process is complete.

**NOTE**

The Player program *player.exe* will be exported automatically during record file export.



Export

Device Name: USB Flash Disk 1-1 | *.mp4;*.zip

SaveType: MP4

| Name | Size | Type | Edit Date | Delete | Play |
|---|---|---|---|---|---|
| ☐ ch05_2017031619... | 909.67MB | File | 03-17-2017 10:22:57 | 🗑 | ◉ |
| ☐ player.zip | 807.83KB | File | 03-17-2017 10:17:25 | 🗑 | ◉ |

Free Space: 12.30GB

Figure 7-3 Checkup of Quick Export Result Using USB1-1

Click ◉ on the Export interface, and you can view the video.

Click 🗑 on the Export interface, and you can delete the record file.

## 7.1.2 Backing up by Normal Video/Picture Search

***Purpose***

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

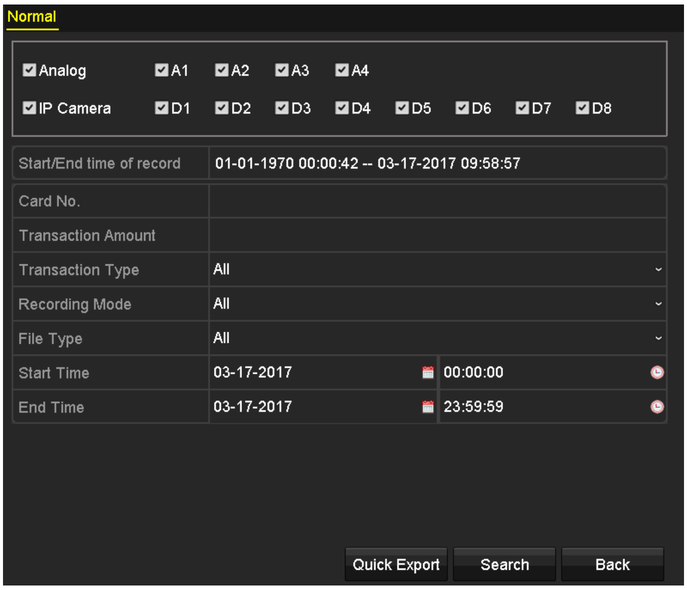
### Backup using USB flash drives and USB HDDs

Step 1 Enter Export interface.

Menu>Export>Normal/Picture

Step 2 Select the cameras to search.

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



☑ Analog ☑ A1 ☑ A2 ☑ A3 ☑ A4
☑ IP Camera ☑ D1 ☑ D2 ☑ D3 ☑ D4 ☑ D5 ☑ D6 ☑ D7 ☑ D8

| | | |
|---|---|---|
| Start/End time of record | 01-01-1970 00:00:42 -- 03-17-2017 09:58:57 | |
| Card No. | | |
| Transaction Amount | | |
| Transaction Type | All | |
| Recording Mode | All | |
| File Type | All | |
| Start Time | 03-17-2017 | 00:00:00 |
| End Time | 03-17-2017 | 23:59:59 |

Figure 7-4 Normal Video Search for Backup

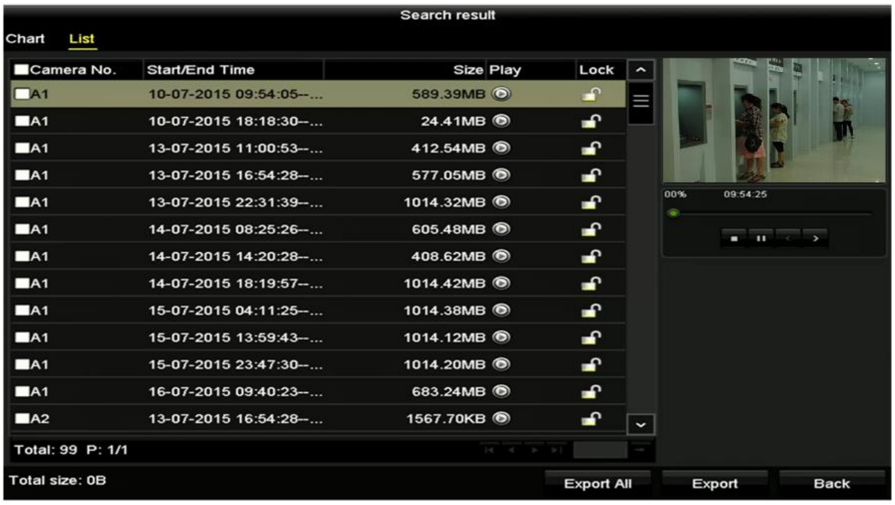
Step 4 The matched video files are displayed in **Chart** or **List** display mode.

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

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

**NOTE**

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



| ☐Camera No. | Start/End Time | Size | Play | Lock |
|---|---|---|---|---|
| ☐A1 | 10-07-2015 09:54:05--... | 589.39MB | ◉ | 🔓 |
| ☐A1 | 10-07-2015 18:18:30--... | 24.41MB | ◉ | 🔓 |
| ☐A1 | 13-07-2015 11:00:53--... | 412.54MB | ◉ | 🔓 |
| ☐A1 | 13-07-2015 16:54:28--... | 577.05MB | ◉ | 🔓 |
| ☐A1 | 13-07-2015 22:31:39--... | 1014.32MB | ◉ | 🔓 |
| ☐A1 | 14-07-2015 08:25:26--... | 605.48MB | ◉ | 🔓 |
| ☐A1 | 14-07-2015 14:20:28--... | 408.62MB | ◉ | 🔓 |
| ☐A1 | 14-07-2015 18:19:57--... | 1014.42MB | ◉ | 🔓 |
| ☐A1 | 15-07-2015 04:11:25--... | 1014.38MB | ◉ | 🔓 |
| ☐A1 | 15-07-2015 13:59:43--... | 1014.12MB | ◉ | 🔓 |
| ☐A1 | 15-07-2015 23:47:30--... | 1014.20MB | ◉ | 🔓 |
| ☐A1 | 16-07-2015 09:40:23--... | 683.24MB | ◉ | 🔓 |
| ☐A2 | 13-07-2015 16:54:28--... | 1567.70KB | ◉ | 🔓 |

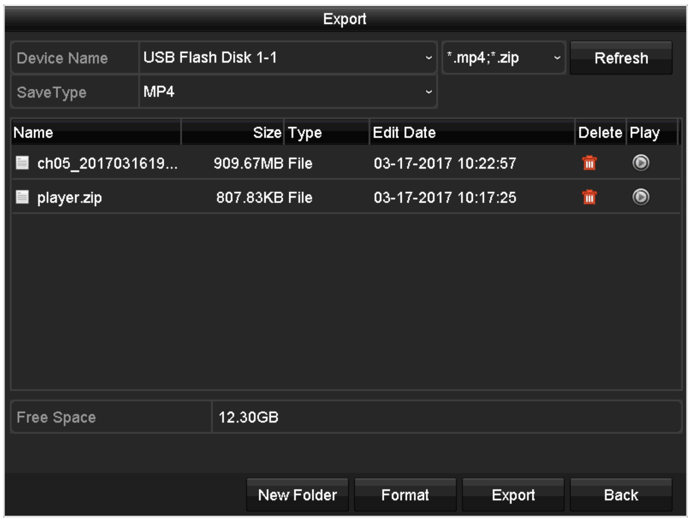
Total: 99 P: 1/1

Total size: 0B

Figure 7-5 Result of Normal Video Search for Backup

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



Device Name: USB Flash Disk 1-1

*.mp4;*.zip

SaveType: MP4

| Name | Size | Type | Edit Date | Delete | Play |
|---|---|---|---|---|---|
| ☐ ch05_2017031619... | 909.67MB | File | 03-17-2017 10:22:57 | 🗑 | ◉ |
| ☐ player.zip | 807.83KB | File | 03-17-2017 10:17:25 | 🗑 | ◉ |

Free Space: 12.30GB

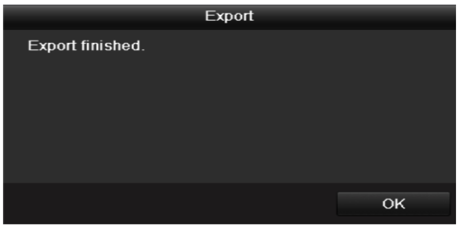
Figure 7-6 Export by Normal Video Search using USB Flash Drive

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

Step 7 Select the saving type.

Step 8 Click **Export** on the Export interface to start the backup process.

A prompt message will pop up after the backup process is complete.



Export finished.

Figure 7-7 Export Finished

**NOTE**

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

## 7.1.3 Backing up by Event Search

***Purpose***

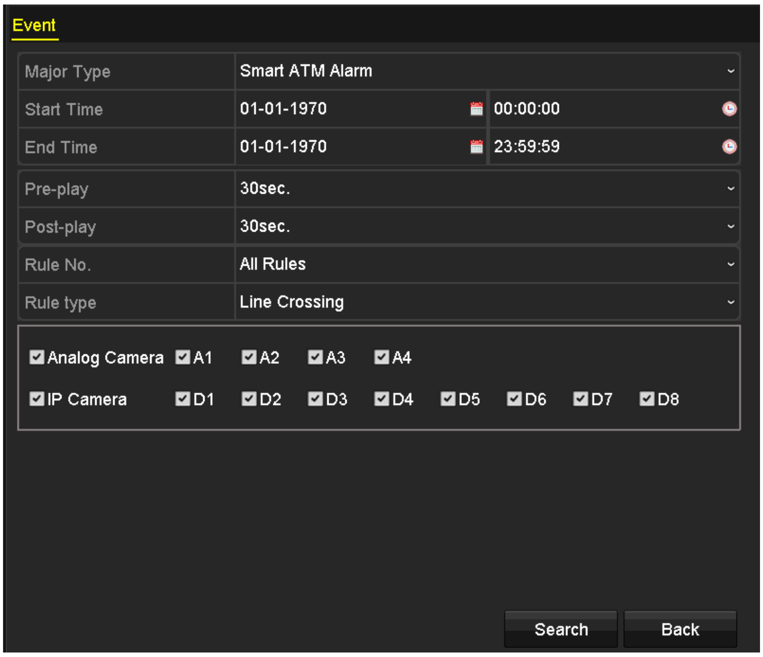
Back up event-related record files using USB devices (USB flash drives, USB HDDs, USB writer), SATA writer or eSATA HDD. Quick Backup and Normal Backup are supported.

Step 1 Enter **Export** interface.

Menu > Export > Event

Step 2 Select the cameras to search.

Step 3 Select the event type to **Alarm Input**, **Motion**, or **Smart ATM Alarm**.



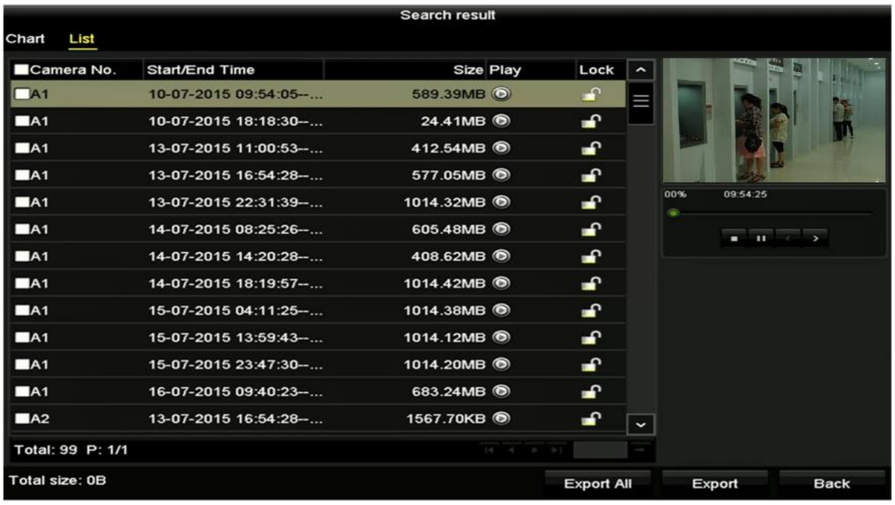
Major Type: Smart ATM Alarm
Start Time: 01-01-1970 00:00:00
End Time: 01-01-1970 23:59:59
Pre-play: 30sec.
Post-play: 30sec.
Rule No.: All Rules
Rule type: Line Crossing

☑ Analog Camera ☑ A1 ☑ A2 ☑ A3 ☑ A4
☑ IP Camera ☑ D1 ☑ D2 ☑ D3 ☑ D4 ☑ D5 ☑ D6 ☑ D7 ☑ D8

Figure 7-8 Event Search for Backup

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

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



| ☐Camera No. | Start/End Time | Size | Play | Lock |
|---|---|---|---|---|
| ☐A1 | 10-07-2015 09:54:05--... | 589.39MB | | |
| ☐A1 | 10-07-2015 18:18:30--... | 24.41MB | | |
| ☐A1 | 13-07-2015 11:00:53--... | 412.54MB | | |
| ☐A1 | 13-07-2015 16:54:28--... | 577.05MB | | |
| ☐A1 | 13-07-2015 22:31:39--... | 1014.32MB | | |
| ☐A1 | 14-07-2015 08:25:26--... | 605.48MB | | |
| ☐A1 | 14-07-2015 14:20:28--... | 408.62MB | | |
| ☐A1 | 14-07-2015 18:19:57--... | 1014.42MB | | |
| ☐A1 | 15-07-2015 04:11:25--... | 1014.38MB | | |
| ☐A1 | 15-07-2015 13:59:43--... | 1014.12MB | | |
| ☐A1 | 15-07-2015 23:47:30--... | 1014.20MB | | |
| ☐A1 | 16-07-2015 09:40:23--... | 683.24MB | | |
| ☐A2 | 13-07-2015 16:54:28--... | 1567.70KB | | |

Figure 7-9 Result of Event Search

Step 6 Export the video files. Please refer to step 5 of *Chapter 7.1.2 Backing up by Normal Video/Picture Search* for details.

## 7.1.4 Backing up Video Clips

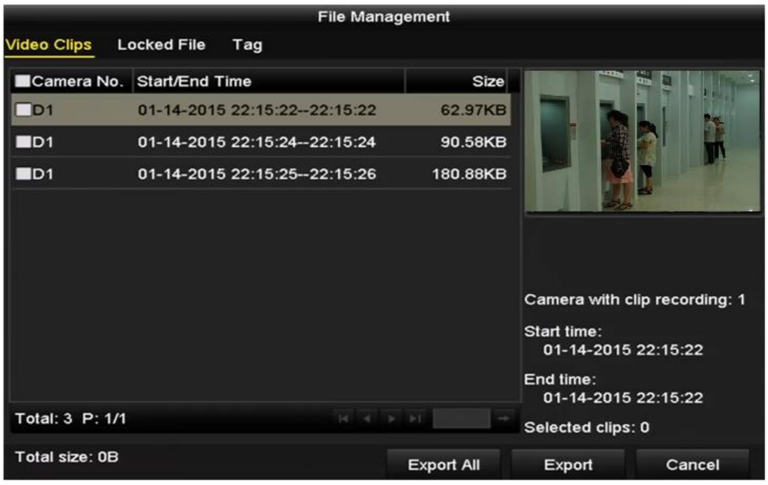
***Purpose***

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

Step 1 Enter **Playback** interface.

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

Step 3 Click to enter the file management interface.



| ☐Camera No. | Start/End Time | Size |
|---|---|---|
| ☐D1 | 01-14-2015 22:15:22--22:15:22 | 62.97KB |
| ☐D1 | 01-14-2015 22:15:24--22:15:24 | 90.58KB |
| ☐D1 | 01-14-2015 22:15:25--22:15:26 | 180.88KB |

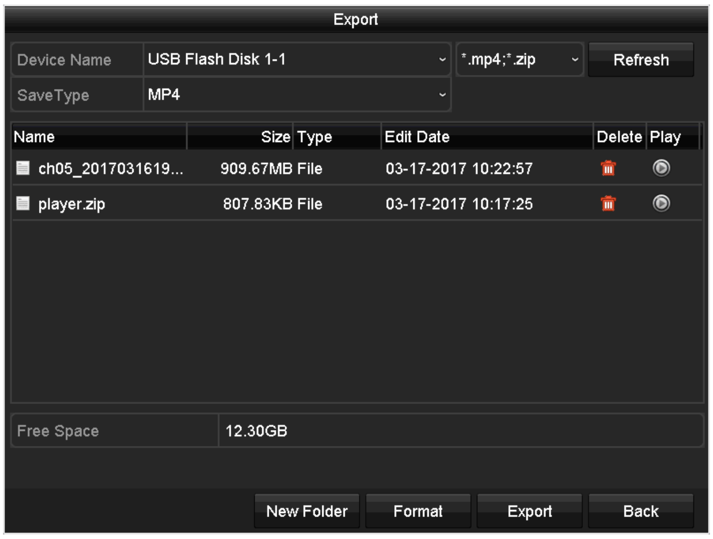
Camera with clip recording: 1
Start time:
01-14-2015 22:15:22
End time:
01-14-2015 22:15:22
Selected clips: 0

Figure 7-10 Video Clips Export Interface

Step 4 Export the video clips in playback. Please refer to step 5 of *Chapter 7.1.2 Backing up by Normal Video/Picture Search* for details.

## 7.2 Managing Backup Devices

Step 1 Enter the **Export** interface.



Device Name: USB Flash Disk 1-1 | *.mp4;*.zip

SaveType: MP4

| Name | Size | Type | Edit Date | Delete | Play |
|---|---|---|---|---|---|
| ch05_2017031619... | 909.67MB | File | 03-17-2017 10:22:57 | 🗑 | ▶ |
| player.zip | 807.83KB | File | 03-17-2017 10:17:25 | 🗑 | ▶ |

Free Space: 12.30GB

Figure 7-11 Storage Device Management

Step 2 Backup device management.

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

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

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

4) Click **Format** to format the backup device.

**NOTE**

If the inserted storage device is not recognized:

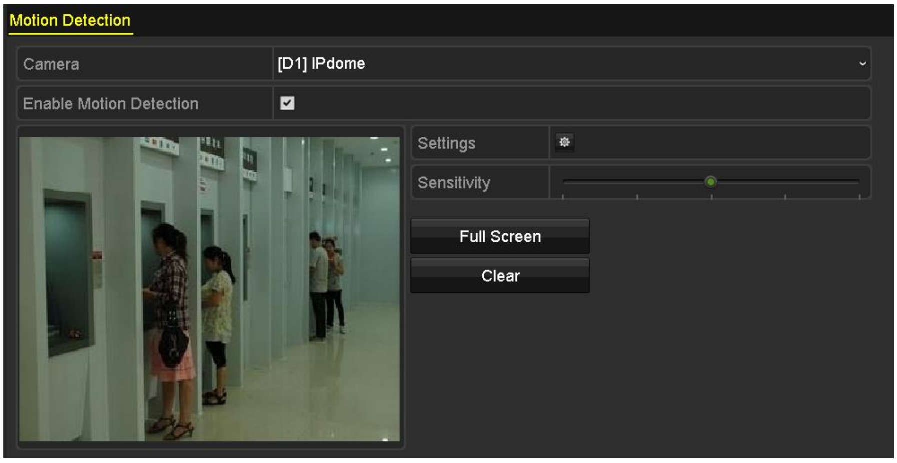
- Click the **Refresh** button.
- Reconnect device.
- Check for compatibility from vendor.

# Chapter 8 Alarm Settings

## 8.1 Setting Motion Detection

Step 1 Enter **Motion Detection** interface of Camera Management.

Menu> Camera> Motion



Camera: [D1] IPdome

Enable Motion Detection: ☑

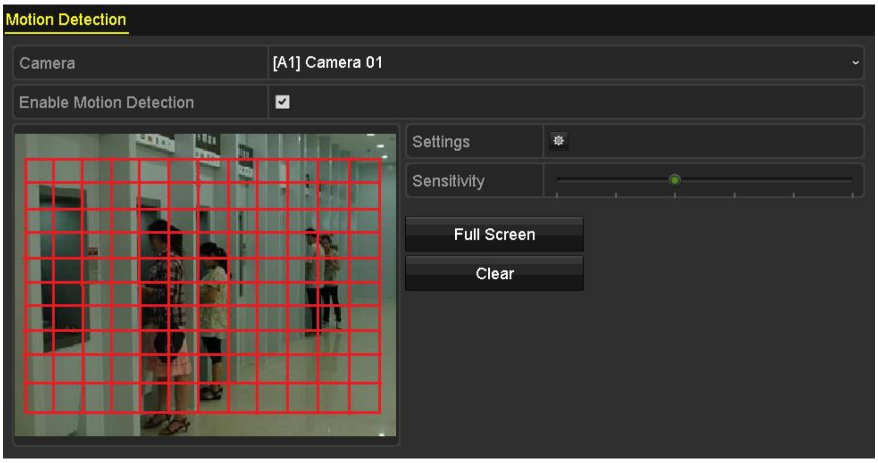
Figure 8-1 Motion Detection Setup Interface

Step 2 Select a camera you want to set up motion detection.

Step 3 Check ☑ checkbox to enable motion detection.

Step 4 Set detection area and sensitivity.

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



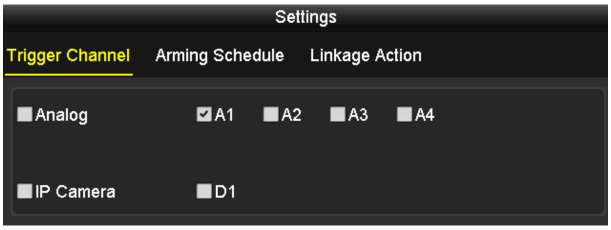
Camera: [A1] Camera 01

Enable Motion Detection: ☑

Figure 8-2 Set Detection Area and Sensitivity

Step 5 Click ⚙ to set alarm response actions.

1) 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.



☐ Analog ☑ A1 ☐ A2 ☐ A3 ☐ A4

☐ IP Camera ☐ D1

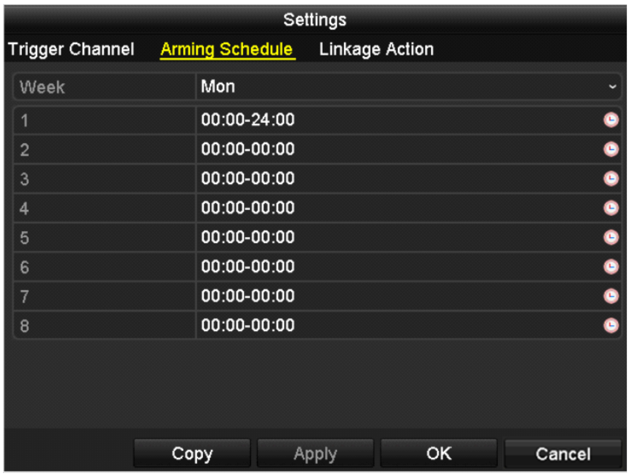
Figure 8-3 Set Trigger Camera of Motion Detection

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

Select 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.



| Week | Mon |
|---|---|
| 1 | 00:00-24:00 |
| 2 | 00:00-00:00 |
| 3 | 00:00-00:00 |
| 4 | 00:00-00:00 |
| 5 | 00:00-00:00 |
| 6 | 00:00-00:00 |
| 7 | 00:00-00:00 |
| 8 | 00:00-00:00 |

Figure 8-4 Set Arming Schedule of Motion Detection

3) Click **Linkage Action** tab to set up alarm response actions of motion alarm (Please refer to *Chapter 8.7 Setting Alarm Response Actions*).

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

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

**NOTE**

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

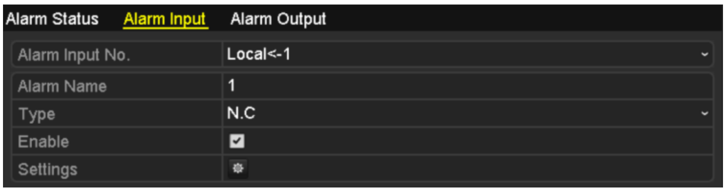
## 8.2 Setting Sensor Alarms

***Purpose***

Set up handling method of an external sensor alarm.

Step 1 Enter Alarm Input Settings interface.

Menu > Configuration > Alarm > Alarm Input

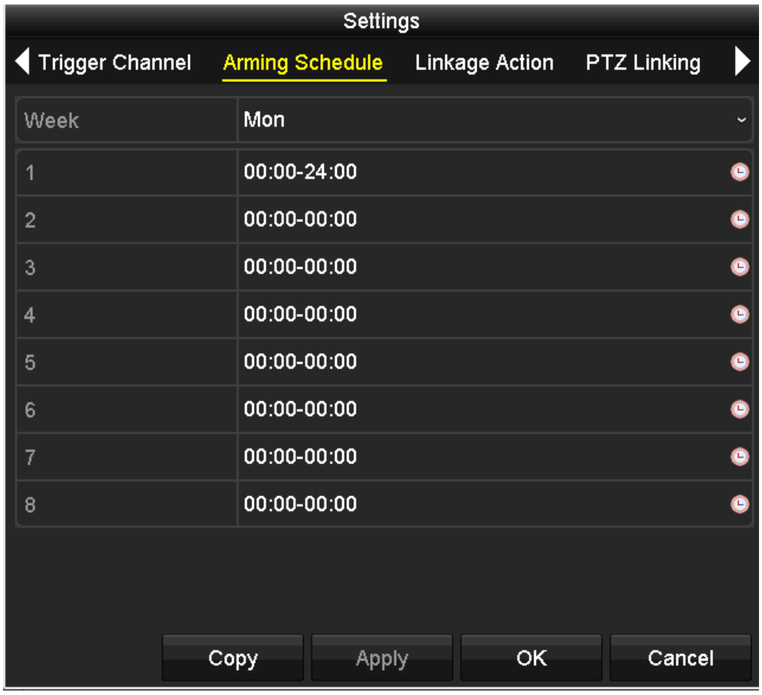


| | |
|---|---|
| Alarm Input No. | Local<-1 |
| Alarm Name | 1 |
| Type | N.C |
| Enable | ☑ |
| Settings | ⚙ |

Figure 8-5 Alarm Input Settings Interface

Step 2 Select the alarm input.

Step 3 Check the **Enable** checkbox and click ⚙ to set its alarm response actions.



| Week | Mon |
|---|---|
| 1 | 00:00-24:00 |
| 2 | 00:00-00:00 |
| 3 | 00:00-00:00 |
| 4 | 00:00-00:00 |
| 5 | 00:00-00:00 |
| 6 | 00:00-00:00 |
| 7 | 00:00-00:00 |
| 8 | 00:00-00:00 |

Figure 8-6 Set Arming Schedule of Alarm Input

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

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

   Select 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**

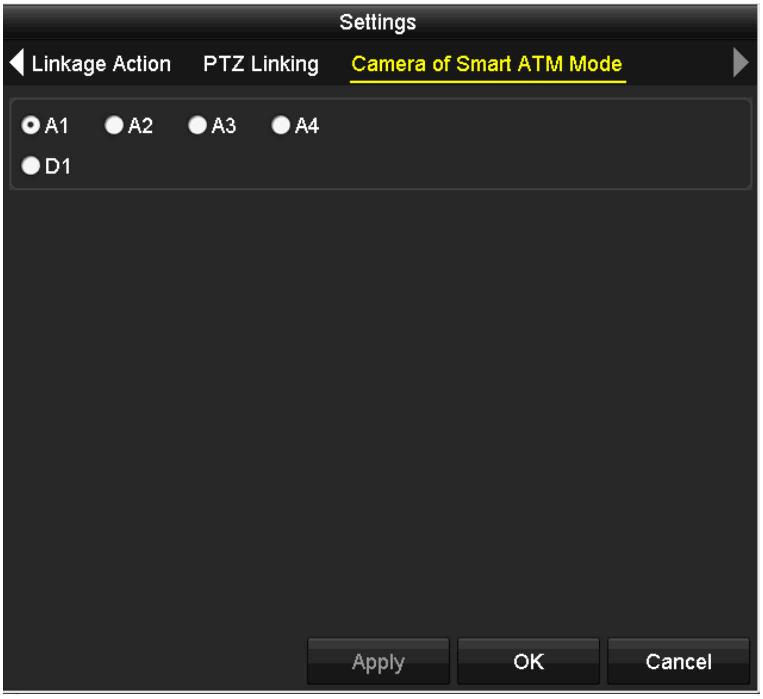
Time periods shall not be repeated or overlapped.

3) Select **Linkage Action** tab to set up alarm response actions of the alarm input (Refer to *Chapter 8.7 Setting Alarm Response Actions*).

4) (Optional) Select **PTZ Linking** tab and set PTZ linkage of the alarm input.

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

5) (Optional) Select **Camera of Smart ATM Mode** tab to select the camera enabled smart ATM.



● A1 ○ A2 ○ A3 ○ A4
○ D1

Figure 8-7 Set Camera of Smart ATM Mode of Alarm Input

**NOTE**

- Check whether the PTZ or speed dome supports PTZ linkage.
- One alarm input can trigger presets, patrol or pattern of more than one channel. But presets, patrols and patterns are exclusive.

Step 4 If you want to set handling action of another alarm input, repeat the above steps or just copy the above settings to it.

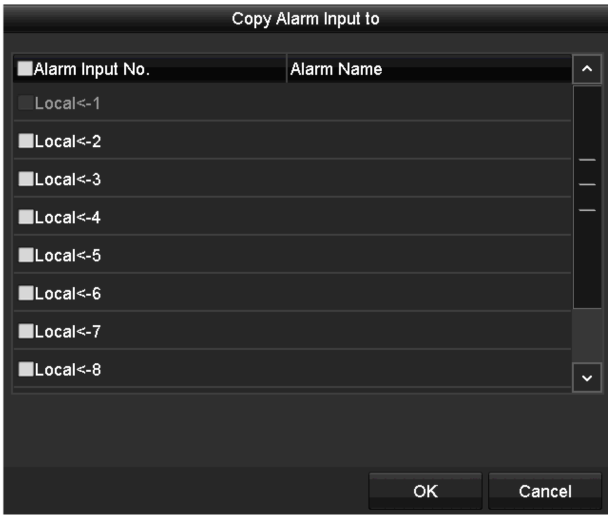


Figure 8-8 Copy Settings of Alarm Input

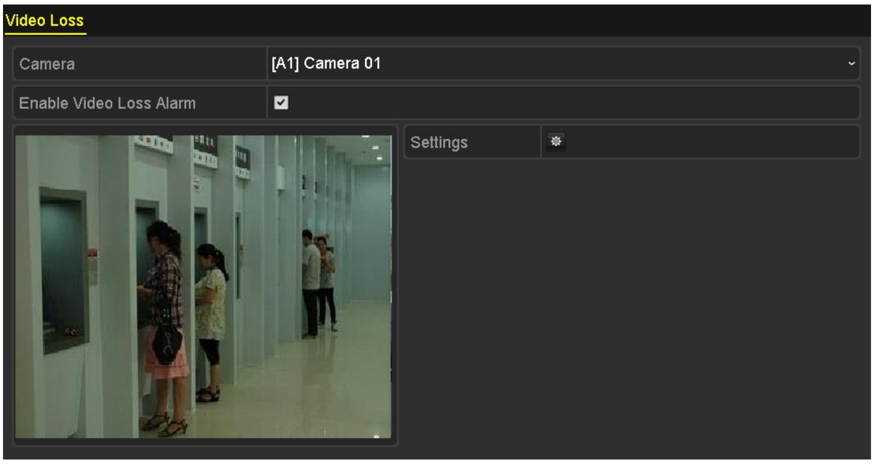
# 8.3 Detecting Video Loss

***Purpose***

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

Step 1 Enter **Video Loss** interface of Camera Management.

Menu> Camera> Video Loss



Camera: [A1] Camera 01

Enable Video Loss Alarm: ☑

Figure 8-9 Video Loss Setup Interface

Step 2 Select a channel you want to detect.

Step 3 Check the checkbox of **Enable Video Loss Alarm**.

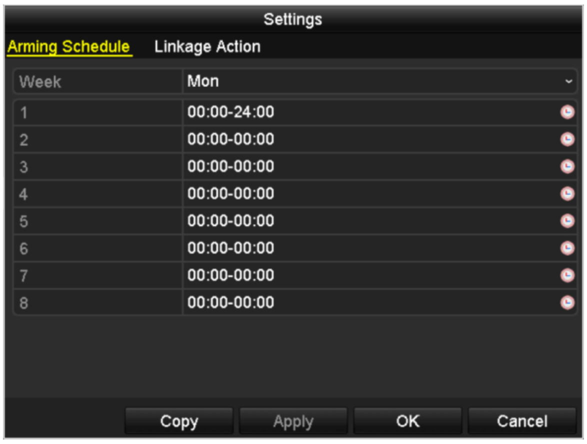
Step 4 Click ⚙ to set up handling method of video loss.

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

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

**NOTE**

Time periods shall not be repeated or overlapped.



| Week | Mon |
|---|---|
| 1 | 00:00-24:00 |
| 2 | 00:00-00:00 |
| 3 | 00:00-00:00 |
| 4 | 00:00-00:00 |
| 5 | 00:00-00:00 |
| 6 | 00:00-00:00 |
| 7 | 00:00-00:00 |
| 8 | 00:00-00:00 |

Figure 8-10 Set Arming Schedule of Video Loss

2) Select **Linkage Action** tab to set up alarm response actions of video loss (Refer to *Chapter 8.7 Setting Alarm Response Actions*).

3) Click **OK** to complete the video loss settings of the channel.

Step 5 Repeat the above steps to finish settings of other channels, or click **Copy** to copy the above settings to them.

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

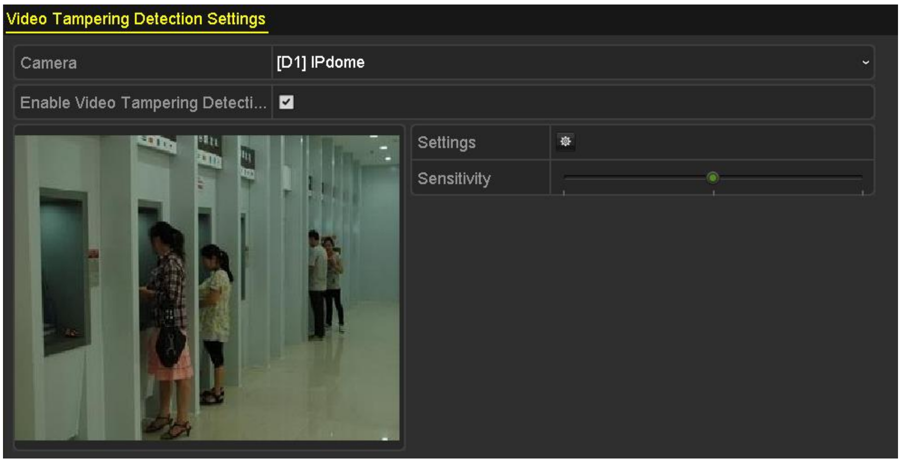
## 8.4 Detecting Video Tampering

***Purpose***

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

Step 1 Enter **Video Tampering** interface of Camera Management.

Menu> Camera> Video Tampering Detection



Video Tampering Detection Settings

Camera: [D1] IPdome

Enable Video Tampering Detecti...: ☑

Figure 8-11 Video Tampering Interface

Step 2 Select a channel you want to detect video tampering.

Step 3 Check the checkbox of **Enable Video Tampering Detection**.

Step 4 Drag the sensitivity bar to set a proper sensitivity level.

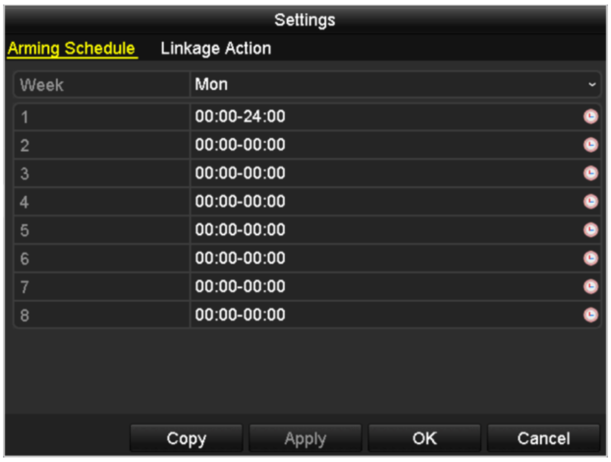
Step 5 Click ⚙ to set handling method of video tampering.

1) Click **Arming Schedule** tab to set the arming schedule of response action.

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

**NOTE**

Time periods shall not be repeated or overlapped.



Settings

Arming Schedule | Linkage Action

| Week | Mon |
|---|---|
| 1 | 00:00-24:00 |
| 2 | 00:00-00:00 |
| 3 | 00:00-00:00 |
| 4 | 00:00-00:00 |
| 5 | 00:00-00:00 |
| 6 | 00:00-00:00 |
| 7 | 00:00-00:00 |
| 8 | 00:00-00:00 |

Figure 8-12 Set Arming Schedule of Video Tampering

2) Select **Linkage Action** tab to set alarm response actions of video tampering alarm (Refer to *Chapter 8.7 Setting Alarm Response Actions*).

3) Click **OK** to complete the video tampering settings of the channel.

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

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

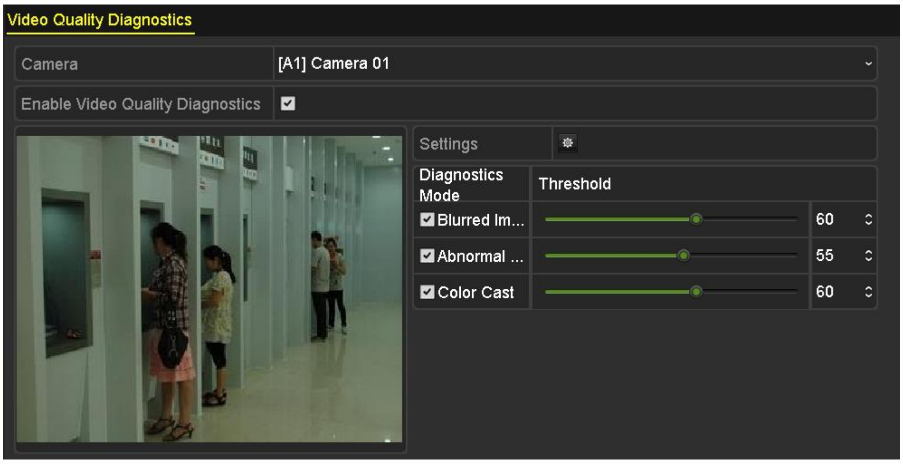
# 8.5 Setting All-day Video Quality Diagnostics

***Purpose***

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

Step 1 Enter **Video Quality Diagnostics Settings** interface of Camera Management.

Menu> Camera> Video Quality Diagnostics



Camera: [A1] Camera 01

Enable Video Quality Diagnostics: ☑

| Diagnostics Mode | Threshold |
|---|---|
| ☑ Blurred Im... | 60 |
| ☑ Abnormal ... | 55 |
| ☑ Color Cast | 60 |

Figure 8-13 Video Quality Diagnostics Interface

Step 2 Select a channel for video quality diagnostics.

Step 3 Check the checkbox of **Enable Video Quality Diagnostics**.

**NOTE**

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

Step 4 Enable and set the threshold of the diagnostic types, there are **Blurred Image**, **Abnormal Brightness**, and **Color Cast**.

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

**NOTE**

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

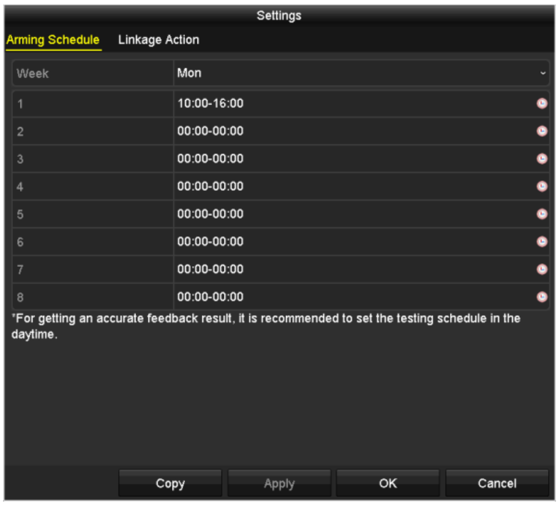
Step 5 Click ⚙ to set handling method of video quality diagnostics.

1) Click **Arming Schedule** tab to set the arming schedule of response action.

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

**NOTE**

Time periods shall not be repeated or overlapped.



| Week | Mon |
|---|---|
| 1 | 10:00-16:00 |
| 2 | 00:00-00:00 |
| 3 | 00:00-00:00 |
| 4 | 00:00-00:00 |
| 5 | 00:00-00:00 |
| 6 | 00:00-00:00 |
| 7 | 00:00-00:00 |
| 8 | 00:00-00:00 |

*For getting an accurate feedback result, it is recommended to set the testing schedule in the daytime.

Figure 8-14 Set Arming Schedule of Video Quality Diagnostics

2) Select **Linkage Action** tab to set alarm response actions of video quality diagnostics alarm (Refer to *Chapter 8.7 Setting Alarm Response Actions*).

3) Click **OK** to complete the video quality diagnostics settings of the channel.

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

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

## 8.6 Handling Exceptions

***Purpose***

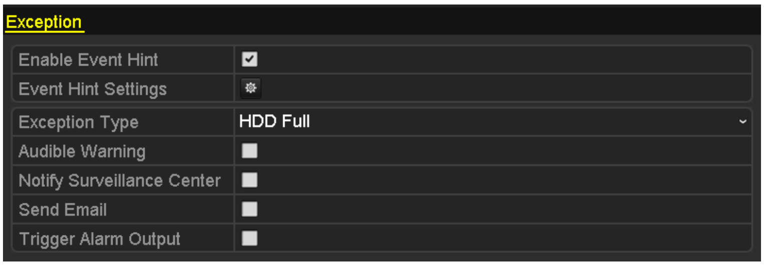
Exception settings refer to the handling method of various exceptions, e.g.

- **HDD Full:** The HDD is full.
- **HDD Error:** Writing HDD error, unformatted HDD, etc.
- **Network Disconnected:** Disconnected network cable.
- **IP Conflicted:** Duplicated IP address.
- **Illegal Login:** Incorrect user ID or password.
- **Input/Recording Resolution Mismatch:** The input resolution is smaller than the recording resolution.

- **Record/Capture Exception:** No space for saving recorded files or captured pictures.

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

Menu> Configuration> Exceptions



Exception

Enable Event Hint ☑

Event Hint Settings ⚙

Exception Type: HDD Full

Audible Warning ☐

Notify Surveillance Center ☐

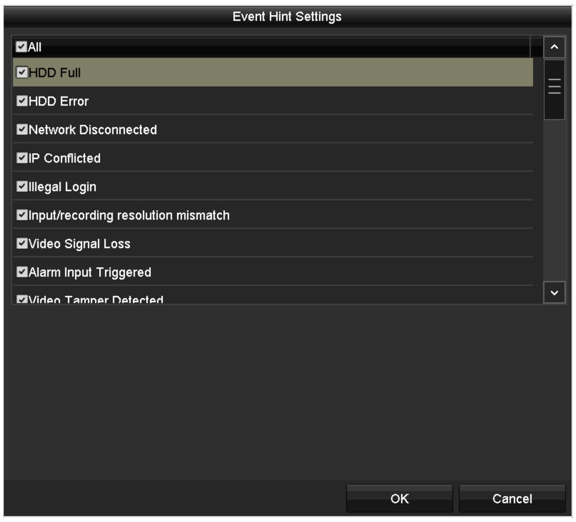
Send Email ☐

Trigger Alarm Output ☐

Figure 8-15 Exception Settings Interface

Step 2 Check the checkbox of **Enable Event Hint** to display ⚠ (Event/Exception icon) when an exceptional event occurs.

Step 3 Click ⚙ to select the detailed event hint for display.



Event Hint Settings

☑All

☑HDD Full

☑HDD Error

☑Network Disconnected

☑IP Conflicted

☑Illegal Login

☑Input/recording resolution mismatch

☑Video Signal Loss

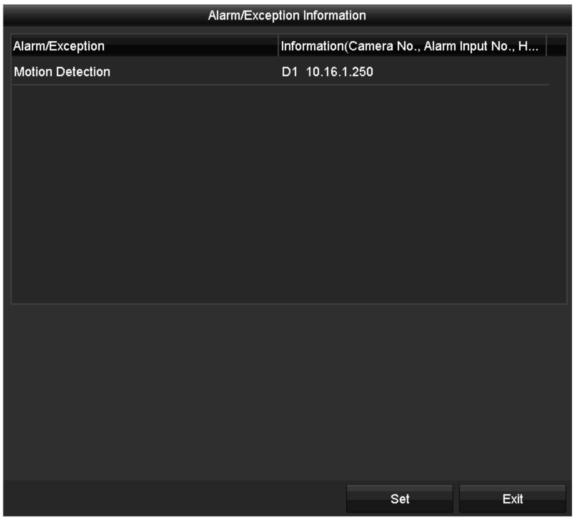
☑Alarm Input Triggered

☑Video Tamper Detected

Figure 8-16 Event Hint Settings

**NOTE**

Click ⚠ appearing on the live view interface, and you can view the detailed information of the exceptional event. Click **Set**, and then you can select the detailed event hint for display.



| Alarm/Exception | Information(Camera No., Alarm Input No., H... |
|---|---|
| Motion Detection | D1 10.16.1.250 |

Figure 8-17 Detailed Event

Step 4 Select the **Exception Type**.

Step 5 Check the checkbox to set the alarm linkage actions. For details, refer to *Chapter 8.7 Setting Alarm Response Actions.*

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

## 8.7 Setting Alarm Response Actions

***Purpose***

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

**Full Screen Monitoring**

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

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

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

**Audible Warning**

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

**Notify Surveillance Center**

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

**NOTE**

The alarm signal will be transmitted automatically at detection mode when remote alarm host is configured. Please refer to *Chapter 12.2.6 Configuring More Settings* for details of alarm host configuration.

**Send Email**

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

Please refer to *Chapter 12.2.8 Configuring Email* for details of Email configuration.

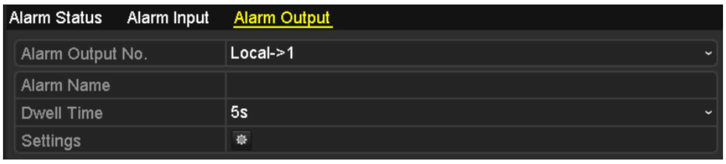
**Trigger Alarm Output**

Trigger an alarm output when an alarm is triggered.

Step 1 Enter Alarm Output interface.

Menu> Configuration> Alarm> Alarm Output

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



Alarm Output No. Local->1

Alarm Name

Dwell Time 5s

Settings

Figure 8-18 Alarm Output Settings Interface

**NOTE**

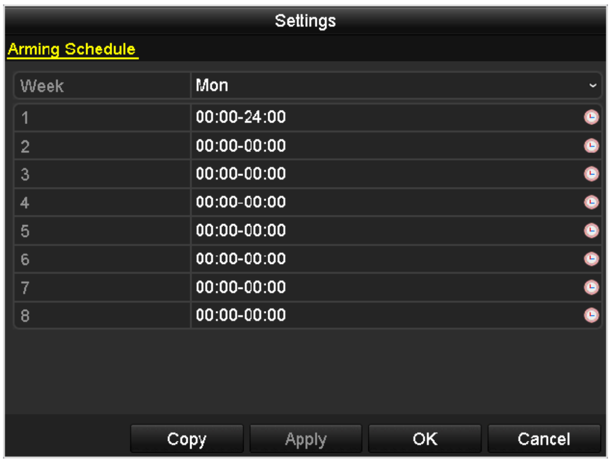
If **Manually Clear** is selected in the drop-down list of **Dwell Time**, you can clear it only by going to Menu> Manual> Alarm.

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

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

**NOTE**

Time periods shall not be repeated or overlapped.



| Week | Mon |
|---|---|
| 1 | 00:00-24:00 |
| 2 | 00:00-00:00 |
| 3 | 00:00-00:00 |
| 4 | 00:00-00:00 |
| 5 | 00:00-00:00 |
| 6 | 00:00-00:00 |
| 7 | 00:00-00:00 |
| 8 | 00:00-00:00 |

Figure 8-19 Set Arming Schedule of Alarm Output

2) Repeat step 1) to set arming schedule of other days of a week. Or click **Copy** to copy an arming schedule to other days.

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

Step 3 Repeat the above steps to finish settings of other alarm outputs, or click **Copy** to copy the above settings to them.

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

# Chapter 9 Smart ATM Settings

For iDS-8104AHQXLI-E4 ATM DVR, you can enable smart ATM function. Four smart ATM modes are supported: panel mode, environment mode, human face mode, and safety cabin mode.

**NOTE**

- The ATM DVR supports up to 4-ch smart ATM configuration of panel mode, environment mode, human face mode, and safety cabin mode together; up to 2-ch human face mode, or up to 2-ch safety cabin, or up to 1-ch human face mode and 1-ch safety cabin mode together. Panel mode and environment mode can be enabled for all the cameras respectively.
- You can only enable one mode for the same camera.

## 9.1 Panel Mode

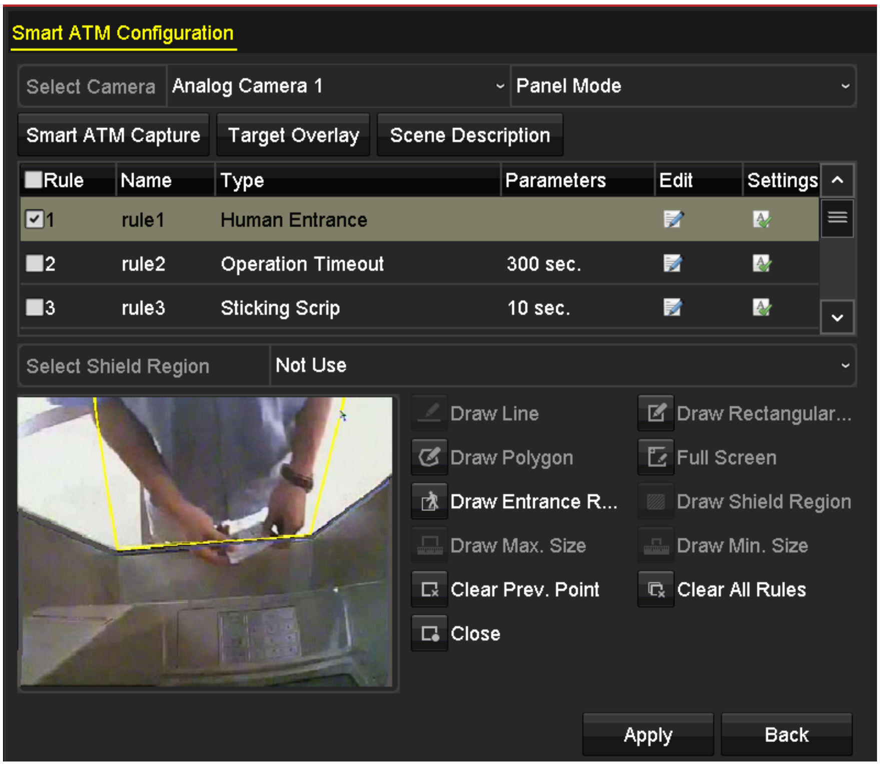
***Purpose***

Panel mode supports the following smart ATM protection rule types: human entrance, operation timeout, sticking scrip, and installing scanner. Eight rules can be set for the mode. You can set the alarm response actions once the configured rule is triggered.

Step 1 Go to **Menu > Camera > Smart ATM Configuration**.

Step 2 Select the camera for panel mode configuration.

Step 3 Select **Panel Mode**.



Smart ATM Configuration

Select Camera: Analog Camera 1 | Panel Mode

| ☐Rule | Name | Type | Parameters | Edit | Settings |
|---|---|---|---|---|---|
| ☑1 | rule1 | Human Entrance | | | |
| ☐2 | rule2 | Operation Timeout | 300 sec. | | |
| ☐3 | rule3 | Sticking Scrip | 10 sec. | | |

Select Shield Region: Not Use

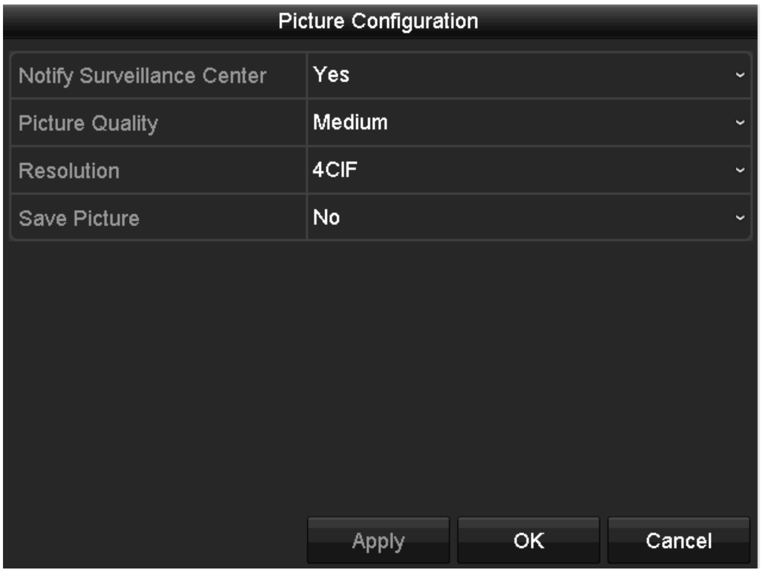
Figure 9-1 Panel Mode

Step 4 Configure **Smart ATM Capture**.

1) Click **Smart ATM Capture**.

2) Configure the captured picture parameters in panel mode.

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



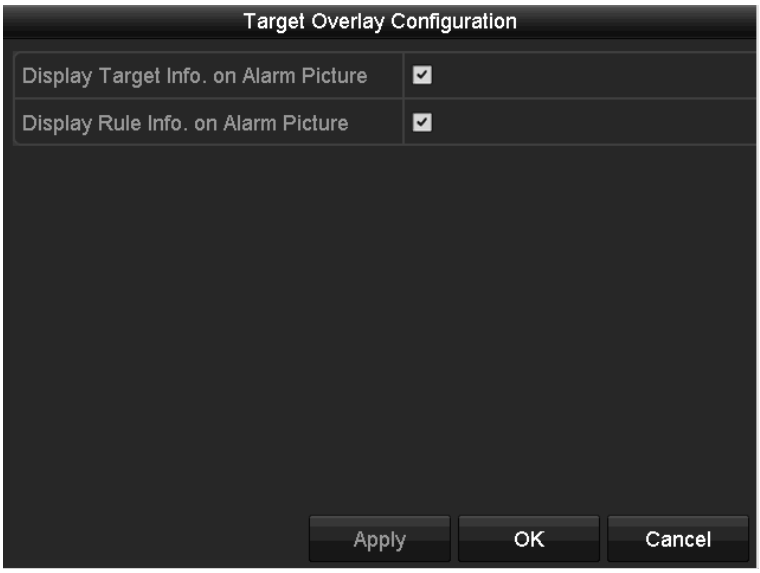
Picture Configuration

| | |
|---|---|
| Notify Surveillance Center | Yes |
| Picture Quality | Medium |
| Resolution | 4CIF |
| Save Picture | No |

Figure 9-2 Picture Configuration

Step 5 Configure **Target Overlay**.

1) Click **Target Overlay**.
2) Check **Display Target Info. on Alarm Picture** or **Display Rule Info. on Alarm Picture**. Once they are checked, the target or rule information will be overlaid on the captured picture.
3) Click **Apply** to save the settings.



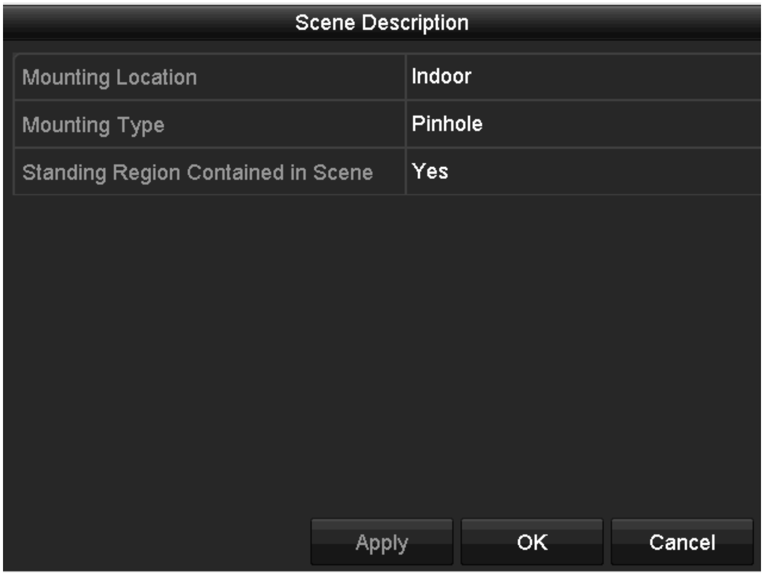
Display Target Info. on Alarm Picture ☑

Display Rule Info. on Alarm Picture ☑

Figure 9-3 Target Overlay Configuration

Step 6 Configure **Scene Description**.

1) Click **Scene Description**.
2) Configure the scene parameters in panel mode.
   - **Mounting Location**: The mounting location of the camera. **Indoor** and **Outdoor** are selectable.
   - **Mounting Type**: The mounting type of the camera. **Pinhole** and **Ceiling** are selectable.
   - **Standing Region Contained in Scene**: Whether the scene contains the human standing region.
3) Click **Apply** to save the settings.



| | |
|---|---|
| Mounting Location | Indoor |
| Mounting Type | Pinhole |
| Standing Region Contained in Scene | Yes |

Figure 9-4 Scene Description

Step 7 (Optional) Configure the shield region.

You can configure shield regions to shield the influence of the configured rules towards the regions. The region easily influenced by light interference can be configured as the shield region to avoid false alarm. Up to four shield regions can be configured and enabled together.

1) Select a shield region from **Select Shield Region** drop-down list.

2) Click **Draw Shield Region**.

3) Left click the mouse to draw the points of the region on the live view image.

4) Click **Close** and the system will close the region automatically.

5) (Optional) Click **Clear Prev. Point** to clear the previous motion of drawing.

6) Click **Apply** to save the settings.

Step 8 Select a rule and click ✎ to configure the rule.

1) Edit **Name**.

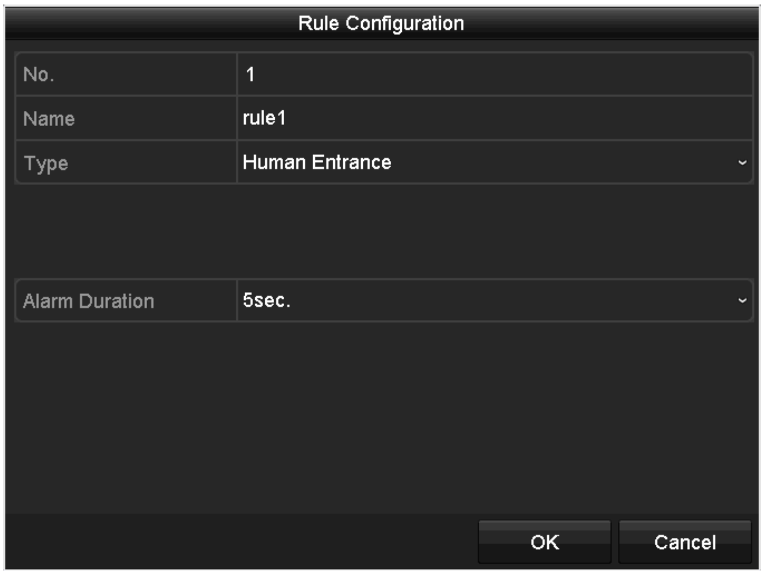
2) Select **Type**. **Human Entrance**, **Operation Timeout**, **Sticking Scrip**, and **Installing Scanner** are selectable.

3) Configure **Duration**, **Sensitivity**, and **Alarm Duration** according to the selected type.

- **Duration**: It will alarm if the selected rule type continues for the configured duration. For **Operation Timeout**, it ranges from 4 to 6000 seconds. For **Sticking Scrip** and **Installing Scanner**, it ranges from 4 to 60 seconds.

- **Alarm Duration**: It refers to the duration of alarm after the selected type is triggered.

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



No. 1
Name rule1
Type Human Entrance
Alarm Duration 5sec.

Figure 9-5 Rule Configuration

**NOTE**

Rules of different types can be enabled together for the panel mode.

Step 9 Draw the rule region.

1) Select a rule.

2) Click the buttons to draw the rule region.

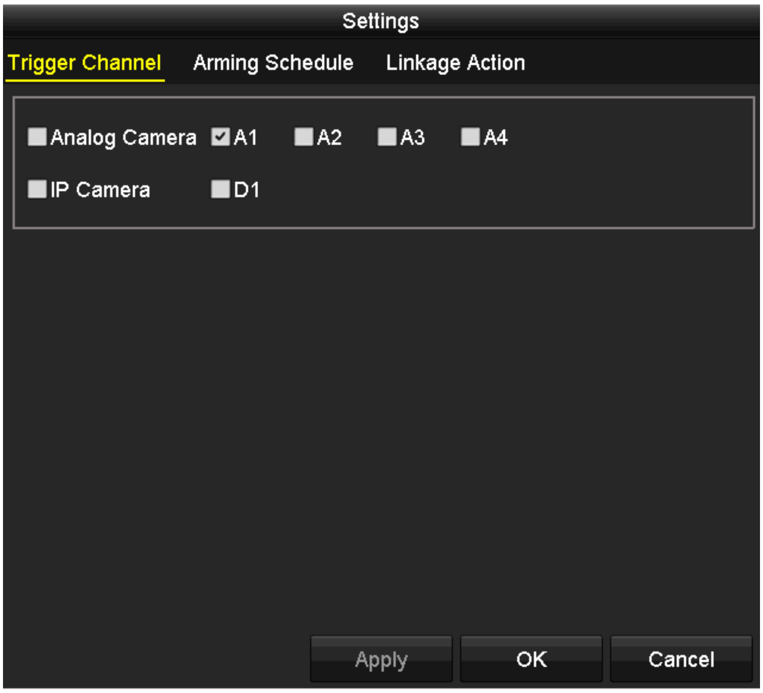
If you select **Human Entrance**, click **Draw Entrance Region** to draw the region. If you select **Operation Timeout**, **Sticking Scrip**, and **Installing Scanner**, click **Draw Rectangular Frame**, **Draw Polygon**, or **Full Screen** to draw the region.

Step 10 Configure the alarm response actions.

1) Select a rule.

2) Click ✓ to configure **Trigger Channel**, **Arming Schedule**, and **Linkage Action**. Refer to step 5 of *Chapter 8.1 Setting Motion Detection* for details.

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



☐ Analog Camera ☑ A1 ☐ A2 ☐ A3 ☐ A4

☐ IP Camera ☐ D1

Figure 9-6 Alarm Response Actions Configuration

Step 11 Click **Apply** in Smart ATM Configuration interface to save the settings.

## 9.2 Environment Mode

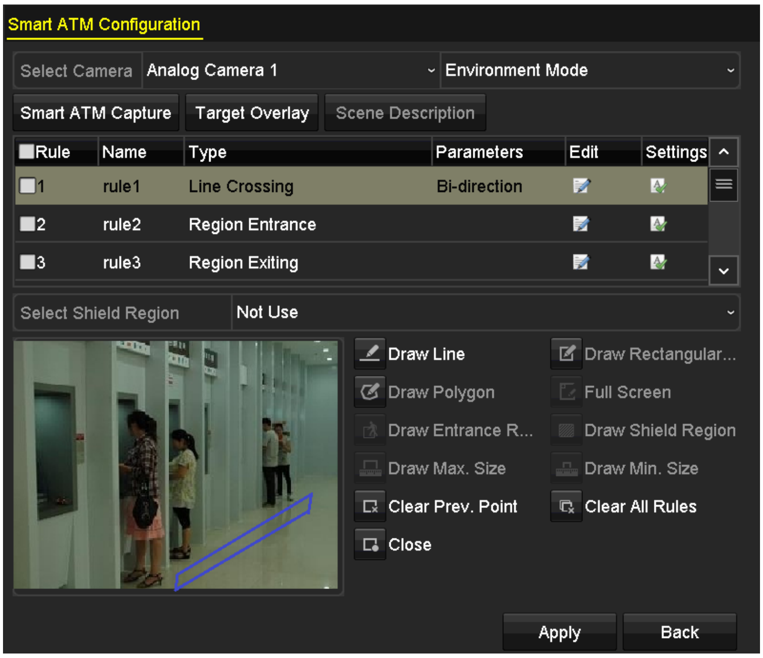
***Purpose***

Environment mode supports the following smart ATM protection rule types: line crossing, region entrance, region exiting, intrusion, loitering, objects removal or unattended baggage, violent motion, tailing, falling down, and sudden change of sound intensity. Eight rules can be set for the mode. You can set the alarm response actions once the configured rule is triggered.

Step 1 Go to **Menu > Camera > Smart ATM Configuration**.

Step 2 Select the camera for environment mode configuration.

Step 3 Select **Environment Mode**.



Select Camera: Analog Camera 1 — Environment Mode

| ☐Rule | Name | Type | Parameters | Edit | Settings |
|---|---|---|---|---|---|
| ☐1 | rule1 | Line Crossing | Bi-direction | ✎ | ✓ |
| ☐2 | rule2 | Region Entrance | | ✎ | ✓ |
| ☐3 | rule3 | Region Exiting | | ✎ | ✓ |

Select Shield Region: Not Use

Figure 9-7 Environment Mode

Step 4 Configure **Smart ATM Capture**. Refer to step 4 of *Chapter 9.1 Panel Mode* for details.

Step 5 Configure **Target Overlay**. Refer to step 5 of *Chapter 9.1 Panel Mode* for details.

Step 6 (Optional) Configure the shield region. Refer to step 7 of *Chapter 9.1 Panel Mode* for details.

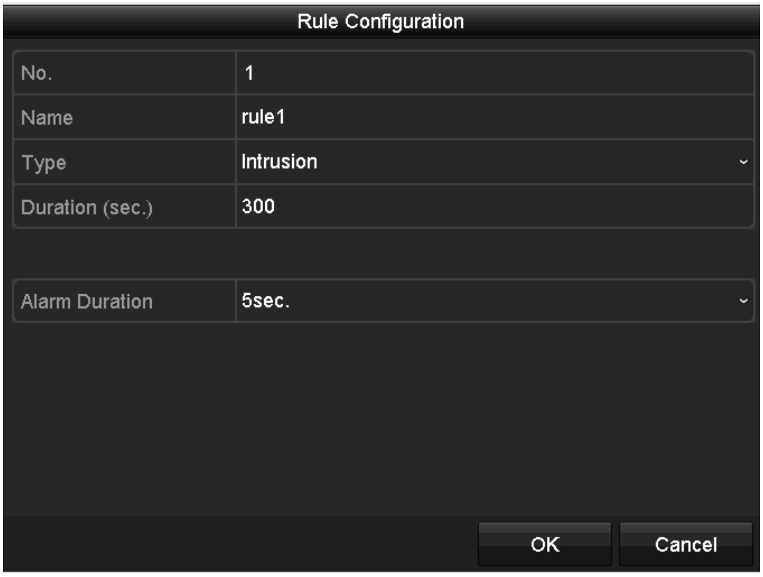
Step 7 Select a rule and click ✎ to configure the rule.

1) Edit **Name**.

2) Select **Type**. **Line Crossing**, **Region Entrance**, **Region Exiting**, **Intrusion**, **Loitering**, **Objects Removal or Unattended Baggage**, **Violent Motion**, **Tailing**, **Falling Down**, and **Sudden Change of Sound Intensity** are selectable.

3) Configure other parameters according to the selected type.

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



No. 1
Name rule1
Type Intrusion
Duration (sec.) 300
Alarm Duration 5sec.

Figure 9-8 Rule Configuration

**NOTE**

Rules of different types can be enabled together for the environment mode.

Step 8 Draw the rule region. Refer to step 9 of *Chapter 9.1 Panel Mode* for details.

Step 9 Configure the alarm response actions. Refer to step 10 of *Chapter 9.1 Panel Mode* for details.

Step 10 Click **Apply** in Smart ATM Configuration interface to save the settings.

## 9.3 Human Face Mode

***Purpose***

Human face mode supports the following smart ATM protection rule types: normal human face, abnormal human face, multiple human faces, wearing sunglasses, and using mobile phone. Only one rule can be set for the mode. You can set the alarm response actions once the configured rule is triggered.

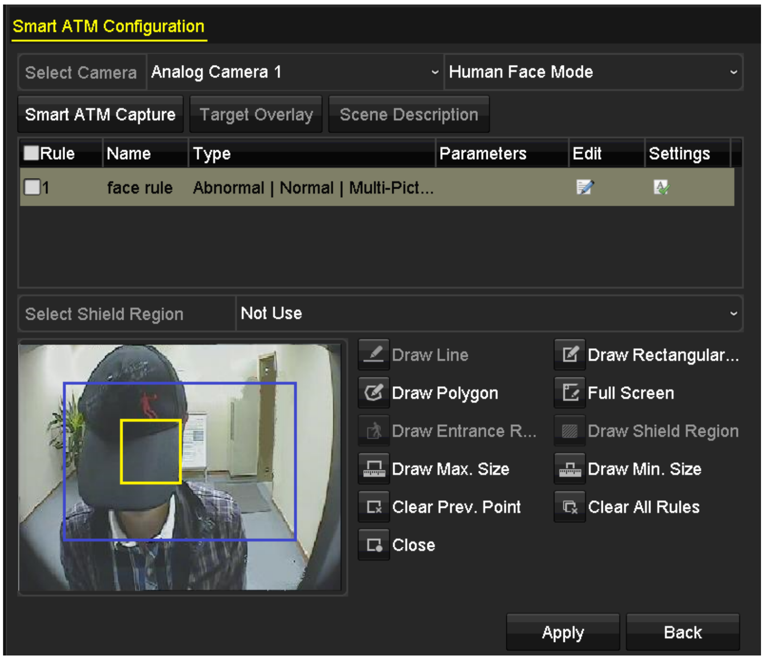
**NOTE**

Up to 2-ch human face mode, or up to 1-ch human face mode and 1-ch safety cabin mode can be enabled.

Step 1 Go to **Menu > Camera > Smart ATM Configuration**.

Step 2 Select the camera for human face mode configuration.

Step 3 Select **Human Face Mode**.



Select Camera: Analog Camera 1 | Human Face Mode

| ☐Rule | Name | Type | Parameters | Edit | Settings |
|---|---|---|---|---|---|
| ☐1 | face rule | Abnormal \| Normal \| Multi-Pict... | | ✎ | ⚙ |

Select Shield Region: Not Use

Figure 9-9 Human Face Mode

Step 4 Configure **Smart ATM Capture**. Refer to step 4 of *Chapter 9.1 Panel Mode* for details.

Step 5 (Optional) Configure the shield region. Refer to step 7 of *Chapter 9.1 Panel Mode* for details.

Step 6 Select the rule and click ✎ to configure the rule.

1) Edit **Name**.

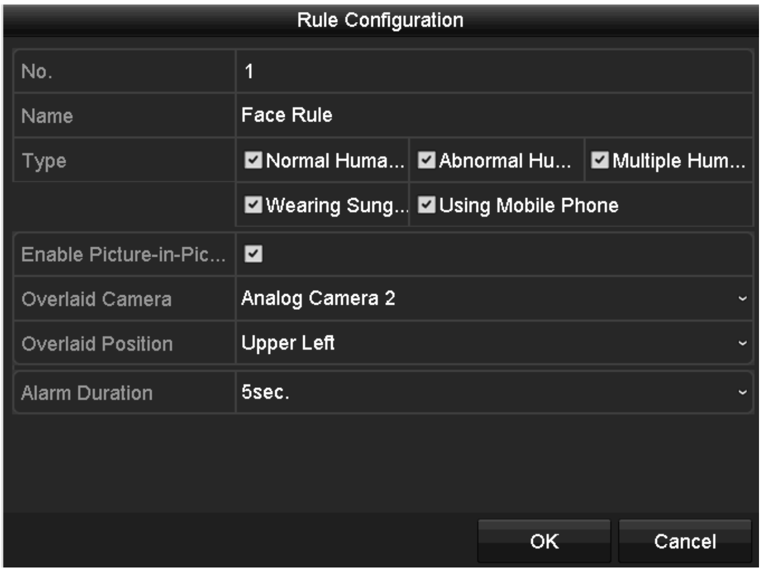
2) Check **Type**. **Normal Human Face**, **Abnormal Human Face**, **Multiple Human Faces**, **Wearing Sunglasses**, and **Using Mobile Phone** are selectable.

3) (Optional) Check **Enable Picture-in-Picture**.

4) (Optional) If you enable picture-in-picture, select **Overlaid Camera** and **Overlaid Position**. The video of the camera enabled human face mode will be overlaid on the selected position of the image of the selected camera in picture-in-picture mode.

5) Select **Alarm Duration**.

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



| | |
|---|---|
| No. | 1 |
| Name | Face Rule |
| Type | ☑Normal Huma... ☑Abnormal Hu... ☑Multiple Hum...<br>☑Wearing Sung... ☑Using Mobile Phone |
| Enable Picture-in-Pic... | ☑ |
| Overlaid Camera | Analog Camera 2 |
| Overlaid Position | Upper Left |
| Alarm Duration | 5sec. |

Figure 9-10 Rule Configuration

Step 7 Draw the rule region.

1) Click **Draw Max. Size** to draw the maximum size of the human face.
2) Click **Draw Min. Size** to draw the minimum size of the human face.

**NOTE**

The max. face size should be larger than the min. face size.

Step 8 Configure the alarm response actions. Refer to step 10 of *Chapter 9.1 Panel Mode* for details.

Step 9 Click **Apply** in Smart ATM Configuration interface to save the settings.

## 9.4 Safety Cabin Mode

***Purpose***

Safety cabin mode supports the following smart ATM protection rule types: intrusion, object removal or unattended baggage, violent motion, tailing, falling down, and sudden change of sound intensity. Eight rules can be set for the mode. You can set the alarm response actions once the configured rule is triggered.

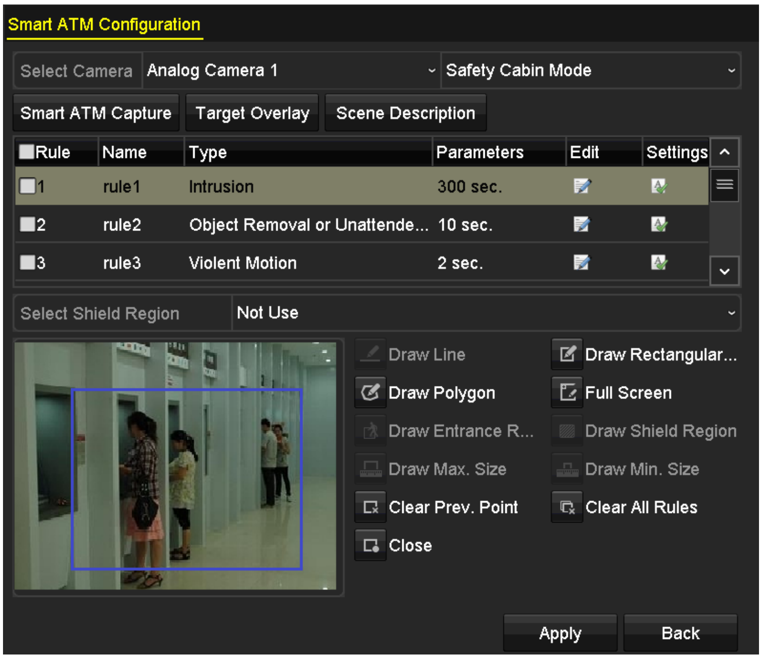
**NOTE**

Up to 2-ch safety cabin mode, or up to 1-ch human face mode and 1-ch safety cabin mode can be enabled.

Step 1 Go to **Menu > Camera > Smart ATM Configuration**.

Step 2 Select the camera for safety cabin mode configuration.

Step 3 Select **Safety Cabin Mode**.



Select Camera: Analog Camera 1 | Safety Cabin Mode

| ☐ Rule | Name | Type | Parameters | Edit | Settings |
|---|---|---|---|---|---|
| ☐ 1 | rule1 | Intrusion | 300 sec. | | |
| ☐ 2 | rule2 | Object Removal or Unattende... | 10 sec. | | |
| ☐ 3 | rule3 | Violent Motion | 2 sec. | | |

Select Shield Region: Not Use

Figure 9-11 Safety Cabin Mode

Step 4 Configure **Smart ATM Capture**. Refer to step 4 of *Chapter 9.1 Panel Mode* for details.

Step 5 Configure **Target Overlay**. Refer to step 5 of *Chapter 9.1 Panel Mode* for details.

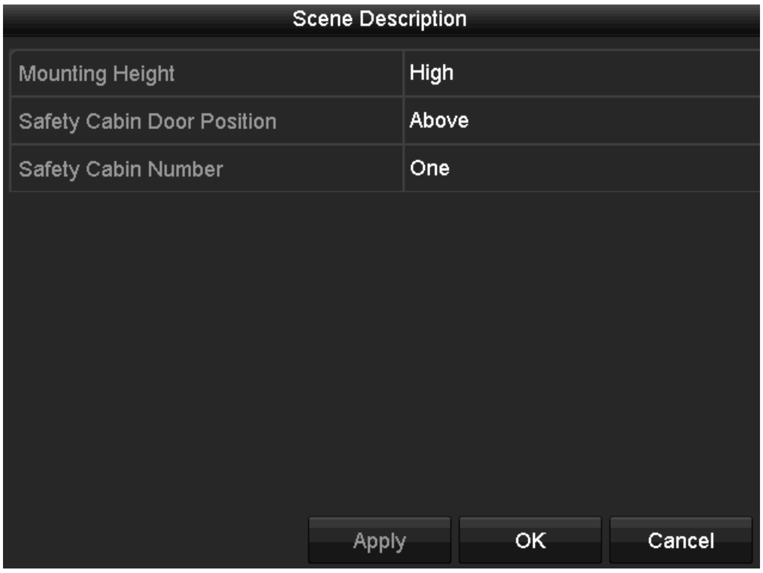
Step 6 Configure **Scene Description**.

1) Click **Scene Description**.

2) Configure the scene parameters in safety cabin mode.

   - **Mounting Height**: The mounting height of the camera.
   - **Safety Cabin Door Position**: The position of the safety cabin door on the covered image of the camera. **Above**, **Below**, **Left**, **Right** are selectable.
   - **Safety Cabin Number**: The number of the safety cabin.

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



Mounting Height: High

Safety Cabin Door Position: Above

Safety Cabin Number: One

Figure 9-12 Scene Description

Step 7 (Optional) Configure the shield region. Refer to step 7 of *Chapter 9.1 Panel Mode* for details.

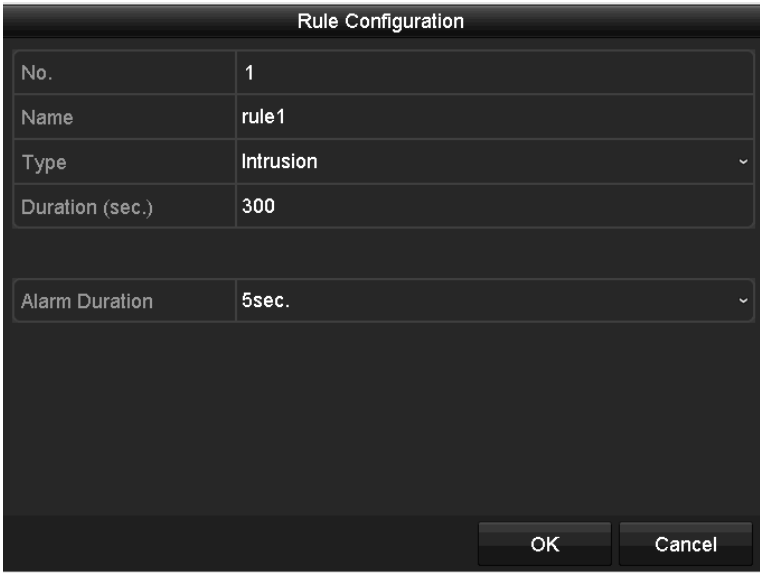
Step 8 Select the rule and click 📝 to configure the rule.

1) Edit **Name**.

2) Select **Type**. **Intrusion**, **Object Removal or Unattended Baggage**, **Violent Motion**, **Tailing**, **Falling Down**, and **Sudden Change of Sound Intensity** are selectable.

3) Configure other parameters according to the selected type.

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



No.: 1

Name: rule1

Type: Intrusion

Duration (sec.): 300

Alarm Duration: 5sec.

Figure 9-13 Rule Configuration

**NOTE**

Rules of different types can be enabled together for the safety cabin mode.

Step 9 Draw the rule region. Refer to step 9 of *Chapter 9.1 Panel Mode* for details.

Step 10 Configure the alarm response actions. Refer to step 10 of *Chapter 9.1 Panel Mode* for details.

Step 11 Click **Apply** in Smart ATM Configuration interface to save the settings.

# Chapter 10 Network Settings

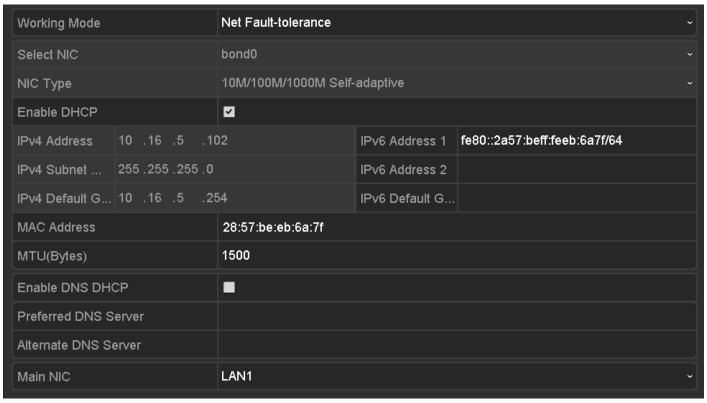
## 10.1 Configuring General Settings

***Purpose***

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

Step 1 Enter the Network Settings interface.

Menu > Configuration > Network > General



Working Mode: Net Fault-tolerance
Select NIC: bond0
NIC Type: 10M/100M/1000M Self-adaptive
Enable DHCP: ☑
IPv4 Address: 10 .16 .5 .102
IPv6 Address 1: fe80::2a57:beff:feeb:6a7f/64
IPv4 Subnet ...: 255 .255 .255 .0
IPv6 Address 2:
IPv4 Default G...: 10 .16 .5 .254
IPv6 Default G...:
MAC Address: 28:57:be:eb:6a:7f
MTU(Bytes): 1500
Enable DNS DHCP: ☐
Preferred DNS Server:
Alternate DNS Server:
Main NIC: LAN1

Figure 10-1 Network Settings Interface

Step 2 Configure the following parameters: Working Mode, NIC Type, IPv4 Address, IPv4 Gateway, MTU, DNS Server and Main NIC.

**Working Mode**

3 types of working modes are selectable: Multi-address, Load Balance and Net Fault-tolerance.

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

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

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

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

**NOTE**

- The valid value of MTU is from 500 to 1500.
- If the DHCP server is available, you can check the checkbox of **Enable DHCP** to automatically obtain an IP address and other network settings from that server.
- If DHCP is enabled, you can check the checkbox of **Enable DNS DHCP** or uncheck it and edit the **Preferred DNS Server** and **Alternate DNS Server**.

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

## 10.2 Configuring Advanced Settings

### 10.2.1 Configuring PPPoE Settings

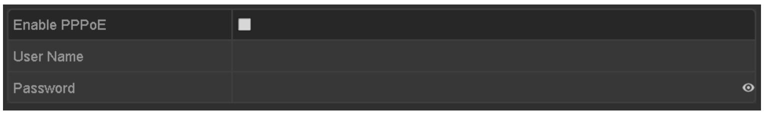
***Purpose***

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

Step 1 Enter the Network Settings interface.

Menu > Configuration > Network

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



| | |
|---|---|
| Enable PPPoE | ☐ |
| User Name | |
| Password | |

Figure 10-2 PPPoE Settings Interface

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

Step 4 Enter **User Name** and **Password** for PPPoE access.

**NOTE**

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

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

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

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

### 10.2.2 Configuring DDNS

***Purpose***

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

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

Step 1 Enter the Network Settings interface.

Menu > Configuration > Network

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

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

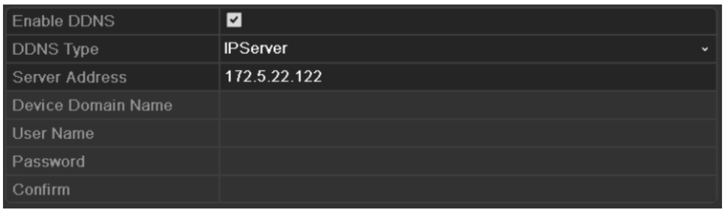
Step 4 Select **DDNS Type**. 5 different DDNS types are selectable: IPServer, DynDNS, PeanutHull, NO-IP and HiDDNS.

- **IPServer**

  Enter **Server Address** for IPServer, and other fields are read only.

**NOTE**

The **Server Address** should be the IP address of the PC that runs IPServer.

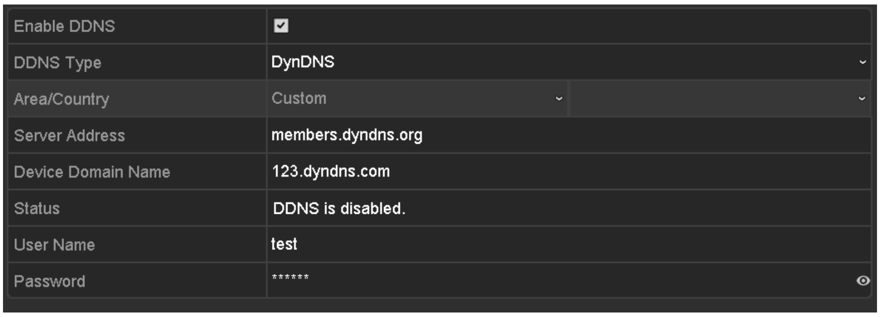


| | |
|---|---|
| Enable DDNS | ☑ |
| DDNS Type | IPServer |
| Server Address | 172.5.22.122 |
| Device Domain Name | |
| User Name | |
| Password | |
| Confirm | |

Figure 10-3 IPServer Settings Interface

- **DynDNS:**

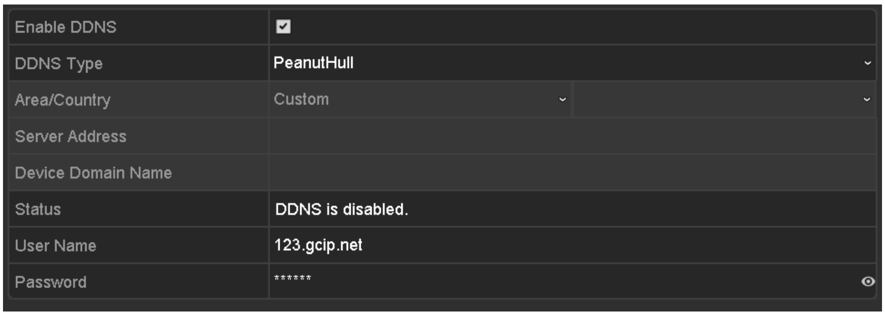
1) Enter **Server Address** for DynDNS (i.e. members.dyndns.org).
2) In the **Device Domain Name** text field, enter the domain obtained from the DynDNS website.
3) Enter the **User Name** and **Password** registered in the DynDNS website.



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

Figure 10-4 DynDNS Settings Interface

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



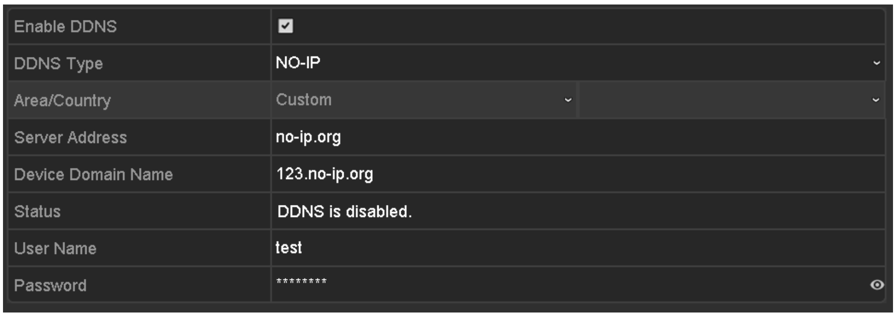
| | |
|---|---|
| Enable DDNS | ☑ |
| DDNS Type | PeanutHull |
| Area/Country | Custom |
| Server Address | |
| Device Domain Name | |
| Status | DDNS is disabled. |
| User Name | 123.gcip.net |
| Password | ****** |

Figure 10-5 PeanutHull Settings Interface

- **NO-IP:**

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

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



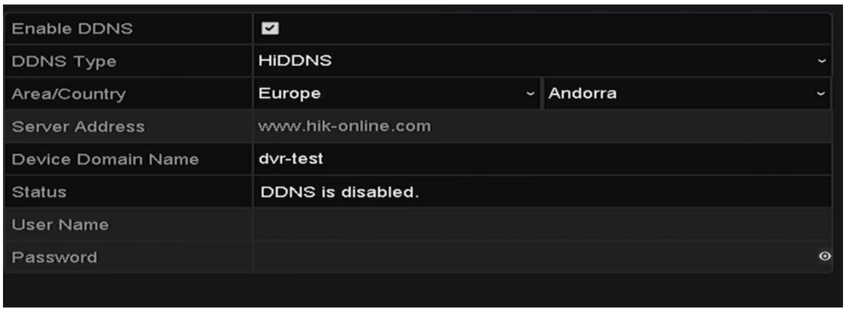
| | |
|---|---|
| Enable DDNS | ☑ |
| DDNS Type | NO-IP |
| Area/Country | Custom |
| Server Address | no-ip.org |
| Device Domain Name | 123.no-ip.org |
| Status | DDNS is disabled. |
| User Name | test |
| Password | ******** |

Figure 10-6 NO-IP Settings Interface

- **HiDDNS**:

  The **Server Address** of the HiDDNS server appears by default: www.hik-online.com.

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

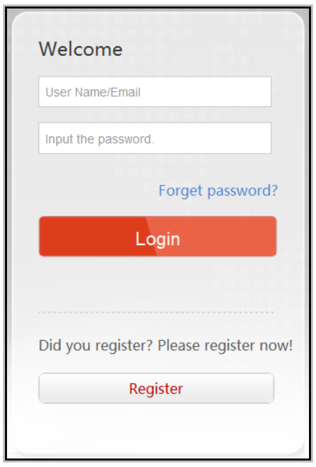


| | |
|---|---|
| Enable DDNS | ☑ |
| DDNS Type | HiDDNS |
| Area/Country | Europe<br>Andorra |
| Server Address | www.hik-online.com |
| Device Domain Name | dvr-test |
| Status | DDNS is disabled. |
| User Name | |
| Password | |

Figure 10-7 HiDDNS Settings Interface

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

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



Welcome

User Name/Email

Input the password.

Forget password?

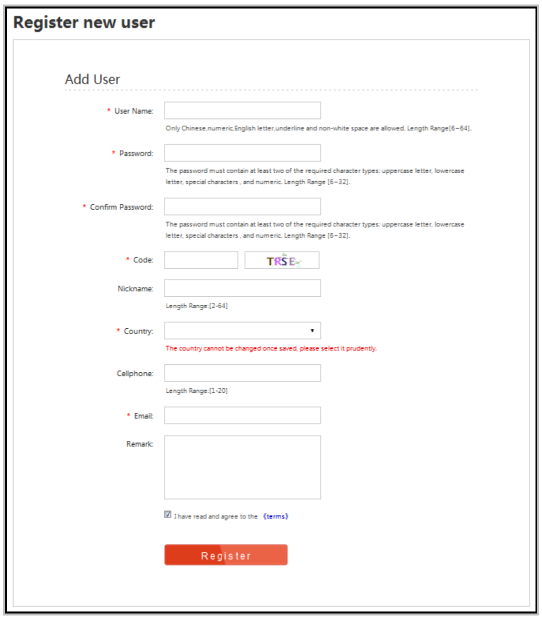
Login

Did you register? Please register now!

Register

Figure 10-8 Login Interface

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



Register new user

Add User

* User Name:

Only Chinese,numeric,English letter,underline and non-white space are allowed. Length Range[6–64].

* Password:

The password must contain at least two of the required character types: uppercase letter, lowercase letter, special characters , and numeric. Length Range [6–32].

* Confirm Password:

The password must contain at least two of the required character types: uppercase letter, lowercase letter, special characters , and numeric. Length Range [6–32].

* Code: TRSE

Nickname:

Length Range:[2-64]

* Country:

The country cannot be changed once saved, please select it prudently.

Cellphone:

Length Range:[1-20]

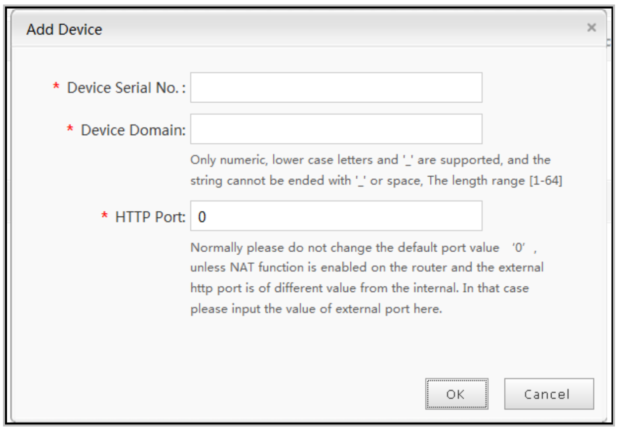
* Email:

Remark:

☑ I have read and agree to the 《terms》

Figure 10-9 Register an Account

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



Add Device

* Device Serial No. :

* Device Domain:

Only numeric, lower case letters and '_' are supported, and the string cannot be ended with '_' or space, The length range [1-64]

* HTTP Port: 0

Normally please do not change the default port value '0' , unless NAT function is enabled on the router and the external http port is of different value from the internal. In that case please input the value of external port here.

Figure 10-10 Register the Device

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

### ➢ Access the Device via Web Browser or Client Software

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

### ● OPTION 1: Access the Device via Web Browser

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

***Example:*** *http://www.hik-online.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://www.hik-online.com/alias:HTTP port* in the address bar to access the device. You can refer to *Chapter 12.2.7 Configuring HTTPS Port* 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.

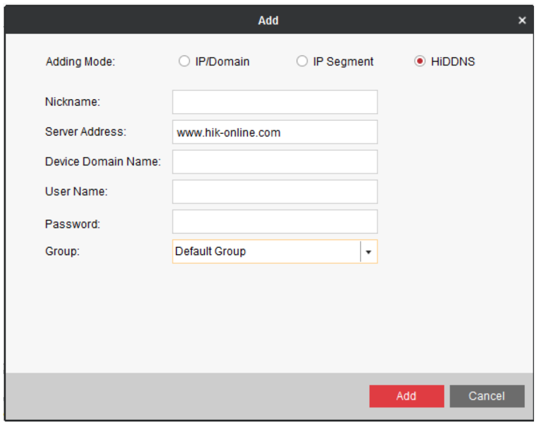
**Nickname**: Edit a name for the device as you want.

**Server Address**: www. hik-online.com

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

**User Name**: Enter the user name of the device.

**Password**: Enter the password of the device.



Adding Mode: ○ IP/Domain ○ IP Segment ● HiDDNS

Nickname:

Server Address: www.hik-online.com

Device Domain Name:

User Name:

Password:

Group: Default Group

Figure 10-11 Access Device via iVMS-4200

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

### 10.2.3 Configuring NTP Server

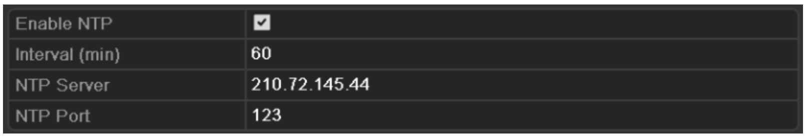
***Purpose***

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

Step 1 Enter the Network Settings interface.

Menu > Configuration > Network

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



| | |
|---|---|
| Enable NTP | ☑ |
| Interval (min) | 60 |
| NTP Server | 210.72.145.44 |
| NTP Port | 123 |

Figure 10-12 NTP Settings Interface

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

Step 4 Configure the following NTP settings:

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

Step 5 Click **Apply** to save the settings and exit from 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.

## 10.2.4 Configuring NAT

***Purpose***

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

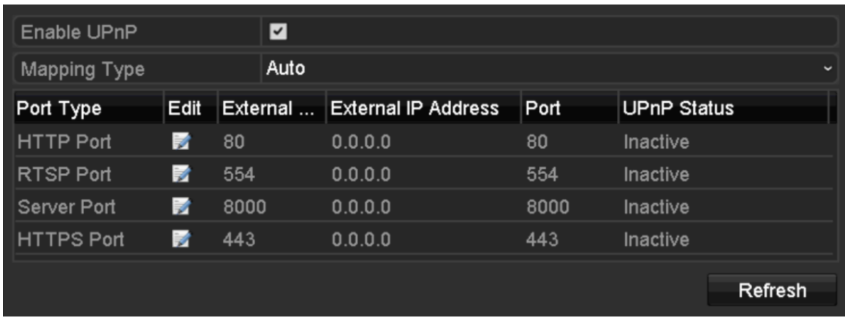
***Before you start***

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

Step 1 Enter the Network Settings interface.

Menu > Configuration > Network

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



Enable UPnP ☑

Mapping Type: Auto

| Port Type | Edit | External ... | External IP Address | Port | UPnP Status |
|---|---|---|---|---|---|
| HTTP Port | ✎ | 80 | 0.0.0.0 | 80 | Inactive |
| RTSP Port | ✎ | 554 | 0.0.0.0 | 554 | Inactive |
| Server Port | ✎ | 8000 | 0.0.0.0 | 8000 | Inactive |
| HTTPS Port | ✎ | 443 | 0.0.0.0 | 443 | Inactive |

Figure 10-13 UPnP™ Settings Interface

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

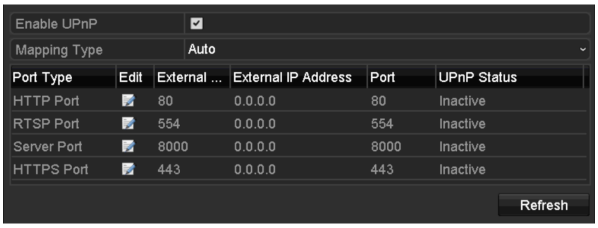
Step 4 Select the **Mapping Type** as Manual or Auto in the drop-down list.

**OPTION 1: Auto**

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

1) Click **Apply** button to save the settings.

2) You can click **Refresh** button to get the latest status of the port mapping.



Enable UPnP ☑

Mapping Type: Auto

| Port Type | Edit | External ... | External IP Address | Port | UPnP Status |
|---|---|---|---|---|---|
| HTTP Port | ✎ | 80 | 0.0.0.0 | 80 | Inactive |
| RTSP Port | ✎ | 554 | 0.0.0.0 | 554 | Inactive |
| Server Port | ✎ | 8000 | 0.0.0.0 | 8000 | Inactive |
| HTTPS Port | ✎ | 443 | 0.0.0.0 | 443 | Inactive |

Figure 10-14 UPnP™ Settings Finished-Auto

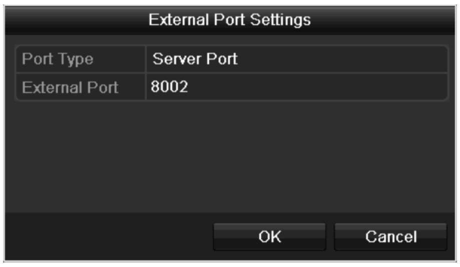
**OPTION 2: Manual**

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

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

**NOTE**

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

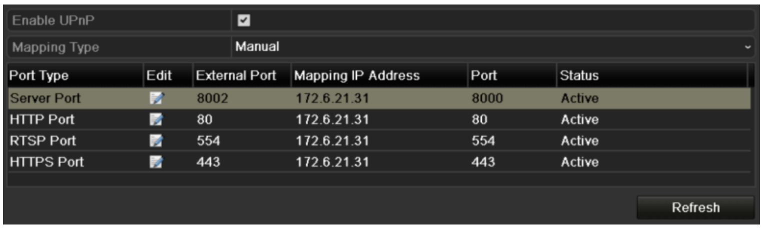

External Port Settings

| | |
|---|---|
| Port Type | Server Port |
| External Port | 8002 |

Figure 10-15 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.


| | |
|---|---|
| Enable UPnP | ☑ |
| Mapping Type | Manual |

| Port Type | Edit | External Port | Mapping IP Address | Port | Status |
|---|---|---|---|---|---|
| Server Port | | 8002 | 172.6.21.31 | 8000 | Active |
| HTTP Port | | 80 | 172.6.21.31 | 80 | Active |
| RTSP Port | | 554 | 172.6.21.31 | 554 | Active |
| HTTPS Port | | 443 | 172.6.21.31 | 443 | Active |

Figure 10-16 UPnP™ Settings Finished-Manual

## 10.2.5 Configuring More Settings

Step 1 Enter the Network Settings interface.

Menu > Configuration > Network

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

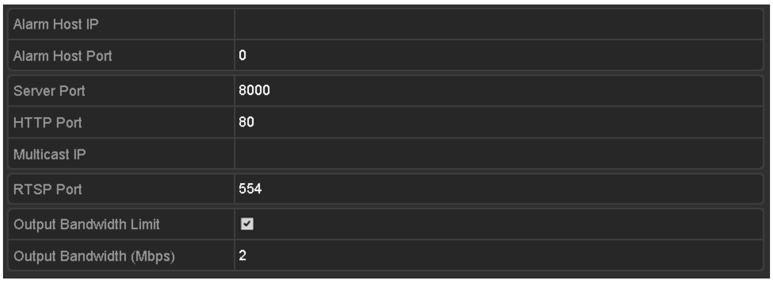

| | |
|---|---|
| Alarm Host IP | |
| Alarm Host Port | 0 |
| Server Port | 8000 |
| HTTP Port | 80 |
| Multicast IP | |
| RTSP Port | 554 |
| Output Bandwidth Limit | ☑ |
| Output Bandwidth (Mbps) | 2 |

Figure 10-17 More Settings Interface

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

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

  The **Alarm Host IP** refers to the IP address of the remote PC on which the CMS (Client Management System) software (e.g., 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.

**NOTE**

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

- **Output Bandwidth Limit**: You can check the checkbox to enable output bandwidth limit.
- **Output Bandwidth**: After enabling the output bandwidth limit, input the output bandwidth in the text field.

**NOTE**

- The output bandwidth limit is used for the remote live view and playback.
- The minimum output bandwidth is 2 Mbps.

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

### 10.2.6 Configuring HTTPS Port

***Purpose***

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

***Example***

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

**NOTE**

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

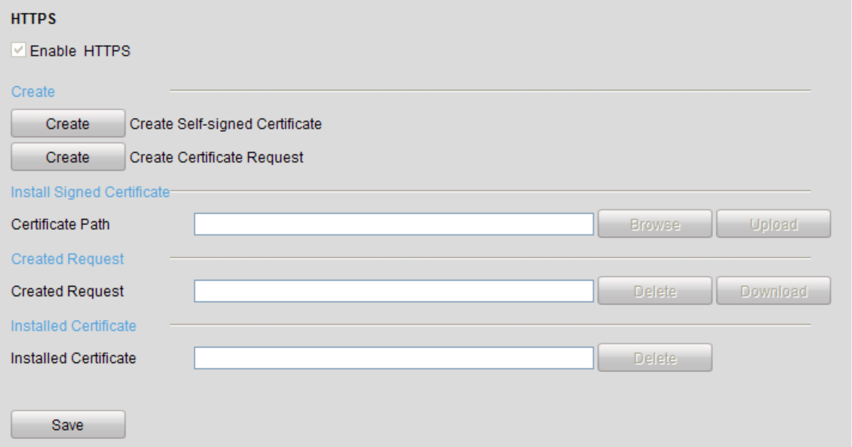
Step 1 Open web browser, input the IP address of device, and the web server will select the language automatically according to the system language and maximize the web browser.

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

Step 3 Enter the HTTPS settings interface.

Configuration > Remote Configuration > Network Settings > HTTPS

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

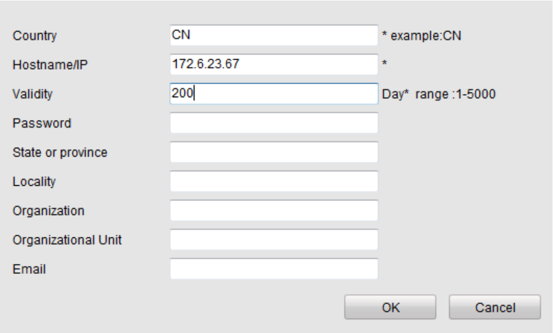


☑ Enable HTTPS

Figure 10-18 HTTPS Settings

**OPTION 1**: Create the self-signed certificate

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



Country: CN
Hostname/IP: 172.6.23.67
Validity: 200

Figure 10-19 Create Self-signed Certificate

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

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

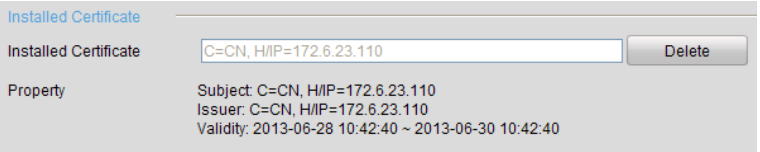
**OPTION 2**: Create the authorized certificate

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

2) Download the certificate request and submit it to the trusted certificate authority for signature.

3) After receiving the signed valid certificate, import the certificate to the device.

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



Installed Certificate: C=CN, H/IP=172.6.23.110

Property: Subject: C=CN, H/IP=172.6.23.110
Issuer: C=CN, H/IP=172.6.23.110
Validity: 2013-06-28 10:42:40 ~ 2013-06-30 10:42:40

Figure 10-20 Installed Certificate Property

Step 6 Check the checkbox to enable the HTTPS function.

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

### 10.2.7 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.

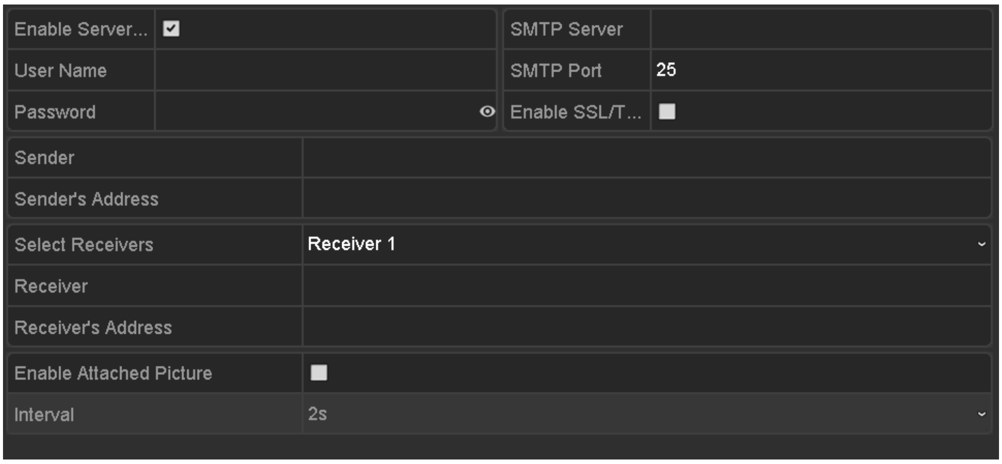
***Before you start***

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 10.1 Configuring General Settings* for detailed information.

Step 1 Enter the Network Settings interface.

Menu > Configuration > Network

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



Enable Server... ☑
User Name
Password
SMTP Server
SMTP Port: 25
Enable SSL/T... ☐
Sender
Sender's Address
Select Receivers: Receiver 1
Receiver
Receiver's Address
Enable Attached Picture ☐
Interval: 2s

Figure 10-21 Email Settings Interface

Step 3 Configure the following Email settings:

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

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

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

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

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

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

**Sender:** The name of sender.

**Sender's Address:** The Email address of sender.

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

**Receiver:** The name of the receiver of the Email.

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

**Enable Attached Picture:** Check the checkbox if you want to send email with attached alarm images. The interval is the time between two captures of the alarm images.

**NOTE**

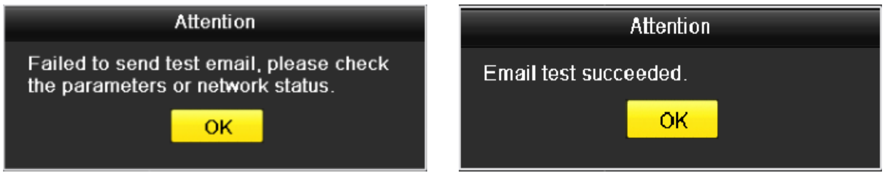
- For the IP cameras, the alarm images are directly sent as the attached pictures by Email. Up to one picture can be sent for one IP camera. The attached pictures of the linked cameras cannot be sent.
- For analog cameras, 3 attached pictures can be sent for one analog camera when the alarm is triggered.

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

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

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

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



Failed to send test email, please check the parameters or network status.

Email test succeeded.

Figure 10-22 Email Testing Attention

# 10.3 Configuring Network Detection

***Purpose***

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

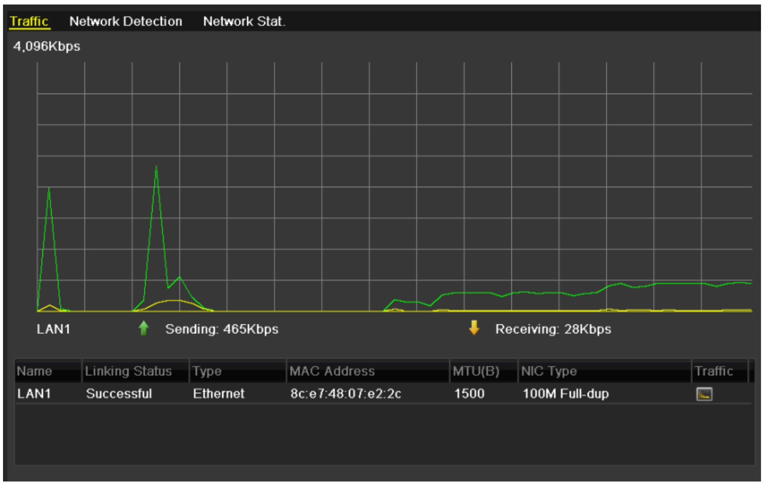
## 10.3.1 Checking Network Traffic

***Purpose***

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

Step 1 Enter the Network Traffic interface.

Menu > Maintenance > Net Detect



Sending: 465Kbps

Receiving: 28Kbps

| Name | Linking Status | Type | MAC Address | MTU(B) | NIC Type | Traffic |
|---|---|---|---|---|---|---|
| LAN1 | Successful | Ethernet | 8c:e7:48:07:e2:2c | 1500 | 100M Full-dup | |

Figure 10-23 Network Traffic Interface

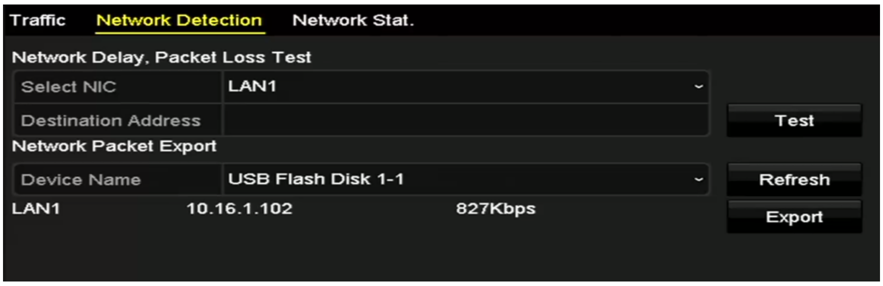
Step 2 You can view the sending rate and receiving rate information on the interface. The traffic data is refreshed every 1 second.

## 10.3.2 Testing Network Delay and Packet Loss

Step 1 Enter the Network Traffic interface.

Menu > Maintenance > Net Detect

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



Select NIC: LAN1

Device Name: USB Flash Disk 1-1

LAN1 10.16.1.102 827Kbps

Figure 10-24 Network Detection Interface

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

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

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

### 10.3.3 Exporting Network Packet

***Purpose***

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

Step 1 Enter the Network Traffic interface.

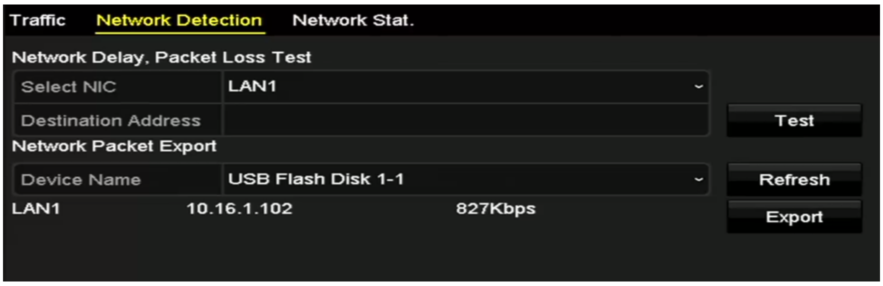
Menu > Maintenance > Net Detect

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

Step 3 Select the backup device from the drop-down 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.



Select NIC: LAN1

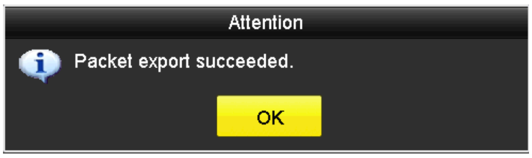
Device Name: USB Flash Disk 1-1

LAN1 10.16.1.102 827Kbps

Figure 10-25 Export Network Packet

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

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



Packet export succeeded.

Figure 10-26 Packet Export Attention

**NOTE**

Up to 1M data can be exported each time.

## 10.3.4 Checking Network Status

***Purpose***

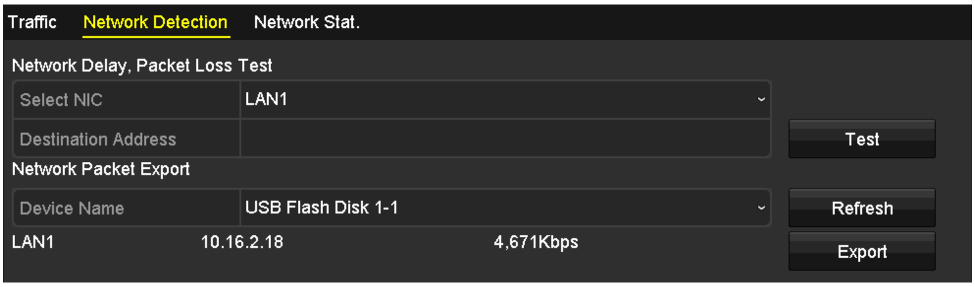
You can also check the network status and quick set the network parameters in this interface.

Step 1 Enter the Network Traffic interface.

Menu > Maintenance > Net Detect

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

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



Network Delay, Packet Loss Test

Select NIC: LAN1

Destination Address:

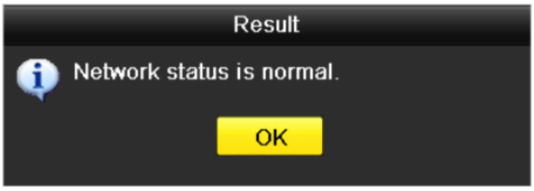
Network Packet Export

Device Name: USB Flash Disk 1-1

LAN1 10.16.2.18 4,671Kbps

Figure 10-27 Checking Network Status

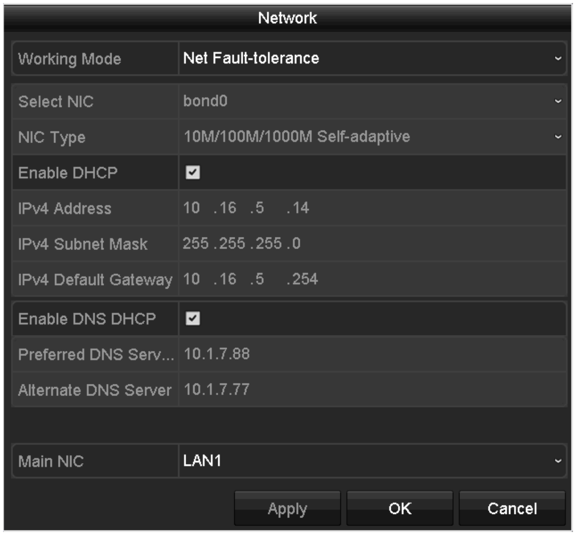
If the network is normal the following message box pops out.



Network status is normal.

Figure 10-28 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.



| | |
|---|---|
| Working Mode | Net Fault-tolerance |
| Select NIC | bond0 |
| NIC Type | 10M/100M/1000M Self-adaptive |
| Enable DHCP | ☑ |
| IPv4 Address | 10 .16 .5 .14 |
| IPv4 Subnet Mask | 255 .255 .255 .0 |
| IPv4 Default Gateway | 10 .16 .5 .254 |
| Enable DNS DHCP | ☑ |
| Preferred DNS Serv... | 10.1.7.88 |
| Alternate DNS Server | 10.1.7.77 |
| Main NIC | LAN1 |

Figure 10-29 Network Parameters Configuration

## 10.3.5 Checking Network Statistics

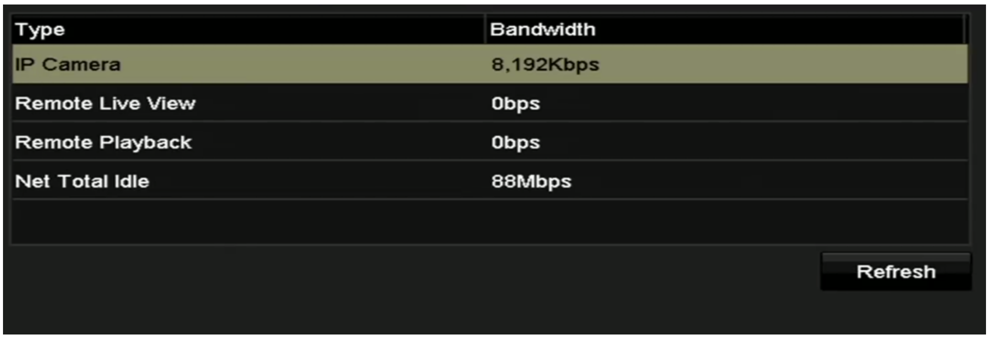
***Purpose***:

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

Step 1 Enter the Network Statistics interface.

Menu > Maintenance> Net Detect

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



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

Figure 10-30 Network Stat. Interface

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

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

# Chapter 11 ATM Settings

## 11.1 Network Interception

***Before you start***

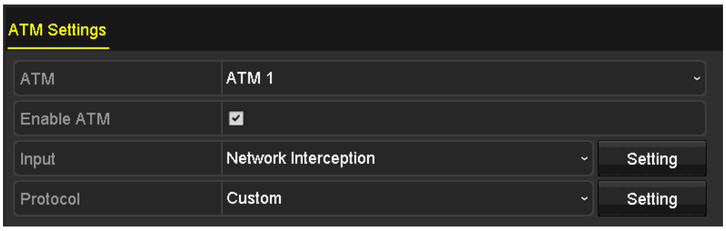
Connect the device and the ATM (Automatic Teller Machine) to the network properly.

***Purpose***

The transaction information of ATM, including transaction card No, transaction amount, transaction behaviour, etc., can be captured by monitoring the data package of the network communication.

Step 1 Enter the ATM Settings interface.

Menu > Configuration > ATM



ATM Settings

ATM: ATM 1

Enable ATM: ☑

Input: Network Interception

Protocol: Custom

Figure 11-1 ATM Settings-Network Interception

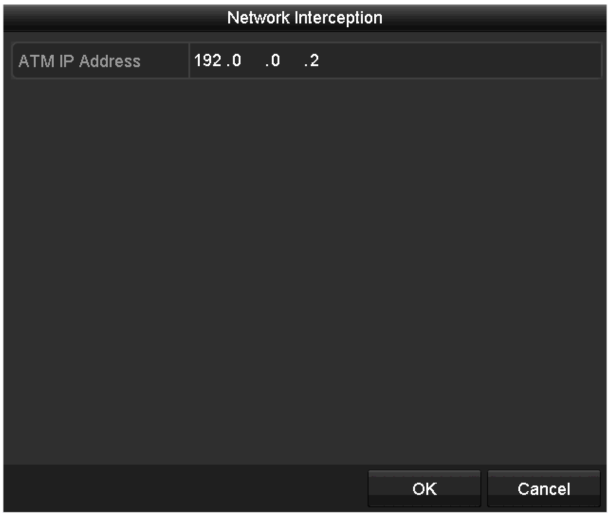
Step 2 Select the ATM from the drop-down list

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

Step 4 Select **Network Interception** from the drop-down list as the input mode.

Step 5 Configure the network interception settings.

1) Click **Setting** of Input to enter the Network Interception Settings interface.
2) Input the IP address of ATM in the text field.
3) Click **OK** to save the settings and exit.



ATM IP Address: 192 .0 .0 .2

Figure 11-2 Network Interception Settings

Step 6 Select the protocol for the network interception.

2 types of protocols are selectable: **PSBC** and **Custom**. If you select **Custom** as the protocol, click **Setting** to customize the protocol for network communication. For details, see *Chapter 10.5 Custom Protocol Settings*.

Step 7 Click **Apply** and reboot the device to activate the new settings.

## 11.2 Serial Port Interception

***Before you start***

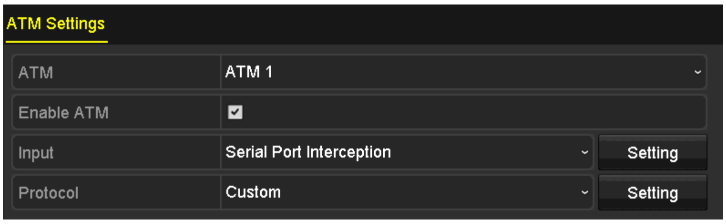
Connect the device and the ATM (Automatic Teller Machine) via the serial port properly.

***Purpose***

The transaction information, including transaction card No, transaction amount, transaction behaviour, etc., can be captured by monitoring the data package of the serial port communication.

Step 1 Enter the ATM Settings interface.

Menu > Configuration > ATM



ATM: ATM 1

Enable ATM: ☑

Input: Serial Port Interception

Protocol: Custom

Figure 11-3 ATM Settings-Serial Port Interception

Step 2 Select the ATM from the drop-down list.

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

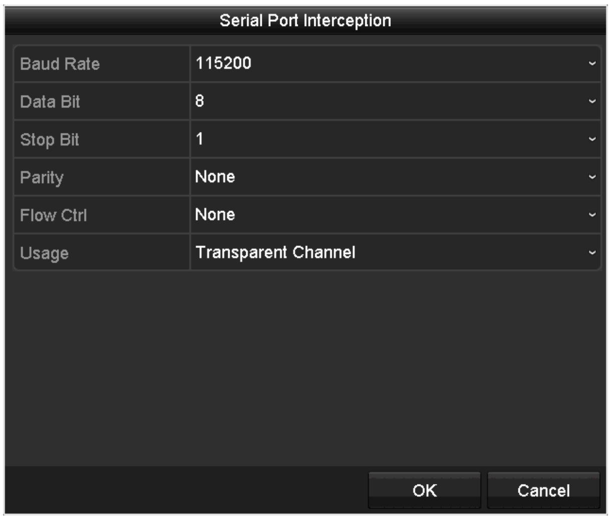
Step 4 Select **Serial Port Interception** from the drop-down list as the input mode.

Step 5 Configure the serial port interception settings.

1) Click **Setting** to enter the Serial Port Interception Settings interface.
2) Set the baud rate, data bit, stop bit, parity, flow ctrl and usage for the serial port communication.
3) Click **OK** to save the settings and exit.

**NOTE**

The serial port parameters you set on the device should be corresponding with that of the connected ATM, and the serial port usage should be set as Transparent Channel.



Serial Port Interception

Baud Rate: 115200
Data Bit: 8
Stop Bit: 1
Parity: None
Flow Ctrl: None
Usage: Transparent Channel

Figure 11-4 Serial Port Interception Settings

Step 6 Select the protocol for the serial port communication.

5 types of protocols are selectable: **DIEBOLD**, **DRS918**, **NCR_2**, **PSBC**, and **Custom**. If you select **Custom** as the protocol, click **Setting** to customize the protocol. For details, see *Chapter 10.5 Custom Protocol Settings*.

Step 7 Click **Apply** and reboot the device to activate the new settings.

## 11.3 Network Protocol

***Before you start***

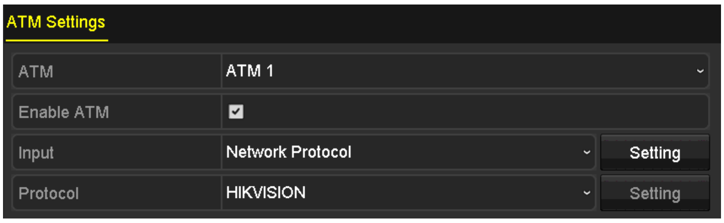
Connect the device and the ATM (Automatic Teller Machine) to the network properly.

***Purpose***

A TCP connection is established between the device and ATM in server/client mode. The transaction information, including transaction card No, transaction amount, transaction behaviour, etc., will be sent from the ATM to the device.

Step 1 Enter the ATM Settings interface.

Menu > Configuration > ATM


ATM Settings

ATM: ATM 1

Enable ATM: ☑

Input: Network Protocol

Protocol: HIKVISION

Figure 11-5 ATM Settings-Network Protocol

Step 2 Select the ATM from the drop-down list.

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

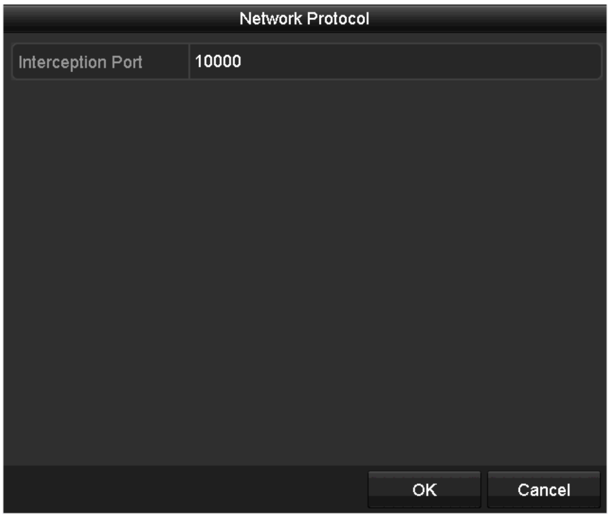
Step 4 Select **Network Protocol** from the drop-down list as the input mode.

Step 5 Configure the network protocol settings.

1) Click **Setting** to enter the Network Protocol Settings interface.
2) Set the **Interception Port** for the network communication.
3) Click **OK** to save the settings and exit.

**NOTE**

The interception port is 10000 by default.


Network Protocol

Interception Port: 10000

Figure 11-6 Network Protocol Settings

Step 6 Select the protocol from the drop-down list for the network communication.

2 types of protocols are selectable: **HIKVISION** and **ICBC**.

Step 7 Click **Apply** and reboot the device to activate the new settings.

# 11.4 Serial Port Protocol

***Before you start***

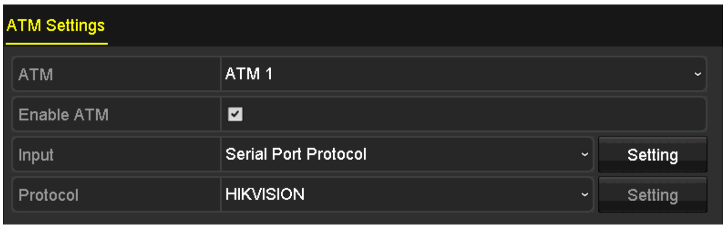
Connect the device and the ATM (Automatic Teller Machine) via the serial port properly.

***Purpose***

The transaction information, including transaction card No, transaction amount, transaction behaviour, etc., will be sent from the ATM to the device.

Step 1 Enter the ATM Settings interface.

Menu > Configuration > ATM



ATM Settings

ATM: ATM 1

Enable ATM: ☑

Input: Serial Port Protocol

Protocol: HIKVISION

Figure 11-7 ATM Settings-Serial Port Protocol

Step 2 Select the ATM from the drop-down list.

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

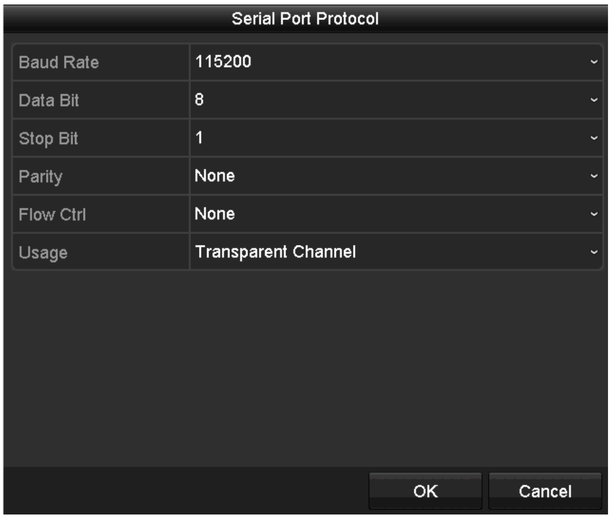
Step 4 Select **Serial Port Protocol** from the drop-down list as the input mode.

Step 5 Configure the serial port protocol settings.

1) Click **Setting** to enter the Serial Port Protocol Settings interface.
2) Set the baud rate, data bit, stop bit, parity, flow ctrl and usage for the serial port communication.
3) Click **OK** to save the settings and exit.

**NOTE**

The serial port parameters you set on the device should be corresponding with that of the connected ATM and the serial port usage should be set as Transparent Channel.



Baud Rate: 115200
Data Bit: 8
Stop Bit: 1
Parity: None
Flow Ctrl: None
Usage: Transparent Channel

Figure 11-8 Serial Port Protocol Settings

Step 6 Select the protocol from the drop-down list for the serial port communication.

2 types of protocols are selectable: **HIKVISION** and **ICBC**.

Step 7 Click **Apply** and reboot the device to activate the new settings.

# 11.5 Custom Protocol Settings

***Purpose***

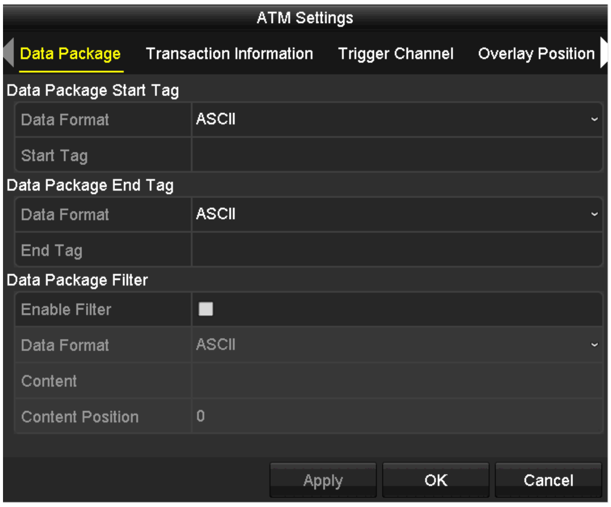
When Network Interception or Serial Port Interception is selected as the input mode of the device, you can configure the custom protocols to analyze the data package captured via the network or serial port, thus to get the ATM transaction information.

Step 1 Enter the ATM Settings interface.

Menu > Configuration > ATM

Step 2 Select **Custom** as the protocol.

Step 3 Click **Setting** to enter the Custom Protocol Settings interface.



Data Package Start Tag

| | |
|---|---|
| Data Format | ASCII |
| Start Tag | |

Data Package End Tag

| | |
|---|---|
| Data Format | ASCII |
| End Tag | |

Data Package Filter

| | |
|---|---|
| Enable Filter | ☐ |
| Data Format | ASCII |
| Content | |
| Content Position | 0 |

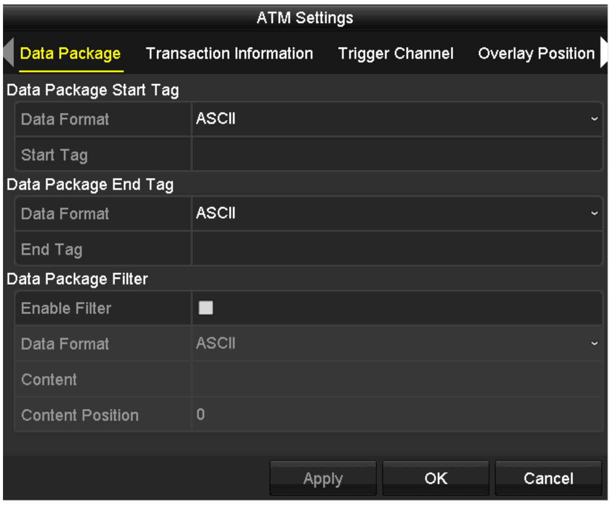
Figure 11-9 Custom Protocol Settings

## 11.5.1 Configuring Data Package Settings

***Purpose***

The start/end tag can be set to locate the data package in the captured message. You can also filter the specified content if needed.

Step 1 Click the **Data Package** tab to enter the Data Package Settings interface.



Data Package Start Tag
Data Format: ASCII
Start Tag:

Data Package End Tag
Data Format: ASCII
End Tag:

Data Package Filter
Enable Filter: ☐
Data Format: ASCII
Content:
Content Position: 0

Figure 11-10 Custom Protocol Settings-Data Package

Step 2 Select the **Data Format** and then set the **Start Tag** for the data package.

Step 3 Select the **Data Format** and then set the **End Tag** for the data package.

Step 4 (Optional) Check the checkbox of **Enable Filter**, select the **Data Format**, input the **Content** and set the **Content Position** to filter the specified contents.

Step 5 Click **Apply** to save the new settings and click **OK** to exit.

**NOTE**

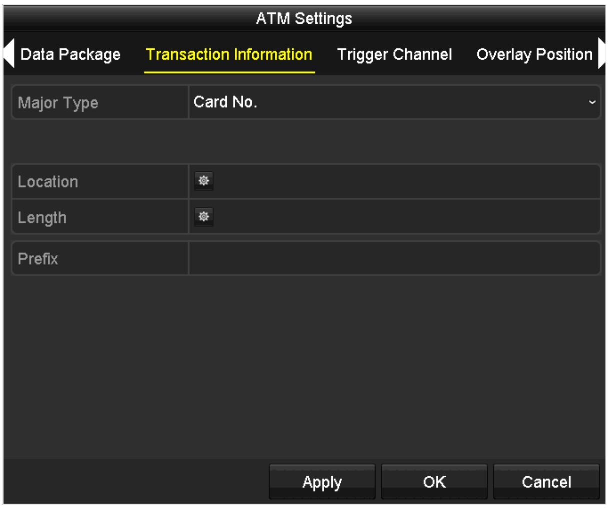
2 types of data format is selectable: **ASCII** and **HEX**. The start/end tag of the data package and the content to be filtered should be set in the selected data format.

## 11.5.2 Configuring Transaction Information Settings

***Purpose***

The device can analyze the transaction information which is contained in the captured message, including the card No., transaction behaviour, transaction amount and serial No.

Step 1 Click the **Transaction Information** tab to enter the Transaction Information Settings interface.



Major Type: Card No.

Location: ⚙

Length: ⚙

Prefix:

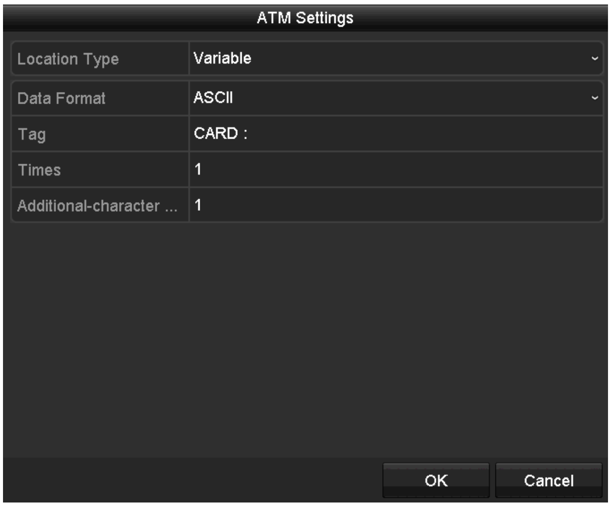
Figure 11-11 Custom Protocol Settings-Transaction Information

Step 2 Select the **Major Type** of transaction information from the drop-down list, including the **Card No.**, **Transaction Behaviour**, **Transaction Amount** or **Serial No.**

**NOTE**

When the **Transaction Behaviour** is set as the major type, 8 minor types are selectable: **Card In**, **Card Out**, **Overlay**, **Query**, **Withdrawal**, **Deposit**, **Change Password** and **Transfer**.

Step 3 Click ⚙ of **Location** to locate the selected transaction information in the captured message.



Location Type: Variable

Data Format: ASCII

Tag: CARD :

Times: 1

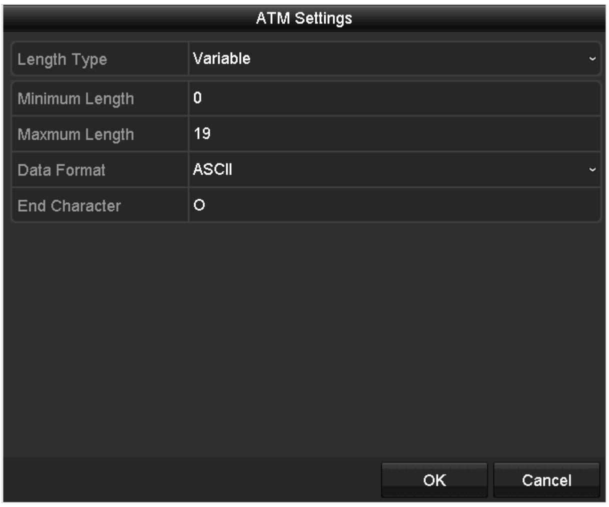
Additional-character ...: 1

Figure 11-12 Location Settings

Select the **Location Type** to **Variable**, select the data format, and then set the tag, times and additional-character offset.

Or select the **Location Type** to **Fixed**, and set the fixed offset.

Step 4 Click ⚙ of **Length** to set the length of the selected transaction information.



| | |
|---|---|
| Length Type | Variable |
| Minimum Length | 0 |
| Maxmum Length | 19 |
| Data Format | ASCII |
| End Character | O |

Figure 11-13 Length Settings

Select the **Length Type** to **Variable**, set the minimum length and maximum length for the transaction information, and then select data format and set the end character.

Or select the **Length Type** to **Fixed**, and set the fixed length value.

Or select the **Length Type** to **Auto**, set the length digits and length position, and then the length of the transaction information will be obtained from the message automatically.

**NOTE**

You cannot set the length parameters when Transaction Behaviour is selected as the transaction major type.

Step 5 Input the **Prefix** of the transaction information in the text field if needed.

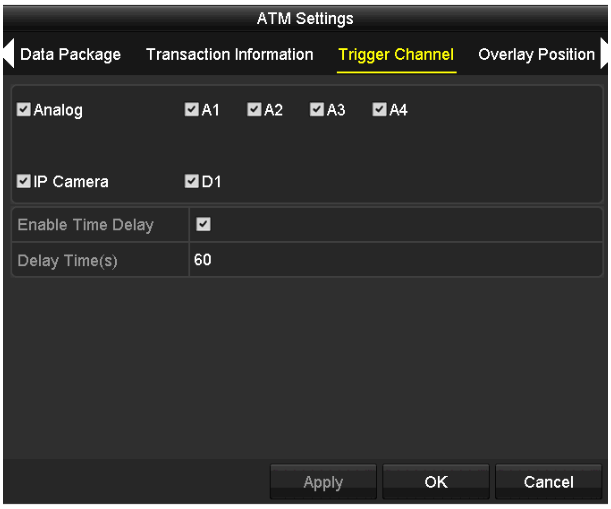
Step 6 Click **Apply** to save the new settings and click **OK** to exit.

## 11.5.3 Configuring Trigger Channel Settings

***Purpose***

You can select the channels for the text overlay of transaction information and command triggered recording.

Step 1 Click the **Trigger Channel** tab to enter the Trigger Channel Settings interface.



☑ Analog ☑ A1 ☑ A2 ☑ A3 ☑ A4

☑ IP Camera ☑ D1

Enable Time Delay ☑

Delay Time(s) 60

Figure 11-14 Custom Protocol Settings-Trigger Channel

Step 2 Check the checkboxes to select the analog channels or IP channels for the text overlay of transaction information and command triggered recording.

Step 3 Check the check of **Enable Time Delay**.

Step 4 Set the **Delay Time** value for menu display if there is no Card In or Card Out in the transaction information.

**NOTE**

- The default delay time is 60s.
- The valid range of delay time is [0 ~ 65535].

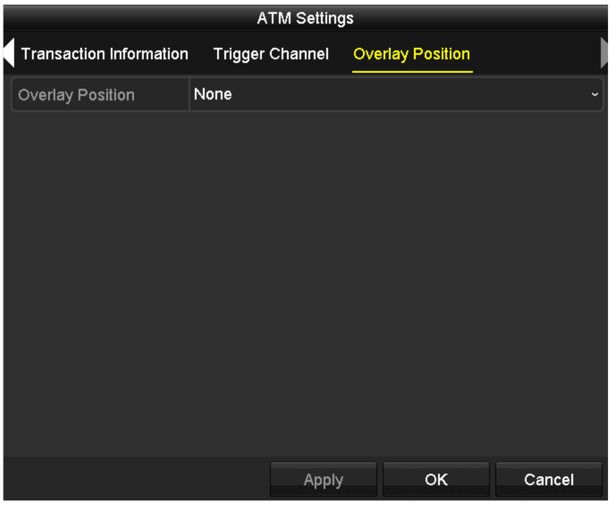
Step 5 Click **Apply** to save the new settings and click **OK** to exit.

### 11.5.4 Configuring Overlay Position Settings

***Purpose***

You can configure the position of transaction text overlay on the display window.

Step 1 Click the **Overlay Position** tab to enter the Overlay Position Settings interface.

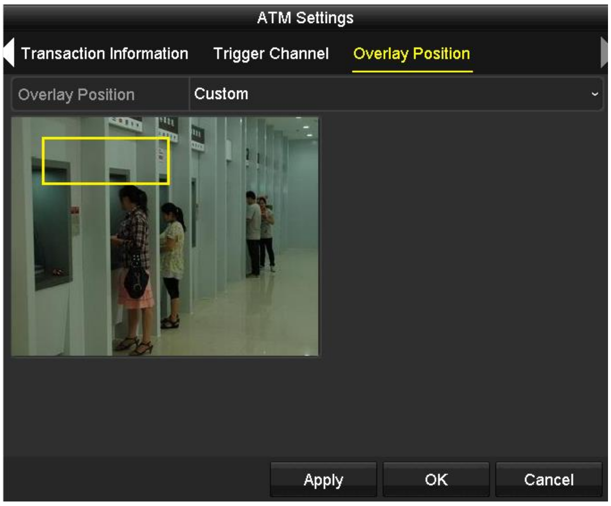


Overlay Position: None

Figure 11-15 Custom Protocol Settings-Overlay Position

Step 2 If you do not need to overlay the transaction information on the display window, select **None** as the overlay position;

If you need to overlay the transaction information on the display window, select **Custom** as the overlay position, and then drag the yellow rectangle to the desired position on the display window.



Overlay Position: Custom

Figure 11-16 Customize Overlay Position

Step 3 Click **Apply** to save the new settings and click **OK** to exit.

# Chapter 12 RAID

## 12.1 Configuring Array

***Purpose***

RAID (redundant array of independent disks) is a storage technology that combines multiple disk drive components into a logical unit. A RAID setup stores data over multiple hard disk drives to provide enough redundancy so that data can be recovered if one disk fails. Data is distributed across the drives in one of several ways called "RAID levels", depending on what level of redundancy and performance is required.

The DVR supports the disk array that is realized by software. You can enable the RAID function on your demand.

**NOTE**

The DS-8104AHQ(L)I-E4 and iDS-8104AHQXLI-E4 series ATM DVR supports RAID0, RAID1, RAID5, and RAID 10 array types.

***Before you start***

Please install the HDD(s) properly and it is recommended to use the same enterprise-level HDDs (including model and capacity) for array creation and configuration so as to maintain reliable and stable running of the disks.

***Introduction***

The DVR can store the data (such as record, picture, log information) in the HDD only after you have created the array or you have configured network HDD (refer to *Chapter14.2 Managing Network HDD*). Our device provides two ways for creating array, including one-touch configuration and manual configuration. The following flow chart shows the process of creating array.

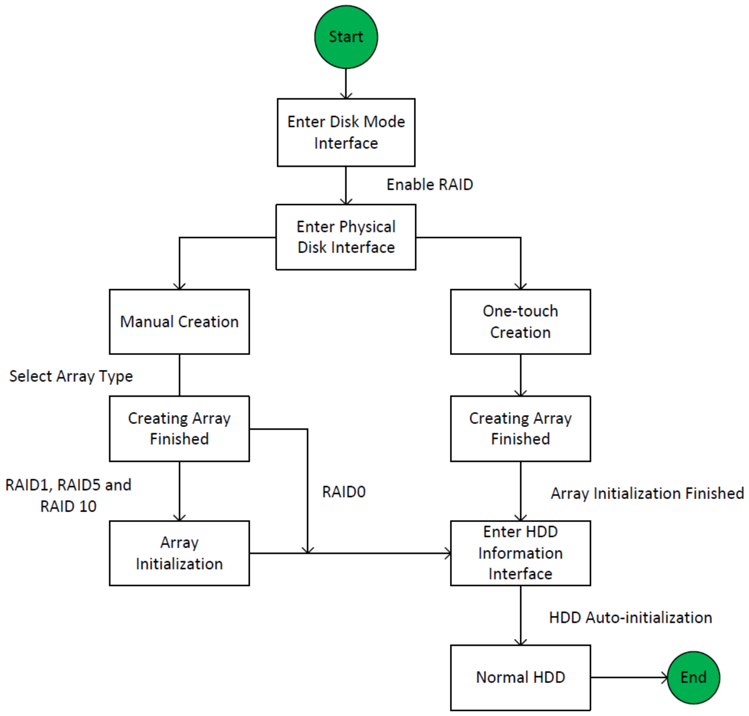


Figure 12-1 RAID Working Flow

## 12.1.1 Enable RAID

***Purpose***

Perform the following steps to enable the RAID function, or the disk array cannot be created.

- **OPTION 1:**

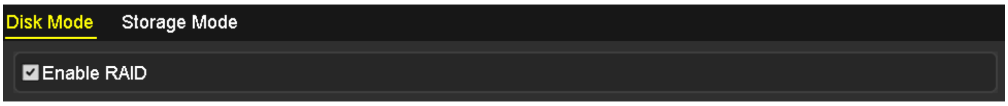
Enable the RAID function in the Wizard when the device startup, please refer to step 4 of Chapter 2.4.2.

- **OPTION 2:**

Enable the RAID function in the HDD Management Interface.

Step 1 Enter the Disk Mode configuration interface.

Menu > HDD > Advanced



☑ Enable RAID

Figure 12-2 Enable RAID Interface

Step 2 Check the checkbox of **Enable RAID**.

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

Step 4 Reboot the device to take RAID into effect.

## 12.1.2 One-touch Configuration

***Purpose***

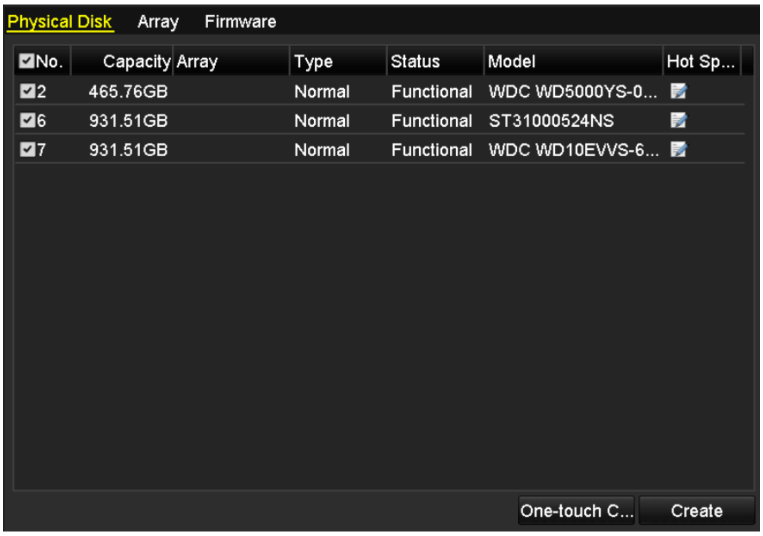
Through one-touch configuration, you can quickly create the disk array. By default, the array type to be created is RAID 5.

***Before you start***

1. The RAID function should be enabled, please refer to the Chapter 12.1.1 for details.
2. As the default array type is RAID 5, please install at least 3 HDDs in you device.

Step 1 Enter the RAID configuration interface.

Menu > HDD > RAID



| ☑No. | Capacity | Array | Type | Status | Model | Hot Sp... |
|---|---|---|---|---|---|---|
| ☑2 | 465.76GB | | Normal | Functional | WDC WD5000YS-0... | ✎ |
| ☑6 | 931.51GB | | Normal | Functional | ST31000524NS | ✎ |
| ☑7 | 931.51GB | | Normal | Functional | WDC WD10EVVS-6... | ✎ |

Figure 12-3 Physical Disk Interface

Step 2 Check the checkbox of corresponding HDD No. to select it.

Step 3 Click the **One-touch Config** button to enter the One-touch Array Configuration interface.

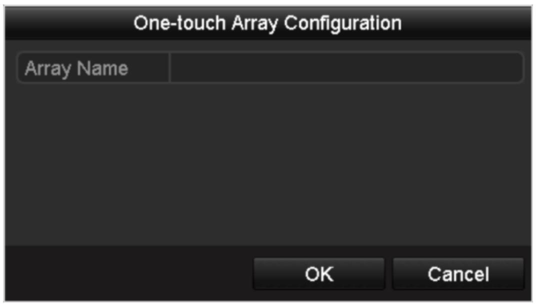


Figure 12-4 One-touch Array Configuration

Step 4 Edit the array name in the **Array Name** text filed and click **OK** button to start configuring array.

**NOTE**

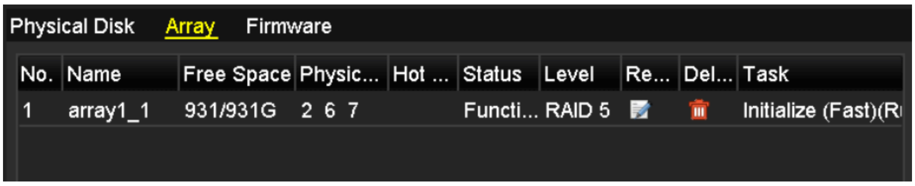
If you install 4 HDDs for one-touch configuration, a hot spare disk will be set by default. It is recommended to set hot spare disk for automatically rebuilding the array when the array is abnormal.

Step 5 When the array configuration is completed, click **OK** button in the pop-up message box to finish the settings.

Step 6 You can click **Array** tab to view the information of the successfully created array.

**NOTE**

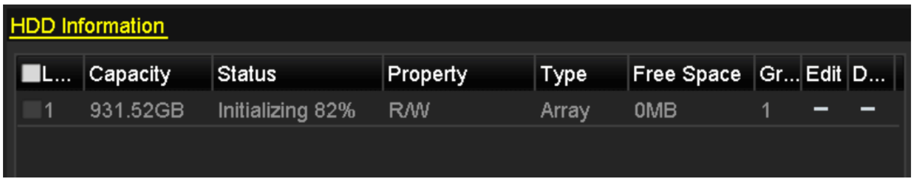
By default, one-touch configuration creates an array and a virtual disk.



| No. | Name | Free Space | Physic... | Hot ... | Status | Level | Re... | Del... | Task |
|---|---|---|---|---|---|---|---|---|---|
| 1 | array1_1 | 931/931G | 2 6 7 | | Functi... | RAID 5 | ✎ | 🗑 | Initialize (Fast)(R |

Figure 12-5 Array Settings Interface

Step 7 A created array displays as an HDD in the HDD information interface.



| ☐L... | Capacity | Status | Property | Type | Free Space | Gr... | Edit | D... |
|---|---|---|---|---|---|---|---|---|
| ☐1 | 931.52GB | Initializing 82% | R/W | Array | 0MB | 1 | – | – |

Figure 12-6 HDD Information Interface

## 12.1.3 Manually Creating Array

***Purpose***

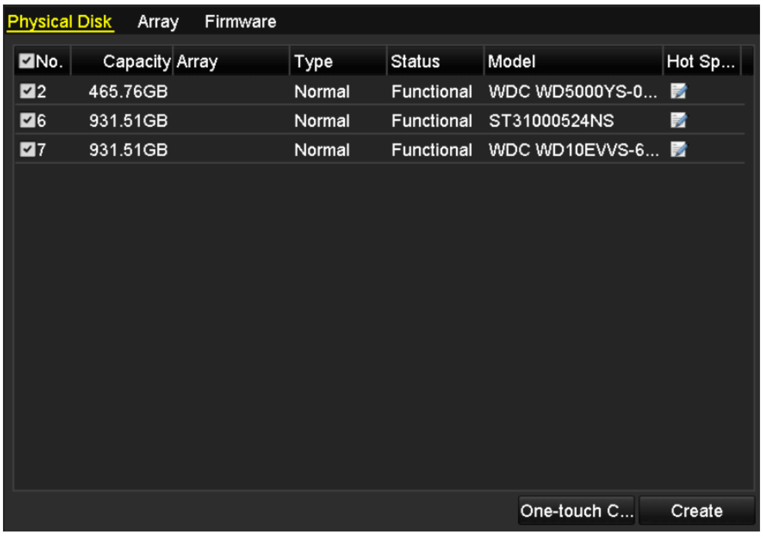
You can manually create the array of RAID 0, RAID 1, RAID 5, and RAID 10.

**NOTE**

In this chapter, we take RAID 5 as an example to describe the manual configuration of array and virtual disk.

Step 1 Enter the Physical Disk Settings interface.

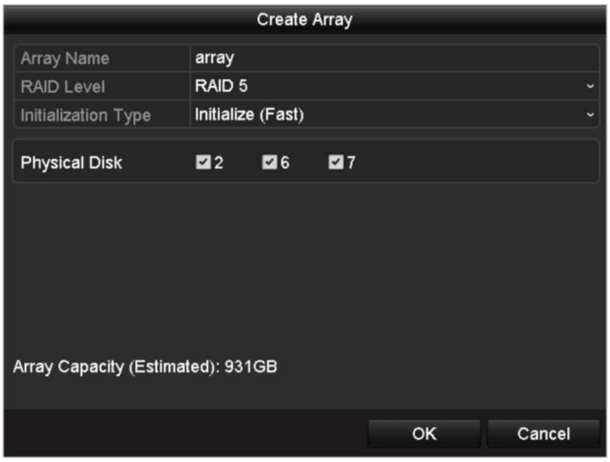
Menu > HDD > RAID > Physical Disk



| ☑No. | Capacity | Array | Type | Status | Model | Hot Sp... |
|---|---|---|---|---|---|---|
| ☑2 | 465.76GB | | Normal | Functional | WDC WD5000YS-0... | |
| ☑6 | 931.51GB | | Normal | Functional | ST31000524NS | |
| ☑7 | 931.51GB | | Normal | Functional | WDC WD10EVVS-6... | |

Figure 12-7 Physical Disk Settings Interface

Step 2 Click **Creat** button to enter the Create Array interface.



| | |
|---|---|
| Array Name | array |
| RAID Level | RAID 5 |
| Initialization Type | Initialize (Fast) |
| Physical Disk | ☑2 ☑6 ☑7 |

Array Capacity (Estimated): 931GB

Figure 12-8 Create Array Interface

Step 3 Edit the **Array Name**; set the **RAID Level** to RAID 0, RAID 1, RAID 5, or RAID 10; select the **Physical Disk** that you want to configure array.

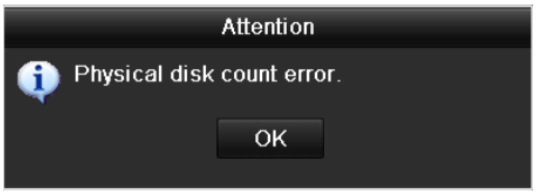
**NOTE**

- If you choose RAID 0, at least 2 HDDs must be installed.
- If you choose RAID 1, 2 HDDs need to be configured for RAID 1.
- If you choose RAID 5, at least 3 HDDs must be installed.
- If you choose RAID 10, the number of HDDs installed should be even in the range of 4 to 16.

Step 4 Click **OK** button to create array.

**NOTE**

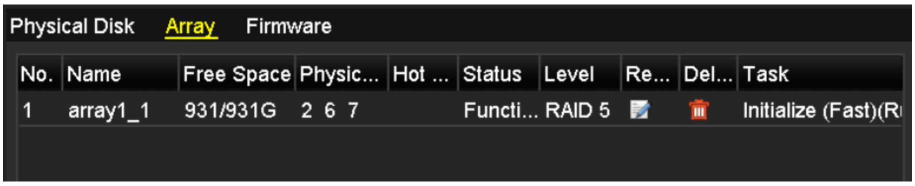
If the number of HDDs you select is not compatible with the requirement of the RAID level, the error message box will pop up.



Physical disk count error.

Figure 12-9 Error Message Box

Step 5 You can click **Array** tab to view the successfully created array.



| No. | Name | Free Space | Physic... | Hot ... | Status | Level | Re... | Del... | Task |
|---|---|---|---|---|---|---|---|---|---|
| 1 | array1_1 | 931/931G | 2 6 7 |  | Functi... | RAID 5 | ✎ | 🗑 | Initialize (Fast)(R |

Figure 12-10 Array Settings Interface

## 12.2 Rebuilding Array

***Purpose***

The working status of array includes Functional, Degraded and Offline. By viewing the array status, you can take immediate and proper maintenance for the disks so as to ensure the high security and reliability of the data stored in the disk array.

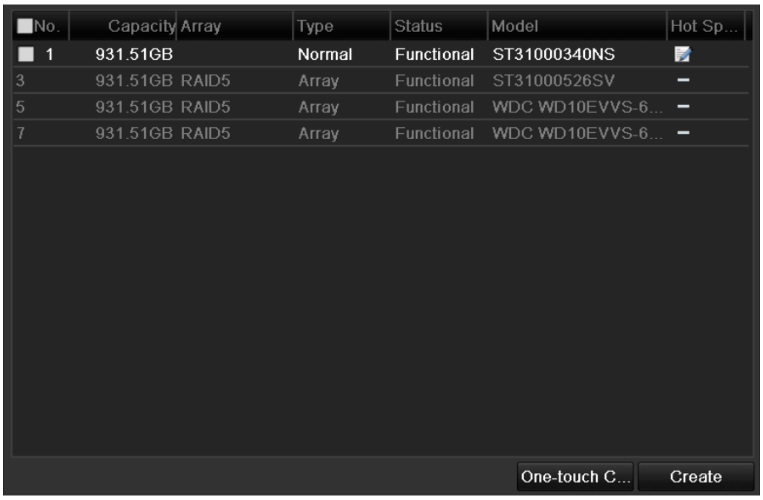
When there is no disk loss in the array, the working status of array will change to Functional; when the number of lost disks has exceeded the limit, the working status of array will change to Offline; in other conditions, the working status is Degraded.

When the virtual disk is in Degraded status, you can restore it to Functional by array rebuilding.

***Before you start***

Please make sure the hot spare disk is configured.

Step 1 Enter the Physical Disk Settings interface to configure the hot spare disk.



| ☐No. | Capacity | Array | Type | Status | Model | Hot Sp... |
|---|---|---|---|---|---|---|
| ☐ 1 | 931.51GB | | Normal | Functional | ST31000340NS | ✎ |
| 3 | 931.51GB | RAID5 | Array | Functional | ST31000526SV | – |
| 5 | 931.51GB | RAID5 | Array | Functional | WDC WD10EVVS-6... | – |
| 7 | 931.51GB | RAID5 | Array | Functional | WDC WD10EVVS-6... | – |

Figure 12-11 Physical Disk Settings Interface

Step 2 Select a disk and click ✎ to set it as the hot spare disk.

**NOTE**

Only global hot spare mode is supported.

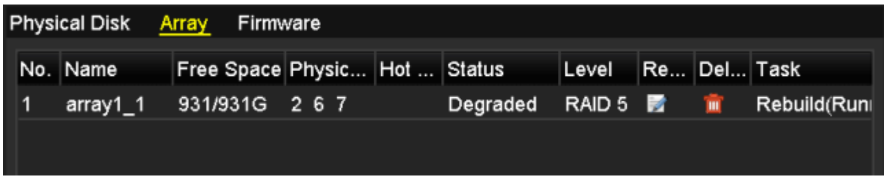
## 12.2.1 Automatically Rebuilding Array

***Purpose***

When the virtual disk is in Degraded status, the device can start rebuilding the array automatically with the hot spare disk to ensure the high security and reliability of the data.

Step 1 Enter the Array Settings interface. The status of the array is Degraded. Since the hot spare disk is configured, the system will automatically start rebuilding using it.

Menu > HDD > RAID > Array



| No. | Name | Free Space | Physic... | Hot ... | Status | Level | Re... | Del... | Task |
|---|---|---|---|---|---|---|---|---|---|
| 1 | array1_1 | 931/931G | 2 6 7 | | Degraded | RAID 5 | ✎ | 🗑 | Rebuild(Run |

Figure 12-12 Array Settings Interface

If there is no hot spare disk after rebuilding, it is recommended to install a HDD into the device and set is as a hot spare disk to ensure the high security and reliability of the array.

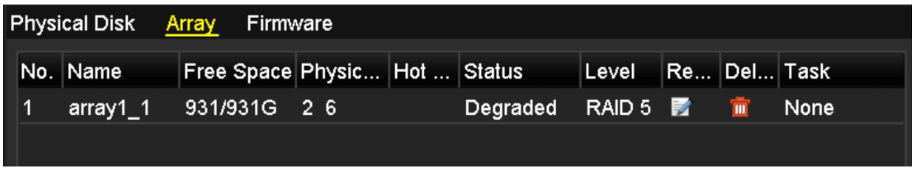
## 12.2.2 Manually Rebuilding Array

***Purpose***

If the hot spare disk has not been configured, you can rebuild the array manually to restore the array when the virtual disk is in Degraded status.

Step 1 Enter the Array Settings interface. The disk 3 is lost.

Menu > HDD > RAID > Array



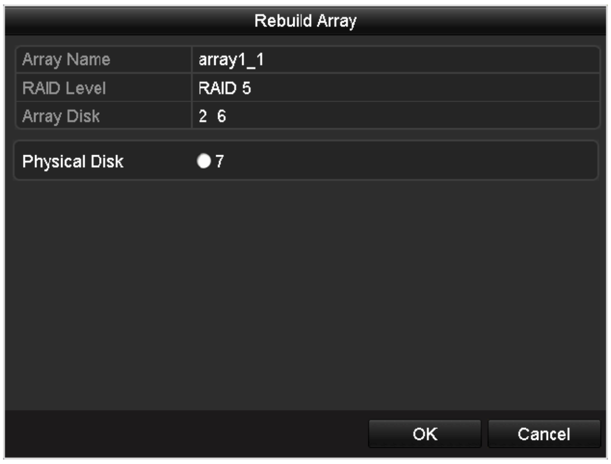
| No. | Name | Free Space | Physic... | Hot ... | Status | Level | Re... | Del... | Task |
|---|---|---|---|---|---|---|---|---|---|
| 1 | array1_1 | 931/931G | 2 6 |  | Degraded | RAID 5 | ✎ | 🗑 | None |

Figure 12-13 Array Settings Interface

Step 2 Click Array tab to return to the Array Settings interface and click ✎ to configure the array rebuild.

**NOTE**

At least one available physical disk should exist for rebuilding the array.



Array Name: array1_1
RAID Level: RAID 5
Array Disk: 2 6

Physical Disk ● 7

Figure 12-14 Rebuild Array Interface

Step 3 Select the available physical disk and click OK button to confirm to rebuild the array.

Step 4 The “Do not unplug the physical disk when it is under rebuilding” message box pops up. Click OK button to start rebuilding.

Step 5 You can enter the Array Settings interface to view the rebuilding status.

Step 6 After rebuilding successfully, the array and virtual disk will restore to Functional.

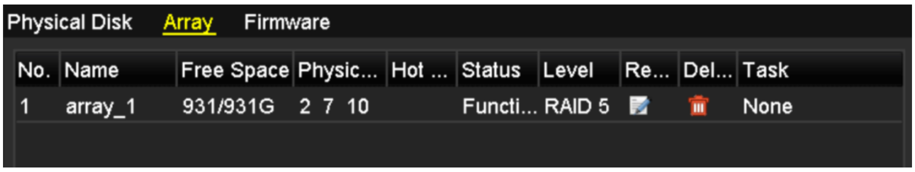
## 12.3 Deleting Array

**NOTE**

Deleting array will cause to delete all the data saved in the disk.

Step 1 Enter the Array Settings interface.

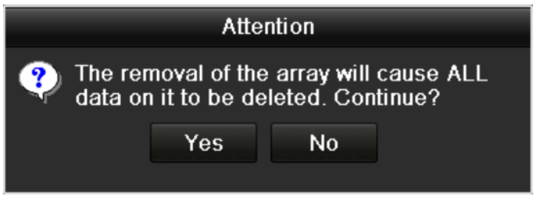
Menu>HDD>RAID>Array



| No. | Name | Free Space | Physic... | Hot ... | Status | Level | Re... | Del... | Task |
|---|---|---|---|---|---|---|---|---|---|
| 1 | array_1 | 931/931G | 2 7 10 | | Functi... | RAID 5 | ✎ | 🗑 | None |

Figure 12-15 Array Settings Interface

Step 2 Select an array and click 🗑 to delete the array.


Attention

The removal of the array will cause ALL data on it to be deleted. Continue?

Figure 12-16 Confirm Array Deletion

Step 3 In the pop-up message box, click **Yes** button to confirm the array deletion.

**NOTE**

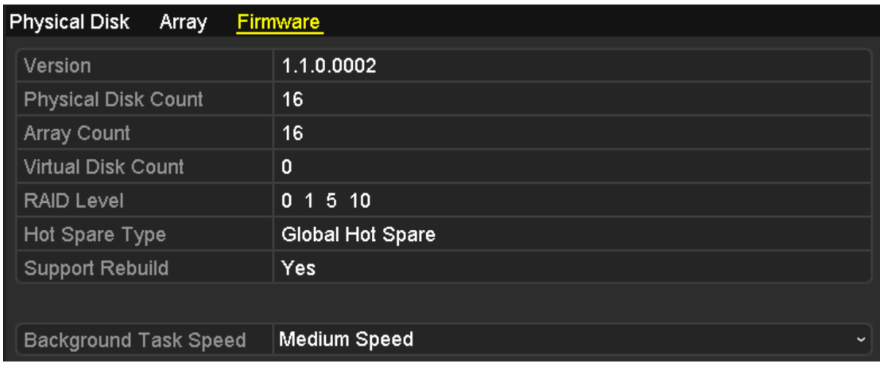
Deleting array will cause to delete all the data in the array.

# 12.4 Checking and Editing Firmware

***Purpose***

You can view the information of the firmware and set the background task speed on the Firmware interface.

Step 1 Enter the Firmware interface to check the information of the firmware, including the version, maximum physical disk quantity, maximum array quantity, auto-rebuild status, etc.



| | |
|---|---|
| Version | 1.1.0.0002 |
| Physical Disk Count | 16 |
| Array Count | 16 |
| Virtual Disk Count | 0 |
| RAID Level | 0 1 5 10 |
| Hot Spare Type | Global Hot Spare |
| Support Rebuild | Yes |
| Background Task Speed | Medium Speed |

Figure 12-17 Firmware Interface

Step 2 You can set the **Background Task Speed** in the drop-down list.

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

# Chapter 13 HDD Management

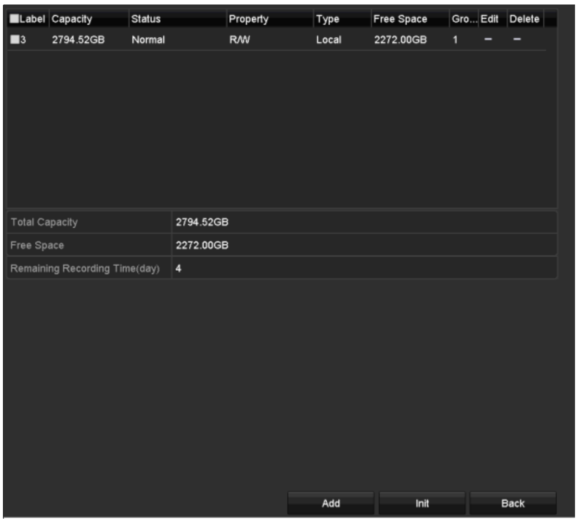
## 13.1 Initializing HDDs

***Purpose***

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

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

Menu > HDD > General



| ☐Label | Capacity | Status | Property | Type | Free Space | Gro... | Edit | Delete |
|---|---|---|---|---|---|---|---|---|
| ☐3 | 2794.52GB | Normal | R/W | Local | 2272.00GB | 1 | – | – |

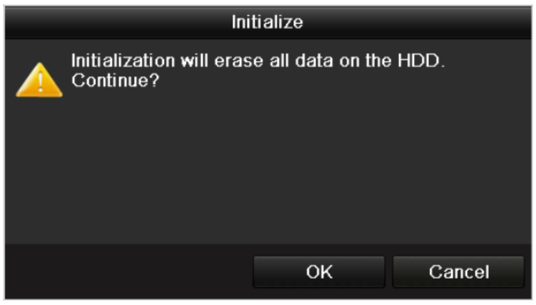
| | |
|---|---|
| Total Capacity | 2794.52GB |
| Free Space | 2272.00GB |
| Remaining Recording Time(day) | 4 |

Figure 13-1 HDD Information Interface

You can view the Total Capacity, Free Space and Remaining Recording Time of the HDD. The algorithm of the Remaining Recording Time is to use average bit rate for the channel enabling smart encoding to raise accuracy.

Step 2 Select HDD to be initialized.

Step 3 Click the **Init** button.

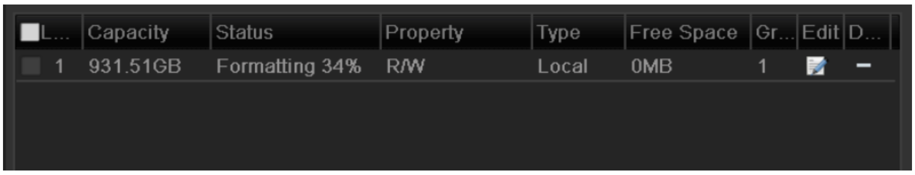


Initialize

Initialization will erase all data on the HDD. Continue?

Figure 13-2 Confirm Initialization

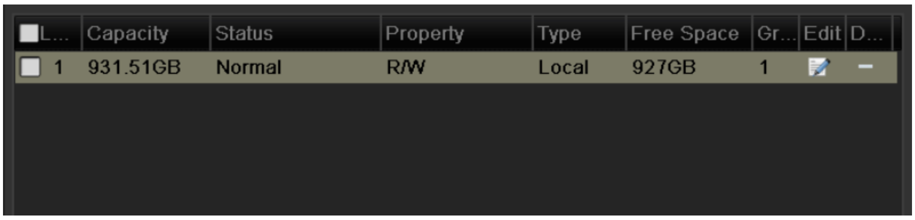
Step 4 Select the **OK** button to start initialization.



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

Figure 13-3 Start Initialization

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



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

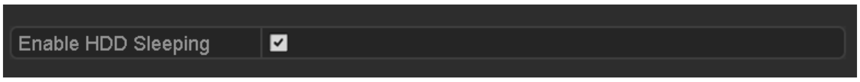
Figure 13-4 HDD Status Changes to Normal

**NOTE**

Initializing the HDD will erase all data on it.

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

Click Menu > HDD > Advanced



Enable HDD Sleeping ☑

Figure 13-5 Enable HDD Sleeping

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

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

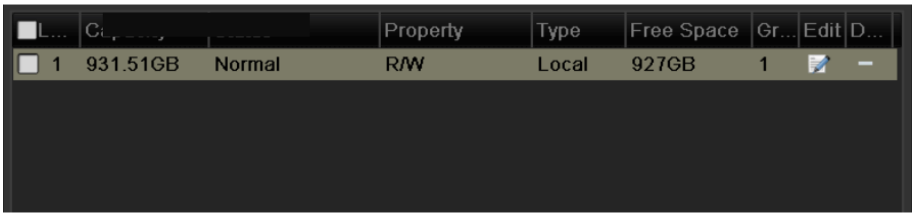
## 13.2 Managing Network HDD

***Purpose***

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

Step 1 Enter the HDD Information interface.

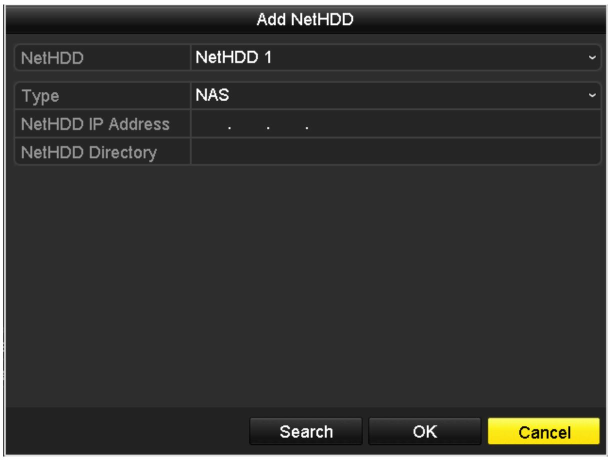
Menu > HDD>General



| ☐L... | C[redacted] | [redacted] | Property | Type | Free Space | Gr... | Edit | D... |
|---|---|---|---|---|---|---|---|---|
| ☐ 1 | 931.51GB | Normal | R/W | Local | 927GB | 1 | 📝 | − |

Figure 13-6 HDD Information Interface

Step 2 Click the **Add** button to enter the **Add NetHDD** interface, as shown in Figure 13-7.



Add NetHDD

NetHDD: NetHDD 1

Type: NAS

NetHDD IP Address: . . .

NetHDD Directory:

Figure 13-7 HDD Information Interface

Step 3 Add the allocated NetHDD.

Step 4 Select the type to NAS or IP SAN.

Step 5 Configure the NAS or IP SAN settings.

- **Add NAS disk:**

1) Enter the NetHDD IP address in the text field.

2) Click **Search** to search the available NAS disks.

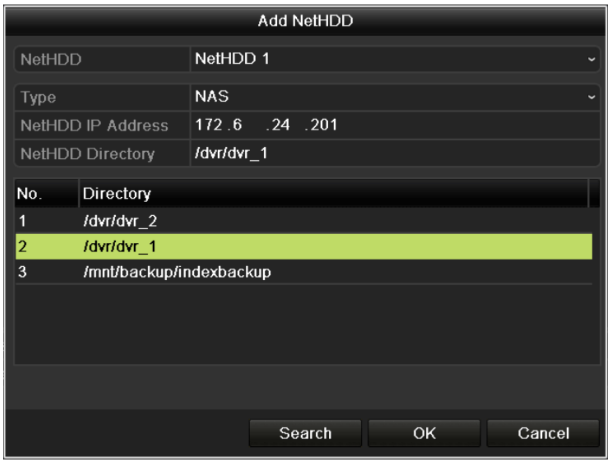
3) Select the NAS disk from the list shown below.

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

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

**NOTE**

Up to 8 NAS disks can be added.



| | |
|---|---|
| NetHDD | NetHDD 1 |
| Type | NAS |
| NetHDD IP Address | 172 .6 .24 .201 |
| NetHDD Directory | /dvr/dvr_1 |

| No. | Directory |
|---|---|
| 1 | /dvr/dvr_2 |
| 2 | /dvr/dvr_1 |
| 3 | /mnt/backup/indexbackup |

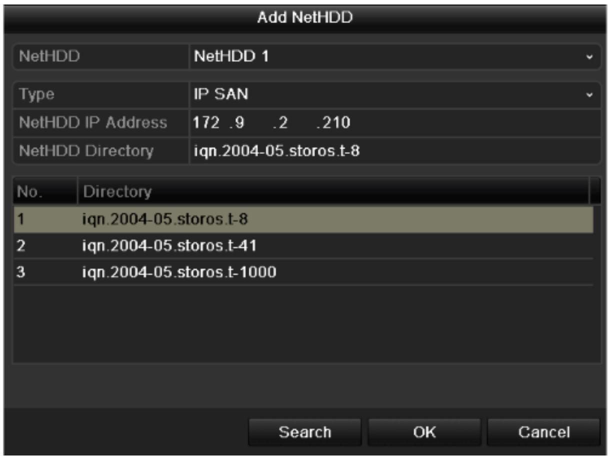
Figure 13-8 Add NAS Disk

- **Add IP SAN:**

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

**NOTE**

Up to 8 IP SAN disks can be added.



| | |
|---|---|
| NetHDD | NetHDD 1 |
| Type | IP SAN |
| NetHDD IP Address | 172 .9 .2 .210 |
| NetHDD Directory | iqn.2004-05.storos.t-8 |

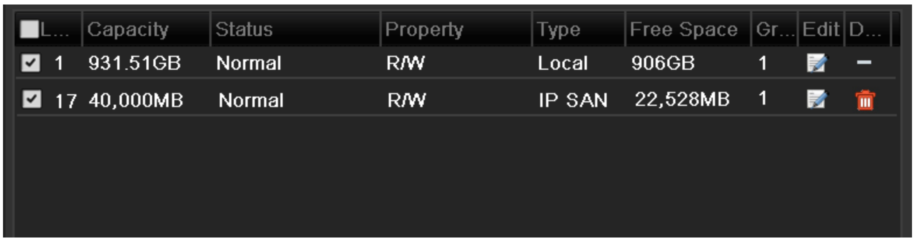
| No. | Directory |
|---|---|
| 1 | iqn.2004-05.storos.t-8 |
| 2 | iqn.2004-05.storos.t-41 |
| 3 | iqn.2004-05.storos.t-1000 |

Figure 13-9 Add IP SAN Disk

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

**NOTE**

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



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

Figure 13-10 Initialize Added NetHDD

# 13.3 Managing HDD Group

## 13.3.1 Setting HDD Groups

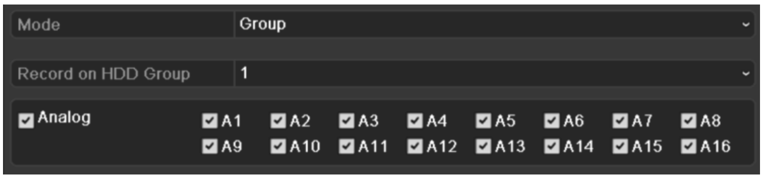
***Purpose***

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

Step 1 Enter the Storage Mode interface.

Menu > HDD > Advanced

Step 2 Set the **Mode** to Group, as shown in Figure 13-11.



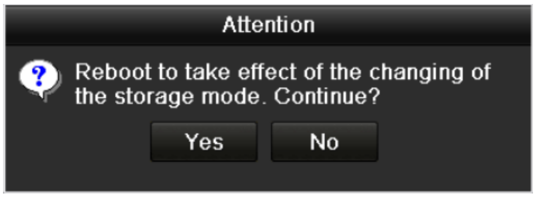
Mode: Group

Record on HDD Group: 1

☑ Analog ☑A1 ☑A2 ☑A3 ☑A4 ☑A5 ☑A6 ☑A7 ☑A8 ☑A9 ☑A10 ☑A11 ☑A12 ☑A13 ☑A14 ☑A15 ☑A16

Figure 13-11 Storage Mode Interface

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



Attention

Reboot to take effect of the changing of the storage mode. Continue?

Yes No

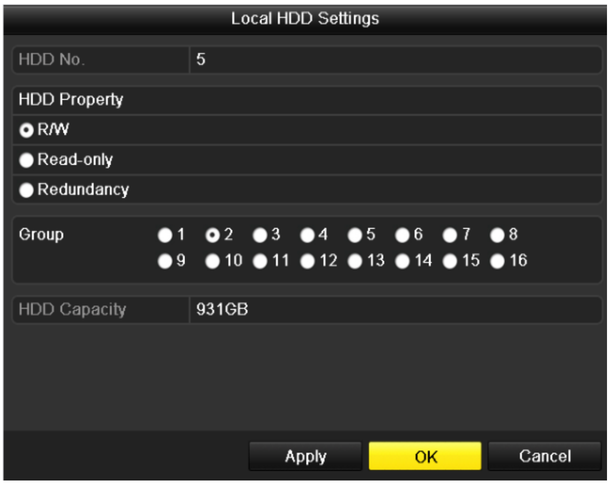
Figure 13-12 Attention for Reboot

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

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

Menu > HDD > General

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



HDD No. 5

HDD Property

◉ R/W

○ Read-only

○ Redundancy

Group ○ 1 ◉ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10 ○ 11 ○ 12 ○ 13 ○ 14 ○ 15 ○ 16

HDD Capacity 931GB

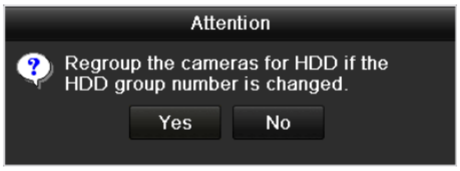
Figure 13-13 Local HDD Settings Interface

Step 7 Select the Group number for the current HDD.

**NOTE**

The default group No. for each HDD is 1.

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



Regroup the cameras for HDD if the HDD group number is changed.

Figure 13-14 Confirm HDD Group Settings

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

## 13.3.2 Setting HDD Property

***Purpose***

The HDD property can be set to redundancy, read-only or read/write (R/W). Before setting the HDD property, please set the storage mode to Group (refer to step1-4 of *Chapter 13.3.1 Setting HDD Groups*).

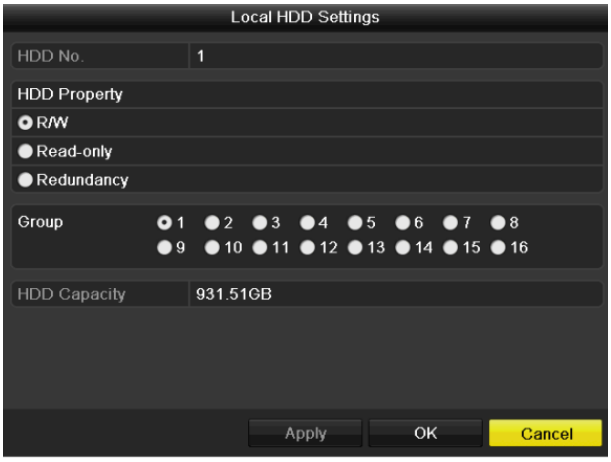
A HDD can be set to read-only to prevent important recorded files from being overwritten when the HDD becomes full in overwrite recording mode.

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.

Step 1 Enter the HDD Information interface.

Menu > HDD > General

Step 2 Select HDD from the list and click the ✎ icon to enter the **Local HDD Settings** interface, as shown in Figure 13-15.



Local HDD Settings

HDD No. 1

HDD Property

● R/W

○ Read-only

○ Redundancy

Group ● 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10 ○ 11 ○ 12 ○ 13 ○ 14 ○ 15 ○ 16

HDD Capacity 931.51GB

Figure 13-15 Set HDD Property

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

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

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

**NOTE**

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

## 13.4 Configuring Quota Mode

***Purpose***

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

***Steps***

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

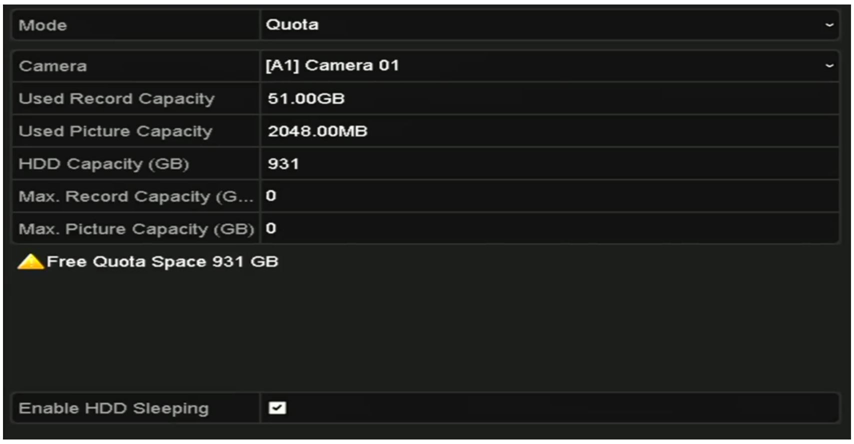
Menu > HDD > Advanced

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

Step 3 Set the **Mode** to Quota, as shown in Figure 13-16.

**NOTE**

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



Mode: Quota

Camera: [A1] Camera 01

Used Record Capacity: 51.00GB

Used Picture Capacity: 2048.00MB

HDD Capacity (GB): 931

Max. Record Capacity (G...: 0

Max. Picture Capacity (GB): 0

⚠ Free Quota Space 931 GB

Enable HDD Sleeping: ☑

Figure 13-16 Storage Mode Settings Interface

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

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

Step 6 You can copy the quota settings of the current camera to other cameras if required. Click the **Copy** button to enter the **Copy Camera** interface, as shown in Figure 13-17.

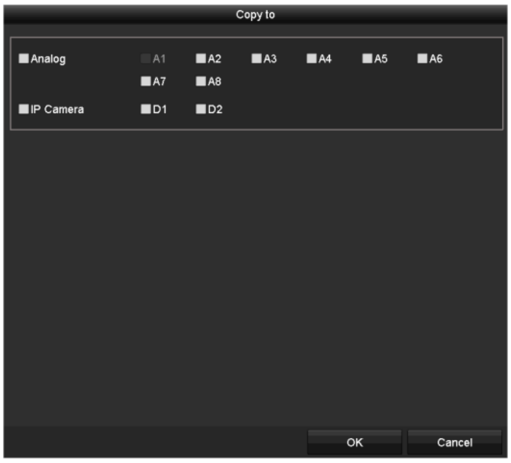


Figure 13-17 Copy Settings to Other Camera(s)

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

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

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

**NOTE**

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

## 13.5 Checking HDD Status

***Purpose***

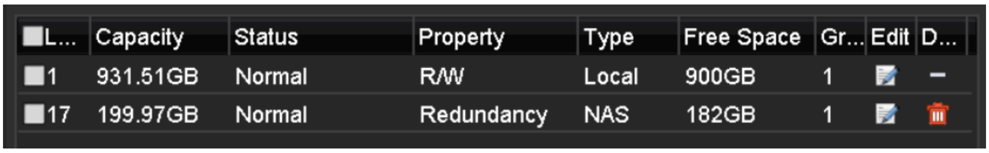
You may check the status of the installed HDDs on DVR so as to take immediate check and maintenance in case of HDD failure.

**Checking HDD Status in HDD Information Interface**

Step 1 Enter the HDD Information interface.

Menu > HDD > General

Step 2 Check the status of each HDD which is displayed on the list, as shown in Figure 13-18.



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

Figure 13-18 View HDD Status (1)

**NOTE**

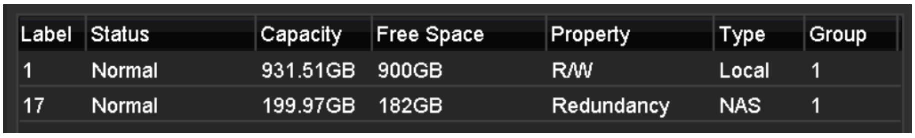
If the status of HDD is *Normal* or *Sleeping*, it works normally. If the status is *Uninitialized* or *Abnormal*, please initialize the HDD before use. And if the HDD initialization is failed, please replace it with a new one.

**Checking HDD Status in System Information Interface**

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

Menu > Maintenance > System Info

Step 2 Click the **HDD** tab to view the status of each HDD displayed on the list, as shown in Figure 13-19.



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

Figure 13-19 View HDD Status (2)

# 13.6 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.

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

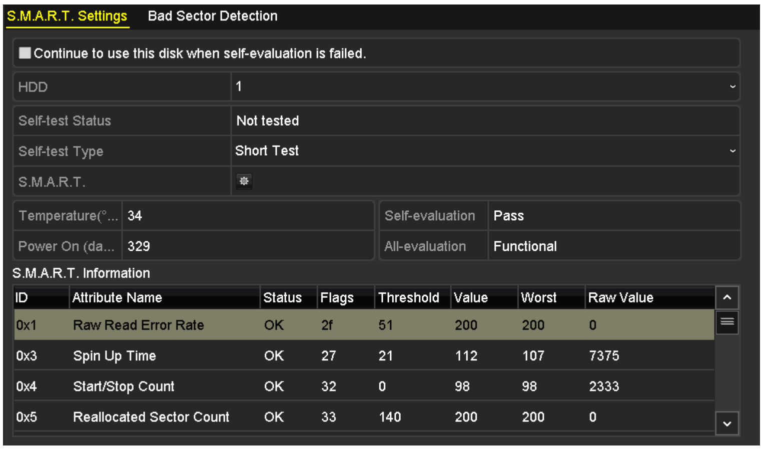
Menu > Maintenance > HDD Detect

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

Step 3 Select the HDD to view its S.M.A.R.T. information list, as shown in Figure 13-20.

**NOTE**

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



☐ Continue to use this disk when self-evaluation is failed.

HDD: 1

Self-test Status: Not tested

Self-test Type: Short Test

S.M.A.R.T.

Temperature(°...: 34

Power On (da...: 329

Self-evaluation: Pass

All-evaluation: Functional

S.M.A.R.T. Information

| ID | Attribute Name | Status | Flags | Threshold | Value | Worst | Raw Value |
|---|---|---|---|---|---|---|---|
| 0x1 | Raw Read Error Rate | OK | 2f | 51 | 200 | 200 | 0 |
| 0x3 | Spin Up Time | OK | 27 | 21 | 112 | 107 | 7375 |
| 0x4 | Start/Stop Count | OK | 32 | 0 | 98 | 98 | 2333 |
| 0x5 | Reallocated Sector Count | OK | 33 | 140 | 200 | 200 | 0 |

Figure 13-20 S.M.A.R.T Settings Interface

# 13.7 Detecting Bad Sector

***Purpose***

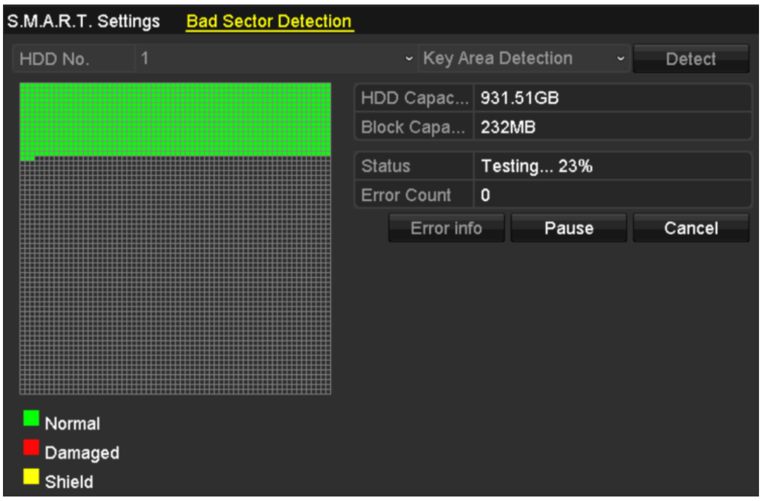
You can detect the bad sector of the HDD to check the status of the HDD.

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

Menu>HDD>HDD Detect

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

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



HDD No.: 1

Key Area Detection

HDD Capac...: 931.51GB

Block Capa...: 232MB

Status: Testing... 23%

Error Count: 0

🟩 Normal

🟥 Damaged

🟨 Shield

Figure 13-21 Bad Sector Detecting

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

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

## 13.8 Configuring HDD Error Alarms

***Purpose***

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

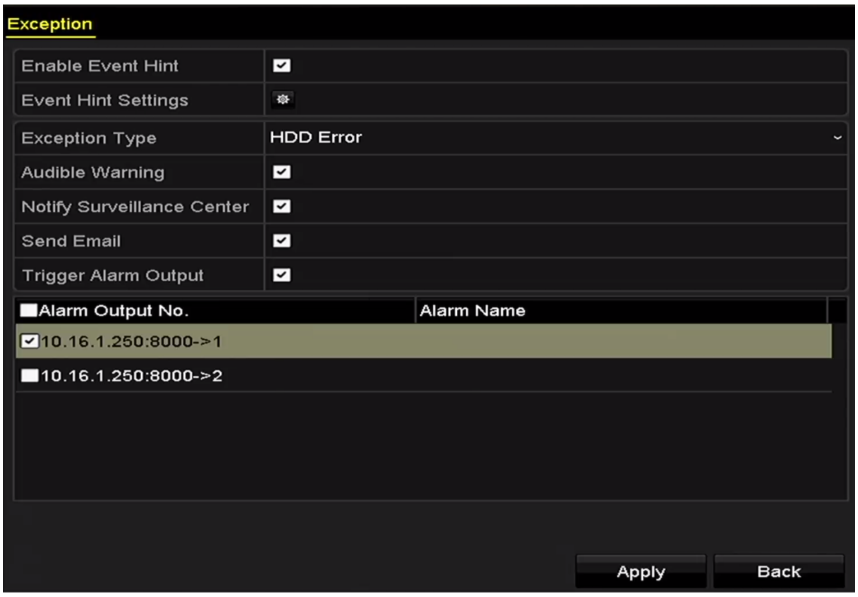
Step 1 Enter the Exception interface.

Menu > Configuration > Exceptions

Step 2 Select the Exception Type to **HDD Error** from the drop-down list.

Step 3 Check the checkbox(s) below to select the linkage action(s) for HDD error, as shown in Figure 13-22.

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



Enable Event Hint ☑

Event Hint Settings

Exception Type: HDD Error

Audible Warning ☑

Notify Surveillance Center ☑

Send Email ☑

Trigger Alarm Output ☑

| ☐ Alarm Output No. | Alarm Name |
|---|---|
| ☑ 10.16.1.250:8000->1 | |
| ☐ 10.16.1.250:8000->2 | |

Figure 13-22 Configure HDD Error Alarm

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

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

# Chapter 14 Camera Settings

## 14.1 Configuring OSD Settings

***Purpose***

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

Step 1 Enter the OSD Configuration interface.

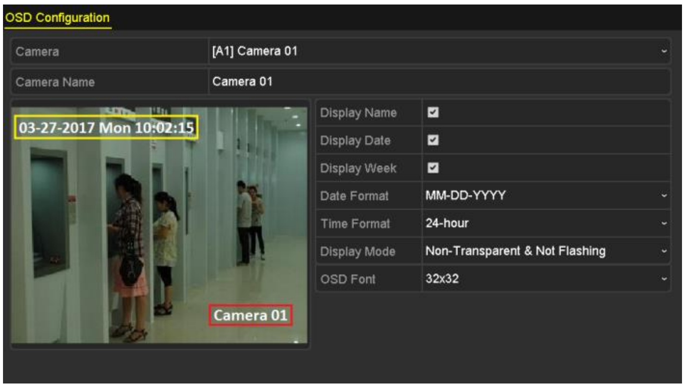
Menu > Camera > OSD

Step 2 Select the camera to configure OSD settings.

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

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

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



Camera: [A1] Camera 01
Camera Name: Camera 01
Display Name: ☑
Display Date: ☑
Display Week: ☑
Date Format: MM-DD-YYYY
Time Format: 24-hour
Display Mode: Non-Transparent & Not Flashing
OSD Font: 32x32

Figure 14-1 OSD Configuration Interface

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

Step 7 Copy Camera Settings

1) If you want to copy the OSD settings of the current camera to other cameras, click the **Copy** button to enter the **Copy Camera** interface, as shown in Figure 14-2.

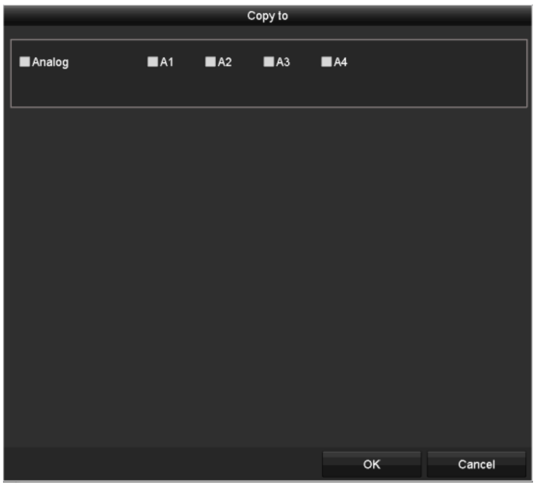


Figure 14-2 Copy Settings to Other Cameras

2) Select the camera (s) to be configured with the same OSD settings. You can also check the checkbox of **Analog** to select all cameras.

3) Click the **OK** button to finish the **Copy** settings and back to the **OSD Configuration** interface.

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

## 14.2 Configuring Privacy Mask

***Purpose***

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

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

Menu > Camera > Privacy Mask

Step 2 Select the camera to set privacy mask.

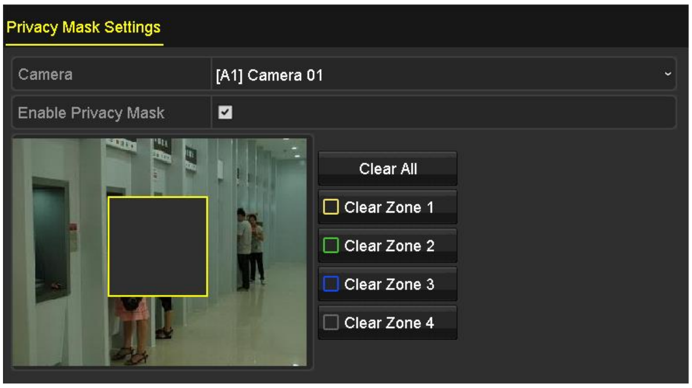
Step 3 Check the checkbox of **Enable Privacy Mask** to enable this feature.

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

**NOTE**

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

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


Privacy Mask Settings

Camera: [A1] Camera 01

Enable Privacy Mask: ☑

Figure 14-3 Set Privacy Mask Area

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

Please refer to step 7 of *Chapter 14.1 Configuring OSD Settings*.

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

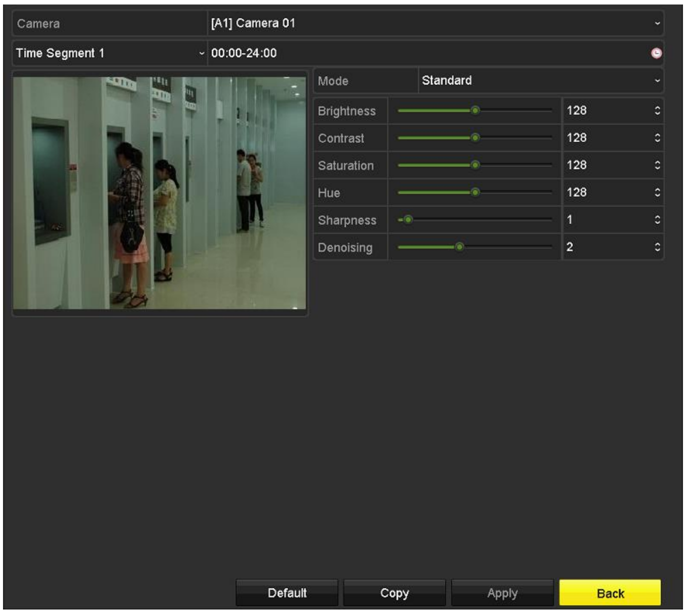
# 14.3 Configuring Video Parameters

## 14.3.1 Configuring Image Settings

Step 1 Enter the Image Settings interface.

Menu > Camera > Image

Step 2 Select the **Image Settings** tab.


Camera: [A1] Camera 01

Time Segment 1: 00:00-24:00

Mode: Standard

Brightness: 128

Contrast: 128

Saturation: 128

Hue: 128

Sharpness: 1

Denoising: 2

Figure 14-4 Image Settings Interface (Analog Camera)

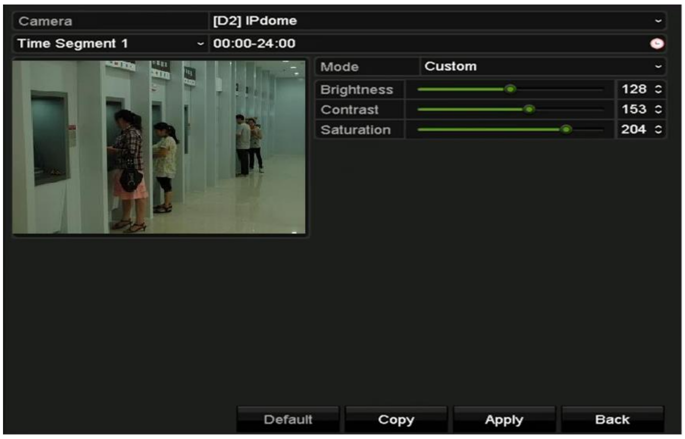


Figure 14-5 Image Settings Interface (IP Camera)

Step 3 Select the camera to set image parameters.

Step 4 Two periods for different image settings are provided, select the period name in the drop-down list.

**NOTE**

The time periods cannot be overlapped with each other.

Step 5 Select the mode from the drop-down list of **Mode**.

There are four modes selectable for the analog cameras: Standard, Indoor, Dim Light and Outdoor.

Step 6 Adjust the image parameters according to actual needs.

The parameters include Brightness, Contrast, Saturation, Hue, Sharpness and Denoising for the analog cameras and Brightness, Contrast and Saturation for the IP cameras. You can also click **Restore** to set the parameters to the default settings.

Step 7 (Optional) Click **Copy** to copy the image settings of the current camera to other cameras.

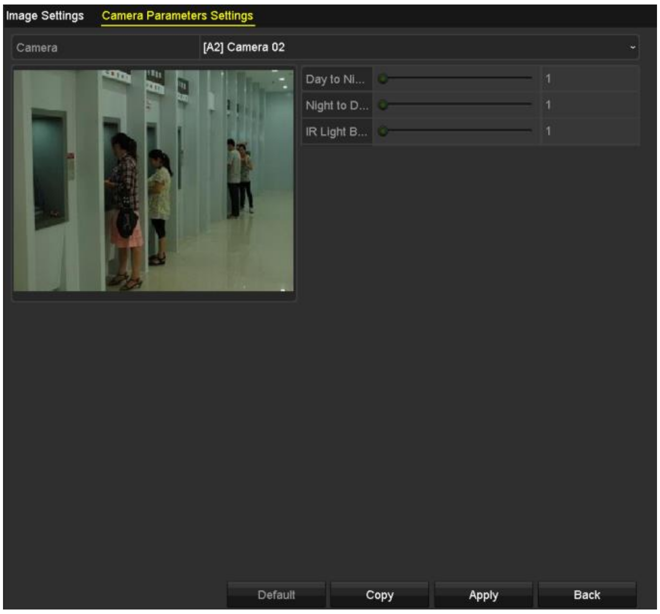
Step 8 Click **Apply** to save the settings.

## 14.3.2 Configuring Camera Parameters Settings

Step 1 Enter the Image Settings interface.

Menu > Camera > Image

Step 2 Select the **Camera Parameters Settings** tab.



Camera [A2] Camera 02

Day to Ni... 1

Night to D... 1

IR Light B... 1

Figure 14-6 Camera Parameters Settings

Step 3 Select the **Camera** from the drop-down list.

Step 4 (Optional) Adjust the parameters including **Day to Night Sensitivity**, **Night to Day Sensitivity** and **IR Light Brightness** for the analog cameras. You can also click **Default** to set the parameters to the default settings.

Step 5 (Optional) Click **Copy** to copy the parameters of the current camera to other analog cameras.

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

**NOTE**

- The camera parameters settings is only applicable for ananlog cameras.
- The Day to Night Sensitivity, Night to Day Sensitivity and IR Light Brightness functions must be supported by the connected analog camera. You cannot set the parameters if the connected analog camera does not support them or there is no video signal.
- The parameters are saved to the connected analog camera and are not saved to the DVR.
- The default value of Day to Night Sensitivity, Night to Day Sensitivity and IR Light Brightness is 5. The effective value ranges from 1 to 9.
- If you exit from the interface and enter it again, the parameters displayed are those you have set the last time.
- The DVR connects to the analog camera via coaxitron and there is no response mechanism. Even if the coaxitron is abnormal, the parameters are still displayed to be set successfully.

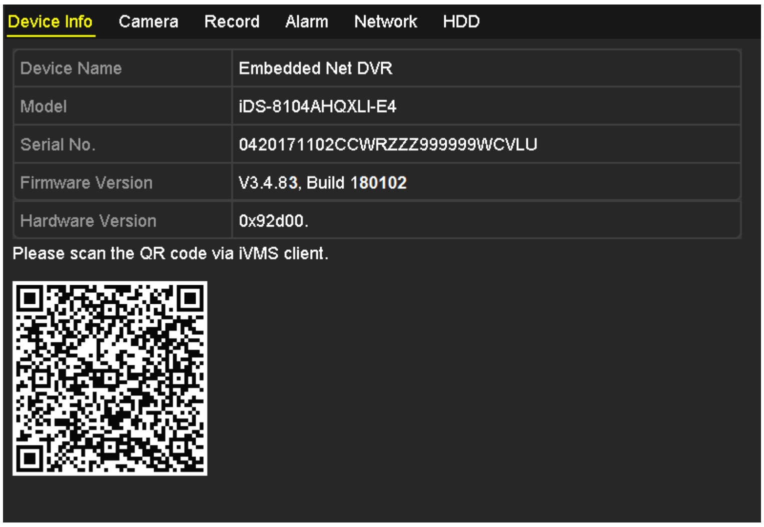
# Chapter 15 DVR Management and Maintenance

## 15.1 Viewing System Information

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

Menu > Maintenance > System Info

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



| | |
|---|---|
| Device Name | Embedded Net DVR |
| Model | iDS-8104AHQXLI-E4 |
| Serial No. | 0420171102CCWRZZZ999999WCVLU |
| Firmware Version | V3.4.83, Build 180102 |
| Hardware Version | 0x92d00. |

Please scan the QR code via iVMS client.

Figure 15-1 System Information Interface

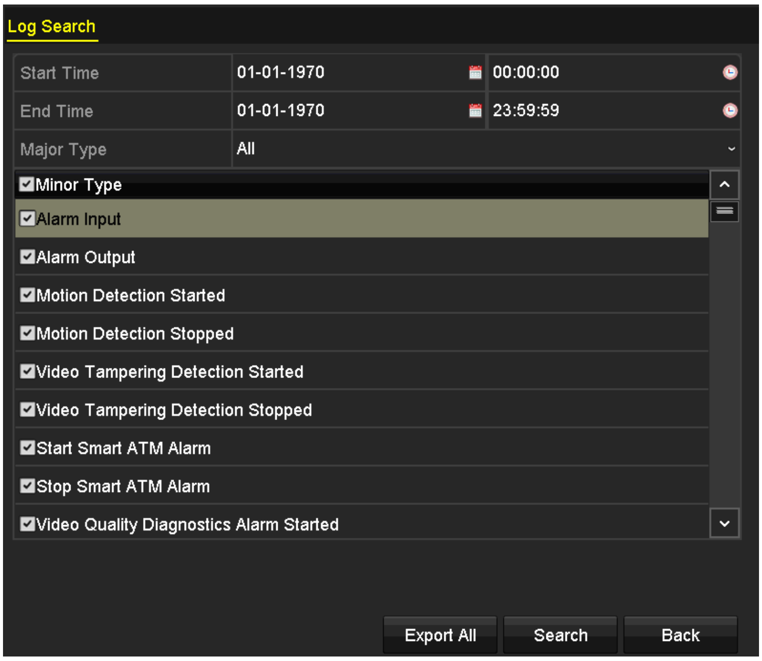
## 15.2 Searching Log Files

***Purpose***

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

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

Menu > Maintenance > Log Information



| | | |
|---|---|---|
| Start Time | 01-01-1970 | 00:00:00 |
| End Time | 01-01-1970 | 23:59:59 |
| Major Type | All | |

☑Minor Type
- ☑Alarm Input
- ☑Alarm Output
- ☑Motion Detection Started
- ☑Motion Detection Stopped
- ☑Video Tampering Detection Started
- ☑Video Tampering Detection Stopped
- ☑Start Smart ATM Alarm
- ☑Stop Smart ATM Alarm
- ☑Video Quality Diagnostics Alarm Started

Figure 15-2 Log Search Interface

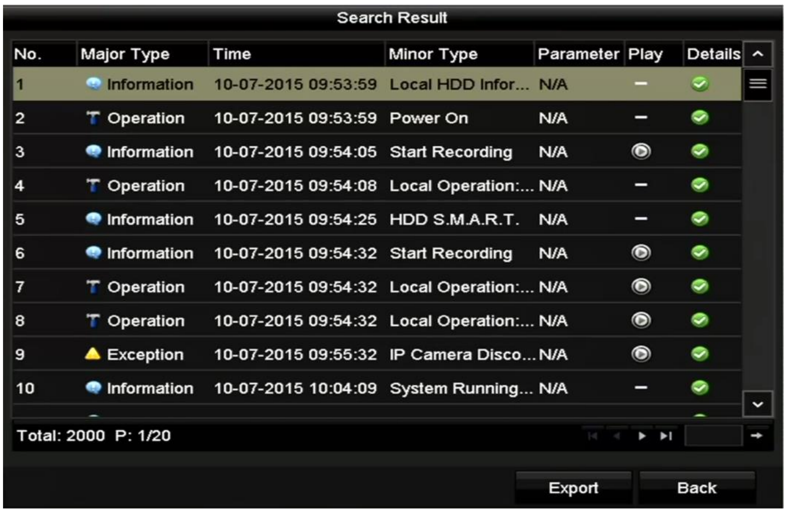
Step 2 Set the log search conditions to refine your search, including the Start Time, End Time, Major Type and Minor Type.

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

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

**NOTE**

Up to 2000 log files can be displayed each time.

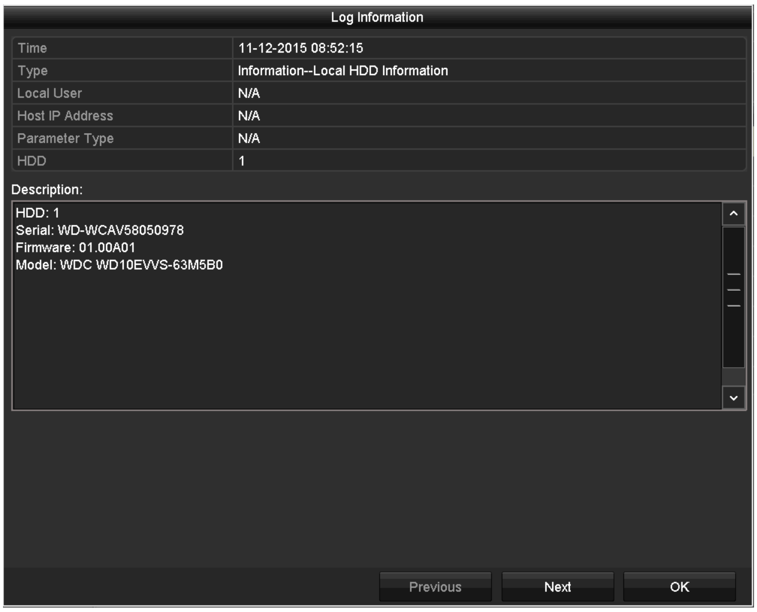


| No. | Major Type | Time | Minor Type | Parameter | Play | Details |
|---|---|---|---|---|---|---|
| 1 | Information | 10-07-2015 09:53:59 | Local HDD Infor... | N/A | – | ✓ |
| 2 | Operation | 10-07-2015 09:53:59 | Power On | N/A | – | ✓ |
| 3 | Information | 10-07-2015 09:54:05 | Start Recording |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

Total: 2000 P: 1/20

Figure 15-3 Log Search Results

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



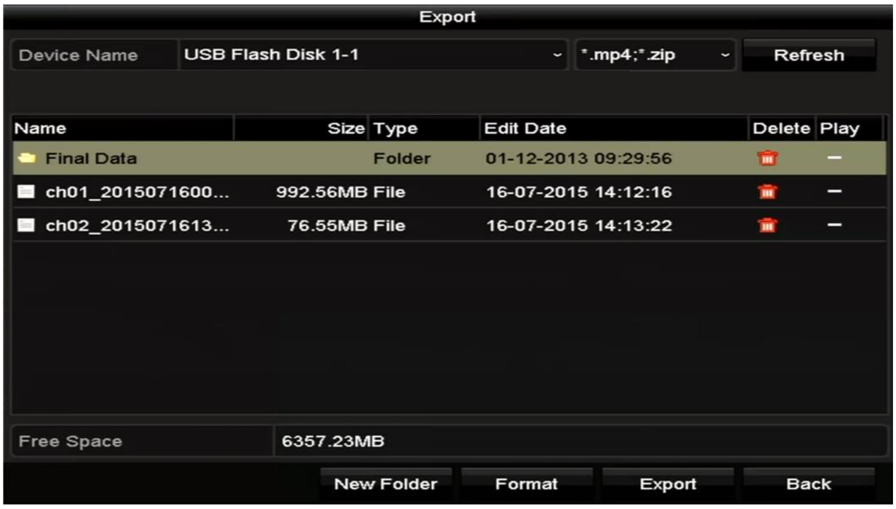
| | |
|---|---|
| Time | 11-12-2015 08:52:15 |
| Type | Information--Local HDD Information |
| Local User | N/A |
| Host IP Address | N/A |
| Parameter Type | N/A |
| HDD | 1 |

Description:

HDD: 1
Serial: WD-WCAV58050978
Firmware: 01.00A01
Model: WDC WD10EVVS-63M5B0

Figure 15-4 Log Information Interface

Step 6 If you want to export the log files, click the **Export** button to enter the Export menu, as shown in Figure 15-5.



Device Name: USB Flash Disk 1-1 | *.mp4;*.zip

| Name | Size | Type | Edit Date | Delete | Play |
|---|---|---|---|---|---|
| Final Data | | Folder | 01-12-2013 09:29:56 | 🗑 | — |
| ch01_2015071600... | 992.56MB | File | 16-07-2015 14:12:16 | 🗑 | — |
| ch02_2015071613... | 76.55MB | File | 16-07-2015 14:13:22 | 🗑 | — |

Free Space: 6357.23MB

Figure 15-5 Export Log Files

Step 7 Select the backup device from the drop-down list of **Device Name**.

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

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

**NOTE**

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

## 15.3 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.

Step 1 Enter the camera management interface.

Menu > Camera > Camera

Click the **IP Camera Import/Export** tab, the content of detected plugged external device appears.

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

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

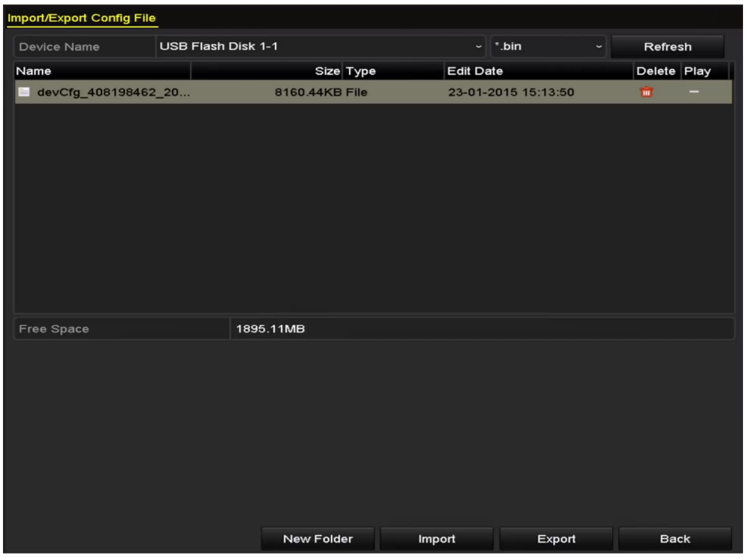
## 15.4 Importing/Exporting Configuration Files

***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.

Step 1 Enter the **Import/Export Configuration File** interface.

Menu > Maintenance > Import/Export



Device Name: USB Flash Disk 1-1

*.bin

| Name | Size | Type | Edit Date | Delete | Play |
|---|---|---|---|---|---|
| devCfg_408198462_20... | 8160.44KB | File | 23-01-2015 15:13:50 | 🗑 | — |

Free Space: 1895.11MB

Figure 15-6 Import/Export Configuration File

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

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

**NOTE**

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

# 15.5 Upgrading System

***Purpose***

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

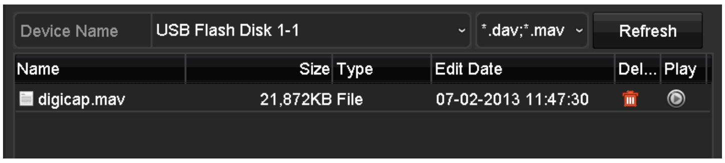
## 15.5.1 Upgrading by Local Backup Device

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

Step 2 Enter the **Upgrade** interface.

Menu > Maintenance > Upgrade

Step 3 Click the **Local Upgrade** tab to enter the **Local Upgrade** interface, as shown in Figure 15-7.



Device Name: USB Flash Disk 1-1

*.dav;*.mav

| Name | Size | Type | Edit Date | Del... | Play |
|---|---|---|---|---|---|
| digicap.mav | 21,872KB | File | 07-02-2013 11:47:30 | 🗑 | ● |

Figure 15-7 Local Upgrade Interface

Step 4 Select the update file from the backup device.

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

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

## 15.5.2 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.

Step 1 Enter the **Upgrade** interface.

Menu > Maintenance > Upgrade

Step 2 Click the **FTP** tab to enter the **Local Upgrade** interface, as shown in Figure 15-8.

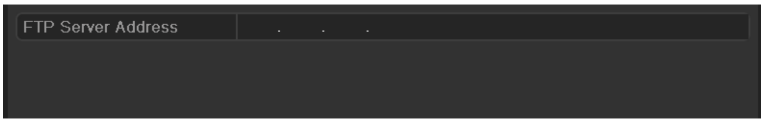


Figure 15-8 FTP Upgrade Interface

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

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

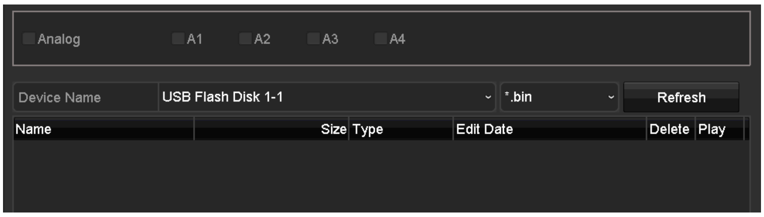
Step 5 After the upgrading is completed, reboot the DVR to activate the new firmware.

# 15.6 Upgrading Camera

***Purpose***

You can upgrade multiple connected analog cameras supporting HDTVI signal simultaneously with DVR.

Step 1 Enter the **Camera Upgrade** interface.



Device Name: USB Flash Disk 1-1

*.bin

Figure 15-9 Camera Upgrade

Step 2 Check the checkbox of the analog camera for upgrading.

**NOTE**

The analog camera must support HDTVI signal.

Step 3 Select the update file from the backup device.

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

# 15.7 Restoring Default Settings

Step 1 Enter the **Default** interface.

Menu > Maintenance > Default

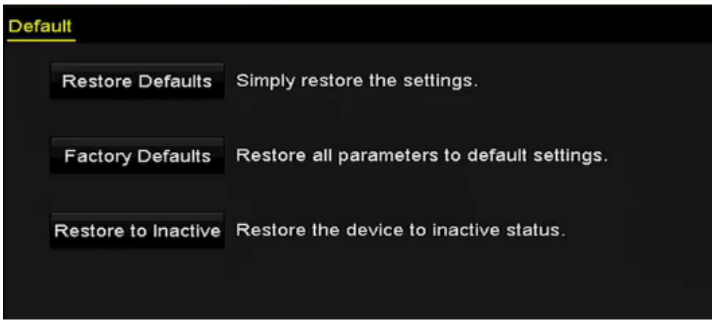

Default
Restore Defaults
Simply restore the settings.
Factory Defaults
Restore all parameters to default settings.
Restore to Inactive
Restore the device to inactive status.

Figure 15-10 Restore Defaults

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

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

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

**Restore to Inactive:** Restore the device to the inactive status.

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

**NOTE**

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

# Chapter 16 Others

## 16.1 Configuring General Settings

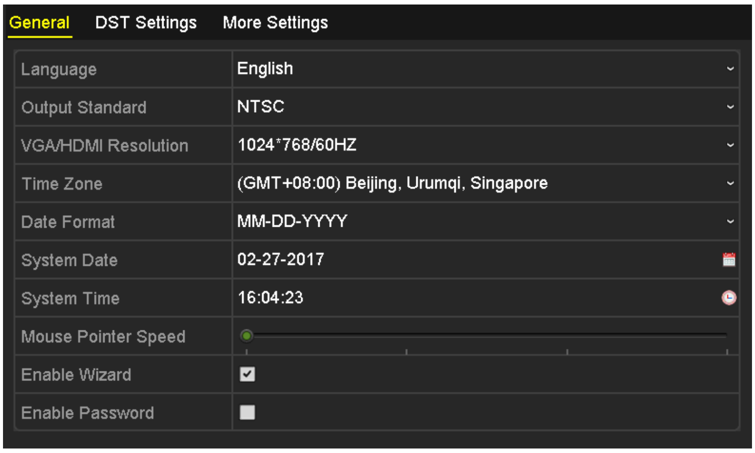
***Purpose***

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

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

Menu > Configuration > General

Step 2 Select the **General** tab.



| | |
|---|---|
| Language | English |
| Output Standard | NTSC |
| VGA/HDMI Resolution | 1024*768/60HZ |
| Time Zone | (GMT+08:00) Beijing, Urumqi, Singapore |
| Date Format | MM-DD-YYYY |
| System Date | 02-27-2017 |
| System Time | 16:04:23 |
| Mouse Pointer Speed | |
| Enable Wizard | ☑ |
| Enable Password | ☐ |

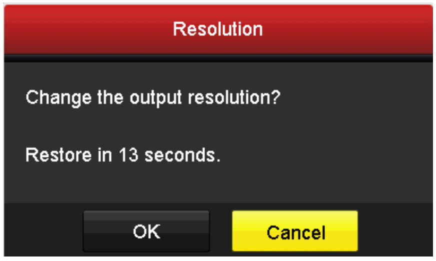
Figure 16-1 General Settings Interface

Step 3 Configure the following settings:

- **Language:** The default language used is *English*.
- **Output Standard:** Select the output standard to be PAL or NTSC.
- **VGA/HDMI Resolution:** Select the output resolution, which must be the same with the resolution of the VGA/HDMI display.

**NOTE**

- HDMI and VGA share simultaneous output. The LCD does not share simultaneous output with HDMI/VGA output. The LCD resolution stays as 1024 × 600.
- The default VGA/HDMI resolution is 1024 × 768/60Hz. If you connect the external display to the DVR via the HDMI or VGA interface, set the VGA/HDMI resolution between 1280 × 720/60Hz to 1920 × 1080/60Hz, and click **Apply**. The attention box will pop up as shown below. Click **OK** within 15 seconds to change the output resolution. Or click **Cancel** within 15 seconds to cancel the settings. Or wait until 15 seconds end and the resolution will restore to defaulted 1024×768/60Hz.



Change the output resolution?

Restore in 13 seconds.

Figure 16-2 Change the Output Resolution

- If you select the HDMI resolution to 2K (2560 × 1440)/60Hz or 4K (3840 × 2160)/30Hz, and click **Apply**, the VGA output will be disabled.
- **Time Zone:** Select the time zone.
- **Date Format:** Select the date format.
- **System Date:** Select the system date.
- **System Time:** Select the system time.
- **Mouse Pointer Speed:** Set the speed of mouse pointer; 4 levels are configurable.
- **Enable Wizard:** Enable/disable the Wizard when the device starts up.
- **Enable Password:** Enable/disable the use of the login password.

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

## 16.2 Configuring RS-232 Serial Port

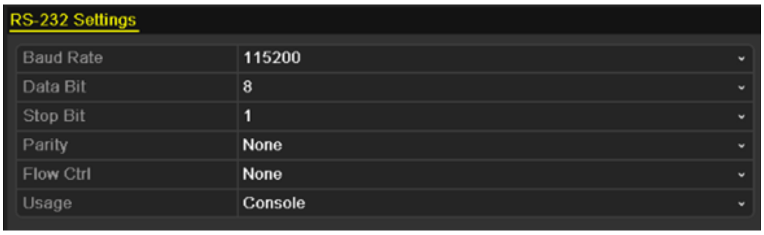
***Purpose***

The RS-232 port can be used in two ways:

- Parameters Configuration: Connect a PC to the DVR through the PC serial port. Device parameters can be configured by using software such as HyperTerminal. The serial port parameters must be the same as the NVR’s when connecting with the PC serial port.
- Transparent Channel: Connect a serial device directly to the DVR. The serial device will be controlled remotely by the PC through the network and the protocol of the serial device.

Step 1 Enter the RS-232 Settings interface.

Menu >Configuration> RS-232



| | |
|---|---|
| Baud Rate | 115200 |
| Data Bit | 8 |
| Stop Bit | 1 |
| Parity | None |
| Flow Ctrl | None |
| Usage | Console |

Figure 16-3 RS-232 Settings Interface

Step 2 Configure RS-232 parameters, including baud rate, data bit, stop bit, parity, flow control and usage.

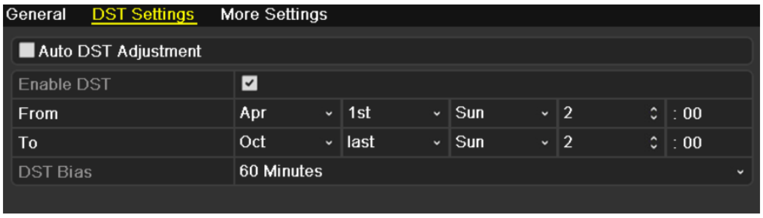
Step 3 Click **Apply** to save the settings.

# 16.3 Configuring DST Settings

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

Menu >Configuration>General

Step 2 Choose **DST Settings** tab.



☐ Auto DST Adjustment

| | | | | | |
|---|---|---|---|---|---|
| Enable DST | ☑ | | | | |
| From | Apr | 1st | Sun | 2 | : 00 |
| To | Oct | last | Sun | 2 | : 00 |
| DST Bias | 60 Minutes | | | | |

Figure 16-4 DST Settings Interface

You can check the checkbox before the **Auto DST Adjustment** item.

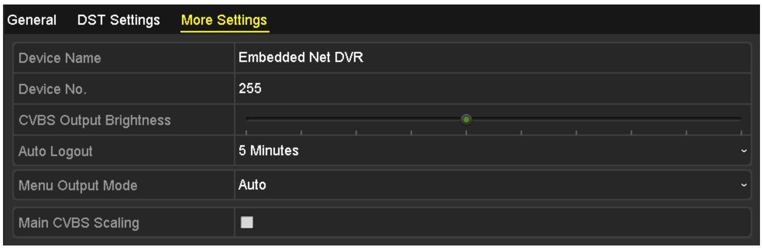
Or you can manually check the **Enable DST** checkbox, and then you choose the date of the DST period.

# 16.4 Configuring More Settings

Step 1 Enter the General Settings interface.

Menu > Configuration > General

Step 2 Click the **More Settings** tab to enter the **More Settings** interface as shown below.



Device Name: Embedded Net DVR
Device No.: 255
CVBS Output Brightness
Auto Logout: 5 Minutes
Menu Output Mode: Auto
Main CVBS Scaling: ☐

Figure 16-5 More Settings Interface

Step 3 Configure the following settings:

- **Device Name:** Edit the name of DVR.
- **Device No.:** Edit the serial number of DVR. The Device No. can be set in the range of 1 to 255, and the default No. is 255.
- **Auto Logout:** Set timeout time for menu inactivity. E.g., when the timeout time is set to *5 Minutes*, then the system will exit from the current operation menu to live view screen after 5 minutes of menu inactivity.
- **CVBS Output Brightness:** Adjust the video output brightness via the CVBS interface.
- **Menu Output Mode:** You can select the menu display on different video output. Auto, HDMI/VGA, and LCD are selectable.
- **Main CVBS Scaling:** You can check the checkbox to enable main CVBS scaling.

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

## 16.5 Managing User Accounts

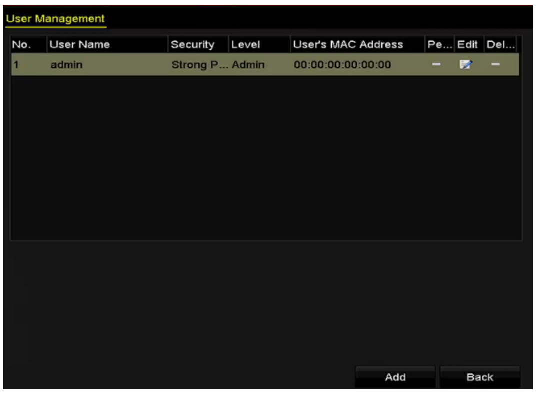
***Purpose***

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.

### 16.5.1 Adding a User

Step 1 Enter the **User Management** interface.

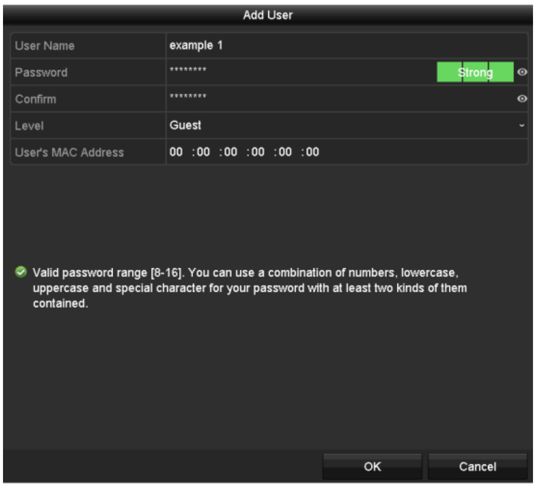
Menu >Configuration>User



| No. | User Name | Security | Level | User's MAC Address | Pe... | Edit | Del... |
|---|---|---|---|---|---|---|---|
| 1 | admin | Strong P... | Admin | 00:00:00:00:00:00 | – |  | – |

Figure 16-6 User Management Interface

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



User Name: example 1
Password: ********
Confirm: ********
Level: Guest
User's MAC Address: 00 :00 :00 :00 :00 :00

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

Figure 16-7 Add User Menu

Step 3 Enter the information for new user, including **User Name**, **Password**, **Confirm**, **Level** and **User's MAC Address**.

**Password**: Set the password for the user account.

---

**WARNING**

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

---

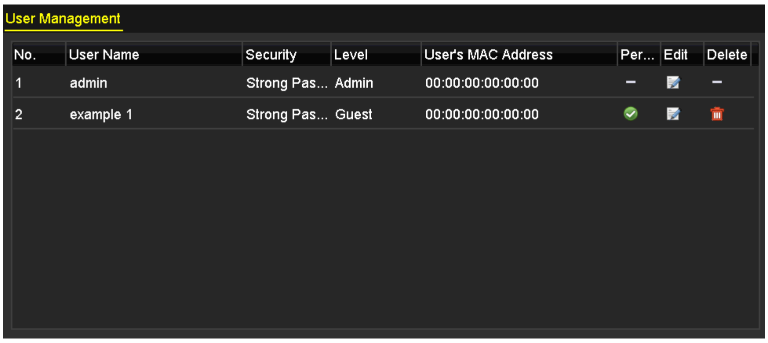
**Level:** Set the user level to Operator or Guest. Different user levels have different operating permission.

- **Operator:** The *Operator* user level has permission of Two-way Audio in Remote Configuration and all operating permission in Camera Configuration by default.

- **Guest:** The *Guest* user has no permission of Two-way Audio in Remote Configuration and only has the local/remote playback in the Camera Configuration by default.

  **User's MAC Address:** The MAC address of the remote PC which logs onto the DVR. If it is configured and enabled, it only allows the remote user with this MAC address to access the DVR.

Step 4 Click the **OK** button to save the settings and go back to the **User Management** interface. The added new user will be displayed on the list, as shown in Figure 16-8.

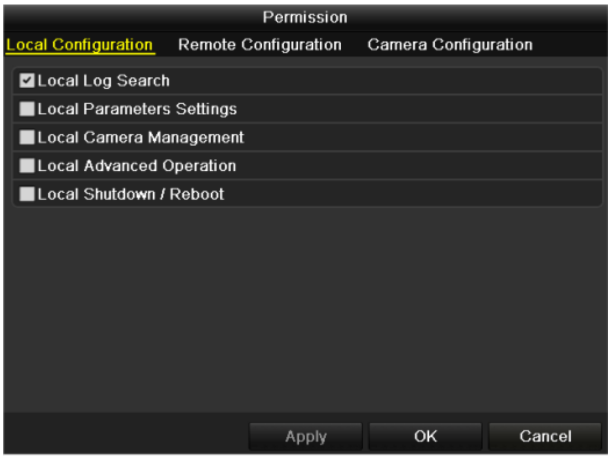


| No. | User Name | Security | Level | User's MAC Address | Per... | Edit | Delete |
|---|---|---|---|---|---|---|---|
| 1 | admin | Strong Pas... | Admin | 00:00:00:00:00:00 | – | ✎ | – |
| 2 | example 1 | Strong Pas... | Guest | 00:00:00:00:00:00 | ✓ | ✎ | 🗑 |

Figure 16-8 Added User Listed in User Management Interface

Step 5 You can assign permissions for the added user.

1) Select the user from the list and then click ✓ to enter the **Permission Settings** interface, as shown in Figure 16-9.



☑ Local Log Search
☐ Local Parameters Settings
☐ Local Camera Management
☐ Local Advanced Operation
☐ Local Shutdown / Reboot

Figure 16-9 User Permission Settings Interface

2) Set the operating permission of Local Configuration, Remote Configuration and Camera Configuration for the user.

**Local Configuration**

- Local Log Search: Searching and viewing logs and system information of device.
- Local Parameters Settings: Configuring parameters, restoring factory default parameters and importing/exporting configuration files.

- Local 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).

**NOTE**

Local Camera Management is provided for the IP cameras only.

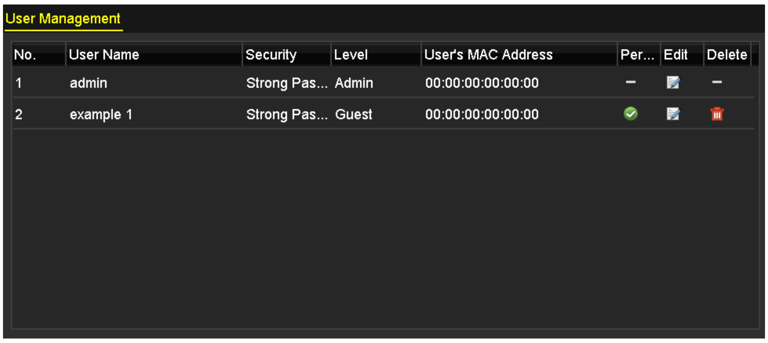
3) Click **OK** to save the settings and exit.

## 16.5.2 Deleting a User

Step 1 Enter the **User Management** interface.

Menu >Configuration>User

Step 2 Select the user to be deleted from the list, as shown in Figure 16-10.



User Management

| No. | User Name | Security | Level | User's MAC Address | Per... | Edit | Delete |
|---|---|---|---|---|---|---|---|
| 1 | admin | Strong Pas... | Admin | 00:00:00:00:00:00 | – | ✎ | – |
| 2 | example 1 | Strong Pas... | Guest | 00:00:00:00:00:00 | ✓ | ✎ | 🗑 |

Figure 16-10 User List

Step 3 Click 🗑 to delete the selected user account.

## 16.5.3 Editing a User

***Purpose***

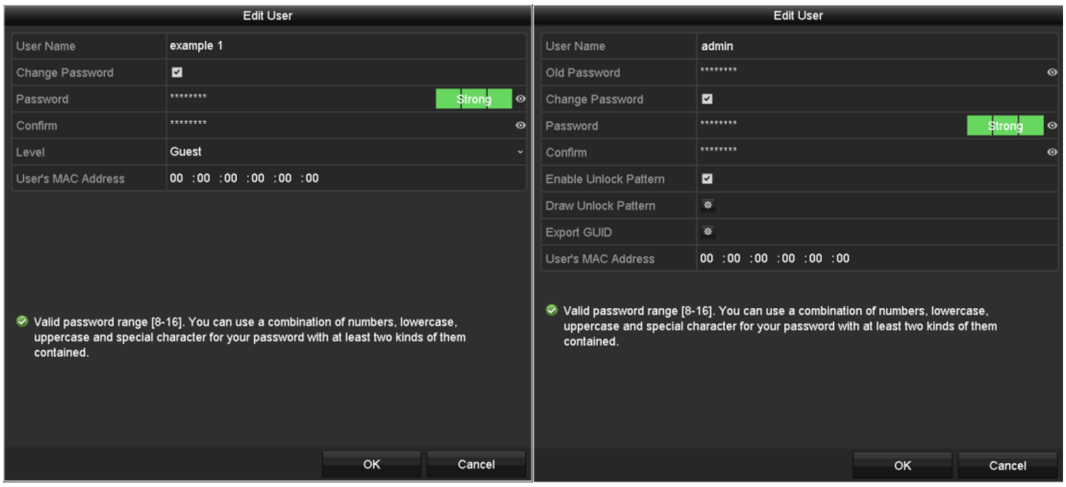
For the added user accounts, you can edit the parameters.

Step 1 Enter the **User Management** interface.

Menu >Configuration>User

Step 2 Select the user to be edited from the list, as shown in Figure 16-10.

Step 3 Click the ✎ icon to enter the **Edit User** interface, as shown in Figure 16-11.



Edit User

| | |
|---|---|
| User Name | example 1 |
| Change Password | ☑ |
| Password | ******** Strong |
| Confirm | ******** |
| Level | Guest |
| User's MAC Address | 00 :00 :00 :00 :00 :00 |

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

Edit User

| | |
|---|---|
| User Name | admin |
| Old Password | ******** |
| Change Password | ☑ |
| Password | ******** Strong |
| Confirm | ******** |
| Enable Unlock Pattern | ☑ |
| Draw Unlock Pattern | ⚙ |
| Export GUID | ⚙ |
| User's MAC Address | 00 :00 :00 :00 :00 :00 |

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

Figure 16-11 Edit User Interface

Step 4 Edit the corresponding parameters.

- **Operator and Guest**

  You can edit the user information, including user name, password, permission level and MAC address. Check the checkbox of **Change Password** if you want to change the password, and input the new password in the text field of **Password** and **Confirm**. A strong password is recommended.

- **Admin**

  You are only allowed to edit the password and MAC address. Check the checkbox of **Change Password** if you want to change the password, and input the correct old password, and the new password in the text field of **Password** and **Confirm**.

---

**WARNING**

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

---

**NOTE**

Hold the ◉ icon and you can see the clear text of the password. Release the mouse and the content of the password restores invisible.

Step 5 Edit the unlock pattern for the *admin* user account.

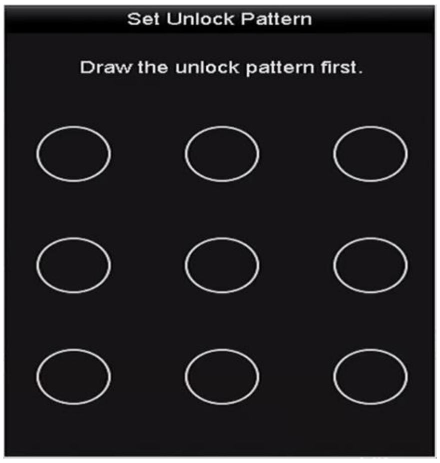
1) Check the checkbox of **Enable Unlock Pattern** to enable the use of unlock pattern when logging in to the device.

2) Use the mouse to draw a pattern among the 9 dots on the screen. Release the mouse when the pattern is done.

3) Confirm the pattern again with the mouse.

**NOTE**

Please refer to *Chapter 2.3.1* Configuring the Unlock Pattern for detailed instructions.

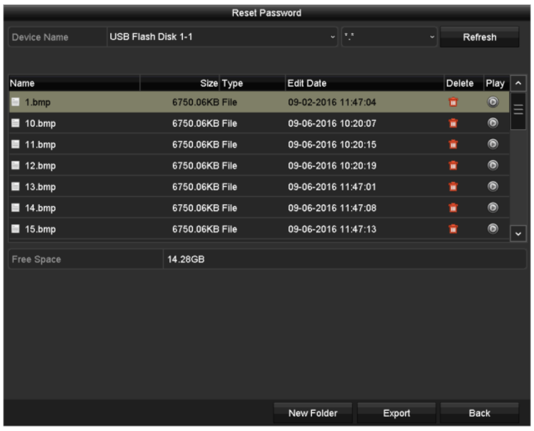


Draw the unlock pattern first.

Figure 16-12 Set Unlock Patter for Admin User

Step 6 (Optional) Click ⚙ icon after **Draw Unlock Pattern** to modify the pattern.

Step 7 (Optional) Click ⚙ icon after **Export GUID** to pop up the Reset Password interface. Click **Export** button to export GUID to the USB flash disk for retrieving the forgotten password. Then a GUID file will be saved in the USB flash disk.



Device Name: USB Flash Disk 1-1 | *.*

| Name | Size | Type | Edit Date | Delete | Play |
|---|---|---|---|---|---|
| 1.bmp | 6750.06KB | File | 09-02-2016 11:47:04 | 🗑 | ⊙ |
| 10.bmp | 6750.06KB | File | 09-06-2016 10:20:07 | 🗑 | ⊙ |
| 11.bmp | 6750.06KB | File | 09-06-2016 10:20:15 | 🗑 | ⊙ |
| 12.bmp | 6750.06KB | File | 09-06-2016 10:20:19 | 🗑 | ⊙ |
| 13.bmp | 6750.06KB | File | 09-06-2016 11:47:01 | 🗑 | ⊙ |
| 14.bmp | 6750.06KB | File | 09-06-2016 11:47:08 | 🗑 | ⊙ |
| 15.bmp | 6750.06KB | File | 09-06-2016 11:47:13 | 🗑 | ⊙ |

Free Space: 14.28GB

Figure 16-13 Export GUID

**NOTE**

You must input the correct old password of the *admin* before exporting GUID.

Step 8 Click the **OK** button to save the settings and exit from the menu.

Step 9 (Optional) For the **Operator** or **Guest** user account, you can also click the ✓ button on the **User Management** interface to edit the permission.

# Chapter 17 Appendix

## 17.1 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.

## 17.2 Troubleshooting

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

*Possible Reasons:*

— No VGA or HDMI connections.

— Connection cable is damaged.

— Input mode of the monitor is incorrect.

Step 1 Verify the device is connected with the monitor via HDMI or VGA cable.

If not, please connect the device with the monitor and reboot.

Step 2 Verify the connection cable is good.

If there is still no image display on the monitor after rebooting, please check if the connection cable is good, and change a cable to connect again.

Step 3 Verify Input mode of the monitor is correct.

Please check the input mode of the monitor matches with the output mode of the device (e.g. if the output mode of DVR is HDMI output, then the input mode of monitor must be the HDMI input). And if not, please modify the input mode of monitor.

Step 4 Check if the fault is solved by the step 1 to step 3.

If it is solved, finish the process.

If not, please contact the engineer from our company to do the further process.

- **There is a beep sound after a new bought device starts up.**

*Possible Reasons:*

— No HDD is installed in the device.

— The installed HDD has not been initialized.

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

Step 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”.

Step 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.

Step 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.

Step 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:***

  — The frame rate has not reached the real-time frame rate.

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

Select “Menu > Record > Parameters > Record”, and set the resolution of Main Stream (Event) the same as the one of Main Stream (Continuous).

Step 2 Verify the frame rate is real-time frame rate.

Select “Menu > Record > Parameters > Record”, and set the Frame Rate to Full Frame.

Step 3 Check if the fault is solved by the above steps.

If it is solved, finish the process.

If not, please contact the engineer from our company to do the further process.

- **When using the device to get the live view audio, there is no sound or there is too much noise, or the volume is too low.**

  ***Possible Reasons:***

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

  — The stream type is not set as “Video & Audio”.

Step 1 Verify the cable between the pickup and camera is connected well; impedance matches and compatible.

Step 2 Verify the setting parameters are correct.

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

Step 3 Check if the fault is solved by the above steps.

If it is solved, finish the process.

If not, please contact the engineer from our company to do the further process.

- **The image gets stuck when DVR is playing back by single or multi-channel cameras.**

  ***Possible Reasons:***

  — The frame rate is not the real-time frame rate.

  — 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.

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

Select “Menu > Record > Parameters > Record”, and set the Frame Rate to “Full Frame”.

Step 2 Verify the hardware can afford the playback.

Reduce the channel number of playback.

Select “Menu > Record > Encoding > Record”, and set the resolution and bitrate to a lower level.

Step 3 Reduce the number of local playback channel.

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

Step 4 Check if the fault is solved by the above steps.

If it is solved, finish the process.

If not, please contact the engineer from our company to do the further process.

- **No record file found in the device local HDD, and the prompt “No record file found” pops up when you search the record files.**

  ***Possible Reasons:***

  — The time setting of system is incorrect.

  — The search condition is incorrect.

  — The HDD is error or not detected.

Step 1 Verify the system time setting is correct.

Select “Menu > Configuration > General > General”, and verify the “System Time” is correct.

Step 2 Verify the search condition is correct.

Select “Playback”, and verify the channel and time are correct.

Step 3 Verify the HDD status is normal.

Select “Menu > HDD > General” to view the HDD status, and verify the HDD is detected and can be read and written normally.

Step 4 Check if the fault is solved by the above steps.

If it is solved, finish the process.

If not, please contact the engineer from our company to do the further process.

## 17.3 Summary of Chnages

### 17.3.1 Version 3.4.83

**Upgraded:**

- iDS-8104AHQXLI-E4 supports up to 4-ch smart ATM configuration of panel mode, environment mode, human face mode, and safety cabin mode together; up to 2-ch human face mode, up to 2-ch safety cabin, or up to 1-ch human face mode and 1-ch safety cabin mode together. Panel mode and environment mode can be enabled for all the cameras respectively.
- Advanced parameters upgrade of smart ATM protection system. Refer to *Quick Start Guide of Smart ATM Protection System* for details.

### 17.3.2 Version 3.4.82

**Added:**

New model: iDS-8104AHQXLI-E4

New functions for iDS-8104AHQXLI-E4：

- Smart ATM record and capture.
- Smart ATM alarm.
- Playback by smart ATM alarm.
- Four smart ATM modes are supported: panel mode, environment mode, human face mode, and safety cabin mode. You can set rules and alarm response actions once the configured rule is triggered.

### 17.3.3 Version 3.4.8

**Added:**

New functions for DS-8104AHQ(L)I-E4 series ATM DVR:

- Connectable to HDTVI, IP and analog cameras.
- Connectable to third-party IP cameras that adopt ONVIF or custom protocol.
- The main stream supports up to 3 MP resolution.
- Supports enabling H.264+ to ensure high video quality with lowered bit rate.
- One-key enable or disable H.264+.
- Night to day sensitivity, day to night sensitivity, and IR light brightness configurable for the connected analog cameras supporting these parameters.
- Simultaneous output of VGA and HDMI with up to 1080p resolution of VGA output and up to 4K (3840 × 2160) resolution of HDMI output.
- Supports RAID 0, RAID 1, RAID 5, and RAID 10.
- Unlock pattern for device login for the *admin*.

- Clear-text password available.
- GUID file can be exported for password resetting.
- Multiple connected analog cameras supporting HDTVI signal can be upgraded simultaneously via DVR.
- Configurable output bandwidth limit.
- If DHCP is enabled, you can enable DNS DHCP or disable it and configure the Preferred DNS Server and Alternate DNS Server.

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See Far, Go Further