Network Video Recorder (NVR) User Manual

Doc ID: 2021-05-2107-02

Safety Instructions

This manual is intended to ensure that user can use the product properly without danger or any property loss. Please read it carefully and do not discard for future reference. Precaution measures are divided into "**WARNINGS**" and "**CAUTIONS**" as below:

WARNING: Neglecting any of the warnings may cause serious injury.

CAUTIONS: Neglecting any of the CAUTIONS may cause injury or equipment damage.

 Warning Follow these safeguards to avoid death or serious injury	 Caution Follow these precautions to Prevent potential injury or Property loss

 **WARNING**

- Use recommended cord sets (power cords) with the correct specifications.

 **CAUTIONS**

- Do not place or install equipment directly in sunlight or near heating devices.
- Keep equipment installed correctly and fully.
- Install the equipment in a well-ventilated place, do not block vents.
- Only use equipment within rated input/output.
- Transport, use, and reserve the equipment within the proper humidity range (10 to 90%) and temperature range (14 to 131°F, -10 to 55℃).
- When cleaning the device, unplug the power cord and completely shut off the power.
- Do not use volatile solvents such as alcohol, benzene, or thinner when cleaning the device. Do not use strong or abrasive cleaning agents. This can damage the surface coating.
- Purchase the NVR dedicated hard drive recommended by the equipment manufacturer from the correct channels to ensure the quality and usage requirements of the hard drive.
- Make sure that the alarm cable is firmly installed with a solid contact.
- Make sure that the NVR is properly grounded.

NOTE: After receiving the product, verify the contents of the package according to the packing list in the box.

Contents

Chapter 1: Product Introduction

1.1 Product Manual

ClareVision NVRs provide local video streaming preview, multi-screen split display streaming, local real-time storage of video files, support for mouse shortcuts, and remote management and control.

This manual will guide you through all NVR settings, options, and provide additional information on NVR operation.

1.2 Defaults

The factory default username is “admin” and password being the **first six characters of the UUID**.

NVR and PoE NVR factory default is set to DHCP.

1.3 Product Features

This section introduces the camera product features:

- The "device" mentioned in this manual mainly refers to the NVR.
- The "IP device" mentioned in this manual mainly refers to the IP Camera.
- The "channel" mentioned in this manual refers to the NVR's IP channel.
- Click the "X" or "Cancel" button to return to the previous screen.
- Click All Interfaces Default to restore the current factory default settings.
- Click "Apply", "Confirm", and "Save" on all screens to save the current settings.
- Click "Copy" on all interfaces to enter the copy channel interface. Select the channel in which to copy the current channel.

1.4 Function Features

- H.264 videos condense format, support 4K/6M/5M/4M/3M/2M/1080P/720P/D1 resolution network camera input.
- G.711U, G711a, ADPCM_DVI4, AAC audio condense format.
- Each channel supports three-stream encoding, including an MJPEG stream.
- Windows-style user interface embedded real-time Linux3.0 operating system.
- Support for independent adjustment of coding parameters for each channel, including coding type, resolution, frame rate, and bitrate.
- Manual capture and image playback.
- Preview, recording, playback, and backup.
- Select NVRs support fisheye correction, dual-screen preview, PoE, humanoid detection, crossover detection, regional intrusion, people gather detection, and people gathering.
- Only one USB interface: The NVR needs to use USB interface for task such as Configuration import, Configuration export, backup, camera update, and manual update. You must first select the corresponding function, such as click "Config import", and then you receive a pop-up "Please insert the USB disk". Follow the prompt within the 60 second countdown, and then unplug the mouse and plug it into the USB device before the countdown ends. After the NVR recognizes the USB device, it automatically proceeds to the next step.

Local monitoring

- Supports local VGA and HDMI output, with HD supporting up to 4K resolution output.
- Screen previews:
    - 4-channel NVRs support 1/4
    - 8-channel NVRs support 1/4/8
    - 16-channel NVRs support 1/4/8/9/16
    - 32-channel NVRs support 1/4/8/9/ 6/25/32
- Adjustable preview channel position (drag them to the desired position using the mouse).
- Set manual or auto-tour preview with an automatic polling cycle.
- Supports video motion detection, video loss detection, and intelligent detection.
- Achieve IP PTZ camera control through the ONVIF protocol.

Hard disk management

- Each SATA interface supports up to an 8T hard drive.
- Hard disk formatting.
- Hard disk loss and hard disk abnormal alarm.

Video Record and Playback

- Video compression standard is H.264/H.264+/H.265/H.265+, with timed recording function.
- Supports recording schedules using drawing and editing methods.
- Supports simultaneous main and sub-stream recording.
- Supports cyclic writing.
- A maximum of 6 recording times can be set each day. The recording trigger mode can be set independently for different time periods.
- Recording trigger modes include Normal, Motion, Alarm, M&A, Smart Events.
- Supports video data retrieval and playback by channel, video type, and date.
- Multiple playback modes (adjustable with mouse): Play/Pause, Reverse, Stop, Single Back, Single Forward, Speed Down, and Speed Up.
- Select the screen area for local zoom.
- Supports multi-channel simultaneous playback of video.

User Management

- Three-level user management: Administrators can create multiple operation users and set their privileges.

Data backup

- Support for backup via USB2.0 or USB3.0 interface.
- Support for U disk or mobile hard disk in FAT32, NTFS, exFAT and other formats.
- Support for batch backup by file and time.
- Support for iVMS320 clip-by-clip backups.
- Support for webpage clip and download video files by time.

Alarm and exception management

- Select models support multi-channel external alarm input and output.
- Support for video loss alarm, motion alarm, network disconnection alarm, IP conflict alarm, hard disk error, and no disk alarm.
- Support our smart IPC face detection, Crossover, Regional intrusion, people stay, people gathering, and other intelligent detection access and linkage.
- Various alarms can be set to trigger the buzzing alarm, sending mail and screen display.
- Various alarms can be set to trigger pop-up alarm prompts, voice warnings, and send emails notifying users.

Other Local Functions

- Users can quickly and easily set the system parameters using the NVR buttons and USB mouse.
- Complete operations: alarms, exceptions, information logging and retrieval.
- Select models support local alarms and upgrades for front-end features.
- Supports gesture password function.

Network Function

- 3536D series devices support a 10M/100M adaptive network interface and the 3536/3536C series devices support 10M/100M/1000M adaptive network interface.
- Support for remote client privileged access helps improve system security.
- Supported protocols: TCP/IP protocol cluster, DHCP, DNS, HTP, SMTP, RTSP, UPnP, HTTPS and other protocols.
- Embedded WEB SERVER and support for ONVIF protocol access to platform.
- Remote access to playback, download, parameter configuration, FTP server configuration, running status, systems log, alarm status, manual trigger & stop recording, manual trigger & stop alarm output, alarm pushes, PTZ control, remote formatting of hard disk, upgrading the program, restart, and other operations for system maintenance.

Chapter 2: NVR Appearance

2.1 Front Panel

No.	Name	Description
1	Switch	Turn the device on/off.
2	Hard disk indicator	Displays hard drive connection status.
3	Power Indicator	Illuminates when powered on.
4	Network Indicator	Displays network connection.
5	USB2.0	Allows connection for mouse or USB memory stick backup.

Table 2-1

2.2 Rear Panel

Rear panel diagram for ClareVision NVRs

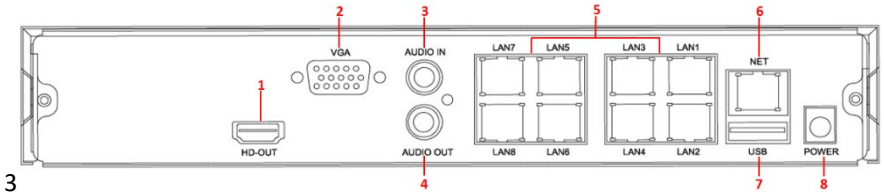

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Figure 2-3

No.	Name	Description
1	HD Video Output	Connects to HD display devices such as computer monitors
2	VGA	Connect to VGA display devices such as computer monitors
3	Audio Input	Equipment audio input interface
4	Audio output	Equipment audio output interface
5	PoE network port	Connects IP devices and power IP devices and networks
6	Ethernet port	Connects Ethernet to the network
7	USB port	Allows connection to the mouse or U disk or removable hard disk
8	Power Connector	Device power connector

2.3 Mouse Input

Operate the NVR using the mouse (left button, right button, and scroll wheel).

Mouse actions	Function
Left click	1. Selects an option 2. Inserts the cursor to enter or modify the value of a parameter 3.Click the timeline during playback to switch the playback progress
Right click	1. Interface not locking - accesses the system menu pop-up 2. Interface locking on a real-time preview interface - login interface pop up 3.When on the submenu returns the user to the previous menu
Double left click	Switches between single and multi-screen when in the preview and playback state
Mouse drag	1. Rotates the direction when in the pan/tilt control state 2. Sets the area range when in the video occlusion alarm and motion detection alarm area settings 3. Select the area for electronic zoom 4. Selections a channel and switches to other channel locations when in the preview interface 5. Switches the playing video file in the progress bar
Scroll wheel	1. Allows time setting modification 2. Selects drop-down menu values 3. Switches preview channels 4. Zooms in and out of a video image

2.3 Mouse Input

Input method includes lowercase and uppercase English letters.

Click  on the left to switch the input method and symbol.

Click  to backspace and delete incorrect/accidental input.

Chapter 3: Connecting NVR

3.1. Hard Disk Installation

Disconnect power before installation.

Use the NVR dedicated monitor hard drive recommended by the device manufacturer.

Installation tools

- A Phillips screwdriver

3.1.1 Hard disk installation

The hard disk is installed is shown in Figure 3-1.

To install the hard disk:

1. Loosen the securing screw on the cover, and then open the cover.
2. Connect one end of the hard disk data cable and power cable to the motherboard, and then connect the other end of the cables to the hard disk.
3. Hold the hard disk in place, turn over the chassis, and then secure the hard disk with the screw at the indicated position.
4. Turn over the chassis, and then secure the cover with screw.

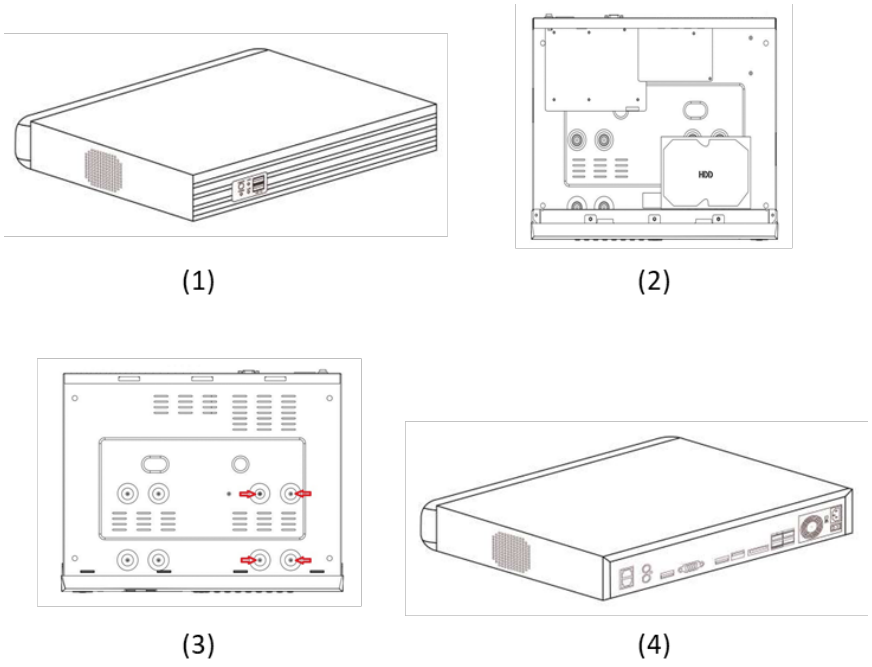


Figure 3-1

3.1.2 Device Connection

Use a VGA cable or HDMI cable to transmit the NVR signal to the display. If it is a controllable PTZ, use the wire to connect the RS485 A cable and the RS485 B cable to the corresponding RS485 interface on NVR, as show in Figure3-2.

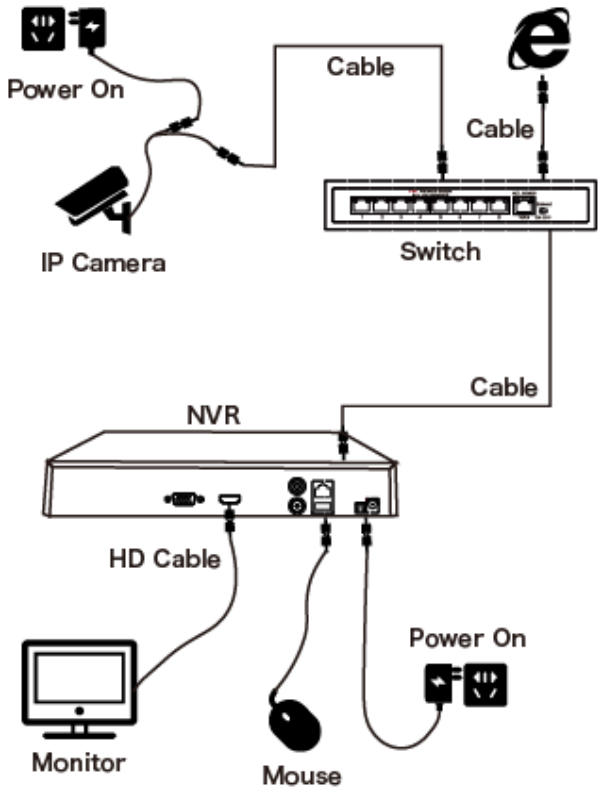


Figure 3-2

Devices with built-in PoE network ports support IPC plug-and-play functionality. When adding IP devices using the PoE network port plug-and-play method, make sure that the IP devices support PoE.

Chapter 4: NVR Setup (WEB)

4.1 Internet connection

Before using the browser to log in to the web console, verify that the network between the PC and the NVR is normal. Using the IP Search Tool which can be downloaded from the Clare Help Center by following the ling HERE or from the resources tab on the SnapAV device page, you can search for the NVR on the Local Area Network (LAN) and display the IP, MAC address, version, port, and other information of the NVR, as shown in Figure 4-1:

Use the IP Search Tool to discover all available online devices found on the network.

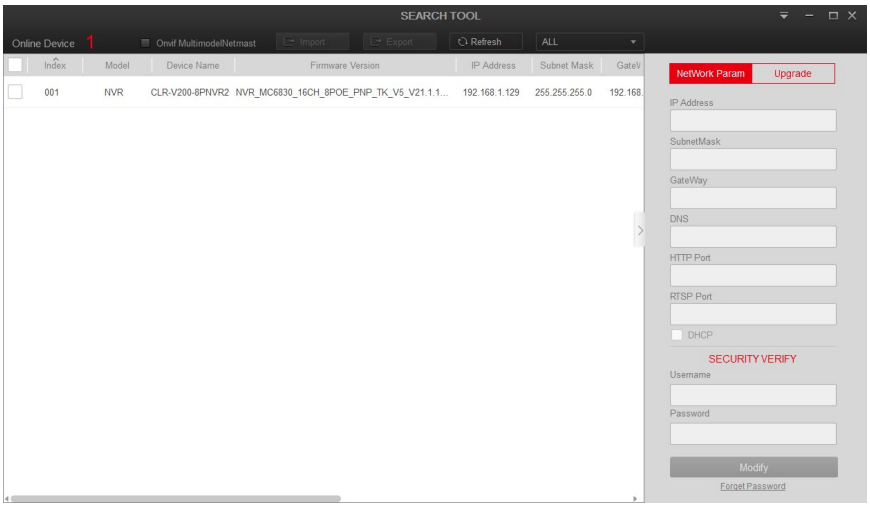


Figure 4-1

1. Confirm that the NVR device is properly connected to the network.
2. Set the IP address, subnet mask, and gateway for the PC and NVR devices.
   If there is no routing device on the network, allocate the IP address of the same network segment: If there is a routing device on the network, you need to set the corresponding gateway and subnet mask.
   The default IP address of the NVR device is 192.168.1.88.
3. Verify that the network between the PC and the NVR device is normal. The method is as follows: When the network between the PC and the NVR device is normal, you can log in to the web interface of the NVR through the PC.
   - On the PC, ping NVR IP address to verify that the network is connected and the returned TTL value is generally equal to 255.
   - Log in to the local interface of the NVR device, and fill in the IP address of the PC on the "Network Test" interface to test whether the network is connected. For details, see 5.3.7.7 Network Detection.

4.2 Browser Login

Open a browser (for optimal experience and to view video playbacks in the browser, Internet Explorer is recommended) on your computer and enter the camera IP address in the web address bar.

Enter "**admin**" for the username and the **first six characters of the UUID for the password**.

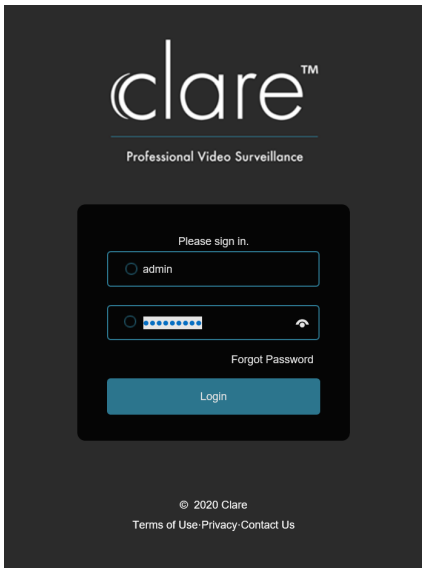


Figure 4-2

IMPORTANT NOTES:

The default administrator username is "**admin**".

The default password is the **first six characters of the UUID** found on the NVR, packaging box, and Quick Start Guide. You will be prompted to change the password once the default login information is entered.

4.2.1 Change password

After a successful login, the interface will prompt you to change the password, as shown in Figure 4-3 and 4-4:

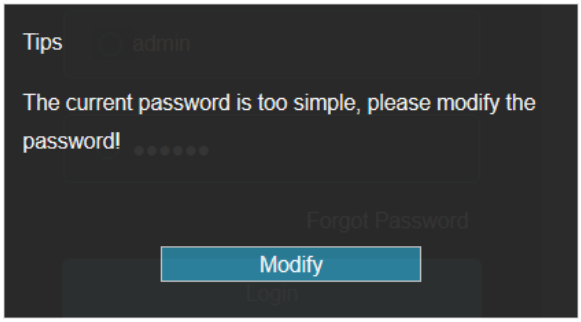


Figure 4-3

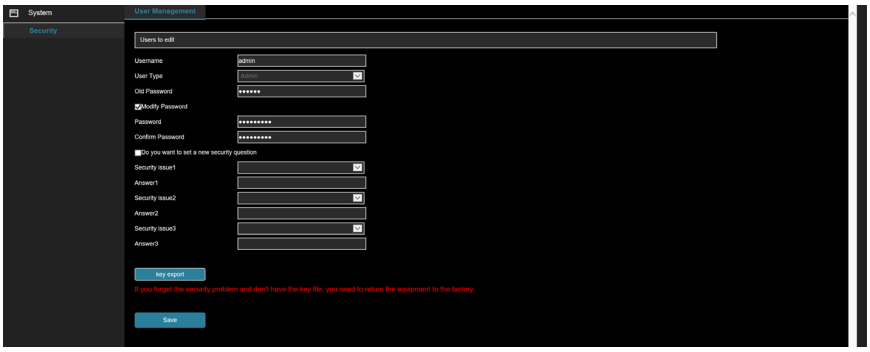


Figure 4-4

To change your password, follow these steps:

1. Enter the old password and enter the new password in the Password and Confirm Password fields.
2. Set security questions 1, 2, and 3, and enter the answers.
3. Click "**key export**" to save the key file to your computer. It is recommended to have the customer save this key file in their email or on their computer.
4. Click "**Save**" to complete the password modification.

IMPORTANT NOTE:

When setting a new password, you must set at least 8 characters and contain both letters and numbers.

4.2.3 Forgot password

If you forget your password, you can reset the password by using the security question verification or security key verification.

Security question verification

1. On the login interface, click "**Forgot Password**".
2. Select the verification method as "**Security question validation**" (as shown in Figure 4-5), enter the answers to security questions 1, 2, and 3, and click "**Next**"
3. Enter the new password and confirm the password (as shown in Figure 4-6) and click "**Next**".

Figure 4-5

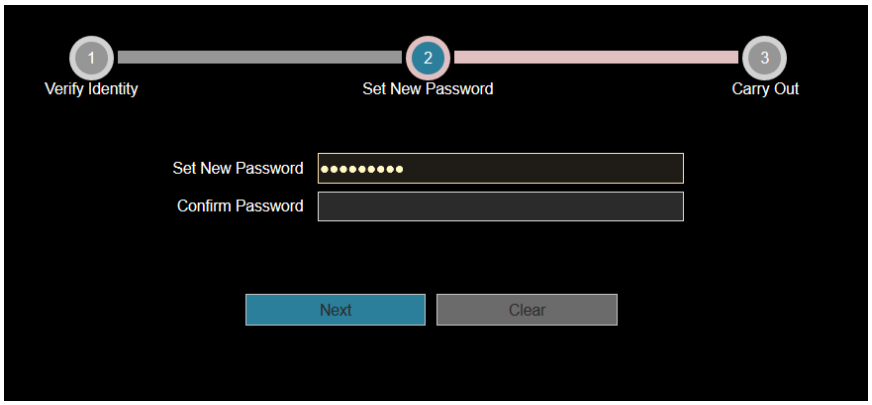


Figure 4-6

4. Click "**Re-login**" to return to the login interface (as shown in Figure 4-7).

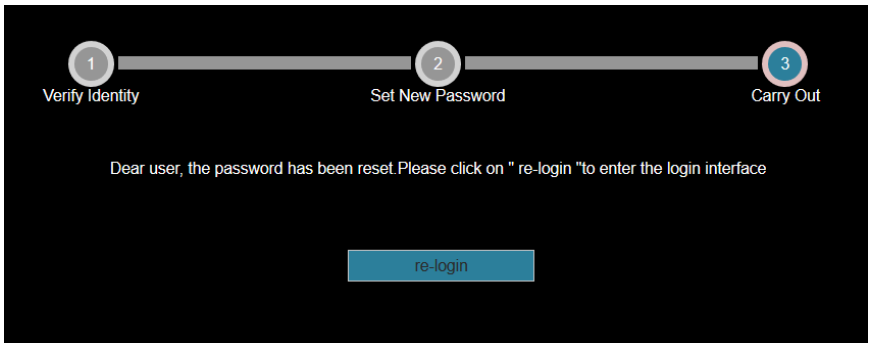


Figure 4-7

Security Key verification

1. On the login interface, click "**Forgot Password**".
2. Select the verification method as "**Security Key Verification**" (as shown in Figure 4-8) and click "**Import**" to import the key file exported when the password is modified.

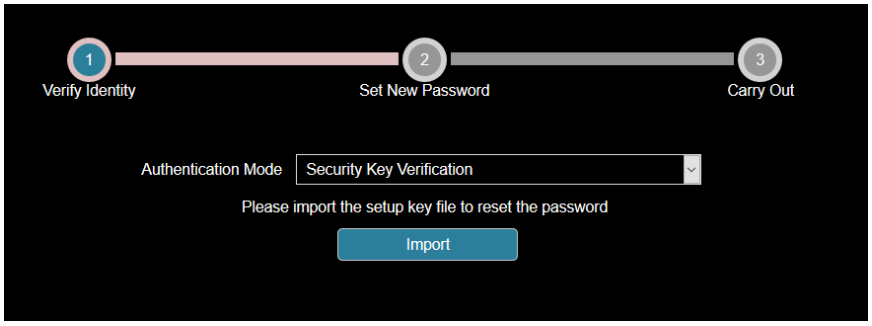


Figure 4-8

3. Enter the new password and confirm the password (as shown in Figure 4-9) and click "**Next**".

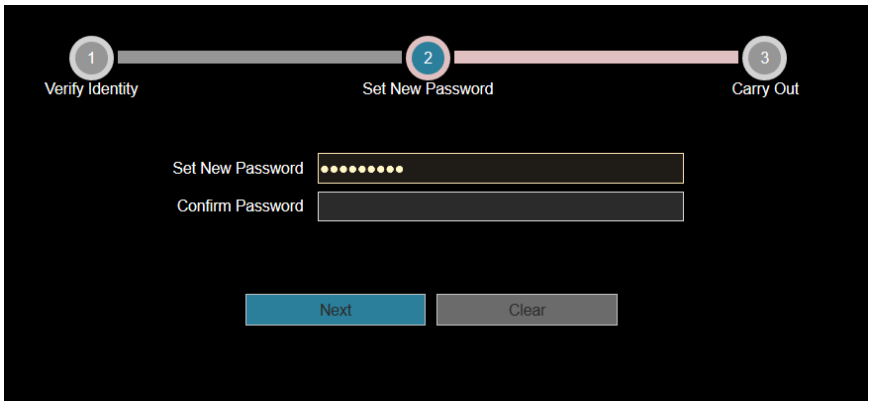


Figure 4-9

4. Click "**Re-login**" to return to the login interface (as shown in Figure 4-10).

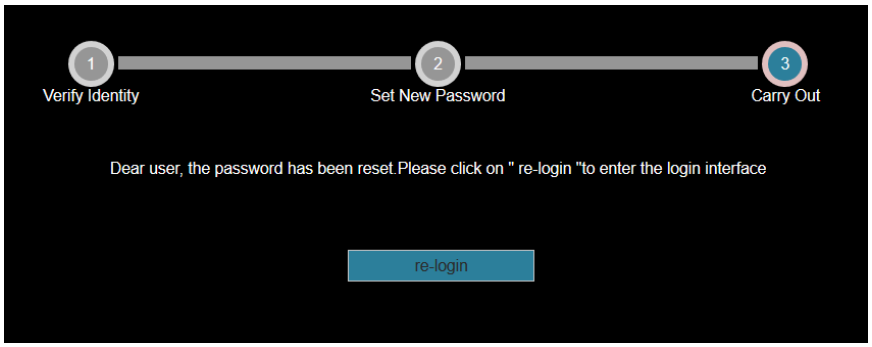


Figure 4-10

IMPORTANT NOTE:

When selecting "**Security question validation**", enter the correct answers to 2 questions to enter the "**Set New Password**" interface and proceed to the next step.

When setting a new password, you must set at least 8 digits and contain both letters and numbers to set it successfully.

An NVR key file can be used multiple times to reset the password if you forget it.

4.2.4 Exiting Web Console

When you access the NVR web console, you can quickly log out of the console by tapping on the "**Logout**" button in the top-right corner of the screen.

3.3 Install the necessary browser plugins

The browser plug-in needs to be downloaded and installed when logging in to the device for the first time, Figure 4-11. Click "Please click here to download the browser plug-in, please close the browser when the download is finished", install it, and then follow the prompts to complete the installation.

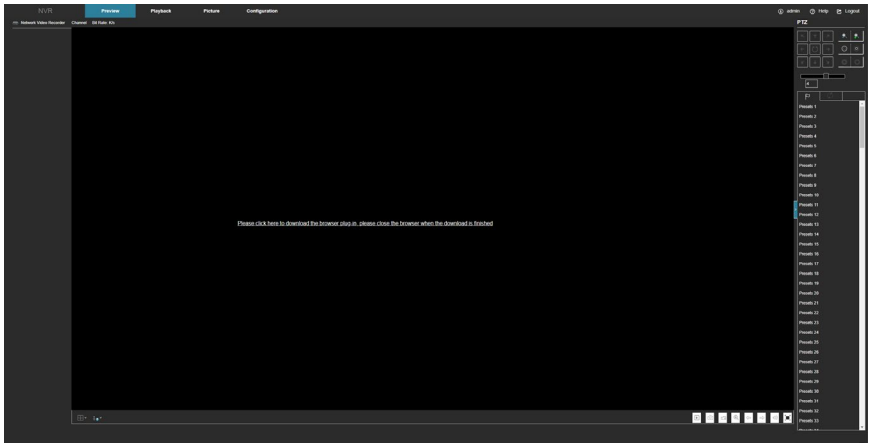
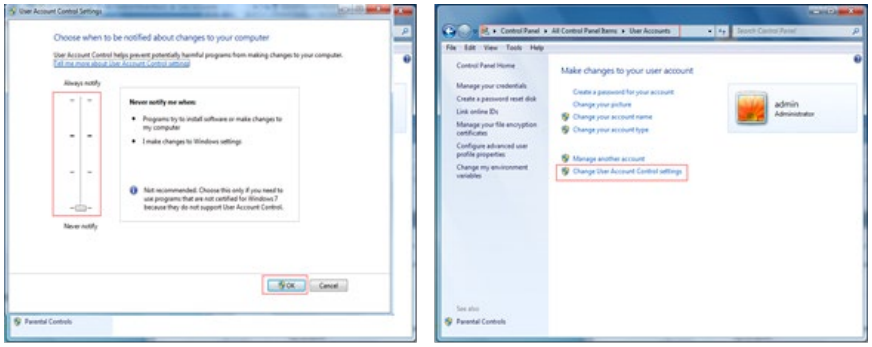


Figure 4-11

IMPORTANT NOTE:

After the NVR upgrades to a new version, you need to delete the original control, download, and then install the control again.

WIN 7 could have problems regarding backup and recording. If so, check the Admin setting, procedure as follows:



(WIN7-1 WIN 7-2)

If the Active X cannot be loaded. Please adjust the security level and firewall setting to the lowest setting and make some adjustment to IE as well: Tool-Internet Option- Custom level-ActiveX- enables all the options below ActiveX, and then click "OK". The Active X is downloaded and installed automatically, Figure 4-12.

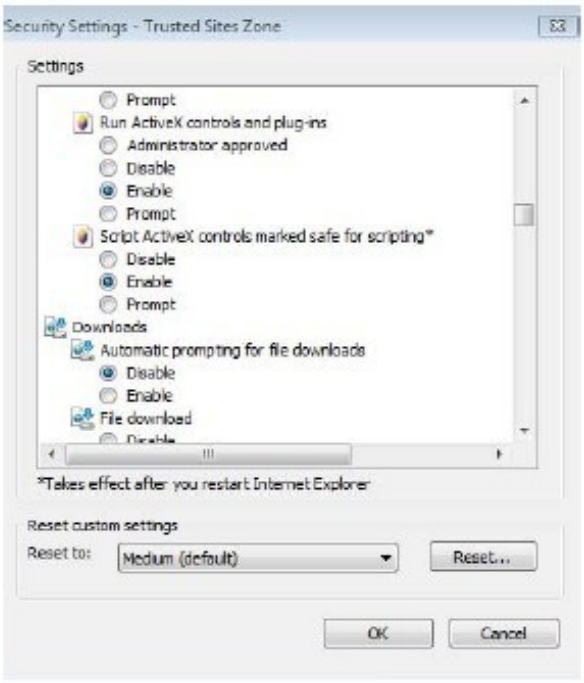


Figure 4-12

4.4 Preview

After logging the live preview interface displays, Figure 4-13.

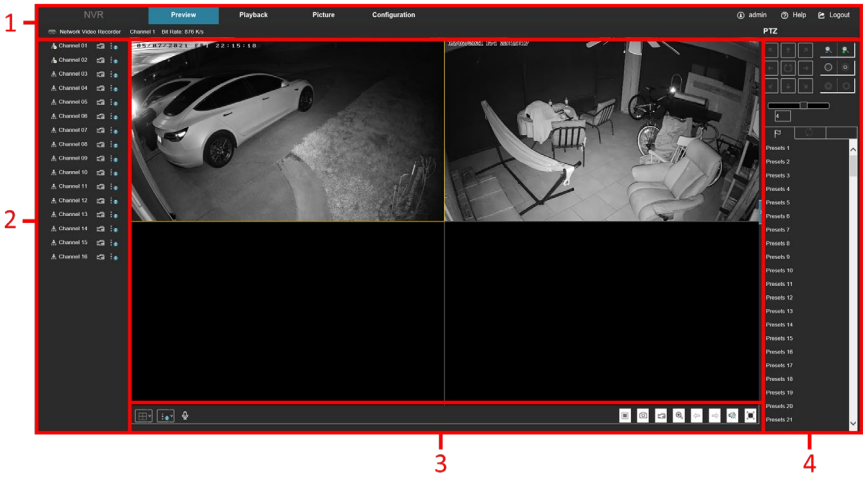


Figure 4-13

1. System Menu: Including Live View, Playback, Picture, Configuration, Help, Logout, and show login username.
2. Real-time Monitoring Channel: Open/Close Preview, record, and stream switching.

Mark	Specification
Channel 01	Open/close corresponding preview channel.
	Start/stop recording, save video on local computer hard drive.
	Main/sub bit stream switching.
	For voice calls, click to automatically connect to the device to make a real-time call. Prerequisites for local device calls: There are audio input/audio output interfaces on the local device, and both mic and speakers have been connected. Note: The app and web interfaces cannot talk to the local device at the same time.

3. Real-time Monitoring Channel: Open/Close Preview, **record,** and stream switching.

Mark	Specification
	Preview window toggle. From left to right are: 1 split screen, 4 split screen, and 9 split screens. The preview number varies per device.
	Switch all preview channel master, sub streams, and open previews.
/	Open/Close all preview channels.
	Click this icon to take a picture. The default storage path of the picture is C:\Record. You can enter the Configuration → Local Config interface to modify the storage path.
	Click this icon to start recording on all channels; click the icon again to stop recording. The default storage path of the recording is C:\Record. You can enter the Configuration → Local Config interface to modify it.
	Local electronic zoom, click this icon to open the electronic zoom function, select to enlarge the channel, hold down the left mouse button to select the area to be zoomed in, release the left button, and select the area to be enlarged; in the zoom channel, click the right mouse button to restore the original status.
	1 Split screen preview, click to switch between channels.
/	Turn on/off the speaker. If the audio is not turned on, there is no sound when listening.
	Full-screen playback, press the keyboard Esc to exit the full screen.

4. Preview channel shortcut button:

Mark	Specification
	PTZ directional control
	PTZ self-test
	Zoom button
	Focus button
	Aperture control button
	The step size is mainly used for speed control. The larger the value, the faster the rotation speed. For example, the rotational speed of 7 is much larger than the rotational speed 1.
	Preset point setting
	Call presets
	Settings
	Delete settings
	Cruise path setting
	Turn on / off cruise

Chapter 5: Configuration

5.1 Configuration

5.1.1 Local Configuration

In the main interface, click **Configuration** → **Local Config** → **Local Config** to enter the local configuration interface, Figure 5-13. Here you can the local file recording settings including captured video and clips to the local computer's save path, click **Browse** to select the path to save, and click **Save** to complete the path settings.

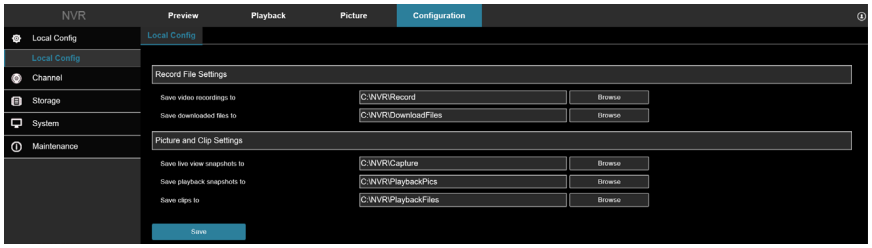


Figure 5-13

5.2 Channel

5.2.1 Camera

In the main interface, click **Configuration** → **Camera** → **Camera** to enter the add camera interface, Figure 5-14 and 5-15. Here you can add, edit, and delete devices as needed.

Add: Assign ClareVision and ONVIF-compatible cameras to a channel.

Manual Add: Manually input camera parameters and settings to assign to a channel.

Delete: Delete selected camera channels.

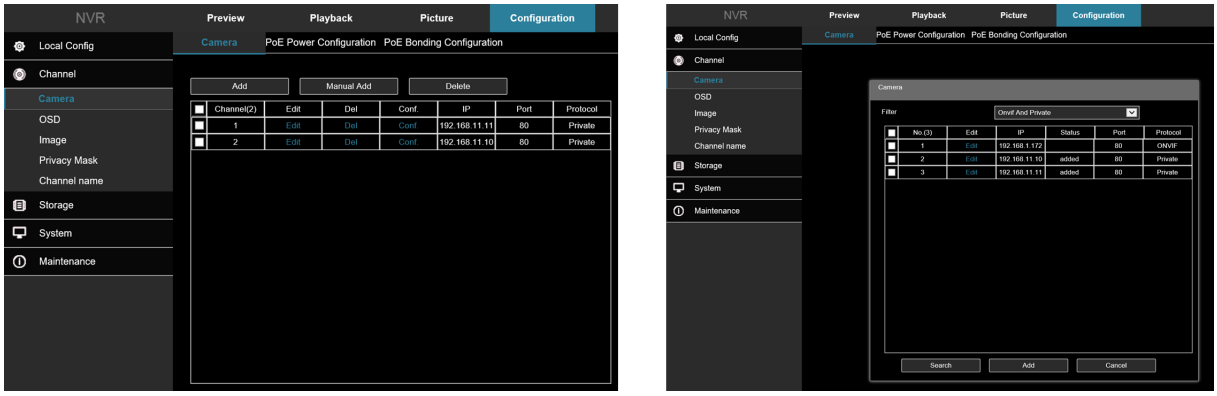


Figure 5-14 and 5-15

5.2.2 PoE Power Configuration

In the main interface, click **Configuration** → **Camera** → **Add Camera** → **PoE Power Configuration** to enter the PoE Power Configuration interface. Here you can check the connection status of each channel and adjust the power configuration for each channel according to the distance of the tether. Figure 5-16.

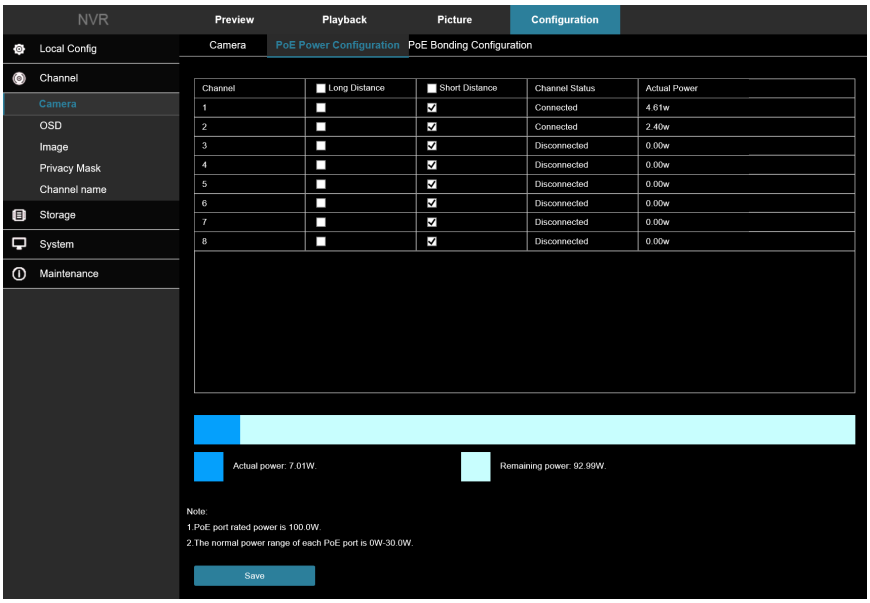


Figure 5-16

5.2.3 PoE Bonding Configuration

In the main interface, click **Configuration** → **Camera** → **Add Camera** → **PoE Binding Configuration** to enter the PoE Power Configuration interface. Here you can set each PoE port to bind with the desired camera. Figure 5-17.

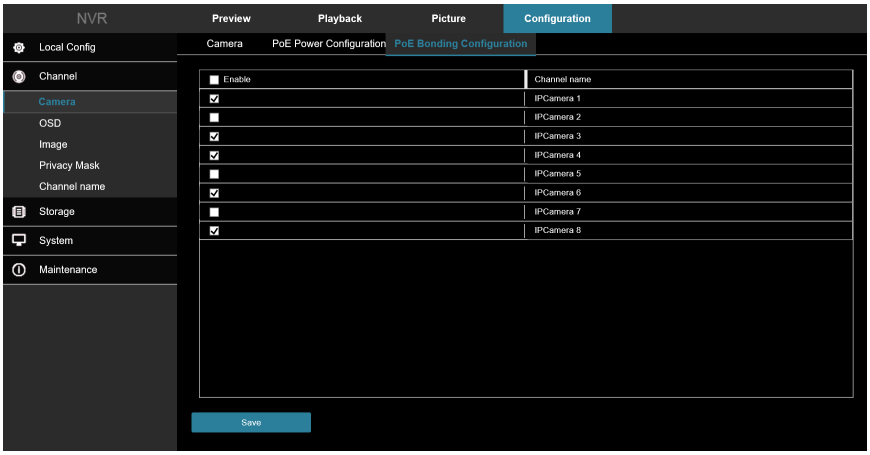


Figure 5-17

5.3 OSD

In the main interface, and then click **Configuration** → **Camera** → **OSD** to enter the OSD setting interface, Figure 5-18. Here you can adjust he On Screen Display settings to view channel text, date, and other related information.

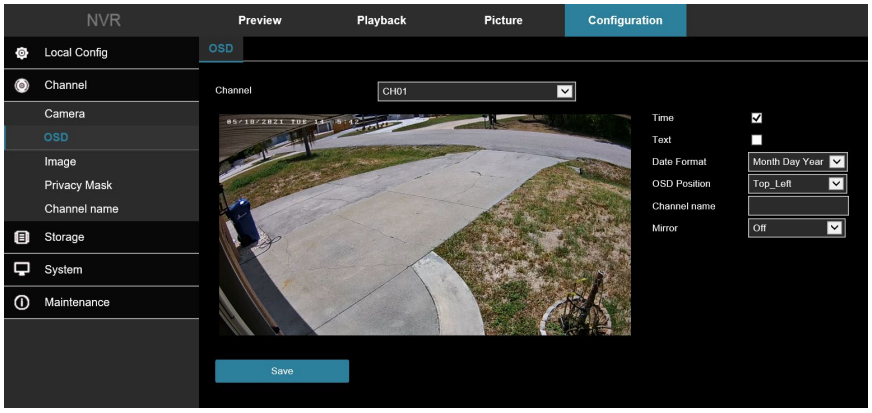


Figure 5-18

- **[Time]** Turn on / off the preview interface time display.
- **[Text]** Turn on / off the preview interface OSD text display.
- **[Date Format]** Set the preview interface to display the date format, default day / month / year, switchable month / day / year, and year / month / day options.
- **[OSD Position]** Set the preview interface to display the time or OSD text position, the default is the Top Left You can switch the Bottom Left.
- **[Channel Name]** Display the channel name.
- **[Mirror]** Adjust image orientation.

5.4 Image

In the main interface, click **Configuration** → **Camera** → **Image** to enter the Image setting interface, Figure 5-19. Here you can view and adjust each channel image settings, including Image Adjustment, Exposure Settings, Focus, Backlight Settings, Day and night switch, White Balance, Video Adjustment, Image Enhancement, Defog Mode, Distortion, and Image rotation as shown in Figure 5-19.

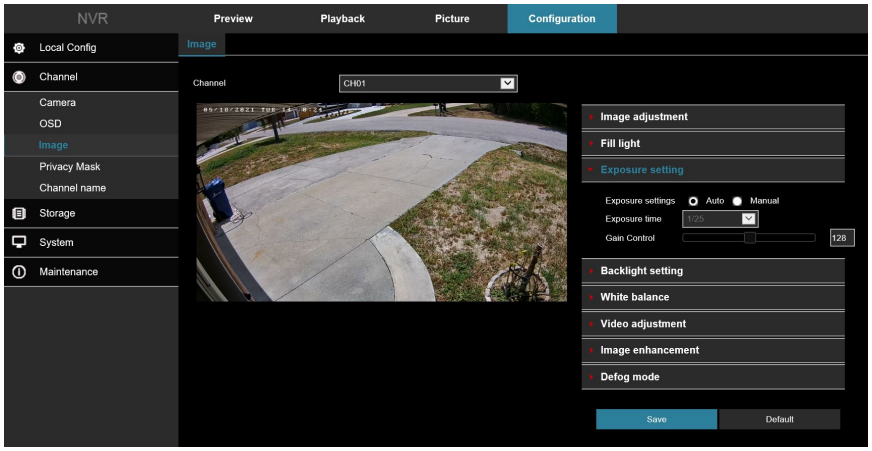


Figure 5-19

[Image adjustment] You can manually set brightness, contrast, saturation, sharpness. The scope of valid values is from 0 to 255, you can drag the slider to set, and the default value is 128, as shown in Figure 5-20.

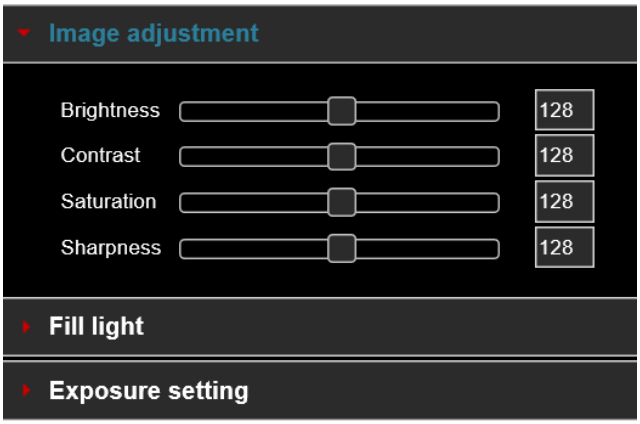


Figure 5-20

[Exposure settings] The default is automatic exposure. To set specific exposure settings, select Manual, and the Exposure Time and Gain Control is activated, click "**Save**". As shown in Figure 5-21

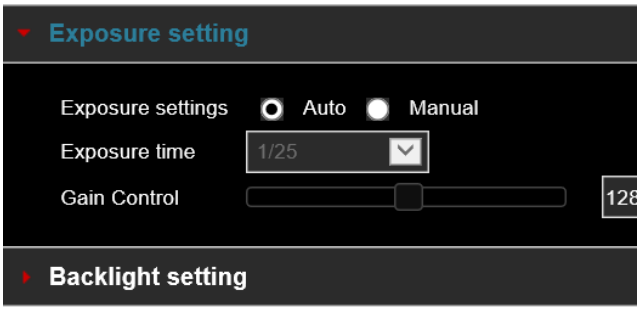


Figure 5-21

[Backlight Settings] Used to set backlight compensation and strong light suppression. The default is OFF, it can be turned on manually, allowing backlight, strong light suppression intensity, and dark area boost strength settings to be configured, as shown in Figure 5-22.

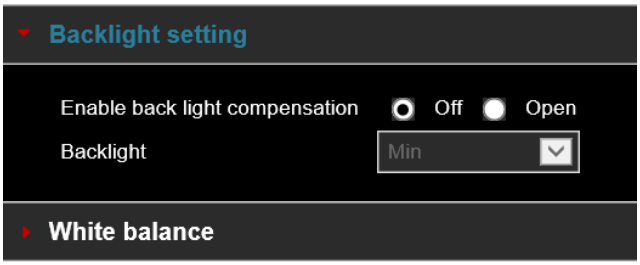


Figure 5-22

[Fill Light] The fill light mode defaults to automatic with sensitivity set to 3. Filter time is 3 seconds, light mode is auto, **Light Brightness** is 100, as shown in Figure 5-23. When the fill mode is "**Automatic**", the device will turn on the fill light according to the actual environment. The user can switch the fill mode to "**Day**", "**Night**" and "**Scheduled Switch**" according to the actual scene environment and switch the sensitivity and filter time of the device according to the fill mode.

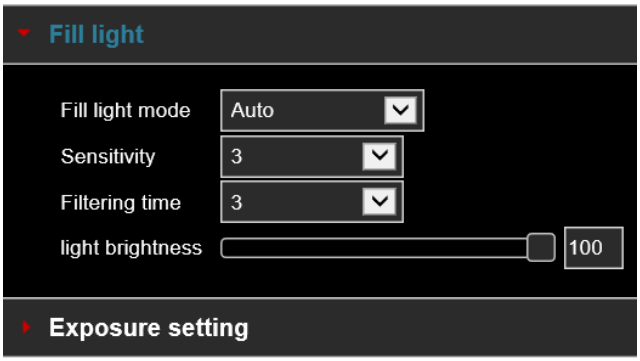


Figure 5-23

[White balance] Default is Auto, can be switched to Manual for adjusting the Red, Green, and Blue color gains as shown in Figure 5-24.

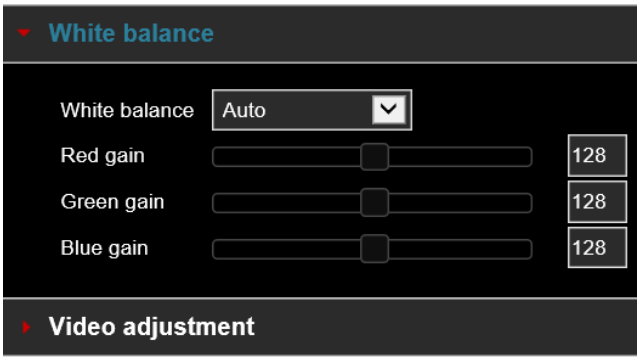


Figure 5-24

[Video adjustment] Here you can turn on and set 2D or 3D digital noise reduction, as shown in Figure 5-25.

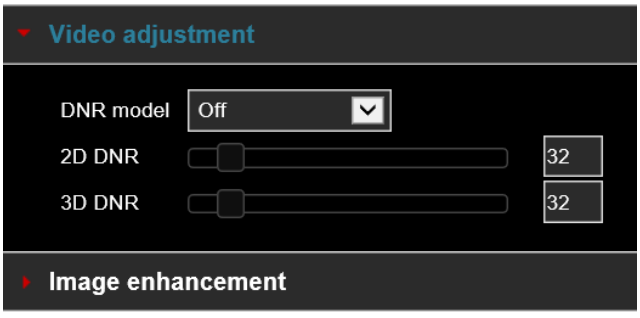


Figure 5-25

[Image enhancement] Including flicker control, wide dynamic switch, HDR, as shown in Figure 5-26.

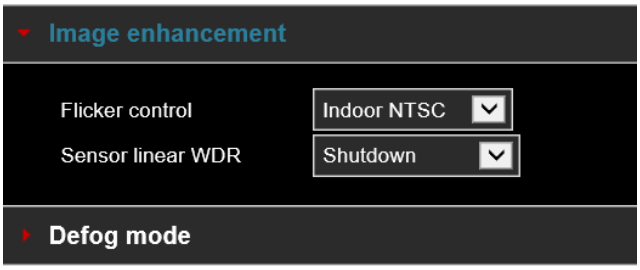


Figure 5-26

- **Flicker control:** The flash mode is selected according to the camera installation environment and the flicker standard. The default setting is NTSC (60HZ).
- **Sensor linear WDR:** The default is Shut Down (off). You can switch select: Automatic, Weak, Moderate, Strong, Super.

[Defog mode] Used to set the defog mode and strength, as shown in Figure 5-27.

Figure 5-27

- **Defog Mode:** The default is off; you can choose from the drop-down menu to On or Auto.
- **Defog Strength:** The default is 0, when the fog mode is open, you can set the fog strength, can be set to a value range of 0-255.

5.4 Privacy Mask

In the main interface, click **Configuration** → **Camera** → **Privacy Mask** to enter the privacy mask setting interface, Figure 5-28. Here you can add three shielding areas. This feature blocks a portion of the camera view from being viewed and recorded.

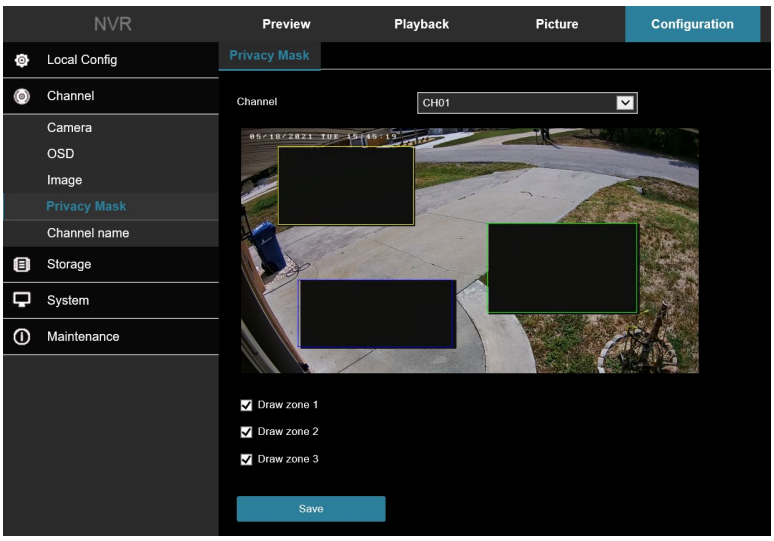


Figure 5-28

You can choose up to 3 privacy areas. Hold down the left mouse button and drag to select the area in the area. Region 1, Region 2, and Region 3 will show the corresponding coordinates, width, and height of the region. If you want to delete a region, uncheck the corresponding privacy checkbox. Click on "**Save**" after completing the setting.

5.6 Channel Name

In the main interface, click **Configuration** → **Camera** → **Channel Name** to enter the channel name setting interface, Figure 5-29. Here you can view and modify the names of all channels of the NVR.

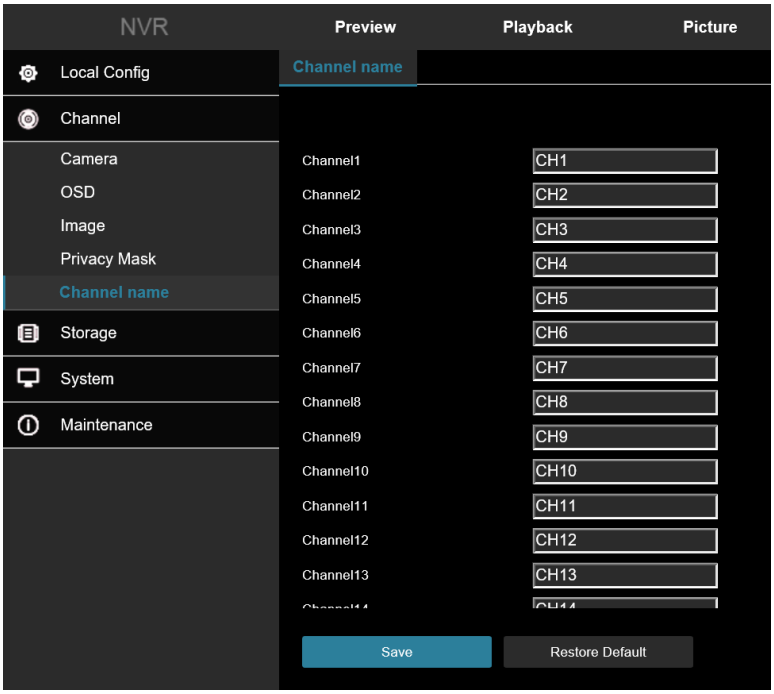


Figure 5-29

Chapter 6: Storage

6.1 Record

6.1.1 Record

How to configure video settings:

1. Access the main interface, click **Configuration** → **Storage** → **Record** → **Record** to enter the recording setting interface, Figure 6-30.

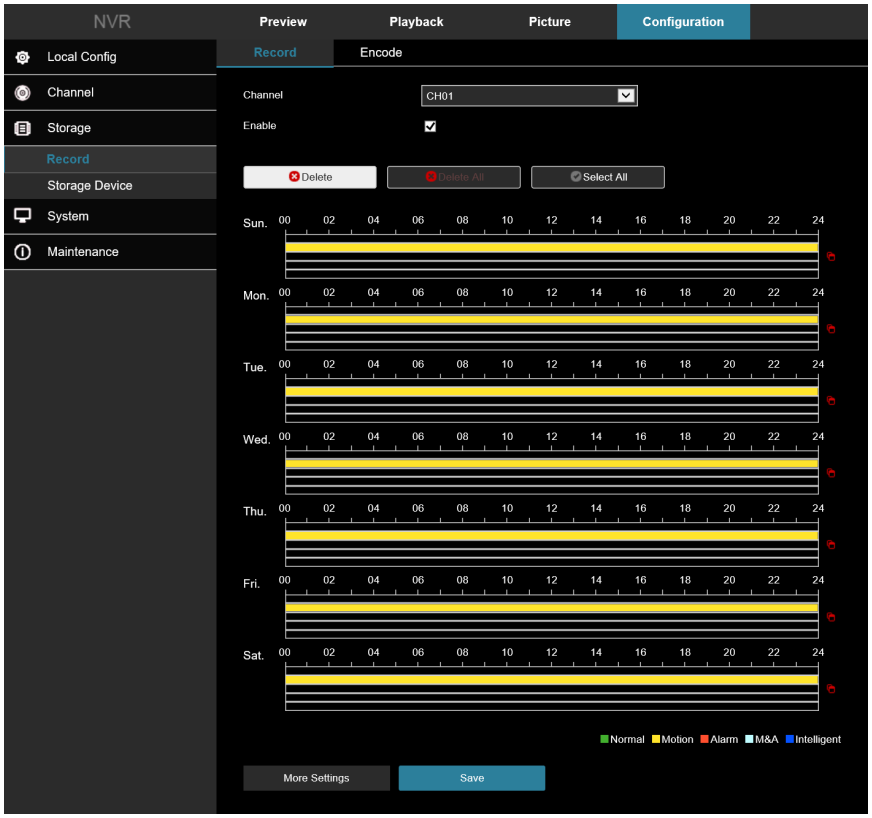


Figure 6-30

2. Set parameters using the table below.

Parameter	Description
Channel	Select the channel number for setting the recording, and you can set different recording plans for different channels. If you set the same for all channels, select "All".
Enable	Enable/Disable the current channel recording function.
Del	Delete the selected recording time period.
Delete All	Click to delete all recording settings.
Selected All	Click to set all channels to normal video and motion detection recording from Monday to Sunday.

	Copy to. After setting the video for a certain day, click to apply the settings of that day to other times.
Time period setting	Click one of the set recording time periods, pop up the time period setting, select the recording type, set the time period, and click Save to complete the setting. When you click Del, the selected time period is deleted.
More Settings	Click to enter the pre-record time setting interface, set the prerecord action status 0 seconds to 30 seconds before the recording, click OK.

Table 6-31

3. Click Save to complete configuration.

6.1.2 Encode

In the main interface, click **Configuration** → **Storage** → **Record** → **Encode** to enter the encoding setting interface Figure 6-32. Here you can view and set the encoding parameter values for accessing each camera.

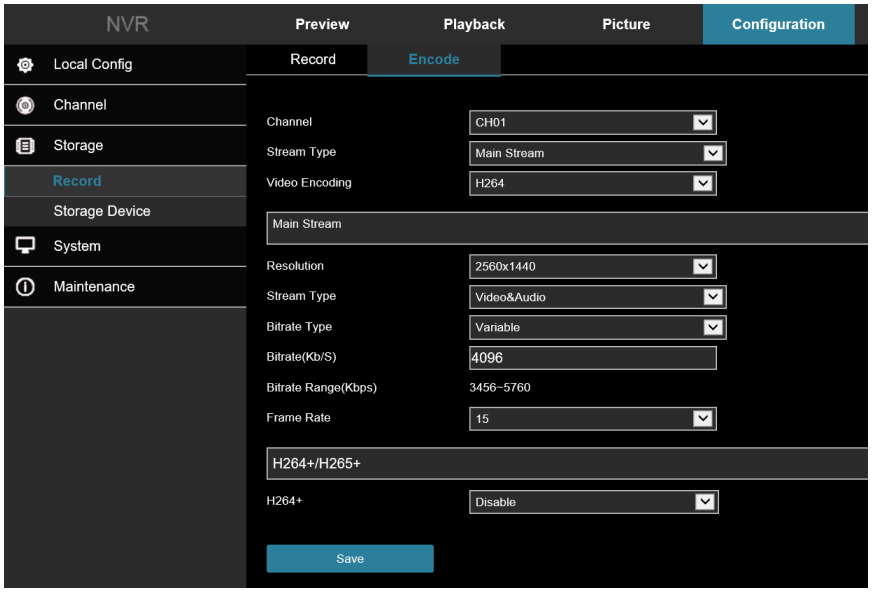


Figure 6-32

6.2 Storage Device

6.2.1 HDD

In the main interface, click **Configuration** → **Storage** → **Storage Device** → **HDD** to enter the HDD interface, Figure 6-33. Here you can view hard drive details, connected cameras, and format the hard drive.

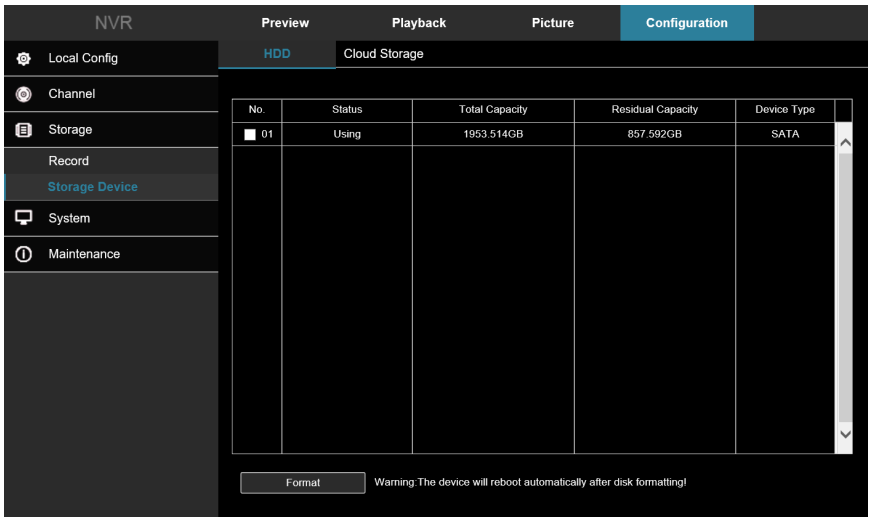


Figure 6-33

6.2.2 Cloud Storage

In the main interface, click **Configuration** → **Storage** → **Storage Device** → **Cloud Storage** to enter Cloud Storage and IPEYE setting interface, Figure 6-34. Here you could enable and set the function of Cloud Storage and IPEYE, the specific setting steps are consistent with the NVR local settings.

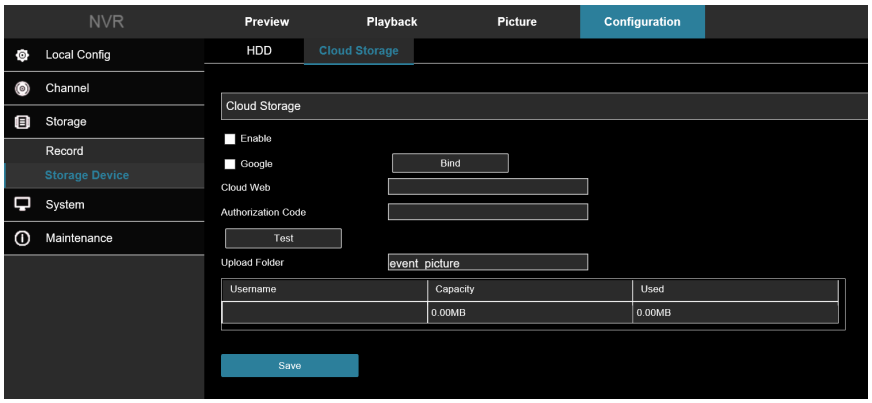


Figure 6-34

Chapter 7: System

7.1 General

7.1.1 Device Settings

In the main interface, click **Configuration** → **System** → **General** to enter the device setting interface, Figure 7-35. Here you could view and adjust language settings, record mode, record days, video standard, resolution, and other information. Click Save to complete the setting.

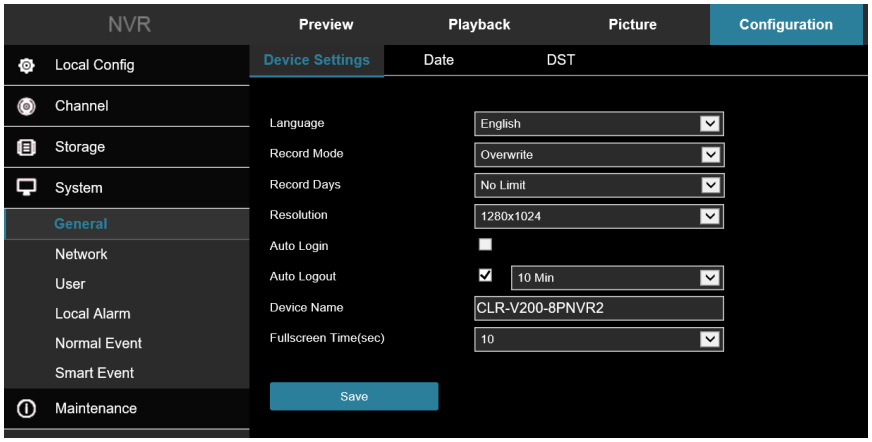


Figure 7-35

7.1.2 Date

Set the system date of the device, and manually set the system time, synchronize with the computer, or set the system date using the Network Time Protocol (NTP) function as needed.

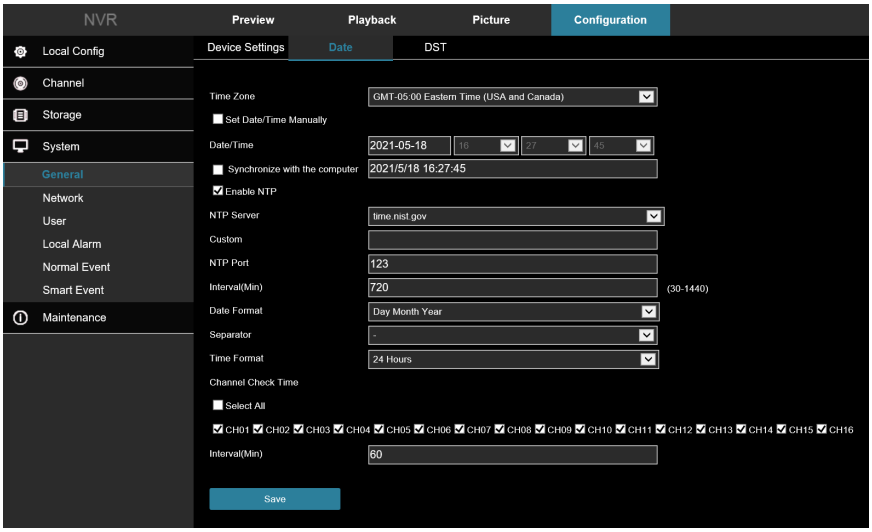


Figure 7-36

Set the system date as follows:

1. Access the main interface, click **Configuration** → **System** → **General** → **Date** to enter the date setting interface, Figure 7-36.
2. Select the setting date type (3 ways):

- **Enable Set Date/Time Manually:** Select the date and time manually, and then click **Save**, the system automatically synchronizes with the manually set time.
- **Enable Synchronize with the computer:** Click **Save**, the system automatically synchronizes the time to the computer that logs into the WEB page.
- **Enable Receive Date/Time from NTP:** Select the NTP server (or select a custom server, enter the custom server domain name), select the time zone where the device is located, enter the NTP port, set the NTP update interval, date format, date separator, time format, click "**Save**", system time, and then the NTP server time is synchronized.

The date setting parameters are described in the following table:

Parameter	Description
NTP Server	Select the server domain name where the NTP service is installed.
Custom NTP server	When the NTP server selects "Custom", enter the NTP server domain name.
NTP Port	Enter NTP server port.
Date Format	Set the date display format for NVR devices, including Year Month Day, Month Day Year, Day Month Year, Day Month Year.
Time Format	Set the time format of NVR devices, including 24-hour and 12-hour.
Date Separator	Set the separator between year, month, and day.
Time Zone	Set the time zone of the NVR device.
Channel Check Time	Select the NVR channel.

Table 7-37

Set the channel check time as follows:

1. Access the main interface, click **Configuration** → **System** → **General** → **Date** to enter the date setting interface, Figure 7-37.
2. Select the channel or select "**All**", and then click **Save** to complete the configuration.

7.1.3 DST

1. Access the main interface, click **Configuration** → **System** → **General** → **DST** to enter the DST setting interface, Figure 6-20.
2. Turn on daylight-saving time, set the type, start time, end time, and offset.
3. Click **Save** to complete the configuration.

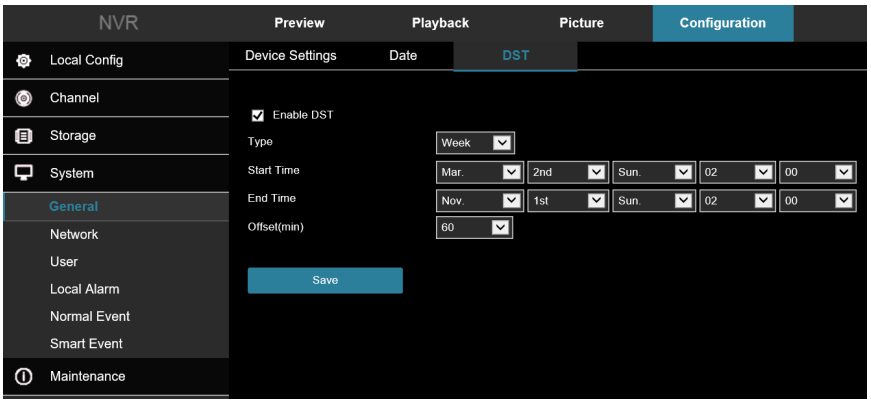


Figure 7-38

7.2 Network

7.2.1 TCP/IP

In the main interface, click **Configuration** → **System** → **Network** to enter the IP/Port setting interface, Figure 7-39. Here you can set the IP Address, Network Mask, Gateway, Port, DNS, and other network information.

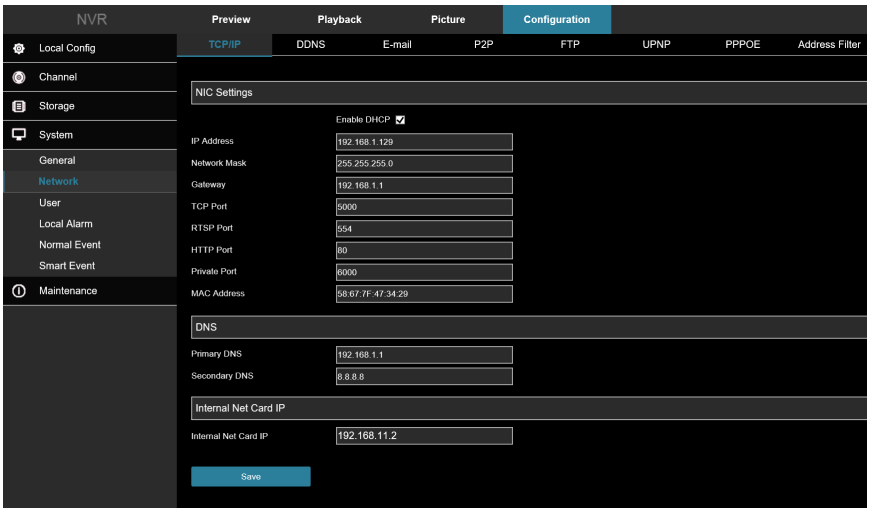


Figure 7-39

7.2.2 DDNS

In the main interface, click **Configuration** → **System** → **Network** → **DDNS** to enter the DDNS setting interface, Figure 7-40. Here you can enable and set the DDNS function.

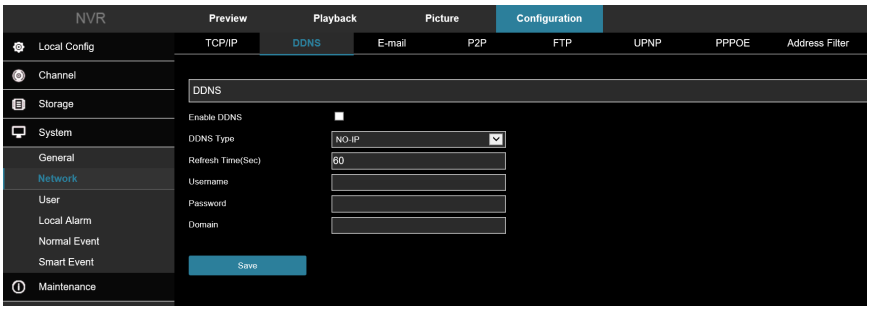


Figure 7-40

7.2.3 E-Mail

In the main interface, click **Configuration** → **System** → **Network** → **E-mail** to enter the email setting interface, Figure 7-41. Here you can open and set the mail function.

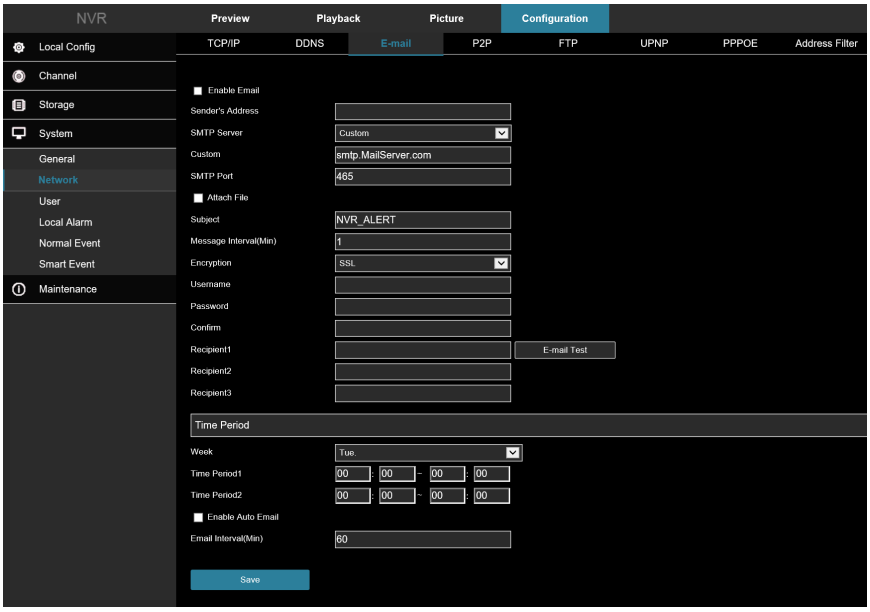


Figure 7-41

7.2.4 P2P

In the main interface, click **Configuration** → **System** → **Network** → **P2P** to enter the P2P setting interface, Figure 7-42. Here you can enable/disable the P2P function, check the serial number of the device, use the mobile phone to scan the QR code to download the app.

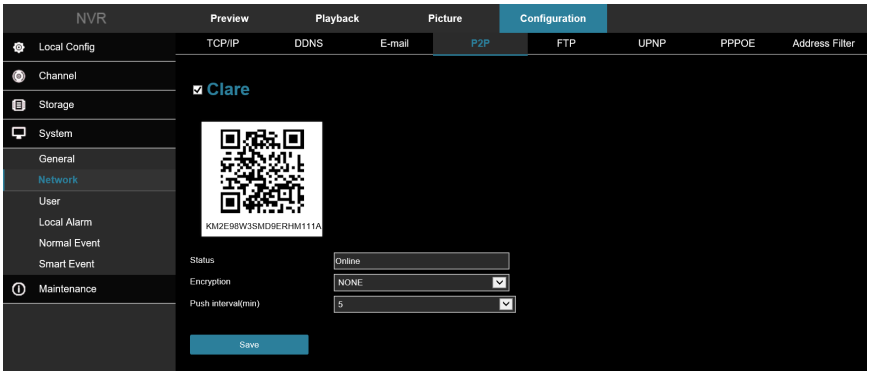


Figure 7-42

7.2.5 FTP

In the main interface, click **Configuration** → **System** → **Network** → **FTP** to enter the FTP setting interface, Figure 7-43. Here you can enable and set the FTP server function.

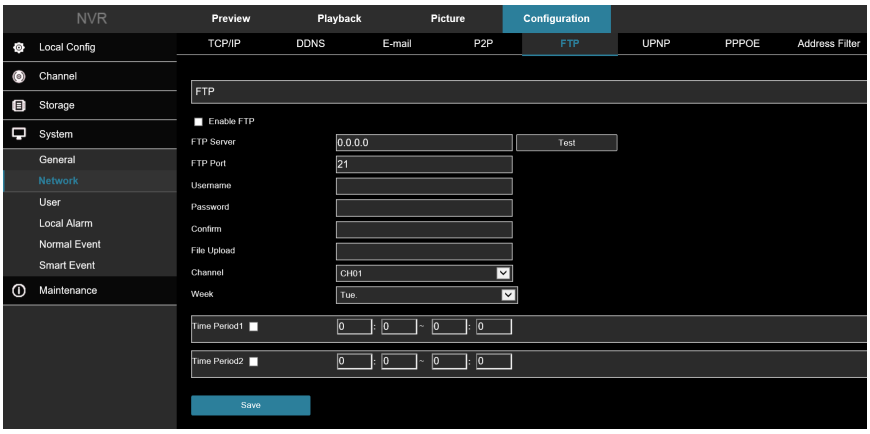


Figure 7-43

7.2.6 UPNP

In the main interface, click **Configuration** → **System** → **Network** → **UPNP** to enter the UPNP setting interface, Figure 7-44. Here you can enable and set the UPNP function.

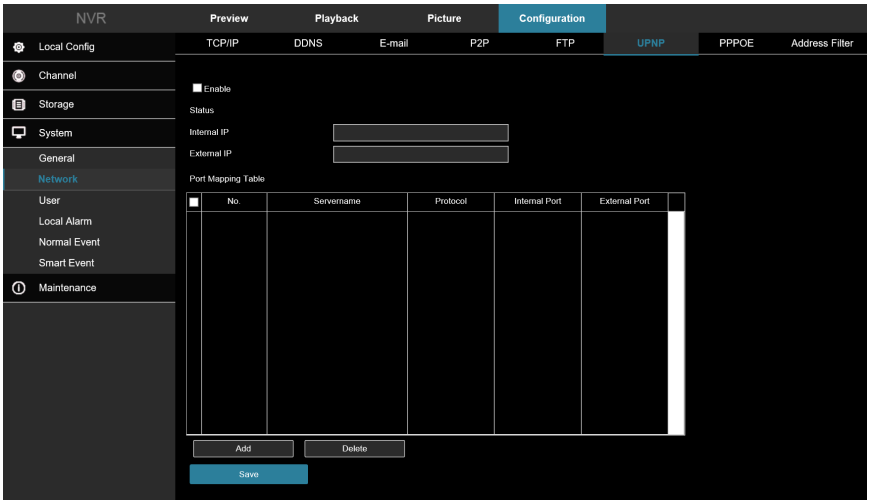


Figure 7-44

7.2.7 PPPOE

In the main interface, click Configuration → System → Network → PPPOE to enter the PPPOE setting interface, Figure **7**-**45**. Here you can enable and set the PPPOE function**.**

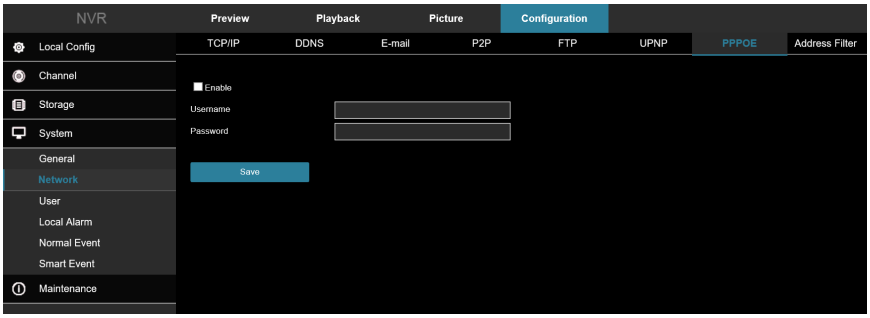


Figure 7-45

7.2.8 Address Filter

In the main interface, click **Configuration** → **System** → **Network** → **Address** Filter to enter the Address Filter setting interface, Figure 7-46. Here you can enable and set the Address Filter function of the NVR.

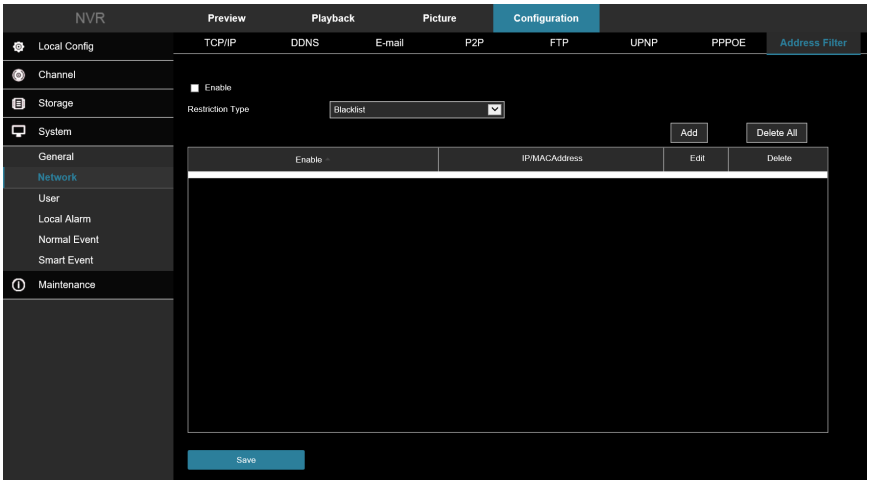


Figure 7-46

7.3 User

In the main interface, click **Configuration** → **System** → **User** to enter the User management interface, Figure 7-47. Here you can add, delete, edit users, user settings.

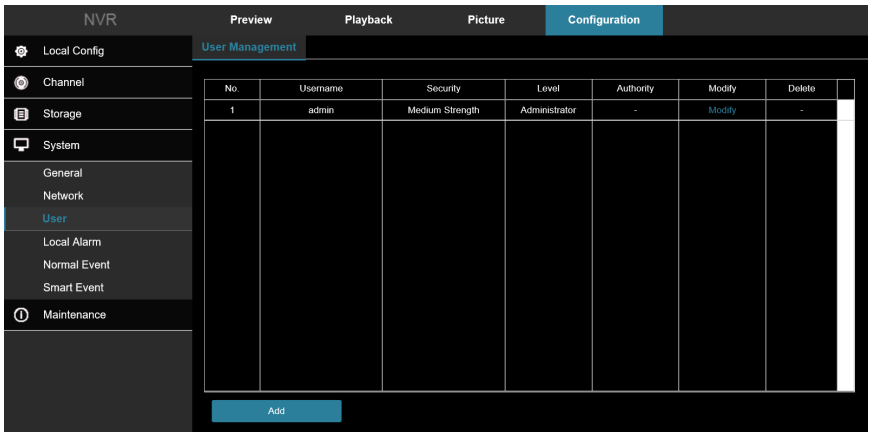


Figure 7-47

7.4 Local Alarm

7.4.1 Alarm Input

In the main interface, click **Configuration** → **System** → **Local Alarm** → **Alarm Input** to enter the Alarm Input interface, Figure 7-48. Here you can set the alarm input of the device to the alarm of the external alarm device.

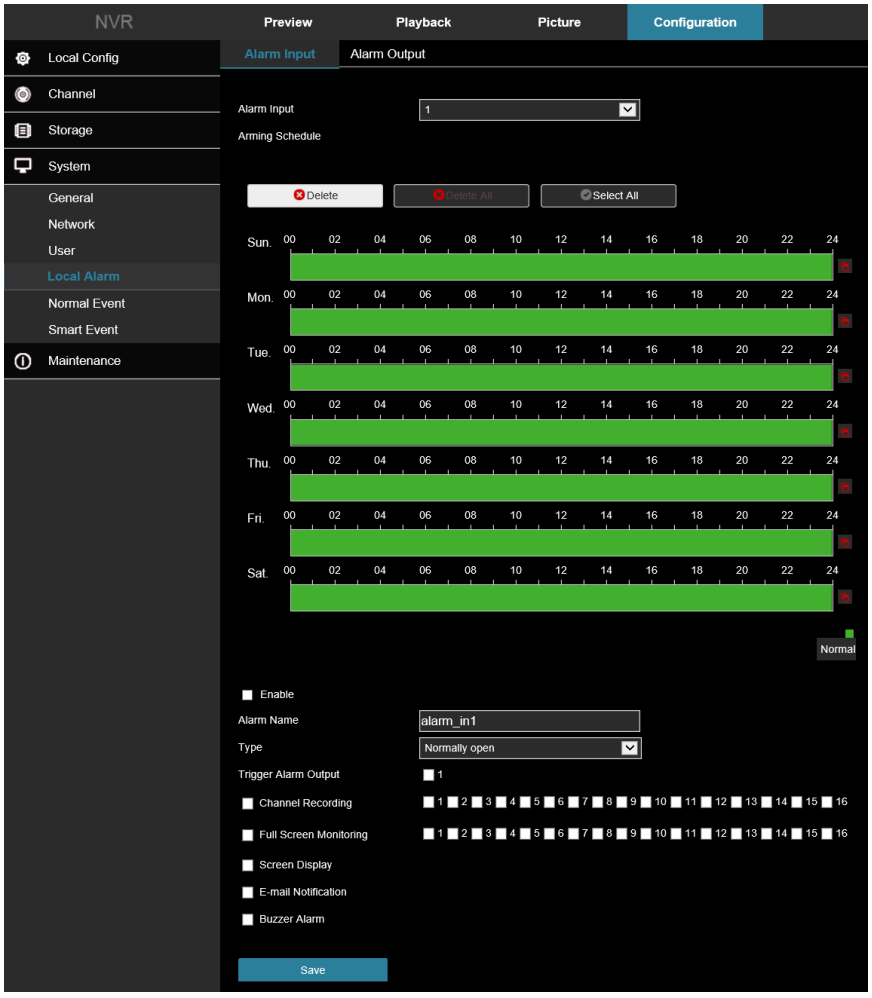


Figure 7-48

7.4.1 Alarm Output

In the main interface, click **Configuration** → **System** → **Local Alarm** → **Alarm Output** to enter the Alarm Output interface, Figure 7-49. Here you can set the alarm output of the device to the alarm of the external alarm device.

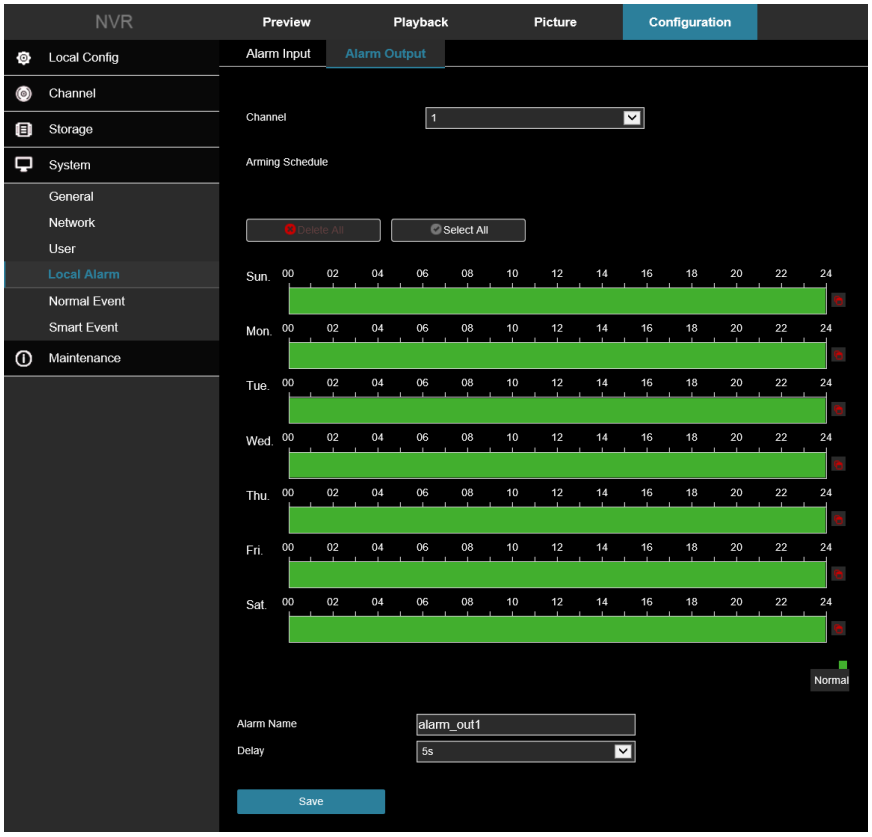


Figure 7-49

7.5 Normal Event

7.5.1 Motion Detection

Motion detection uses computer vision and image processing techniques to analyze the video images to see if there are enough image changes. When the moving target appears on the monitoring screen and the moving speed reaches the preset sensitivity, the system performs an alarm linkage action.

Regional Settings

In the main interface, click **Configuration** → **System** → **Normal Event** → **Motion Detection** to enter the motion detection setting interface, Figure 7-50. Here you can view and set device motion detection related information.

1. Select the desired channel and add a checkbox next to "**Enable**" to turn on motion detection events.
2. Adjust the sensitivity setting as needed.
3. Use the mouse to draw the motion detection area on the channel video.

Settings Include:

Channel: Select to set the channel.

Enable: Check to turn on/off motion detection alarm.

Set Area: Select all areas by default, click to enter the area setting interface, set the range of the dynamic detection area, press and hold the left mouse button to select the alarm area. After selection, the alarm area is replaced by the red grid. Select the red grid again to cancel the alarm area setting.

Sensitivity: Can be set 0 to 10, the higher the value, the more sensitive the device.

Buzzer Alarm: Check to turn on/off the buzzer alarm function.

E-mail Notification: Check to turn on/off when the device alerts the mail function.

Channel Recording: Check to turn on/off the channel recording function.

Full Screen Monitoring: When an alarm is triggered on the preview interface, the real-time video of the device channel is displayed in full screen.

Alarm Output: Select the alarm output port, it is connected to the alarm device, within the set alarm time range, when the device motion detection alarm, it will trigger an external alarm device to alarm.

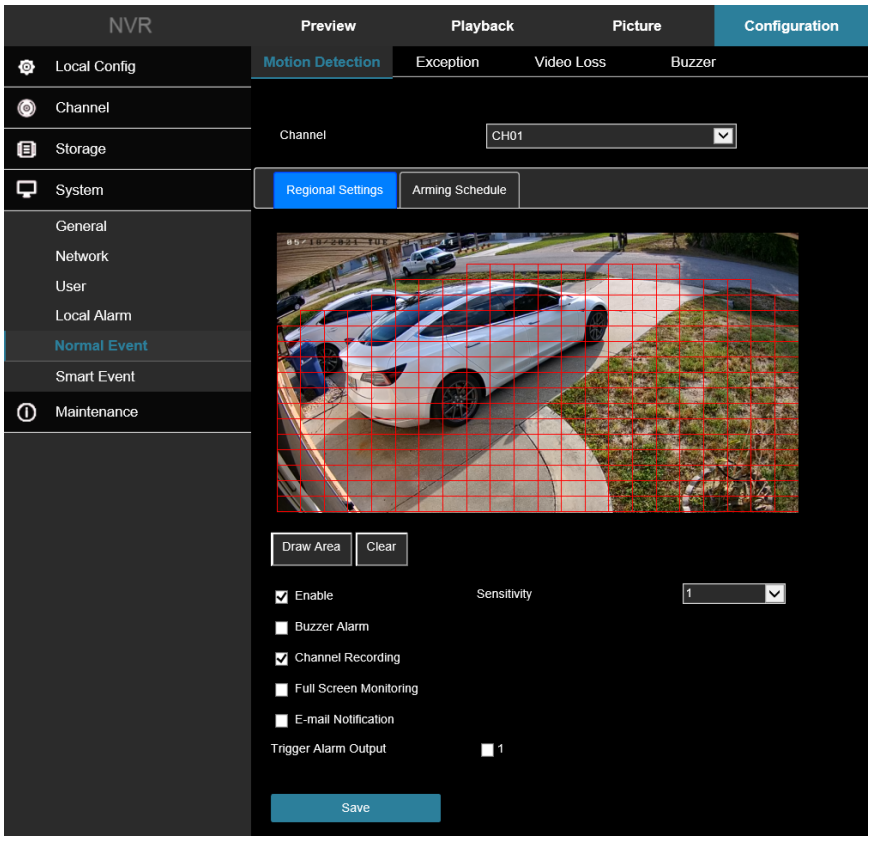


Figure 7-50

Arming Schedule

As shown in Figure 7-51, you can view, edit, and delete the arming time of motion detection. The default is to arm the alarm 24 hours a day.

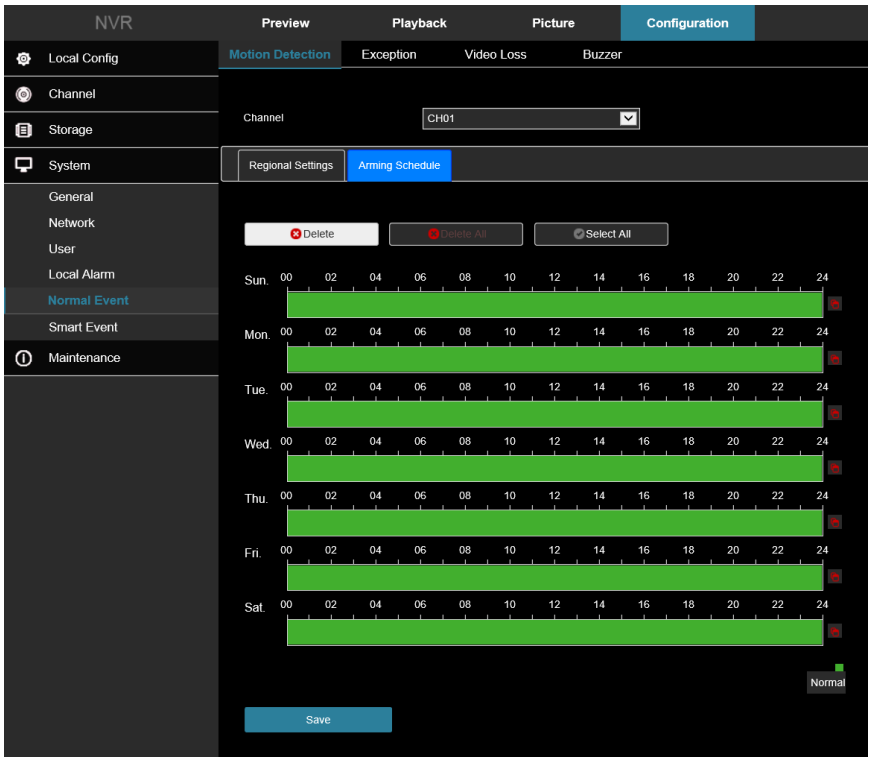


Figure 7-51

7.5.2 Exception

In the main interface, click **Configuration** → **System** → **Normal Event** → **Exception** to enter the exception setting interface, Figure 6-33. Here you could set the alarm mode of abnormal events. When an abnormal event occurs during the operation of the NVR, the system executes the alarm linkage action. Supported event types include "**No Disk**", "**Disk Error**", "**Broken Network**", and "**IP Conflict**".

1. Select the event type, and then add a check box next to "**Enable**" to turn on the exception alarm.
2. Select the alert type (Screen Display, E-mail Notification, Buzzer Alarm), and then select the alarm output port.
3. Click "**Apply**" to save the settings.

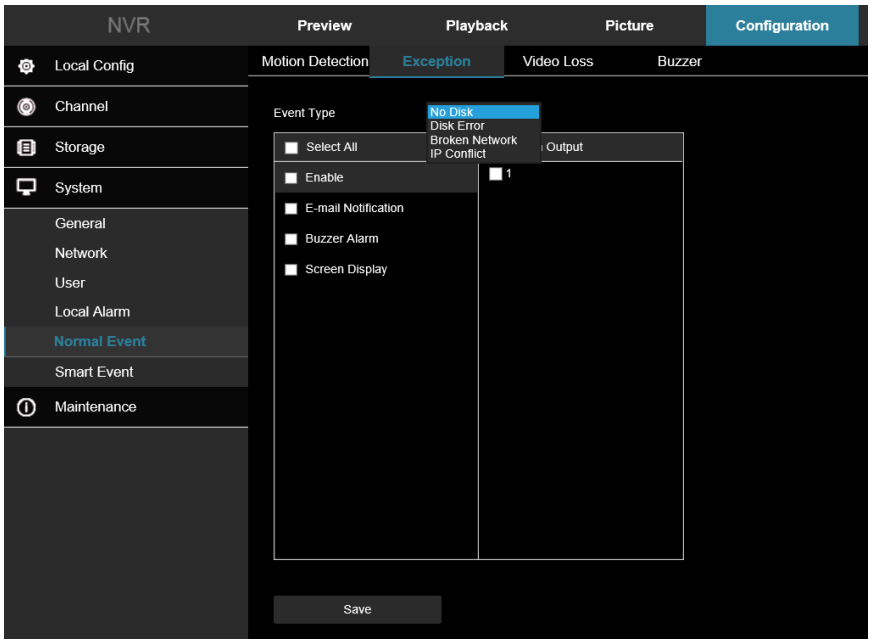


Figure 7-52

- **Enable:** Turn on event alert type.
- **Screen Display:** When an alarm occurs, the device pops up an alarm screen to show a warning.
- **E-mail Notification:** When an alarm occurs, the device sends an email as a warning.
- **Buzzer Alarm:** When an alarm occurs, the device beeps to give a warning.

7.5.3 Video Loss

In the main interface, click **Configuration** → **System** → **Normal Event** → **Video Loss** to enter the video loss setting interface, Figure 7-53. Here you could enable channel video loss and set the corresponding alarm when the video is lost. The relevant parameters are consistent with the local settings of the NVR. When there is a channel losing video signal, the device will alarm and notify the user.

1. Select the desired channel and enable the video loss.
2. Set normal linkage and alarm output as required.
3. Click "**Apply**" to save the setting.

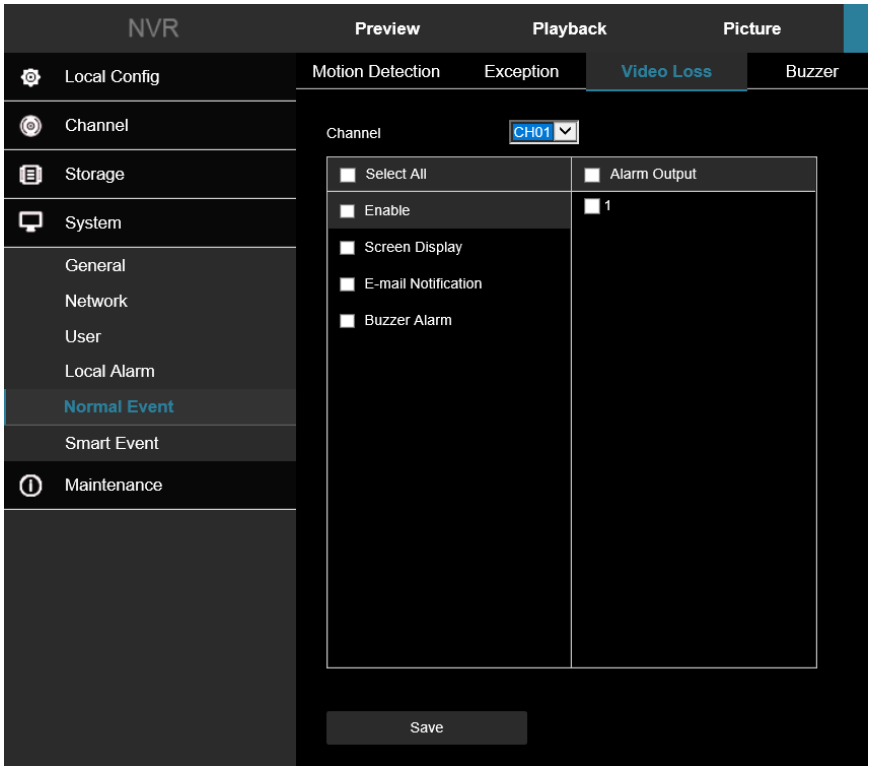


Figure 7-53

- **Channel:** Select the channel.
- **Enable:** Check to turn on/off video loss alarm.
- **Screen Display:** When an alarm occurs, the device pops up an alarm screen to show a warning.
- **E-mail Notification:** When an alarm occurs, the device sends an email as a warning.
- **Buzzer Alarm:** When an alarm occurs, the device beeps to give a warning.

7.5.4 Buzzer

In the main interface, click **Configuration** → **System** → **Normal Event** → **Buzzer** to enter the buzzer alarm setting interface, Figure 7-54. Here you could set the duration of the buzzer alarm. The related parameters are consistent with the local settings of the NVR.

1. Set the buzzer time for the alarm.
2. Click "**Apply**" to save the settings.

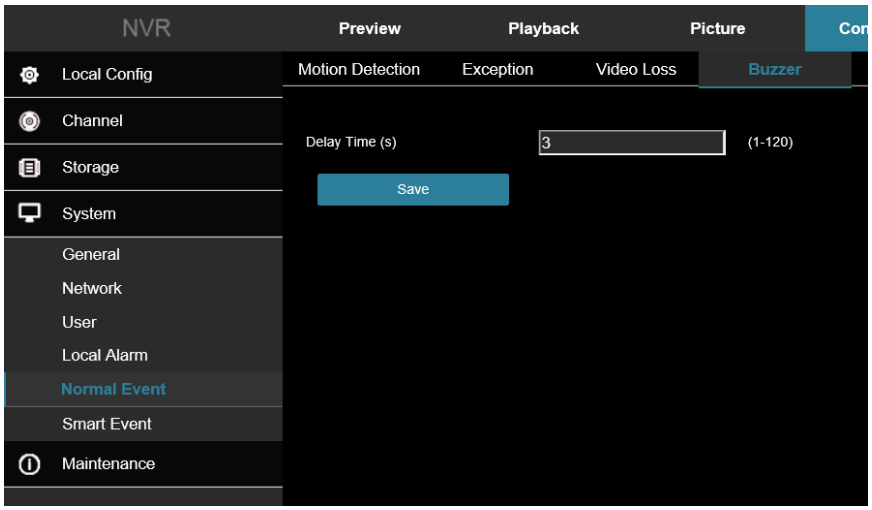


Figure 7-54

- **Test:** Click Test to confirm the volume and duration of the buzzer alarm.

7.5 Smart Event

Intelligent detection includes face detection, crossover detection, regional intrusion detection, people stay and people gathering detection. Smart events are only available on ClareVision Performance Series of cameras.

7.5.1 Human Body Detection

In the main interface, click **Configuration** → **System** → **Smart Event** → **Humanoid** to enter the Face detection setting interface, Figure 7-55. Here you could set the alarm upon detection of a human body.

1. Add a check box next to "**Enable**" to turn on Humanoid detection.
2. Configure alarm notification settings as needed: **Buzzer Alarm**, **E-mail**, **Channel Recording**, **Full Screen Monitoring**, and **Alarm Output Triggering**.
3. Adjust the detection sensitivity under **Rule Settings**.

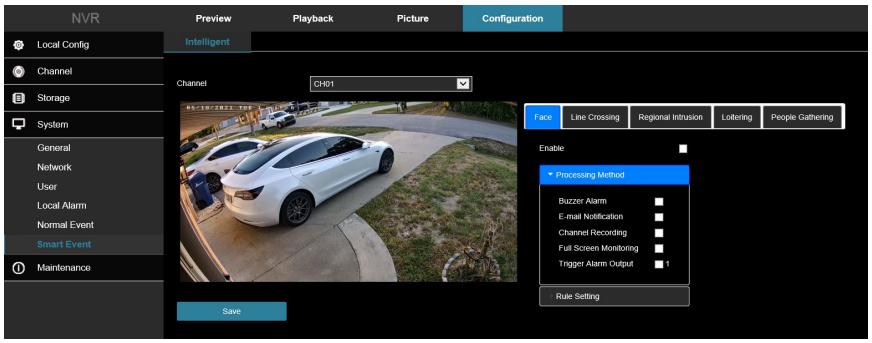


Figure 7-55

7.5.2 Line Crossing

In the main interface, click **Configuration** → **System** → **Smart Event** → **Line Crossing** to enter the Crossover detection setting interface, Figure 7-56. Line crossing detection can detect whether there is an object crossing the set warning surface in the video and perform linkage alarms according to the result.

1. Choose the channel, and then click Line Crossing to enter line crossing detection setting mode.
2. Add checkbox next to “**Enable**”.
3. Select Rule Setting, to set the rule of line crossing detection, the specific steps are shown as below:
    a. In the "Rules" drop-down list, select rules as needed.

    NOTE: Line crossing detection can set 4 rules.

    b. Set the Time Threshold (Seconds) and sensitivity of the rule.
    Sensitivity: It is used to set the size of the control target object. The higher the sensitivity, the easier the object is judged to be the target object. The lower the sensitivity, the larger the object will be judged as the target object. The sensitivity can be set in the range of 0 to 100.
    Direction: There are three options: "A <-> B (bidirectional)", "A-> B", "B-> A", which refers to the direction in which an object passes through the warning area to trigger an alarm.
        - “A<->B” (Bidirectional) Indicates that the alarm is triggered in both directions.
        - "A->B" Indicates that the object will trigger an alarm when it crosses from A to B.
        - "B->A" Indicates that the object will trigger an alarm when it crosses from B to A.
    c. Click **Draw A Line**, and then move the mouse to the preview screen and click the left mouse button in sequence to draw the two endpoints of the warning line.

    NOTE: Modify the drawn warning line through the **Clear All** and **Draw A Line**.

4. Expand "**Processing Method**", and then set alarm linkage as required (Buzzer Alarm, E-mail Notification, Channel Recording and Trigger Alarm Output).
5. Click "**Apply**" to save the settings.

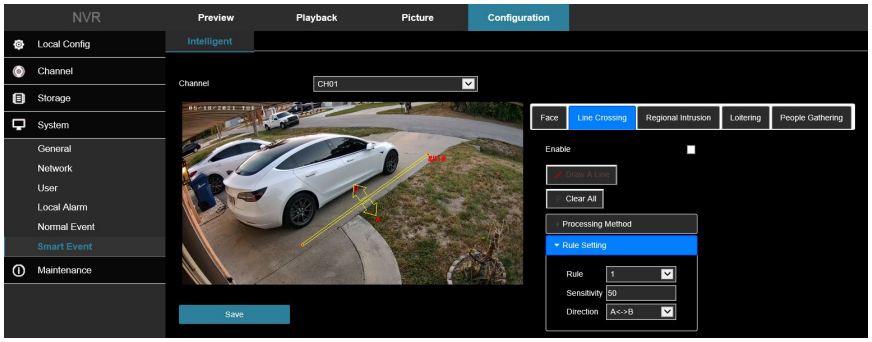


Figure 7-56

7.5.3 Regional Intrusion

In the main interface, click **Configuration** → **System** → **Smart Event** → **Regional Intrusion** to enter the regional intrusion detection setting interface, Figure 7-57. Here you could set the alarm for regional intrusion detection. The regional intrusion function detects whether an object in the video enters the set area, and then conducts a linkage alarm based on the result.

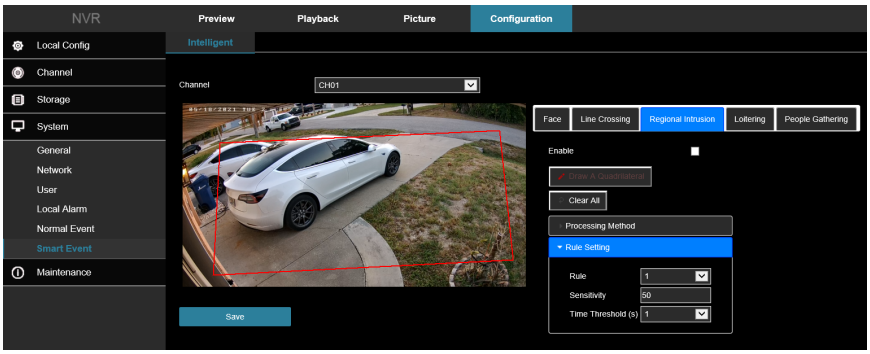


Figure 7-57

1. Select the channel to set the regional intrusion, and then click "**Regional Intrusion**" to enter regional intrusion setting mode.
2. Check "**Enable**" → **Rule Setting** to set the rule of regional intrusion.
    a. In the "**Rules**" drop-down list, select any rule as you need.
    b. Regional intrusion can set any 4 rules.
    c. Set the Time Threshold (Seconds) and sensitivity of the rule.

    Sensitivity: Set the size of the control target object. The higher the sensitivity, the easier the object is judged to be the target object. The lower the sensitivity, the larger the object will be judged as the target object. The sensitivity can be set in the range of 0 to 100.

    Time Threshold (s): An alarm is generated after the target enters the warning zone for a continuous dwell time. If the time threshold is set to 5 seconds, the target intrusion zone is triggered for 5 seconds. The range is 1 to 10 (seconds).

    d. Click **Draw A Quadrilateral**, and then move the mouse to the preview screen and click the left mouse button in sequence to draw the endpoints of the quadrilateral warning zone to complete the zone drawing.

    NOTE: You can modify the drawn warning line using **Clear All** and **Draw A Quadrilateral**.
3. Click "**Processing Method**", set the alarm linkage (Buzzer, E-mail Notification, Channel Recording, Full Screen Monitoring), and then Trigger Alarm Output.
4. Click "**Apply**" to save the settings.

7.5.4 Loitering

In the main interface, click **Configuration** → **System** → **Smart Event** → **Loitering** to enter the Wandering detection setting interface, Figure 7-58. Here you could set the alarm for people stay detection. The loitering function can detect the dwell time of the target in the set area. When the dwell time exceeds the set time threshold, an alarm linkage is triggered.

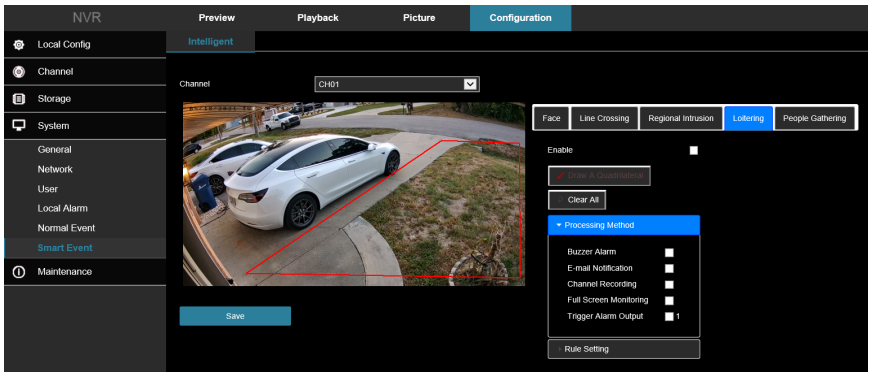


Figure 7-58

1. Select the channel you need to set the loitering, and then click "**Loitering**" to enter the loitering setting mode.
2. Check "**Enable**" → **Rule Setting**, to set the rule of loitering, the specific steps are shown as below:
    a. Loitering can set any 4 rules.
    b. Set the Time Threshold (Seconds) and sensitivity of the rule.

    Sensitivity: It is used to set the size of the control target object. The higher the sensitivity, the easier the object is judged to be the target object. The lower the sensitivity, the larger the object will be judged as the target object. The sensitivity can be set in the range of 0 to 100.

    Time Threshold (s): An alarm is generated after the target enters the warning zone for a continuous dwell time. If the time threshold is set to 5 seconds, the target intrusion zone is triggered for 5 seconds. The range is 1 to 10 (seconds).

    c. Click **Draw A Quadrilateral**, and then move the mouse to the preview screen and click the left mouse button in sequence to draw the endpoints of the quadrilateral warning zone to complete the zone drawing.

    NOTE: You can modify the drawn warning line using **Clear All** and **Draw A Quadrilateral**.
3. Click "**Processing Method**", set alarm linkage (Buzzer, E-mail Notification, Channel Recording, Full Screen Monitoring), and Trigger Alarm Output as required.
4. Click "**Apply**" to save the settings.

7.5.5 People Gathering

In the main interface, click **Configuration** → **System** → **Smart Event** → **People Gathering** to enter the people gathering detection setting interface, Figure 7-59. Here you could set the personnel gathering detection alarm. The people gathering function can detect the density of the human body in the set area, if it exceeds the set threshold, it will trigger an alarm linkage.

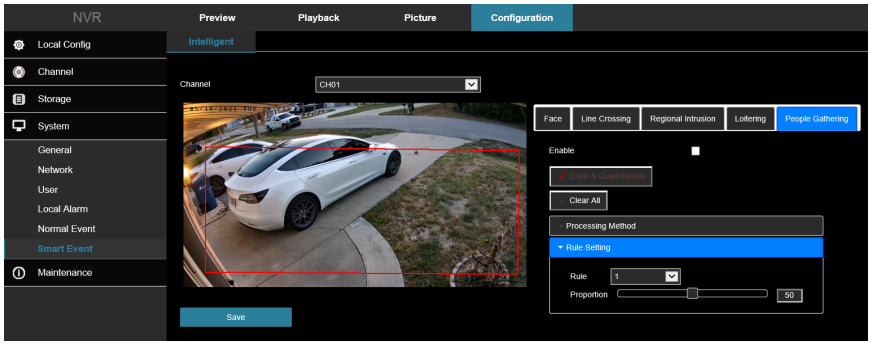


Figure 7-59

1. Select the channel you need to set the people gathering, and then click people gathering to enter people gathering setting mode.
2. Check "**Enable**" → **Rule Setting**, to set the rule of loitering, the specific steps are shown as below:
    a. People gathering can set 4 rules, you can choose any rule.
    b. Set the proportion of rules.
    Proportion: Represents the proportion of personnel in the entire warning area, when the proportion of personnel exceeds the set proportion value, the system alarm is triggered, otherwise the system does not alarm.
    c. Click **Draw A Quadrilateral**, and then move the mouse to the preview screen and click the left mouse button in sequence to draw the endpoints of the quadrilateral warning zone to complete the zone drawing.

    NOTE: You can modify the drawn warning line using **Clear All** and **Draw A Quadrilateral**.
3. Click "**Processing Method**", set alarm linkage (Buzzer, E-mail Notification, Channel Recording, Full Screen Monitoring), and Trigger Alarm Output as required.
4. Click "**Apply**" to save the settings.

NOTE: When the device supports an external alarm device, the alarm processing method can trigger the alarm output.

Chapter 8: Maintenance

8.1 Device

In the main interface, click **Configuration** → **Maintain** → **Device** to enter the version information interface, Figure 8-60. You can view the system's hardware features, software version, and release date on the version information interface.

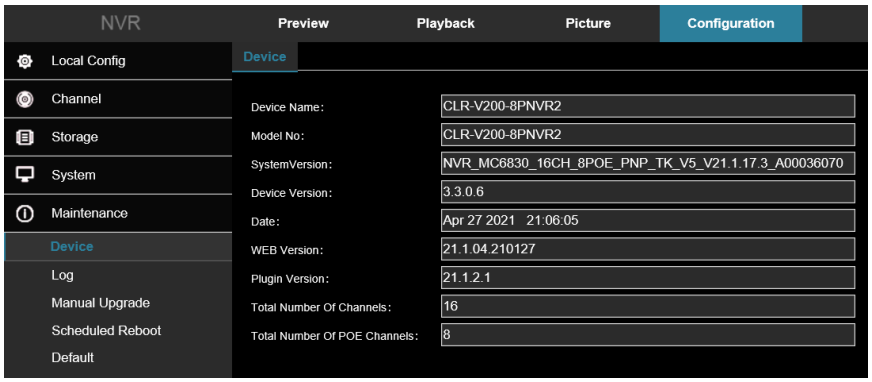


Figure 8-60

8.2 Log

In the main interface, click **Configuration** → **Maintain** → **Log** to enter the log interface, Figure 8-61. Here you can search and clear the device logs.

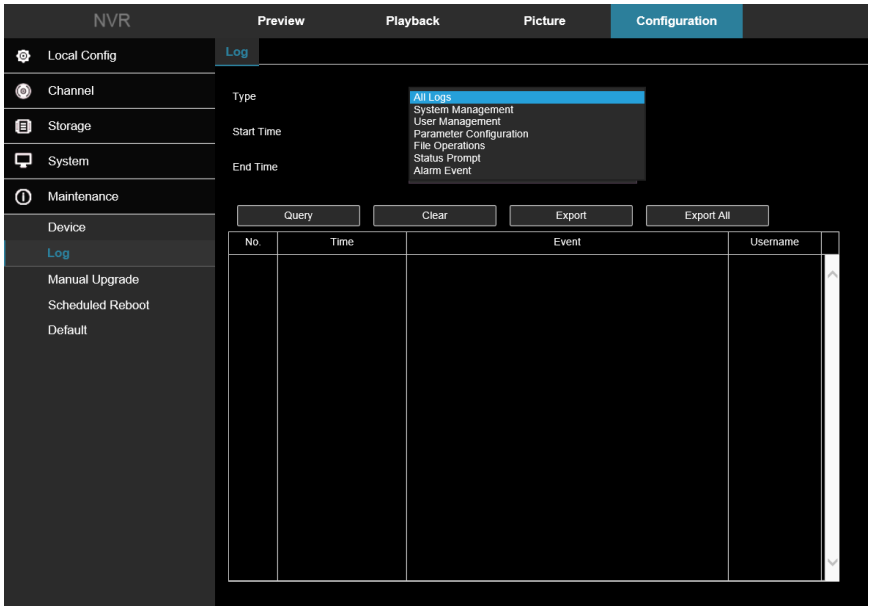


Figure 8-61

- **Type:** Select the type of log to find.
- **Start/End Time:** Enter the time range of the log.
- **Export:** Export the searched log information and store it on the U disk of the connected device.
- **Export All:** Export and store all log information on the U disk connected to the device.
- **Query:** Search logs by setting search criteria and display them in the log list.
- **Prev Page/Next Page:** Page turning function, when there are multiple logs in the query period, click to view other log information.
- **Clear:** Clear all the information for the log.

8.3 Manual Upgrade

In the manual upgrade interface, you can reboot and upgrade your device. Figure 8-62.

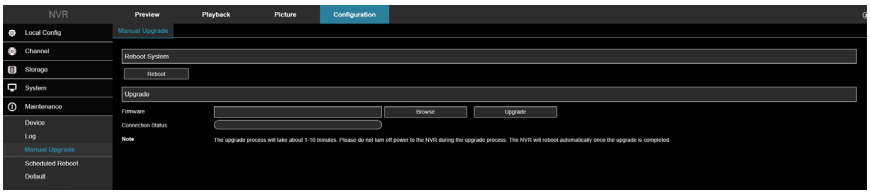


Figure 8-62

1. Select browse and navigate to the location where the firmware update is saved on your computer.
2. Select the firmware and tap "**Open**".
3. Click "**Upgrade**", wait for the interface to finish loading the progress bar. The NVR will restart, completing the upgrade.

8.3 Schedule Reboot

In the main interface, click **Configuration** → **Maintenance** → **Schedule Reboot** to enter the scheduled reboot settings interface, where you can set the period and time for the device to restart. Figure 8-63

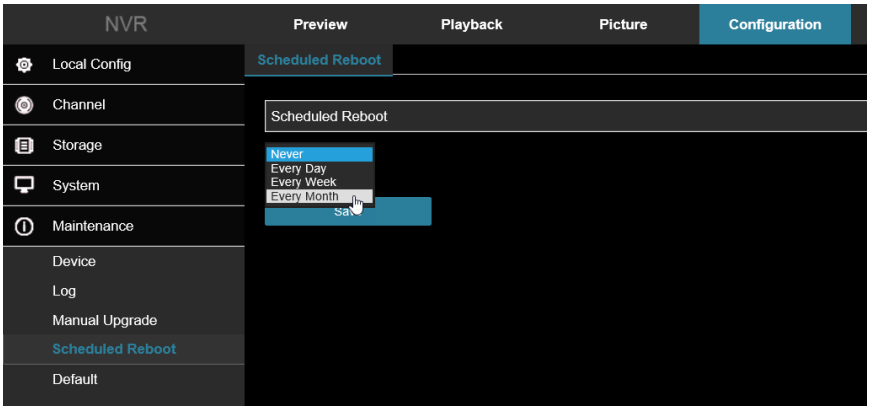


Figure 8-63

8.3 Default

Set the restore default to restore the device default parameters to the factory defaults. Figure 8-64.

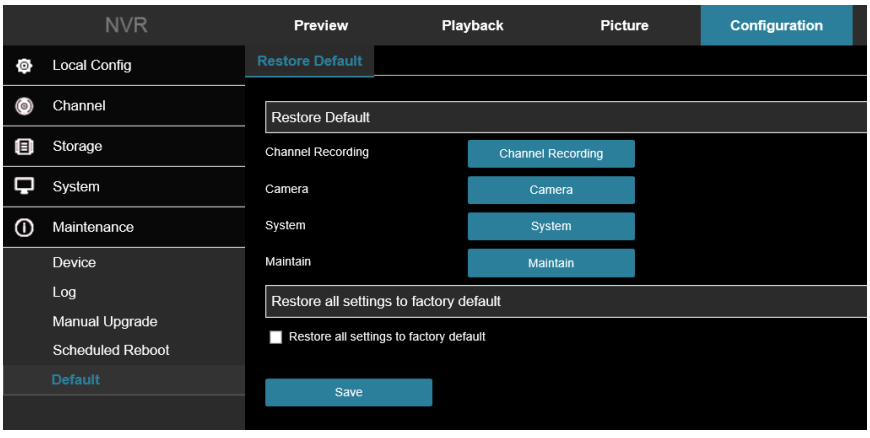


Figure 8-64

1. Select the checkbox "**Restore all settings to factory default**".
2. Click "**Save**" and the selected parameters are restored to the factory defaults.

3. Additional settings can be restored to default including camera and system settings.

Chapter 9: Video Playback

In the main interface, click Playback to enter the playback interface, Figure 9-65. Here you can view the equipment video, capture, download and other actions.

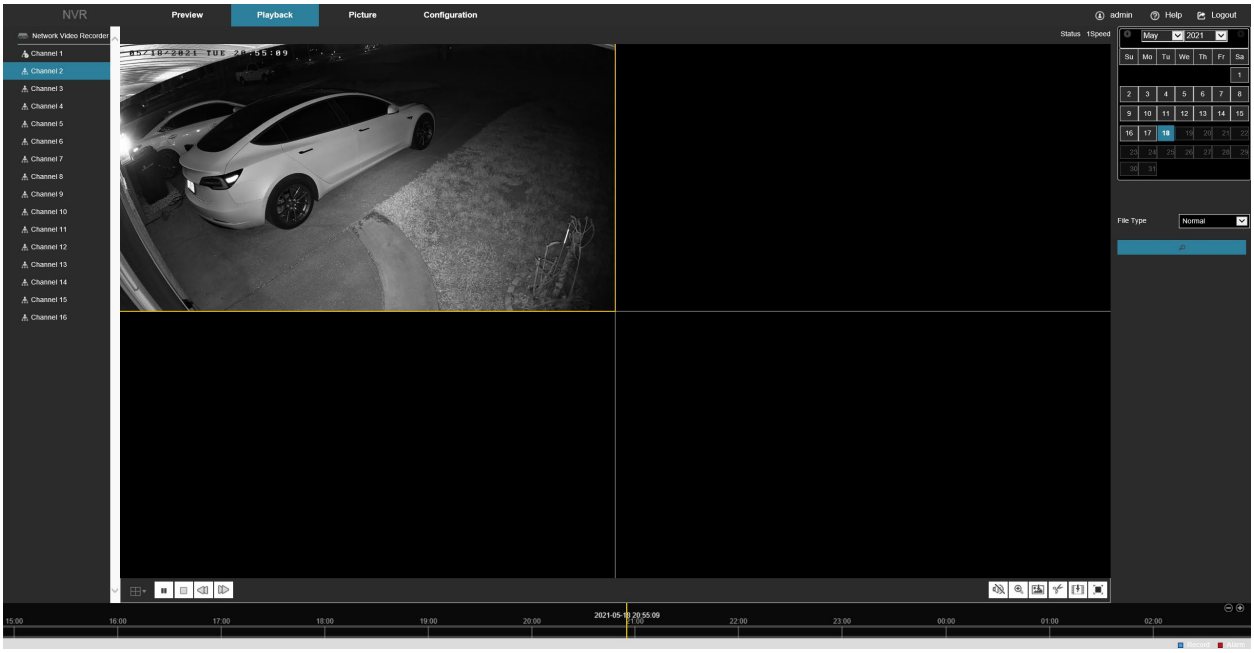


Figure 8-65

- **Timeline:** Displays the type of recording under the current conditions and the time period in which it is located. In the 4-picture playback mode, 4 playback time corresponding to the selected four channels can be displayed. In the other single-screen playback modes, only one time axis is displayed. Use the mouse to click a point in the blue area and drag to the yellow line position, that is, playback from that point in time.
- **Layout:** Click / to toggle the video playback window.
- **Play/Pause:** After querying the video file, click / to start/pause playback of the searched video.
- **Stop:** When the video is played, press to stop playing the video.
- **Slow Forward:** When the video is played, click . The video plays slowly, the specific speed of choice 1/2, 1/4, 1/8. After switching, you can check the playback speed in the status of the upper right corner of the preview interface.
- **Fast Forward:** When the video is played, click . The video will be slow to play, the specific speed of choice 2, 4, 8. After switching, you can check the current playback speed in the status of the upper right corner of the preview interface.
- **Mute/Open the Sound:** When the video is played, click / to turn on/off the sound of the recorded video.
- **Enable Electronic Zoom:** When the video is played, click / to turn on/off the electronic zoom function of the recorded video. Turn on the electronic zoom function by holding down the left mouse

button, and then select the position to zoom in on the playback screen. Release the mouse, select the location screen is placed, and then click , the magnification screen is restored.

- **Snapshot:** When the video is played, click to capture the settings to the local configuration settings.
- **Clip:** When the video is played, click to start recording, and then click Save Clip File again, storing the clip in the local configuration settings.
- **Download:** After querying the video file, click to enter the video file list, select the download file, click Download, and then the video file starts to download. The file download interface is shown in Figure 6-49. The "First Page", "Prev Page", "Next Page", and "Last Page" are used to scroll through all video files. You can use "Edit" under "Set date/time manually" to intercept and download the video file.
- **Full Screen:** When the video is played, click the full-screen playback video. Press Esc on the keyboard to exit the full-screen playback interface.
- **Drag and drop:** Drop and drag the video playback, using the left mouse button click on the time axis to play the position. Drag left and right, drag it to the middle of the yellow time point position, and playback channel to play the point in time recording.

Chapter 9: Picture

In the picture interface, you can view and download all the pictures captured on the device side. Figure 9-67

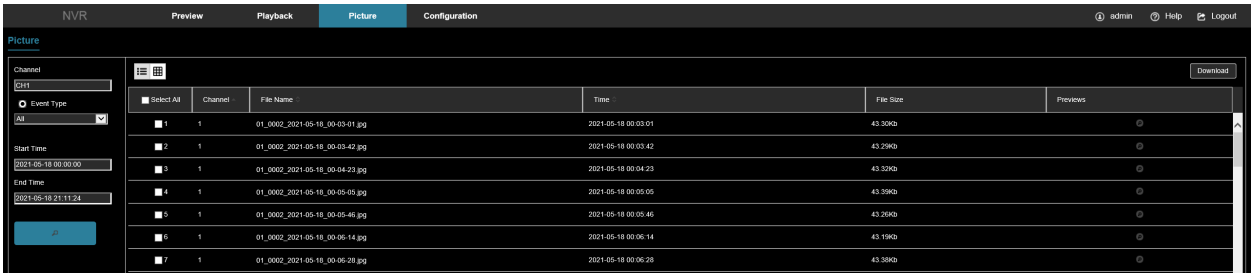


Figure 9-67

1. Access the main interface, and then click Picture to enter the picture interface.
2. Select the channel, click OK, select the event type, and then set the search time range.
3. Click , the searched image is displayed on the right side of the interface.
4. Select the picture, click Download to select the storage path, click OK, and then select the image to download to the specified folder. Click corresponding to the preview position to view the image.
   - **Channel:** Select the channel to search for image files. Select one channel individually or multiple channels or Select All at the same time.
   - **Event Type:** Capture image type, the drop-down box option consists of All, Manual capture, Motion capture, Face detection, Regional Intrusion, Crossover, Wandering, and Staff Gathering.
   - **Start/End Time:** The time range for capturing image files.
   - **Query:** Click , the system will query the corresponding picture file according to the set channel, event type and time range, and display it in the file list.
   - **Details:** The image searched by clicking is displayed in the list as detailed information.
   - **Big icon:** The image searched by clicking is displayed in the list as a large icon. Figure 9-68.

- **Download:** Select the picture, click Download, select the storage path, click OK, and then select the picture to download to the specified folder.

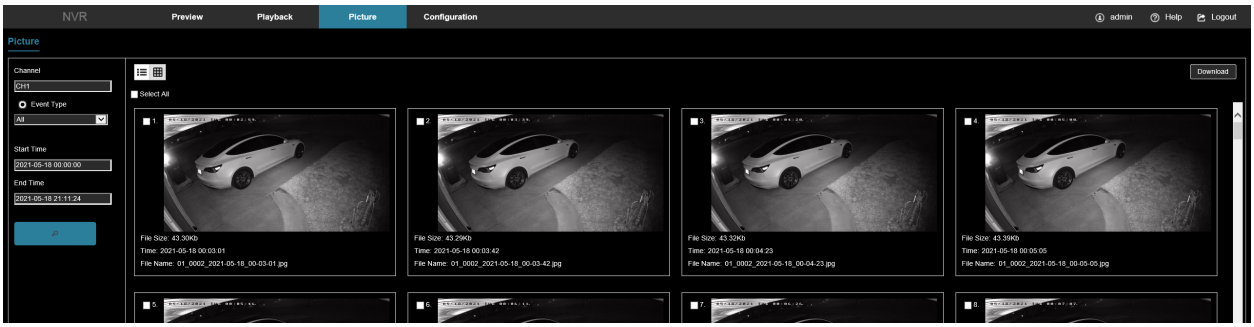


Figure 9-68

Chapter 10: NVR maintenance and best practices

- When NVR shutdowns, don't turn off the power switch directly. Use the shutdown button of system to avoid data loss or damage of the hard disk.
- Ensure that the NVR is away from high temperature heat sources.
- Keep the NVR free of dust and in an area of good ventilation.
- Do not hot swap the audio/video signal line and RS-485 interfaces, or these ports will be damaged.
- Check the HDD power cable and data cable of the NVR regularly and check for damage.
- Avoid the audio/video signal affected by other circuits and devices as much as possible, prevent the hard disk damaged by electrostatic or induced voltage.