User Manual

BioSense Series Network Video Recorder

Date: April 2023

Doc Version: 1.0

English

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For further details, please visit our Company's website www.zkteco.com.

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If there is any issue related to the product, please contact us.

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About the Company

ZKTeco is one of the world's largest manufacturers of RFID and Biometric (Fingerprint, Facial, and Finger-vein) readers. Product offerings include Access Control readers and panels, Near & Far-range Facial Recognition Cameras, Elevator/floor access controllers, Turnstiles, License Plate Recognition (LPR) gate controllers and Consumer products including battery-operated fingerprint and face-reader Door Locks. Our security solutions are multi-lingual and localized in over 18 different languages. At the ZKTeco state-of-the-art 700,000 square foot ISO9001-certified manufacturing facility, we control manufacturing, product design, component assembly, and logistics/shipping, all under one roof.

The founders of ZKTeco have been determined for independent research and development of biometric verification procedures and the productization of biometric verification SDK, which was initially widely applied in PC security and identity authentication fields. With the continuous enhancement of the development and plenty of market applications, the team has gradually constructed an identity authentication ecosystem and smart security ecosystem, which are based on biometric verification techniques. With years of experience in the industrialization of biometric verifications, ZKTeco was officially established in 2007 and now has been one of the globally leading enterprises in the biometric verification industry owning various patents and being selected as the National High-tech Enterprise for 6 consecutive years. Its products are protected by intellectual property rights.

About the Manual

This manual introduces the product of **BioSense Series Network Video Recorder**.

All figures displayed are for illustration purposes only. Figures in this manual may not be exactly consistent with the actual products.

TABLE OF CONTENTS

1. Installation

1.1. Unpacking Inspection

During installation of the NVR:

- Ensure the device is installed in a well-ventilated, dust-free environment.
- The device is designed for indoor use only.
- Keep all liquids away from the device.
- Ensure environmental conditions meet factory specifications.
- Power down the device before connecting and disconnecting accessories and peripherals.

1.2. Hard Disk Installation

Before you start:

Disconnect the power from the NVR before installing a hard disk drive (HDD). A factory recommended HDD should be used for this installation.

Tools Required: Screwdriver.

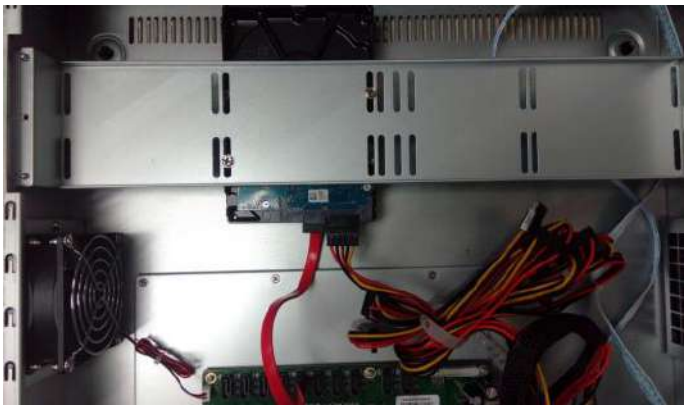
1.2.1. NVR with 4 or 8 HDD

Steps:

1. Remove the cover from the NVR by unfastening the screws on the rear panel.

2. Insert the hard disk along the slot and fasten it.

3. Connect the power & data cable to the NVR and HDD.



4. Close the cover and fasten it with the screws.

1.2.2. NVR with 1 or 2 HDD

Steps:

1. Remove the cover from the NVR by unfastening the screws on the side and rear panel.

2. Fasten the HDD with the screws on the bottom.

3. Connect the power & data cable to the NVR and HDD.

4. Close the cover and fasten it with the screws.

2. Getting Started

2.1. Start up and Shutdown

2.1.1. Start up

Plug in the power cord, press the power switch, the power indicator light should turn bright. The device will begin to start. After the device starts up, the video output defaults to multiple screen output mode.

2.1.2. Shut down

Option 1: Press the power key on front panel to shutdown the device (should be supported by the device).

Option 2: Click **Start > Shutdown > Confirm** (**Prompt:** It is recommended to use this way, in order to avoid damage to the device when suddenly powered off.)

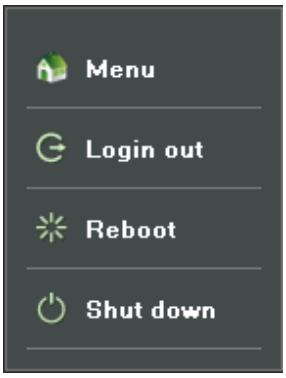


Figure 2.1 Shutdown Menu

2.2. Login

If NVR first start-up or has logged out, you must login the device before operating the menu and other functions, as shown in Figure 2.2.

Figure 2.2 Login Interface

Steps:

1. Click **Start** button on the top of screen.
2. Click **Login** in the drop-down menu.
3. Input the **Password** in the pop-up interface (Default password: 123456).
4. Click **Login** to log in.

2.3. Using Guide

The Guide starts once login, as shown in Figure 2.3.

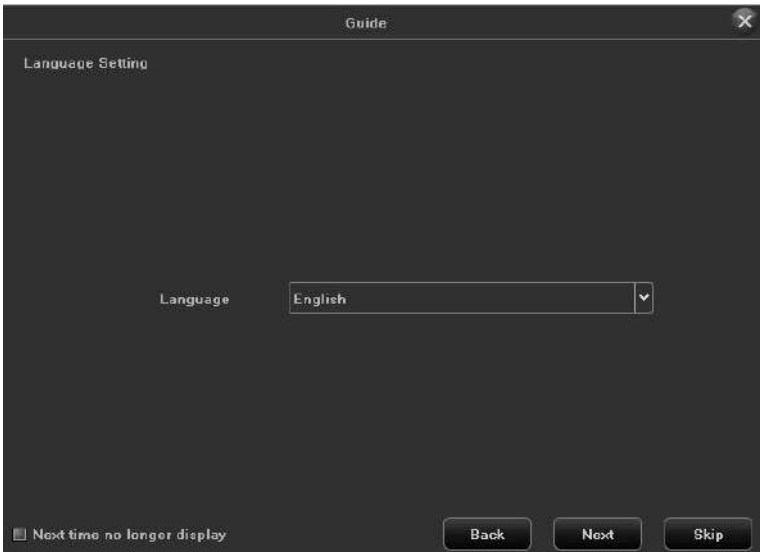


Figure 2.3 Language Setting

Operating the Guide:

1. The Guide can walk you through some basic settings of the NVR. If you don't want to use the Guide at that moment, click the button. You can also choose to use the Guide next time by leaving the "Next time no longer display" check-box unchecked.
2. Click **Next** button to enter the Display Setting window, as shown in Figure 2.4.

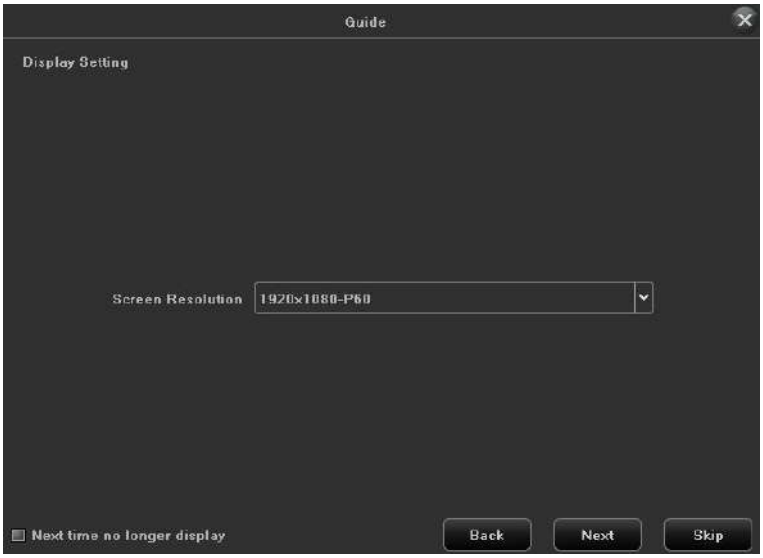


Figure 2.4 Resolution Setting

3. After the display setting, click **Next** button to enter the Network Setting window, as shown in Figure 2.5.

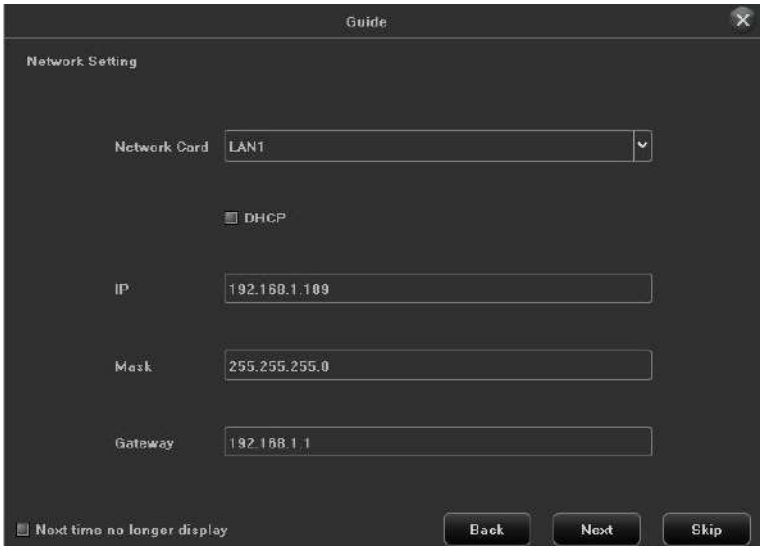


Figure 2.5 Network Setting

4. After the network setting, click **Next** button to enter the QR Code interface, as shown in Figure 2.6.

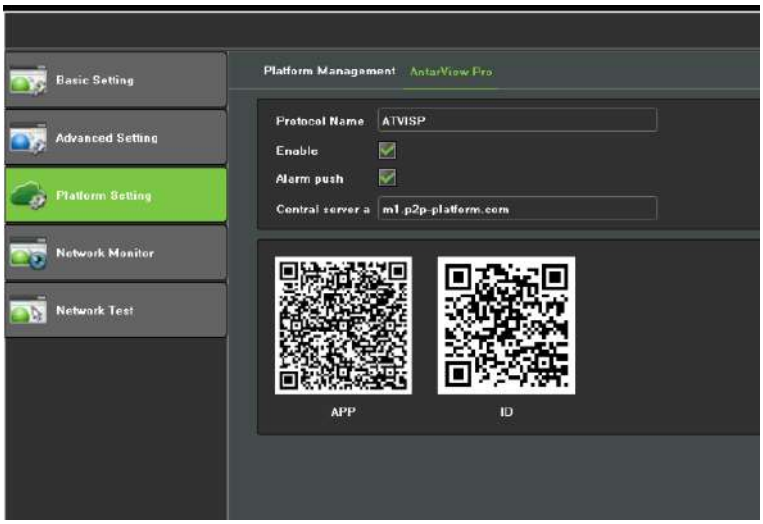


Figure 2.6 QR Code

5. Click **Finish** to complete the Guide setup.

2.4. Menu operation

After the user login successfully, according to the interface of toolbar to perform associated settings, as shown in Figure 2.7.

Figure 2.7 Menu Operation

2.4.1. Begin setup

Click the  icon, it will pop-up the interface as show in Figure 2.8.

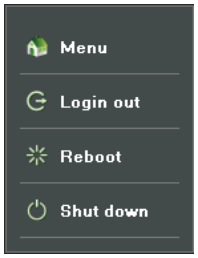


Figure 2.8 Begin Setup

1. **Logout:** Click **Logout** button, can exit the current user.
2. **Reboot:** Click **Reboot** button and confirm, the device will automatically reboot.
3. **Shutdown:** Click **Shut down** button and confirm, the device will automatically shutdown.

3. Preview

3.1. Introduction of Preview

Preview shows you the video image getting from each camera in real time. The NVR will automatically enter live view mode when powered on, as shown in Figure 3.1.

Figure 3.1 Preview Interface

Channel Preview Icons:

In the Preview mode, there are hide icons on the screen of each channel, which shows when you move the mouse to the bottom of channel.

Icons	Description	Icons	Description
	Open/Close PTZ		Show/Hide Smart detection
	Snapshot		Open/Close Voice Intercom
	Open/Close Channel Audio		Manual Recording On/Off
	Instant Playback		
	Media parameters		

Table 3.1 Preview Icon Description

Media Parameters: May revise the brightness, contrast, saturation and hue of the channel that the current mouse selected, one click to restore the default value when necessary, as shown in Figure 3.2.

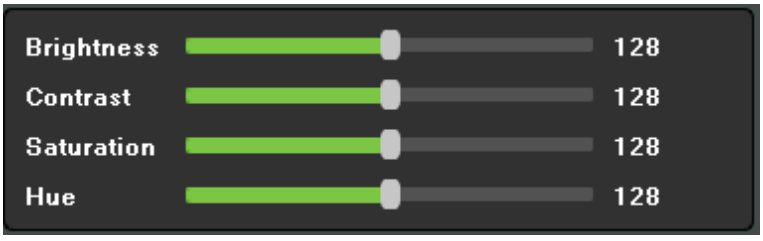


Figure 3.2 Media Parameters

PTZ/Preset/Cruise/Pattern:

Please confirm whether the related parameters setting is correct before control the PTZ. After setting up parameters, select the channel to be controlled in the preview interface, then control the direction of the lens, focal length, focus, aperture amplification and narrow in PTZ operation interface, and adjust the speed of PTZ, as shown in Figure 3.3. See below the detailed operation of PTZ control part.

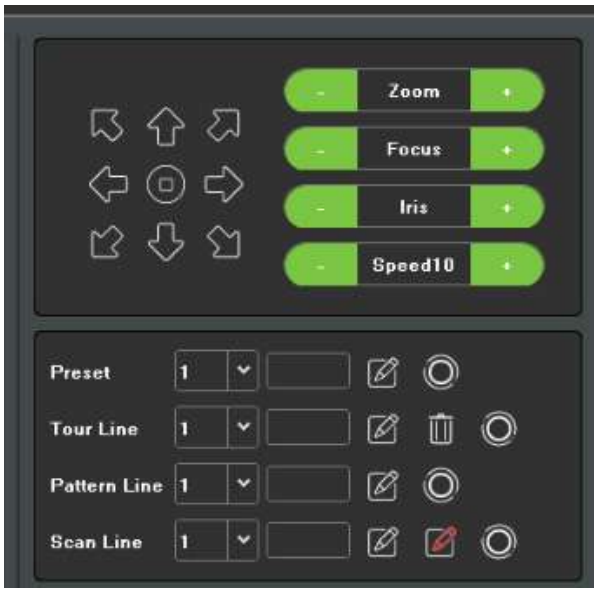


Figure 3.3 PTZ Control

3.2. Operations in Preview Mode

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

Real-time Alarm Information:

On the bottom right corner, there is a real-time alarm information, as shown in Figure 3.4.

Figure 3.4 Alarming

When you click , it will pop-up the alarm information, as shown in Figure 3.5.

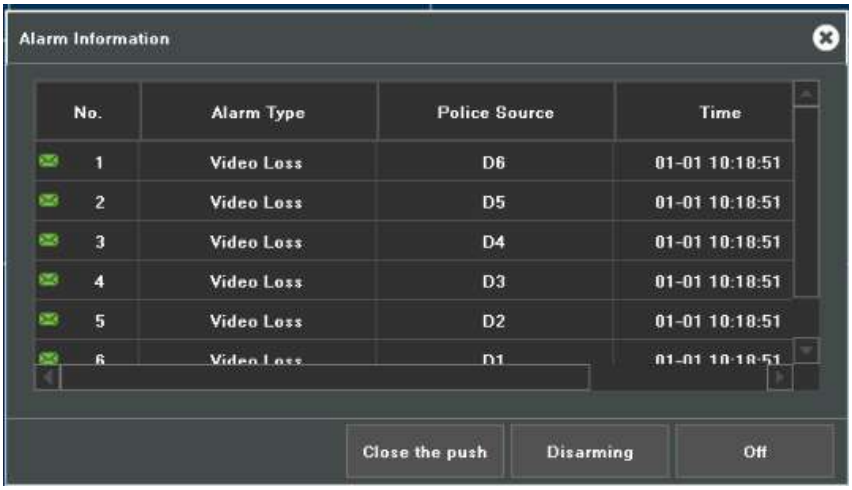


Figure 3.5 Alarm Information

Other Functions:

Icons	Functions	Icons	Description
1	1 Split Screen	4	4 Split Screen
6	6 Split Screen	8	8 Split Screen
9	9 Split Screen	16	16 Split Screen
25	25 Split Screen	36	36 Split Screen
64	64 Split Screen		Sound Adjust
	Cruise on Setting		Linkage Preview
	Page Up		Page Down

Table 3.2 Other Function Description

3.3. Using the Mouse in Preview

Figure 3.6 Preview

Name	Description
PTZ Control	Open the PTZ interface
4 Split Screen	Select and enter 4 Split Screen mode.
6 Split Screen	Select and enter 6 Split Screen mode.
8 Split Screen	Select and enter 8 Split Screen mode.
9 Split Screen	Select and enter 9 Split Screen mode.
16 Split Screen	Select and enter 16 Split Screen mode.

25 Split Screen	Select and enter 25 Split Screen mode.
36 Split Screen	Select and enter 36 Split Screen mode.
64 Split Screen	Select and enter 64 Split Screen mode.
Previous Screen	Switch to the previous screen.
Next Screen	Switch to the next screen.
Full Screen	Quick enter full screen mode.

Table 3.3 Right Click Function Description

4. Playback

4.1. Instant Playback

Purpose:

Playback the recorded video files of a specific channel in the live view mode.

Steps:

Choose a channel in live view mode and click the button in the bottom of the channel, as shown in Figure 4.1.

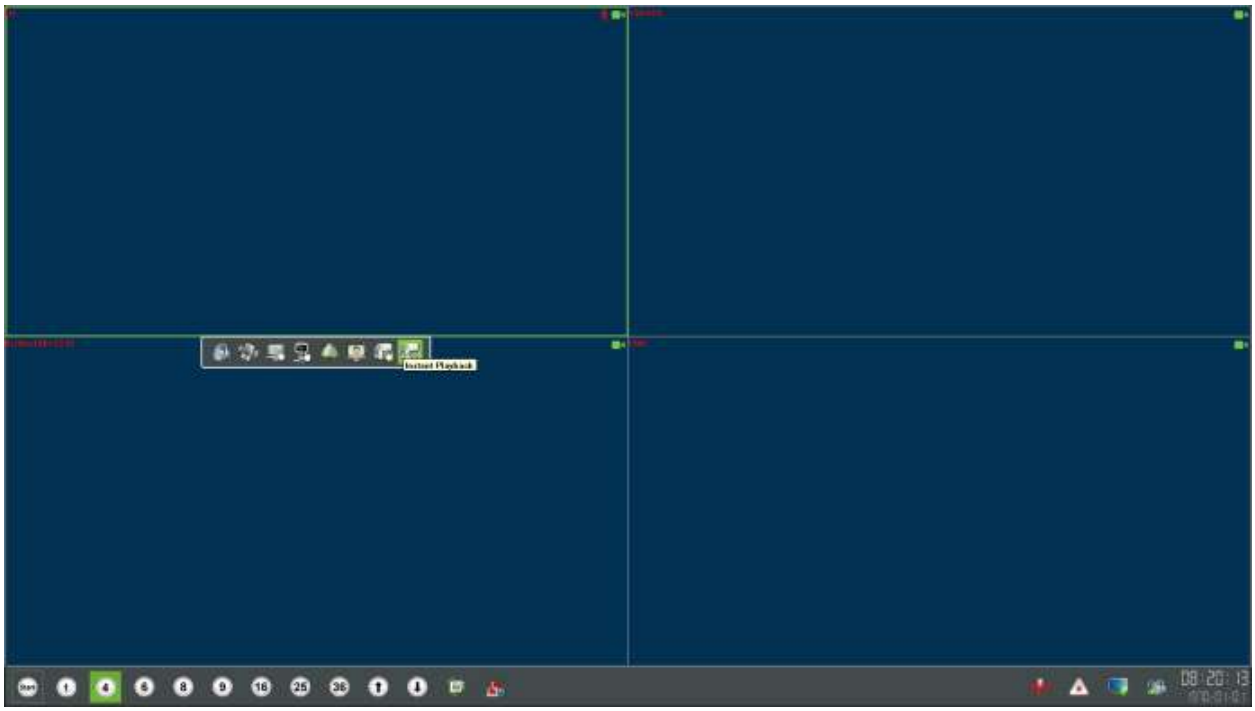


Figure 4.1 Instant Playback

4.2. Playback by Normal Search

4.2.1. Recording Playback

Click  icon to enter the Playback interface, as shown in Figure 4.2.

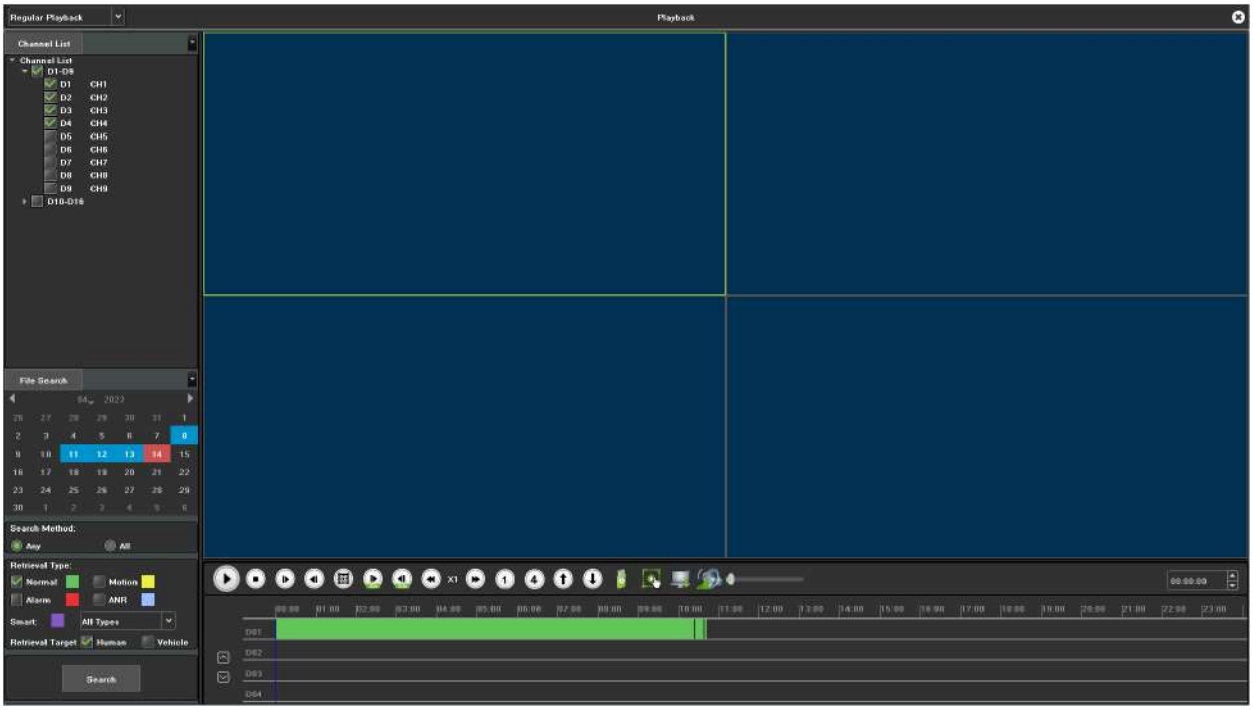


Figure 4.2 Normal Playback Interface

❖ Playback by Time

Purpose:

Playback video files recorded in specified time duration. Multi-channel simultaneous playback is supported.

Steps:

1. Enter **playback** interface.
2. Check the check-box of channel(s) in the channel list and then double-click to select a date on the calendar.
3. Click the  button to start playback, as shown in Figure 4.3.

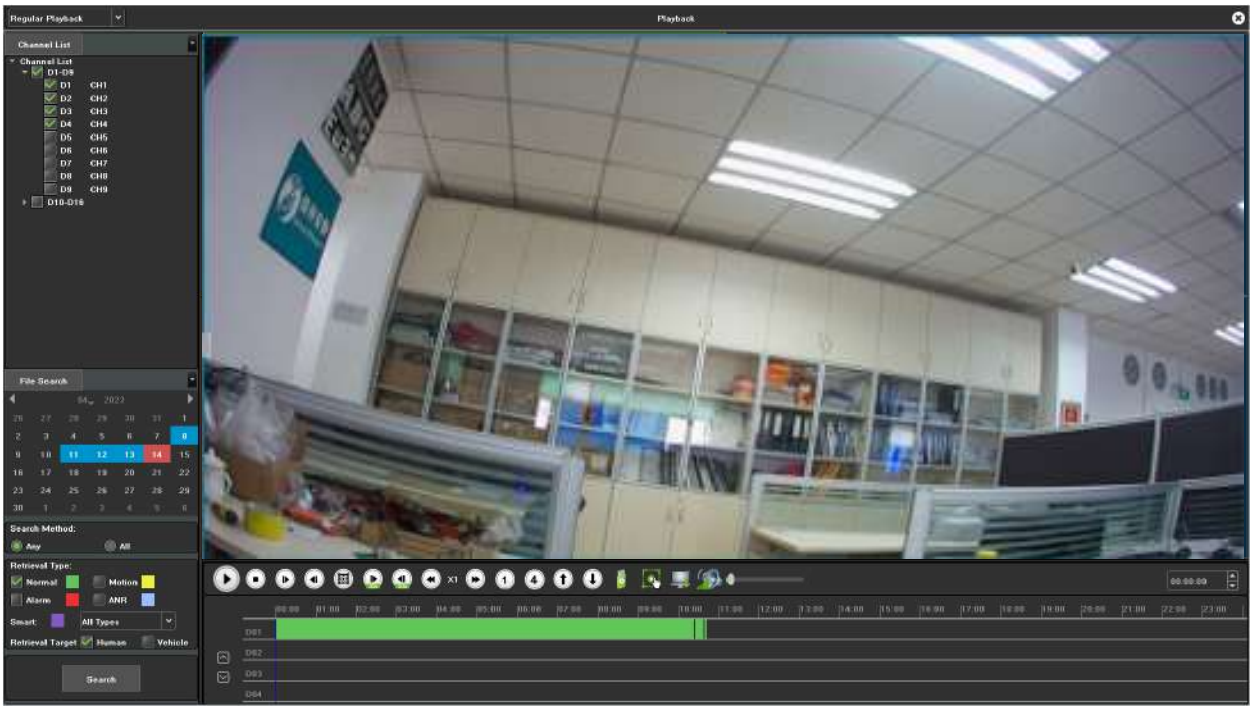


Figure 4.3 Video Playback

Note:

If there retrieval target are record files for that camera in that day, in the calendar, the icon for that day is displayed as 6 7 8. Otherwise it is displayed as 6 7 8.

❖ Playback Interface

You can use the toolbar in the bottom part of Playback interface to control playing progress, as shown in Figure 4.4.

Figure 4.4 Playback Toolbar

Button	Operation	Button	Operation
	Play/Pause		Stop
	Playback Forward		Playback Backward
	Single Frame		30 Seconds Forward/Backward
	Speed Down		Speed Up
	1 Split Screen		4 Split Screen
	6 Split Screen		8 Split Screen
	9 Split Screen		16 Split Screen
	Page Up/Page Down		Backup
	Capture		Hide/Show the Progress Bar

	Sound Adjust		

Table 4.1 Detailed Explanation of Playback Toolbar

4.2.2. Playback by Event Search

Purpose:

Playback record files on one or several channels searched out by event type (e.g. alarm detection, motion).

Steps:

1. Enter the Playback interface.
2. Select the Retrieving type: There are many types you can select, such as Count Alarm, Motion, Across the line, Regional, Alarm detection and object left/Loss etc. .
3. Select the human and Vehicle.
4. Click the **Search** button to get the search result information.
5. Click button to playback the file.

4.2.3. Playback Pictures

Purpose:

The captured pictures stored in the HDDs of the device can be searched and viewed, as shown in Figure 4.5.

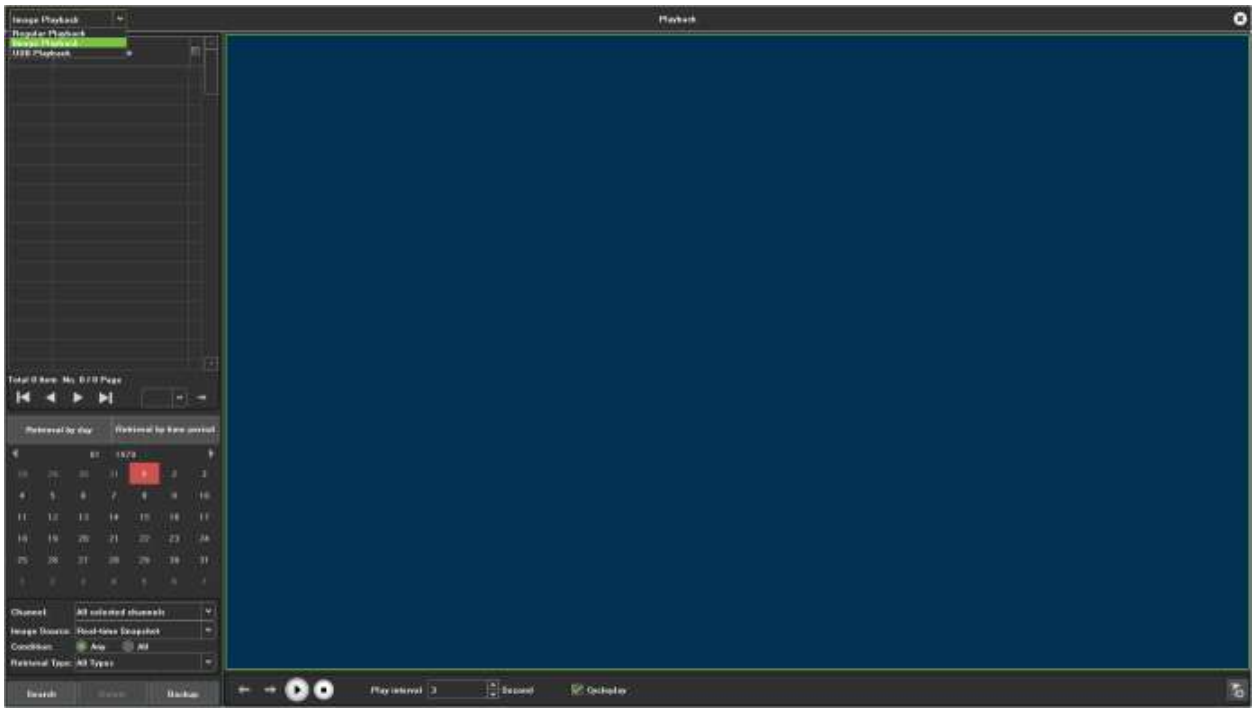


Figure 4.5 Picture Playback

Steps:

1. Enter playback interface.
2. Select playback modes: Image playback.
3. Select Search by day or Search by time.

4. Select Picture source: IPC Snapshot (preview snapshot) or Playback Snapshot.
5. Choose Condition: Meet random or Meet all.
6. Select Retrieving type.
7. Select Search Channel.
8. Click **Search** button to search for the capture picture.
9. Check the check-box after the picture listed, then click to view the picture.
10. The toolbar in the bottom of playback interface can be used to control playing process.

Button	Function	Button	Function
	Play/Stop		Stop
	Next picture		Last picture

Table 4.2 Detailed Explanation of Playback Toolbar

Note: Click the check-box of the picture listed, then click Backup button, can enter the Snapshot back-up interface, as shown in Figure 4.6.

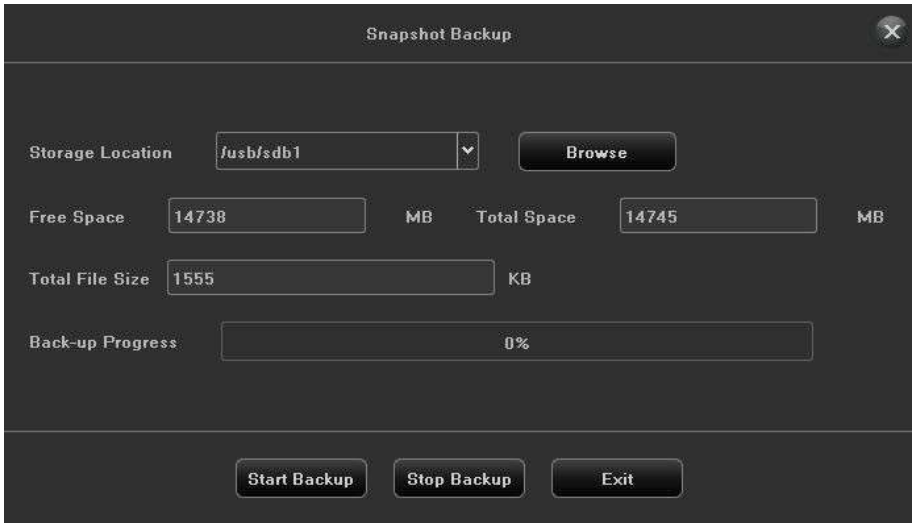


Figure 4.6 Snapshot Backup

4.2.4. Playback External File

Purpose:

Perform the following steps to look up and playback files in the external devices, as shown in Figure 4.7.

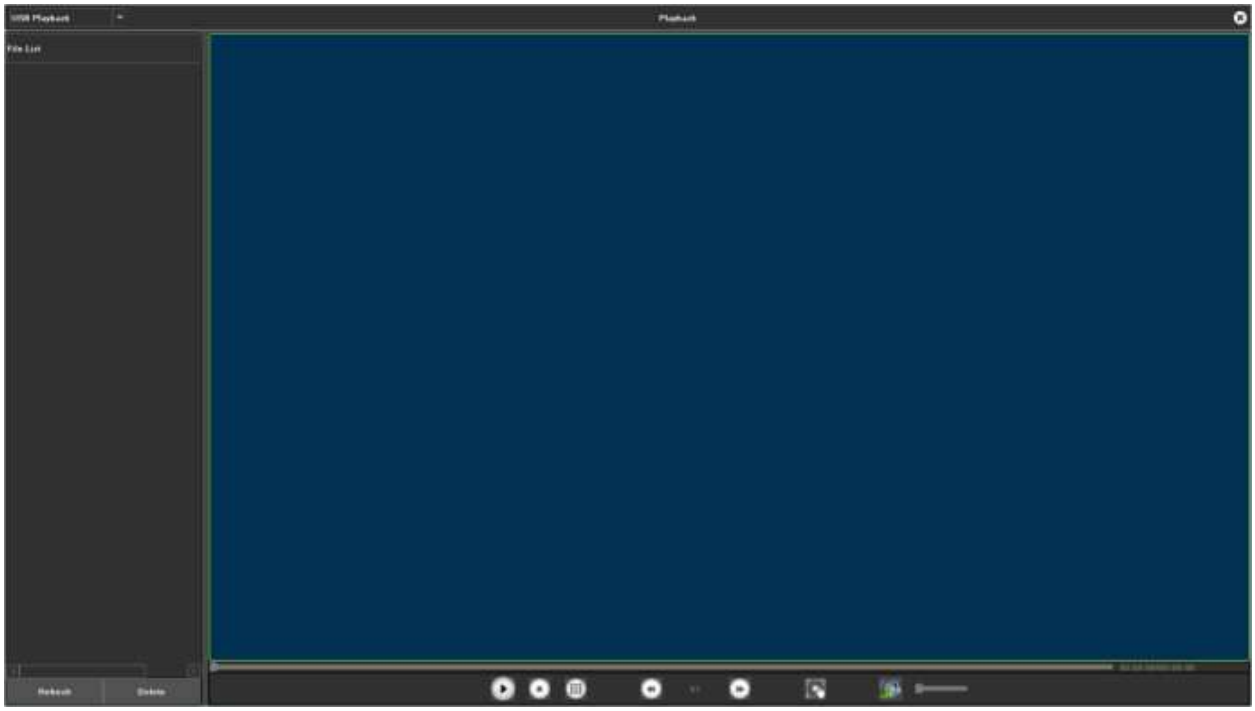


Figure 4.7 USB Playback Interface

Steps:

1. Enter the playback interface.
2. Select playback modes: USB playback.
3. Click the **Refresh** button to refresh the file listed.
4. Select and click the button to playback it.

5. PTZ Controls

5.1. Configuring PTZ Settings

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

Steps:

1. Enter the PTZ Setting interface, as shown in Figure 5.1, click **Channel Manage** > **Regular config** > **PTZ Setting**.

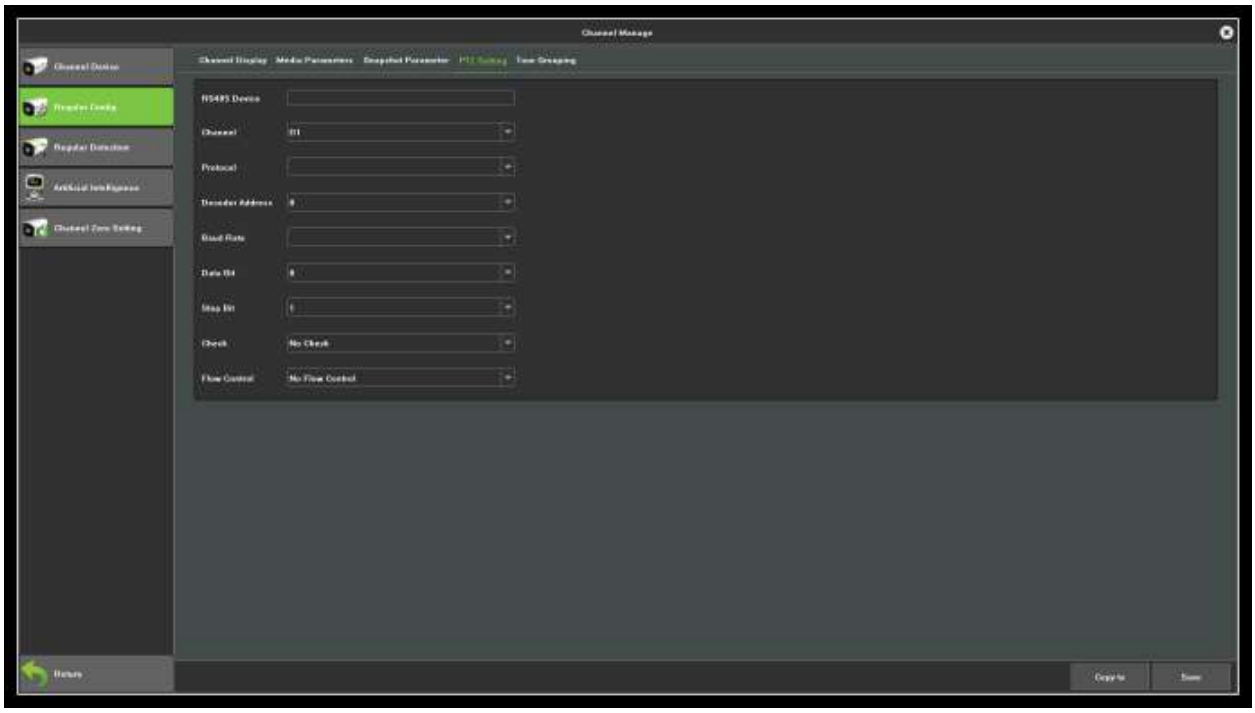


Figure 5.1 PTZ General Setting Interface

2. Set the parameter of PTZ:
   Channel: Choose the channel.
   Protocol: Choose the protocol for your PTZ.
   Decoder Address: Choose the decoder address.
   Baud Rate: Select the baud rate.
   Data Bit: Select the data bit.
   Stop Bit: Select the stop bit.
   Parity: Select the verify, Non-Parity by default.
   Stream Control: Select the stream control, No Flow Control by default.
3. Click **Save** button to save the settings.

5.2. Setting PTZ Preset, Cruise, Pattern & Linear Scan

Before you start:

Please make sure that the preset, cruise and pattern should be supported by PTZ protocols, as shown in Figure 5.2.

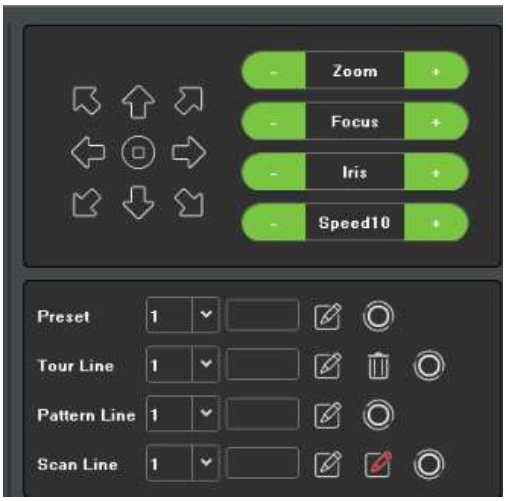


Figure 5.2 PTZ Setting Interface

5.2.1. Preset Setting

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

Steps:

1. 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.
2. Setting the name of preset, click button to save the preset. Repeat the above steps to save more presets.

5.2.2. Cruise Setting

Purpose:

Cruise can be set to move the PTZ to different locations and have it stay there for a set duration before moving on to the next location. The locations are corresponding to the presets. The presets can be set following the steps above in **Preset Setting**.

Steps:

1. Select cruise No. in the drop-down list of cruise.
2. Click the button to add key points for cruise, as shown in Figure 5.3.

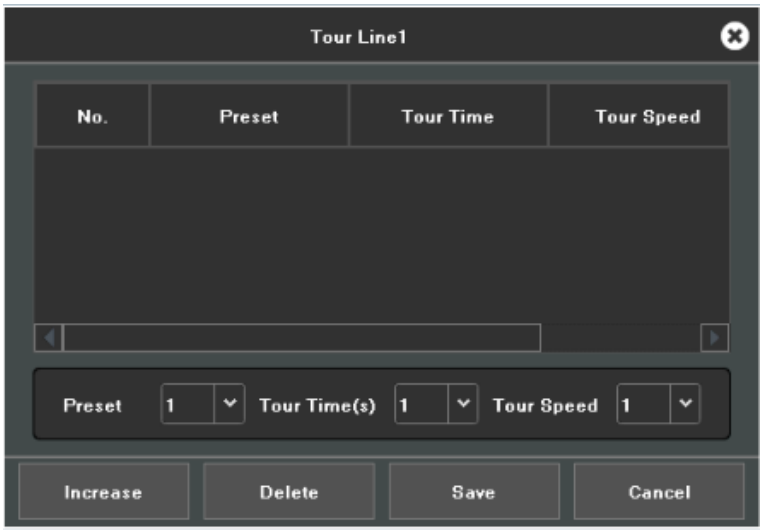


Figure5.3 Tour Line

3. Configure key point parameters, such as the key point No., duration of staying for one key point and speed of cruise. 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 cruise. The **Cruise time** refers to the time span to stay at the corresponding key point. The **Cruise Speed** defines the speed at which the PTZ will move from one key point to the next.
4. Click the **Add** button to add the next key point to the patrol.
5. After finish setting, click **Exit** button.

5.2.3. Pattern Setting

Purpose:

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

Steps:

1. Choose pattern number in the drop-down list.
2. Click button to begin and click corresponding buttons in the control panel to move the PTZ camera, then click button to end. The movement of the PTZ is recorded as the pattern.

5.2.4. Linear Scan Setting

Steps:

1. Select a number, use the directional button to wheel the camera to the location where you want to set starting point, click button.
2. Wheel the camera to the location where you want to set end point, click button.
3. Click button, the PTZ camera will move from the starting point to the end point.

6. Search

Purpose:

The record files can be backup to various devices, such as USB devices (USB flash drives, USB HDDs).

Click icon to enter the local backup interface, as shown in Figure 6.1.

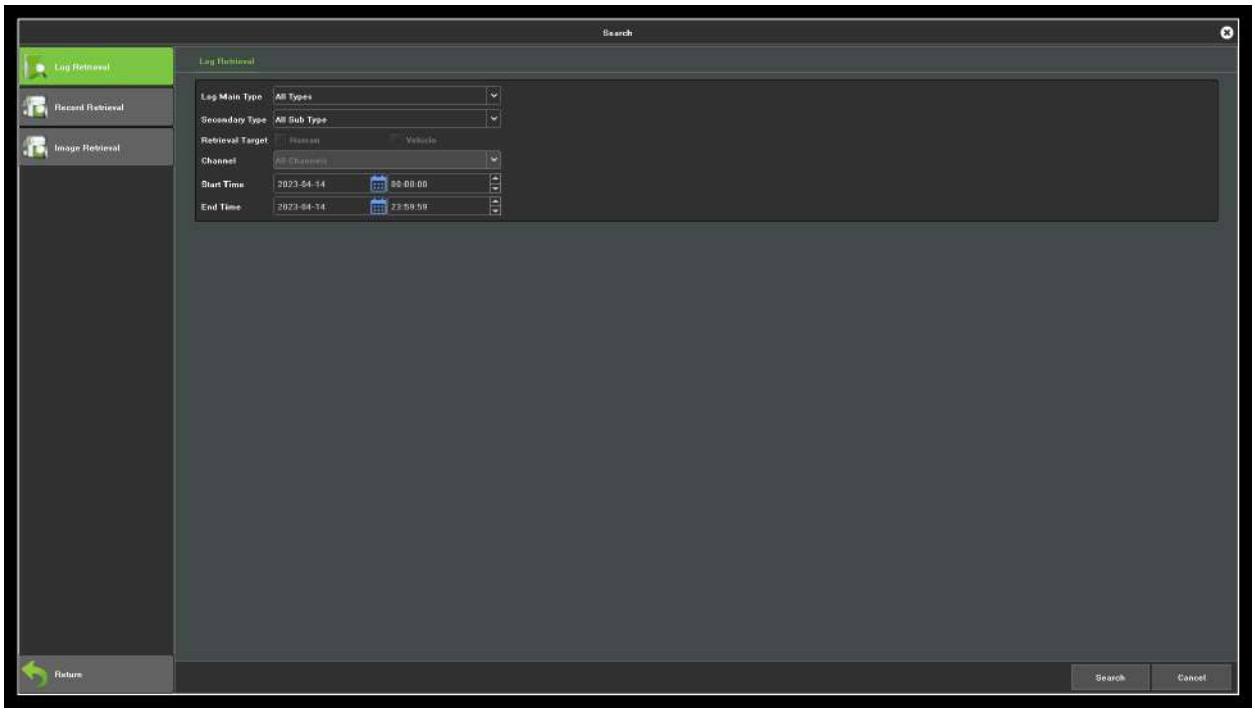


Figure 6.1 Rearch Interface

6.1. Picture Backup

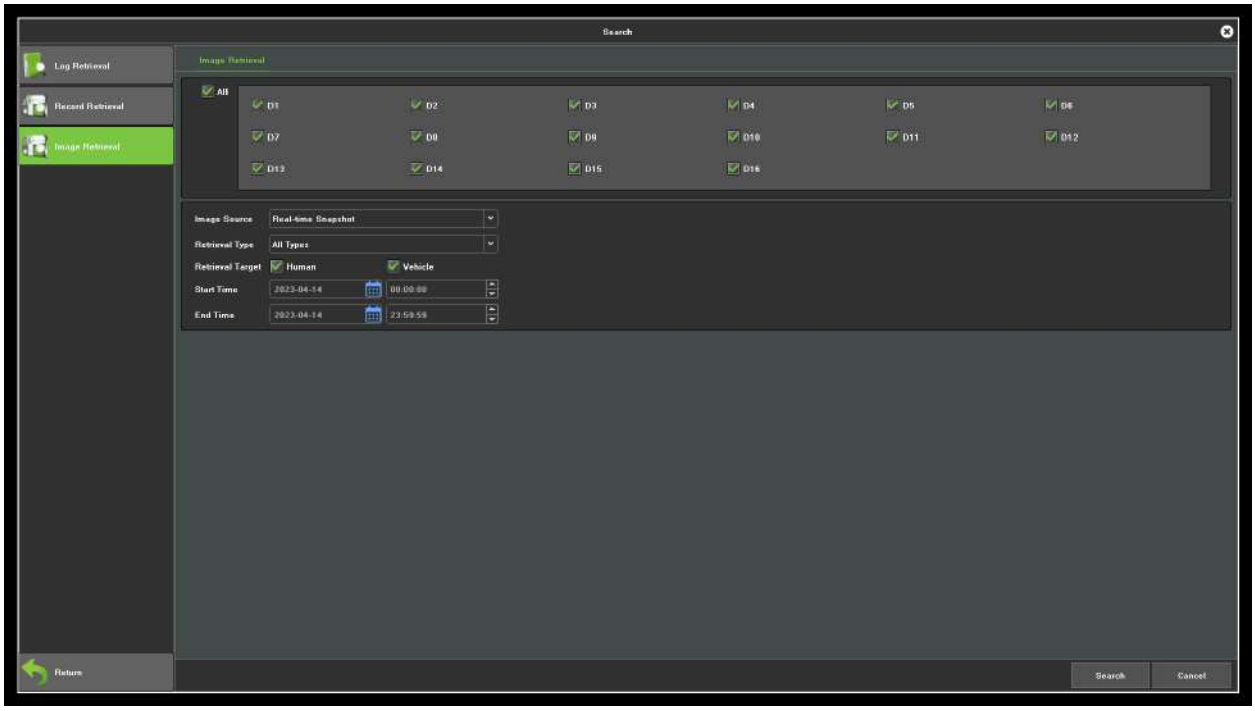


Figure 6.2 Picture Backup Interface

Steps:

1. Select the Channel to backup.
2. Select the File Type: Picture.
3. Select the human and vehicle
4. Set the time of file to backup.
5. Click **Search** button to view the file size.
6. Click **Start Backup** button to start the backup, show as Figure 6.2.

6.2. Video Retrieval

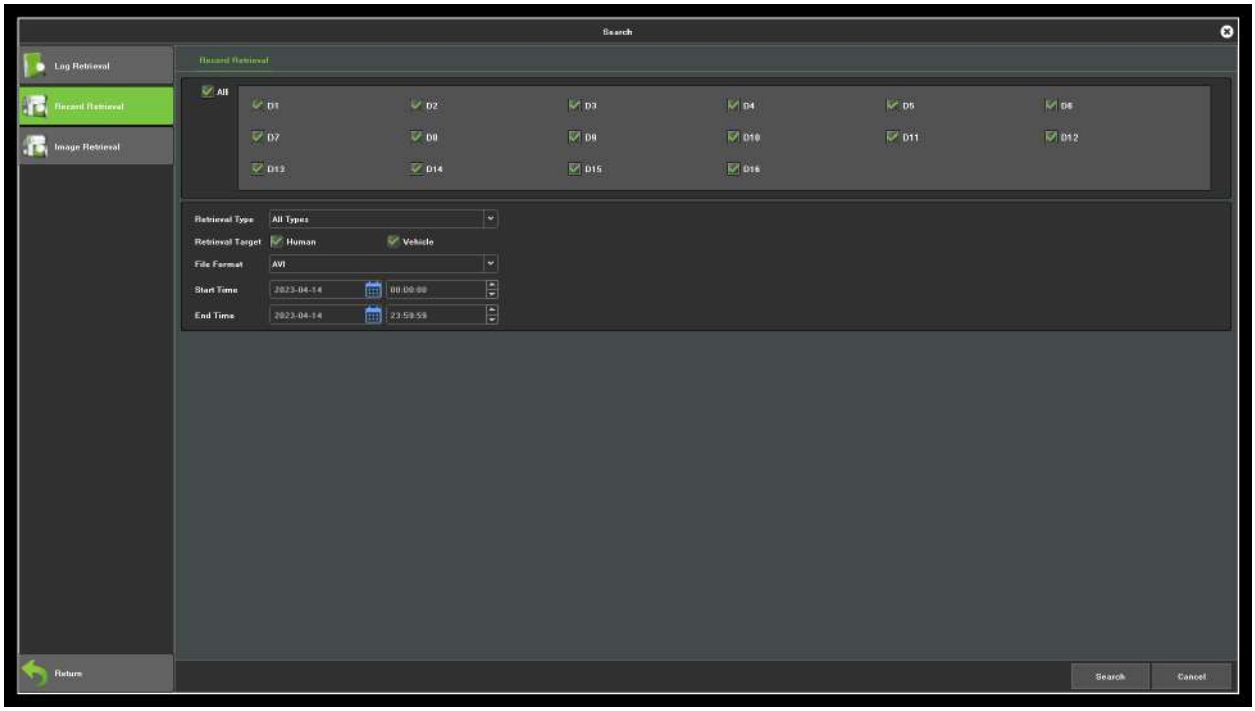


Figure 6.3 Video Backup Interface

Steps:

1. Select the Channel to backup.
2. Set the time of file to backup.
3. Select the File Format.
4. Select the human and vehicle
5. Click **Search** button to view the file size.
6. Click **Start Backup** button to start the backup, show as following picture.
7. After finish, click **Confirm**.

7. Channel Manage

7.1. Adding IP Cameras

Purpose:

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

Before you start:

Ensure the network connection is valid and correct, and the IP camera to add has already been activated.

Steps:

1. Click icon , enter into the Channel Connecting interface, as shown in Figure 7.1.

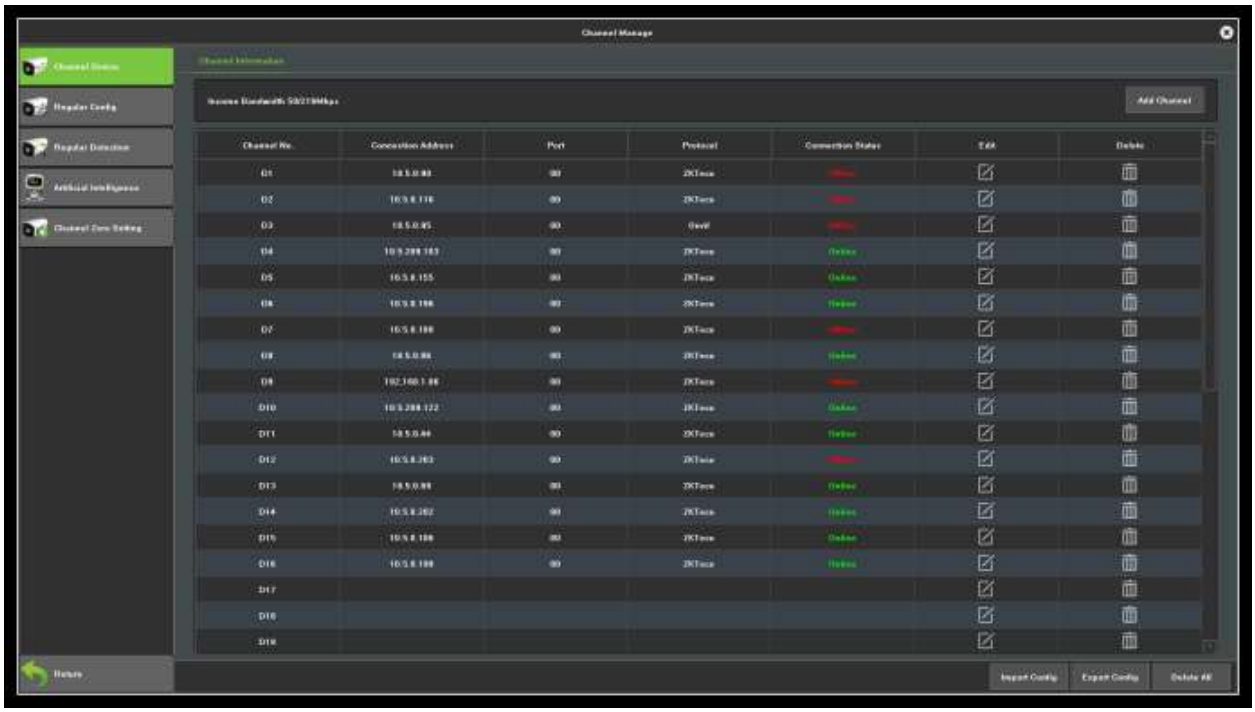


Figure 7.1 Quick Adding IP Camera Interface

2. Click **Add Channel** button, it will automatically search all the IP cameras connected to the NVR.
3. You can click the **Refresh** button to refresh the online IP camera manually. Select the detected IP camera and click the **OK** button to add it directly,
4. Or you can choose to custom add the IP camera by editing the parameters in the corresponding text field and then click the **Save** button to add it, as shown in Figure 7.2.

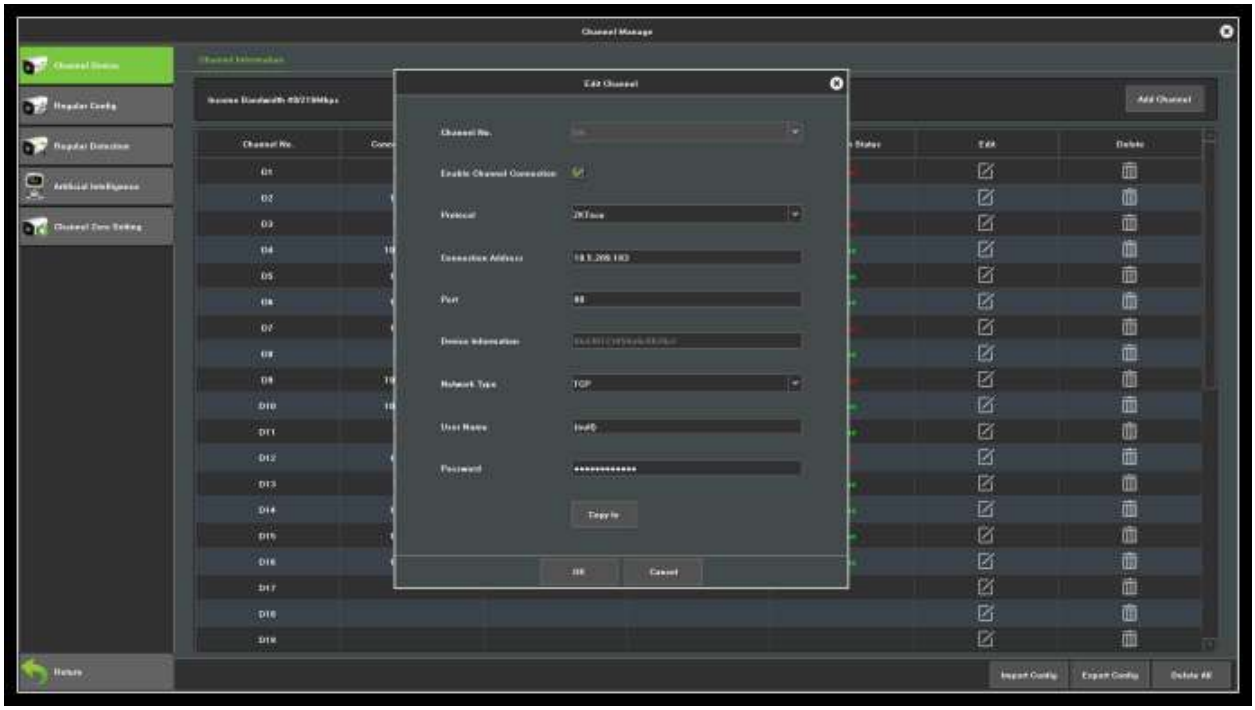


Figure 7.2 Custom Adding IP Camera Interface

7.2. Regular Config

7.2.1. Channel Display

Purpose:

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

Steps:

1. Enter the channel display configuration interface. Click **Channel Manage** > **Regular config** > **Channel Display**.
2. Select the channel of camera to configure OSD settings.
3. Local Channel Name setting.
   1) Check the check-box before **Show Local Channel Name**, then enter the **Local Channel Name** in the text field.
   2) Click **Save** button, the name that enter will show on the screen. You can use the mouse to click and drag the text frame on the window to adjust the OSD position.
4. IP Camera Name setting (should be supported by the camera).
   1) Check the check-box before Show Channel Name, then enter the Channel Name in the text field.
   2) Click Save button, the name that enter will show on the screen, you can use the mouse to click and drag the text frame on the window to adjust the OSD position, as shown in Figure 7.3.

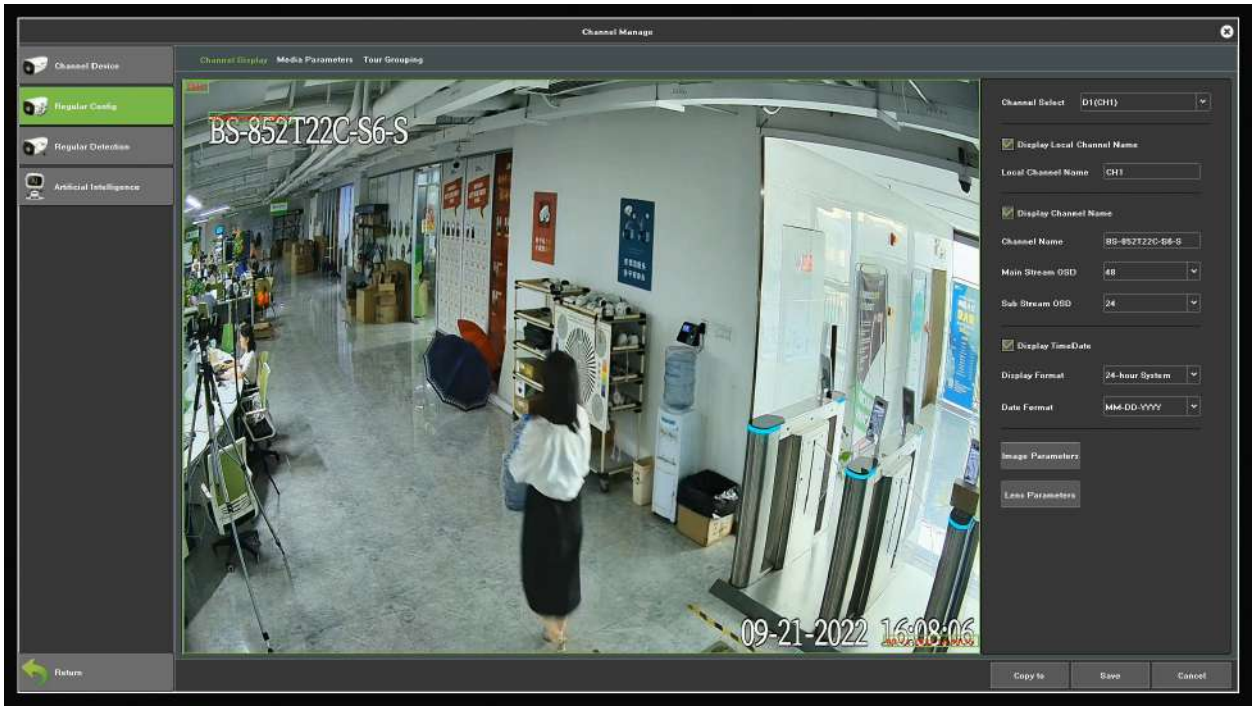


Figure 7.3 OSD Configuration Interface

5. Select the Date & Time Format (should be supported by the camera).
6. Image Parameters: Adjust the Brightness, Contrast, Saturation and Hue of the channel, as shown in Figure 7.4.

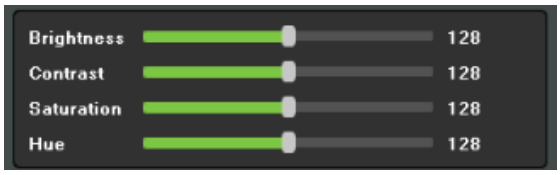


Figure 7.4 Image Setting Interface

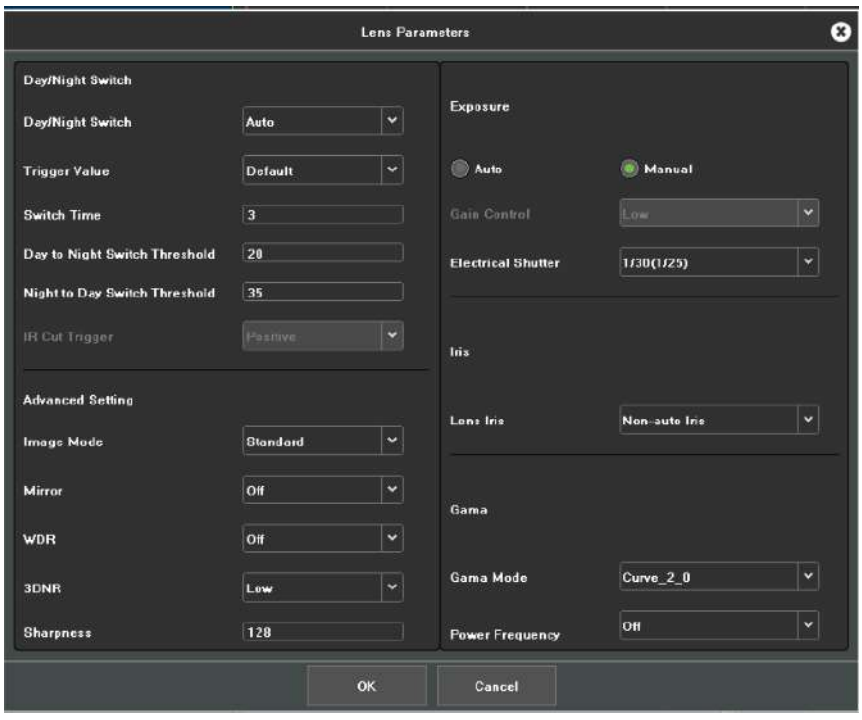


Figure 7.5 Camera Lens Parameters Setting Interface

1) **Camera Lens Parameters Setting:** Set the channel Camera Lens Parameters, as shown in Figure 7.5.
2) Click Save button to save the settings.

7.2.2. Media Parameters

Purpose:

Sometimes you need to edit the channel Camera recording parameters for better image.

Steps:

1. Enter the media parameters interface, as shown in Figure 7.6

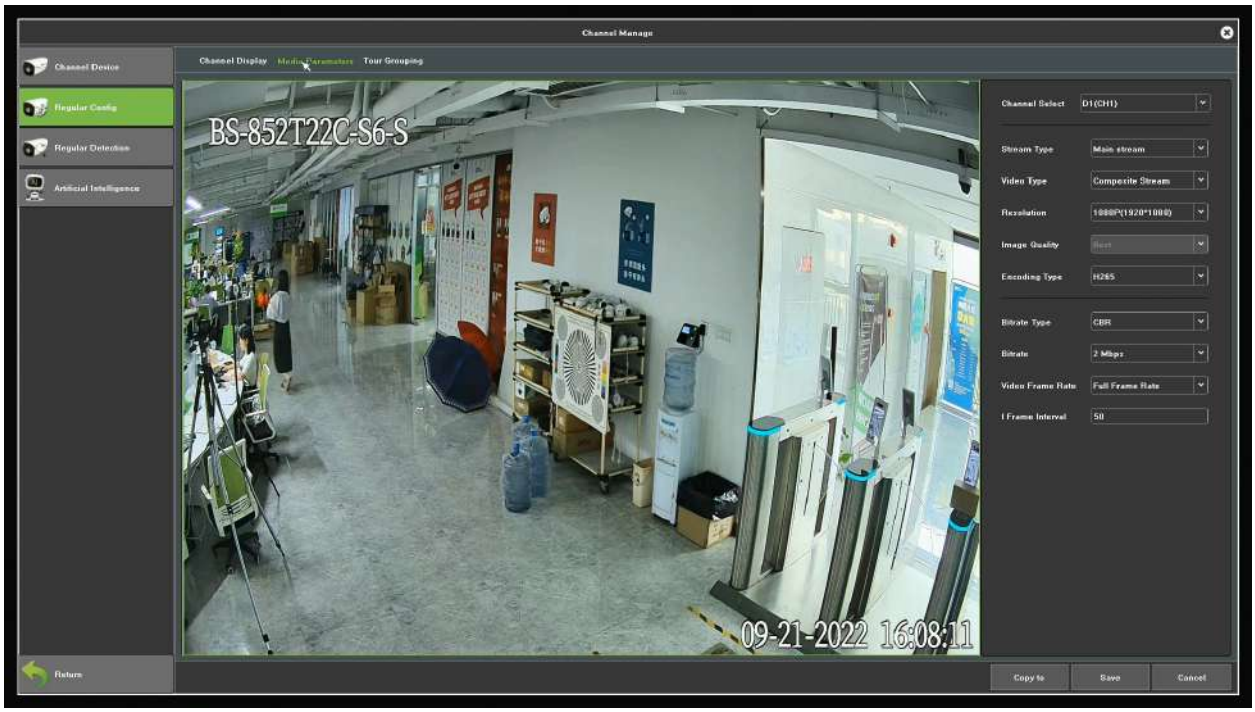


Figure 7.6 Recording Parameter

2. Set the video parameter:

   Channel Select: Select the channel of camera to configure the encoding type.

   Stream Type: Select Main Stream or Sub Stream.

   Video type: Select the video type.

   Resolution: Select the video resolution.

   Image Quality: Select the Imange quality when VBR **(Variable bite rate)**.

   Encoding type: Select H.264 or H.265

   Advanced setting:

   Bitrate Type: CBR & VBR can be selected.

   Bitrate: Set the Bit-Rate.

   Frame Rate: Select the frame rate.

3. Click **Save** button to save the settings.

7.2.3. Snapshot Parameter

Can set the resolution of the local snapshot and relevant parameters. The interface is shown in Figure 7.7.

Figure 7.7 Snapshot Parameters

7.2.4. PTZ Setting

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

Steps:

1. Enter the PTZ Setting interface, as shown in Figure 7.8.
2. Set the parameter of PTZ:

   Channel: Choose the channel.

   Protocol: Choose the protocol for your PTZ.

   Decoder Address: Choose the decoder address.

   Baud Rate: Select the baud rate.

   Data Bit: Select the data bit.

   Stop Bit: Select the stop bit.

   Parity: Select the verify, Non-Parity by default.

   Stream Control: Select the stream control, No Flow Control by default.
3. Click **Save** button to save the settings.

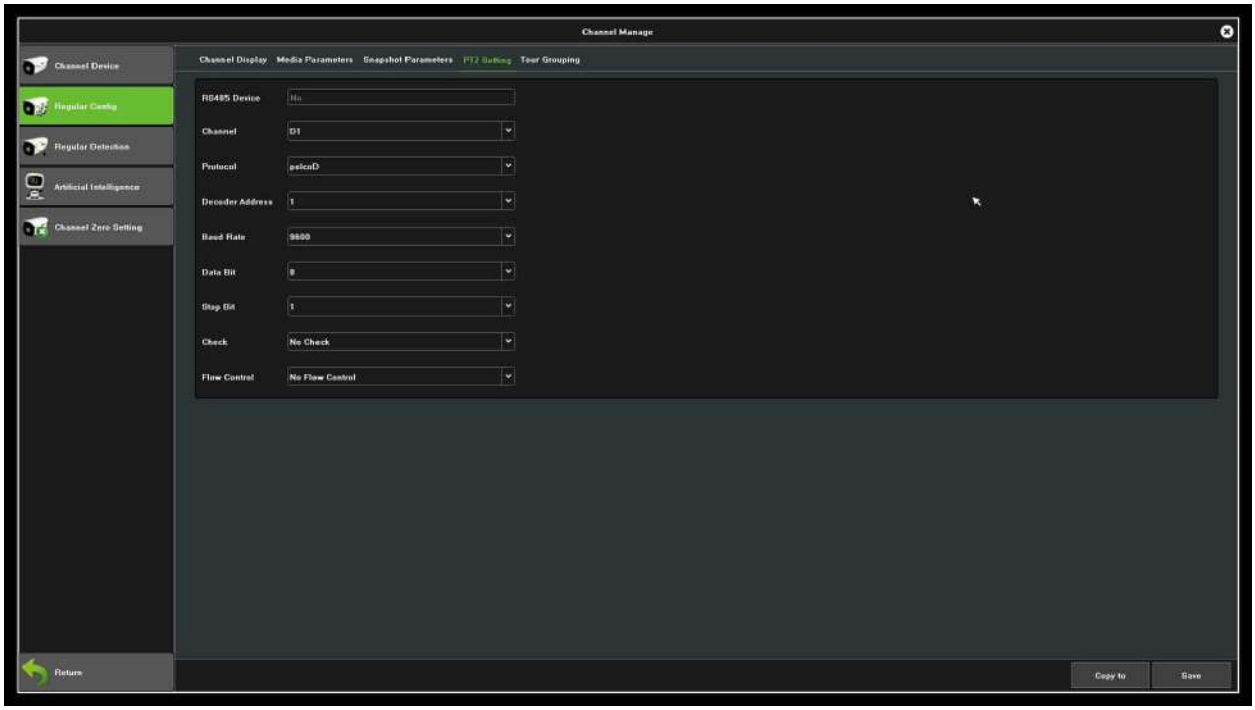


Figure 7.8 PTZ General Setting Interface

7.2.5. Tour Grouping

The role of setting tour Grouping is to group the channel and preview, can group according to a standard, as shown in Figure 7.9, that is group according to the region, the same channel can be divided into different groups according to the needs.

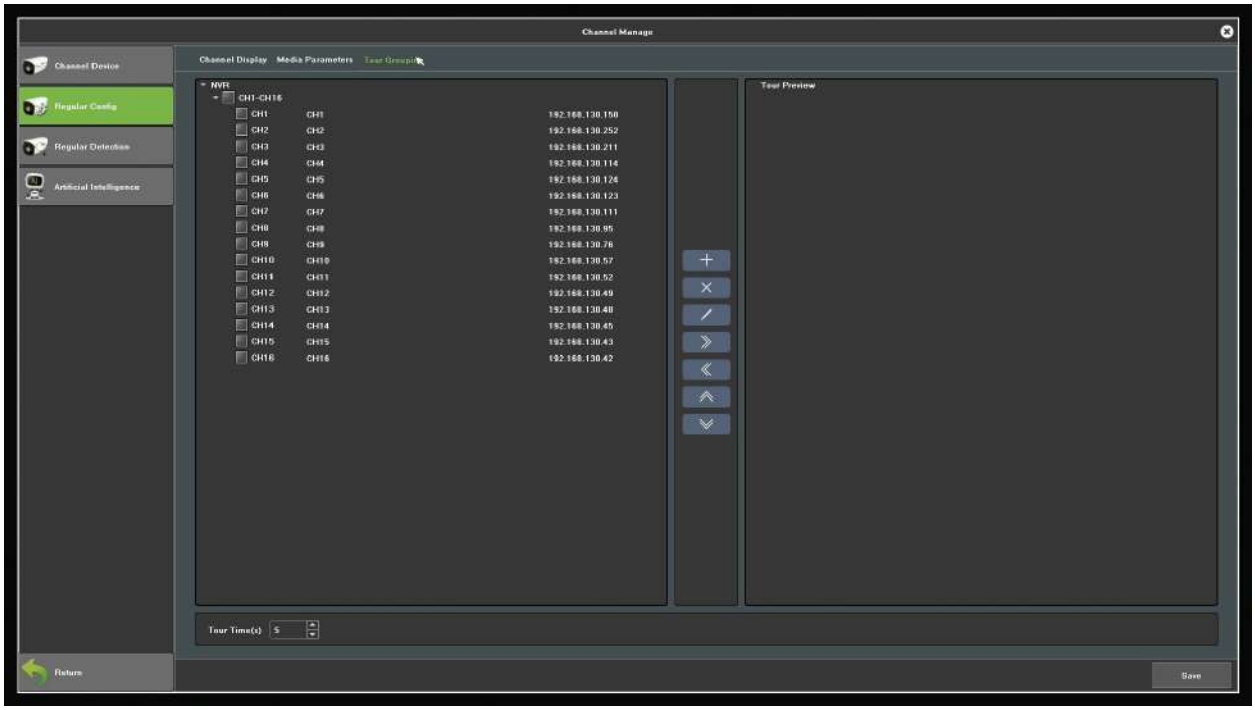


Figure 7.9 Tour Grouping

Icon function is shown in table 7.1:

Icon	Functional Description	Icon	Functional Description
	Create group		Delete group
	Modify the group name		Add group
	Remove the channel		Move up
	Move down		

Table 7.1 Icon Function

7.3. Regular Detection

7.3.1. Motion Detection

Motion detection interface is shown in Figure 7.10, can set the related parameters of motion detection.

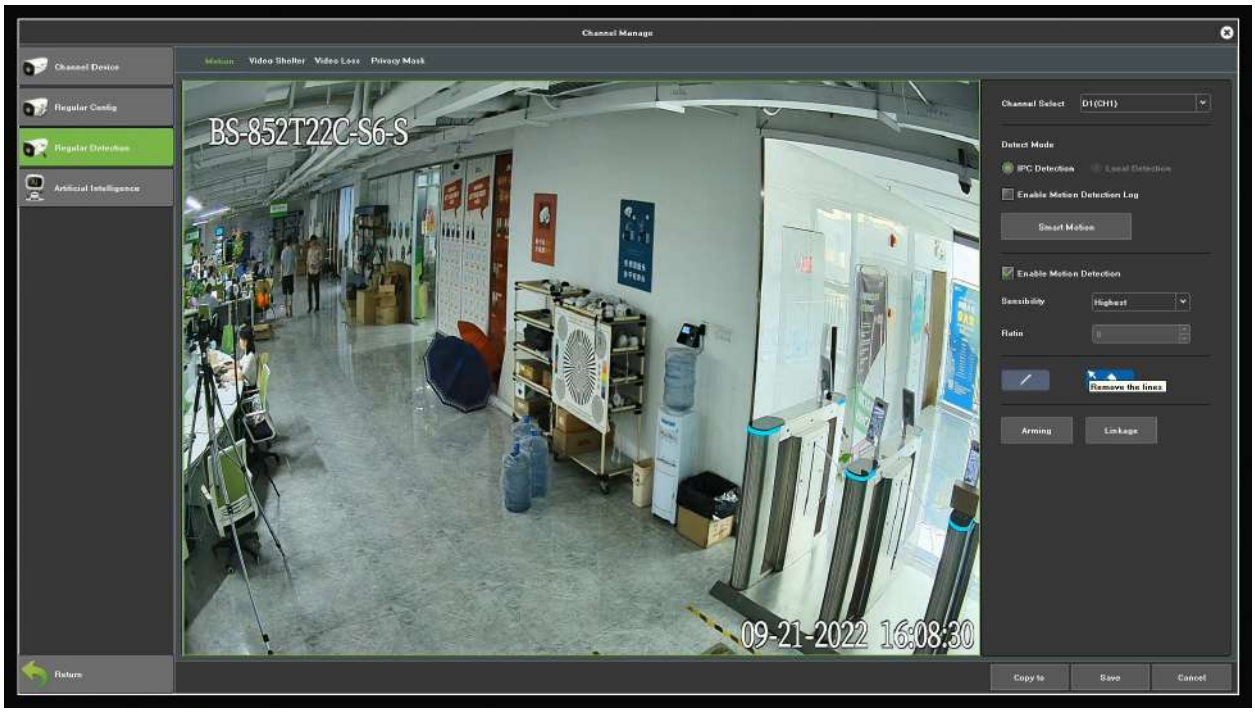


Figure 7.10 Motion

Detect Mode: The default is "Camera", when NVR support smart (smart detection) can switch mode to "NVR".

Sensitivity: Can increase the accuracy of the motion detection trigger after setting up reasonably.

Ratio: Only when size of Moving objects in the screen is larger than the size of the set can it be used as a "target", when setting the center of the screen will appear a yellow dotted rectangle frame as a reference.

Zone Setting: Hold the left mouse button directly in the picture, drag to the area that needs motion detection, the red plaid area is the selected motion detection area, as shown in Figure 7.11.

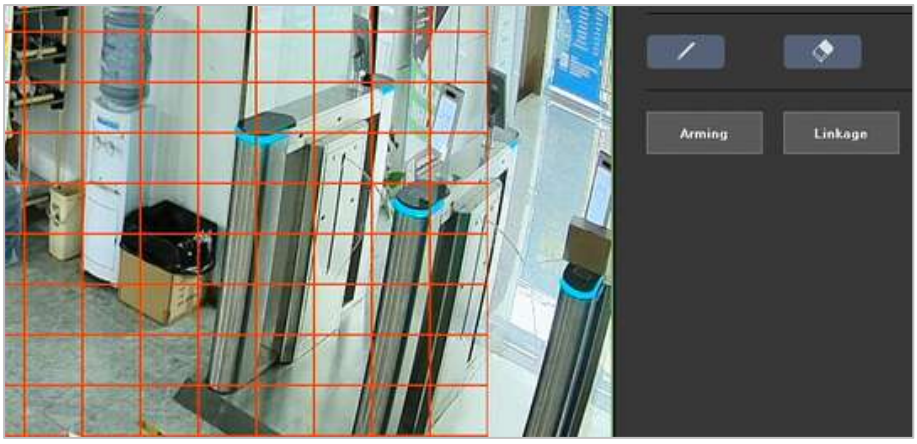


Figure 7.11 Zone Setting

Arming Plan: Set the schedule that needs arming, as shown in Figure 7.12

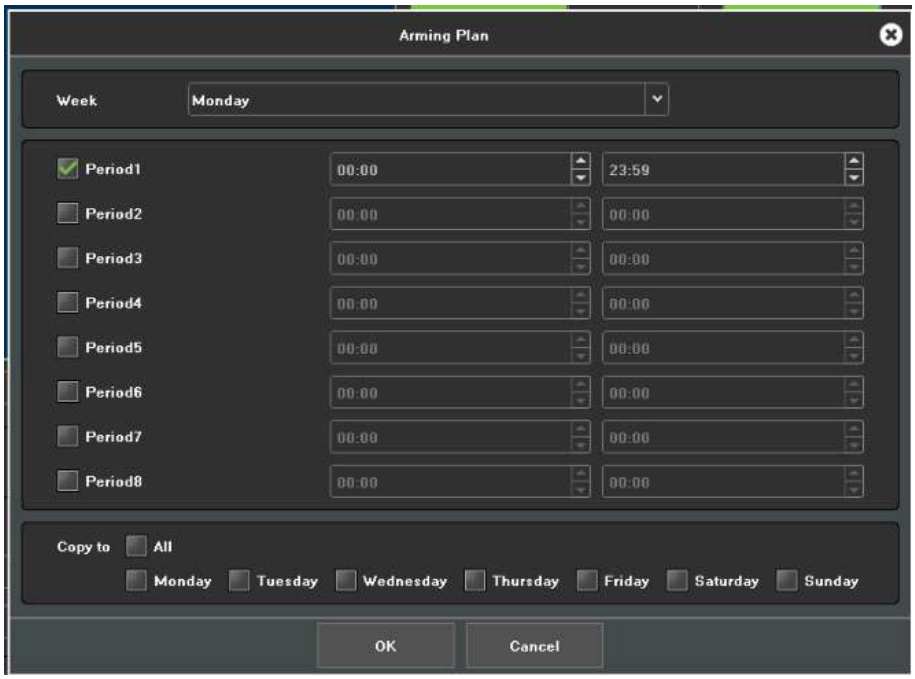


Figure 7.12 Planning

Linkage Setting: Choose the mode that needs linkage, as shown in Figure 7.13.

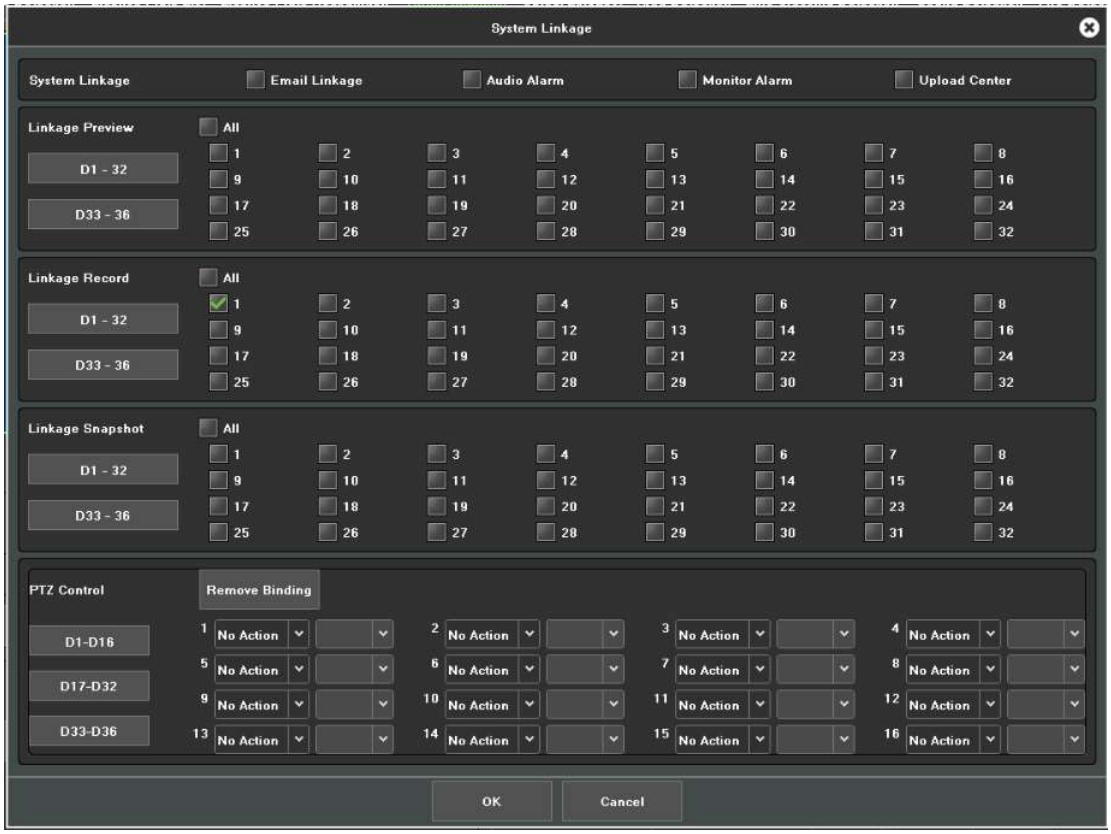


Figure 7.13 Linkage

Clear all: One click  to clear the motion detection area on the screen set before.

7.3.2. Video Lost

Video lost configuration interface, as shown in Figure 7.13.

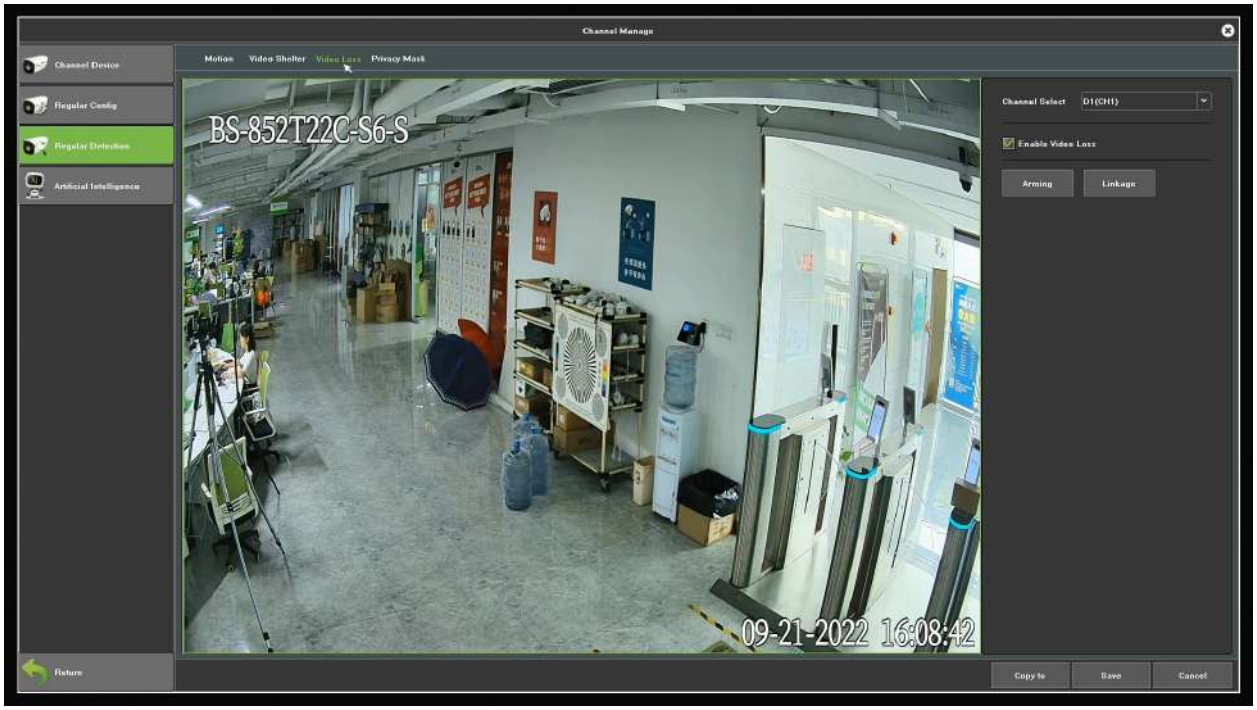


Figure 7.14 Video Loss

Channel: Choose the channel number.

Planning: Set the arming schedule of video loss, as shown in Figure 7.15.

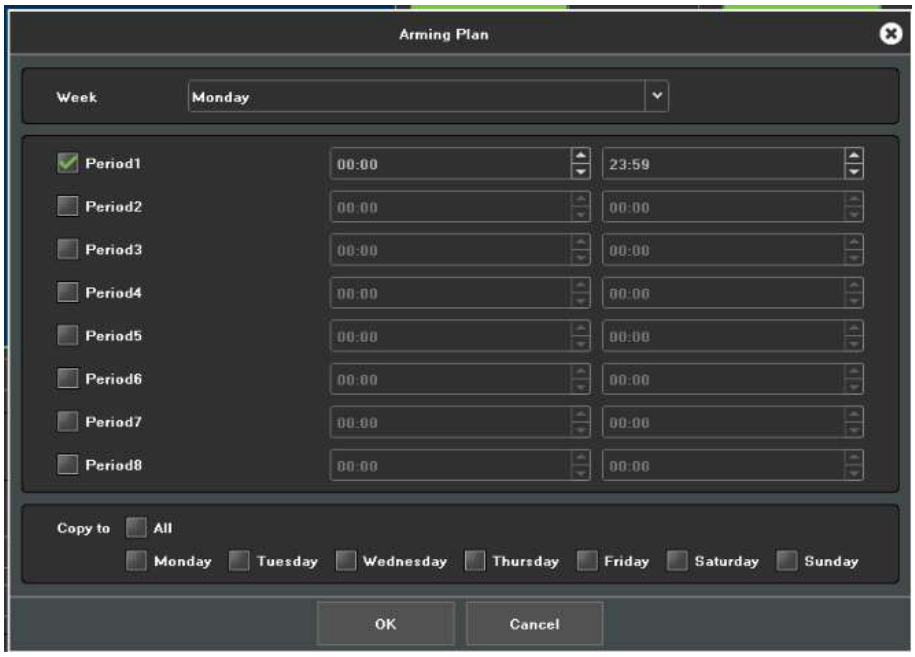


Figure7.15 Planning

Linkage: Set the linkage mode, as shown in Figure 7.16.

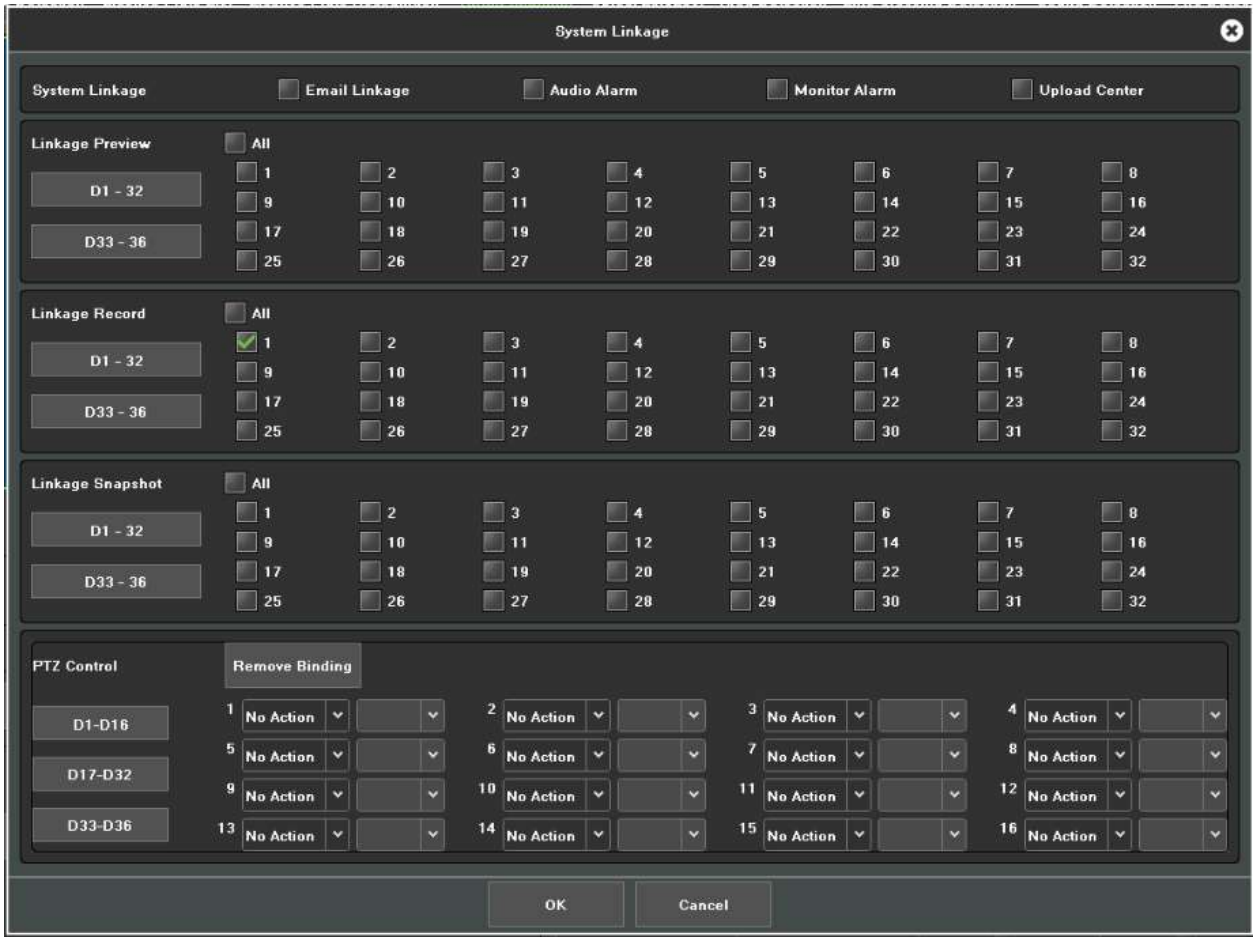


Figure7.16 Linkage

7.3.3. Video Shelter

Purpose:

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

Steps:

1. Enter Video Mask Alarm interface of channel parameter and choose a channel you want to setup Video Mask Alarm, as shown in Figure 7.17.

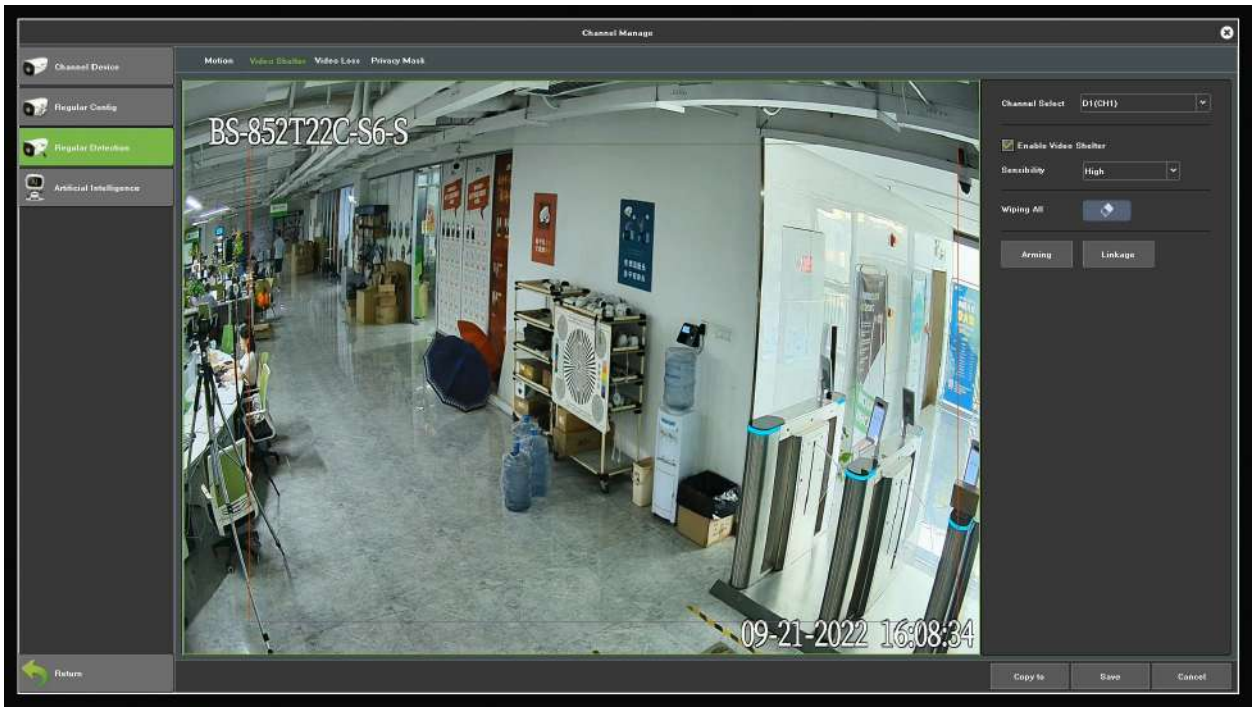


Figure7.17 Video Shelter

2. Set the video mask alarm handling action of the channel.
   1) Check the check-box of **Enable Video Shelter**.
   2) Select the sensitivity.
   3) Use the mouse to draw an area you want to detect video mask.
3. Setup the planning of the channel, as shown in Figure 7.18.

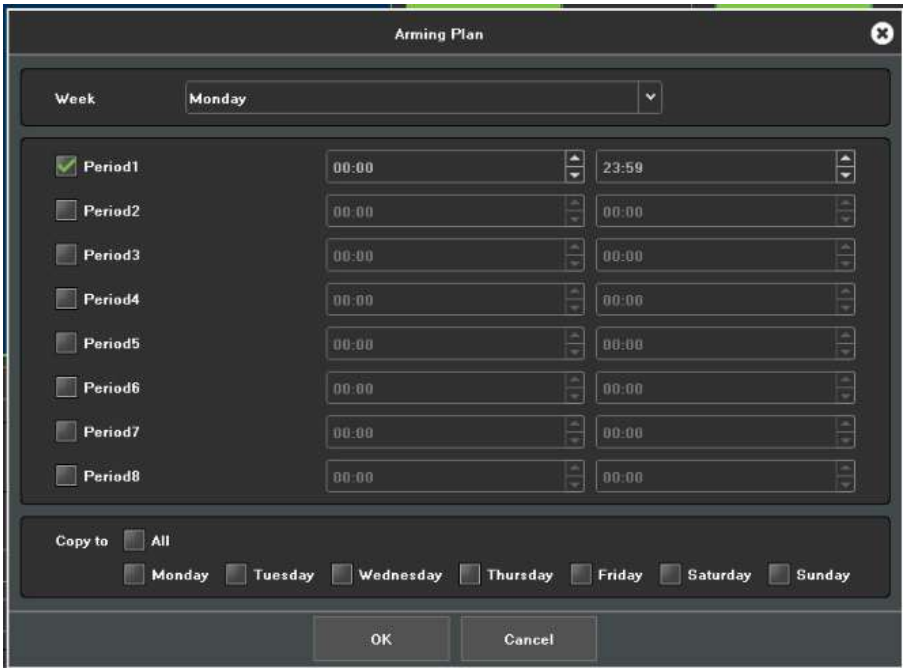


Figure 7.18 Planning

4. Setup the linkage operation of the channel, as shown in Figure 7.19.

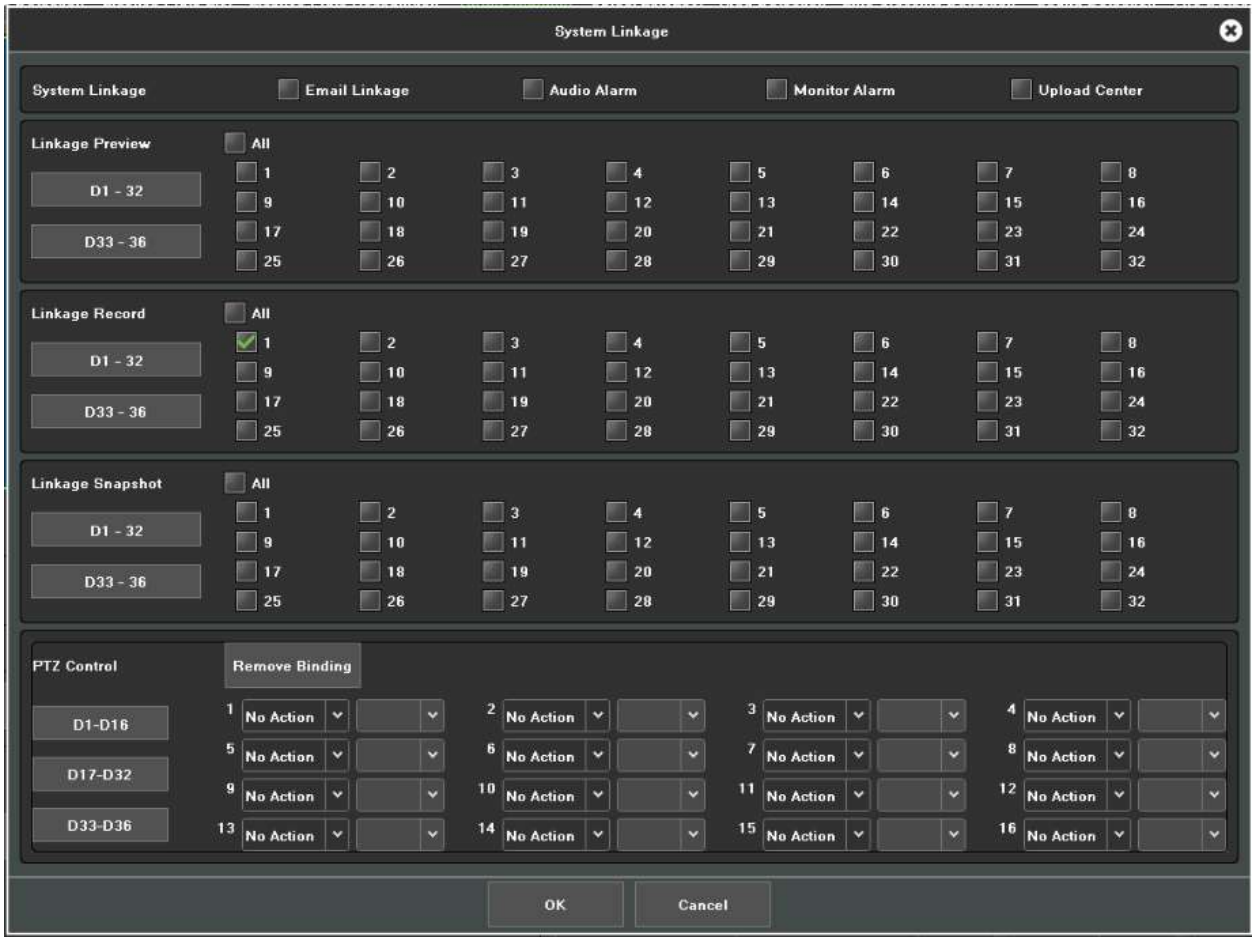


Figure 7.19 Linkage

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

Note: Onvif protocol can't support Video Shelter.

7.3.4. Privacy Mask

Purpose:

You are allowed to configure the four-sided privacy mask zones that cannot be viewed by the operator. The privacy mask can prevent certain surveillance areas to be viewed or recorded.

Steps:

1. Enter the **Privacy Mask Settings** interface, as shown in Figure 7.20.

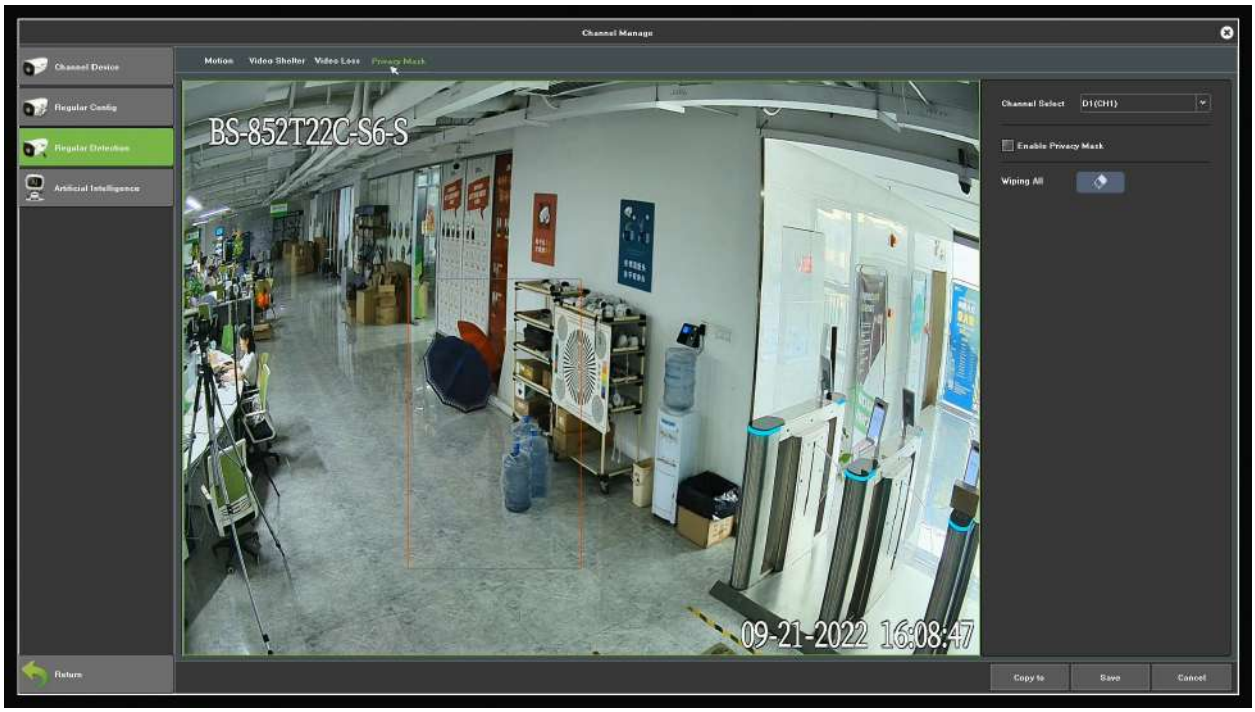


Figure 7.20 Video Mask

2. Select the camera to set privacy mask.
3. Click the check-box of **Enable Privacy Mask** to enable this feature.
4. Use the mouse to draw a zone on the window, up to 4 privacy mask zones can be configured and the size of each area can be adjusted.
5. The configured privacy mask zones on the window can be cleared by clicking the button.
6. Click the **Save** button to save the settings.

Note: Onvif protocol can't support privacy mask.

7.4. Artificial Intelligence

Smart analysis is the vital function of 4.0 NVR, and this chapter will give clear and specific instructions in terms of intelligent performance, process and parameter configuration.

7.4.1. Brief Introduction

The current Smart performance of NVR4.0 includes:

1. Behavior Analysis: target counting, Object Left/Lost, Area Detection, Line crossing, Scene Change.
2. Some NVR have: Scene Change, Face detection, License Plate list, Sound Detection, Fire Detection, VQD.

Note: The behavior analysis can support both front-end and local detection modes (based on the actual capacity of the product). scene changes only support the local detection mode.

7.4.2. Enable Smart Analysis

Some NVR models disable local smart by default. To enable smart analysis, first open the device parameters interface and set the preview capability to the mode with smart analysis, as shown in Figure 7.21.

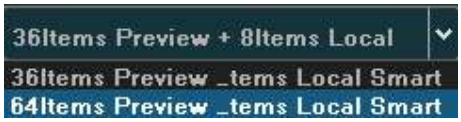


Figure7.21 Model

Note: Currently NVR2.0 smart function only supports I8H protocol, so only when I8H protocol accesses IPC can the front-end detection be turned on.

7.4.3. Function Configuration

7.4.3.1. Detect Mode

As shown in Figure 7.22, there are "IPC detection" and "local detection" mode, the default is the former. The IPC detection mode requires the IPC to support smart detection. If IPC front-end detection is not supported, the NVR Local Detection mode is then selected.

Figure7.22 Detection Mode

7.4.3.2. Behavior Analysis

Behavior analysis includes the following functions: target counting, object left/lost, area detection, line crossing detection.

The target triggering rule is based on the center of the target's lower edge (except height limit detection), which is generally the position of the human foot. So when setting the detection line or detection area, the line / area should not be suspended in the air.

The minimum height of the target should not be less than 1/32 of the image height. the minimum width should not be less than 1/64 of the image width. the maximum width of the proposed object should not exceed 1/4 of the image width. the maximum height should not exceed 1/2 of the image height.

Set the detection line or the detection area, do not appear too close to the target location. It also requires the scope view of camera can not be too small, the target can not be too large.

Precautions:

1. Camera installation: to install vertically, to maintain static, to avoid occlusion of vision, to make height appropriate (higher than two meters).
2. Scene selection: to ensure adequate lighting, reduce the complexity of the scene, try avoid areas that may affect the accuracy, such as the detection area where there are leaves shaking, severe shadows, birds, insects and more, try to avoid Glass, floor tiles, lake and other reflective scene selection.
3. Alert area requirements: the warning area used for intelligent analysis is required to exceed more than 1/8 of the video screen area. if it is cordon, the distance between the sides of the line should exceed the image width or 1/4 of the height.

7.4.3.3. Smart Motion

The purpose of this page is to help you use intelligent mobile detection. You can click the “Smart Motion” button from the Motion page to enter this page. This module has upgraded mobile detection to recognize the behavior of people/vehicles in designated areas and issue alerts. as shown in Figure 7.23. Please note that when intelligent mobile detection is turned on, regular wireframes will not be displayed in the preview screen.

- **Channel Select:** Select the channel.
- **Detect Mode:** Divided into front-end and local, the two models to the actual capacity of the product subject, selecting the front-end mode requires front-end access to IPC support, selecting the local model requires equipment support.
- **Enable Motion Detection Log:** Can record information that triggers an alarm.
- **Motion:** Can switch back to motion detection.
- **Enable:** Check to enable the Smart Motion.
- **Ratio:** Only when size of Moving objects in the screen is larger than the size of the set can it be used as a "target", when setting the center of the screen will appear a yellow dotted rectangle frame as a reference.
- **Sensitivity:** Can increase the accuracy of the motion detection trigger after setting up reasonably.
- **Detect Area:** Each screen can be set up to 4 detection area, drag the mouse directly on the screen to draw the line, release the left button, move the mouse again to form a second left-click line, and

then click Right after the automatic closure of the formation of the region is the detection area (to set up a qualified area at least manually draw two lines).

- **Detect Type:** Set the detection object to be human or vehicle, and an alarm will be triggered when the object detected in the area is the set value.
- **Arming:** That is, set the deployment time, the default is all-day deployment.
- **Linkage:** You can enter the linkage configuration page when the alarm is triggered, and perform the linkage configuration operation.

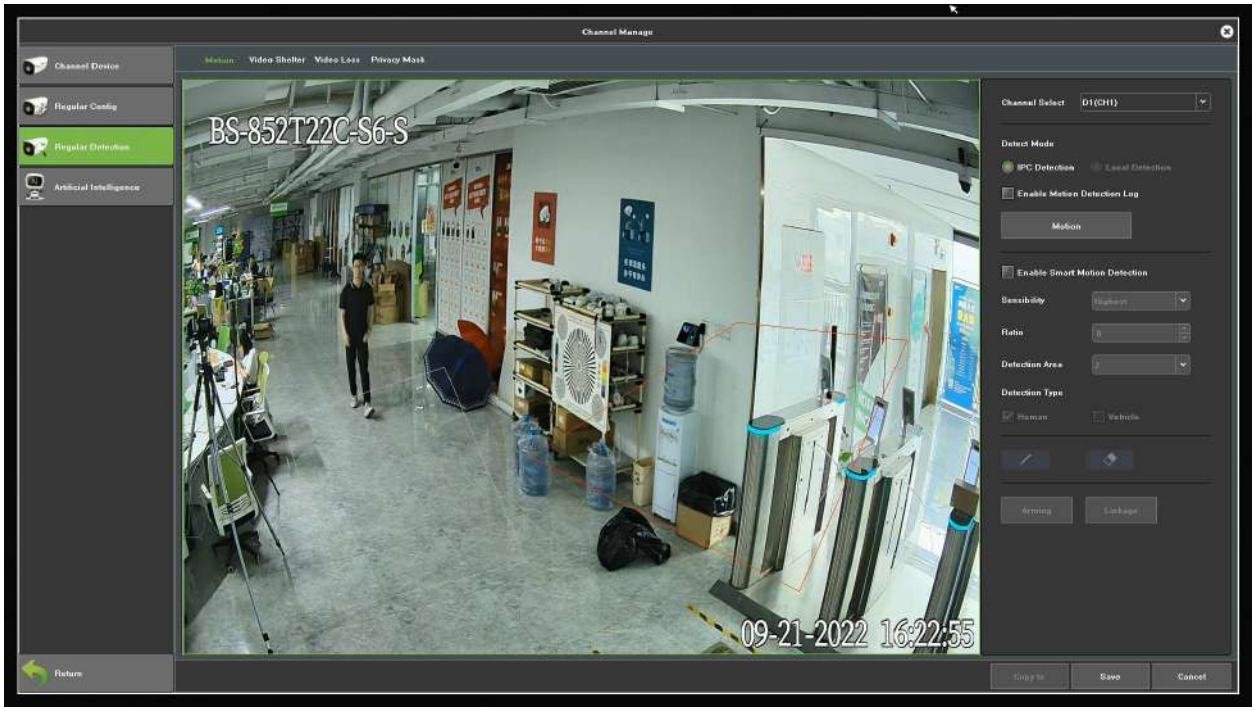


Figure 7.23 Smart Motion

7.4.3.4. Target Counting

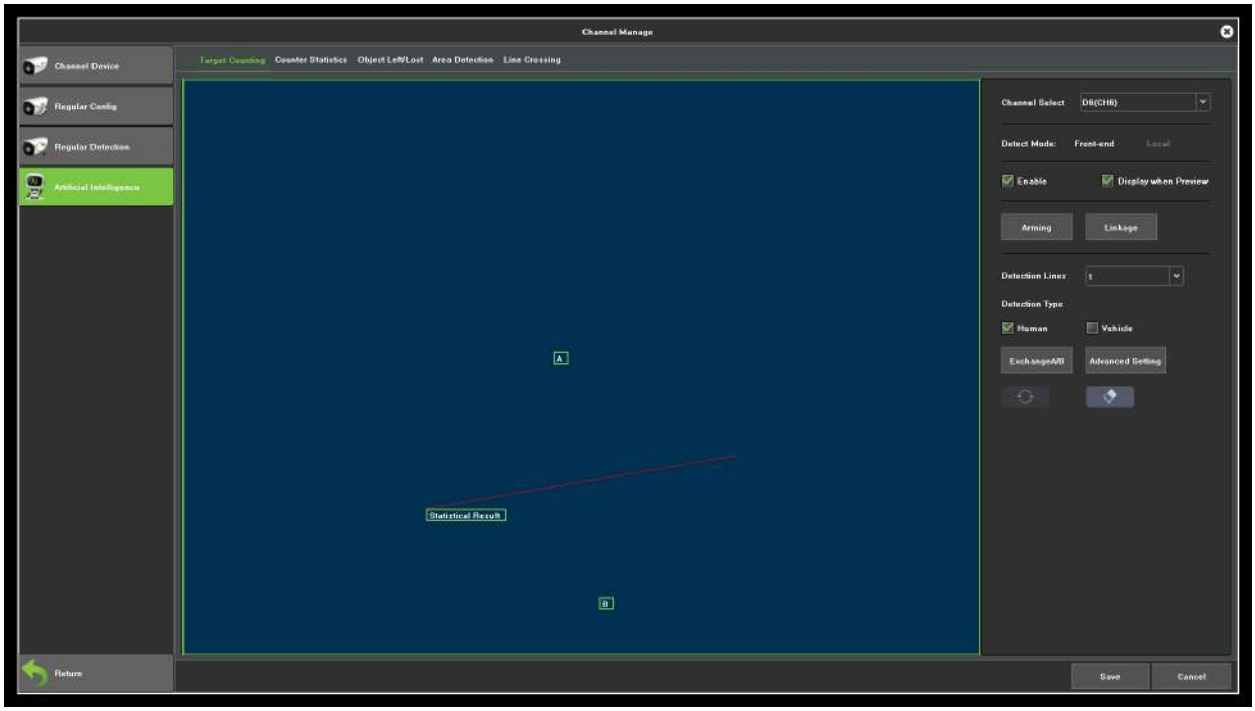


Figure 7.24 Target Counting

The purpose of this page is to configure the relevant parameters so that the target count alarm occurs when a moving object whose proportion is larger strides the set detection line to obtain the number set by the detection rules, as shown in Figure 7.24. The following describes the parameters of the pages on the set method.

- **Channel Select:** Select the channel.
- **Detect Mode:** Divided into front-end and local, the two models to the actual capacity of the product subject, selecting the front-end mode requires front-end access to IPC support, selecting the local model requires equipment support.
- **Enable:** Check to enable the target count.
- **Display when Preview:** When enabled, you can see the detection line and the statistical result in the preview interface.
- **Detection lines:** Each screen can be set up to four detection lines, directly on the screen drag the left mouse button to draw the line, release the left button, right-click to complete the drawing line, the completion of the detection line on both sides were AB Area, the upper side will display the statistical results.
- **Detection Type:** Set the detection object to be human or vehicle, and an alarm will be triggered when the object detected in the area is the set value.

Advanced Setting:

- **A > B:** Acquiesce is A area to B area to increase counting, A / B area location on both sides of detection line can be exchanged.
- **B > A:** "Increment Count" or "Flow Count Result = 'A-> Count of B' + 'B-> Count of A'", "Count Down" > Count of B '-' B-> Count of A '', 'Ignore' or 'Count of flow statistics '='.
- **Ratio:** Only when size of Moving objects in the screen is larger than the size of the set can it be used as a "target", when setting the center of the screen will appear a yellow dotted rectangle frame as a reference.
- **Enable Flow Statistics:** Enable statistics, you can set the "Flow Statistics interval and Alarm threshold".
- **Flow Statistics Interval(second):** Set the counting time interval. When the counting time exceeds the time interval set, the flow counter will reset and enter next counting period automatically.
- **Flow Alarm Threshold Value:** Set the upper count limit. When the value exceeds the set value, the system will automatically trigger the alarm.
- **Enable Total Quantity Statistics:** Enable or disable the Total quantity function.
- **Statistical Time Quantum:** Set the effective time period for the day's total counter.
- **Total Quantity Alarm Threshold Value:** Set the upper limit of the total flow on a day. When the value exceeds the set value, the system will automatically trigger the alarm.
- **Arming:** That is, set the deployment time, the default is all-day deployment.
- **Linkage:** You can enter the linkage configuration page when the alarm is triggered, and perform the linkage configuration operation.
- **Delete:** Click to clear the screen to set the history setting line.

In accordance with the above settings, every 30s account for 150 times the number of objects through the detection line 1, trigger the alarm, as shown in Figure 7.25 and 7.26 is the pre-alarm and alarm occurs when the real-time preview screen.

Figure 7.25 Pre-alarm

Figure 7.26 Alarming

7.4.3.5. Counter Statistics

The purpose of this page is to calculate the number of people/vehicles counted during the activation of the target counting function by time period, which can effectively help you view the traffic volume during the time period. After selecting the filtering criteria, click the "statistics" button to display the statistical data as shown in Figure 7.27.

- **Channel Select:** Select the channel.
- **Statistical Type**: You can choose options Inquiry by day, week, month or year, corresponding to the statistical period of day, week, month and year.

- **Statistical Time:** You can choose the date for statistics. Please note that when you do not choose to use days as the statistical period, the number of days will correspond to the corresponding time period.
- **Detection Type:** Set the detection object to be human or vehicle, and only the data selected this option will be show.
- **Detection Line:** The four statistical lines corresponding to the target counting module will be show after selecting them.
- **Export:** You can export statistical data to a USB drive, and you can choose to store it in a directory and file format.

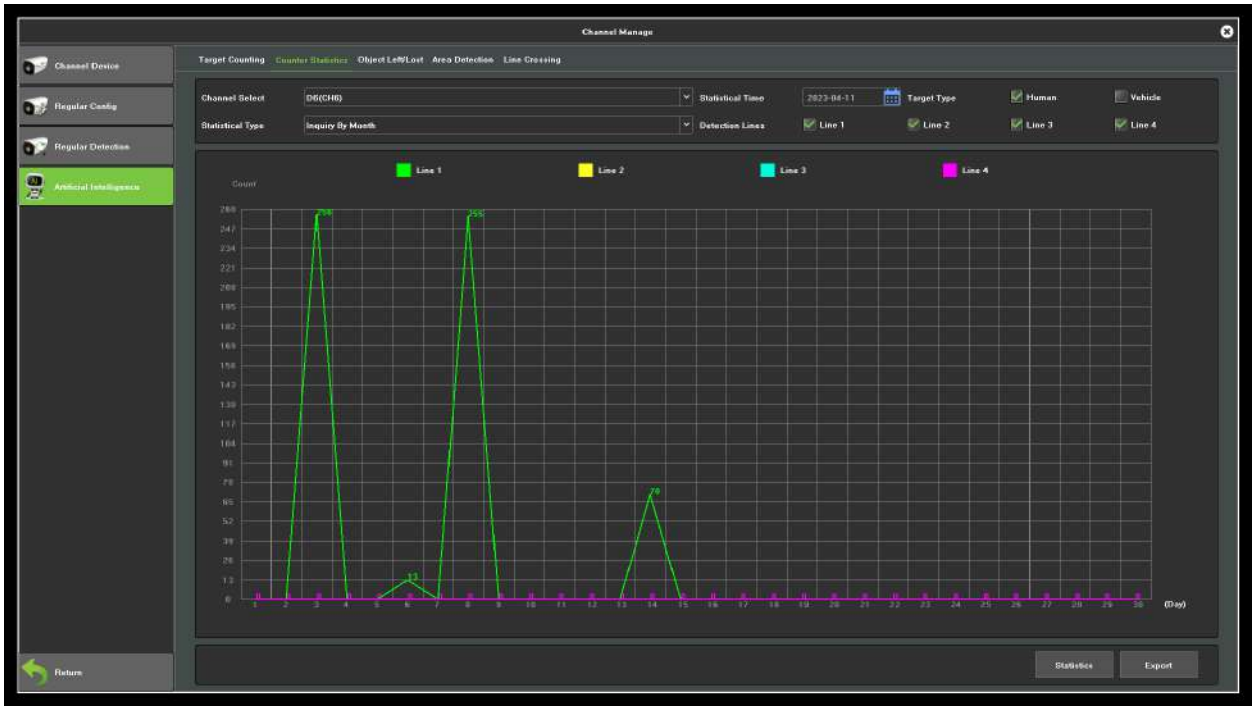


Figure 7.27 Counter Statistics

7.4.3.6. Object Left/Lost

The purpose of this page is to configure the relevant parameters, so that more than the proportion of objects in the set detection area lost / left over time detection time that goods detection alarm. As shown in Figure 7.28, the following describes the main parameters on the page set method.

- **Channel Select:** Select the channel.
- **Detect Mode:** Divided into front-end and local, two models to the actual capacity of the product subject, select the front-end mode requires front-end access to IPC support, select the local mode requires device support.
- **Enable:** Check to enable the target count.
- **Display when Preview:** When enabled, you can see the detection line and the statistical result in the preview interface.
- **Arming:** That is, set the deployment time, the default is all-day deployment.
- **Linkage:** You can enter the linkage configuration page when the alarm is triggered, and perform the linkage configuration operation.

- **Detection Area:** Each screen can be set up to 4 detection area, drag the mouse directly on the screen to draw the line, release the left button, move the mouse again to form a second left-click line, and then click Right after the automatic closure of the formation of the region is the detection area (to set up a qualified area at least manually draw two lines).
- **Detection Type:** "objects loss", "objects left", "objects loss or left" three types.
- **Ratio:** Moving objects in the screen than the size of the set when the size can be used as "items".
- **Detect Time:** detected items lost / left more than this time to trigger the alarm.

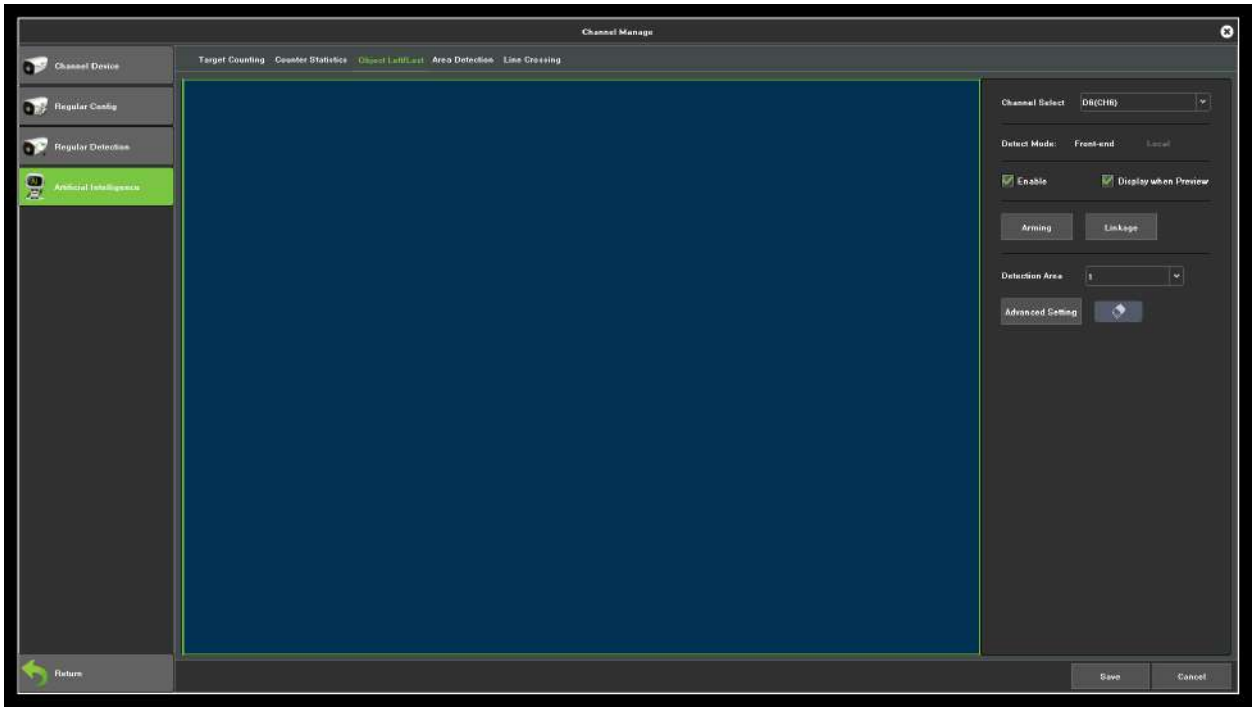


Figure 7.28 Object Left/Lost

In accordance with the above settings, in the channel screen, the proportion of more than 150 items in the detection area disappeared more than 30s, triggered object left/lost alarm, alarm before and after the real-time preview screen, respectively, as shown in Figure 7.29 and Figure 7.30 (Which identifies the blue rectangle that is missing the area where the goods).

Figure 7.29 Pre-alarm

Figure 7.30 Alarming

7.4.3.7. Area Detection

The purpose of this page is to configure the relevant parameters, so that more than the proportion of moving objects, Enter / leave / Enter or Leave/Loiter in the set detection area, over time detection zone detection alarm occurs. Interface shown in Figure 7.31, the following page describes the main parameters of the setting method.

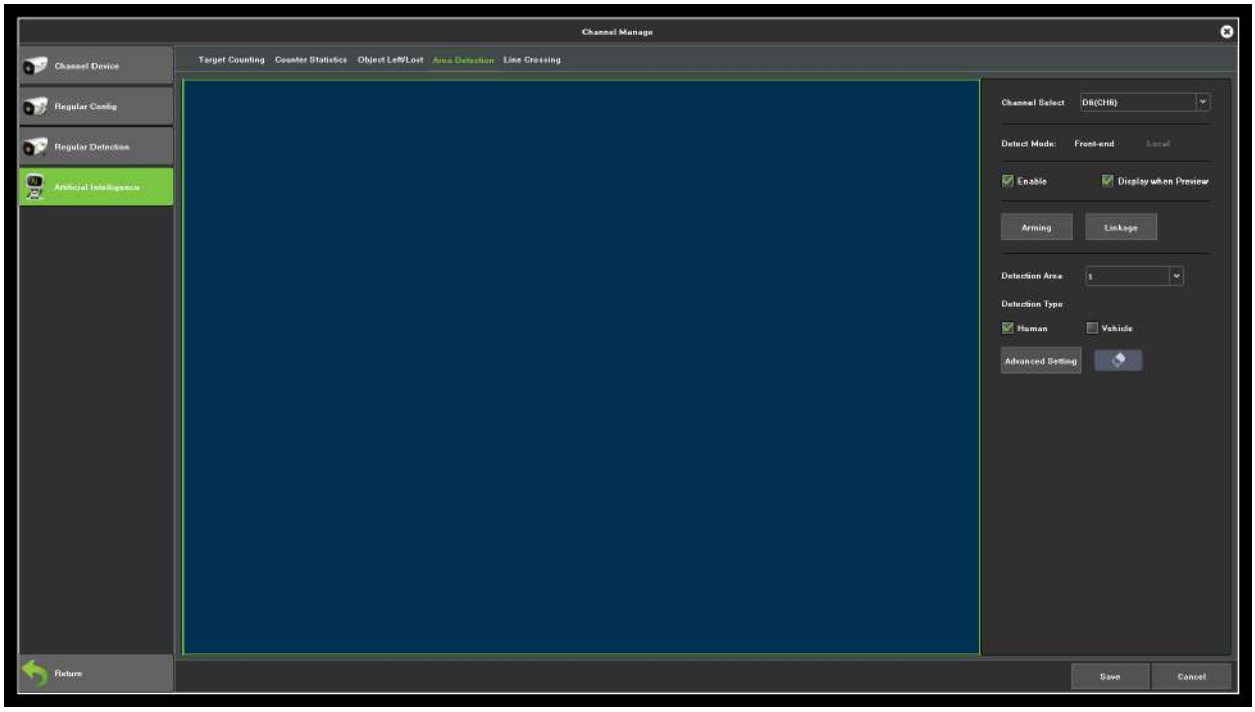


Figure 7.31 Area Detection

- **Channel:** Select the channel.
- **Detect Mode:** divided into front-end and local, the two models to the actual capacity of the product subject, select the front-end mode requires front-end access to IPC support, select the local mode requires the device support.
- **Enable:** Set whether to enable zone detection function.

- **Display when Preview:** Set whether to display the set rules and test results in the preview interface.
- **Arming:** That is, set the deployment time, the default is all-day deployment.
- **Linkage:** You can enter the linkage configuration page when the alarm is triggered, and perform the linkage configuration operation.
- **Detect area:** the screen with the mouse to draw the area.
- **Detection type:** Set the detection object to be human or vehicle, and an alarm will be triggered when the object detected in the area is the set value.
- **Advanced Setting:**
- **Detection type:** Set the target detect type. There are four detection types, all of them will trigger the alarm. “Target enter” represents that the camera will trigger the alarm once it detects that a target enters the monitored zone. “Target leave” represents that the camera will trigger the alarm once it detects that a target leave the zone. “Target enter or leave” represents that the camera will trigger the alarm once it detects that a target enters and/or leave the zone. The last type is that the camera will trigger the alarm once it finds that the time that a target staying in the controlled area exceeds the upper limit of the set and allowed duration.
- **Ratio:** moving objects in the screen than the size of the set when the size can be used as a "target".
- **Detect Time:** detect the target activity more than this time to trigger the alarm.

According to the above setting, the moving object (automobile) occupying over 150 in the channel picture has entered the detection area for more than 5s, triggering an area detection alarm, as shown in Figure 7.32, which is the preview real-time picture Color rectangular box that is identified into the area of the target).

Figure 7.32 Area Detection

7.4.3.8. Line Crossing

The purpose of this page is to configure the relevant parameters, so that more than the proportion of moving objects, across the set of test lines, the virtual alarm immediately alarm line. The following describes the main parameters of the page setting method.

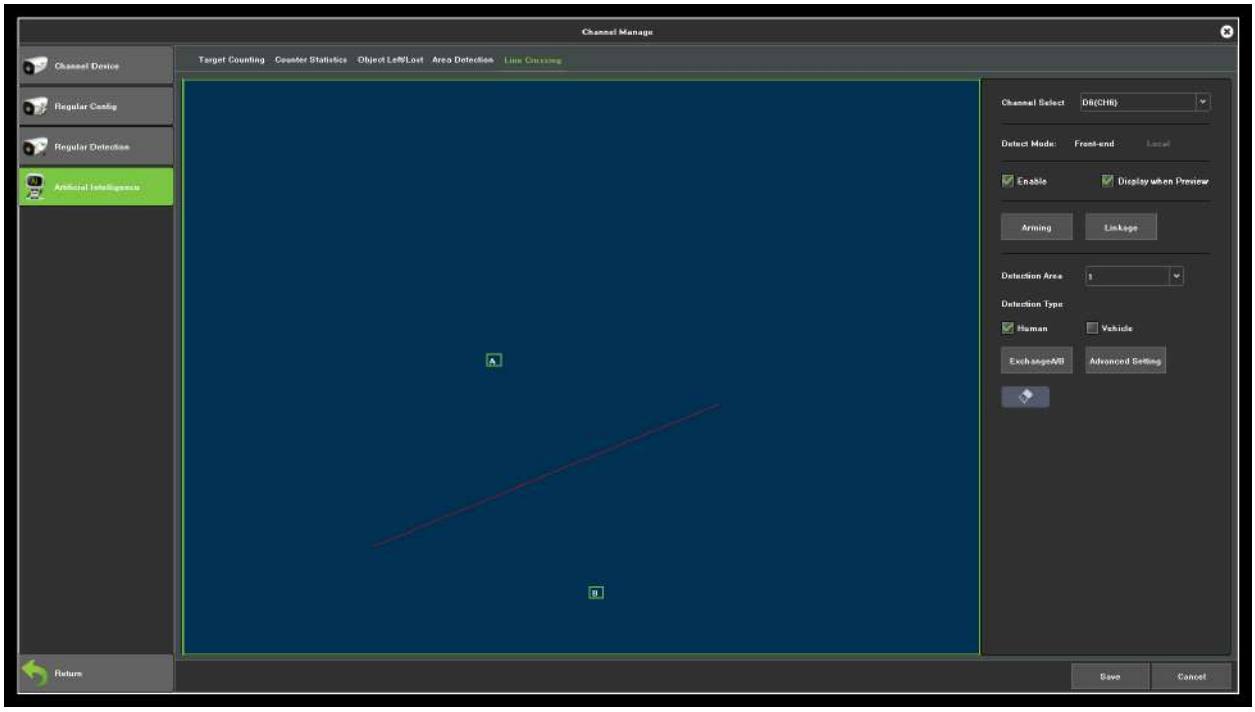


Figure 7.33 Line Crossing

- **Channel:** Select the channel.
- **Detect Mode:** Divided into front-end and local, two models to the actual capacity of the product subject, select the front-end mode requires front-end access to IPC support, select the local mode requires the device support.
- **Enable:** Set whether to enable zone detection function.
- **Display when Preview:** Set whether to display the set rules and test results in the preview interface.
- **Arming:** That is, set the deployment time, the default is all-day deployment.
- **Linkage:** You can enter the linkage configuration page when the alarm is triggered, and perform the linkage configuration operation.
- **Detection Area:** Filter out less than the proportion of the set of moving objects.
- **Detection Type:** Set the detection object to be human or vehicle, and an alarm will be triggered when the object detected in the area is the set value.
- **ExchangeA/B:** On the screen with the mouse to draw the test line, a key exchange A/B.
- **Advanced Setting:**
- **Detection Type:** There are two types: "A > B Alarm" and "A <-> BAlarm"
- **Ratio:** moving objects in the screen than the size of the set when the size can be used as a "target".

According to the above settings, in this picture of a channel, accounted for more than 30 of the moving object, across the detection line from A region to B area, triggered area detection alarm, as shown in

Figure 7.34 is the alarm occurs real-time preview images (where the detection line or the red and green are blinking alternately, and the alarm is triggered, And the blue rectangle moves with the target crossing the cordon).

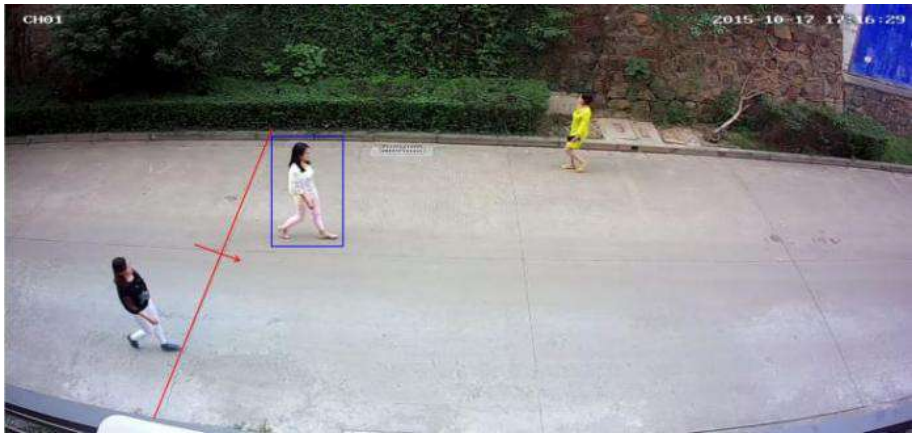


Figure 7.34 Line Crossing

7.5. Channel Zero Setting

7.5.1. Parameter config

Parameter config interface is shown in Figure 7.35, then set the related channel information after enable the parameter configuration.

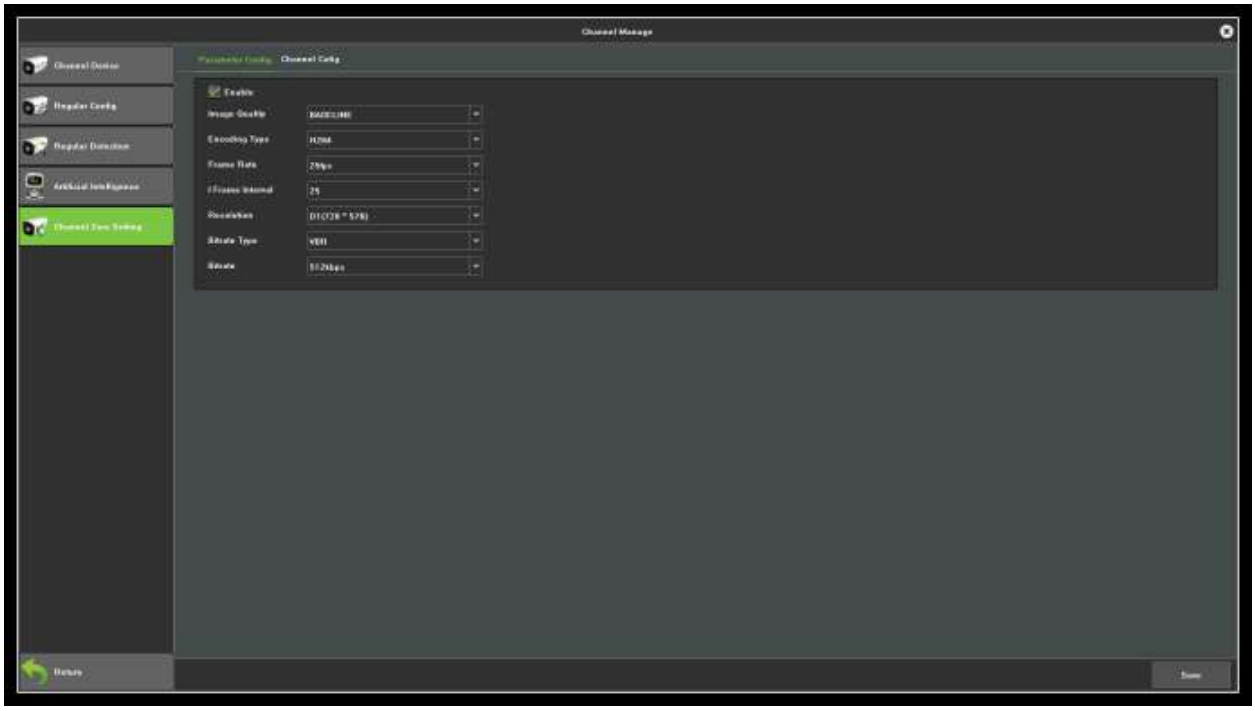


Figure 7.35 Parameter Configuration

- **Resolution:** Set the video resolution.
- **BitRate Type:** Choose the bit rate type， the default is CBR.
- **BitRate:** Set the bit rate upper limit.
- **Video Frame Rate:** set the frame rate according to the requirements.

7.5.2. Channel Config

The Channel config Interface, is shown in Figure 7.36.

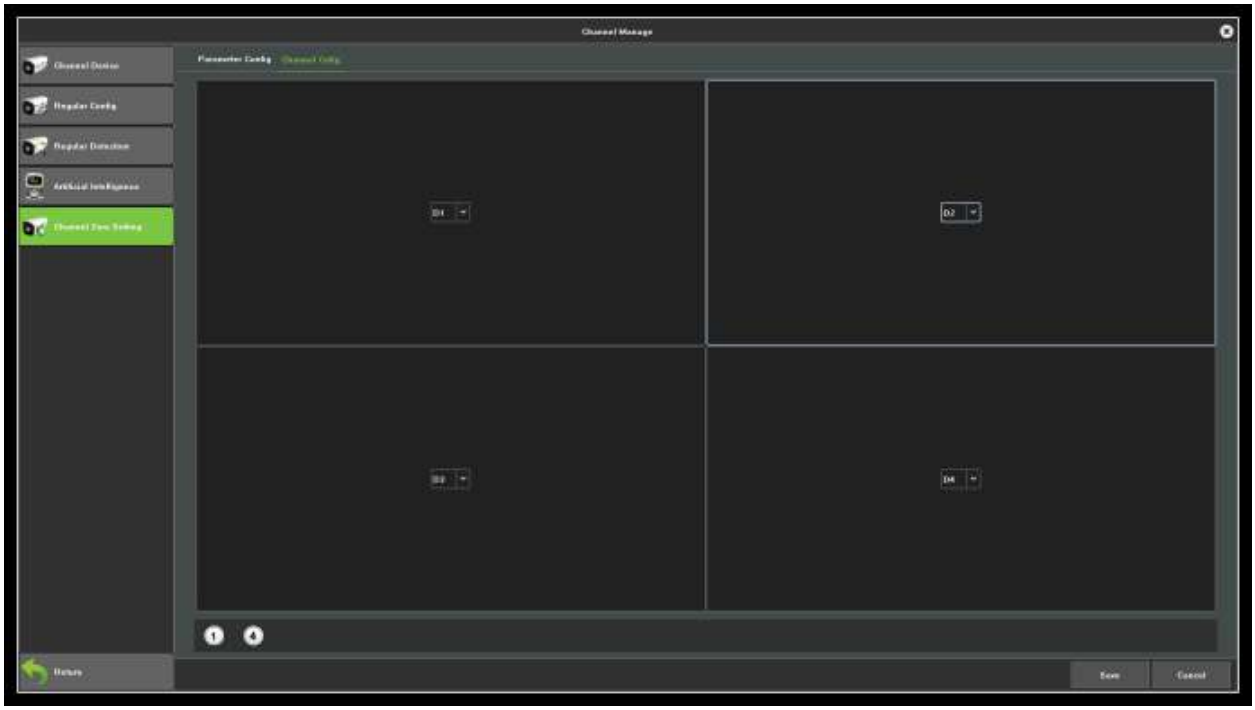


Figure 7.36 Channel Configuration

8. Record Manage

8.1. Record Configuration

Before you start:

Make sure that the HDD has already been installed. If not, please install an HDD.

Steps:

1. Enter the **Record Configuration** interface to configure the recording parameters, as shown in Figure 8.1.

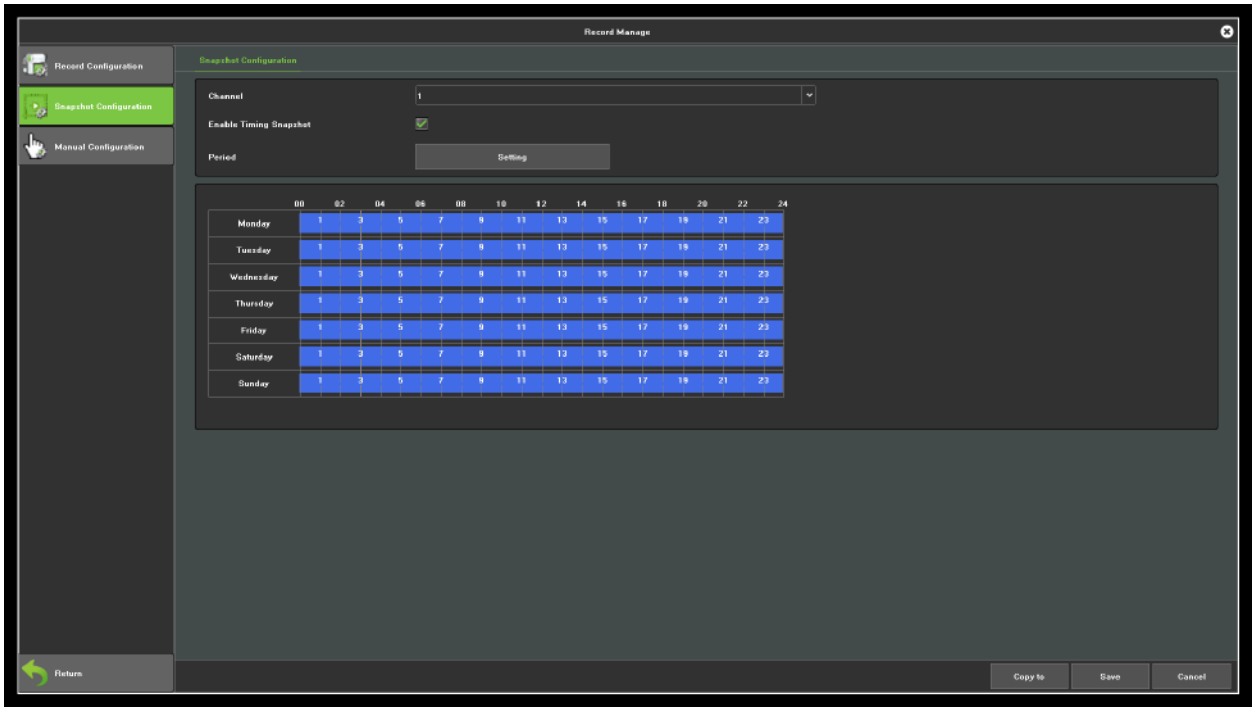


Figure 8.1 Record Setting Interface

2. Select the Channel you want to configure.
3. Select the Record Mode.
4. Click **Setting** button to set the record time, as shown in Figure 8.2.
5. **Pre-Record:** The time you set to record before the scheduled time or event.
6. **Record Delay:** The time you set to record after the scheduled time or event.

Note: Use the Copy to button to do the same setting to the channel needed.

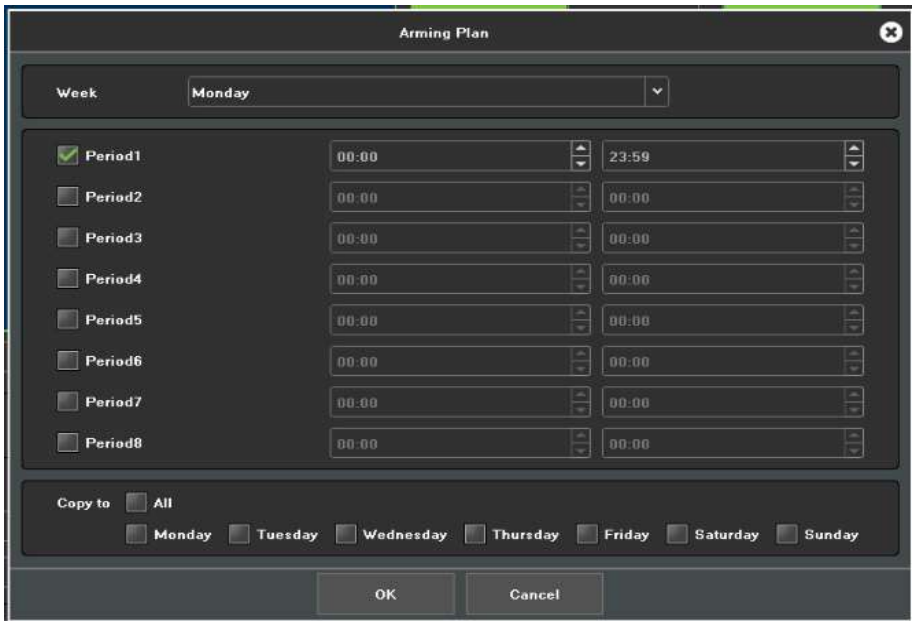


Figure 8.2 Arming Schedule

8.2. Manual Operation

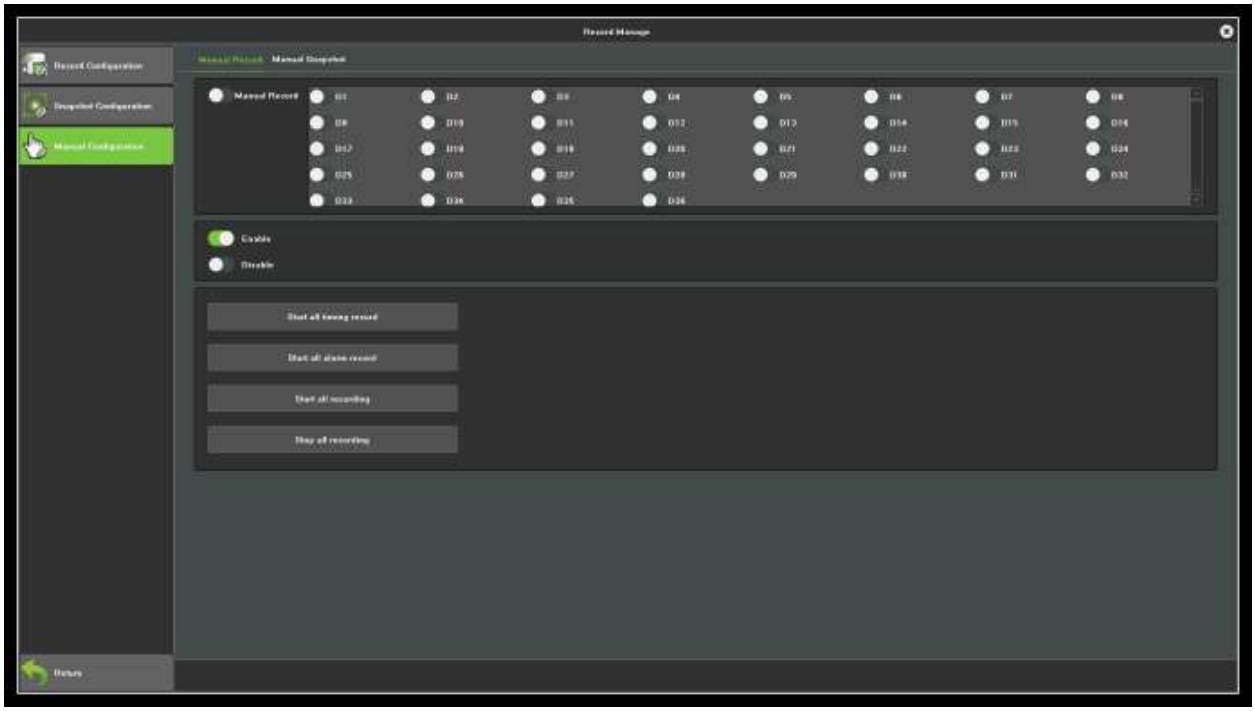


Figure 8.3 Manual Operation

8.2.1. Snapshot

The snapshot interface, as shown in Figure 8.3.

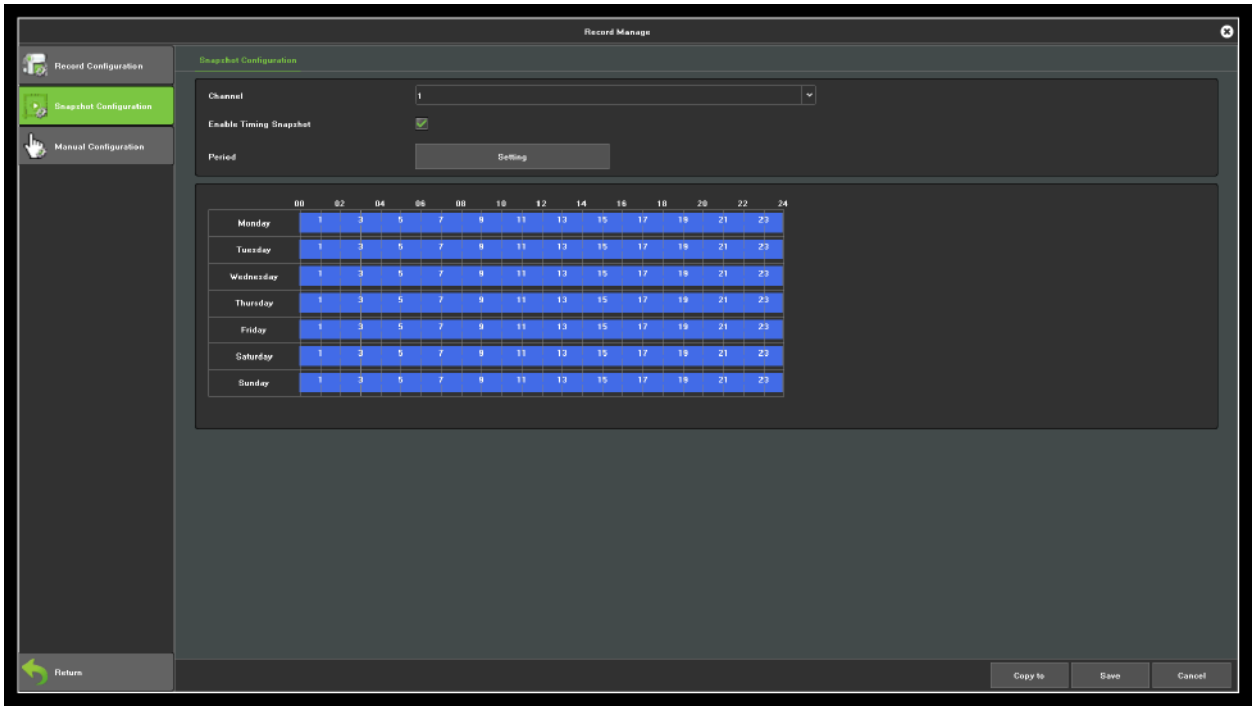


Figure 8.4 Snapshot

9. Storage Manage

Click icon, entering the disk backup interface, there are three modules in this interface, the following instructions, respectively.

9.1. Storage Management

The information on the page explains in detail the situation of the current NVR receive the hard disk, as shown in Figure 9.1, the device connects 1 hard disk, and is in normal state video recording.

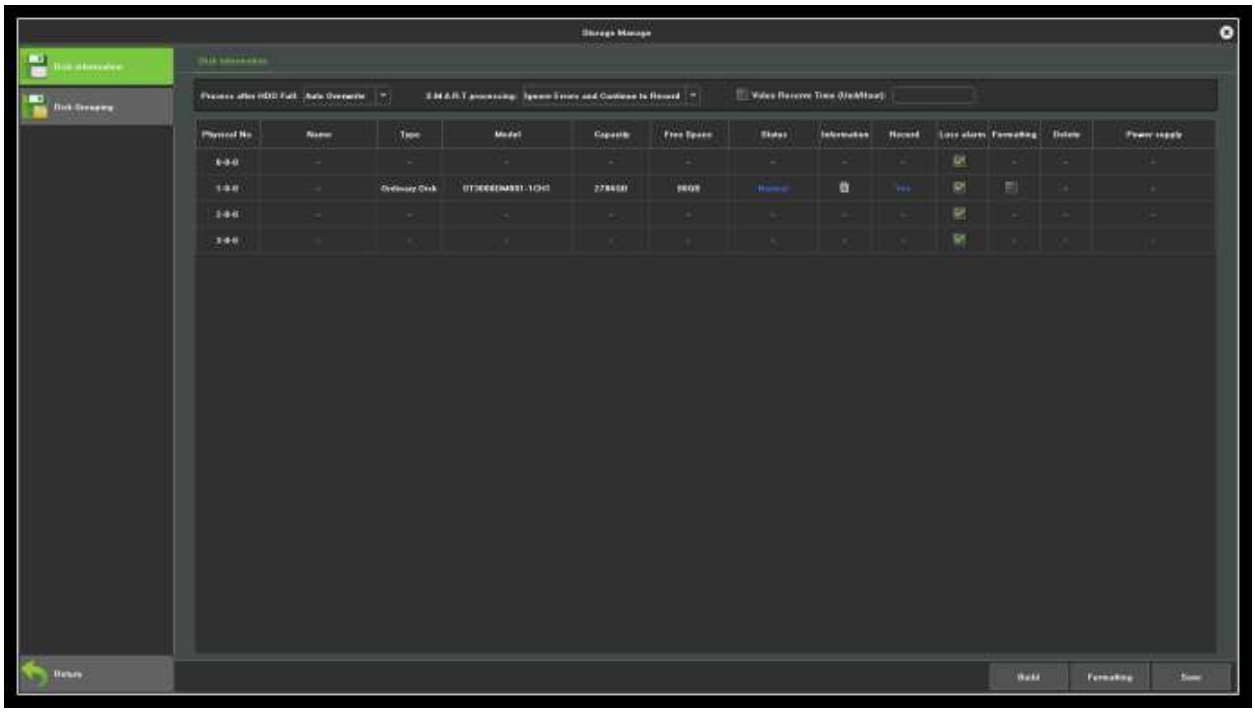


Figure 9.1 Storage Management

- **Process after HDD Full:** There are "Auto Overwrite" and "Stop Recording" two ways, the default is "Auto overwrite".
- **SMART Processing:** There are "Ignore error, continue recording" and "Error happen, stop recording" two ways.
- **SMART information:** click icon will pop-up the SMART information list of current hard disk.
- **Loss Alarm:** Detect that the SATA port will give an alarm if there is no hard disk connected.
- **Format:** Check the hard disk which needs to be formatted, then click the Formatting button. (**Note:** when the status is "Need to be formatted", only when the corresponding hard disk only when finish formatting corresponding hard disk, can the hard disk continue video, note: please don't do other operation in the process of formatting.)

9.2. Disk Group

9.2.1. Automatic Grouping

The system default is video in accordance with the "Automatic grouping", that is to say, all channel video defaulted to write video data in a hard disk, switch to next hard disk after finish video, if the NVR connect only one hard disk, namely, in accordance with the type of storage management page in the "video post-processing" selected, cover the history video or stop video.

Note that, when the channel of device video is more than 32CH and connect multiple hard disk, to ensure the efficiency and performance of hard disk, default to video in 2 hard disk, video in one hard disk first 32CH of the video channel, the remaining channel video in another hard disk video.

9.3. Manual Grouping

Manual grouping function is to group the channel, the channel of different group can video in different hard disk, and each channel can be set quotas, as shown in Figure 9.2.

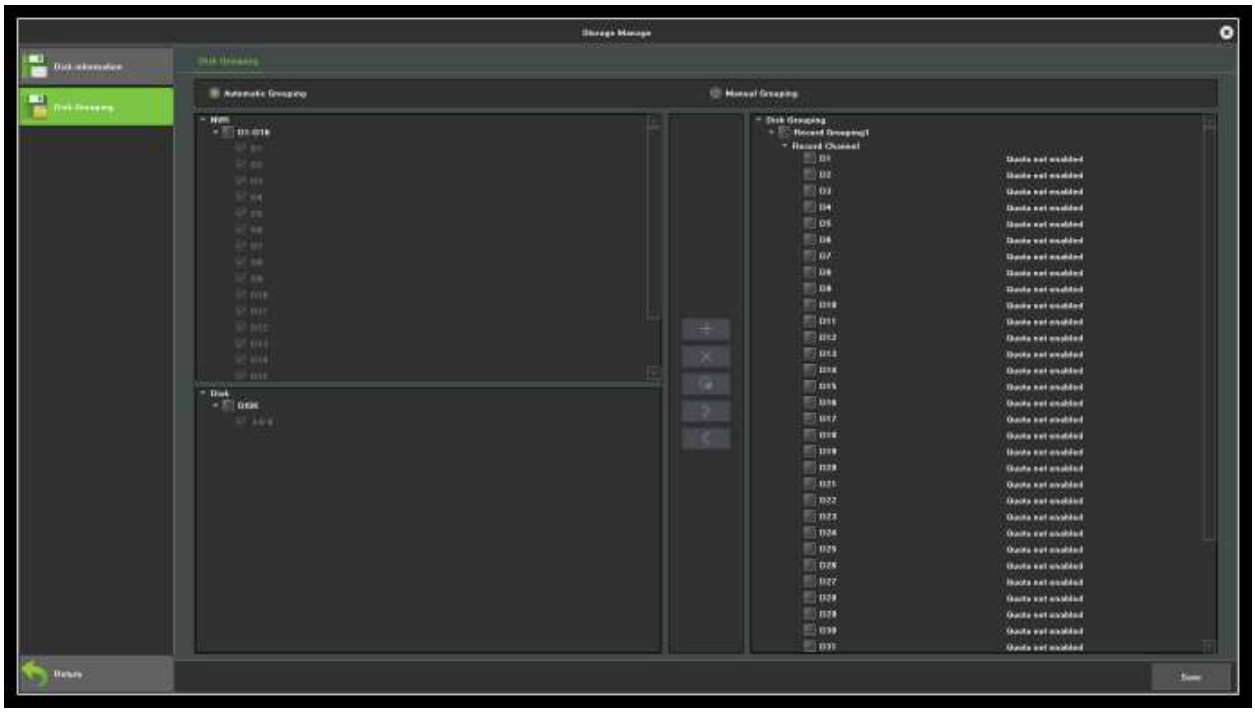


Figure 9.2 Manual Grouping

Above the middle column function button respectively are“ Create a group”, “delete the group”, “quota setting”, “Right move to add channels to group”, “Left move to delete channels to group”, note that, the channel preview without being added into the group won’t video, the hard disk without being grouped is free hard disk, there would be no writing data.

Note: when manually group, it may clear the history video in the hard disk, please be careful when operating, to avoid irreparable harm.

10. System Manage

Click icon, can enter the system manage interface, this part includes six parts altogether, note the following instructions.

10.1. System Information

Can view the device information, stream info and online users.

10.1.1. Device Information

Device information interface, as shown in Figure 10.1, can view the versions of hardware and software.

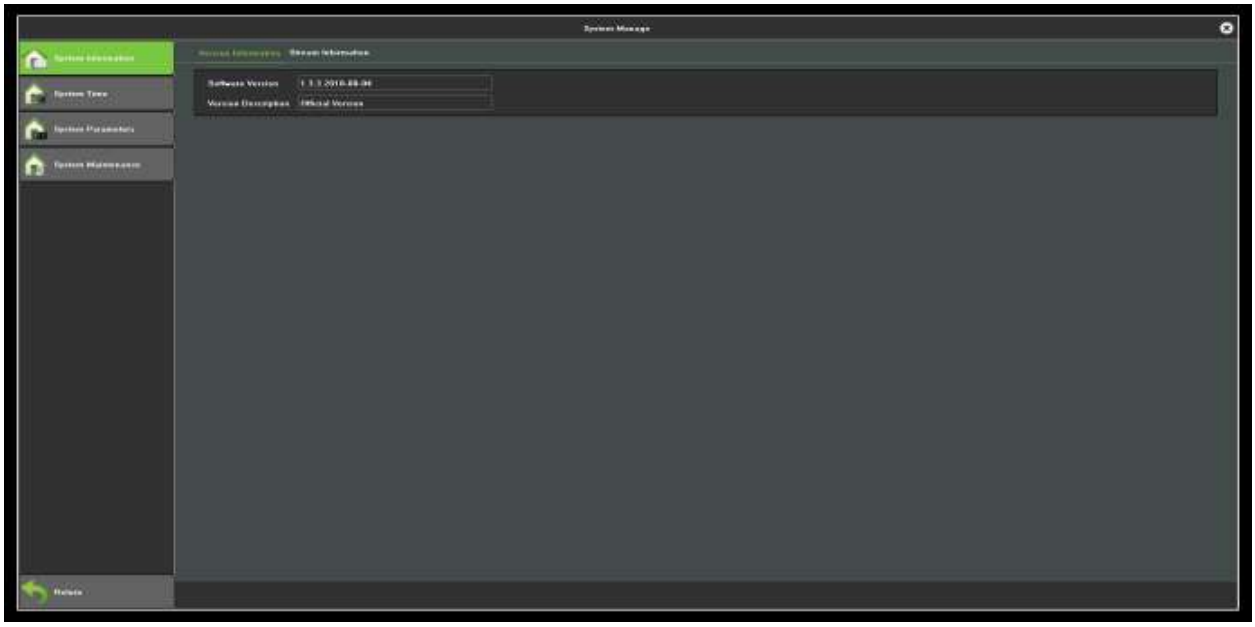


Figure 10.1 Device Information

10.1.2. Stream Information

View the stream status of the current device, as shown in Figure 10.2.

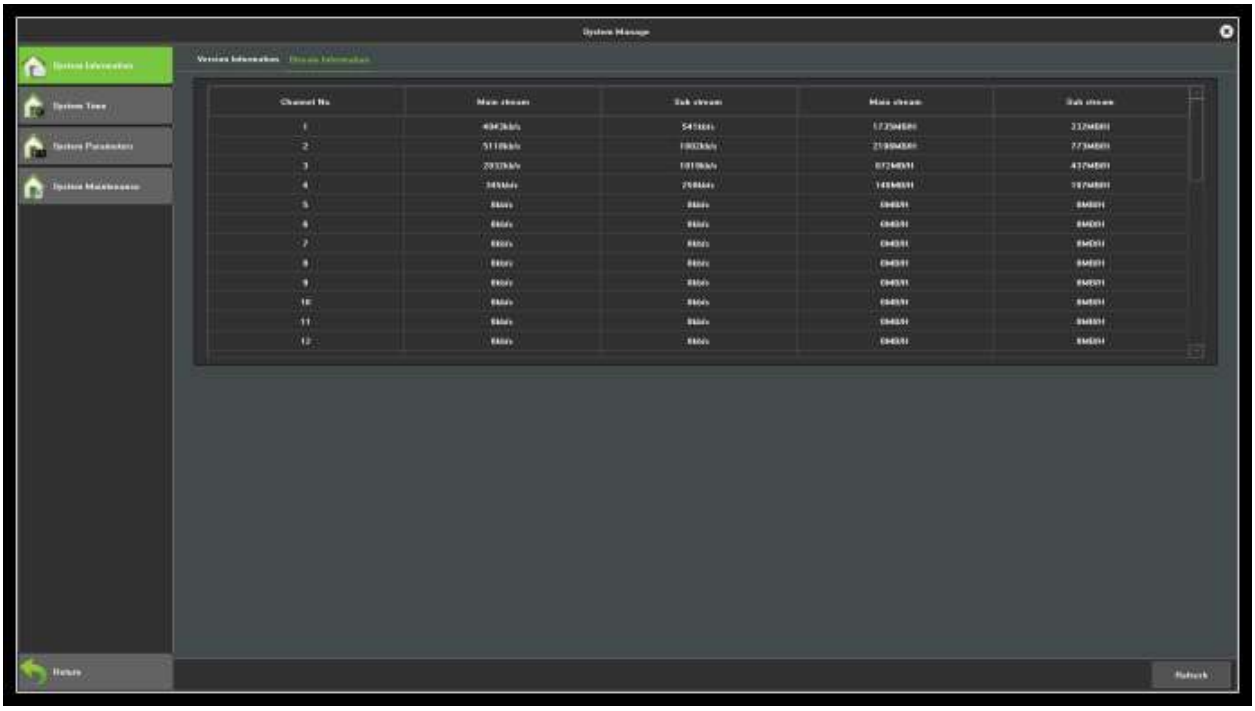


Figure 10.2 Stream Information

10.2. Configuration Management

As shown in Figure 10.3, can export the configuration, import configuration and restore the default operation.

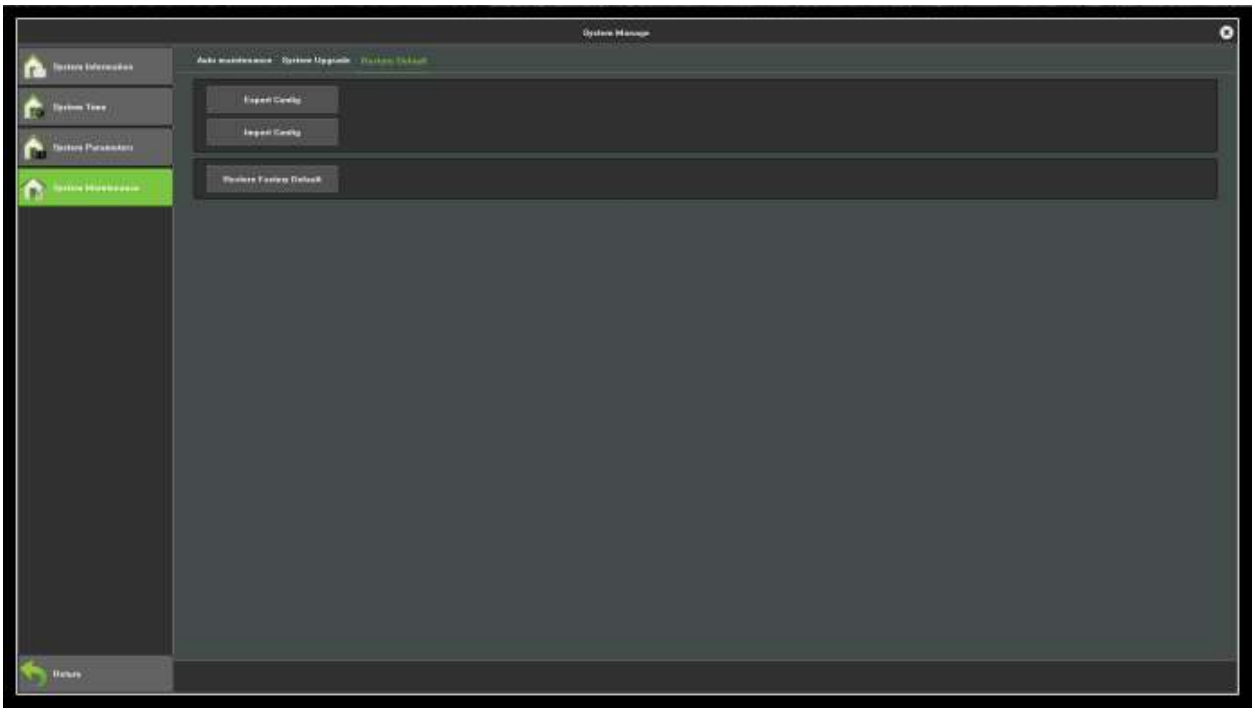


Figure 10.3 Configuration Management

10.3. System Upgrade

As shown in Figure 10.4.

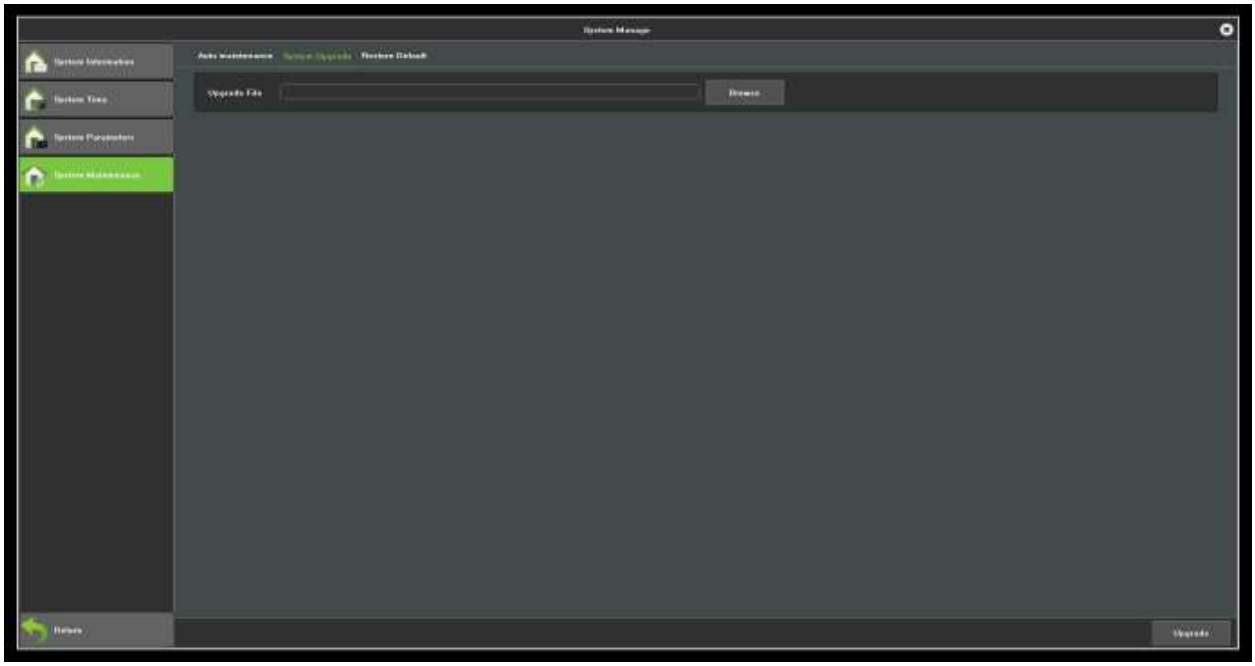


Figure 10.4 System Upgrade

NVR Upgrade: Click **Browse**, select to upgrade the file, and then, the system will automatically restart after upgrading.

10.4. Auto Maintenance

Can set the maintenance mode, as shown in Figure 10.5. You can select the maintenance mode in this interface. (The default mode is disable)

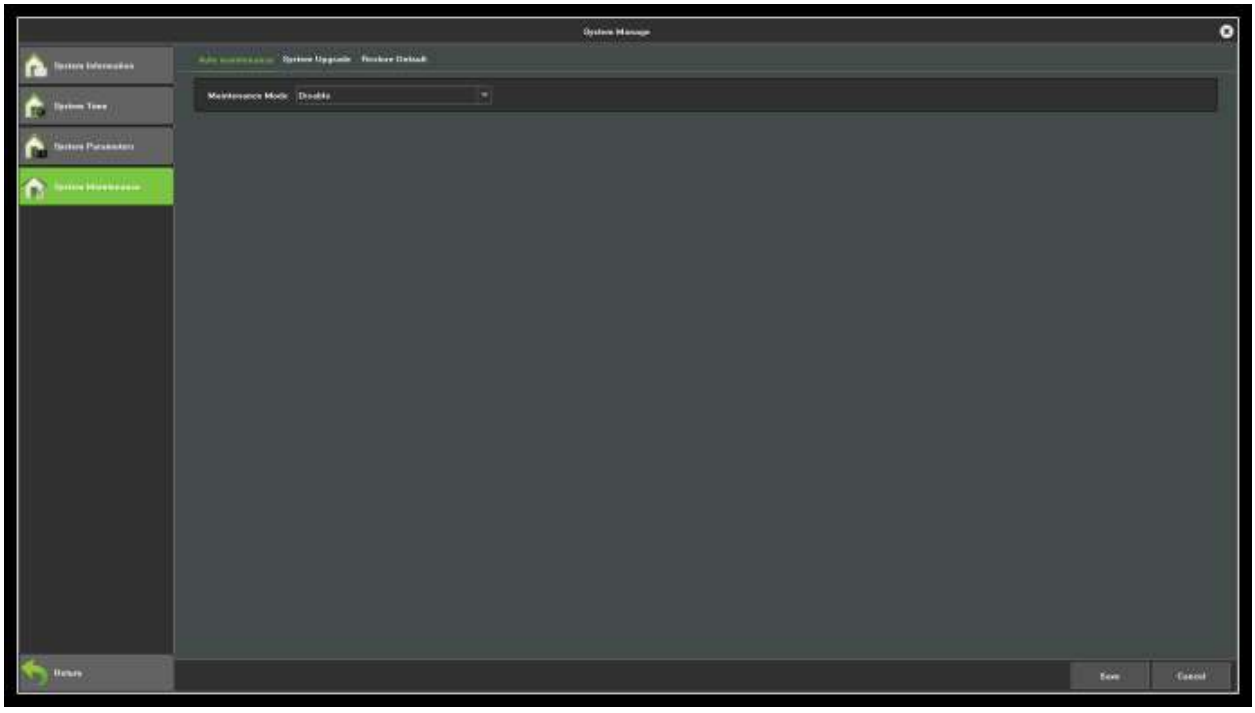


Figure 10.5 System Upgrade

10.5. Time Setting

10.5.1. Device Time

Time settings interface, as shown in Figure 10.6, can set the device time, time zone selection.

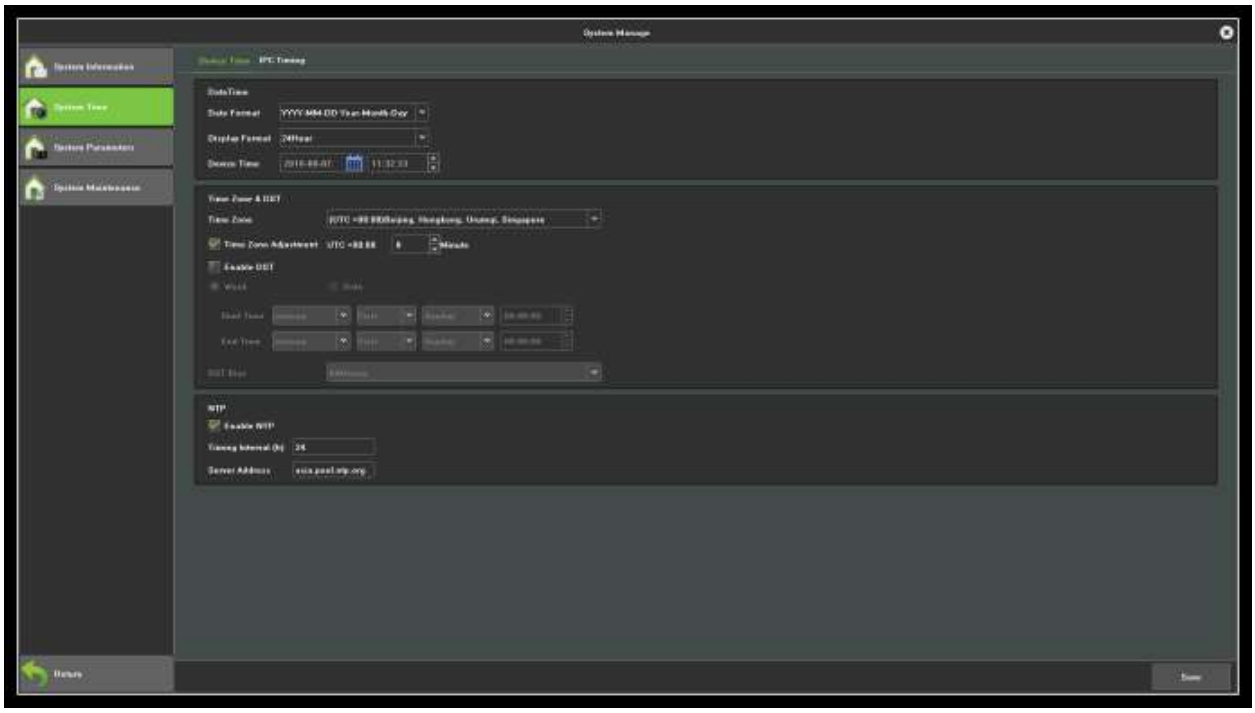


Figure 10.6 Time Setting

- **Device time:** Can manually modify the device time, set the time, click **Modify**, then save time.
- **Data Format:** Set the data format.
- **Time Zone:** Switch time zones, the page will pop up a new date and time, there is daylight saving time function part time zone, the time zone is with functions of fine-tuning.
- **Enable Summer Time:** Click to **Enable Summer Time**, just need to finish setting the start and end time.
- **NTP:** Enable/Disable NTP (the device need to access network).

10.5.2. IPC Time

The IPC time set interface, as shown in Figure 10.7.

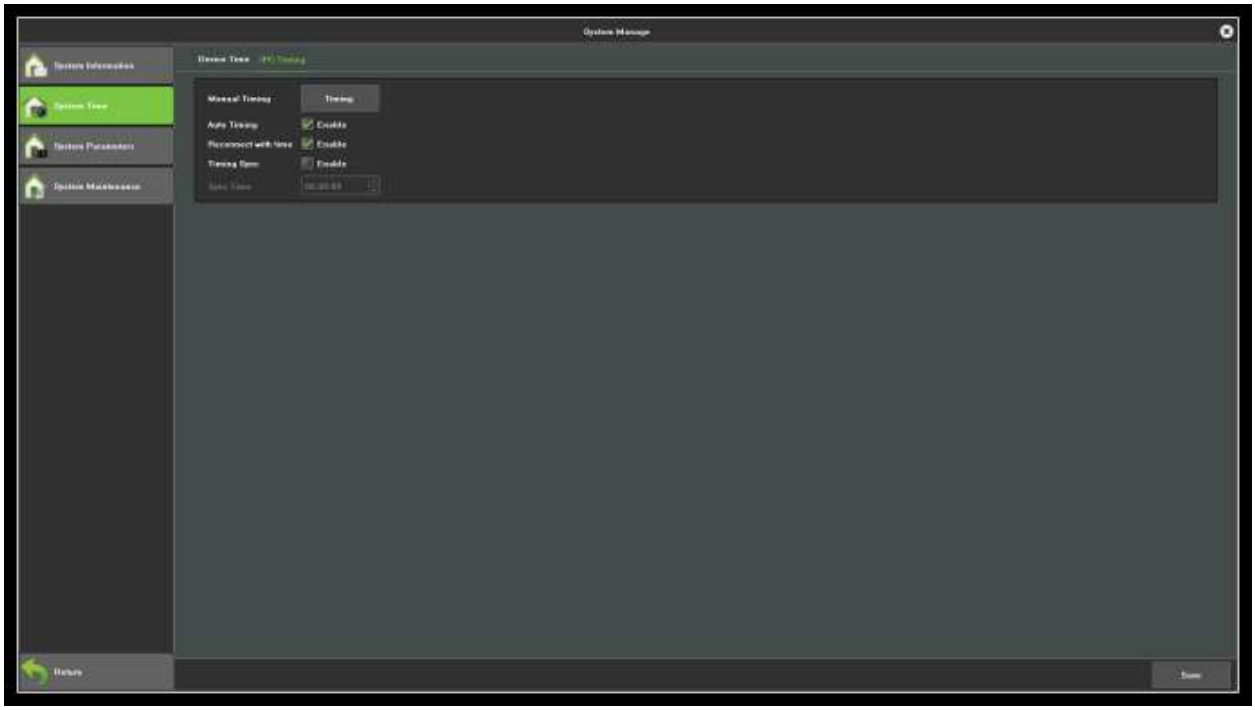


Figure 10.7 IPC Time

- **Manual Timing:** Click Manual Timing button, adjust the IPC time as same as device time.
- **Auto Timing:** Enable the auto timing, the IPC will be timing when it is different to the device time.
- **Reconnect Timing:** Enable the reconnect timing, the IPC will be timing after reconnect to device.
- **Timing Sync:** Enable the Timing sync, the IPC will be timing on the time you setting.
- **Timing on Time:** Set the time customers.

10.6. Device Parameter

The Device Parameter interface, as shown in Figure 10.8.

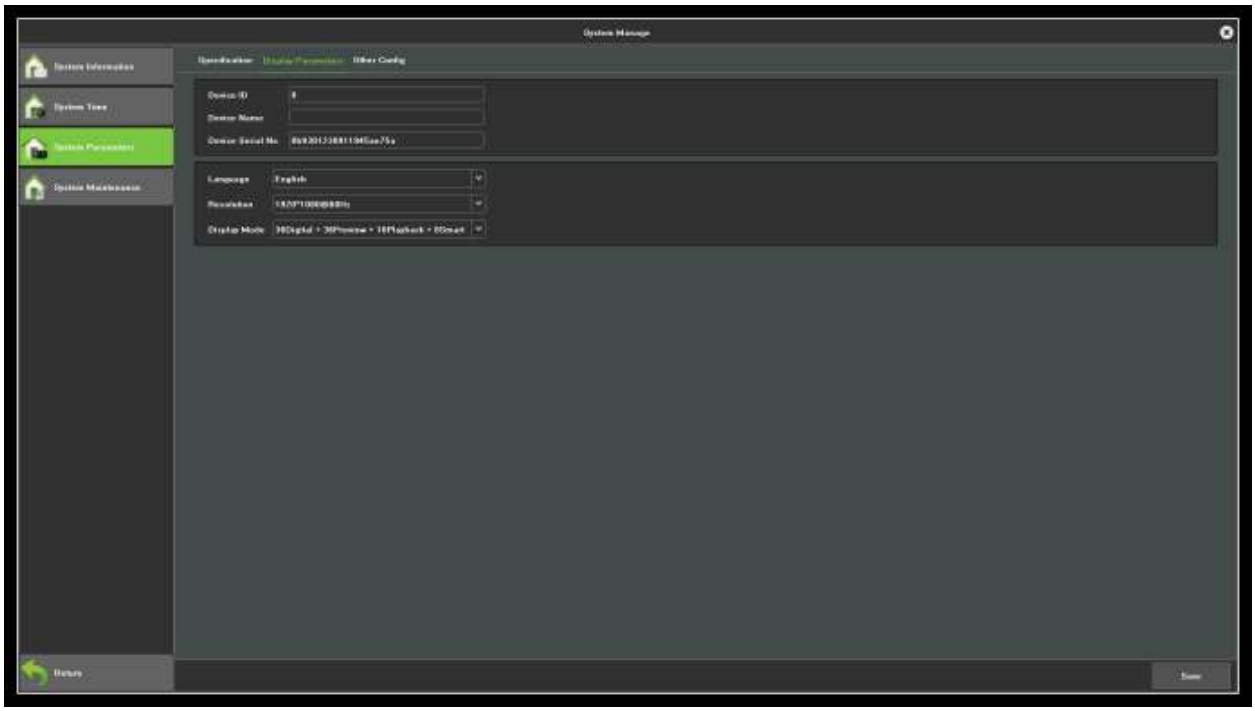


Figure 10.8 Device Setting

- **Device ID:** Namely device number, default to 0.
- **Device name:** Can edit the device name, default to blank.
- **Product Serial No:** Show the product serial number.
- **Total Channels:** Show the max preview channel number, different model support different max channels.
- **HDD Number:** Show the number of hard disk access.
- **Alarm Input NO.:** Namely the alarm input channel.
- **Alarm Output NO.:** Namely alarm output channels.
- **Language Select:** Can modify the system language of NVR, need to restart to take effect.
- **Resolution:** Can modify the local monitor resolution of NVR (need monitor support), it come into effect immediately after modified.
- **Preview ability:** Preview max same screen display channels the device supported and the max intelligent detection channel numbers (different models of NVR, different ability), need to restart to take effect.
- **Info Display:** There are 4 kinds of display mode, the preview interface device list refresh in time after modify successfully.
- **Instant Playback:** There are 5 kinds of time choice, it come into effect immediately after modified.
- **RS485 Device:** Set the 485 control mode, default to None.
- **IPC Protocol:** Selective to enable the protocol, click **Setting** button, as shown in Figure 10.9.

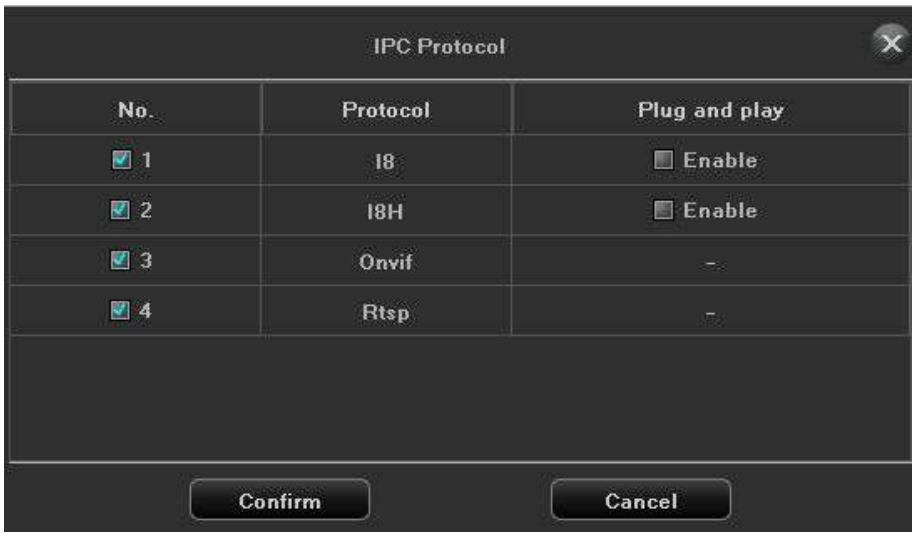


Figure10.9 IPC protocol Management

- **Auxiliary User:** Open/close function, default to close, restart device to open.
- **Mouse Speed:** Adjust the speed of the mouse, it come into effect immediately.

11. Network Manage

The module has 5 pages, the following description respectively.

11.1. Basic Setting

The network Setting interface is shown in Figure 11.1, then can set the IP parameters.

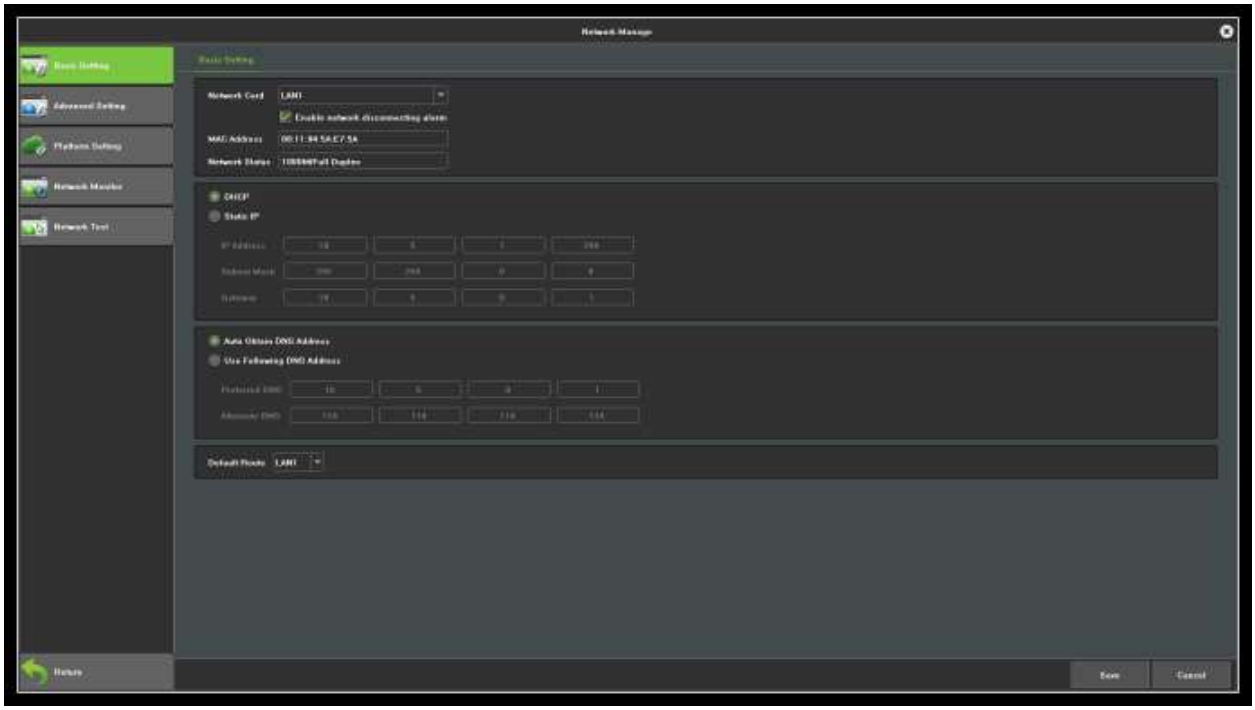


Figure11.1 Basic Setting

- **Network card:** According to the need can choose a different card type.
- **MAC Address:** Show the physical address of the the current network interface, unchangeable.
- **DHCP:** When open it, IP/mask/the gateway can not be set, if the current DHCP is effective, then it will obtain new IP/mask/gateway the router assigned (remote login need to use the new IP address), if it doesn't take effect, IP/mask/gateway will still show the previous address (can use the old IP address to remotely login equipment).
- **IP:** Set the IP address, the default IP of the network card 1 is 192.168.1.188, the default IP of the network card 2 is 192.168.2.188.
- **Mask:** Set the mask.
- **Gateway:** Set the gateway address.

11.2. Advanced Setting

The Advanced Setting interface, as shown in Figure 11.2.

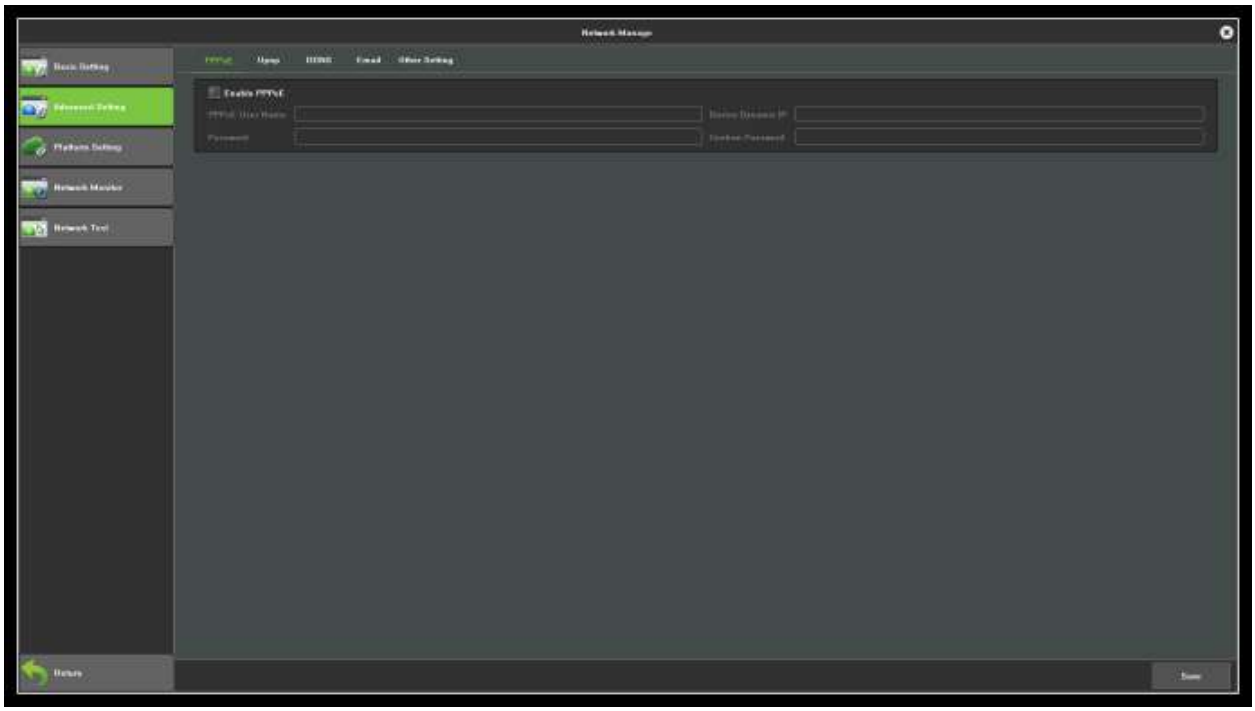


Figure 11.2 Advanced Setting

11.2.1. Enable PPPoE

Need to fill in the correct PPPoE user name and password, if the network connect, can obtain the dynamic address of the device.

11.2.2. Enable UPnP

Defaulted RTSP, RTMP, HTTP, HTTPS and ONVIF port numbers are respectively 554, 1935, 80, 8081 and 8082, port numbers can be modified (modifying the internal port need to restart the device to take effect), UPnP status is defaulted to ineffective state, it will obtain the external IP address after take effect.

11.2.3. DDNS Setting

The default is "disable DNS" status, each set column can not be set, it needs to switch to the "enable DNS" status, as shown in Figure 11.3, note that, this function need to ensure that device can normal access network when using.

- **DDNS Type:** there are 5 types of the defaulted list.
- **Server Address:** Each server type is corresponding to the existing default server domain name.
- **Port:** Each server type is corresponding to the existing default port.
- **The User Name and Password:** Manually enter the correct user name and password.
- **Domain:** Manually enter the correct domain name (After the function is OK, you can use the domain name remote access device).

- **Update Interval:** Set the update interval time.

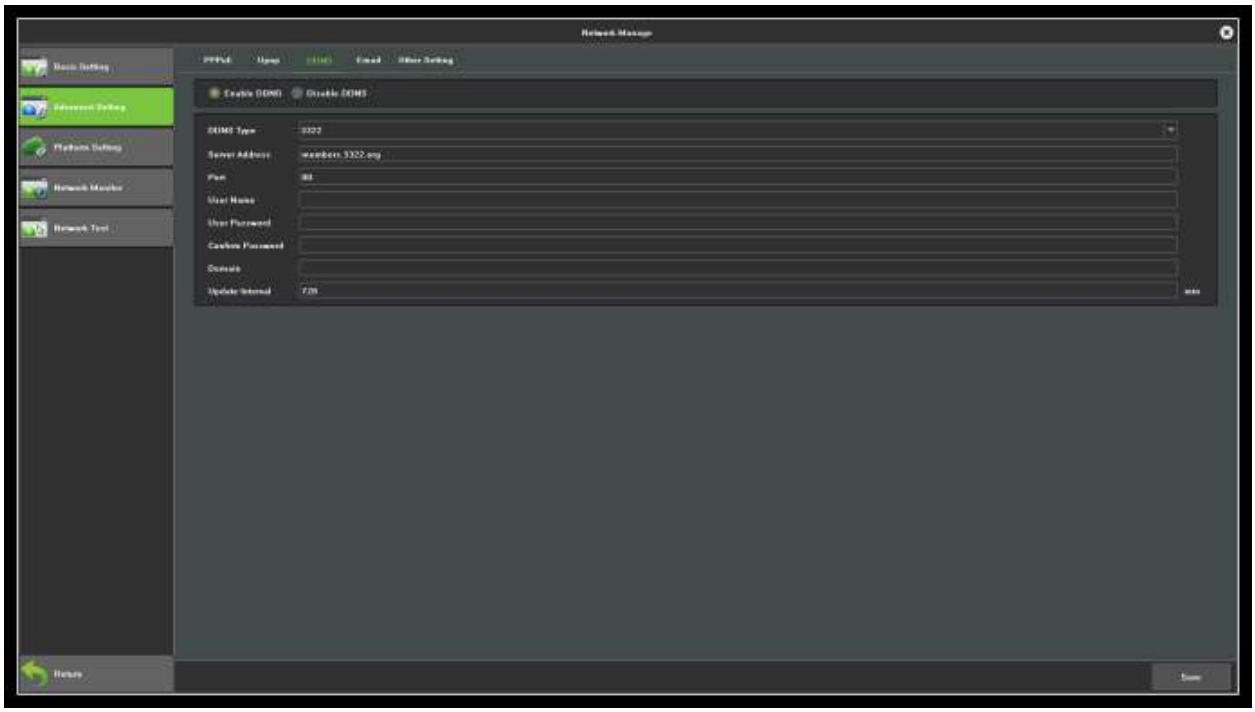


Figure11.3 DDNS Setting

11.2.4. Email Setting

The settings in this page is used with "Email Linkage" in the "Linkage Setting ", the sender email address and password, the recipient email address, SMTP server address and port information need to input correctly in the corresponding field according to the requirements of the format, here are other additional features on the page, as shown in Figure 11.4.

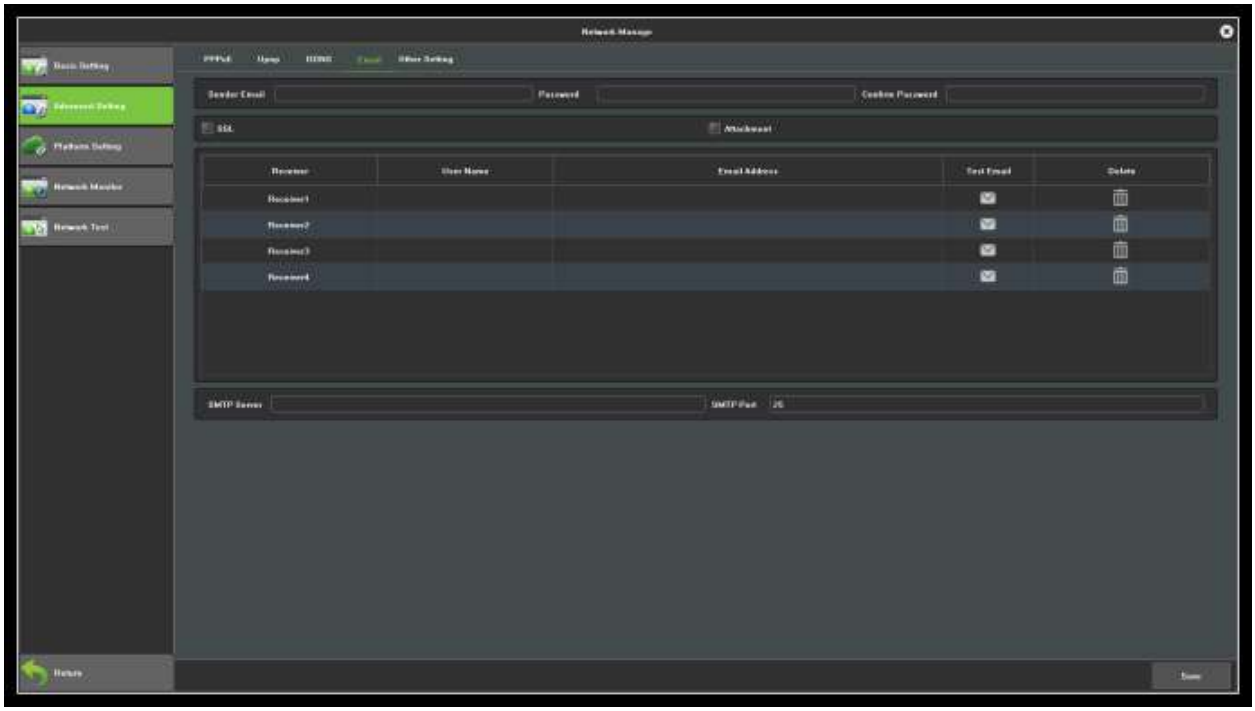


Figure 11.4 Email Setting

1. Fill in the multiple recipient mailbox, the sender email address will send E-mail to multiple recipients mailbox at the same time.
2. Check Attachment function, the mail the recipient received in his mailbox is with attachments, the attachment content is linkage capture file of the corresponding channel (zip format).
3. Click the "test mail" corresponding field icon, Let the sender mailbox to send mail to the recipient's mailbox, the success or failure will pop-up tips.

Note: use Email linkage function need to ensure a good network environment, then the device can smoothly access external network.

11.3. Management Platform

This page is the enable interface of the platform agreement, as shown in Figure 11.5, defaulted to enable Fseye and Web Server protocol (Support the device remotely login), other services enable according to the need. Note that, enable/disable parts of service need to restart the device.

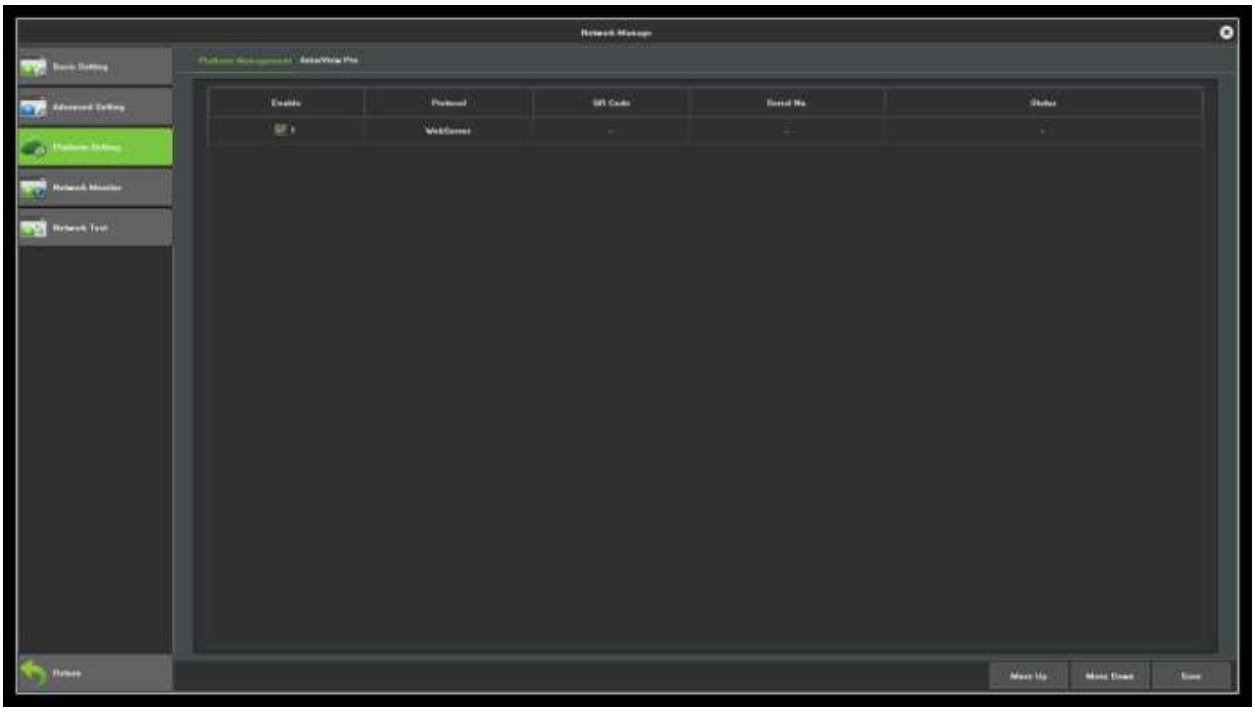


Figure 11.5 Management platform

Click AntarView Pro icon, can view QR code, as shown in Figure 11.6.

Figure 11.6

11.4. Network Flow

As shown in Figure 11.7, can monitor the network traffic of the current device.

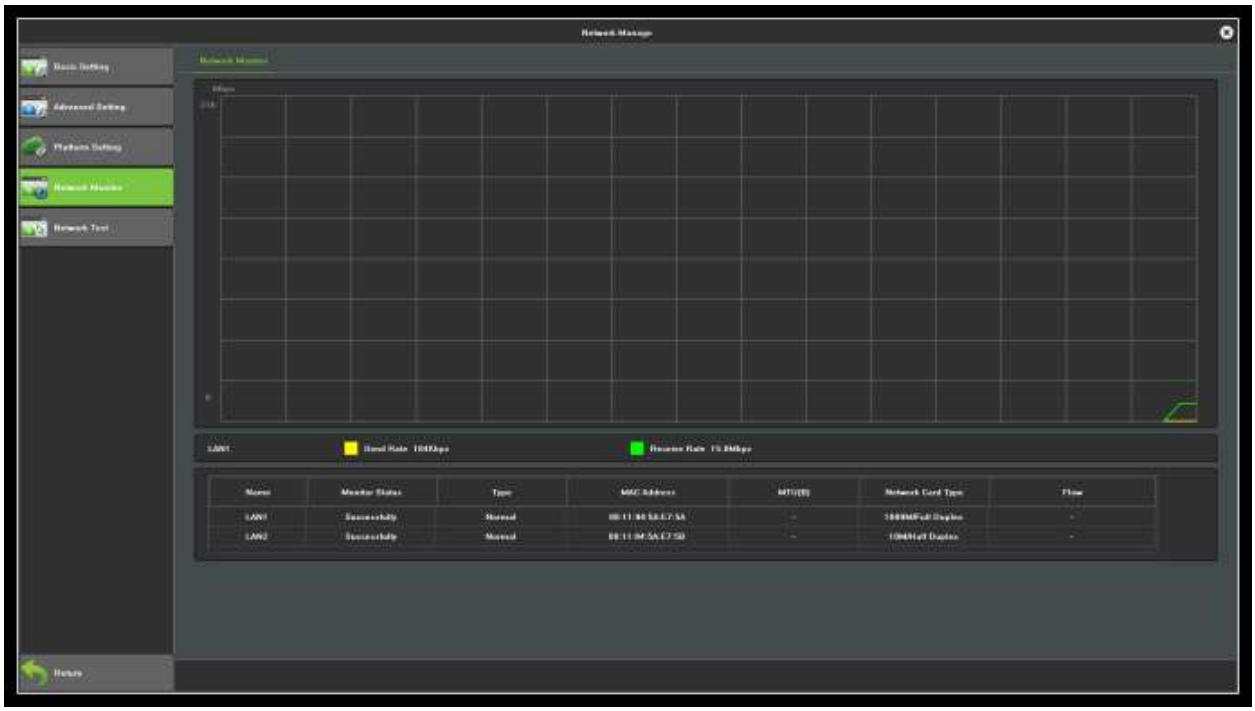


Figure 11.7 Network Flow

11.5. Network Test

The network test interface, as shown in Figure 11.8.

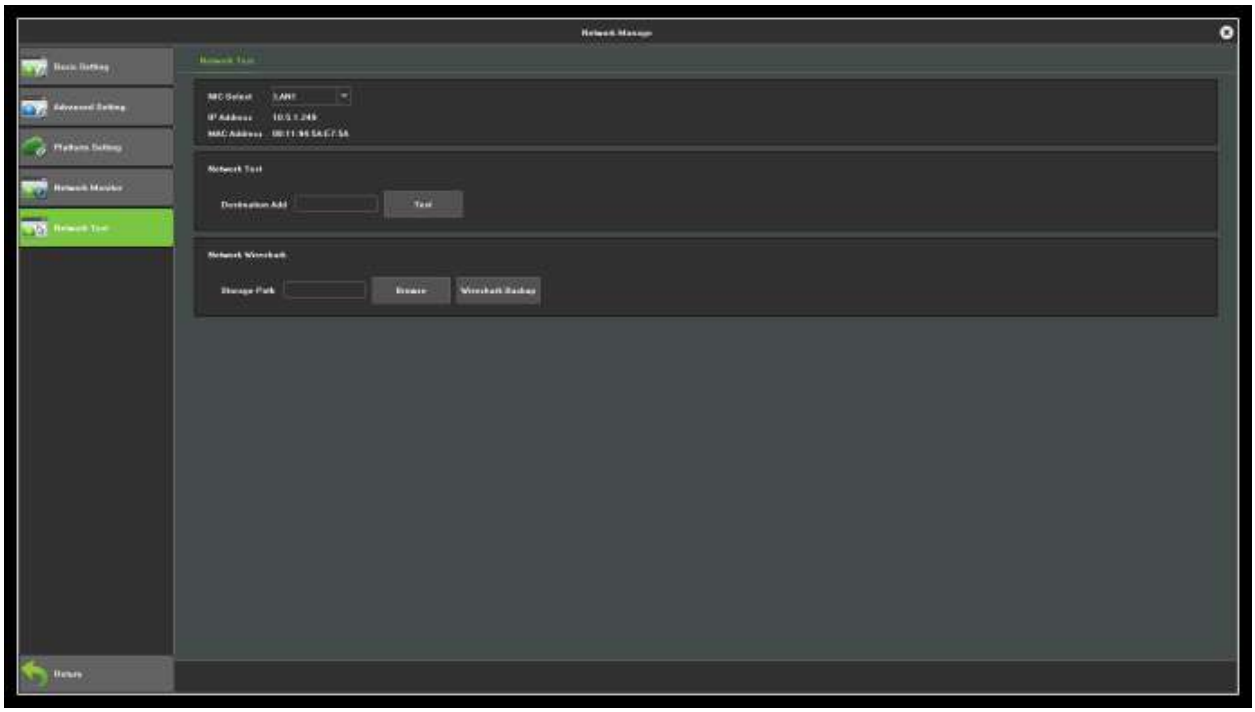


Figure 11.8 Network Test

- **NIC Select:** Select the network card, the default is network card 1.
- **Destination Add:** Input the network address that needs to be tested.

- **Network Wireshark:** Click **browse**, set up storage paths, click **Wireshark backup**, then complete the backup.

12. Alarm Management

There are 2 pages of this module, the following instructions respectively.

12.1. Alarm Input

The Alarm input interface, as shown in Figure 12.1.

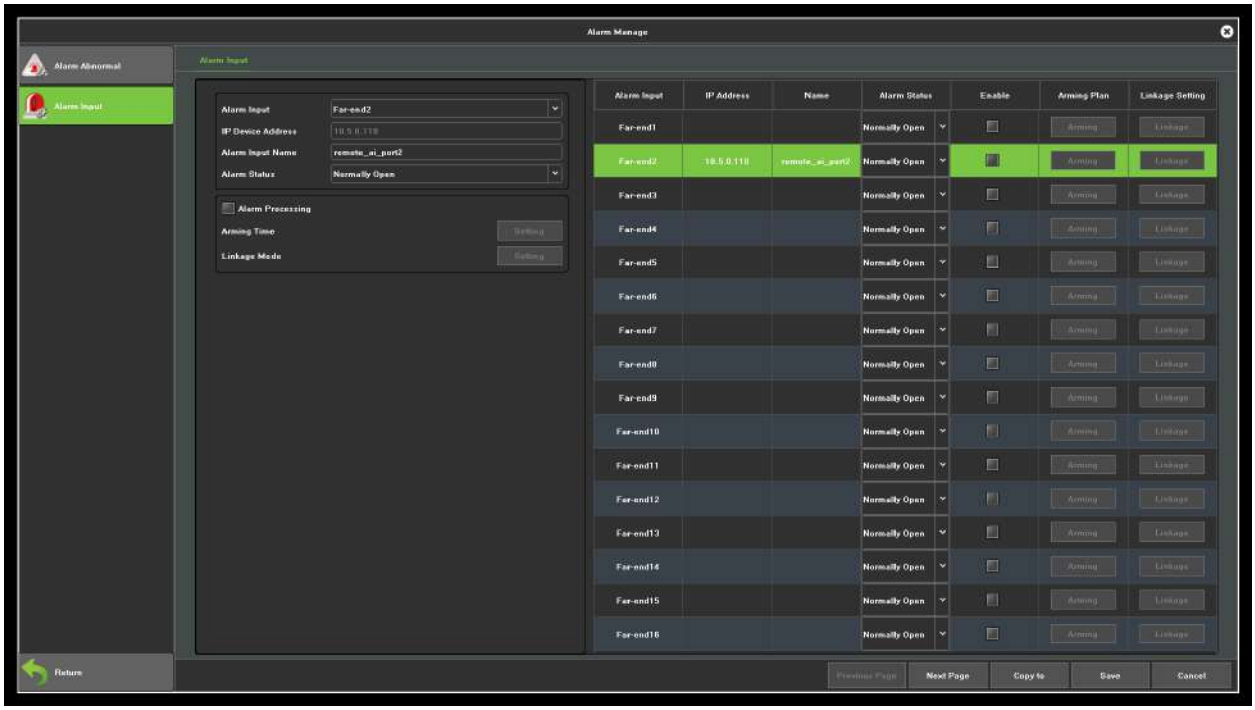


Figure 12.1 Alarm Input

- **Alarm Input:** Select channel.
- **Alarm Input Name:** Edit alarm name.
- **Alarm Status:** Set the alarm state, the default value is always open.
- **Arming Planning:** Set the arming schedule, as shown in Figure 12.2.

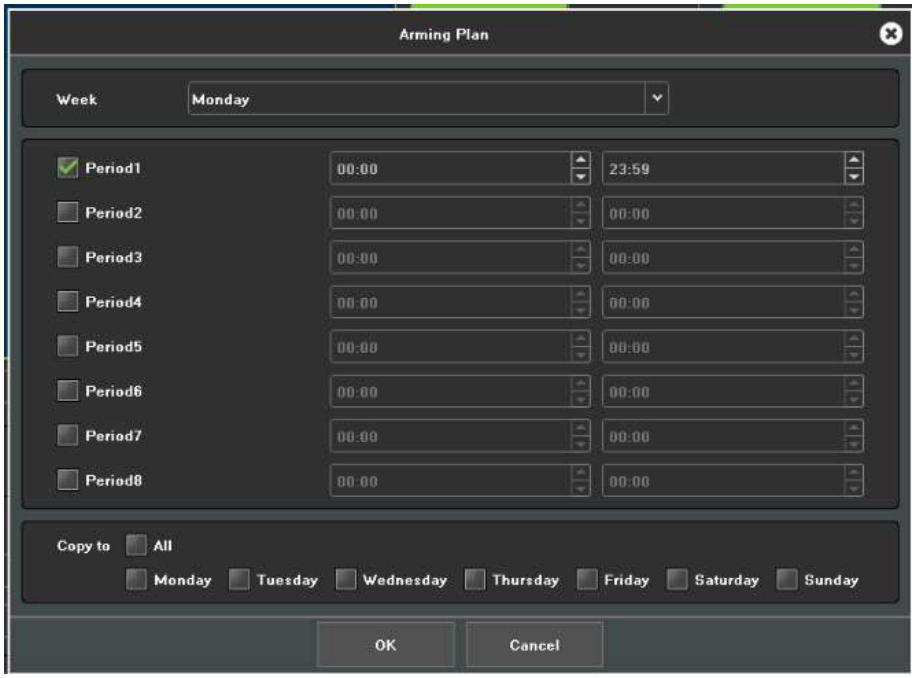


Figure12.2 Arming Schedule

- **Linkage Way:** Choose the type of alarm linkage, as shown in Figure 12.3.

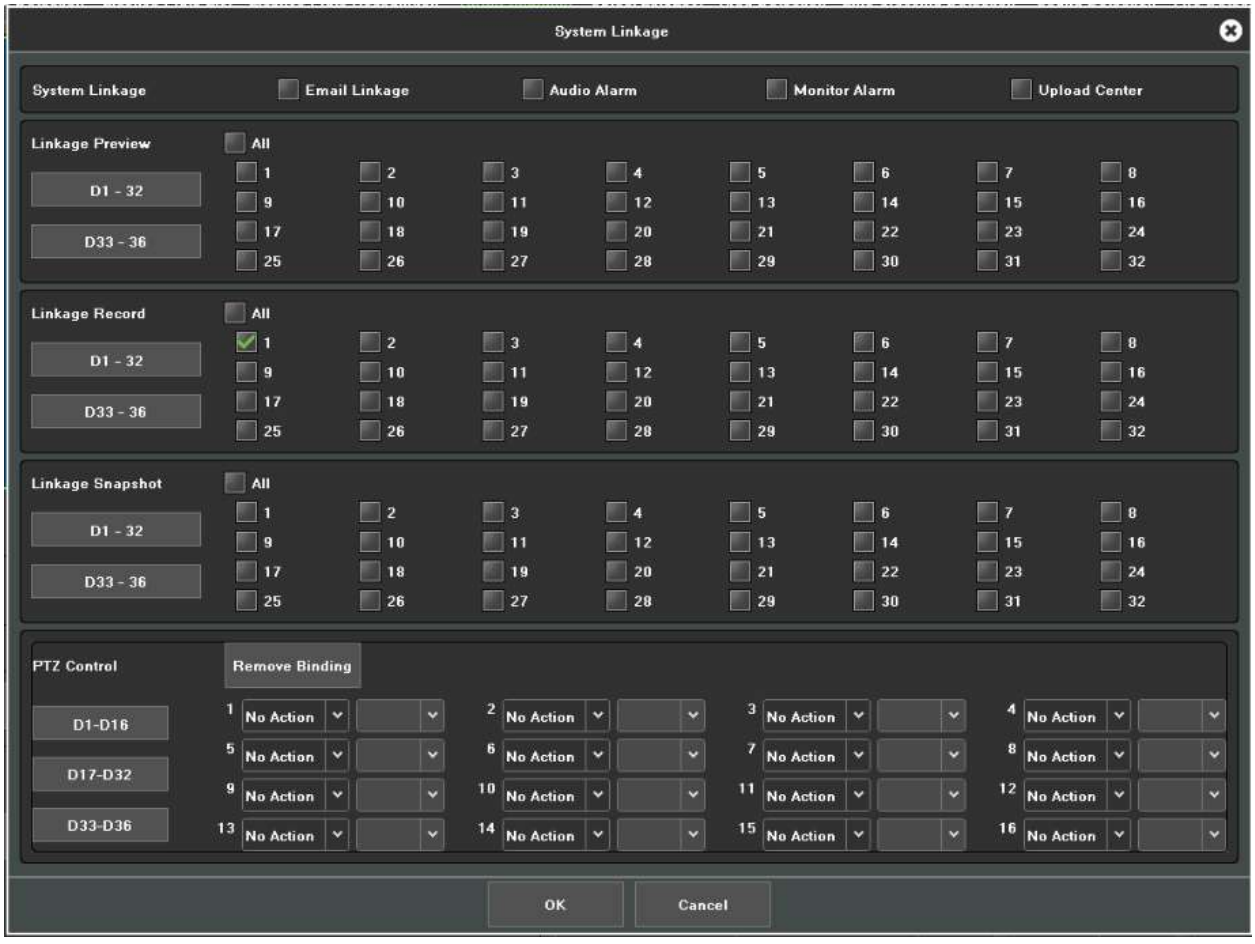


Figure 12.3 Linkage Mode

12.2. Exception

The Abnormal Setting interface, as shown in Figure 12.4.

Figure12.4 Abnormal Setting

13. User Manage

User manage interface is shown in Figure 13.1, you can modify the user information and users permission.

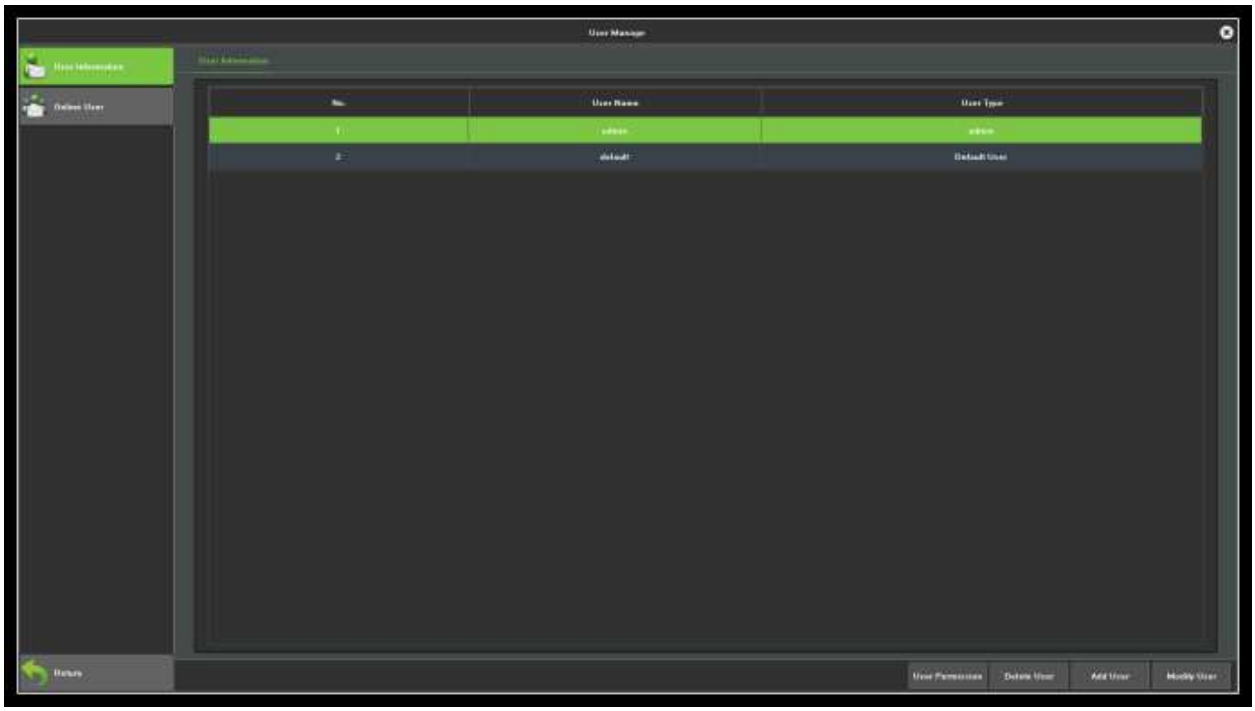


Figure 13.1 User Management

- **Modify Users:** Modify the selected users information, as shown in Figure 13.2.

Figure 13.2 Modify Users

- **Add User:** Add a new user, as shown in Figure 13.3, fill in the user name and password.

Figure 13.3 Add User

- **Delete Users:** Can delete the selected users (except admin and default users).
- **User Authority:** Set the selected users permission.

14. Quick Start Guide

14.1. Unpacking Inspection

When you receive the product, please assure that you get all the items on packing list on the reverse of the box.

14.2. HDD Installation

Tools: A cross screwdriver.

①Remove the screws on the device and lift the cover.

②Install the HDD into the bracket and plug cables into HDD.

③Fasten the HDD at the bottom of the chassis by screws.

④Install the cover and tighten all the screws.

1. The environmental temperature should below 35°C.
2. Make sure that there is a 15 cm (6 inches) space around the device for ventilation.

Before the initial installation, please check whether HDD has been installed. The number of HDD you can install depends on the number of the SATA interface.

Note:

1. Our device will format the HDD once it boot up, please back up the HDD data.
2. **Notes on Purchasing HDD:** We recommend that you use the surveillance HDD. It is suitable for long-term, large amount of data storage and processing. Please purchase them from the authorized agents to ensure the quality.

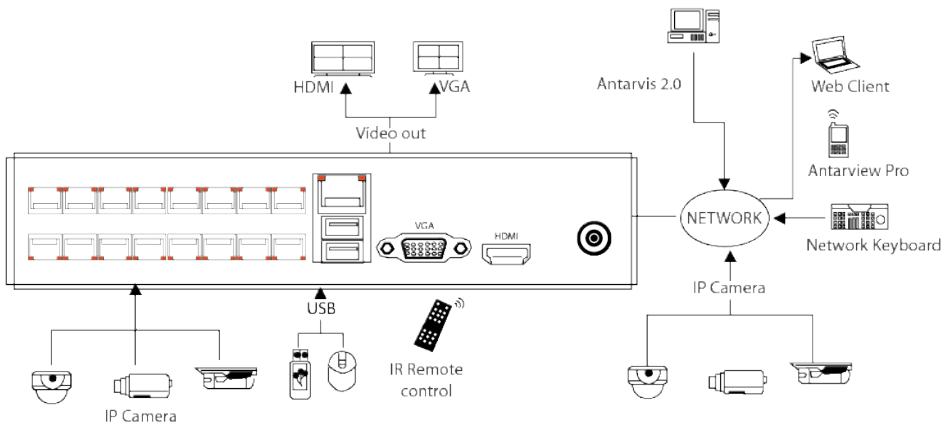
14.3. Front Panel Instruction

Name	Icon	Description
Power Switch	⏻	Power button, press this button to boot up or shut down DVR.
USB Port	⇤	USB2.0 interface: 1. Connect mouse to configure the settings. 2. Connect U-disk to backup data or upgrade the firmware.
Menu	Menu	Pop up the menu interface.
Rec	●	Start Recording.
Enter	Enter, OK	Confirm current operation.
Esc	Esc, ⮌	Back to previous menu, or cancel current operation.
Shirt	Shift	Switch input methods.

Direction Key		1. Auxiliary function, such as PTZ menu. 2. Switch multiple-window and single-window under In monitor mode. 3. Activate the digital input box to increase or decrease the value. 4. Activate pull-down box to select item from different options. 5. Activate checkbox to change status. 6. Activate the control box to move the cursor. 7. Activate display window to select channels.
Play/Pause		1. Move to SEARCH interface. 2. In PTZ channel: ZOOM+. 3. In playback mode, click this button to pause the play. 4. In pause mode, click this button to resume the play.
Fast / Backward Playback		Multiple play speed or backward play.
Previous/ Next Record		Play the next or previous recorded video.
Power Light	Power	Red light on means power on.
HDD Light	HDD	Light on means HDD error.
Network Light	Net	Light on means network connected. Light flashing means IP conflict.
Rec Light	Rec	Light on means recording video.
IR	IR	Light on means receiving the remote control's signal.
Alarm Light	Alarm	Light on when alarm triggered.
Recording Light	1~16	Light on means the channel is recording video.

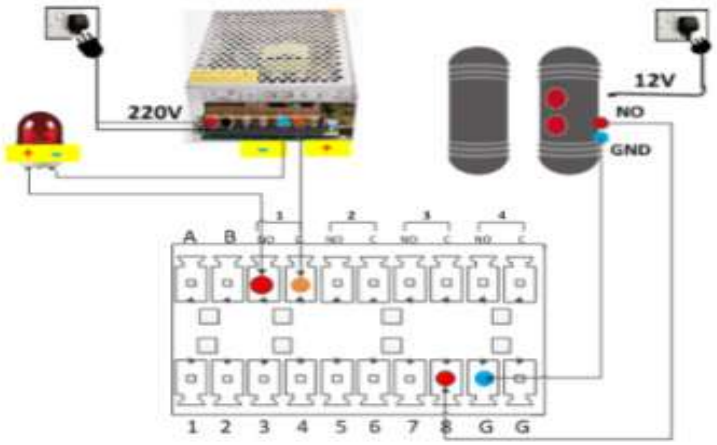
Note: Different modes represents different functions, please refer to user manual for standard explanation.

14.4. Back Panel Instruction



Note: Different modes represents different functions, please refer to user manual for standard explanation.

14.5. Alarm Connection



Name	Description	Name	Description
A, B	RS485 interface	NO1, C	Alarm out
NO2, C	Alarm out	NO3, C	Alarm out
NO4, C	Alarm out	1—8	Alarm in
G	Ground interface		

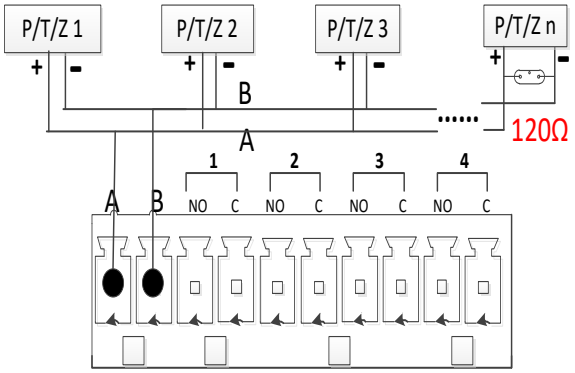
14.5.1. Alarm Input Connection

1. Alarm input signal is switch signal. Support both open type and close type.
2. Alarm detector's Ground-terminal and DVR's Ground-terminal are different.
3. Alarm detector's ON-terminal should be connected to the DVR's alarm input interface.
4. Alarm detector should be connected to the DVR's Ground-terminal once the detector is powered by external power supply.

14.5.2. Alarm Output Connection

Alarm output signal is switch signal. Default mode is open. Alarm output equipment should be powered by external power supply.

14.5.3. PTZ Connection



PTZ's "+" terminal should be connected to DVR's interface "A".

PTZ's "-" terminal should be connected to DVR's interface "B".

1. PTZ's video output interface should be connected to DVR's video in interface.
2. Power the PTZ.
3. Choose the correct PTZ protocol in menu **CONFIG > CHANNEL > P/T/Z**.

Note: 120Ω resistors should be paralleled at the remote terminal of interface A and B to reduce the distortion of signal if a larger number of PTZs are connected.

14.6. Basic Operation Guide

14.6.1. Power On

Install the DVR correctly (as above) and connect to the power. DVR's LED lights will be on and it will boot automatically.

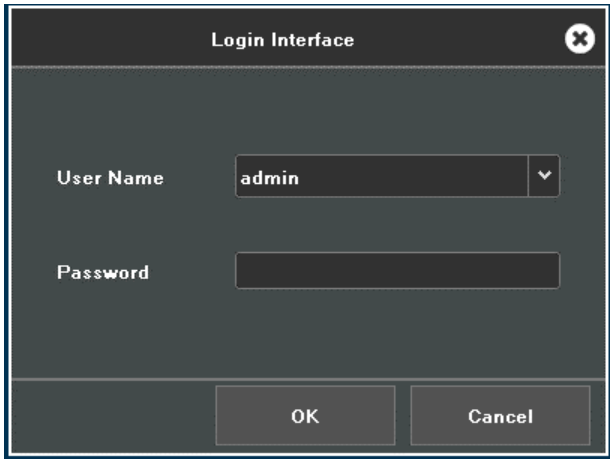
DVR can detect any connected hardware automatically (cameras, monitors, etc.), it could last for about 20 Seconds. You will hear "beep" sound if the whole process is completed. DVR will set itself to multi-screen, real-time surveillance mode and start recording video according to the plan you have set.

14.6.2. Power Off

There are two ways to shut down the DVR:

1. Right click **Main Menu > Shut Down**.
2. If there is a power button on the front or back panel, press the button to shut down.

14.6.3. Log In



Right click the mouse and select log in from the menu. Type in username and password.

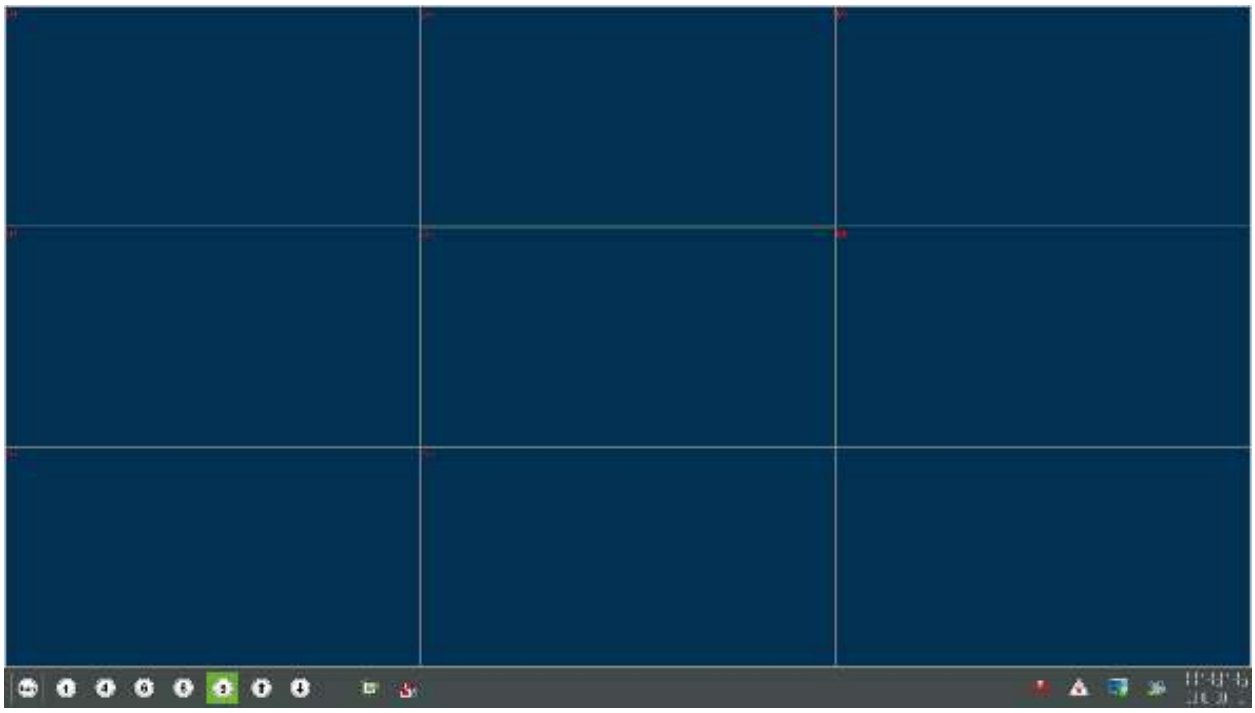
Note: The default administrator account is admin and the default password is 123456. Users can modify the password by themselves. The administrator can add, delete and modify other accounts' parameters.

- **Password:** If you enter error password more than 6 times, the DVR will beep, and the account will be locked. Shut down the device and reboot it or leave the device for about 5 minutes, the account will

be unlocked automatically. We recommend you modify the password the first time you log into the system successfully.

14.6.4. Preview

After you log into the system, it is in live mode. You can find system date, time, channel's name, etc.



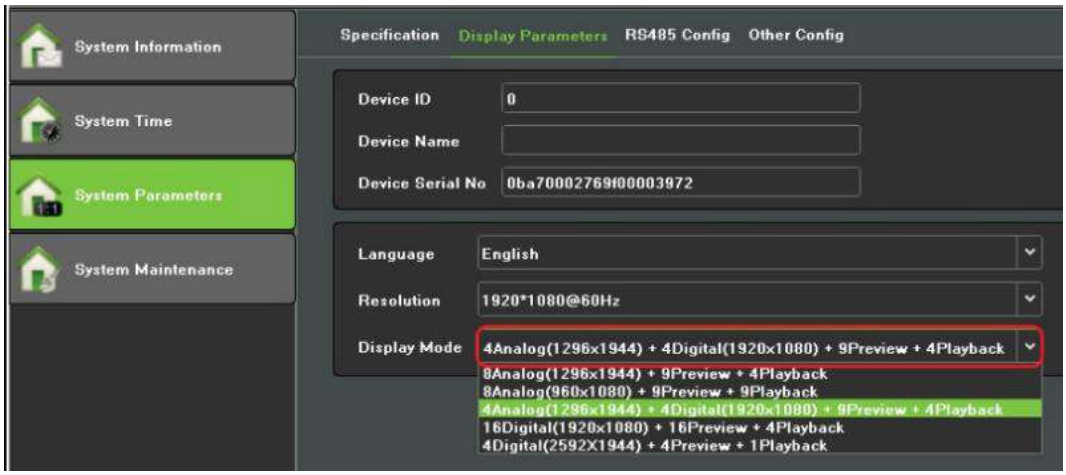
The Preview GUI

There is a Start button on the left-bottom corner, click it, you can find the access to Menu and other options. Left click the **Menu** button, the main menu will pop up, you can manage the DVR and channels via this menu.

14.7. Channel Management

14.7.1. Mode Switch

Click **Start > System Manage > System Parameters > Display Parameters > Display Mode** to set the channel's parameters. There are multiple options for full-analogy mode and composite mode.



14.7.2. IP Channel

If you use composite mode, you can manage the IP channels and Analog channels at **Start > Channel Manage > Channel Device.**

Click **Add Channel** button and click **Refresh** button to search out the IPCs in the LAN, and tick the checkbox to select the IPCs, then click **Add** button to add them to the video recorder.

Click **Add Channel** button and select **Manual Add**, then fill in the correct parameters to add the IPCs.

Note: Features mentioned in this section are only for the devices which support IP channels.

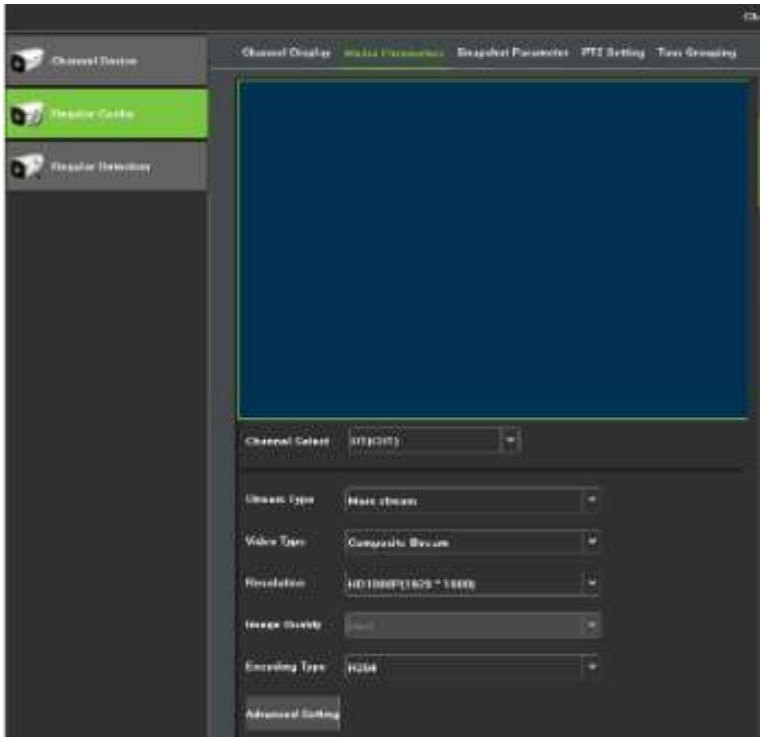
14.7.3. Video Encode Configuration

Left click the Start button into **Main Menu > Channel Manage > Regular Config > Media Parameters** to configure the corresponding channel's encoding parameters.

- **Stream Type:** Main Stream/Sub Stream.
- **Video Type:** Video Stream/Composite Stream.
- **Resolution:** HD 1080P/ 960H/ 2M/ etc.
- **Image Quality:** Good/ Best/ Low.

- **Encoding Type:** H.264/ MJPEG

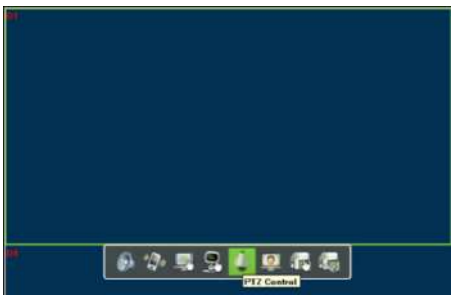
Note: Features showed in the picture are only available on certain devices. And device's menu system showed in the picture above may be different from that of the device you are using.



14.8. PTZ Control

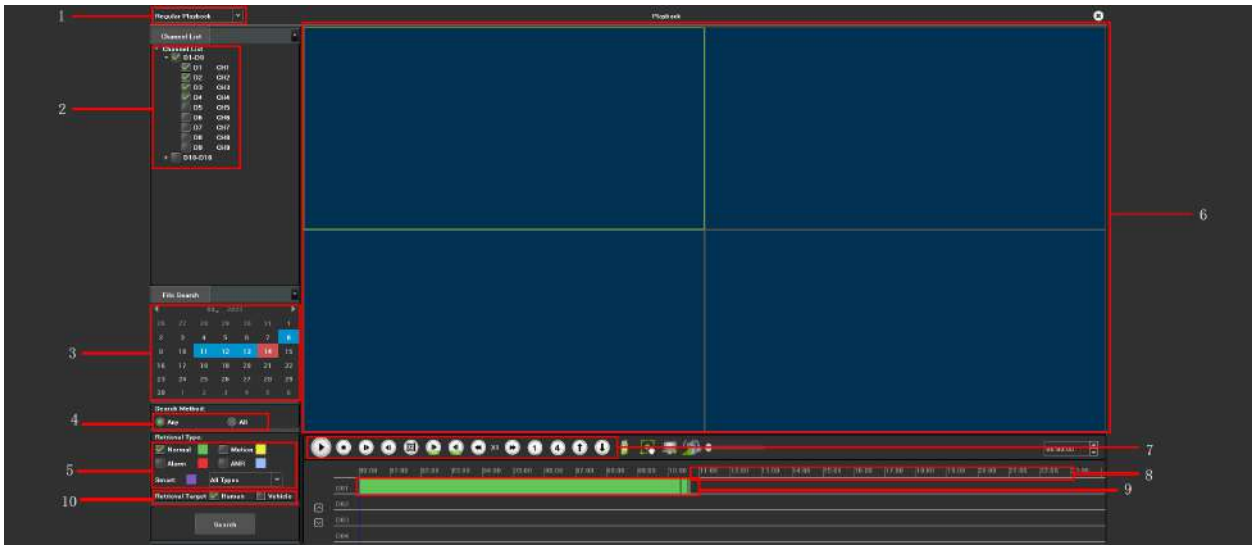
Follow the steps bellow to control PTZ.

1. Go to the preview interface, left click the mouse on PTZ channel, the menu will popup, click the PTZ icon, the PTZ control interface will display.
2. Configure the parameters.
   - **Speed:** The range of speed is 1~16. Higher the range, bigger the extent.
   - **Zoom Focus Iris:** Click **+** or **-** to adjust the parameters.
   - **Preset:** Input preset value in box and click the round button to enable preset function.
   - **Tour:** Input value in box and click the round button to enable tour function.
   - **Pattern:** Input pattern value in box and click the round button to enable pattern function.



14.9. Playback

Click **Start > Playback > Search** to start the playback operations.



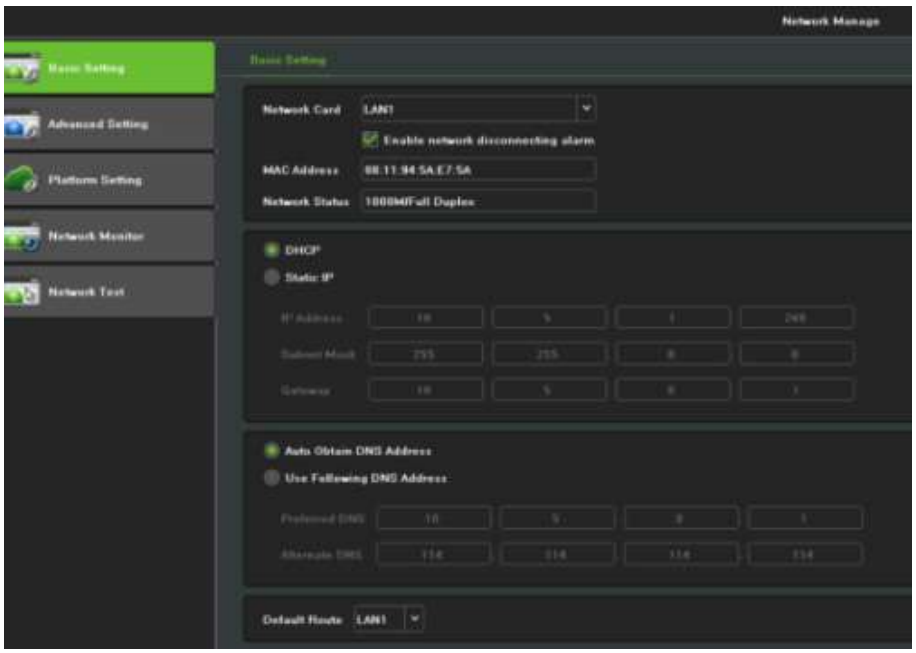
Index	Type	Description
1	Playback Mode	Regular Playback/ Image Playback/ USB Playback.
2	Select Channels	Choose the channels for querying.
3	Time Range	Select the Date you want to search.
4	Search Mode	Any Conditions in 5, all conditions in 5.
5	Search Filter	Normal/ Motion Detection/ Alarm Detection/ Offline Detection.
6	Play Window	The playback video display here sorted by channels.
7	Playback Control	Full screen/ Loop/ Stop/ Play/ Pause/ Fast/ Slow/ Back/ Previous Frame/ Next Frame/ Channel Layout.
8	Timeline	Display the time point when playback the video.
9	Video Events	Display the event of every channel by different color.
10	Retrieval Target	Select the target type that needs to be filtered.

Note: The HDD must be the R/W HDD or Read HDD. Files playback are kept in HDDs.

14.10. Network

14.10.1. Network Setting

Click **Start > Menu > Network Manage > Basic Setting** to set network.



- **IP Address:** Default IP address is 192.168.1.86.
- **DHCP:** Enable the DHCP to obtain an IP address automatically. If it is enabled, the device will search for a DHCP server, and then assigned a dynamic IP address. The dynamic IP address will be displayed in the menu. Enter a static IP address if there is no DHCP service available. If you are using the advanced feature PPPOE, then the IP/mask/gateway and DHCP are unable to be changed.

14.10.2. WEB Access

Check whether the DVR/NVR is on the network by checking network LED on front panel. Light on indicates connected, otherwise lose connection.

Open one browser and type the NVR/DVR IP and HTTP port into the browser address bar.

For Example:

If the device's IP address is 192.168.1.88 and HTTP port is 80, then you should type http://192.168.1.88 into the browser's address bar.

If the device's IP address is 192.168.1.88 and HTTP port is 90, then you should type http://192.168.1.88:90 into the browser's address bar.

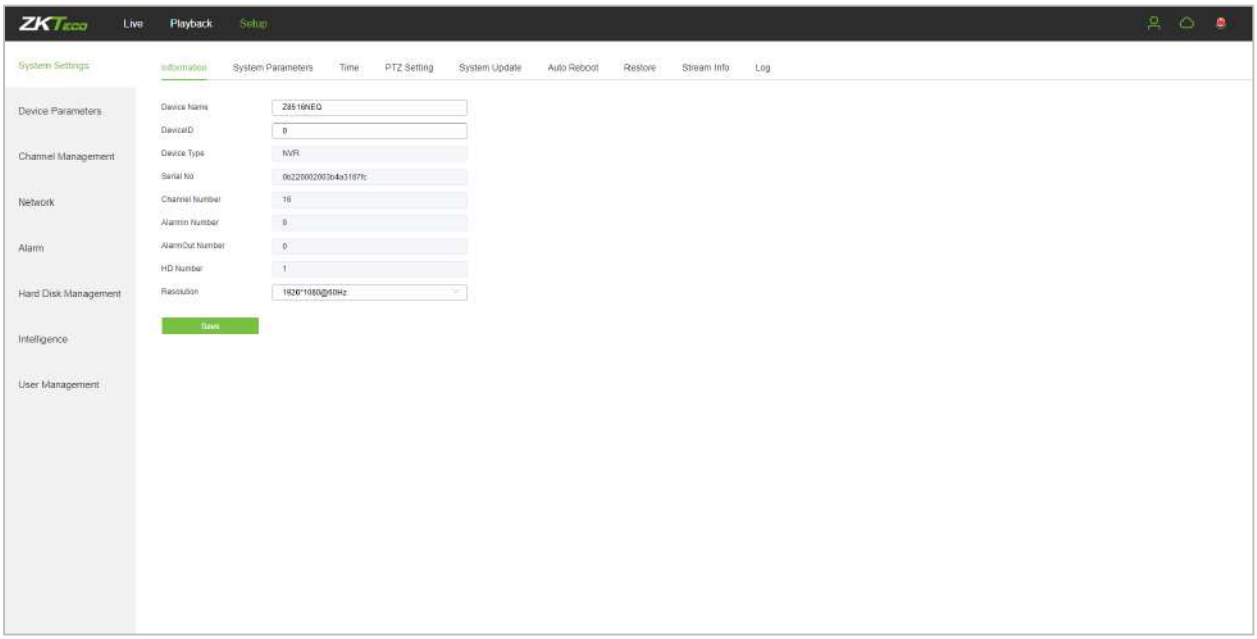
If the device's IP address is 192.168.130.107 and HTTP port is 80, then you should type http://192.168.130.107 into the browser's address bar, you will see a login page like this. What's more, you will see preview, playback and NVR/DVR configuration. If HTTP port is 90, then you should type http://192.168.130.107:90 into the browser's address bar.

You can switch between different channels for preview, control PTZ and modify camera parameters.

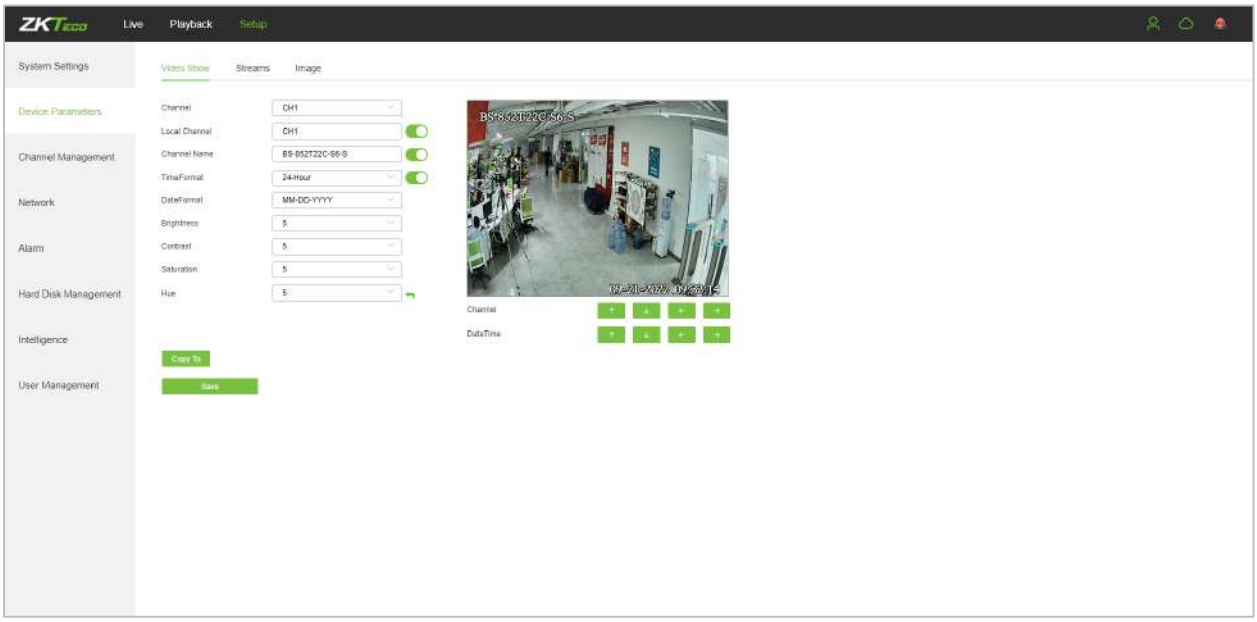
You can switch between different channels and different type of video for playback.

You can view and modify NVR/DVR configuration.

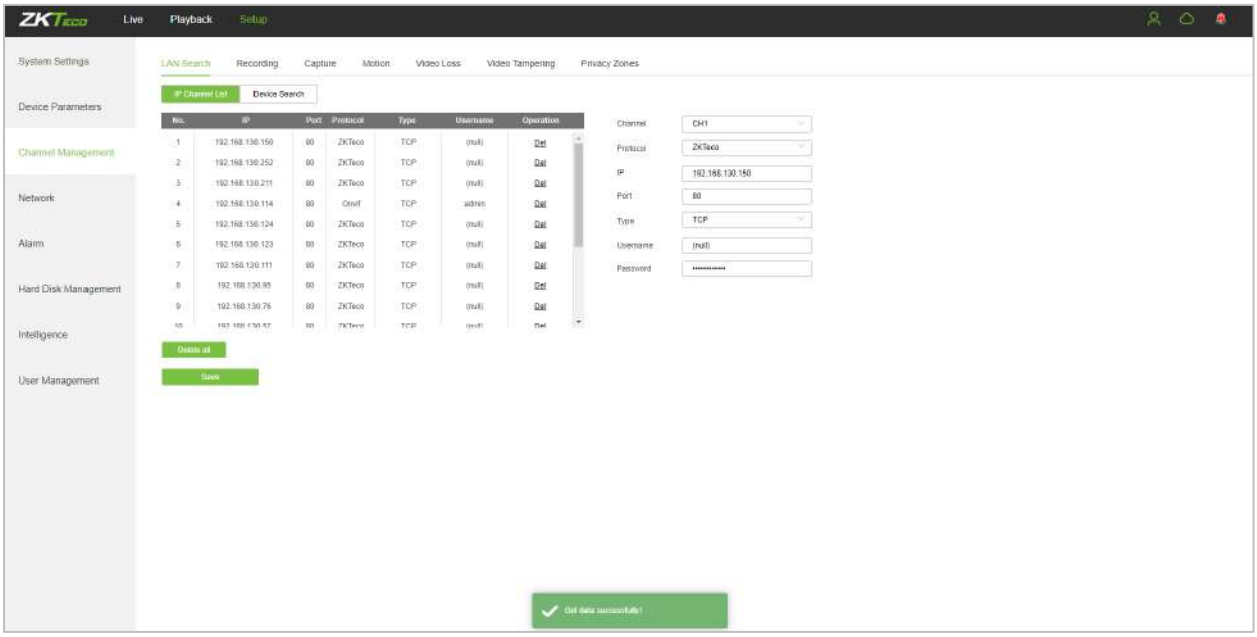
- **System Settings**



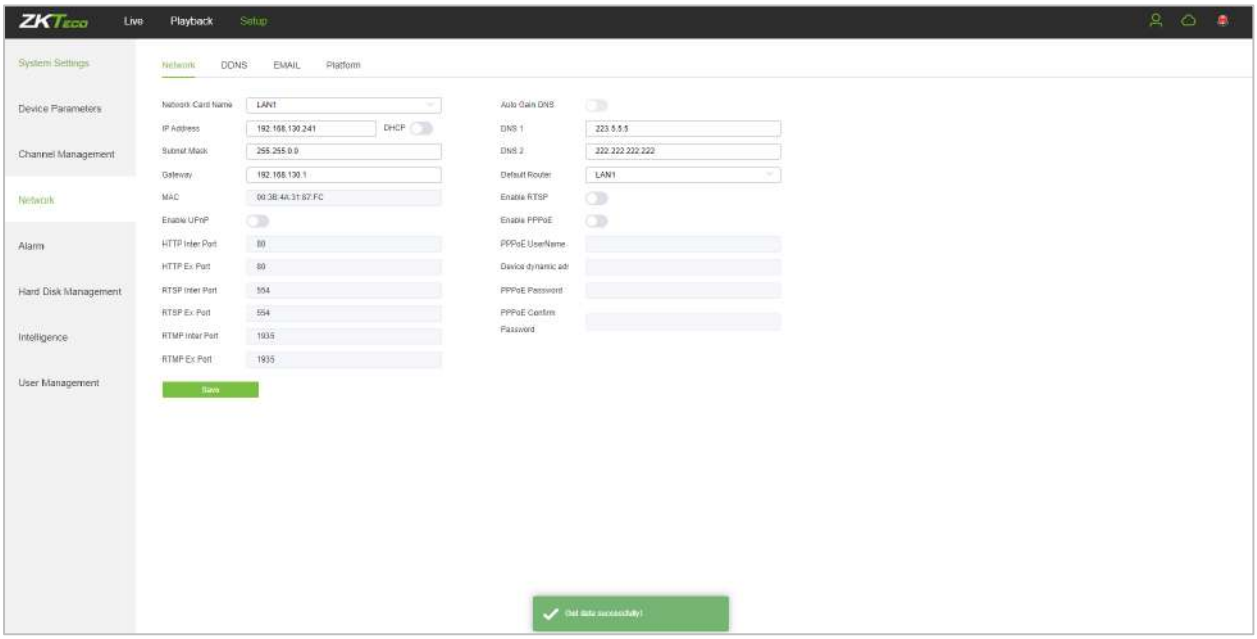
- **Device Parameters**



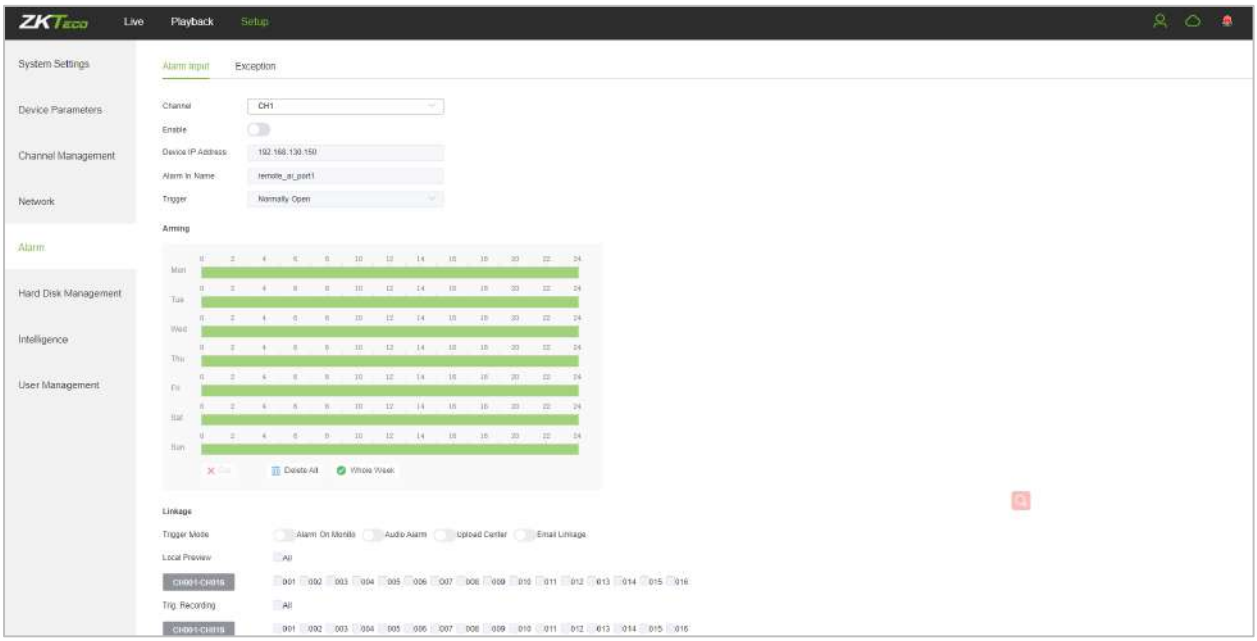
- **Channel Management**



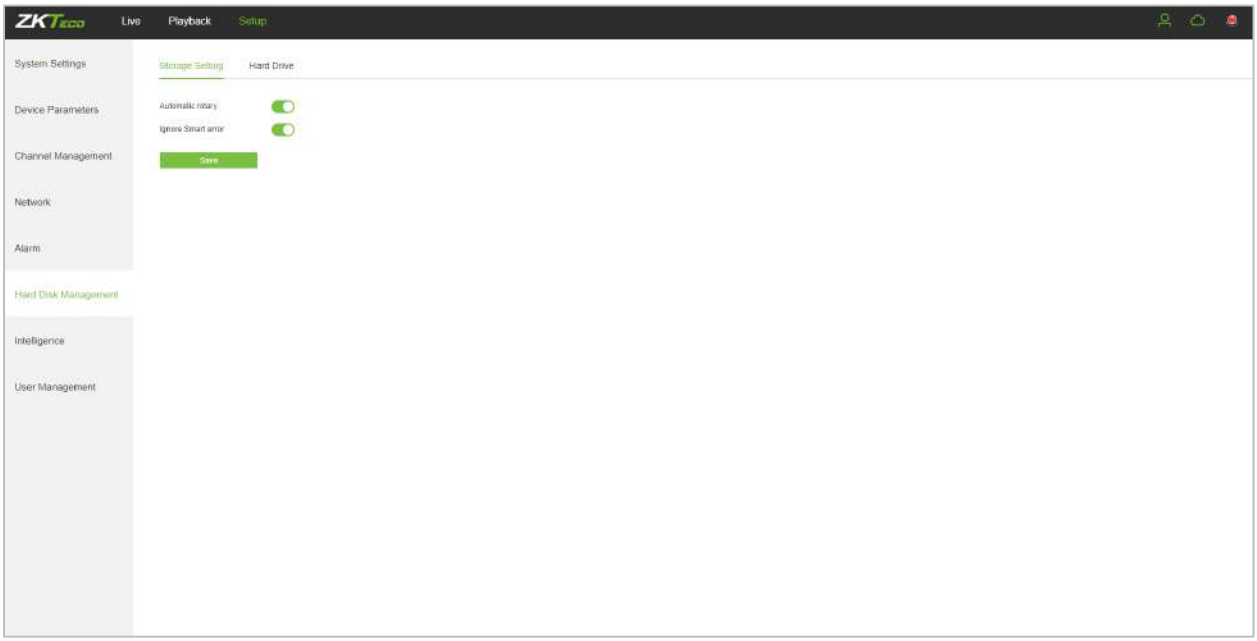
- **Network**



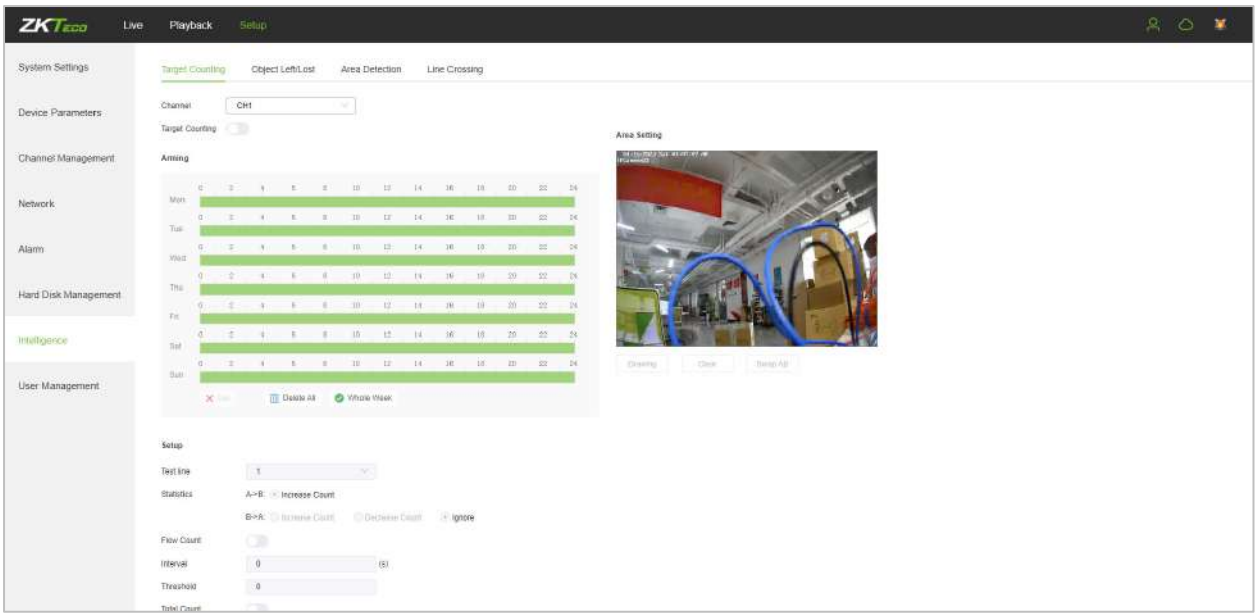
- **Alarm**

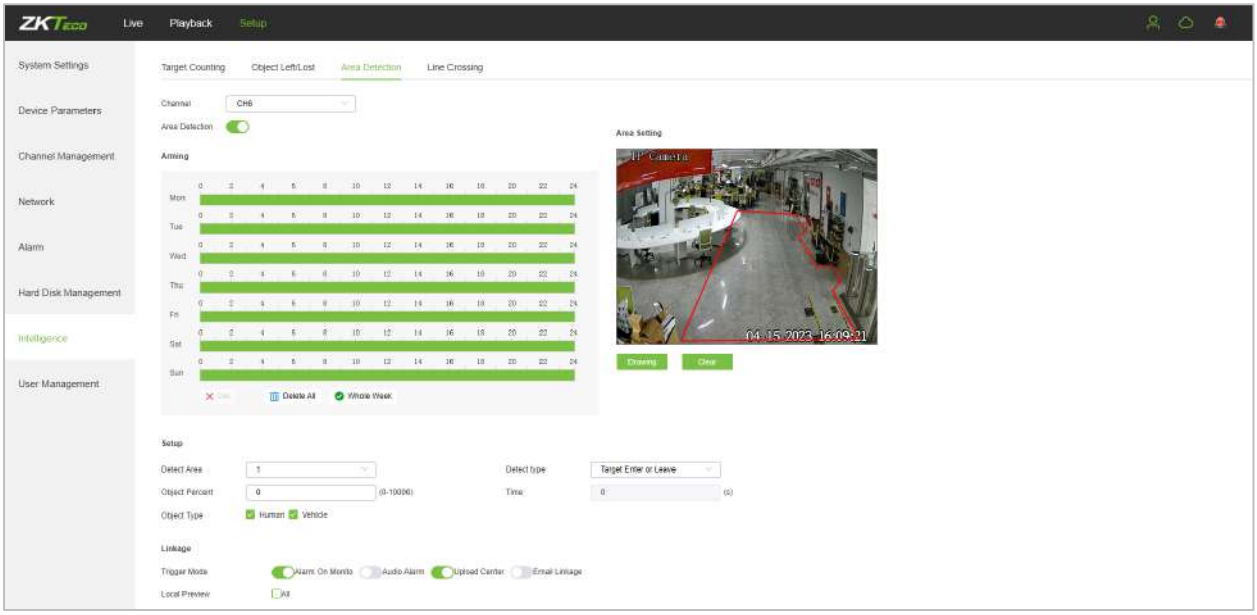


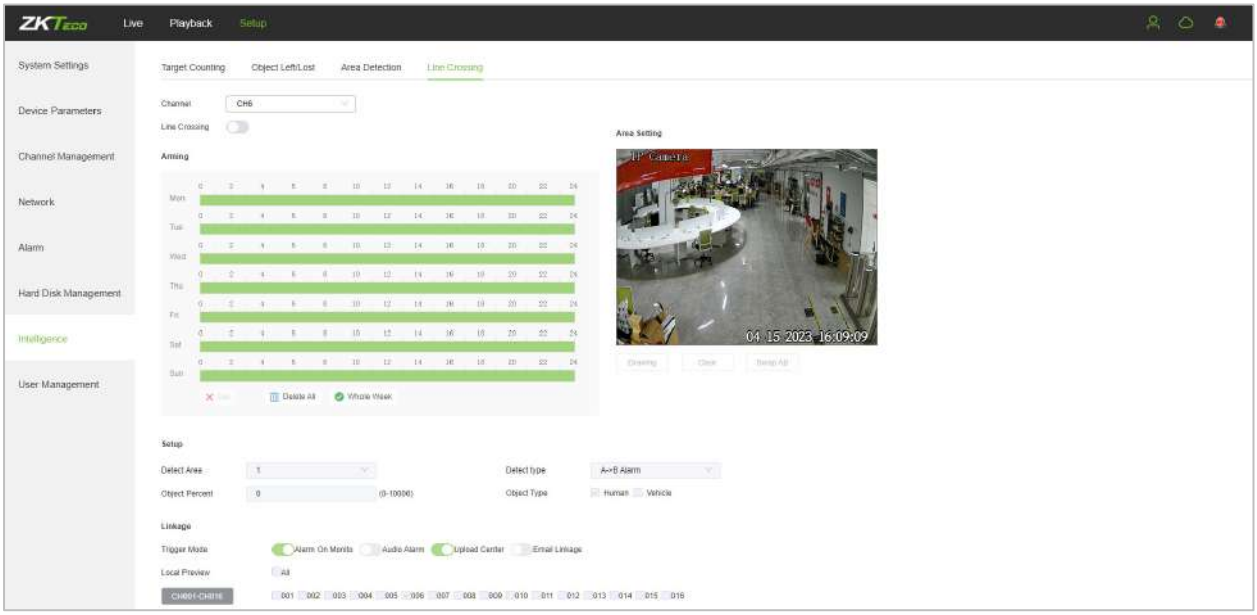
- **Hard Disk Management**



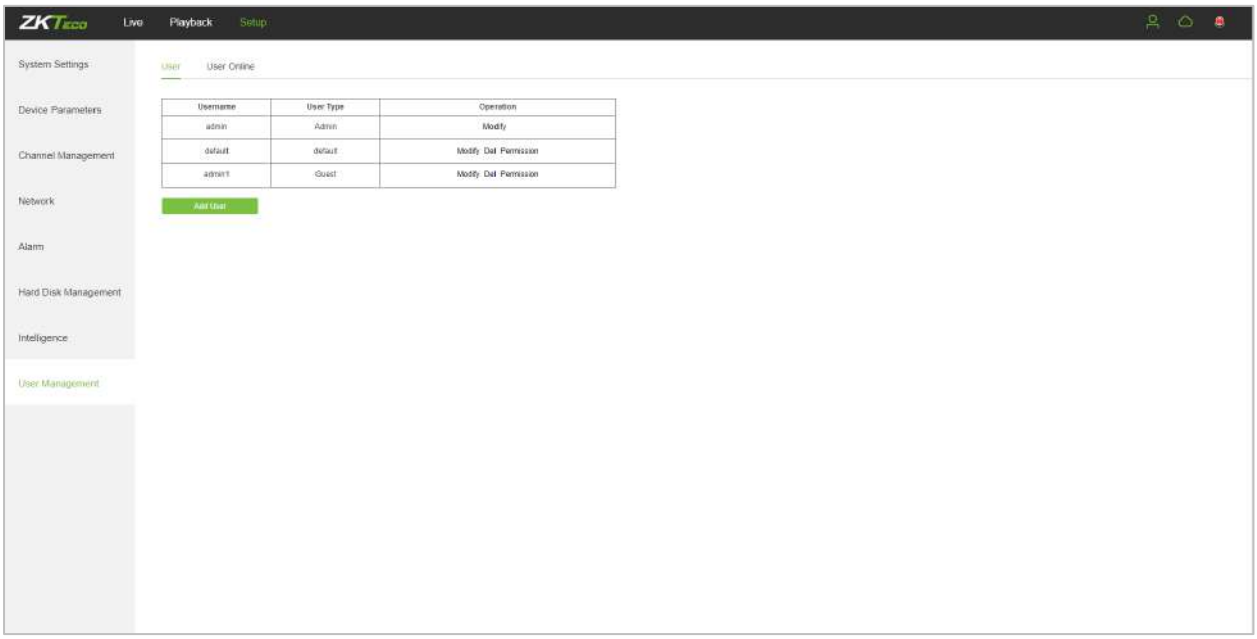
- **Intelligence**







- **User Management**



14.10.3. Client Access

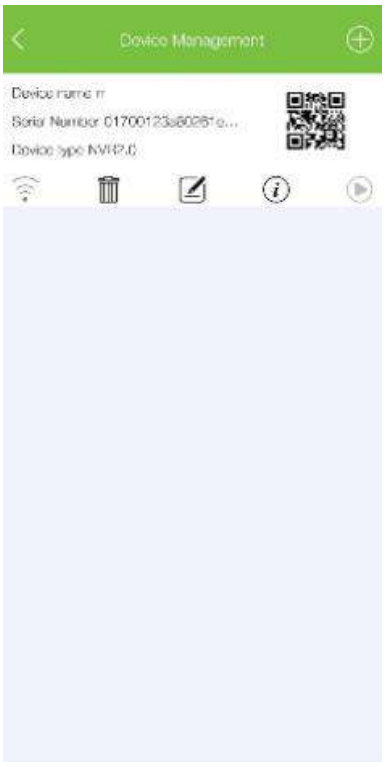
14.10.3.1. Mobile Phone Application Access

1. Click **Start > Menu > Network Manage > Basic Setting > Platform Setting > AntarView Pro** and enable this function.

2. Scan APP QR code to download and install application on your phone.

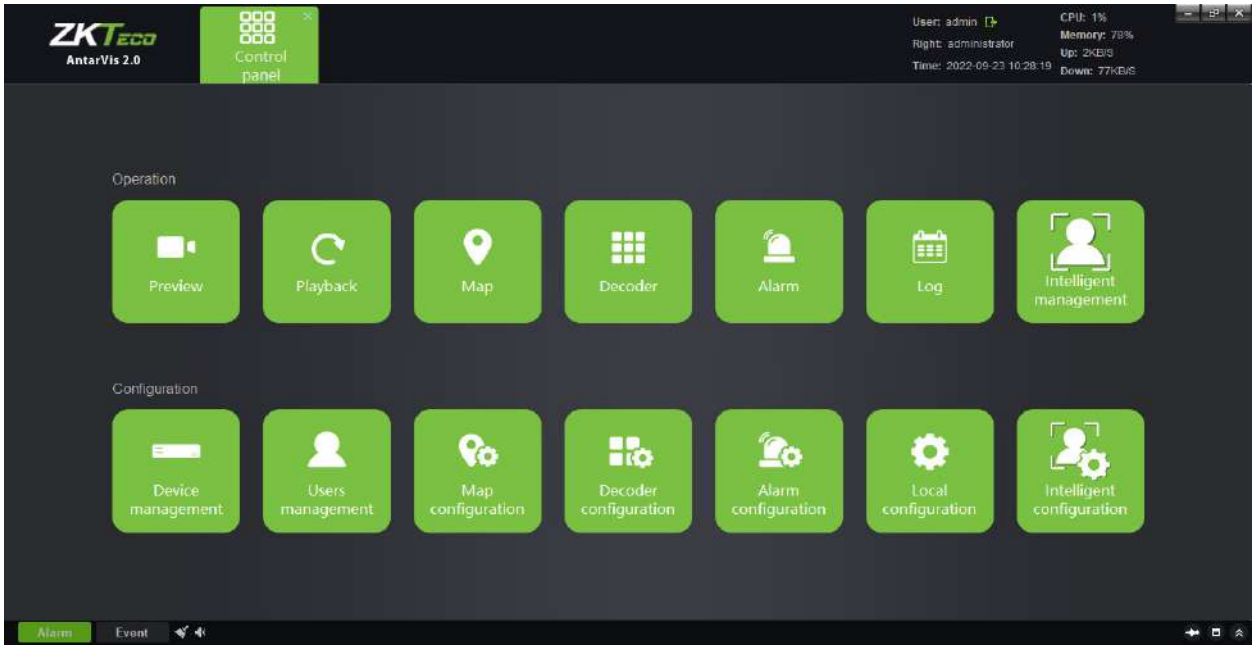
   Note: We support both Android system and IOS system.

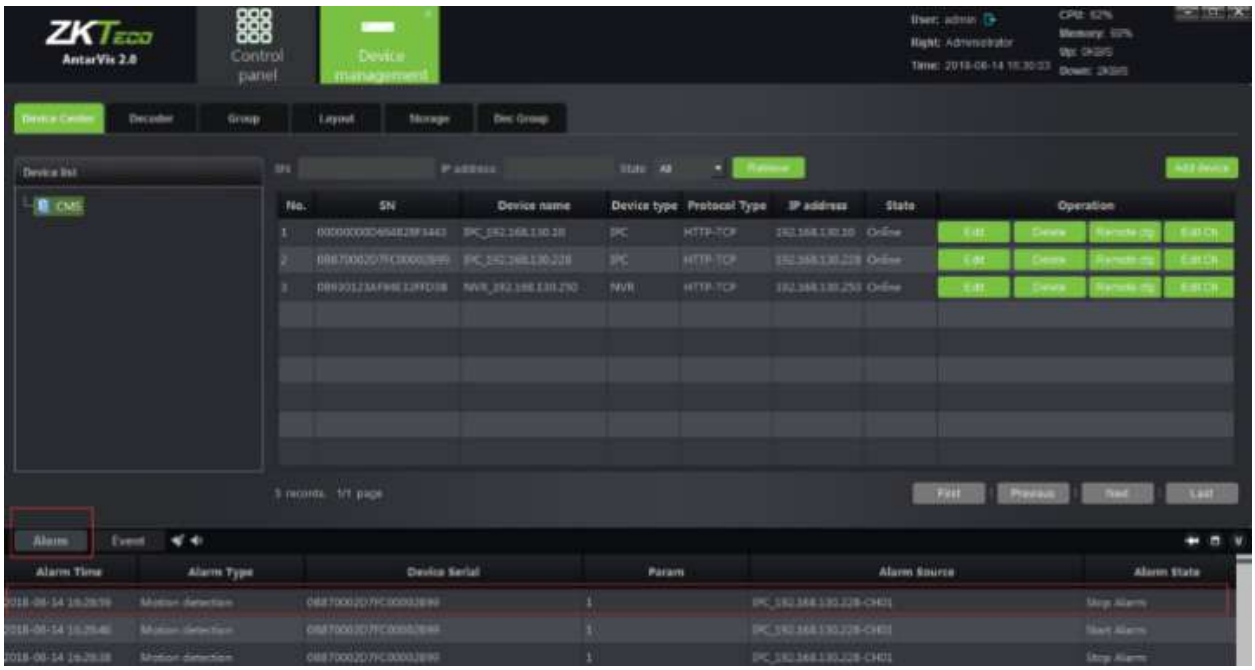
3. Run the application, go to **Device Manage** and press + button to add new device.



14.10.3.2. PC Application Access

1. Install VMS on your computer.
2. Enter **Resource Management > Device Manage** to search, add, delete, modify network devices. Type in device name, port, IP address, account and password to manually add the devices.





15. Statement

- This manual describes basic operations. For more details please contact with our technician teams.
- Our company owns the final interpretation if there are doubts in or disagreements with this product description.
- This Quick Setup Guide is for quick reference to certain DVR/NVR models, the specific operations of each product are not listed. Please contact us if you have any operational problem.

16. Appendix List of Compatible HDD Already Tested

Manufacture	Capacity	Model
TOSHIBA	1.0TB	DT01ABA100VOCT-2015
	1.0TB	DT01ABA100VMAY-2015
	2.0TB	DT01ABA200VFEB-2015
Seagate	1.0TB	ST1000VM002
	1.0TB	ST1000DM003
	2.0TB	ST2000VX000
WD	500GB	WD5000AVDS-63U7B1
	2.0TB	WD20PURX-64P6ZY0
	3.0TB	WD30PURX-64P6ZY0

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