User Manual of Network Video Recorder

Version v1.0.5

Contents

SAFETY INSTRUCTION

Please carefully read the following safety instruction to avoid personal injuries and prevent the equipment and other connection devices from being damaged.

1. Power sources. Please use the included power supply or specified by the manufacturer.
Never operate the equipment with an unspecified power supply.

2. Never push objects of any kind through openings of Network Video Recorder (NVR).
Never push objects of any kind through openings of NVR to avoid an electric shock or other accidents.

Do not put the equipment in a dusty environment. Place equipment in a well ventilated area to prevent dust build-up and causing static shock.

3. Do not place the equipment under rain or in a humid environment
Do not place the equipment in a humid environment like a basement. If the equipment is in contact with water please unplug the power cable and immediately contact your local dealer.

4. Keep the surface of the equipment clean and dry
Use soft damp cloth to clean the outer case of NVR (do not use liquid aerosol cleaners or solvents)

5. Do not operate if any problems are found
If there are any abnormal smell or noise, unplug the power cable and contact the authorized dealer or service center.

6. Do not try to remove the upper cover when the NVR is in operation
Warning: Do not remove the cap of NVR when it is powered to avoid electrocution.

7. Handle with care
If NVR does not work normally due to impact against or from a hard object, please contact the authorized dealer for repair or replacement.

8. Use standard lithium battery
Note: *Use the batteries attached or specified by the manufacturer. After cutting off the power supply, if the system clock cannot continue to work, please replace the standard 3V lithium battery on the main board.*
Warning: *Turn off NVR before replacing the batteries, or you may suffer from a serious electric shock. Please properly dispose of the used batteries.*

9. Put the equipment in a place with good ventilation.
The NVR system operates with large amounts of heat. As a result, do not block the ventilation openings (on the top, bottom, both sides and the reverse side) for cooling during system operation. Install or put the equipment in a well ventilated area.

10. The attached power adapter can only be used for a single NVR.
Do not connect multiple equipments, or NVR may restart repeatedly because of insufficient power.

11. Prevent the equipment from water.
Do not place objects containing water, such as a flower vase, on or around the equipment.

Chapter 1 Overview of NVR

1.1 Front Panel

NVR Front Panel, as shown in figure 1-1 to figure 1-7.

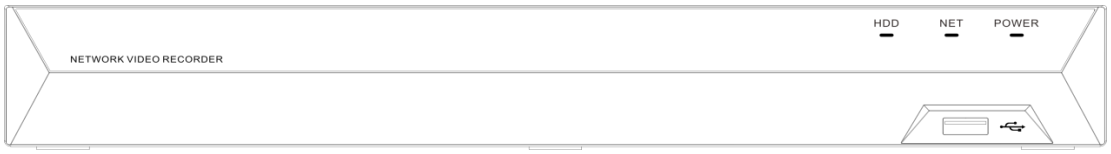


Figure 1-1 Front panel of M1 case

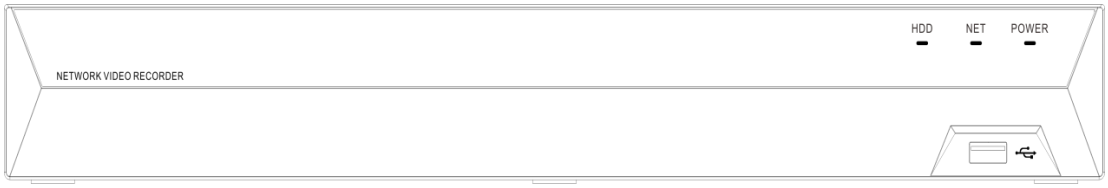


Figure 1-2 Front panel of N1 case

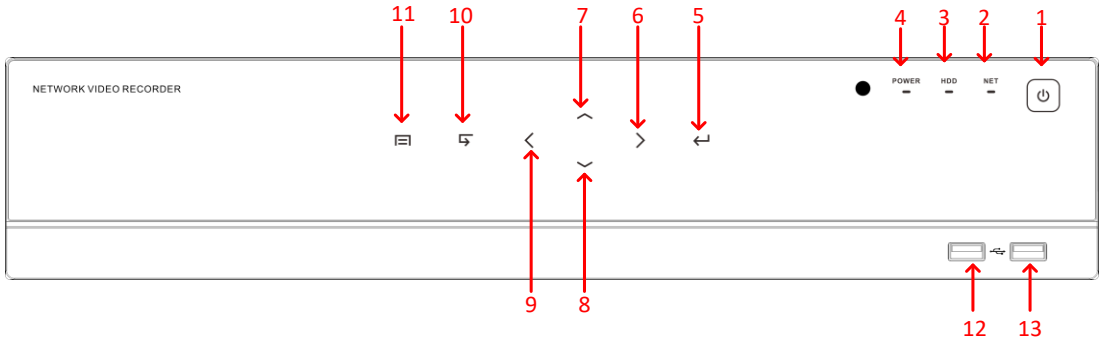


Figure 1-3 Front panel of W1 case

No.	Function Description
1	Power switch
2	Network status light
3	Hard disk status light
4	Power status light
5	Enter
6	Right
7	Up
8	Down
9	Left
10	Backspace
11	Main Menu
12/13	USB interface

Table 1-1 Description of front panel

1.2 Rear Panel

NVR Rear Panel, as shown in figure 1-8 to figure 1-12.

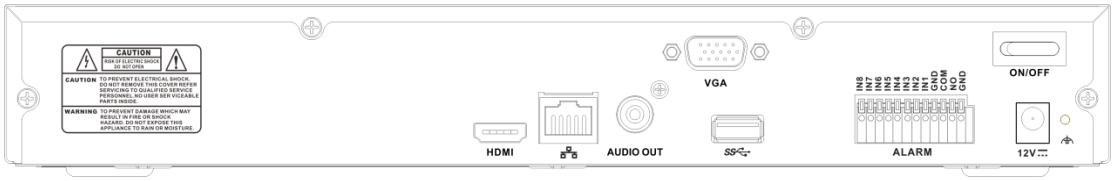


Figure 1-8 Rear panel of MX8 case

Figure 1-9 Rear panel of NX3 case

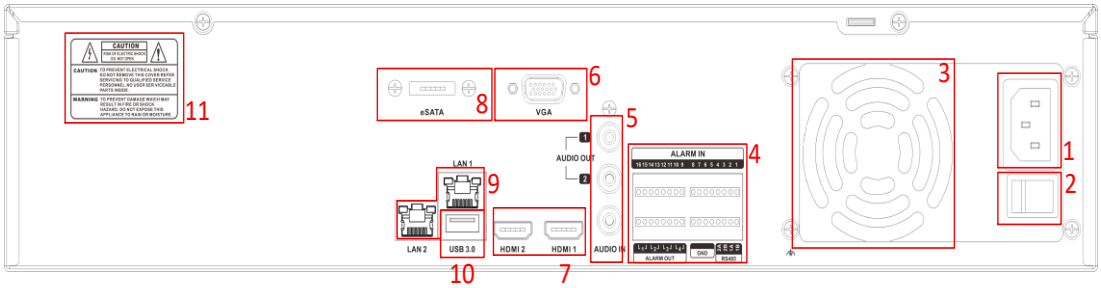


Figure 1-10 Rear panel of WX1 case

No.	Description
1	Power Input Interface
2	Power switch
3	Exhaust Fan Vent
4	Alarm in/out Interface
5	Audio in/out Interface
6	VGA interface
7	HDMI interface
8	eSATA Interface
9	RJ45 interface
10	USB 3.0 interface
11	Caution Information Sticker

Table 1-3 Description of Rear Panel

Note:

- *All above drawings are for reference only.*

1.3 Remote Controller

The NVR may also be controlled with the included IR remote control, as shown in Figure 1-7.

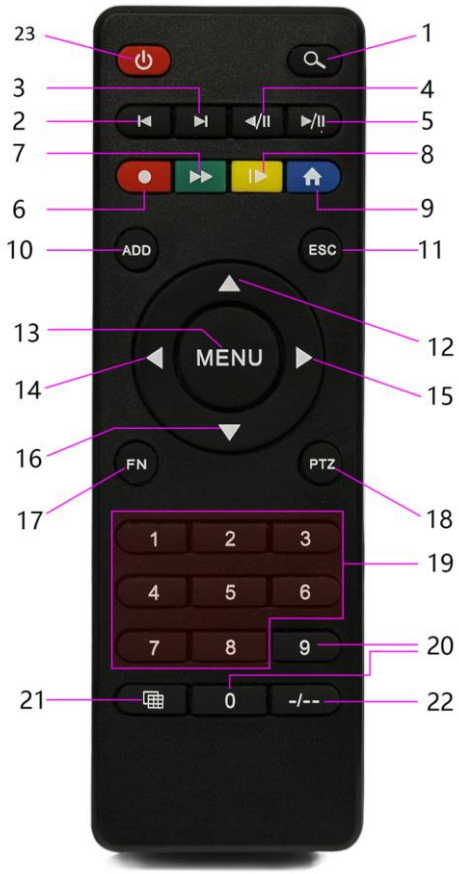


Figure 1-14 Remote Controller

No.	Item	Description
1		Enter the Playback Interface
2		Backward One Frame
3		Control Step-Frame
4		Backward Playback Control Button
5		Control Playback Status
6		Quick Control All Channels Record Type
7		Control Playback Speed
8		Slow Down Playback
9		Back to Preview
10	ADD	Set Address to Match of NVR
11	ESC	Back to Preview
12/16/14/15		Choose Function Area On the Menu/Switch Preview Channels
13	MENU	Enter the Main Menu
17	FN	Switch Control Area

18	PTZ	Quick Button of PTZ Control
19/20	Number Area	Enter Numbers/Switch Preview Channels
21		Switch Preview Channel Number
22	-/--	Choose Input Number Digits Once
23	Shutdown	Shutdown/Restart/Logout/Switch user

Table 1-5 Key functions of the remote controller

Note:

➢ *The remote control only works properly when the status indicator on the front panel turns blue. If the Status indicator does not turn blue and there is still no response from the remote, please check the following:*

➢ **Troubleshoot1:**

1. Go to Main Menu > Settings > General by operating the front control panel or via a mouse.
2. Check and remember Device #, The default No. is 8. This ID# is valid for all the IR remote controls.
3. Press the **ADD** button on the remote control.
4. Enter the NVR ID# you set in step 2.
5. Press the ENTER button on the remote.

➢ **Troubleshoot2:**

1. Batteries are installed correctly and the polarities of the batteries are not reversed.
2. Batteries are fresh and not out of charge.
3. IR receiver is not obstructed.
4. If the remote still can't function properly, please contact your retailer.

1.4 USB Mouse Operation

A regular 3-button (Left/Right/Scroll-wheel) USB mouse can also be used with this NVR. To use a USB mouse: plug USB mouse into one of the USB interfaces on the front or rear panel of the NVR. The mouse should automatically be detected.

Items	Action	Description
Left-Click	Single-Click	Live view: Select channel and show the quick set menu. Menu: Select and enter.
	Double-Click	Live view: Switch between single-screen and multi-screen.
	Click and Drag	Live view: Drag channel/time bar. Alarm: Select target area. Digital zoom-in: Drag and select target area.

Right-Click	Single-Click	Live view: Show main menu. Menu: Exit current menu to upper level menu.
Left&Right-Click	At the same time click	Hold 5 seconds, change device resolution into the lowest
Scroll-Wheel	Scrolling up	Menu: change the settings value to high
	Scrolling down	Menu: change the settings value to low

Table 1-6 Key functions of USB Mouse Operation

Note:

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

1.5 Input Method Description

Figure 1-15 Virtual Full key board (1)

Figure 1-16 Virtual Numerical key board (2)

Icon	Description
! ? @ # $ % ^ & * - _ ←	Symbols
0 9	Numbers
Enter	Submit
␣	Space
a ..... z	English letter

←	Backspace
Shift	Lowercase/Uppercase

Table1-7 Description of the Soft Keyboard Icons

Chapter 2 NVR Connection

2.1 HDD Installation

Before installing a Hard Disk (HDD), please make sure the power is disconnected from the NVR. Please refer to NVR's specifications to confirm the max capacity for each Hard Disk. NVR without a Hard Disk will still support monitoring, but there will be no recording or playback. If you install the Hard Disk correctly, the HDD indicator will blink regularly when the NVR is on and recording video.

Please turn off the power and then start the installation of HDD. The pictures of the installation are only for reference.

Figure 2-1 Remove the cover

Figure 2-2 Mount the HDD

Figure 2-3 Connect the power and data cables **Figure 2-4**Install the cover and screws

Note:

- *If you require a higher performance HDD, it is strongly recommended to use special hard drive designed*
- *for security and protection.*
- *Please do not take out hard drive when NVR is running!*

2.2 IP Camera and Monitor Connection

Transmit data of IP camera to NVR via the network cable, then connect switch annd VGA/HDMI monitor port for output as depicted below.

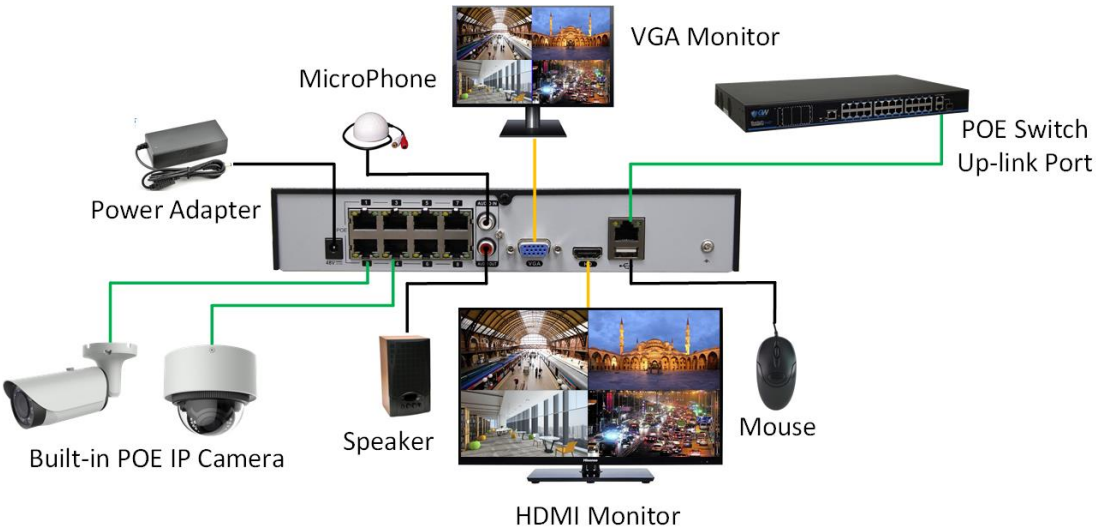


Figure 2-5 GW7808NP connection guide

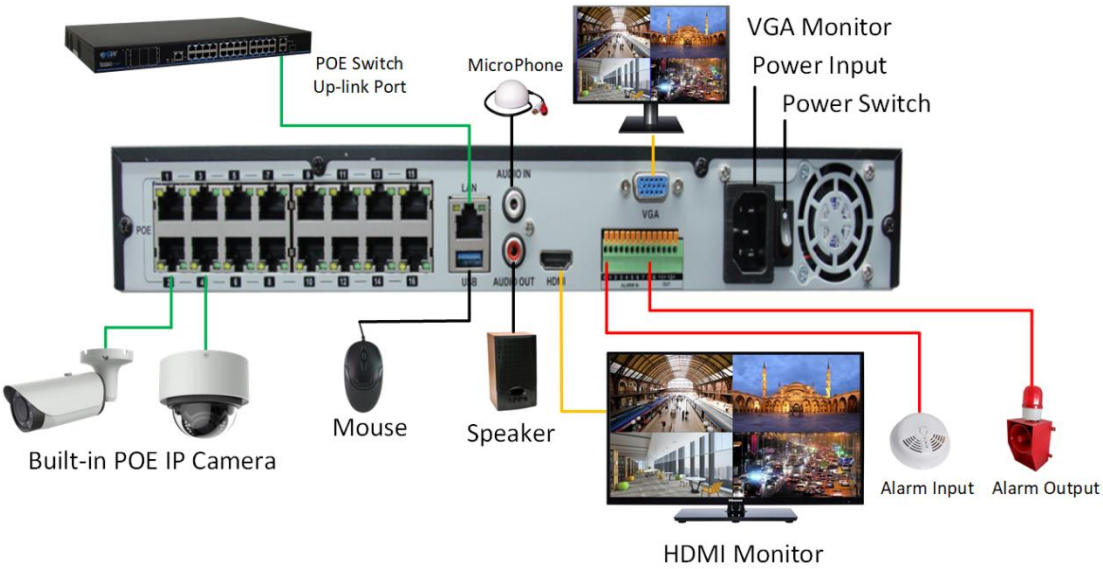


Figure 2-6 GW7816NP connection guide

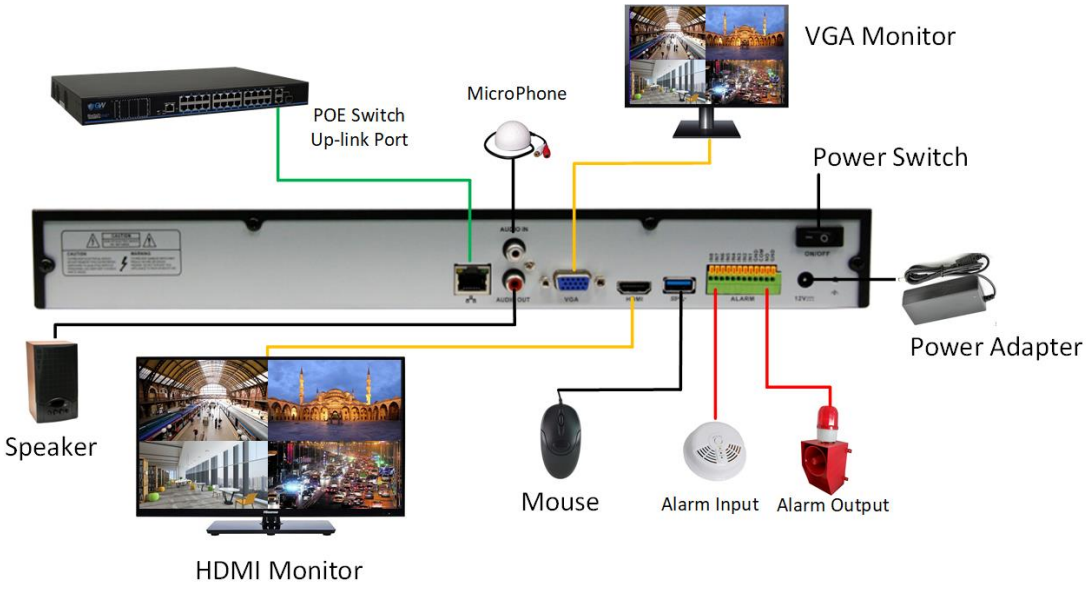


Figure 2-7 GW7832N connection guide

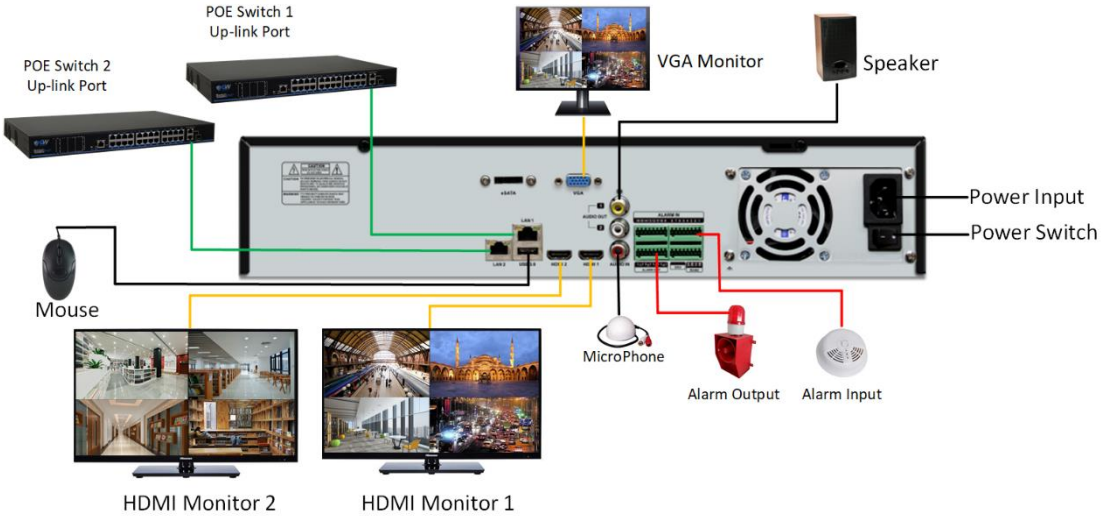


Figure 2-8 GW7832N-V8 & GW7864N-V8 connection guide

2.3 Power Supply Connection

Please use attached power adapter to connect NVR. Before powering on, make sure the cables on the audio I/O ports and network port are well connected.

Figure 2-8 Power Connection Guide

Chapter 3 Getting Start

3.1 Start Up and Shut Down

Proper startup and shutdown procedures are crucial to expanding the life of the NVR. Please check that the voltage of the power supply is the same with the NVR's requirements, and the ground connection is working properly.

- **Starting up the NVR**

Plug-in the power supply and turn on the power switch (if there is one). The power supply blinking indicator indicates the video recorder booting up. After the startup you will hear a beep.

The default setting of video output is multiple-window output mode. If the startup time is within the recording schedule time, the video recording function will start up automatically. Then the recording indicator of corresponding channel will start blinking confirming NVR is working normally.

- **First start up**

For security reason, the NVR requires you activate the admin's password before login. It will show you a change password dialog when the device is powered on for the first time.

Note:

- *The password can be set as numbers(0~9), English characters(a~z, A~Z), and other symbols*
- *The password must include at least 2 categories of character. The length support 6~64.*
- *The password can be restored to empty by clicking "Maintain →Config→restore default"*

- **Shutting down the NVR**

Right-click the mouse on the live view interface and choose "**Main Menu** >**Shutdown",** then click the OK button, as shown in figure 3-1.

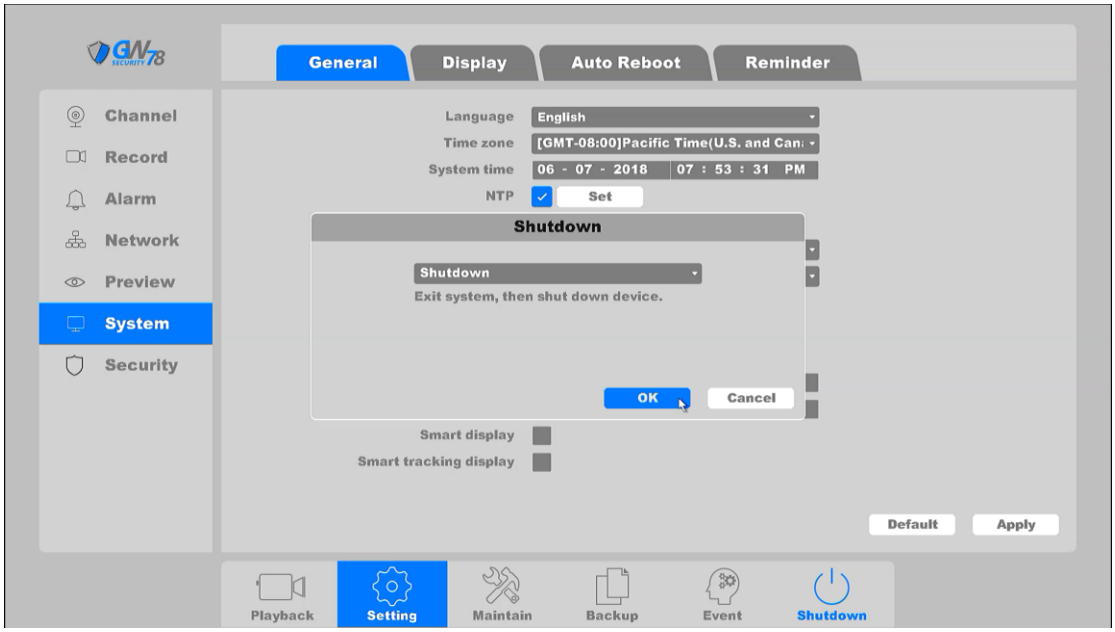


Figure 3-1 Shutdown Menu

3.2 Using the Startup Wizard

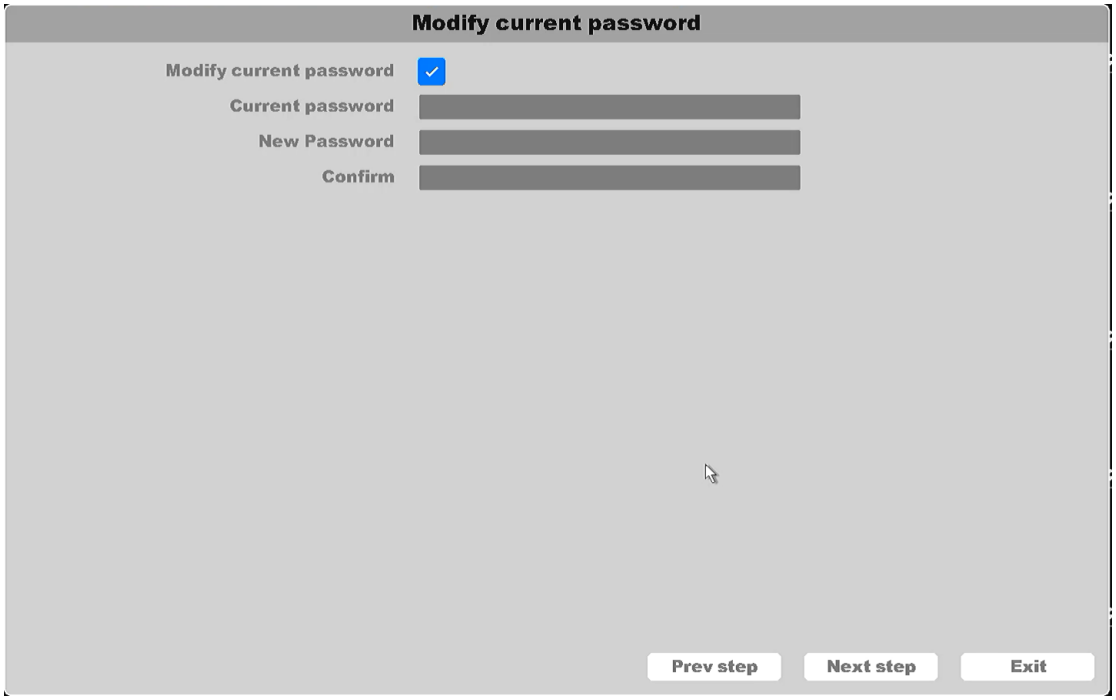
By default, the Startup Wizard starts once the NVR has loaded, as shown in **Figure 3-2.**

Figure 3-2 Startup Wizard

Operating the Startup Wizard:

1. The Startup Wizard can walk you through some important NVR configurations. If you don't want to use the Startup Wizard at that moment, click the exit button. You can also choose to use the Startup Wizard next time by leaving the "enable" checkbox checked.

2. Click Next Step button to enter the modify current password window and general settings window, as shown in **figure 3-3.**



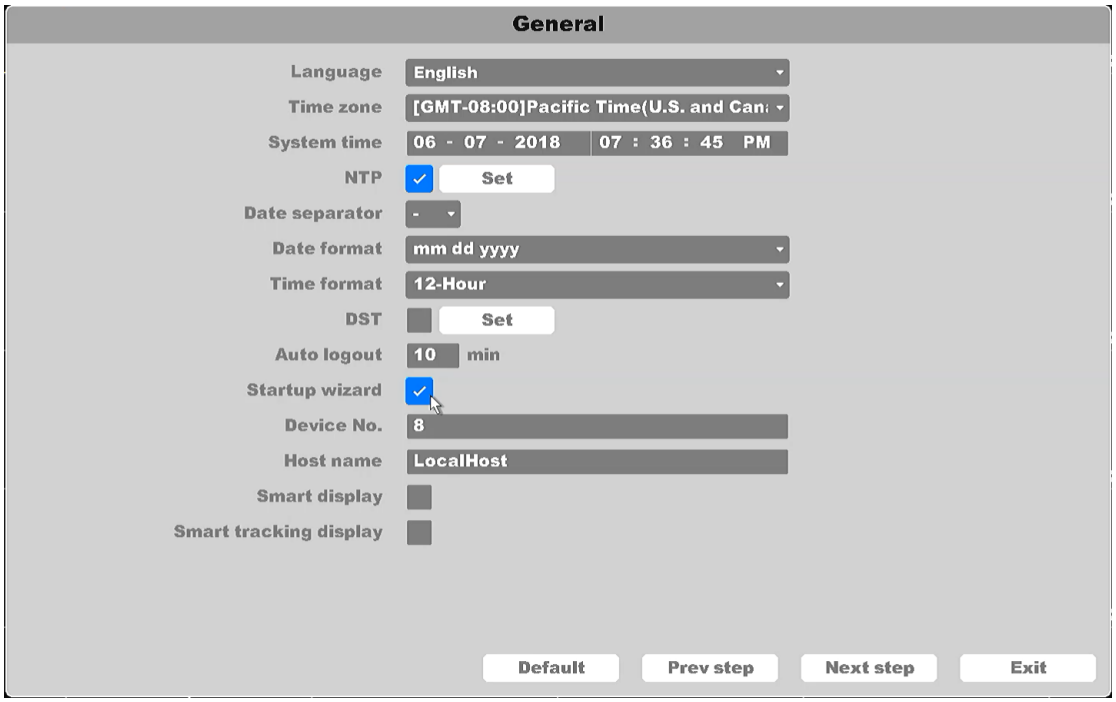


Figure 3-3 Modify current password &General settings Wizard

Note: Please refer section 4.3.1.1 ***General*** *setting for further explanation of menu*

3. After the general settings, click Next Step button which takes you back to the record control Setup Wizard window, as shown in **figure 3-4.**

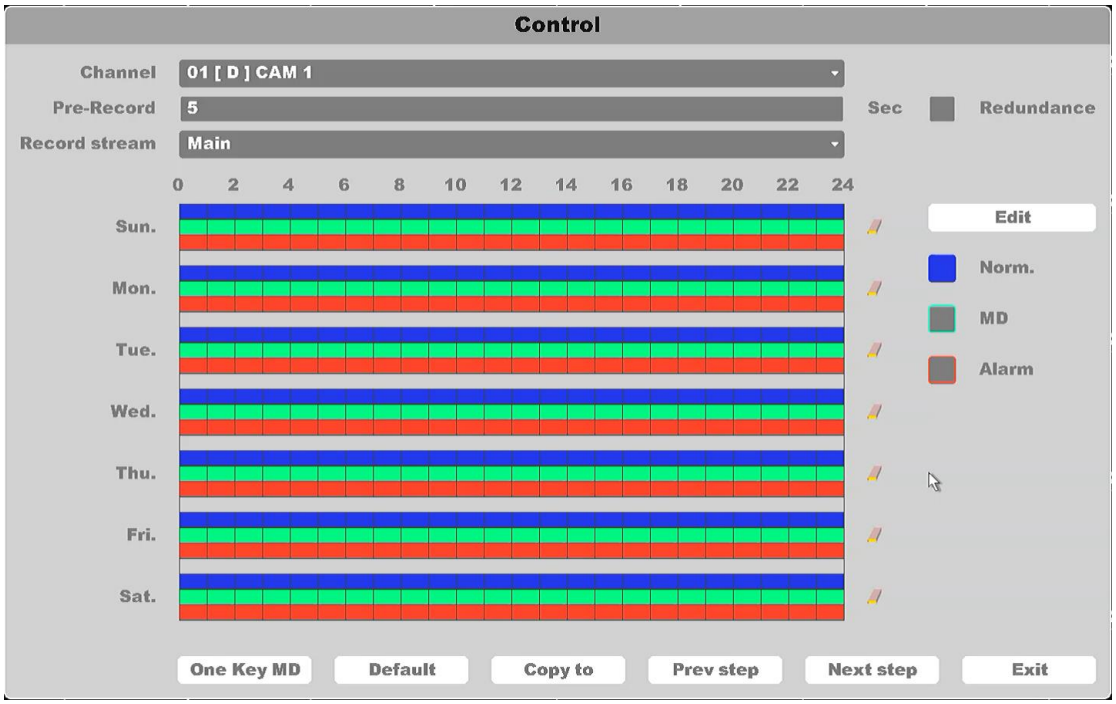


Figure 3-4 Record control settings

Note: Please refer section 4.3.5 ***Record*** *for further explanation of menu*

4. After the record control settings, click Next Step button which takes you to the HDD Manage Setup Wizard window, as shown in **figure 3-5.**

Figure 3-5 HDD Manage

Note: Please refer section 4.4.3.1 ***Base*** *for further explanation of menu*

5. Click Next button. You enter the Network Setup Wizard window, as shown in **figure 3-6.**

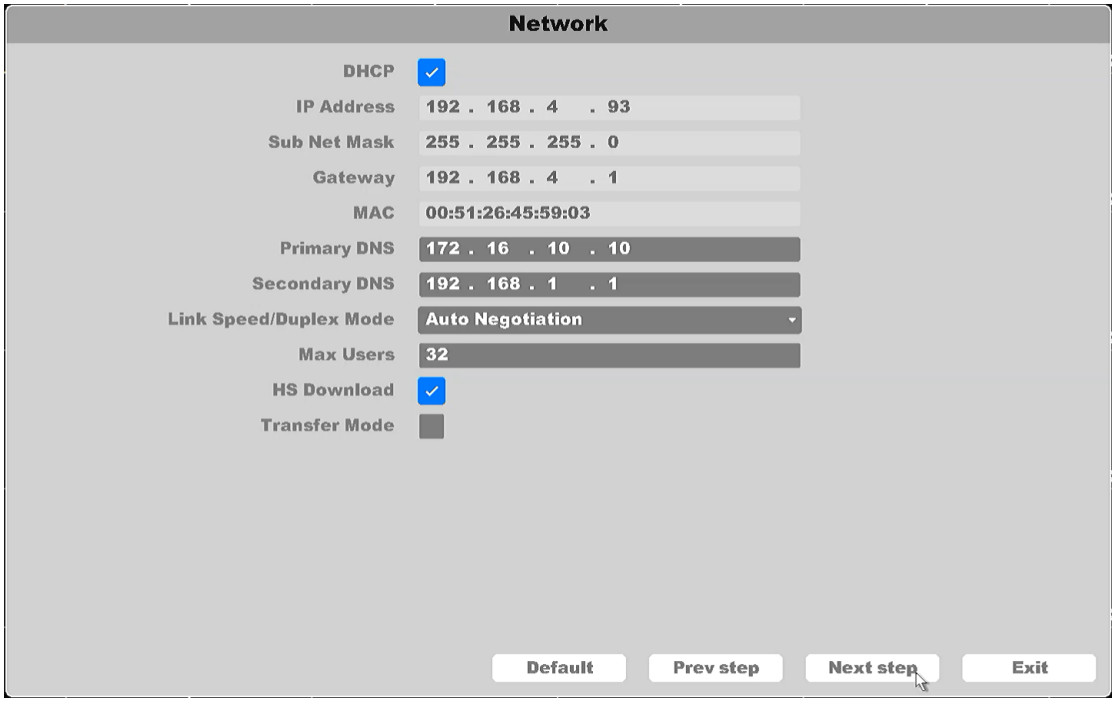


Figure 3-6 Basic Network Settings

Note: Please refer section 4.3.2 ***Network*** *for further explanation of menu*

6. Click Next button after you configured the network parameters, you enter the cloud service Setup Wizard window, as shown in **figure 3-7.**

Figure 3-7 Cloud Service

Note: Please reference section 4.3.2.3 ***P2P*** *for further explanation of menu*

7. Click finished button to complete the startup Setup Wizard.

3.3 Login and logout

- **User Login**

NVR requires user login before operating the menu and other functions.

Login Method 1, Pattern:

User can draw a preset Pattern to login or unlock his NVR, shown as below:

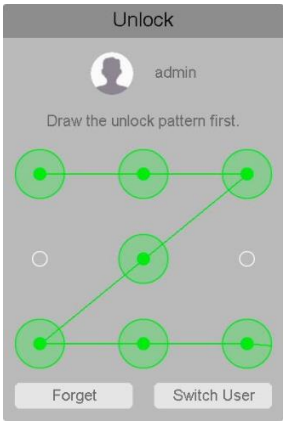


Figure 3-8 Login by Pattern

Note:

➢ *You need first set a pattern for your NVR, please refer section 4.3.2.1 Account for detailed explanation.*

Login Method 2, Username and Password

If user forget his Pattern, he can click "Forget" to switch to login NVR this way, shown as below:

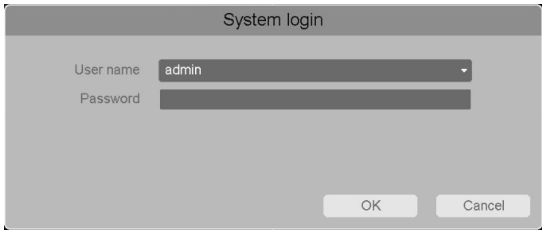


Figure 3-9 Login by Username and Password

Note:

➢ *In the Login dialog box, if you enter the wrong password 7 times, the current user account will blocked for 60 seconds.*

- **User Logout**

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

Steps:

1. Enter the Shutdown menu. Go to Main Menu > Shutdown
2. Select logout and click the OK button.

Note:

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

Chapter 4 NVR MENU

4.1 NVR Menu Guide

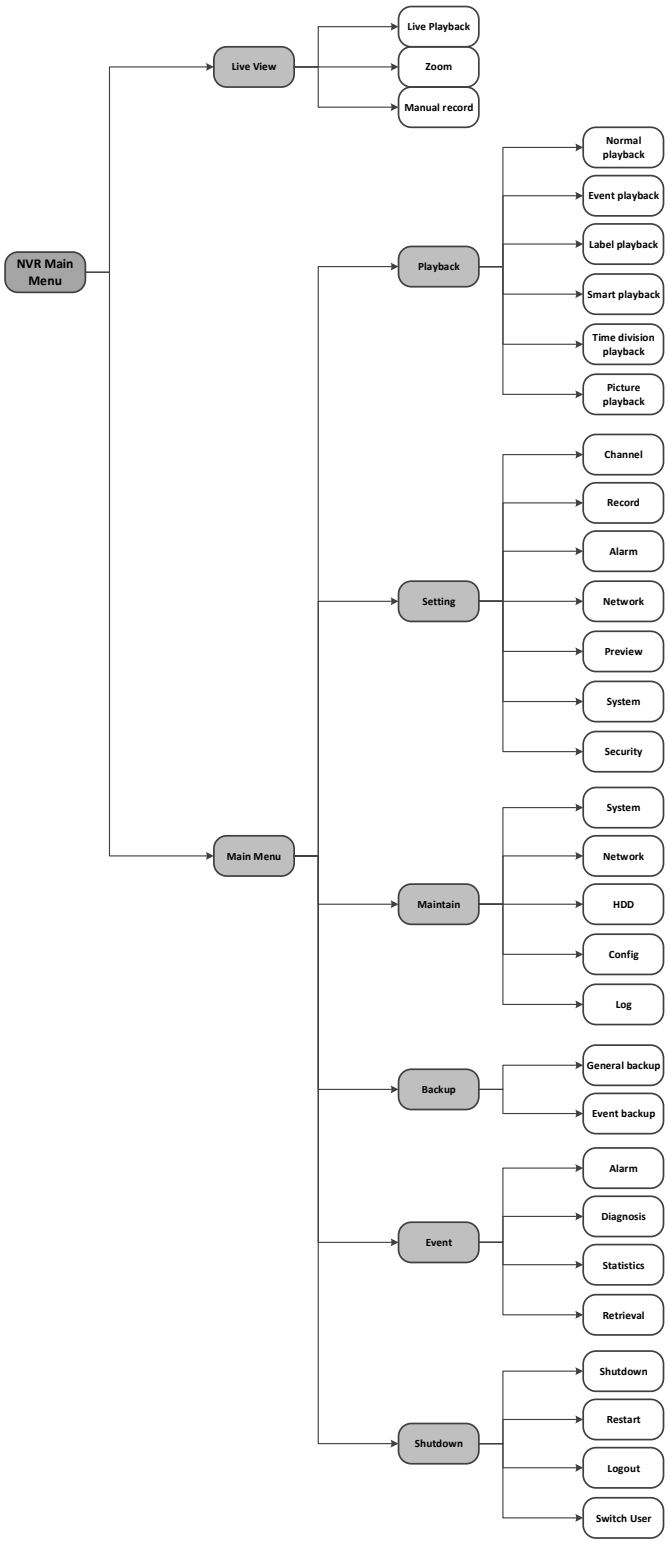


Figure 4-1 NVR Menu Guide

4.2 Live View

4.2.1 Introduction of Live View

Live view shows you the video stream from each camera in real time. The NVR automatically enters Live View mode when powered on, as shown in figure 4-2.

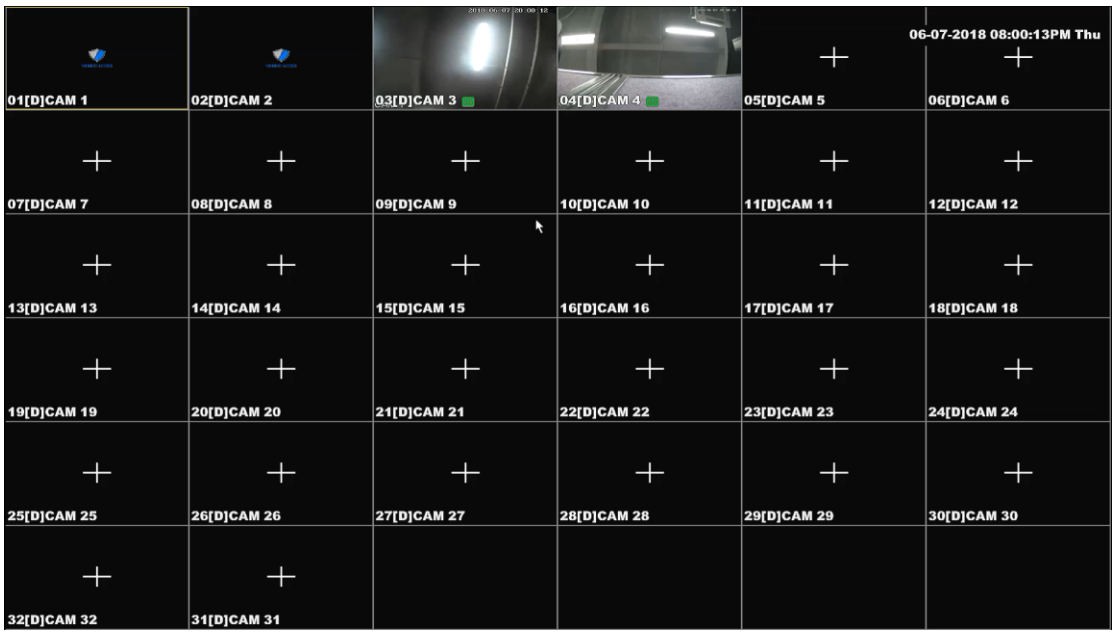


Figure 4-2 live view interface

On live view screen, click on the channel " + "Button to enter the channel management interface. NVR automatically searches the network segment for IPC (Internet Protocol Camera). User can select the found IPC → Click Add to add the IPC to the channel

Note:

- *The number for IP cameras channels may differ according to your model of NVR*
- *The output from the IP cameras to NVR is in main stream when viewed under a single or four screen live view, and it is in sub-stream under multi- screen live view.*
- *Mainstream is the best quality stream, while sub-stream is a lower resolution video stream used to lower processing burden on NVR when displaying several cameras at once.*

- Live View Icons

In the live view mode, there are icons at the upper-left of the screen for each channel showing the status of the record and alarm in the channel. For a list of the status, please refer to the chart below.

Items	Description
Recording state	Shown on channel preview when recording.

Alarm detect	Shown on channel preview when alarm triggered.
Video lost	Shown on channel preview when video lost.
Camera lock	No preview authority.

Table4-1 Live view Icons

4.2.2 Operations in Live View Mode

There are many functions available from the Live View Mode. The functions are listed below.

• Single Screen: showing only one screen on the monitor.

• Multi-screen: showing multiple screens on the monitor simultaneously.

• Tour: the screen is auto switched to the next one. And you must set the dwell time for each screen on the configuration menu before enabling the tour.

• Start Recording: continuous recording and motion detection recording are supported.

• Add IP Camera: the shortcut to the IP camera management interface.

• Playback: playback the recorded videos for current day.

4.2.3 Quick Setting Toolbar in Live View Mod

On the screen of each channel, there is a quick setting toolbar which shows when you move the arrow of mouse to the top of image.

Figure 4-3 Quick Setting Toolbar in channel image

Items	Description
Instant Replay	In the preview channel window interface within ten minutes of video for playback.
Zoom	Displays the selected channel in full screen, and displays a small window in the right corner of the area you want to zoom-in on.
Manual Record	Quick switch video mode for this channel (only in manual and stop mode switching).
Manual Snap	Take a snapshot of the current video stream.
Audio Preview	Open channel audio capture. (If cameras have audio capture capability)
Voice Intercom	Open-channel intercom functions, to allow voice projection. Also supported via web interface and mobile app. (Cameras must have audio projection capability)

Channel Set	Quickly enter and locate a channel in channel management interface.
Face Detection	Quickly enable a blank area in preview to show the people's face detected by the camera.(As shown in Figure 4-4)
PTZ	Quickly enter PTZ control interface.

Table4-2 Description of the Quick Setting Toolbar

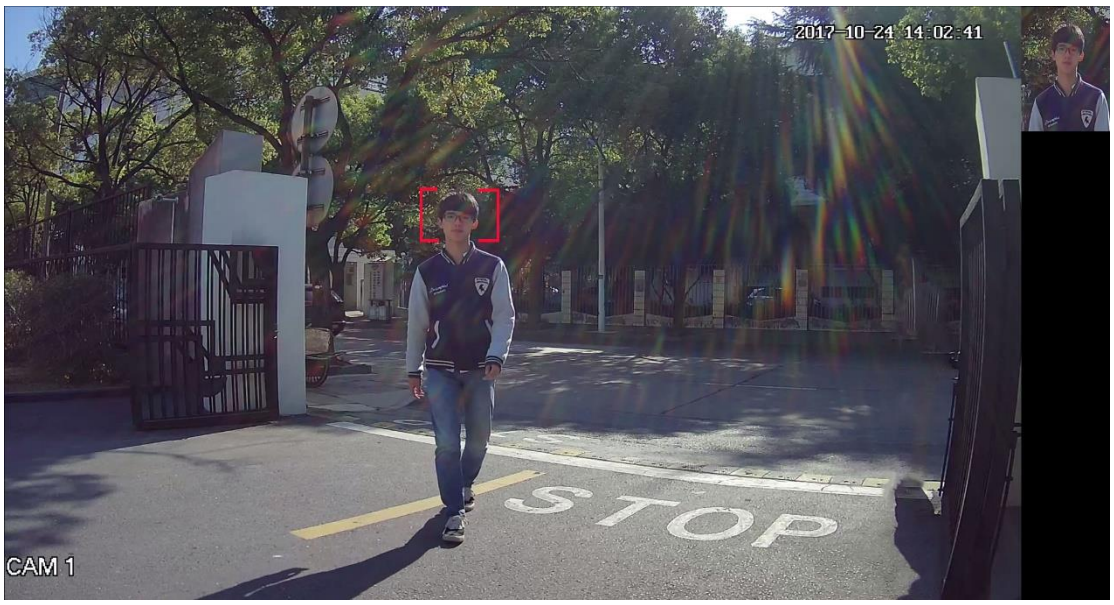


Figure 4-4 Face Detection

4.2.4 Desktop shortcut menu

In preview mode you can right click mouse to access the desktop shortcut menu, as shown in figure 4-5.

Figure 4-5 Desktop shortcut menu

- Main menu: The main menu includes playback, setting, maintain, backup and shutdown.
- Startup wizard: Please refer to section 3.2 for more information.
- Automatic channel config: When you right click the mouse and choose Auto Channel Config, the NVR will automatically add available IP cameras on the same Network as NVR
- IP channel: it is a shortcut access to IP channel interface.
- Channel status: it is a shortcut access to IP channel status interface.
- Playback: it is a shortcut access to playback interface.
- Quick Record: You can check current channel status: "o" means it is not selected, "●" means it is selected.

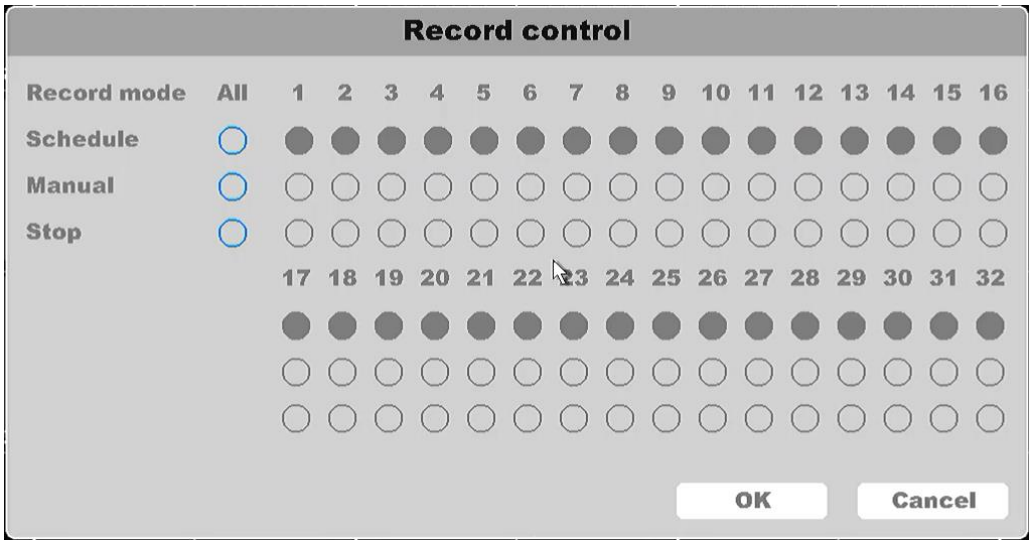


Figure 4-6 Quick Record

Items	Description
Schedule	Record according to the configuration.
Manual	Click the button and the according channel will record immediately regardless of the current state, will continue to record until disabled.
Stop	Click the stop button and the according channel will stop recording regardless of the current state.

Table4-3Quick Record

- PTZ control: Operation interface is as shown in figure 4-7. The functions include: PTZ direction control, speed, zoom, focus, iris, setup operation, patrol between spots, pattern, border, and tour.

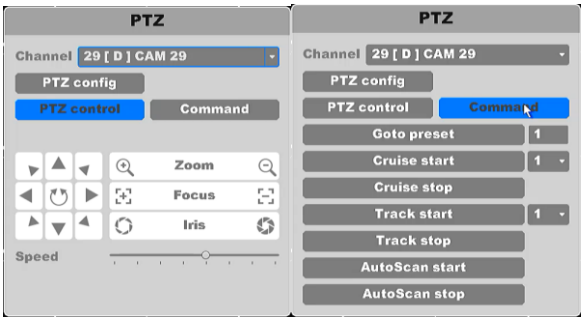


Figure 4-7 PTZ Control

- Color setting: it is a shortcut to settings ->Channel management ->Image color settings window.
- Output adjust: it is a shortcut access to settings ->System settings ->Output control interfaces.
- Mute: The speaker mute switch, Icon means speaker turns on, icon means speaker turns off.
- Logout: Shutdown, restart system, logout menu user and switch user, as shown in figure 4-8.

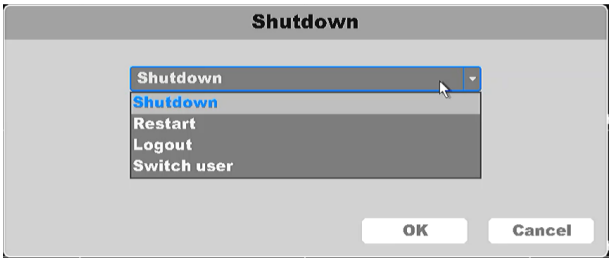


Figure 4-8 Logout

- Screen switch: Preview in single screen/four screens/eight screens /nine screens /sixteen screens according to your choice.
- Corridor Mode: Preview in three screens (as shown in Figure 4-9)/four screens/five screens /seven screens /nine screens/ten screens/twelve screens/sixteen screens according to your choice.

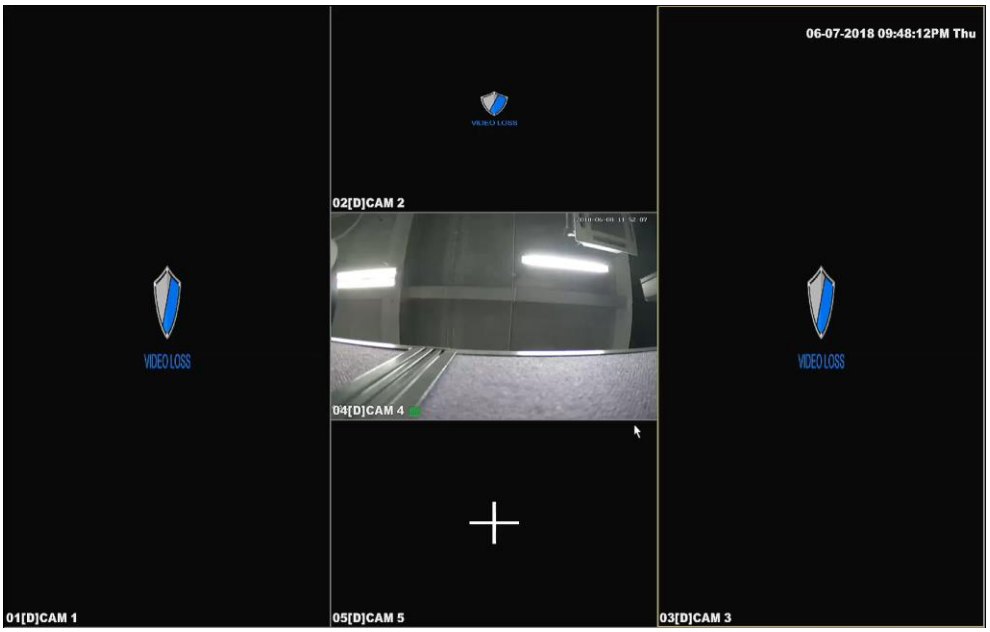


Figure 4-9 Corridor Mode – Five screens

4.3 Settings

4.3.1 System

4.3.1.1 General setting

Click on "Main Menu-> Setting → System-> General ", as shown in Figure 4-10.

Figure 4-10 General

- Language: Simplified Chinese, English, Italian, Russian, Portuguese, Turkish, Persian, Arabic, Cesky.
- Time zone: Select your corresponding time zone here.
- System time: Set the system data and time.
- Date format: Choose the data format: YYYYMMDD, MMDDYYYY, and DDMMYYYY.
- Time format: Choose list separator of the data format: dot, beeline and solidus.
- Time Format: Choose time format: 24-hour or 12-hour.
- DST: Choose the summer time option and pop the dialog box as followed.

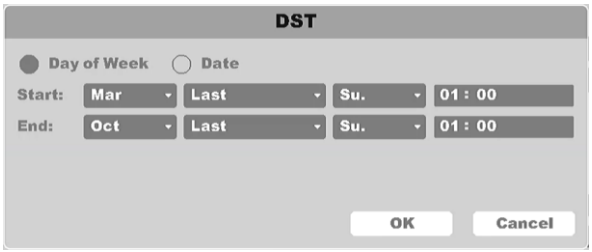


Figure 4-11 DST (week)

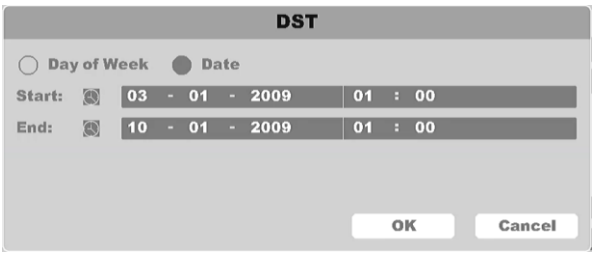


Figure 4-12 DST (date)

- Auto Logout: The amount of time of inactivity before your account is logged out of NVR
- Startup Wizard: The startup wizard can guide you to finish some important settings of the NVR. You can also choose to skip this step, or make sure it never pops up again.
- Device No: When you are using one remote control to control several NVRs, you can give a number to each NVR as address for your management.
- Host Name: NVR's name
- Smart display: It will display smart alarm line or area after you enable this function.
- Smart tracking display: It will track the moving objects from the specified intelligent alarm type.

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

Click "NTP" on this page, as shown in **figure 4-13**. This page can be set NTP server IP, server port, update schedule.

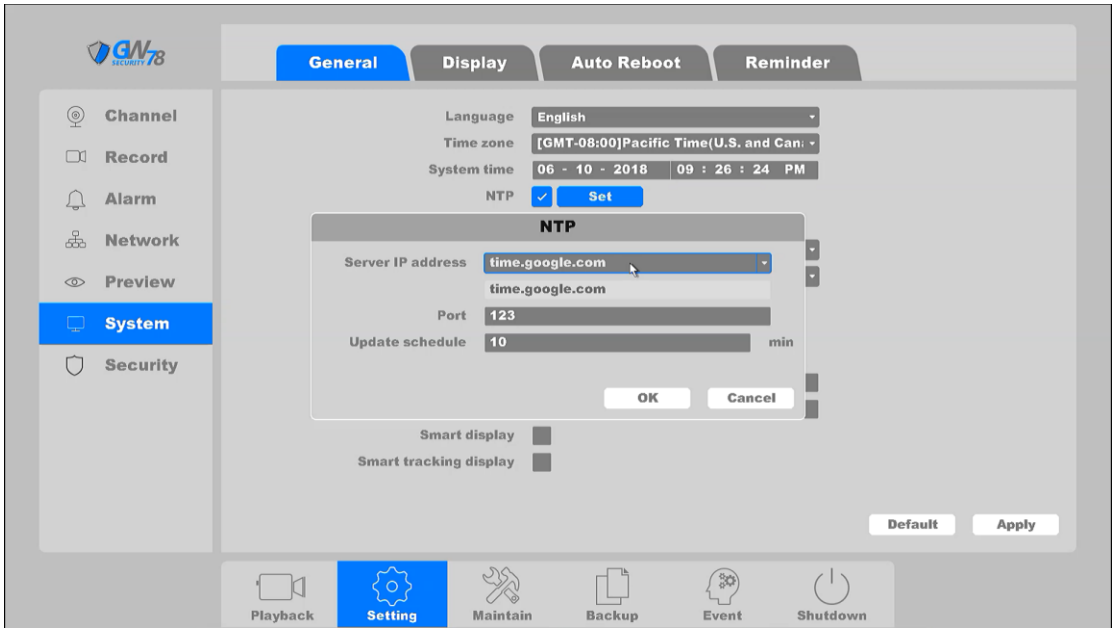


Figure 4-13 NTP Setting

- **Server IP**: The NTP Server IP address or host name. Support two built-in server IPs and custom way.
- **Port**: Port of NTP server.
- **Update Schedule**: Time interval between the two synchronizing actions with NTP server. The unit is in minutes.

Click the button **Save** to save the configuration.

Note:

- *The time synchronization interval can be set from 1 to 65535min, and the default value is 10 min. If the NVR is connected to a public network, you should use a NTP server that has a time synchronization function, such as the server at the National Time Center.*

4.3.1.2 Display setting

Click on the "Settings -> System ->Display", as shown in **Figure 4-14**. In this menu you can adjust video output parameters.

Figure 4-14 Display

Note:

- Please make sure your monitor support 4k if you choose display resolution as 4K(3840*2160);
- If you set 4K but your monitor don't support 4K, there will be no picture on the monitor, if this happen please left click and right click mouse at the same time for at least 10 seconds, NVR will reboot with the lowest resolution(1024*768), then you need select again the suitable resolution according to your monitor ability.

4.3.1.3 Auto Reboot

Click on "Setting -> System ->Auto Reboot", as shown in **figure 4-15.** You can set the auto reboot time to maintain the device.

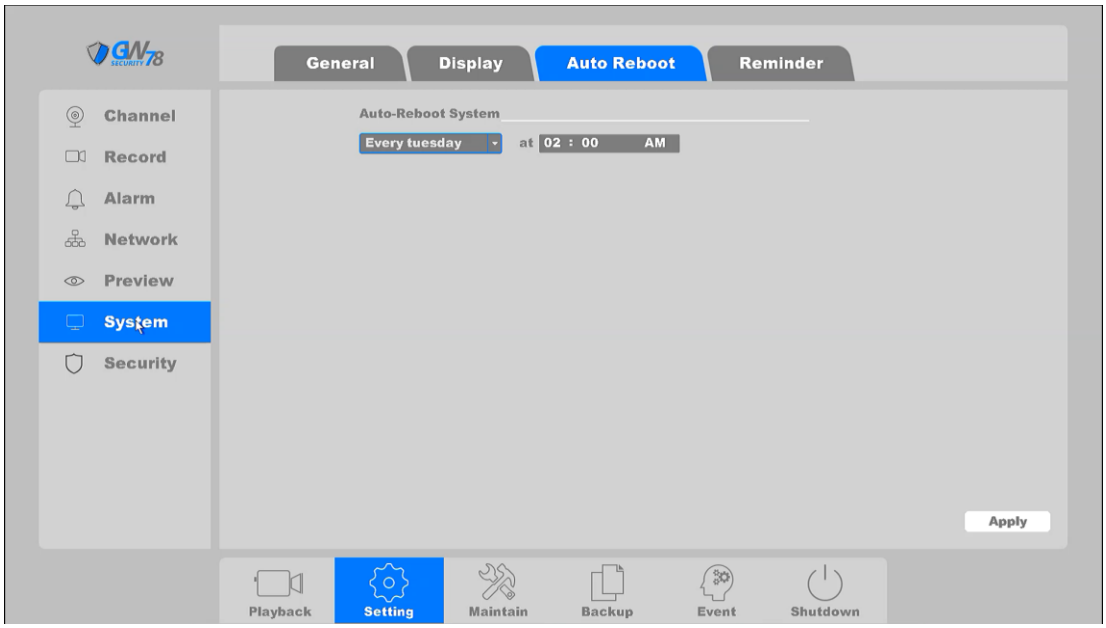


Figure 4-15 Auto Reboot

4.3.1.4 Reminder

Click on "Setting -> System ->Reminder", as shown in **figure 4-16.** When enable this function, there will be a reminder box on the GUI when every selected time gap comes, the user who view the monitor need to click OK button to prove that he is on duty, each operation will be kept in log.

Figure 4-16 Reminder

4.3.2 Security

4.3.2.1 Account

Click on "Setting -> System ->Account", as shown in **figure 4-17.**
There are three default accounts in the NVR: **admin/guest/default**. The account of admin is an administrator, it has the permission to add and delete any user and configure user parameters.

Figure 4-17 Account

Note ***：***

➢ *The character length of name is 64 bytes at most for the following users and users' group. Legal characters include: letters and numbers, other characters are forbidden.*

➢ *The user management includes: group/ user. One user should belong to one group.*

- **Add Group:** Add a user group and set the permission. There are 73 different permissions: control panel, real time surveillance, playback, recording setup, video file backup and so on.

Figure 4-18 Add group

- **Add user:** Add a user in the group and set the user permission. Enter the menu interface and input the user name and password. Choose the group and choose whether using the. Re-useable function, this function allows multiple users use the same account to login. User's right cannot exceed group's right. We recommend that the common user's permission is lower than the advanced user.

Figure 4-19 Add user

- **Modify Group:** Modify the existing groups' attribute, as shown in **figure 4-20.**

Figure 4-20 Modify group

- **Modify User:** click icon  to modify the existing users' attribute, as shown in **figure 4-21.**

Figure 4-21 Modify User

- **Modify password:** You can set password among 1-64 bits, legal characters include letter and number, other characters are not forbidden - as shown in **figure 4-22.**

Figure 4-22 Modify password

Here you can set Pattern for quick login. Click “Pattern Set” to open following set interface.

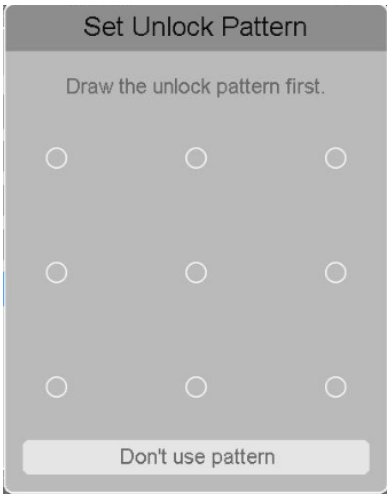


Figure 4-23 Set Unlock Pattern

You can set your own Pattern, for example:

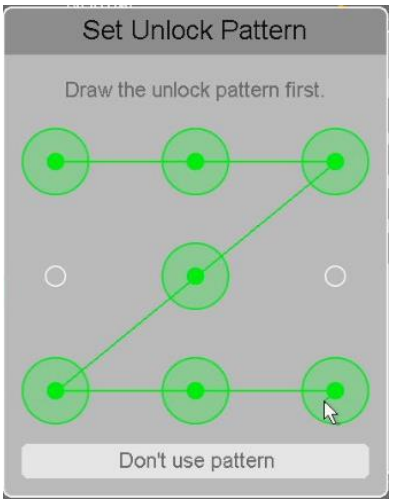


Figure 4-24 Set Unlock Pattern

Then draw the pattern again to confirm your pattern:

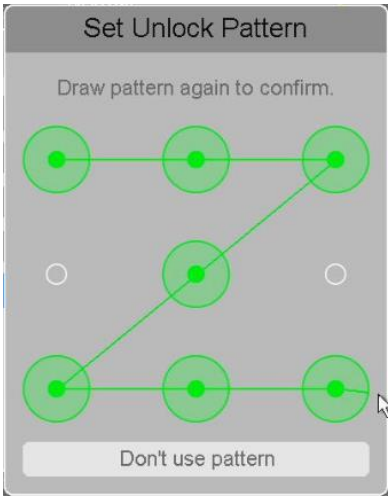


Figure 4-25 Confirm Unlock Pattern

Then click save and your Pattern will be saved into system, next time when a login needed you can use Pattern to unlock, shown as below:

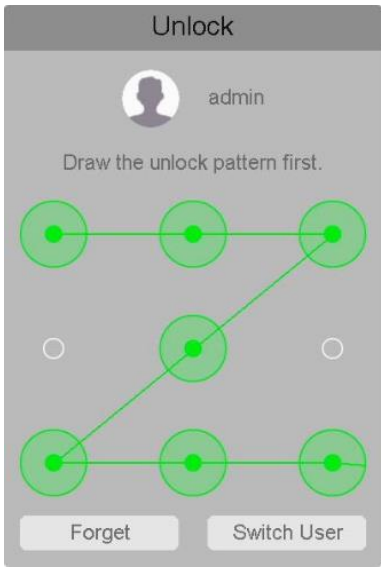


Figure 4-26 Unlock NVR by Pattern

Note:

- *The user who possess the user control permission can modify his/her own or other users' password.*
- This "Z" Pattern is for reference, you can set your own private one.
- If user forget the Pattern, he can click "Forget" button to switch to the original way "Username + Password" to login system.

4.3.2.2 Access

In this chapter by setting the IP address to be blocked and trusted, you can block specific IP

address or allow some trusted IP.

Click on "Setting -> Network ->Access", as shown in **figure 4-23**.

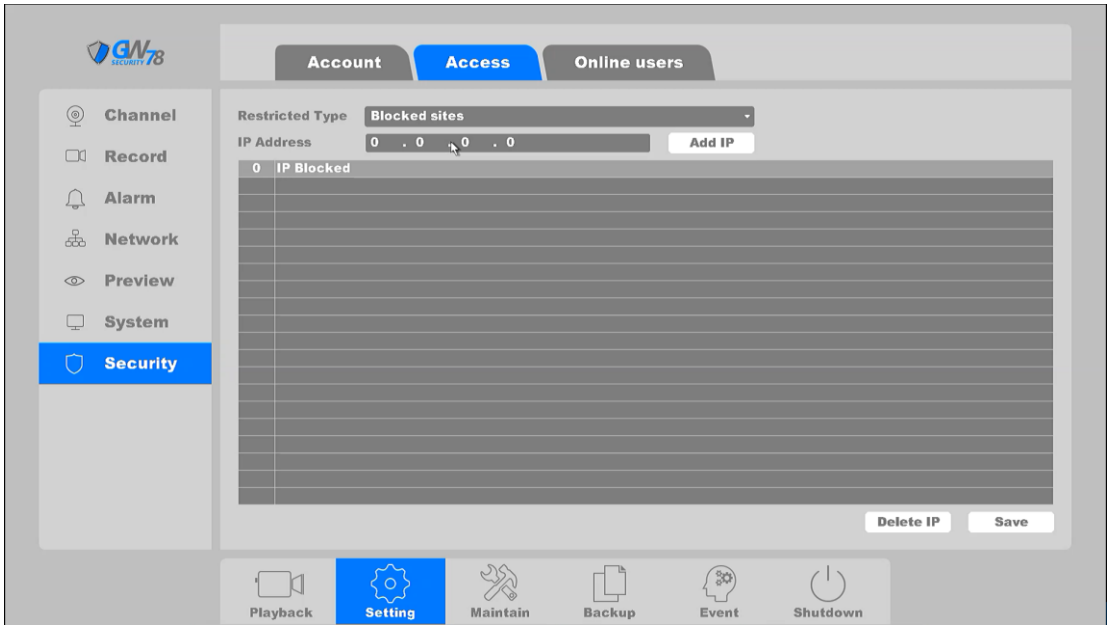


Figure 4-27 Access

- **Blocked Sites:** The IP Addresses which are added to blocked sites are not allowed to login NVR.
- **Trusted Sites:** Only the IP Addresses which are added to trusted sites are allowed to login NVR.

You can add IP or delete IP by clicking **Add IP** and **Delete IP** buttons. After the operation is finished click the **Save** button.

4.3.2.3 Online Users

Click on the "Maintain --> System -> Online Users", as shown in **figure 4-24**.

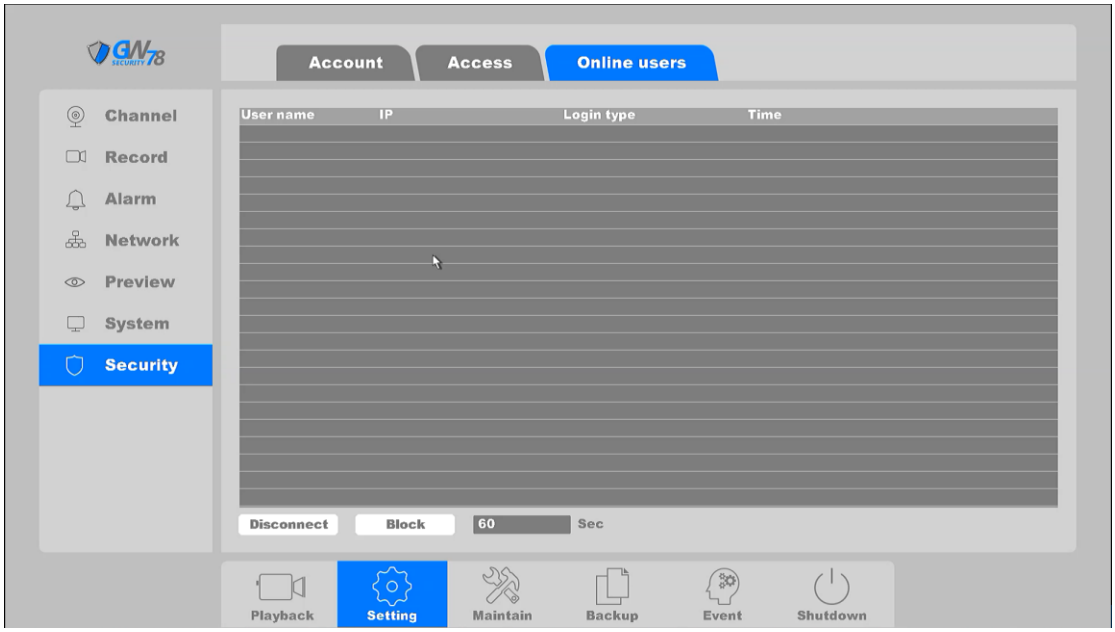


Figure 4-28 Online Users

- **User Name:** Remote device login this NVR device account.
- **IP:** User remote access devices IP Address.
- **Login Type:** Remote connection type.
- **Disconnect:** Disconnect the connected user, and disconnected users will reconnect automatically in a while.
- **Block:** Blocking the connected user for a specfic time that you set, and remote user will reconnect after the specific time length.

4.3.3 Network

Before the NVR connects to the Network, you need to configure the related Network settings. In this chapter, you'll learn how to set the basic network configuration in relation to: TCP/IP, P2P, DDNS, UPNP, Email, FTP, NTP, Access, etc.

4.3.3.1 TCP/IP

Click on "Setting -> Network -> TCP/IP", as shown in **figure 4-25.** This page you can set the device IP Address, gateway, DNS As well as view the NVR's MAC address. If the NVR has two Ethernet ports, you can connect with two net segments and set one for default route.

Figure 4-25 Basic Setting of Network

- **DHCP:** Obtain IP address automatically.
- **IP Address:** Set the IP address of NVR. Default is 192.168.1.10
- **Subnet Mask:** Default is 255.255.255.0.
- **Gateway:** Default is 192.168.1.1.
- **MAC:** the physical address of NVR.
- **DNS setup:** Domain Name Server, it translates the domain name into IP address, it contain primary DNS and secondary DNS.
- **Internal IP (Of Built-in POE Switch):** Set the beginning of IP addresses of those IP Cameras connected to POE panel. Default is 192.168.3.10. Make sure that this value should not be at the same subnet with the IP address of NVR. (You'll only see this field if your NVR has a built-in PoE)
- **Max Users:** The maximum number of users can simultaneously access the NVR. Default value is 10.
- **HS Download:** Download at a high speed on the network side.
- **Transfer Mode:** There are three modes: quality preferred, fluency preferred and adaptive. The code stream will adjust itself according to the setup, adaptive is the tradeoff between the image quality preferred and fluency preferred, fluency preferred and adaptive are valid only when the sub-stream is turned on, otherwise, quality preferred is valid.

Note:

- *You can't set internal IP address if the NVR does not support POE function.*

4.3.3.2 P2P

The peer-to-peer connection is allows you to seamlessly and securely access your NVR via your

smart phone or tablet without extra setup on your network's.

Click on "Setting -> Network ->P2P", as shown in **figure 4-26**. This page shows the iPhone or Android APP download links, and the cloud ID Identification code.

NVR can be connected to Cloud service and users can visit the NVR by its Cloud ID through Cellphone APP or the website: http://p2p.gwsecurityusa.com.

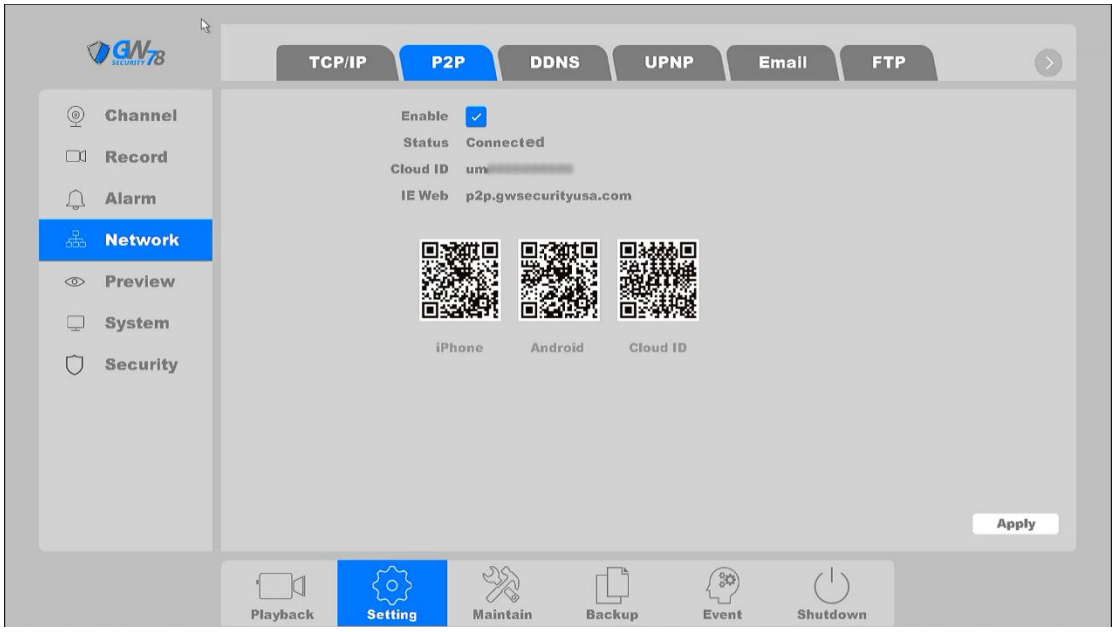


Figure 4-26 P2P Setting

- **Enable:** P2P Function enabling toggle.
- **Status:** Display P2P status.
- **Cloud ID:** P2P Identification number.
- **IE Web:** The P2P web address.
-

You can visit NVR by entering http://p2p.gwsecurityusa.com in the Web Browser of your computer, and click the option **By Device**, fill in the blank with the serial code Cloud ID, and Username, Password of NVR.

4.3.3.3 DDNS

DDNS is a service that can be used to automatically update DNS records if client PCs get their IP settings from a DHCP Server. If DDNS function is enabled on your NVR, you can access the NVR by domain name provided by either your Internet Service Provider (ISP) provider or a third-party DDNS service.

Click on "Setting -> Network ->DDNS ", as shown in **figure 4-27**.

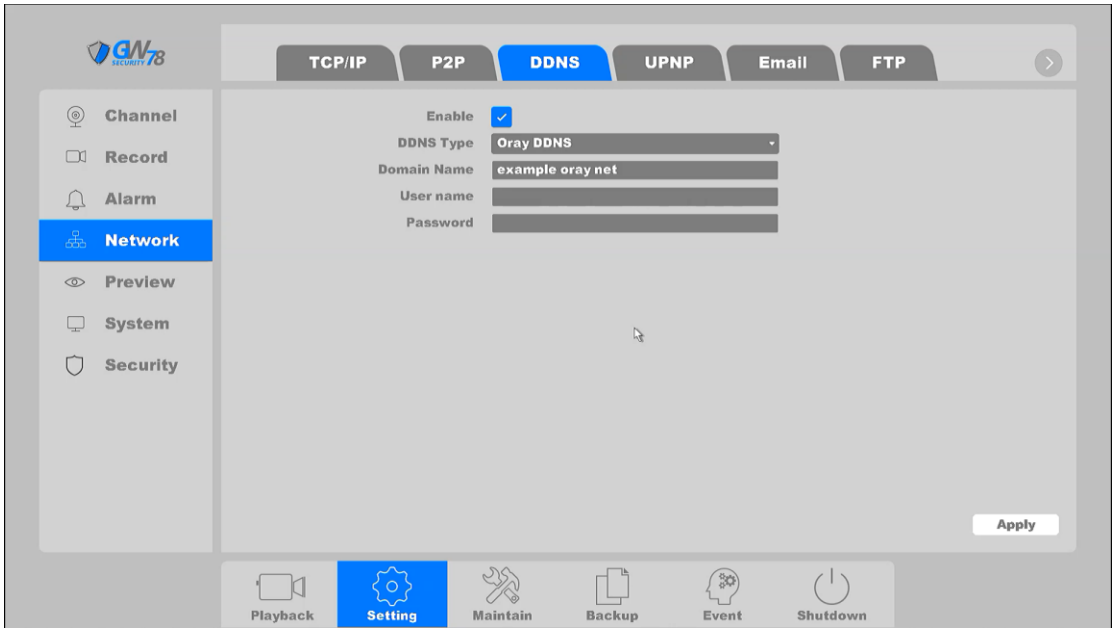


Figure 4-27 DDNS Setting

- **Enable:** DDNS enabling toggle.
- **DDNS Type:** ISP of DDNS, including Oray DDNS, CN99 DDNS, DynDNS DDNS, NO-IP DDNS. This option can be customized according to the requirement your requirements.
- **Domain name:** Fill in the domain name provided by ISP or other DDNS service.
- **User name/Password:** Fill in the username and password that corresponds to the domain name.

4.3.3.4 UPNP

UPnP is a networking standard that uses protocols on the Internet to allow electronic devices connected to a network to detect and identify each other.

Click on "Setting -> Network ->UPNP", as shown in **figure 4-28**. In this page you can configure the Media Port, HTTP Port and Handset Port. Check UPNP Is enabled, the external port can automatically obtain and use.

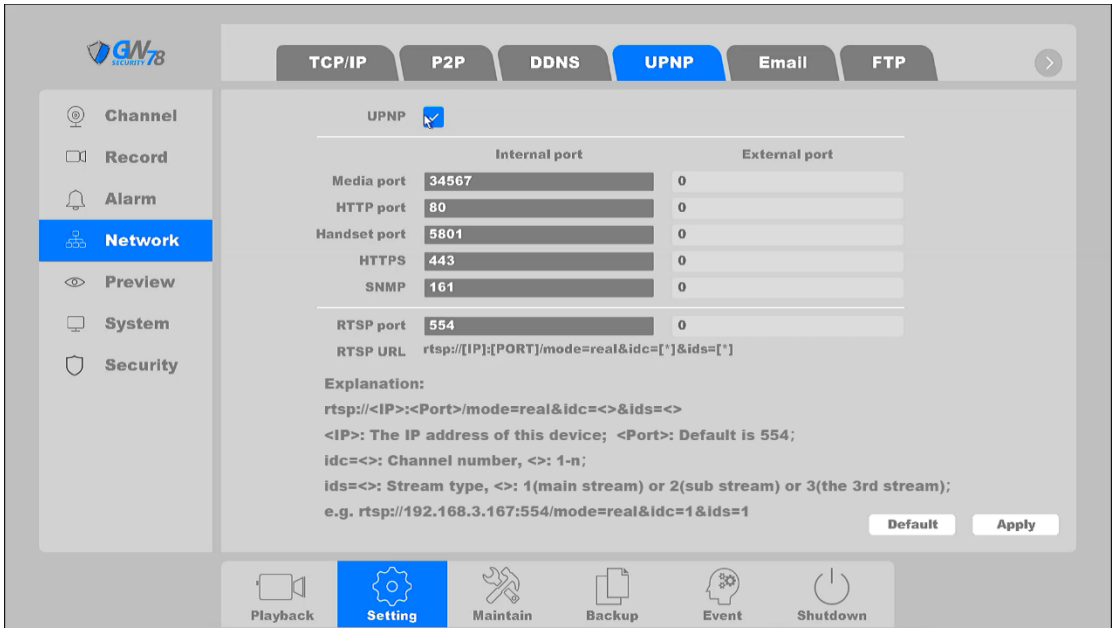


Figure 4-28 UPNP Setting

4.3.3.5 Email

The system can be configured to send an Email notification to all designated users if an alarm event is detected, etc., an alarm or motion event is detected.
The network must be connected to the Internet in order to connect to the Email SMTP server.

Click on "Setting -> Network ->Email", as shown in **figure 4-29.**

Figure 4-29 E-mail Setting

- **Enable:** Enable the Email service.

- **SMTP Server**: The SMTP Server IP address or host name.
- **SMTP Port**: The SMTP port. The default TCP/IP port used for SMTP is 25.
- **Open SSL**: Click the checkbox to enable SSL if required by the SMTP server.
- **User Name/Password:** The username and password of the sender email accounts.
- **Sender:** Displayed by the recipient of the message sender email address.
- **Title:** The title displayed in the email.
- **Receiver:** The Email address of user to be notified (3 receivers at most).

After finishing the setting, you can click the button **MailTest** to try to verify the email service is available, and click the button **Apply** to activate the configuration.

4.3.3.6 FTP

You can upload a record file onto a FTP server by configuring the FTP settings. It allows you to upload the record file by the record type and record time.

Click on "Setting -> Network ->FTP", as shown in **figure 4-30**.

Figure 4-30 FTP Setting

- **FTP setting:** divided into video FTP and pictures FTP- you can set up your server IP, port, user name, password, directory, and file length. There is also an Anonymous option.
- **Channel setting:** you can select the channel to transmit, and the schedule of upload.

After finishing the setting, you can click the button **FTP Test** to try to verify the FTP service is available, and **Copy To** button is used to copy the configuration of current channel to other channels. Click the button Apply to activate the configuration.

4.3.3.7 Cloud Storage

As a new feature our device support upload video & picture to the cloud. Device will upload the video and picture to the cloud automatically after you set this function correctly.

Click on "Setting -> Network → Cloud Storage", as shown in **figure 4-31**.

Figure 4-31 Cloud Storage

- **Enable:** Enable the cloud storage function.
- **Cloud Type:** Support two kinds of cloud services “Google Drive” & “Dropbox”.
- **Status:** Shows the cloud storage function status “Bind” or “Unbind”.
- **Operation:** Make sure you have already access to internet, click “Bind ” button, the device and your Google account will be bound.
- **Upload directly:** You can set the path of your account folder on your device.
- **File length:** Set the video length that will upload to the cloud.

You can set which kind of file you want to upload as you followed by the steps below.

- **Channel:** Choose the channel which you want upload files. Also you can choose different channels to set different upload plan.
- **Upload type:** Including “Norm” “Event” “Main” “Sub stream” four kinds of upload type.
- **Video:** In “Norm” type device will keep upload the video file all the time as long as recording keep going. In “Event” type device will only upload video files as plan that you set in alarm trigger process. “Main” and “Sub stream” means you can choose which the record file type you want to upload.
- **Picture:** Same as the video configuration. It has “Norm.” and “Even” type of upload. But it's of merely a still image.

After the operation is finished, click the **Save** button to save the configuration.

4.3.3.8 SNMP

Simple Network Management Protocol (SNMP) is an Internet-standard protocol for collecting and organizing information about managed devices on IP networks and for modifying that information to change device behavior.

Click on "Setting -> Network ->SNMP". There are 3 versions in SNMP. V1/V2 are shown in **figure 4-32.**

Figure 4-32 SNMP-V1/V2

V3 is shown in **figure 4-33.**

Figure 4-33 SNMP-V3

4.3.3.9 Multicast

In computer networking, multicast (one-to-many or many-to-many distribution) is group communication where information is addressed to a group of destination computers simultaneously.

Click on "Setting -> Network → Multicast, as shown in **figure 4-34**. Set the Multicast IP and Multicast port within the required range. If different source devices want to apply the multicast, the multicast IP should be DIFFERENT.

Figure 4-34 Multicast

4.3.4 Alarm

The NVR supports video detection alarm, including motion detection, crossing detection, intrusion detection, masking detection, video lost detection. And also the device supports Alarm out configuration and Exception warnings such as: HDD error, no writable disk, disk no space, network disconnection, and IP conflicted.

Note:

- Video detection should be supported by the IP Camera, so please refer the User Manual of IP Camera to confirm the video detection types. If the IP Camera does not support some types of the video detection the configuration on the NVR will not be utilized.

4.3.4.1 Motion

Motion detection is to detect the movement of the channel. If any movement appears in the surveillance area the NVR will detect it and respond according to the settings established.

Click on the "Setting -> Alarm -> Motion", as shown in **figure 4-35**.

Figure 4-35 Motion Detect

- **Channel:** Select the channel.
- **Enable:** Motion detection enable toggle.
- **Schedule:** Set the time slot of motion detection. Here it supports 6 time slots at most. You can copy the setting to other days: click **Copy** and select another weekday, click **Paste** to have it configured as the former one. Click **Default** to clear all the settings. (as shown in **figure 4-36**)

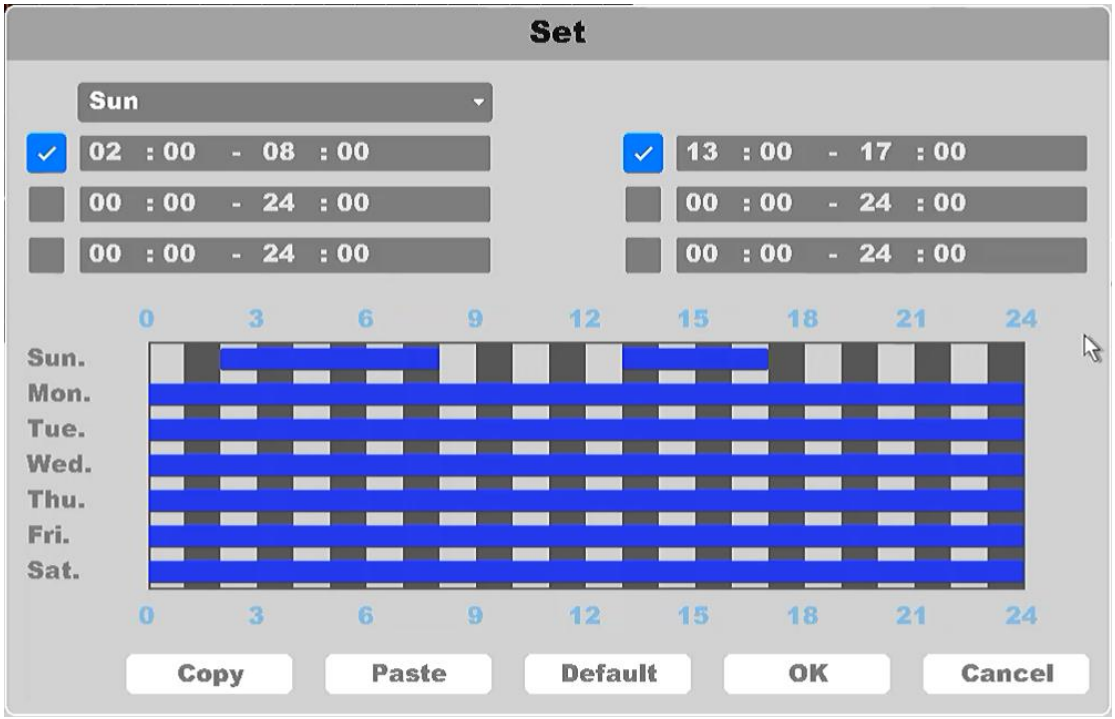


Figure 4-36 Schedule Setting

- **Interval:** Set the time interval of each motion detection triggered.
- **Trigger process:** Set the handling action of motion detection including: alarm output, alarm delay, show massage, buzzer, send Email, record channels, record delay, PTZ act, tour, and Snapshot (as shown in **figure 4-37**).

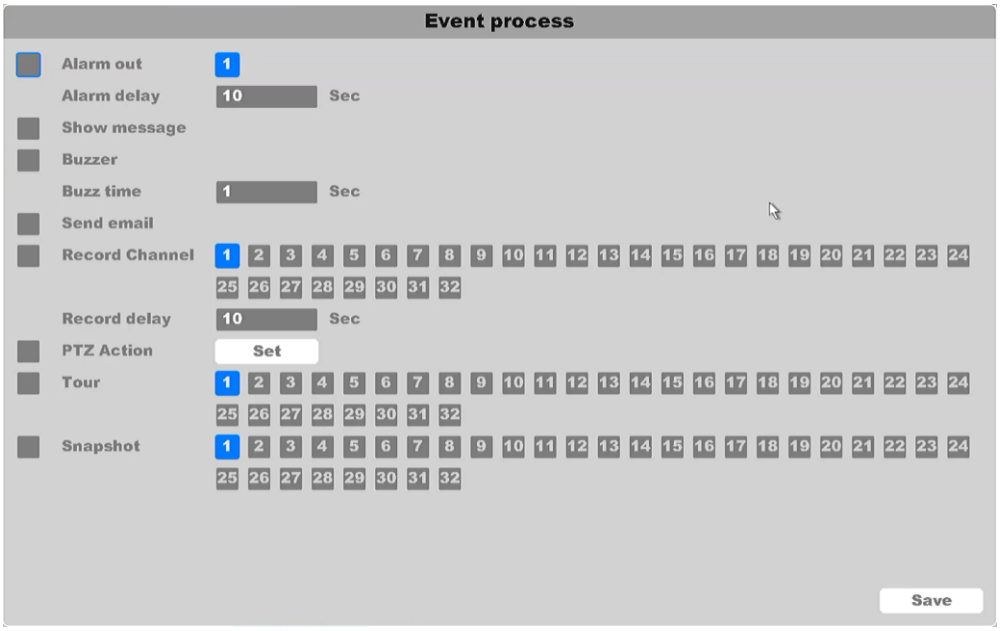


Figure 4-37 Event Process

- **Sensitivity:** Set Sensitivity of motion detection, range from 1 to 6.

You need to select the surveillance area on the screen, by click and drag the mouse, or you can click the button **Select All** to select all the surveillance area, or click the button **Clear** to reset the area:

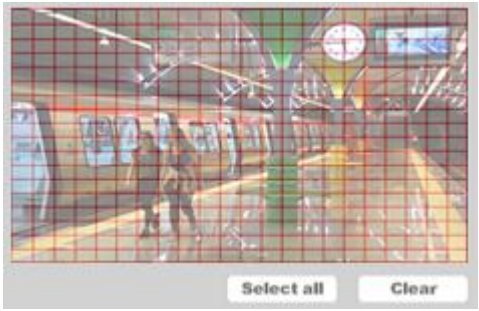


Figure 4-38 Select partially **Figure 4-39 Select All**

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

4.3.4.2 Masking

Click on the "Settings -> Alarm ->Masking", as shown in **figure 4-40**.

Detect video masked on a channel and take alarm response actions.

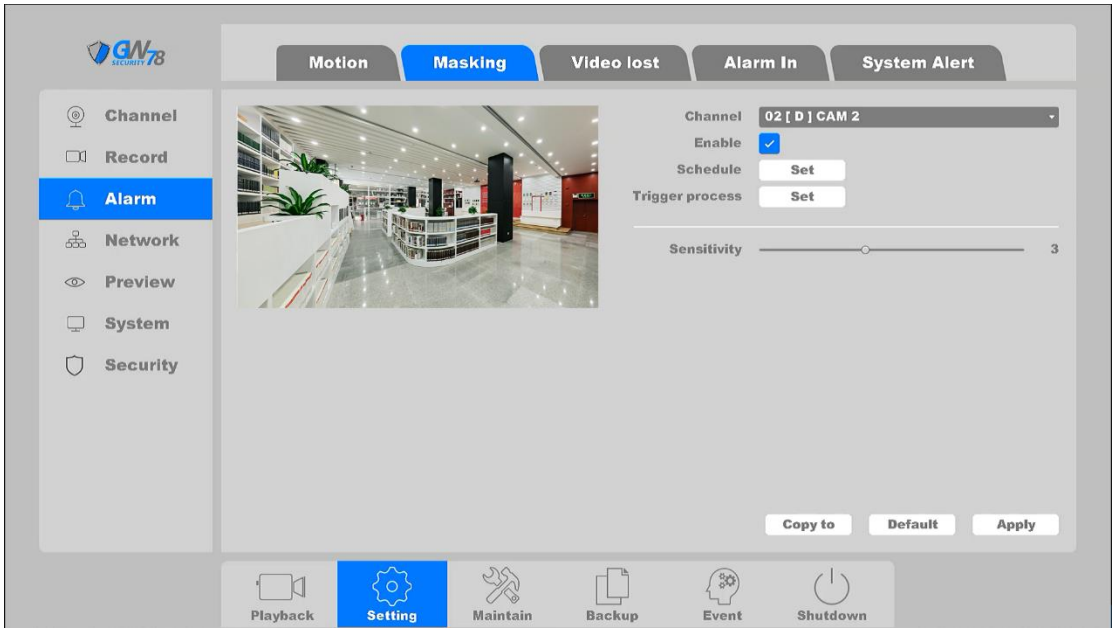


Figure 4-40 Masking

- **Channel:** Select the channel.
- **Enable:** Video masking enable toggle.
- **Schedule:** Set the time slot to detect video masking. You can take the setting of chapter 4.3.3.1 motion detection for reference.
- **Trigger process:** Set the handling action of masking detection; please take the setting of chapter 4.3.3.1 motion detection for reference.

After all the settings finished, click the button **Apply** to save all changes.

4.3.4.3 Video lost

Click on the "Settings -> Alarm ->Video Lost", as shown in **figure 4-41**.

Detect video loss of a channel and take alarm response actions.

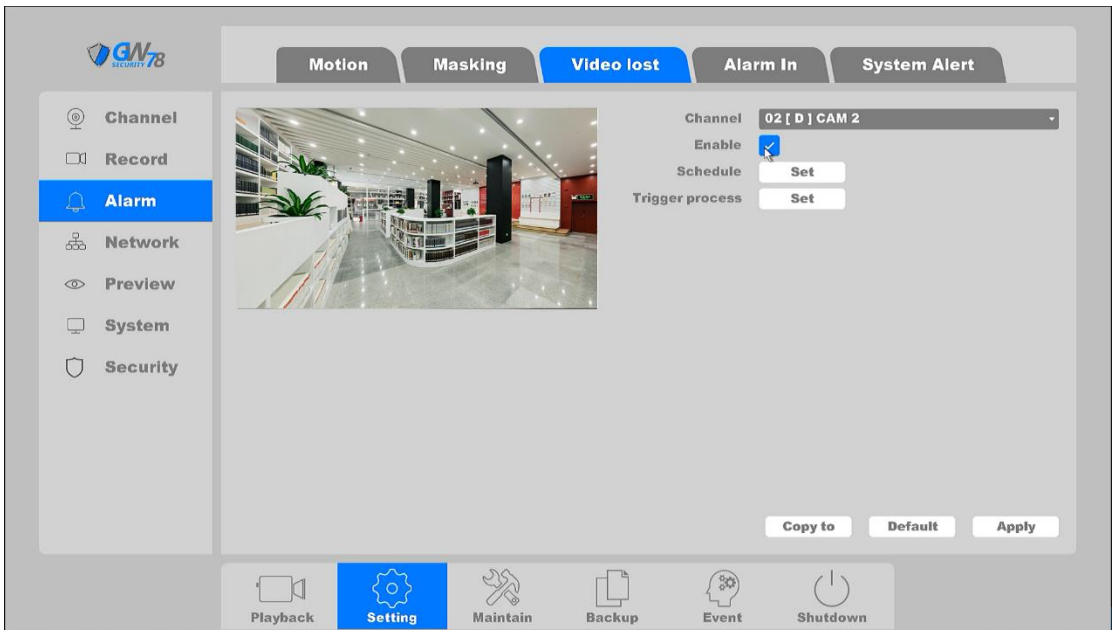


Figure 4-41 Video Lost

- **Channel:** Select the channel.
- **Enable:** Video loss enable toggle
- **Schedule:** Set time slot to detect video loss.
- **Trigger process:** Set the handling action of video loss detection; please take the setting of chapter 4.3.3.1 motion detection for reference.

After all the settings finished, click the button **Apply** to save all changes.

4.3.4.4 Alarm In

Click on the "Settings -> Alarm ->Alarm In "into the graphic interface", as shown in **figure 4-42**.

Set the handling action of external sensor alarms, including alarm input and alarm output.

Figure 4-42 Alarm In

The Alarm input device is a device which can detect the surveillance area using sensors such as infrared sensor or temperature sensor, and when the environment is been changed, the sensor will trigger and alert the status.

- **Name:** Set the name of the Alarm input device.
- **Type:** Normal Open/Normal Close. It means the system supports those external sensor alarms which have two statuses: Open and Close. When the status switches from Open –> Close, or from Close–>Open, alarm will be triggered.
- **Enable:** Alarm in enable toggle.
- **Schedule:** Set time slot to detect video loss.
- **Interval:** Set the time interval of each Alarm when triggered.
- **Action:** Set the handling action of alarm in detection; please take the setting of chapter 4.3.3.1 motion detection for reference.

Alarm output device is a device which can output warning signal such as sound or light, to remind the user that there´s alarm are triggered.

- **Name:** Set the name of the Alarm output device.
- **Type:** Three types: Schedule/Manual/Stop. Schedule means the alarm output device will be activated when the NVR detects the alarm. Manual means the alarm output device will be activated after choosing the Manual and press the button Apply. Stop means the alarm output device is not on-guard.

After all the settings finished, click the button **Apply** to save all changes.
You can also click **Copy to** to pass the same settings to another port.

4.3.4.5 System Alert

Click on the "Settings -> Alarm-> System Alert "into the graphical interface.", as shown in **figure 4-43**.

Exception settings refer to the handling action of various exceptions, including: No writable disk, Disk error, Disk No space, Network Disconnection, IP Conflicted.

Figure 4-43 System Alert

- **No writable disk:** If all HDD are set to only read, this exception will be triggered. It supports these methods to remind the user about the exception: Show Message, Buzzer, Send Email, and Alarm Out.
- **Disk Error:** If writing HDD error or HDD is unformatted, this exception will be triggered. It supports these methods to remind the user about the exception: Show Message, Buzzer, Send Email, and Alarm Out.
- **Disk No Space:** You can set a minimum percentage of hard disk space. The handling actions of this exception are: Show Message, Buzzer, Send Email, and Alarm Out.
- **Network Disconnection:** If network is disconnected, this exception will be triggered. It supports these methods to remind the user about the exception: Show Message, Buzzer, Send Email, and Alarm Out.
- **IP Conflicted:** Contain If IP conflict with other device at the same network, exception will be triggered. It supports these methods to remind the user about the exception: Show Message, Buzzer, Send Email, and Alarm Out.
- **S.M.A.R.T:** This exception is about HDD health detection. It will be triggered when the HDD of device have some problems and not work under good condition. It

supports these methods to remind the user about the exception: Show Message, Buzzer, Send Email, and Alarm Out.

After all the settings finished, click the button **Apply** to save all changes.

4.3.5 Record

In this chapter you'll learn how to set the recording schedule by configuring the related parameters. Before these operations, please make sure that the HDD has already been installed and formatted. If not, please install the HDD and initialize it. For detailed information, please refer to chapter: 4.4.3.1 Base

Click on the "Setting ->Record ->Schedule", as shown in **figure 4-44.**

Figure 4-44 Record Plan Setting

On this schedule setting screen, we can set the record schedule for specific channels.

- Channel: Select the channel to configure
- Sub stream: To record as both main stream and sub stream.
- Pre-Record: The time to be pre-record on the created videos. Range from 0-30 seconds.
- Redundancy: The record will be backed up in a redundant HDD, to setup a redundant HDD in the system, please check the chapter 4.4.3 for the details.

Note:

➢ *If there are several channels to be set with pre-record function, the pre-record time will be less than 30 seconds (the maximum value), because pre-record function will consume the system resources and it will adjust the time length to support many channels at the same time.*

You can click the button Edit to enter the edit screen and set the schedule of the record.

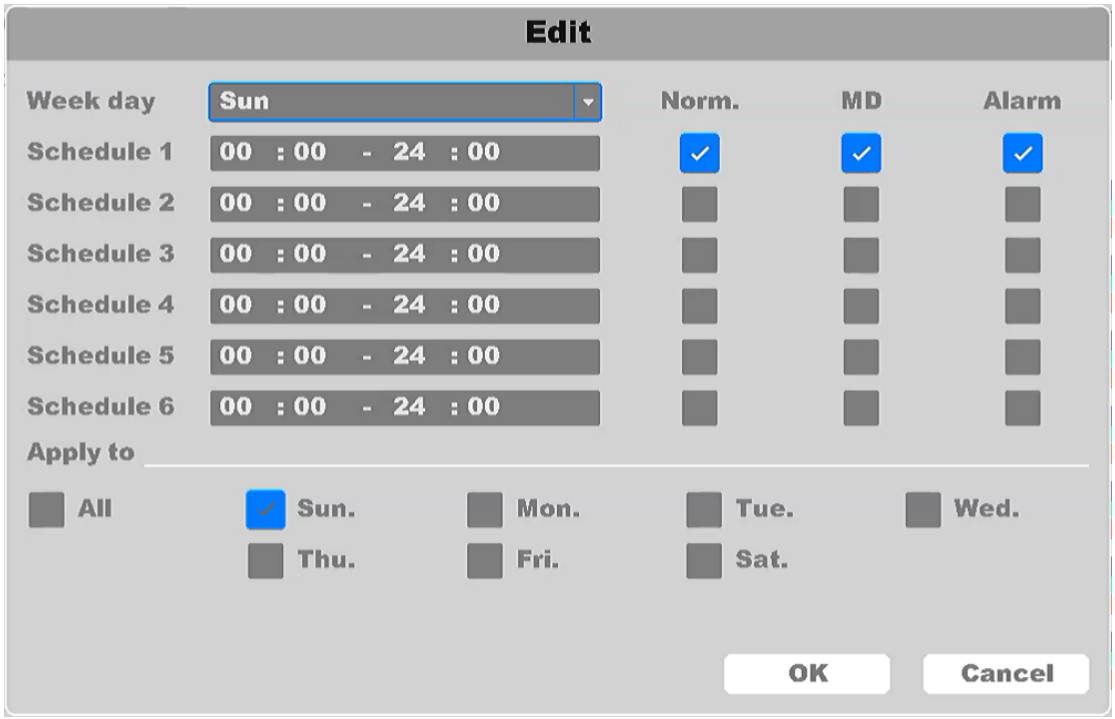


Figure 4-45 Record Plan Edit

- Week Day: The day to set the schedule, from Sunday to Saturday.
- Schedule 1-6: The time slot for the record, you can set 6 time slots for one day.
- Norm.: Record as continuous, normal video.
- MD: Record motion detection video trigger by motion alarm.
- Alarm: Record alarm video trigger by Alarm-in Device.

You can check ” All” to select every day of the week day and set the schedule at the same time, or check only the ones you need. If Norm, MD and Alarm are checked at the same time, it will record in the priority of: Alarm > MD > Norm. That means if the three type of detection occurred at the same time, the type of the record will be set as Alarm video.

You can also edit the schedule on the configuration graph screen, as shown in Figure 4-46.

Figure 4-46 Edit graph

1. By selecting the checkbox on the right we can edit the corresponding bar on the left. For example, if we check the MD and edit the corresponding bar we will be able to edit the green part of the bar.

2. By clicking the icon eraser , we can clear the setting of the bar at once.

After all the settings finished, click the button Apply to save all changes.

You can copy the current channel setting to other channels by clicking the button Copy To. As shown in Figure 4-47.

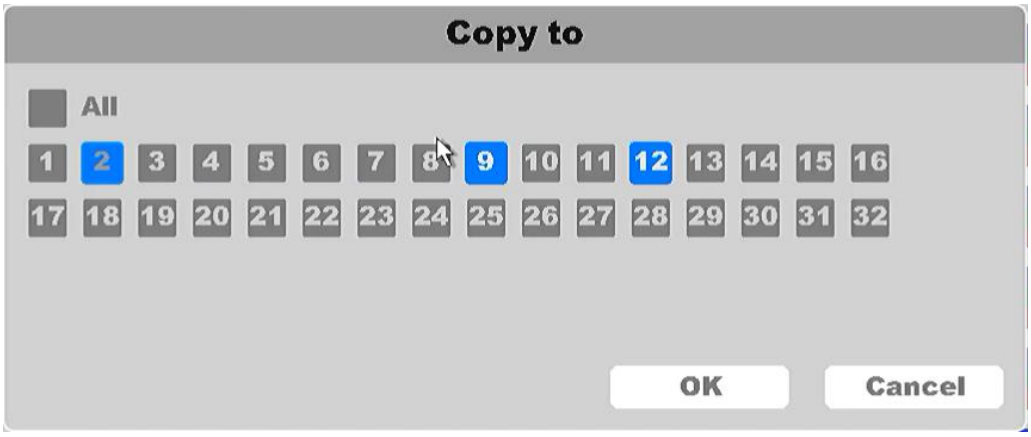


Figure 4-47 Copy To

By clicking the button Default, you can reset all the settings.

4.3.6 Channel

This chapter will show configuring the channel and add IP Cameras into the corresponding channel, set encode, adjust the parameters of the IP Cameras, set the OSD menu, privacy masking, and PTZ functions.

Before adding the IP Cameras to the NVR channels, please make sure that the IP Cameras and NVR are in the same network- and the IP Cameras are in an active status.

4.3.6.1 IP Channel

Click on the "Setting -> Channel ->IP channel", as shown in **figure 4-48**.

Figure 4-48 IP Channel Setting

4.3.6.1.1 Device edit

The list above shows the channel name for each channel, IP Address, connection protocols, connection status. Also, includes:

- **Delete:** Delete the IPC highlighted. Also you can click the icon to delete the IP camera.
- **Clear All:** Clear all the connected IPCs.
- **Encode:** Settings for the connected IPC fast encode settings. As shown in figure 4-49. Encode For the details, please refer to chapter 4.3.6.2 Encode.

Figure 4-49 Encode Config

- **Copy to:** You can choose to copy the IPC Parameters of one camera to the remaining number of channels. As shown in **figure 4-50.**

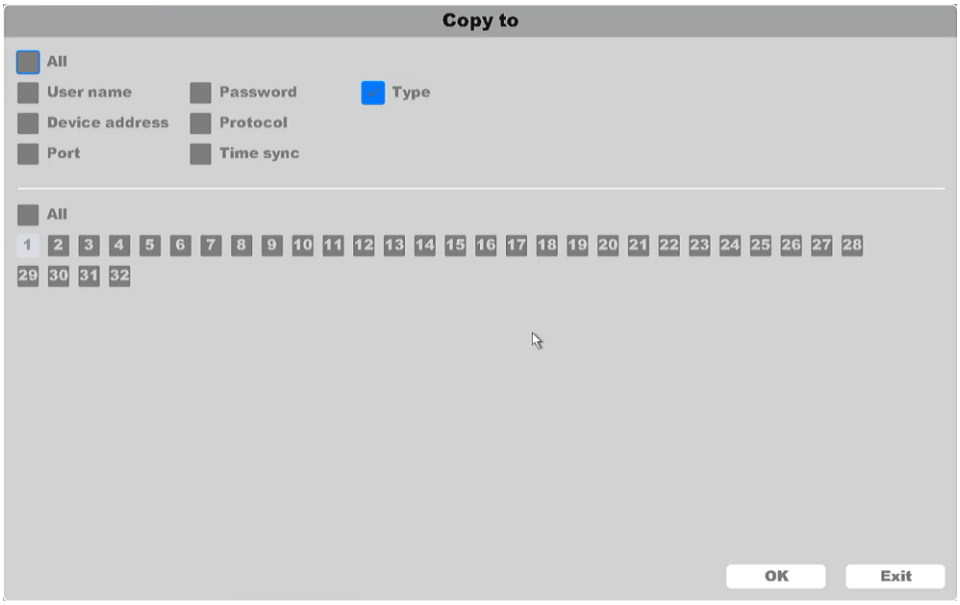


Figure 4-50 Copy the Encode Setting

- **Edit:** Click the icon , and enter the screen of Edit. Select channel, enter the user name and password of the IP Camera then select the: time sync type, connection protocol type, modify or add IP address, port number. As shown in **figure 4-51.**

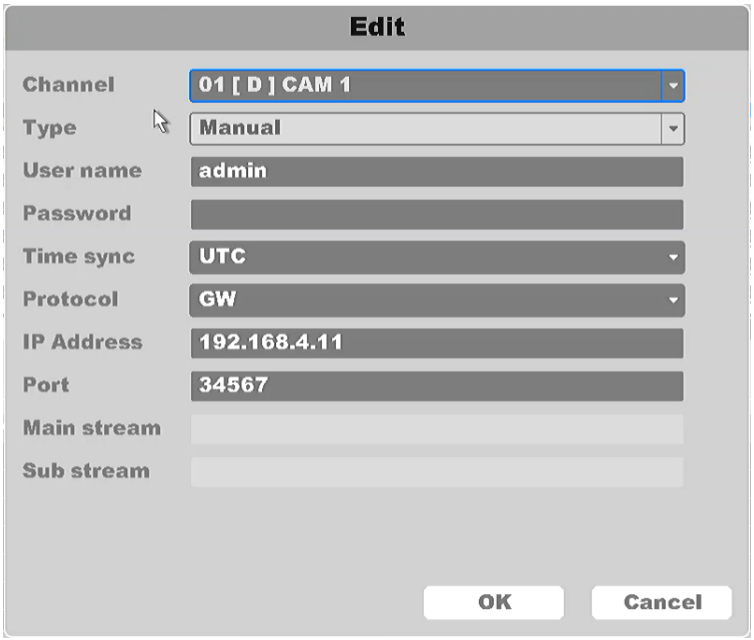


Figure 4-51 IPC Edit

- **Preview:** Click the icon , and you can see a preview of the connected channel IPC.

- **Upgrade:** Click the icon , and upgrade IPC connected. As shown in **figure 4-52.**

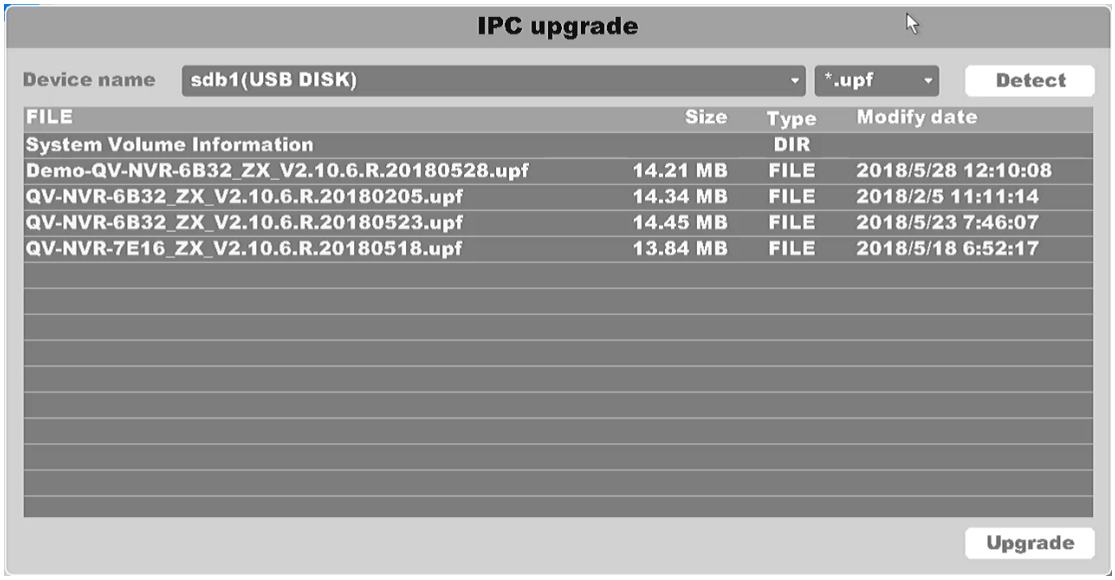


Figure 4-52 IPC upgrade

After all the settings finished, click the button **Apply** to save all changes.

4.3.6.1.2 IPC Searching

This list shows: the device name, type of agreement, IP Address, port number, and access networks of all IP cameras that have found in the same subnet.

- **Search:** Scope search contains: private agreements, ONVIF Protocol search, and comprehensive search of both types of agreements. Click to search all of the devices under the same network segment. You can click the protocol drop box and select the corresponding protocol. Please refer to the **Figure 4-53.**

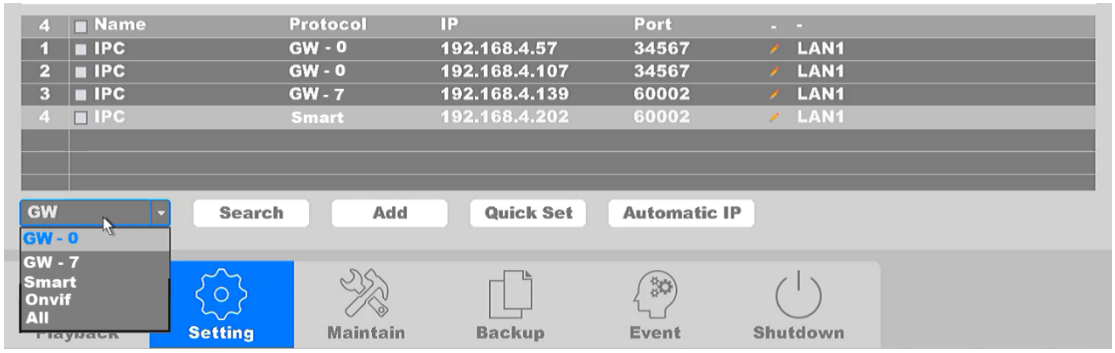


Figure 4-53 IPC Search

- **Add:** Devices are selected from search list, then clicking the add button will establish a connection between the cameras and NVR.
- **Quick Set:** Click the button to add all IPCs to the channels automatically according to what's found by the NVR.
- **Automatic IP:** Auto assign IP address to the IP cameras. The assigned IP address are at the same segment with the NVR.

Note:

➢ *If our IP camera's IP address is not in the same segment with the NVR the NVR can still find the IP* camera, but the NVR may not be able to pull a video stream from the camera. It is recommended to change the IP address of the IP camera first to match the internal IP or if the NVR doesn't have a built-in POE the IP address of the NVR

4.3.6.2 Encode

By configuring the encode parameters you can define the parameters which affect the image quality, such as: Compression type, Resolution, Frame Rate, Bit Rate Type, Quality, etc.
The NVR supports Dual Stream Encode, we can set the main stream encode and sub stream encode on this screen.

Click on the "Setting -> Channel -> Encode", as shown in **figure 4-54.**

Figure 4-54 Encode

- **Channel:** Select the channel to configure.
- **Stream Type:** Main Stream/Sub Stream/Event Stream/Mobile Stream
- **Compression:** H.265 is the compression protocol for encoding. Also supported is H.264 IP cameras.
- **Resolution:** The resolution of the encoding record.
- **Frame Rate (FPS):** The number of frames per second in the encoding video.

- **Bit Rate Type:** CBR(constant bitrate)/VBR(variable bitrate). Variable bitrate uses redundant bits in the video stream to lower the bitrate of the camera without losing quality of image.
- **Image Quality:** Lowest/Low/Standard/Good/Better/Best
- **Bit Rate(Kb/s):** Value of the Bandwidth, or rate in which data is brought into NVR
- **I-Frame:** I-frame setting, range from 10-100
- **Video/Audio:** To encode the Video and Audio in the record files. The video in mainstream is always enabled.
- **H.264+/H.265+:** Enable smart encode technology, all the record file can reduce the HDD space maximum 80%-90% in static view.

After all the setting finished, click the button **Apply** to save the configuration.

You can copy the configuration of the current camera chosen to rest or select few channels. By clicking **Copy To** button, select the channels and save the setting. Please refer to Figure 4-55.

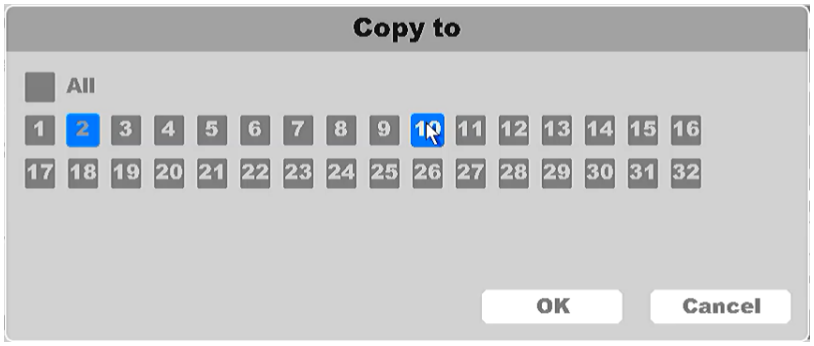


Figure 4-55 Copy To

4.3.6.3 Color

IP Cameras support image adjustment such as: Brightness, Contrast, Saturation, Hue and Sharpness. Some high-end IP Cameras support advanced Settings such as: Image adjust, Exposure, Backlight, White balance, Day/Night setting, etc. In this chapter you can configure the IP Camera to improve the image and make a better view experience.

Click on the "Settings -> Channel ->Color", as shown below in **fig 4-56**.

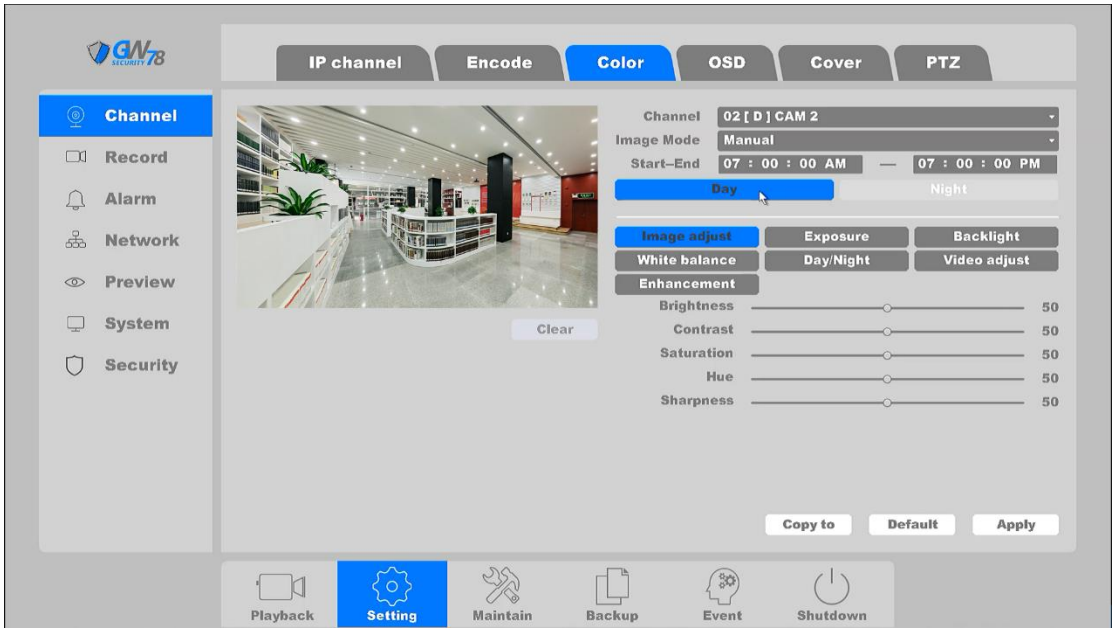


Figure 4-56 Channel Color Setting

- **Channel:** Select the channel to configure.
- **Period:** Set the effective period of the configuration, it supports 2 period settings.
- **Image Mode:** The image mode for specific period of the configuration, there are Auto/Manual for options. Auto mode keeps the image settings for 24h, and Manual mode supports 2 period settings (Day period & Night period). You can set independent image settings for each period.
- **Start-End:** Set the image mode as Manual, then enter the starting time and ending time for Day period or Night period.

You can adjust the IP Camera parameters on this screen, if the IP Camera is compatible with the NVR.

Functions	Parameters
Image adjust	Brightness: 0-100 Contrast: 0-100 Saturation: 0-100 Hue: 0-100 Sharpness: 0-100
Exposure	Auto: Set exposure time automatically Manual: Set exposure time by selecting exact value
Backlight	DWDR: Close, DWDR, WDR(if IPC supports) Limit: Set the degree of DWDR or WDR (Digital Wide Dynamic Range/Wide Dynamic Range) Back Light Comp: When DWDR is Closed, BLC function can be activated in either two options: HLC, BLC
White balance	Auto: Set white balance automatically Manual: Set white balance by selecting exact value of Red Gain and Blue Gain
Day/Night	Auto/Color On/Color Off Switch Type: IR Synchronous Switch Filter Time: from 0-120 seconds
Video adjust	Image: Close/Up down/Left right/Centre Rotate: Off/90°/180°/270°

Defog	Close: function disable Auto: defog automatically Manual: adjust the effect manually
Enhancement	NR Level: 0-6 Defog: Close/Auto/Manual Smart light: close/manual/auto

Table 4-4 IP Camera advanced setting

4.3.6.4 OSD

You can configure the OSD (On-screen Display) settings for the camera, including Channel Name, Date/Time format, Record status, Alarm status, etc.

Click on the "Setting -> Channel ->OSD", as shown in **figure 4-57**.

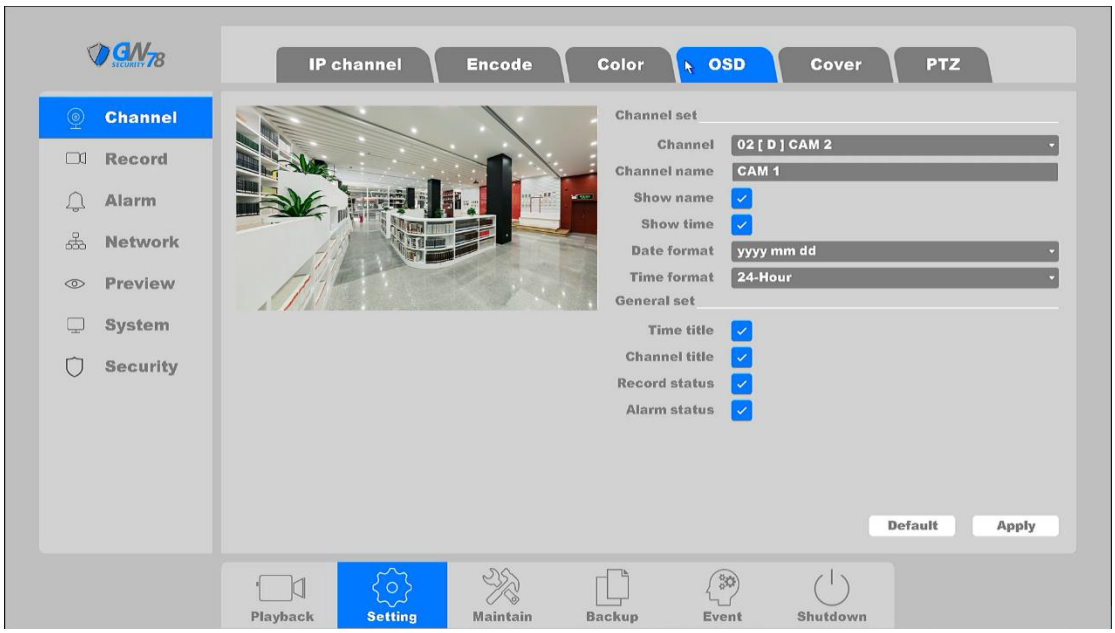


Figure 4-57 OSD Setting

There are two parts for the setting: Channel Set and General Set. For Channel Set, you can configure the following items:

- **Channel:** Select the channel to configure.
- **Channel Name:** The name of the channel to be set.
- **Show Name, Show Time:** Enable the information of channel name and time to be displayed on the video stream.
- **Date Format, Time Format:** Set the format of the date and time.

For the General Set you can configure the following items:

- **Time Title, Channel Title:** Enable/disable the display of the time tile and channel title on the monitor screen.
- **Record Status, Alarm Status:** Enable/disable the display of the record status and alarm status on the screen.

After all the setting finished, click the button **Apply** to activate the configuration.

4.3.6.5 Cover

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. Click on the "Settings -> Channel ->Cover", as shown in **figure 4-58**.

Figure 4-58 Channel Cover Setting

- **Channel:** Select the channel to configure.
- **Enable:** Check the box to enable the feature.

Use the mouse to draw a zone on the window. The zones will be marked with different frame colors. Up to 4 privacy masks zones can be configured and the size of each area can be adjusted. The configured privacy mask zones on the window can be cleared by clicking the corresponding Clear Region button with different colors on the bottom side of the preview window, or click **Clear All Region** to clear all regions. Please refer to **Figure 4-59.**

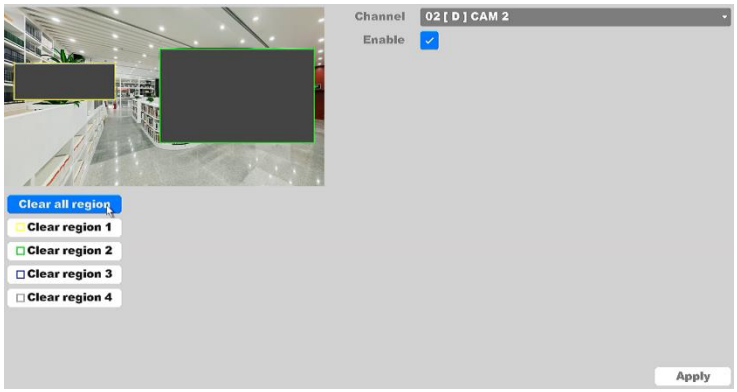


Figure 4-59 Draw mask zone

After all the setting finished, click the button **Apply** to save the configuration.

4.3.6.6 PTZ

Click on the "Setting -> Channel ->PTZ", as shown in **figure 4-60**.
This chapter is to show you how to set the actions which you want the PTZ Camera to carry out when a corresponding alarm is triggered.

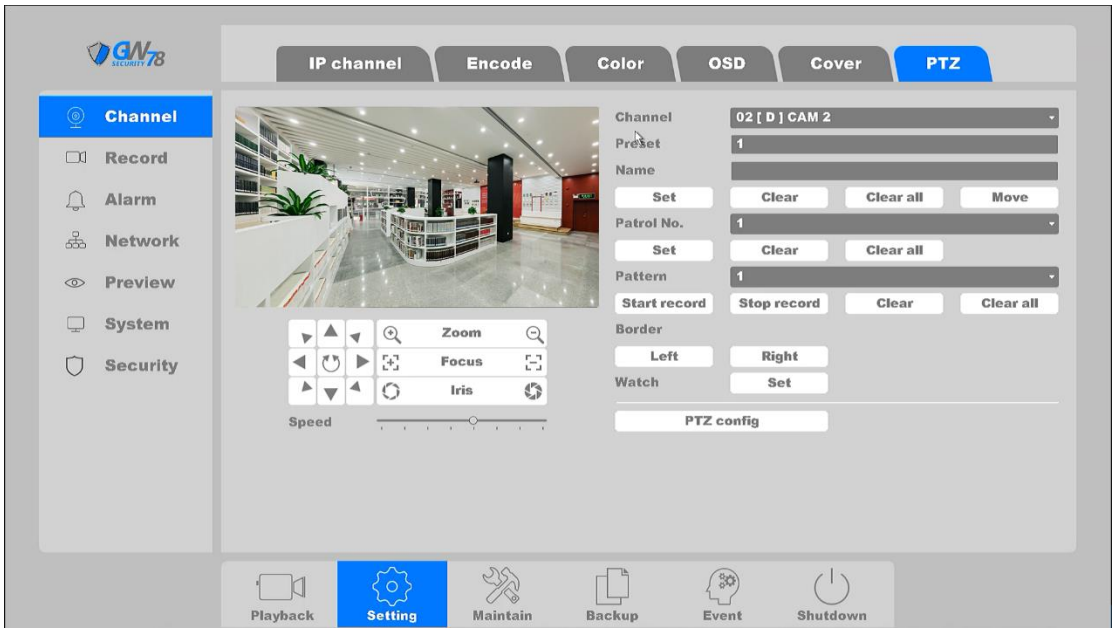


Figure 4-60 PTZ Setting

- **Preset:** This feature enables the camera to point to a specified position such as a window when an event takes place. You can set up to 255 preset points.
- **Patrol:** Patrols can be set to move the PTZ to different key points and have it stay there for a set duration before moving on to the next key point. The key points are corresponding to the presets. You can set up 4 cruise lines. Each cruise line includes preset points and the time stayed in the preset point, as well as cruising speed. Please refer to **Figure 4-61.**

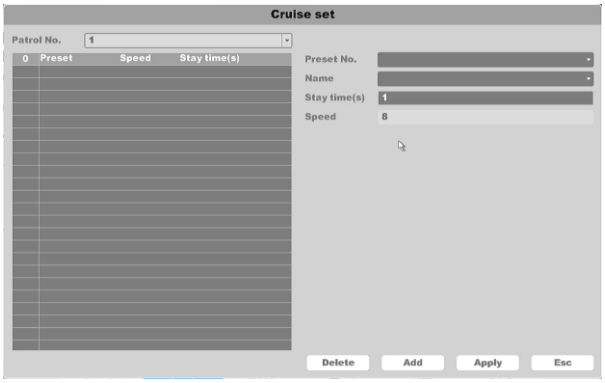


Figure 4-61 Patrol Setting

- **Pattern:** Patterns can be set by recording the movement of the PTZ. You can call the pattern to make the PTZ move according to a predefined path.

- **Border:** Linear boundaries Including Left and right boundaries.
- **Speed:** Set the speed of the PTZ movement.

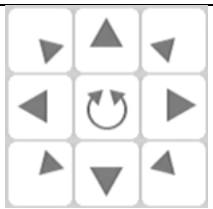
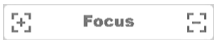
Items	Function Description
	Direction button and the auto-cycle button
	Zoom+, Zoom-
	Focus+, Focus-
	Iris+, Iris-
	The speed of the PTZ movement

Table 4-5 Description of PTZ Control Icons

4.3.7 Preview

4.3.7.1 General Setting

Click on the "Settings -> Preview->General Setting", as shown in **figure 4-62**.

Figure 4-62 General Setting

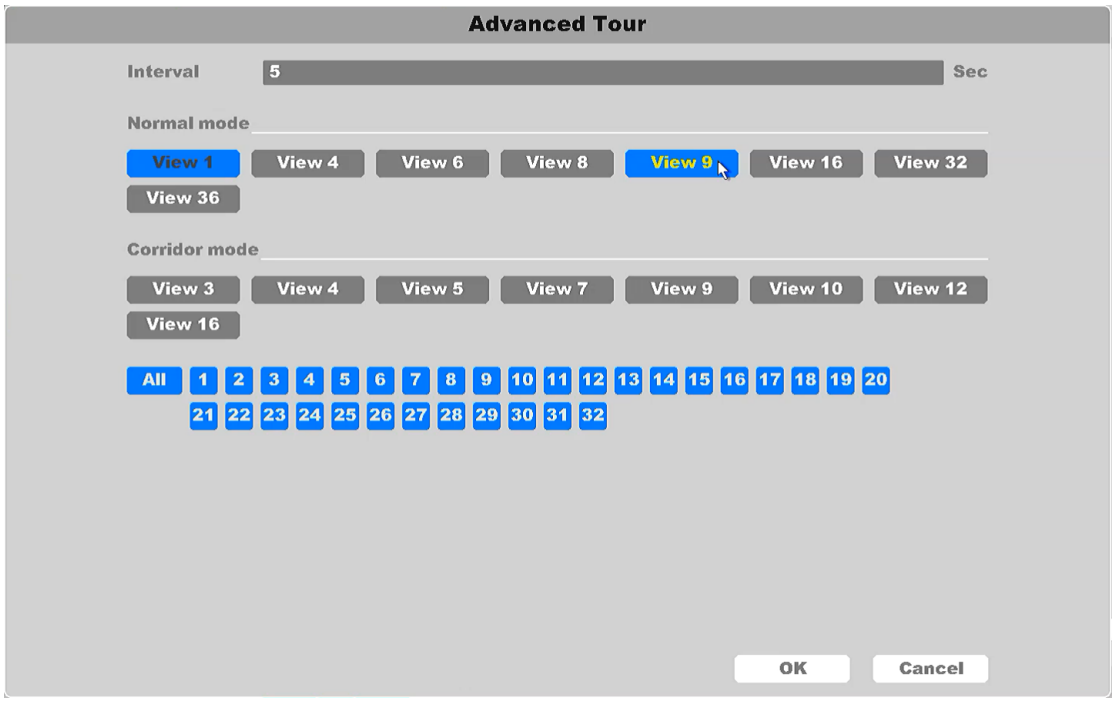


Figure 4-63 Advanced Tour Setting

4.3.7.1 View Setting

Click on the "Setting -> Preview->View Setting", as shown in **figure 4-63**.

Here you can design which cameras lie in which channel from different preset layout. For Dual-HDMI output NVR, you can also set which cameras show on HDMI1 and which cameras show on HDMI2.

Figure 4-63 View Setting

Note:

➢ *If you drag and switch two cameras position at preview, it will take into effect and show the corresponding position in View Setting interface.*

4.4 Maintain

Items	Function Description
System	Check the version of the device and upgrade the NVR. Check: channels, record, and alarm status. Review PoE power info, and manage online users.
Network	Check base settings of network, and network transmission info of LAN1/LAN2 port
HDD	Manage the base and advanced settings of HDD, and review HDD self-test results.
Config	Backup parameters of device, and restore defaults
Log	Search the operations log of device

Table 4-6 Control Panel description

4.4.1 System

4.4.1.1 Version

Click on the "Maintain --> System -> Version", as shown in **figure 4-64**.

Figure 4-64 Version of Software

- **Type:** Devices' model type.
- **System:** Shows the system version.
- **Release date:** Software release date.
- **MAC:** The Mac address of device.
- **Update firmware version (Cloud Upgrade):** User can manually check if there is a new firmware version, once the upgrade is selected the device will download the new firmware from the cloud server and upgrade.

4.4.1.2 Upgrade

Click on the "Maintain --> System ->Upgrade", as shown in **figure 4-65**.

On this page you can upgrade your device by use USB flash disk.

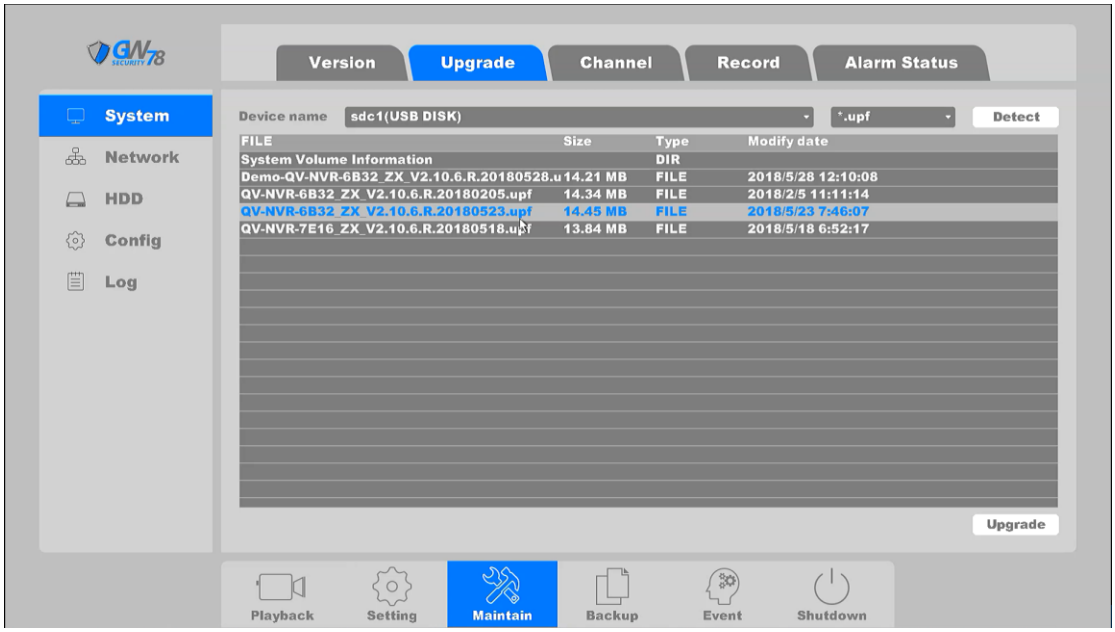


Figure 4-65 Upgrades NVR

- **Detect:** Manually detect the USB flash disk on this device.
- **Upgrade:** Select the correct file and click the “upgrade” button to upgrade the device, then click “OK” button to reboot the device after upgrading successfully.

4.4.1.3 Channel

Click on the "Maintain --> System -> Channel", as shown in **figure 4-67**.

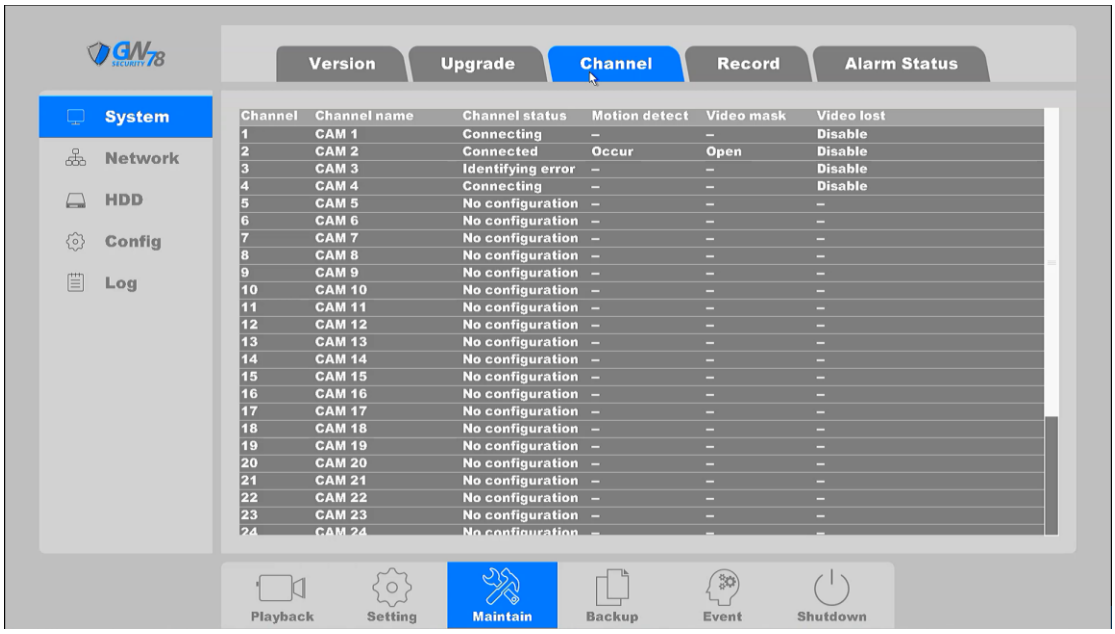


Figure 4-67 Channel Status

On this page you can check all the IP channel status and the status of alarm occurred including: motion detect, video mask, and video lost.

4.4.1.4 Record

Click on the "Maintain --> System -> Record" as shown in **figure 4-68**.

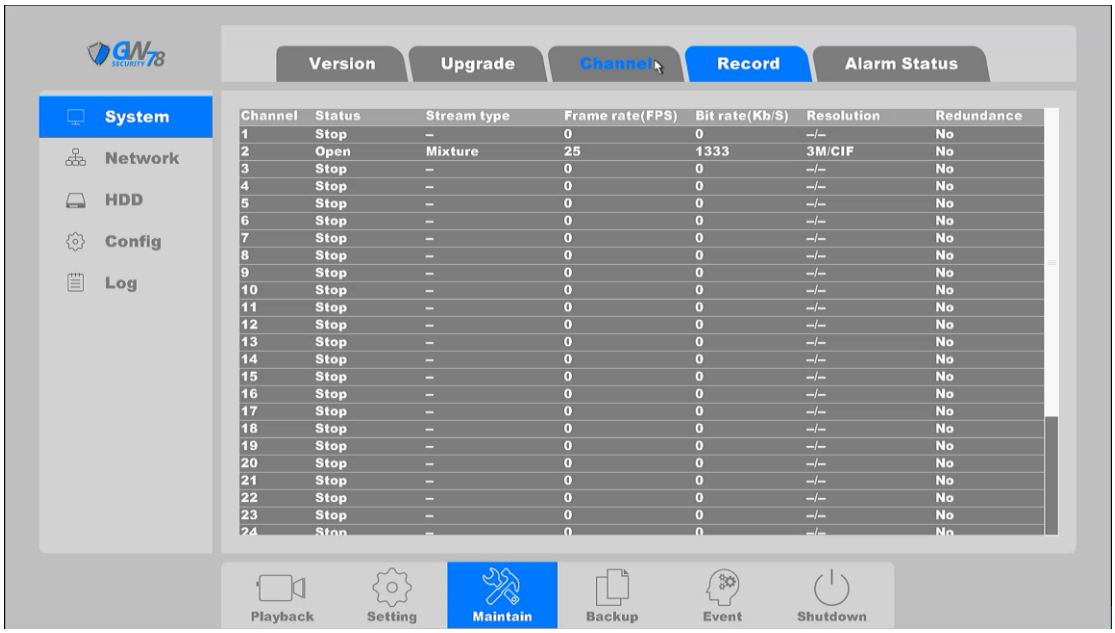


Figure 4-68 Channel Record Status

On this page you can check all the channels recording status, open or stop, stream type, video or mixture (video and audio), frame/bite rate of channels stream, main/sub resolution of IP channel, and whether to open the redundancy function or not.

4.4.1.5 Alarm Status

Click on the "Maintain --> System -> Alarm status", as shown in **figure 4-69**.

- Input/Output

Figure 4-69 Alarm Status – Input/Output

- **Name (Type):** Contain alarm in and alarm out type and shows alarm name.
- **Type:** Alarm in contain normal open/normal close type, alarm out contain schedule/manual/stop type.
- **Alarm status:** Shows alarm status: contain “On” and “Off” type.
- **Record channel:** Alarm in linkage video record channels.

➢ Alarm Information

In this GUI you can playback the record video of the Alarm. Shown as figure 4-70.

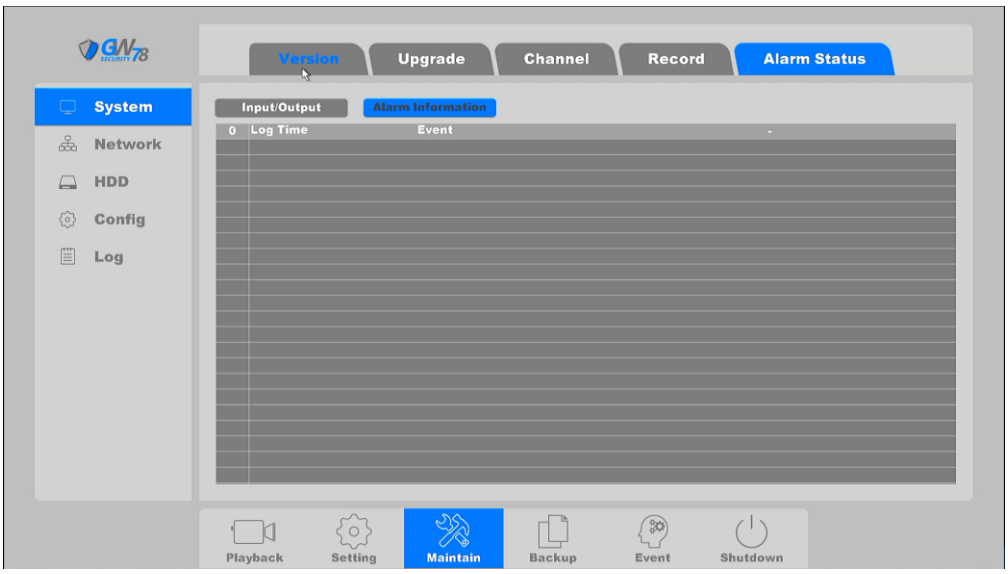


Figure 4-70 Alarm Status – Alram Information

4.4.1.7 PoE power

Click on the "Maintain --> System ->PoE power", as shown in **figure 4-71**.

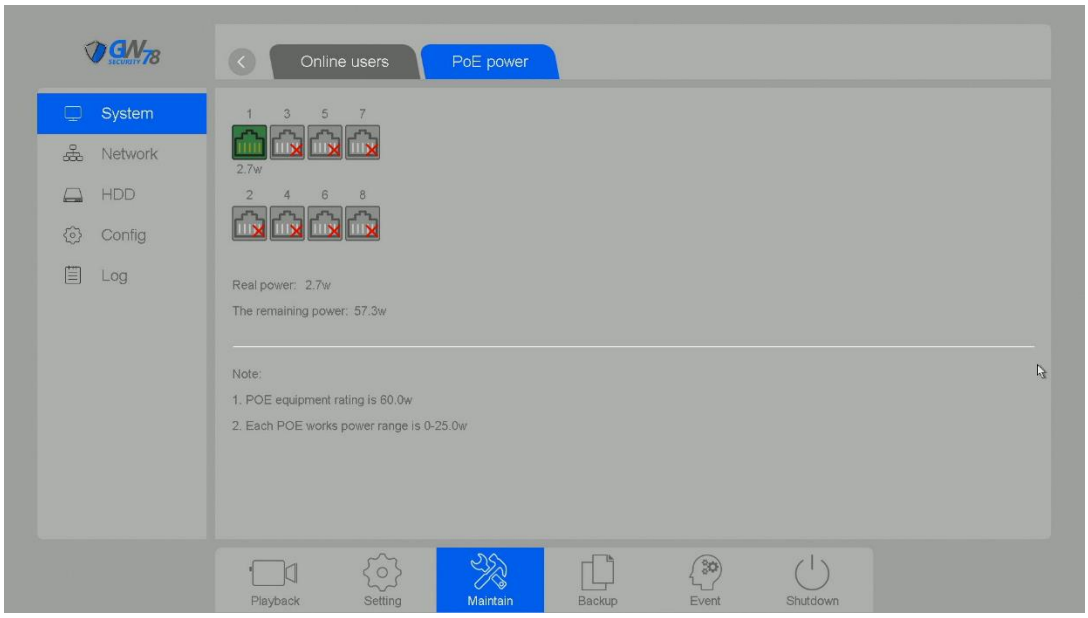


Figure 4-71 PoE power

This page you can check all PoE channels power and connection status, include each POE port consumption and the rated power.

Note:

- *The menu above will only be available to NVR that have a built-in POE switch.*

4.4.2 Network

4.4.2.1 Base

Click on the "Maintain --> Network -> Base", as shown in figure **4-72.**

Figure 4-72 Interface of Check Base Network

This page shows device network parameters, and DHCP enable status.

4.4.2.2 Flow

Click on the "Maintain --> Network ->Flow", as shown in figure **4-73**.

Figure 4-73 Flow of Network

You can check transmission and receive status by LAN Port.

- **Receive:** Shows the byte rate that NVR device received in real-time.
- **Transmit:** Shows the byte rate that NVR device transmit in real-time.

4.4.3 HDD

4.4.3.1 Base

Click on the "Maintain --> HDD -> Base", as shown in **figure 4-74**.

Figure 4-74 Base Setting of HDD

This page displays: the status of your HDDs, hard drive serial number, name, attributes, type of hard drive, the total capacity / remaining capacity, which group they belong to, edit button, and uninstall / Loaded button.

- **HDD:** Shows HDD serial number, "[1]sda" or"[2]sdb".
- **Status:** Shows the state of HDD: "Unformatted", "normal", or "no disk".
- **ATTR:** HDD have three attribute, “Read/Write”,”Read only”, “Redundant”.
- **Type:** Shows HDD connection type.
- **Total:** Size of the HDD total capacity.
- **Free:** Shows HDD remaining capacity size.
- **Group:** Shows which group the HDD belonged.
- **Uninstall:** Uninstall HDD.
- **Add:** Add the HDD from uninstall state.
- **Format:** Format the HDD manually.
- **HDD:** You can set the full strategy of hard disk, "stop" or "overwrite".
- **Auto-Delete Old Files:** Support two mode of strategy, “never” and “Custom”. In the “Custom” mode you can set auto-delete time from 1-30 days before.
- **Sleep:** Open this function and your HDD will smart sleep when it not being used.
- **Apply:** Apply changes to the settings.

Click HDD the set button, interface depicted below.

Figure 4-75 Edit of HDD

On this page you can set HDD parameters, including ATTR and Group.

Note:

- *Every HDD only can be set to one group at the same time.*

4.4.3.2 Advanced

Click on the "Maintain --> HDD -> Advanced", as shown in **figure 4-76**.

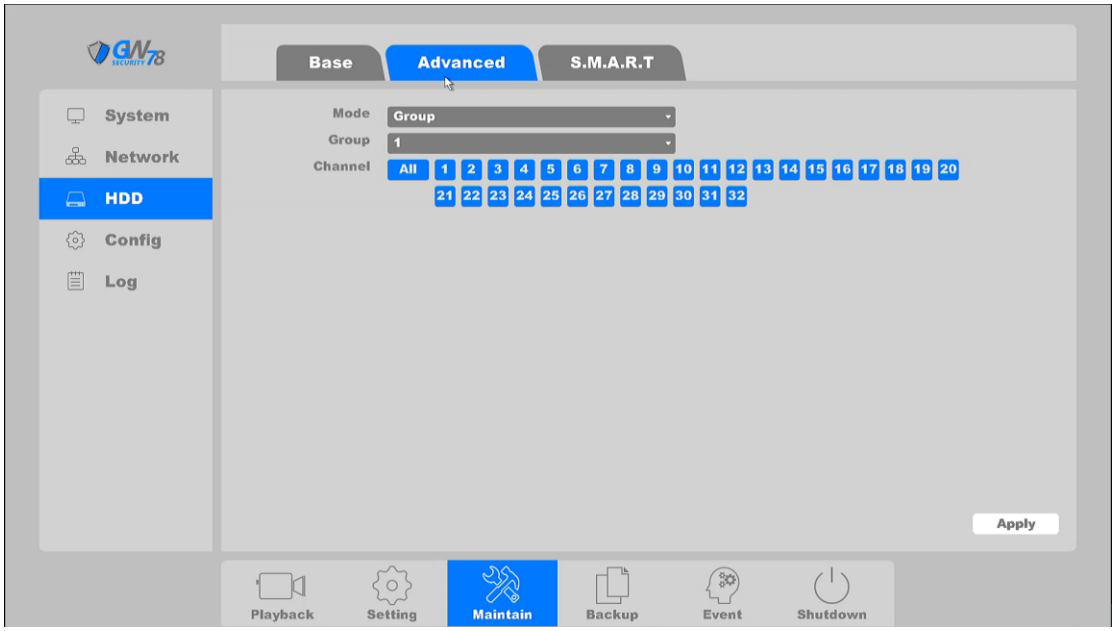


Figure 4-76 Advanced Setting of HDD

This page allows you to switch: the hard disk's storage mode, "group", "quotas (Capacity)", and “Quota (Time)”. Changing the storage mode requires that you restart the NVR device.

i. **Group:** You can set 16 different groups under group mode, and each channel is independent of each group. If a channel does not belong to any group, no video file will saved; if the channel belongs to more than one group the channel will use the space of these group one by one until all the groups are full.

Note:

- *Apply a new storage mode need restart the NVR device.*

i. **Quota (Capacity):** The quota (capacity)mode allows manually setting allocated disk space for each channel.

Figure 4-77 Quota of Capacity Mode

- **Record used:** Shows the video files space that the channel you chose have used in real-time.
- **Picture used:** Shows the pictures space that the channel you chose have used in real-time.
- **Volumes:** Total capacity of all hard drives.
- **Record Quota:** You can manually set the quota size of channel video.
- **Picture quota:** You can manually set the quota size of channel picture.
- **Free volumes:** Shows the free space minus the space you have set on other channels.

i. **Quota (Time):** The quota of time mode supports set time for every channel manually.

Figure 4-78 Quota of Time Mode

- **Record used:** Shows the video files space that the channel you chose has used in real-time.
- **Volumes:** Total capacity of all hard drives.
- **Record Quota (Day):** Set a time for a channel from 0-60 days, and the new video files will not cover the old files in the time period.

4.4.3.3 S.M.A.R.T

Click on the "Maintain --> HDD -> S.M.A.R.T", as shown in **figure 4-79**.

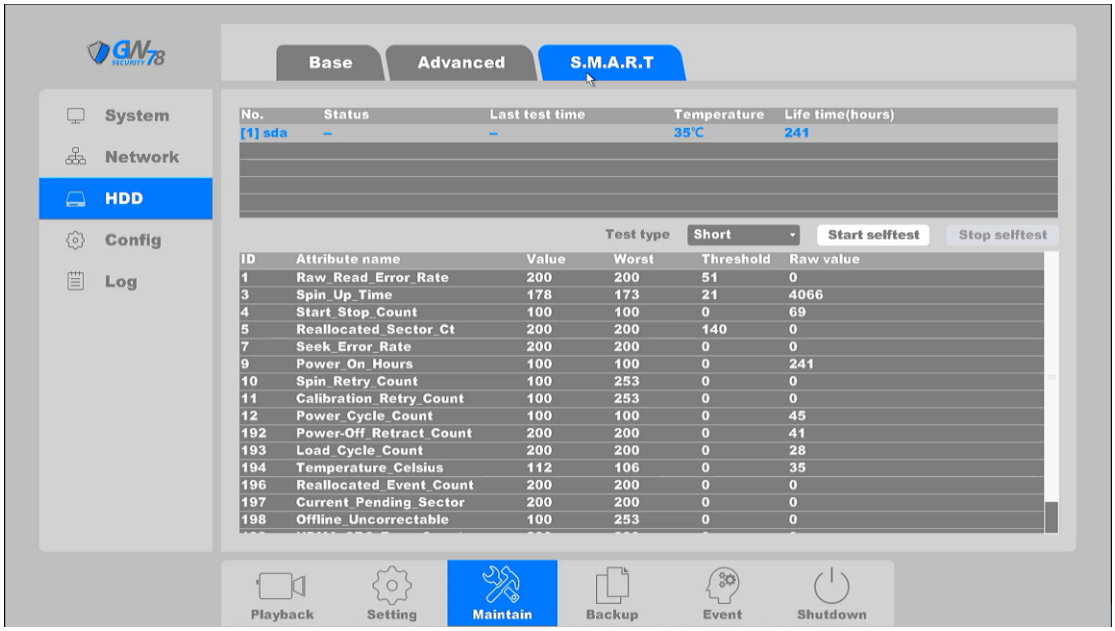


Figure 4-79 Check HDD Status

- **NO.:** Hard disk serial number.
- **Status:** Shows HDD self-test status and results.
- **Last test time:** The last time you test HDD.
- **Temperature:** Shows HDD temperature in real-time.
- **Life time (hours):** Shows how long the time have you used this HDD.

Note:

➢ *We provide two type of self-test: brief and extended. Extended type will be taking a little longer time than brief type. And you can stop while it's been self-testing if you want.*

4.4.4 Config

4.4.4.1 Backup

Click on the "Maintain -->Config ->Backup", as shown in **figure 4-80**. On this page you can backup device parameters into a USB flash disk to reconfigure your NVR back to specific settings.

Figure 4-80 Backup Setting Status

- **Detect:** Detects a USB device.
- **Name (type):** File name and file type, and the backup file is in a ".coi" type.
- **ATTR:** Shows the file type.
- **Export:** Export the parameters backup file into USB disk.
- **Import:** Choose the backup file and click import button, your device parameters will change into in accordance with the ".coi" file.

4.4.4.2 Default

Click on the "Maintain -->Config ->Default", as shown in **figure 4-81**.

Figure 4-81 Default

On this page you can choose the function items displayed above and after when the execute button is clicked, the item(s) what you chosen will restore to factory defaults. Checking the “select all” button will restore all parameters to default settings.

4.4.5 Log

Click on the "Maintain --> Log”, as shown in **figure 4-82**.

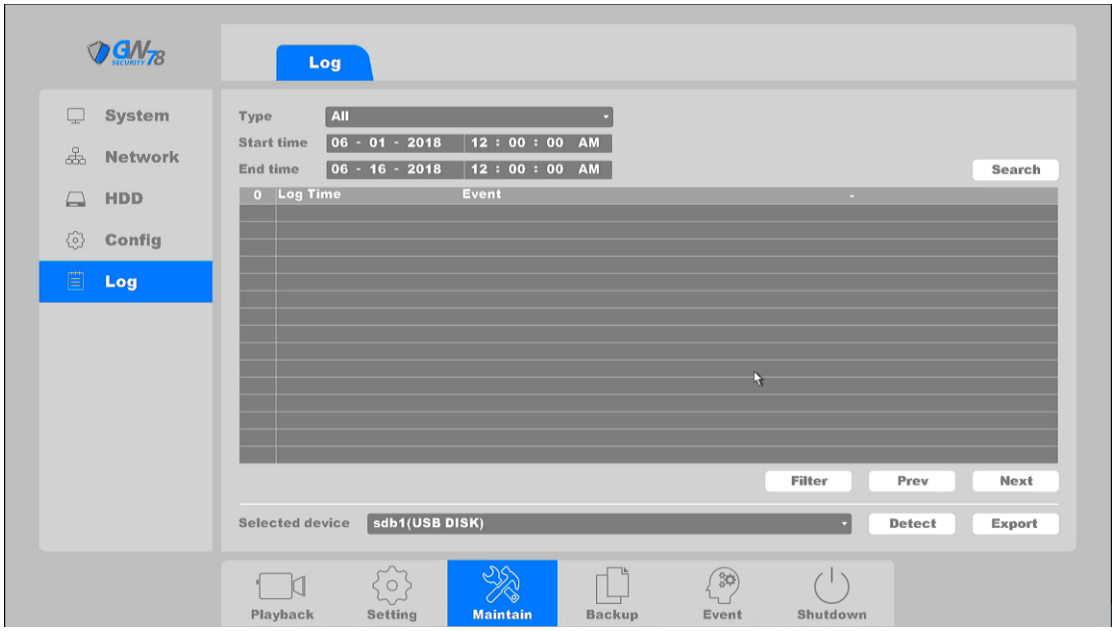


Figure 4-82 Search System Log

You can check device the operation log on this page: all system events are archived here.

- **Type:** Search type includes: “System”, “Config”, “Storage”, “Alarm”, “Record”, “Account”, ”Clear”, and ”Playback”.
- **Start time/End time:** Set the period of time you want to search.
- **Search:** After you set the time period and search type click the search button, and the device can save up to 4096 logs.
- **Prev/Next:** It can shows 1000 logs in one page, and you can check on more by clicking “Prev/Next” button.
- **Clear:** Delete all log information.
- **Filter:** On this page you can chose whether cover the log after it’s full, and decide which type operation log you want to save.
- **Detect:** Detect the USB device.
- **Export:** Export the operations log into a USB flash drive.

4.5 Backup

Click the backup button to enter the backup interface.

- Detect: Detect the USB flash drive you have plugged into the NVR.
- Format: Format the USB drive.

4.5.1 General

4.5.1.1 Video backup

Click on "Backup ->General -> Video", as shown in **figure 4-83.**.

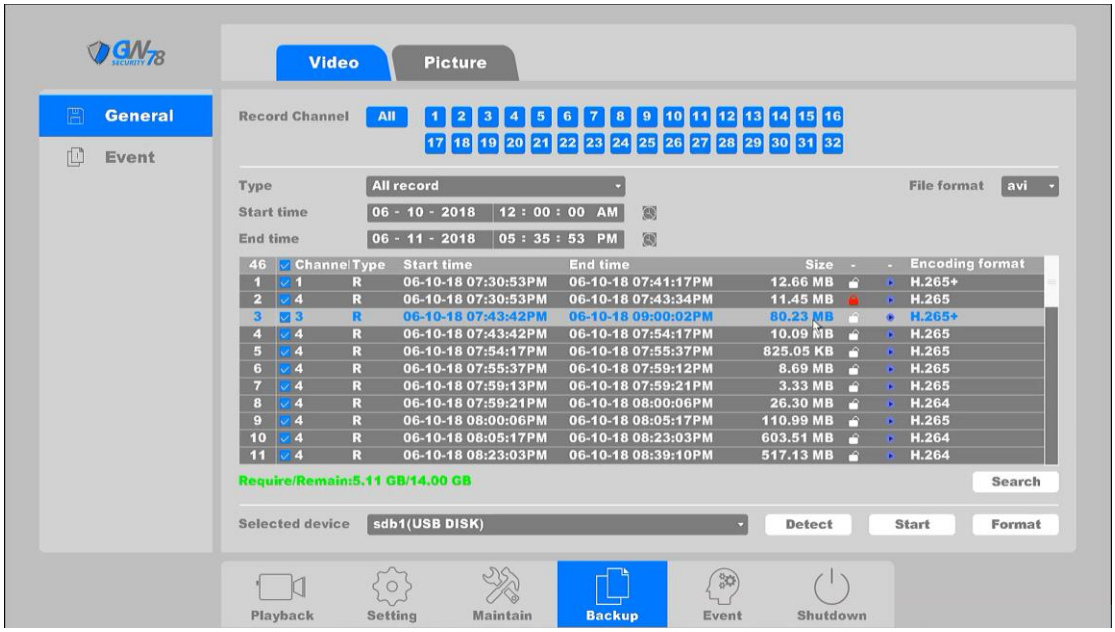


Figure 4-83 Backup General Video File

How to back up the recording:

1. Chose the record channel;
2. Chose the video file type: “All Record”, “Event Record”, “Timing Record”, “Manual Record” four types. And
3. Select File Format: DAV/AVI (It is recommended to use the AVI file type for easiest accessibility)
4. Set the time period you want to check, and click on the search button. And search results column shows on the middle area. On this area you should chose the serial number of the backup file you need.
5. Check on the “Require/Remain” bar, make sure the required space smaller than your USB drive. And click start button to initialize backup.

Note:

➢ *The file status marked red as search result shows is the file you locked in the playback interface. In case the file that you’re interesting covered by new files.*

4.5.1.2 Picture

Click on "Backup ->General ->Picture", as shown in **figure 4-84**.

Figure 4-84 Backup Pictures

The operations of backup pictures is the same as videos, please refer to the previous part.

4.5.2 Event

Click on "Backup -> Event-> Video "into the graphical interface.

Figure 4-85 Backup Event Video File

This page you can check the event video, and there are three event types, include “Alarm input”, “Motion detect”, ”IA Detect”. And “IA Detect” contains two sub types “Crossing detect” and “Area intrusion detect”.

1. Set search time period and the channel..
2. Click on the search button. The search results show in the middle area. From this area you should chose the serial number of the backup file you need. And DAV/AVI two file formats.
3. Check on the “Require/Remain” bar, make sure the required space smaller than your USB device. And click start button to start backup.

4.6 Event

4.6.1 Alarm

4.6.1.1 Line Crossing

Click on the "Event -> Alarm -> Line Crossing", as show in **figure 4-86**.

Crossing detection is used to detect the object crossing the set virtual line. The direction can be set as bidirectional, from side A to B, or from side B to A. If there´s object that moves from one side to another it will trigger the alarm and the NVR will respond to those alerts as configured: such as record, show message, send email, etc.

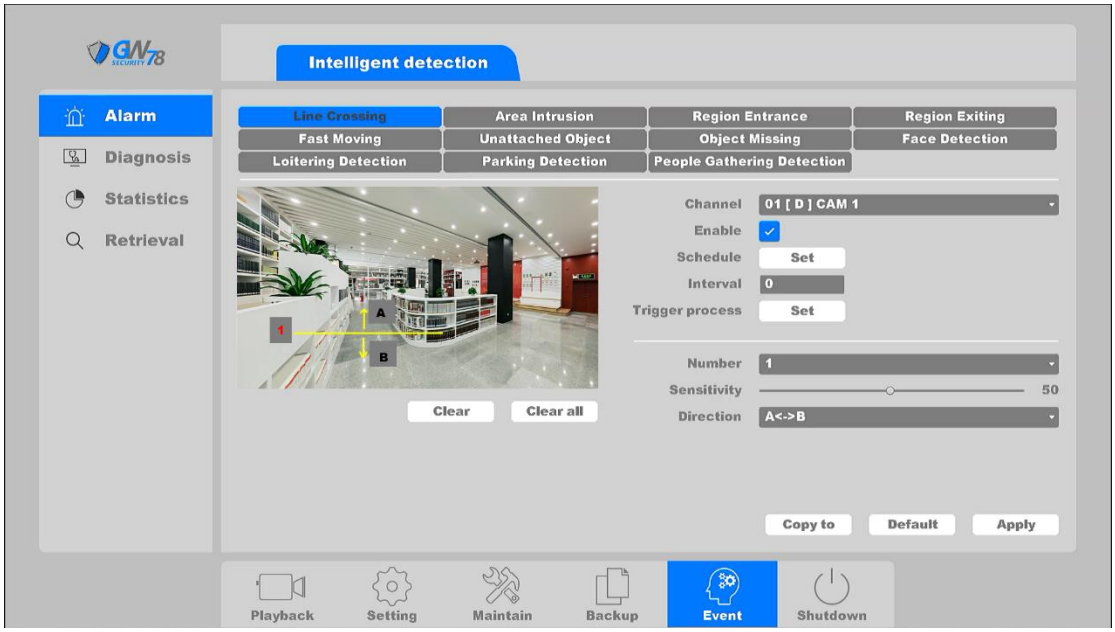


Figure 4-86 Line Crossing

- **Channel:** Select the channel.
- **Enable:** Crossing detection enable toggle.
- **Schedule:** Set the time slot to detect crossing. You can take the setting of chapter 4.3.3.1 motion detection for reference.
- **Interval:** Set the time interval of each crossing detection triggered.
- **Trigger process:** Set the handling action of crossing detection; please take the setting of chapter 4.3.3.1 motion detection for reference.

You can add a virtual line to the surveillance area using the following steps:

1. Choose the line number, the maximum number of the line is 4.
2. Select the direction: A<->B, A->B, B->A.

A<->B: Only the arrow on the B side shows; when an object going across the configured line from either direction can be detected and alarms are triggered.

A->B: Only the object crossing the configured line from the A side to the B side can be detected.

B->A: Only the object crossing the configured line from the B side to the A side can be detected.

3. Adjust the sensitivity. Range from 1-100.The higher the value is, the more easily the detection alarm can be triggered.
4. Click the Apply button to save the settings.

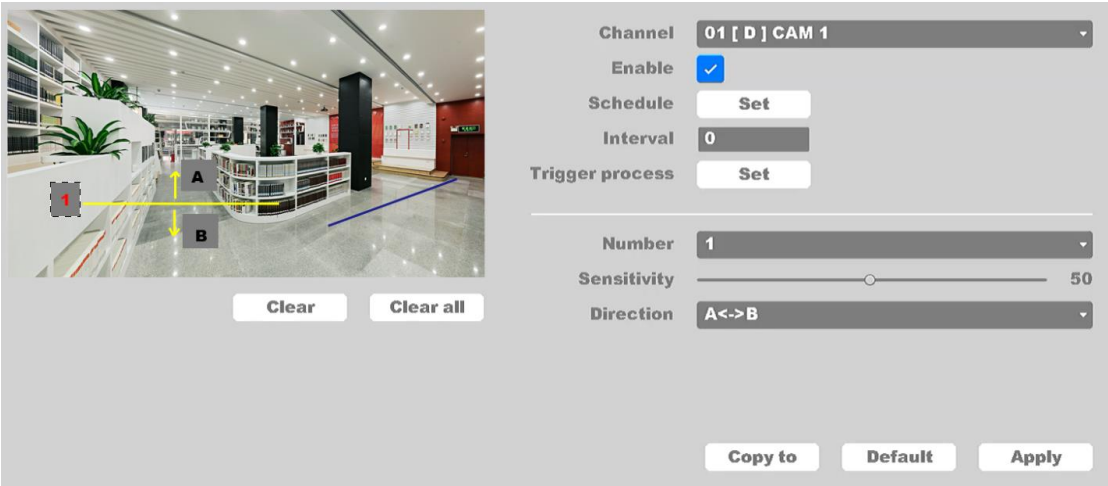


Figure 4-87 Add Virtual Line

4.6.1.2 Area Intrusion

Click on the " Event -> Alarm -> Area Intrusion", as shown in **figure 4-88**.

Intrusion detection function detects people, vehicles, and other objects entering in a pre-defined virtual region from outside; certain actions can be taken when the alarm is triggered.

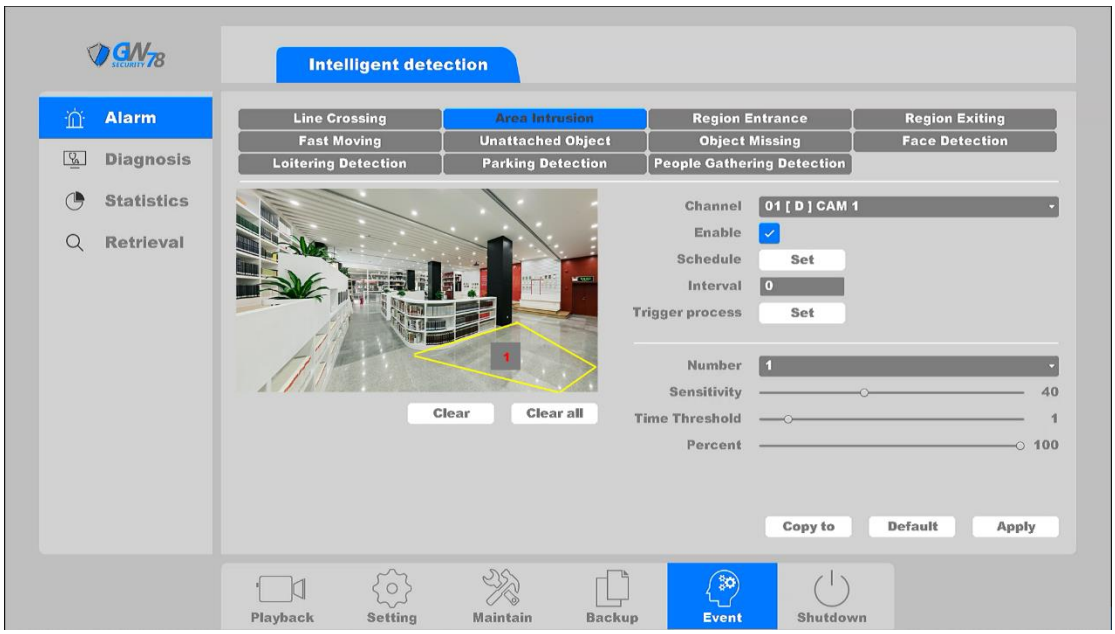


Figure 4-88 Area Intrusion

- **Channel:** Select the channel.
- **Enable:** Intrusion detection enable toggle.
- **Schedule:** Set the time slot to detect intrusion. You can take the setting of chapter 4.3.3.1 motion detection for reference.

- **Interval:** Set the time interval of each intrusion detection triggered.
- **Trigger process:** Set the handling action of intrusion detection; please take the setting of chapter 4.3.3.1 motion detection for reference.

You can add a virtual area to the surveillance area using the following steps:

1. Choose the area number, the maximum number of the area is 4.
2. Set detect time threshold. For example, if you set the time threshold to 5 seconds and someone intrudes your area for about 3 seconds the alarm will not be triggered until the perceived movement lasts at least 5 seconds.
3. Adjust the sensitivity. Range from 1-100. The higher the value is, the more easily the detection alarm can be triggered.
4. Percent. Range from 1-100. For example, if you set the percent is 50, alarm will be triggered only when the area be intruded by more than half.
5. Click the Apply button to save the settings.

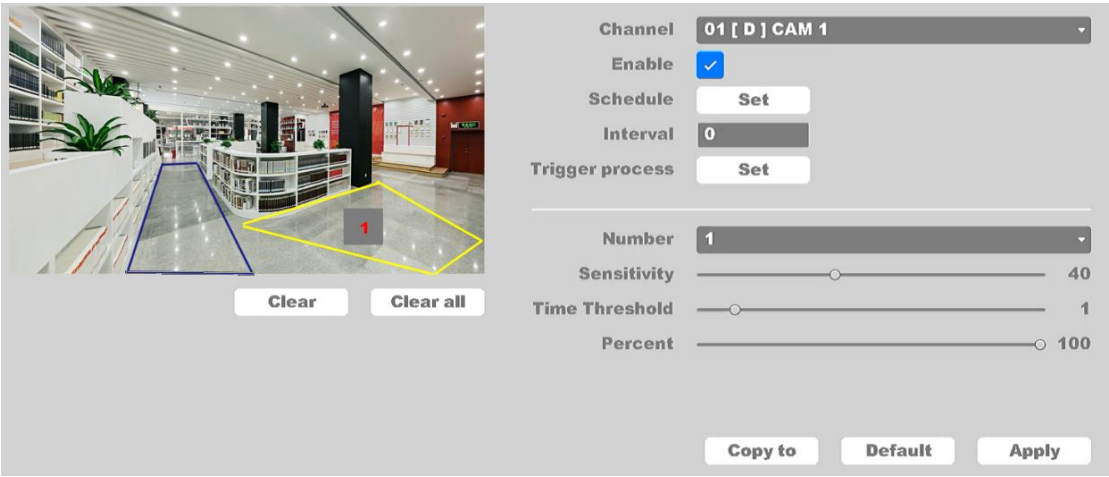


Figure 4-89 Set Intrusion Zone

4.6.1.3 Region Entrance

Click on the " Event -> Alarm -> Region Entrance", as shown in **figure 4-90**.

Region Entrance function detects people, vehicles, and other objects entering in a forbidden pre-defined virtual region from outside; certain actions can be taken when the alarm is triggered.

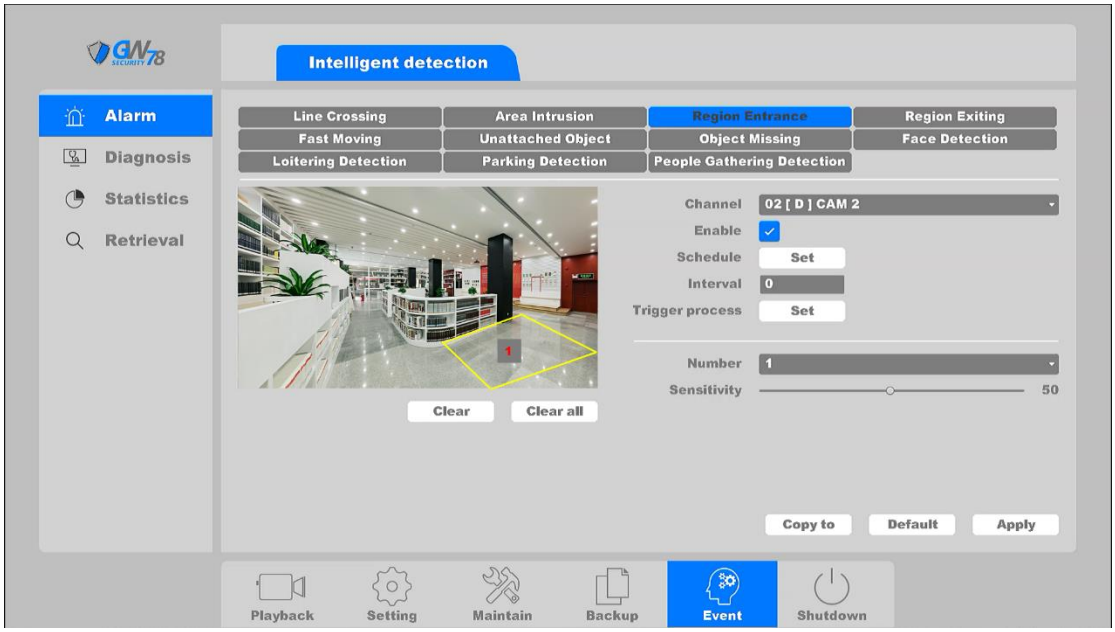


Figure 4-90 Region detection

- **Channel:** Select the channel.
- **Enable:** Intrusion detection enable toggle.
- **Schedule:** Set the time slot to detect intrusion. You can take the setting of chapter 4.3.3.1 motion detection for reference.
- **Interval:** Set the time interval of each intrusion detection triggered.
- **Trigger process:** Set the handling action of intrusion detection; please take the setting of chapter 4.3.3.1 motion detection for reference.

You can add a virtual area to the surveillance area using the following steps:

1. Choose the area number, the maximum number of the area is 4.
2. Adjust the sensitivity. Range from 1-100. The higher the value is, the more easily the detection alarm can be triggered.
3. Click the Apply button to save the settings.

4.6.1.4 Region Exiting

Region Exiting function detects people, vehicles, and other objects which exit a forbidden pre-defined virtual region from inside; certain actions can be taken when the alarm is triggered.

Click on the " Event -> Alarm -> Region Exiting "into the graphical interface.

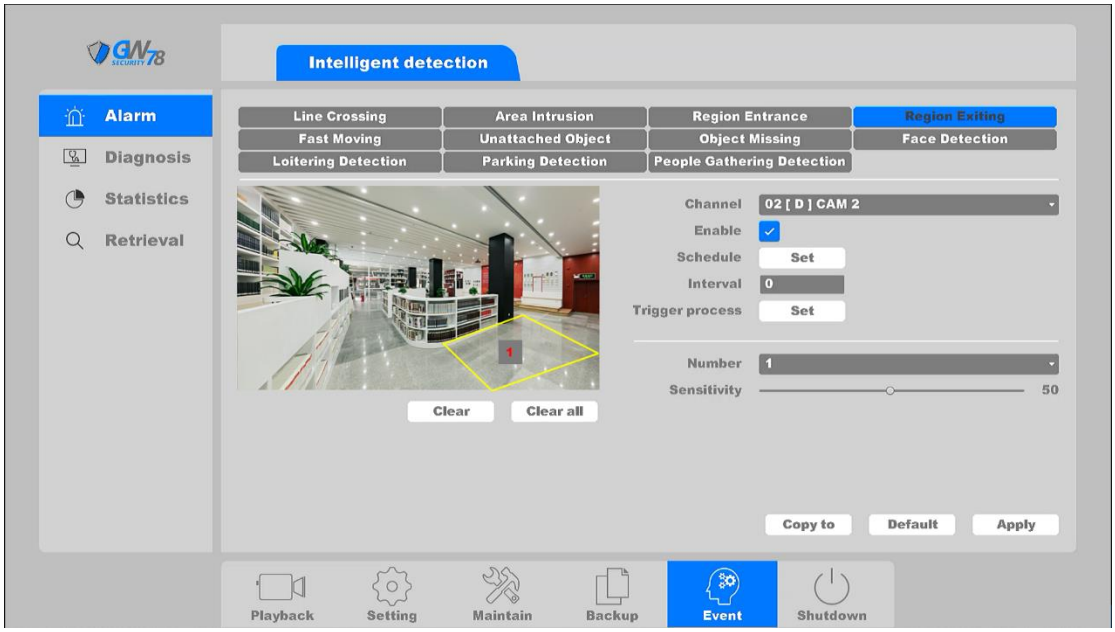


Figure 4-91 Region detection

- **Channel:** Select the channel.
- **Enable:** Intrusion detection enable toggle.
- **Schedule:** Set the time slot to detect intrusion. You can take the setting of chapter 4.3.3.1 motion detection for reference.
- **Interval:** Set the time interval of each intrusion detection triggered.
- **Trigger process:** Set the handling action of intrusion detection; please take the setting of chapter 4.3.3.1 motion detection for reference.

You can add a virtual area to the surveillance area like following steps:

1. Choose the area number, the maximum number of the area is 4.
2. Adjust the sensitivity. Range from 1-100. The higher the value is, the more easily the detection alarm can be triggered.
3. Click the Apply button to save the settings.

4.6.1.5 Unattended Object

Click on the " Event -> Alarm -> Unattended Object ", as shown in **figure 4-92**.

Unattended Object function detects an article that leaves a certain pre-defined virtual region, and some certain actions can be taken when the alarm is triggered.

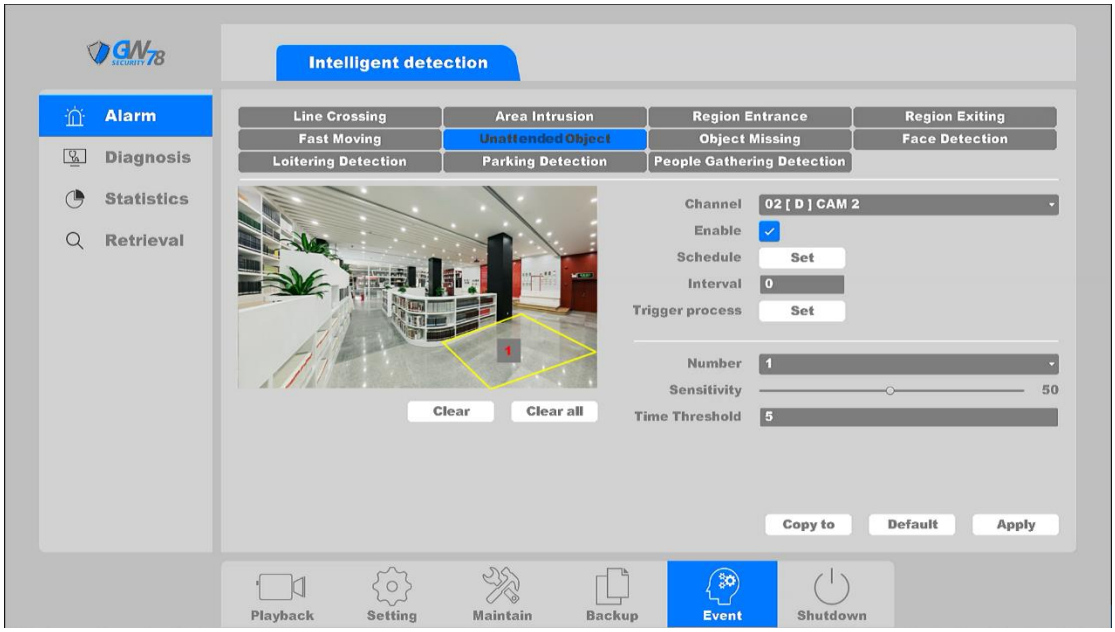


Figure 4-92 Unattended Object

- **Channel:** Select the channel.
- **Enable:** Intrusion detection enable toggle.
- **Schedule:** Set the time slot to detect intrusion. You can take the setting of chapter 4.3.3.1 motion detection for reference.
- **Interval:** Set the time interval of each intrusion detection triggered.
- **Trigger process:** Set the handling action of intrusion detection; please take the setting of chapter 4.3.3.1 motion detection for reference.

You can add a virtual area to the surveillance area using the following steps:

1. Choose the area number, the maximum number of the area is 4.
2. Adjust the sensitivity. Range from 1-100. The higher the value is, the more easily the detection alarm can be triggered.
3. Set detect time threshold. For example, if you set the time threshold to 5 seconds and the object leaves the area for about 3 seconds the alarm will not be triggered until it's moved from the area for at least 5 seconds.
4. Click the Apply button to save the settings.

4.6.1.6 Object Missing

Click on the " Event -> Alarm -> Object Missing", as shown in **figure 4-93**.

Object Missing function detect an article missing from a certain pre-defined virtual region, and some certain actions can be taken when the alarm is triggered.

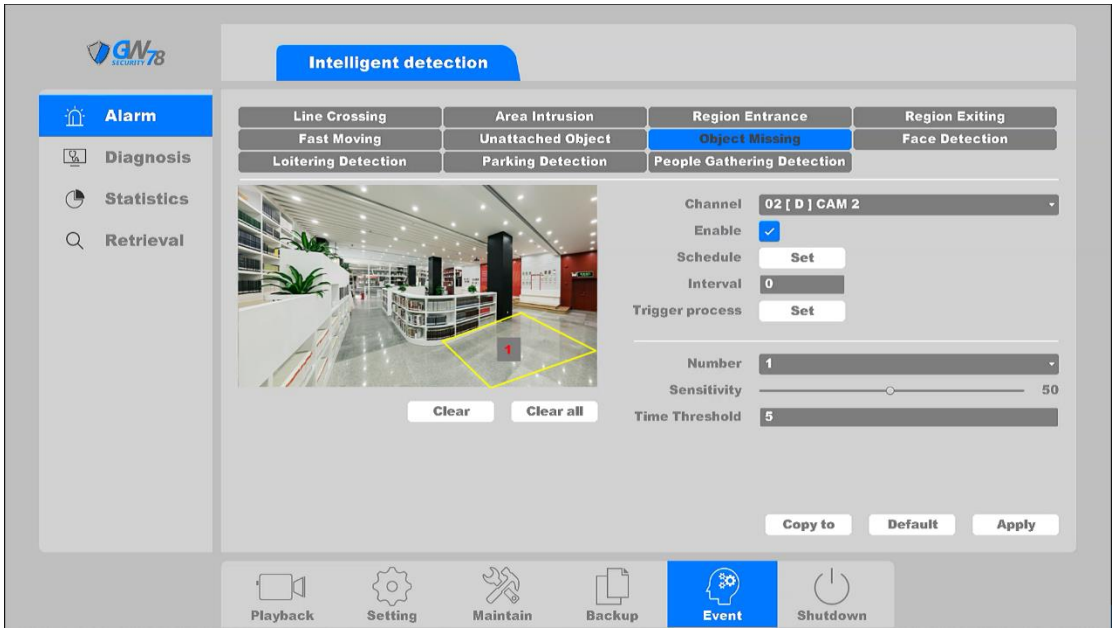


Figure 4-93 Object Missing

- **Channel:** Select the channel.
- **Enable:** Intrusion detection enable toggle.
- **Schedule:** Set the time slot to detect intrusion. You can take the setting of chapter 4.3.3.1 motion detection for reference.
- **Interval:** Set the time interval of each intrusion detection triggered.
- **Trigger process:** Set the handling action of intrusion detection; please take the setting of chapter 4.3.3.1 motion detection for reference.

You can add a virtual area to the surveillance area using the following steps:

1. Choose the area number, the maximum number of the area is 4.
2. Adjust the sensitivity. Range from 1-100. The higher the value is, the more easily the detection alarm can be triggered.
3. Set detect time threshold. For example, if you set the time threshold to 5 seconds and the object is missing for 3 seconds the alarm will not be triggered until it's not occupying the area for 5 seconds.
4. Click the Apply button to save the settings.

4.6.1.7 Fast Moving

Click on the " Event -> Alarm -> Fast Moving", as shown in **figure 4-94**.

Fast Moving function detects people, vehicles, and other objects that move with prohibited speed; certain actions can be taken when the alarm is triggered.

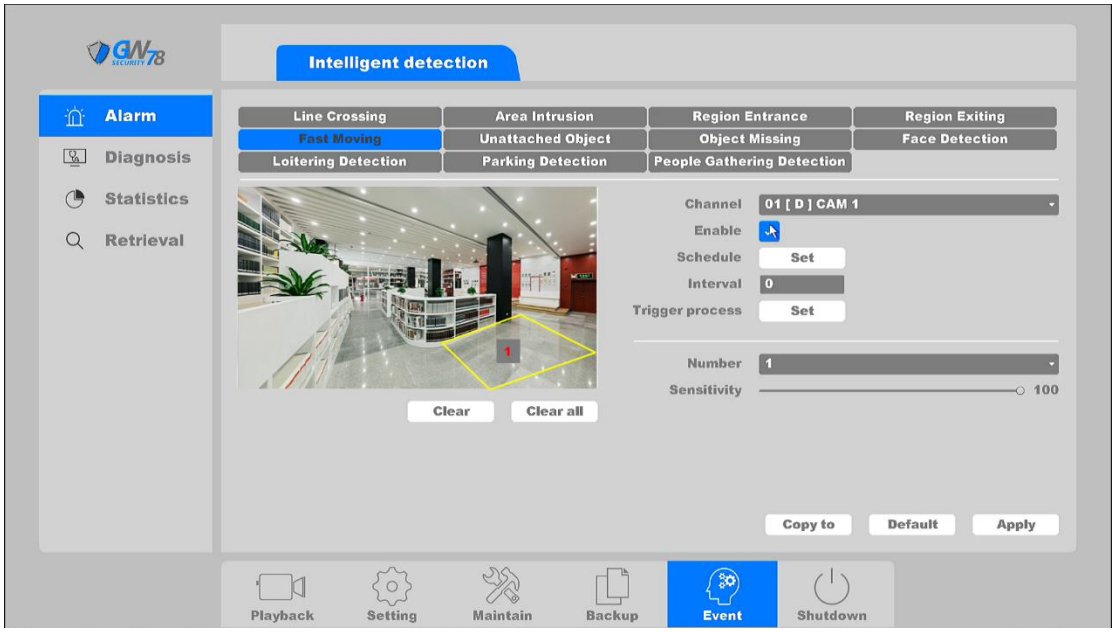


Figure 4-95 Fats Moving

- **Channel:** Select the channel.
- **Enable:** Fast Moving enable toggle.
- **Schedule:** Set the time slot to detect intrusion. You can take the setting of chapter 4.3.3.1 motion detection for reference.
- **Interval:** Set the time interval of each intrusion detection triggered.
- **Trigger process:** Set the handling action of intrusion detection; please take the setting of chapter 4.3.3.1 motion detection for reference.

You can add a virtual area to the surveillance area using the following steps:

1. Choose the area number, the maximum number of the area is 4.
2. Adjust the sensitivity. Range from 1-100. The higher the value is, the more easily the detection alarm can be triggered.
3. Click the Apply button to save the settings.

4.6.1.8 Face Detection

Click on the " Event -> Alarm -> Face Detection", as shown in **figure 4-96**.

Face detection function detect peoples' faces in a certain pre-defined virtual region; certain actions can be taken when the alarm is triggered.

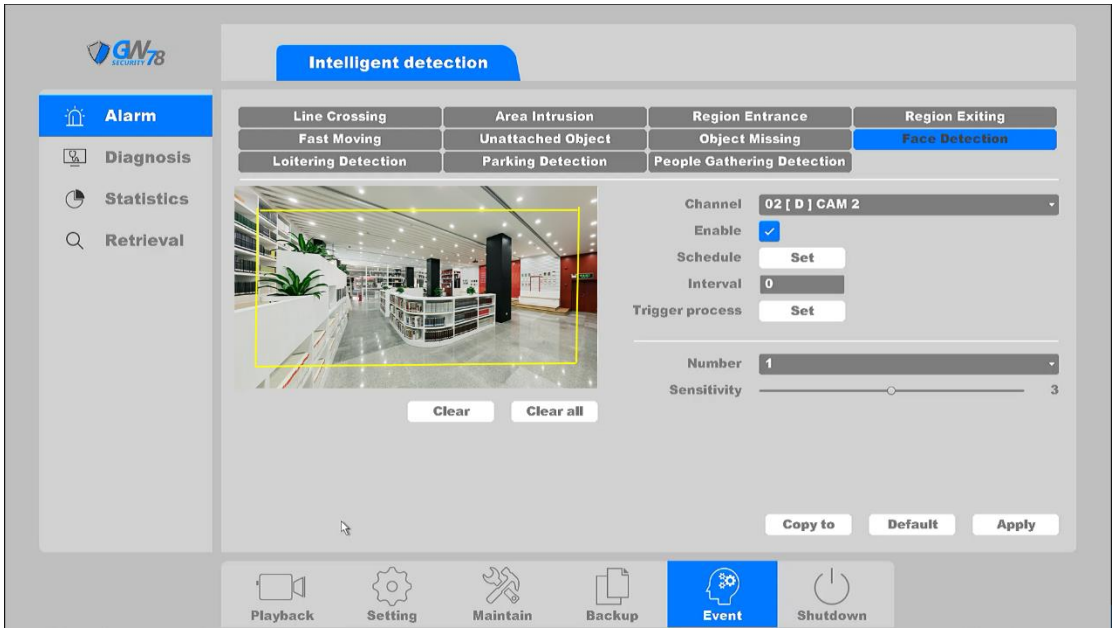


Figure 4-96 Face Detection

- **Channel:** Select the channel.
- **Enable:** Face Detection enable toogle.
- **Schedule:** Set the time slot to detect intrusion. You can take the setting of chapter 4.3.3.1 motion detection for reference.
- **Interval:** Set the time interval of Face Detection triggered.
- **Action:** Set the handling action of intrusion detection; please take the setting of chapter 4.3.3.1 motion detection for reference.

You can add a virtual area to the surveillance area using the following steps:

1. Choose the area number, the maximum number of the area is 4.
2. Adjust the sensitivity. Range from 1-100. The higher the value is, the more easily the detection alarm can be triggered.
3. Click the Apply button to save the settings.

4.6.1.9 Loitering Detection

Click on the " Event -> Alarm -> Loitering Detection", as shown in **figure 4-97**.

There are three types for Loitering Detection: Journey, Weight, Offsets.

Journey: When people walk into and wander in an area, once the length he has wandered over half of the longest diagonal line of this area, it will trigger the alarm.

Weight: When people go back and forth at least 3 times, or go in a non-linear path within a pre-defined virtual region; certain actions can be taken when the alarm is triggered.

Offsets: When people change his original direction and walk for over half of the area, then it will trigger the alarm.

Figure 4-97 Loitering Detection

- **Channel:** Select the channel.
- **Enable:** Loitering Detection enable toggle.
- **Schedule:** Set the time slot to detect intrusion. You can take the setting of chapter 4.3.3.1 motion detection for reference.
- **Interval:** Set the time interval of Loitering Detection triggered.
- **Action:** Set the handling action of intrusion detection; please take the setting of chapter 4.3.3.1 motion detection for reference.

You can add a virtual area to the surveillance area using the following steps:

1. Choose the area number, the maximum number of the area is 4.
2. Adjust the sensitivity. Range from 1-100. The higher the value is, the more easily the detection alarm can be triggered.
3. Set detect time threshold. For example, if you set the time threshold to 5 seconds and someone intrudes the pre-defined area for 3 seconds no alarm will be triggered, the intrusion will have to occur for at least 5 seconds before an alert is activated.
4. Journey: 3 modes can be chosen in Loitering Detection, Offset, Weight and Journey. You can choose one, two or all of them.
5. Click the Apply button to save the settings.

4.6.1.10 Parking Detection

Click on the " Event -> Alarm -> Parking Detection", as shown in **figure 4-98**.

Parking Detection alarm is triggered when a car is parked in a pre-defined virtual region, and some certain actions can be taken when the alarm is triggered.

Figure 4-98 Parking Detection

- **Channel:** Select the channel.
- **Enable:** Parking Detection enable toggle.
- **Schedule:** Set the time slot to detect intrusion. You can take the setting of chapter 4.3.3.1 motion detection for reference.
- **Interval:** Set the time interval of Parking Detection triggered.
- **Action:** Set the handling action of intrusion detection; please take the setting of chapter 4.3.3.1 motion detection for reference.

You can add a virtual area to the surveillance area using the following steps:

1. Choose the area number, the maximum number of the area is 4.
2. Adjust the sensitivity. Range from 1-100. The higher the value is, the more easily the detection alarm can be triggered.
3. Set detect time threshold. For example, if you set the time threshold to 5 seconds and a car is detected for 3 seconds the alarm will not be triggered until it's in the area for at least 5 seconds.
4. Click the Apply button to save the settings.

4.6.1.11 People Gathering Detection

Click on the " Event -> Alarm -> People Gathering Detection", as shown in **figure 4-99**.

People Gathering Detection alarm is triggered when there are many people in a pre-defined virtual region; certain actions can be taken when the alarm is triggered.

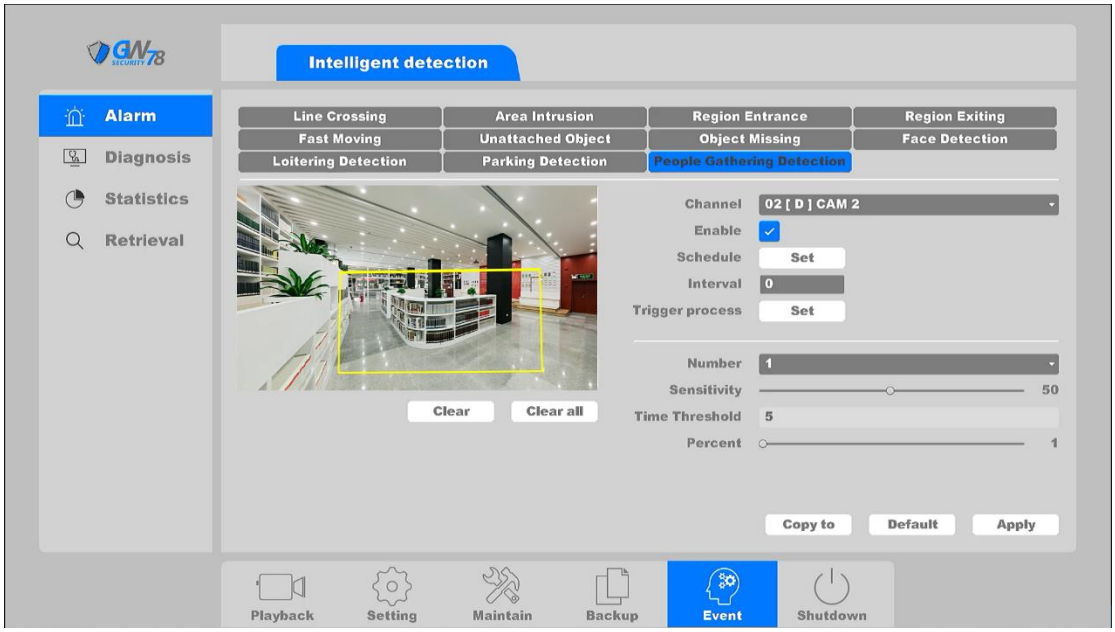


Figure 4-99 People Gathering Detection

- **Channel:** Select the channel.
- **Enable:** Loitering Detection enabled switch.
- **Schedule:** Set the time slot to detect intrusion. You can take the setting of chapter 4.3.3.1 motion detection for reference.
- **Interval:** Set the time interval of People Gathering Detection triggered.
- **Action:** Set the handling action of intrusion detection; please take the setting of chapter 4.3.3.1 motion detection for reference.

You can add a virtual area to the surveillance area using the following steps:

1. Choose the area number, the maximum number of the area is 4.
2. Adjust the sensitivity. Range from 1-100. The higher the value is, the more easily the detection alarm can be triggered.
3. Set detect time threshold. For example, if you set the time threshold to 5 seconds and the number of people in the pre-defind area crosses the max amount permitted for 3 seconds the alarm will not be triggerd, the amount of people over the approved amount will have be there 5 secounds before an alarm is triggered.
4. Adjust the percent. Range from 1-100. The higher the value is, the more edge pixels needed to trigger the detection alarm.
5. Click the Apply button to save the settings.

4.6.2 Diagnosis

4.6.2.1 Video diagnosis

Click on "Event->Diagnosis", there are another four types alarm in this page.

Note: Only GW78 series IP camera can support this feature, with protocol "Smart".

4.6.2.1.1 Blurred detection

After enabling this detection, there will be an alarm when a camera lose focus, you can set the Schedule, Sensitivity and linkage action like other Alarm. Shown as picture below:

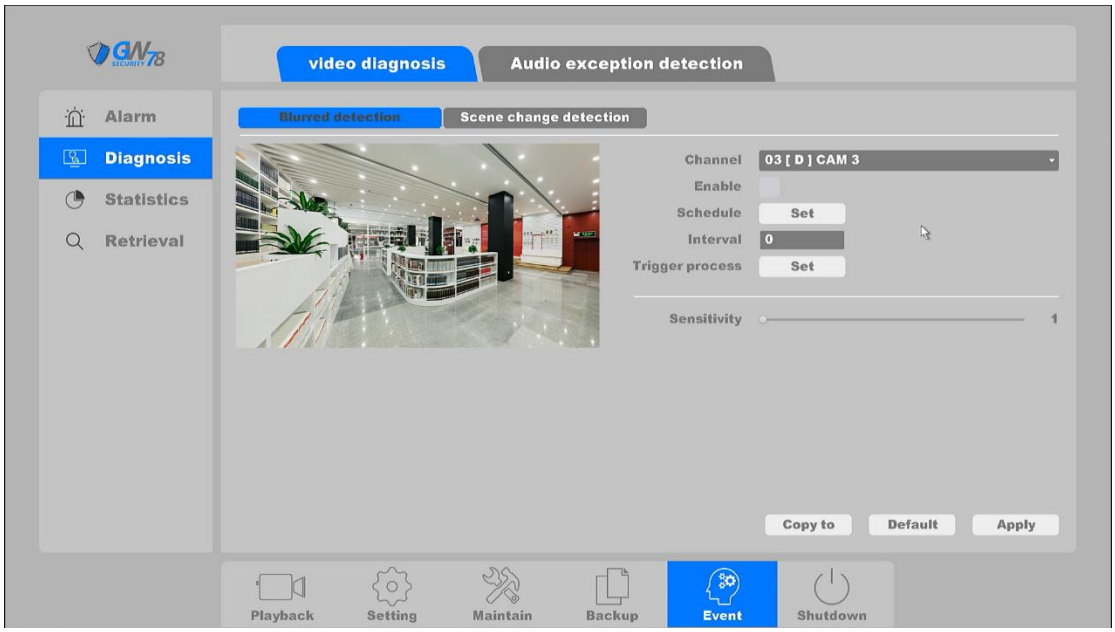


Figure 4-100 Blurred detection

4.6.2.1.2 Scene change detection

After enabling this function, an alarm will be triggered when the position of the camera has been changed. Schedule, Sensitivity and linkage action can be set, shown as picture below:

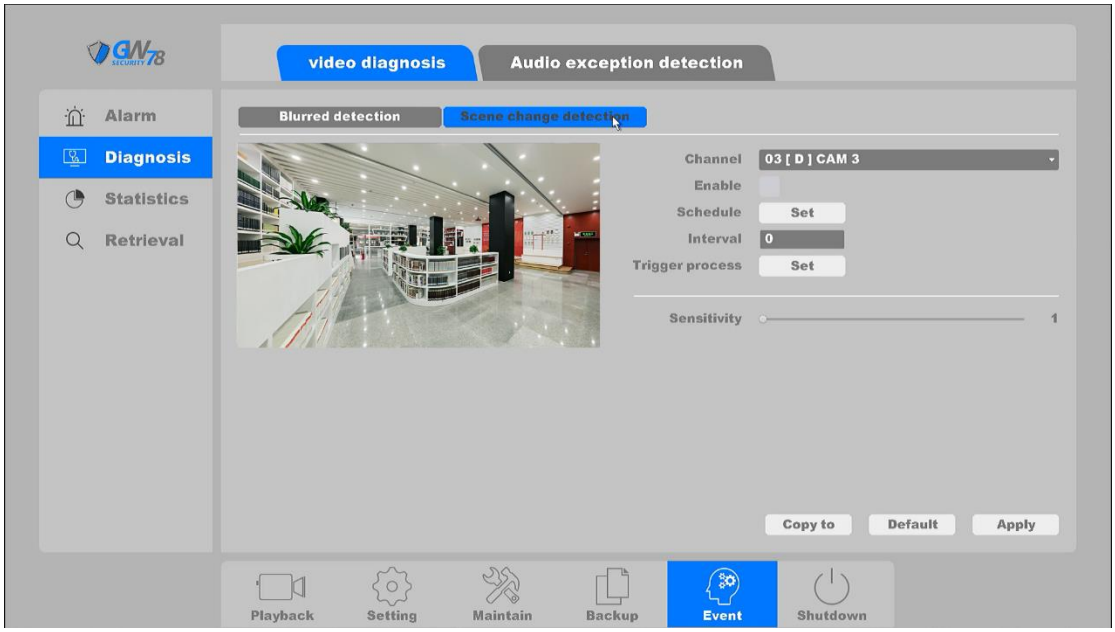


Figure 4-101 Scene change detection

4.6.2.2 Audio exception detection

There are two types audio detection alarm:

1. Audio input abnormally: when the audio input of the camera input abnormally, then it will trigger the alarm;
2. Strong sound intensity: When there is a sudden strong sound input, then it will trigger the alarm.
3. Sound intensity dropped sharply: When the sound intensity drops sharply, then it will trigger the alarm.

Schedule, Sensitivity and linkage action can be set, shown as picture below:

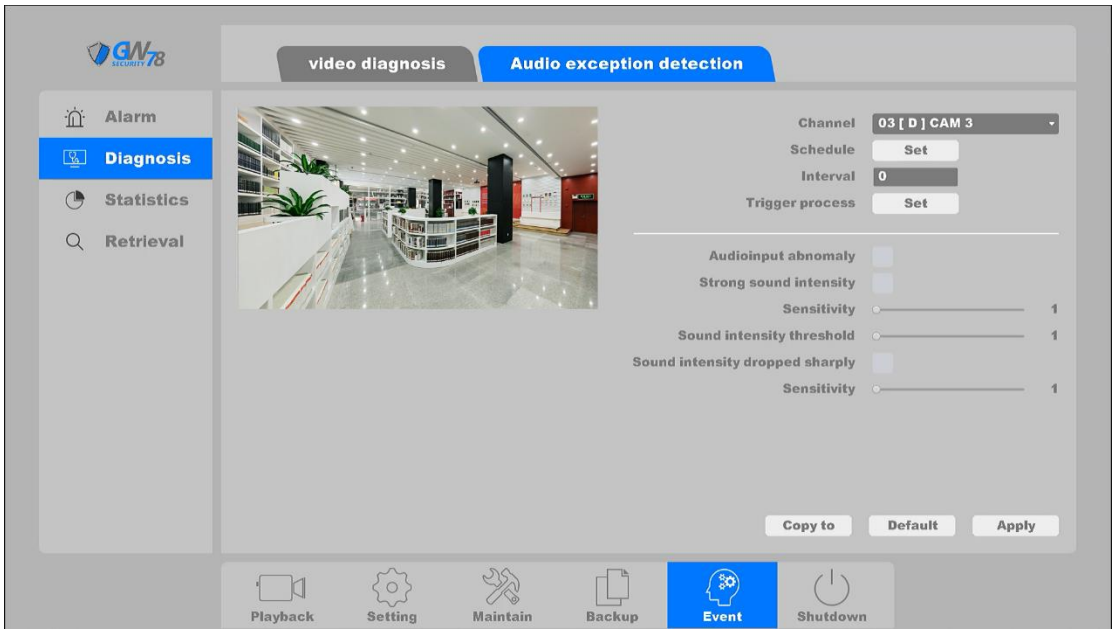


Figure 4-102 Audio exception detection

4.6.3 Statistics

4.6.3.1 Crossing line statistics

Here user can enable this function, camera will count how many people get in and how many get out. Shown as figure below:

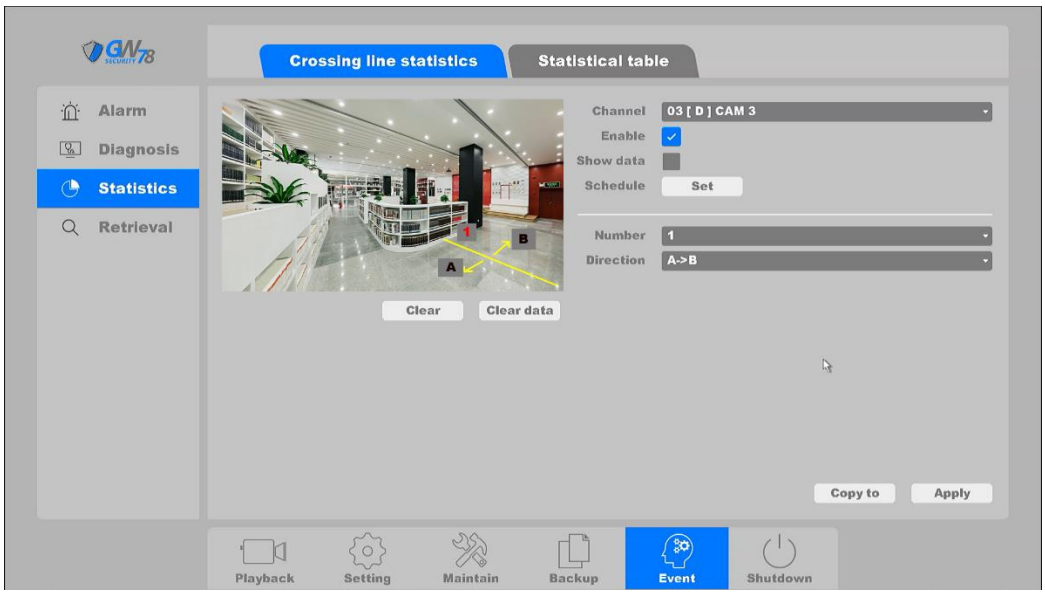


Figure 4-103 Crossing line statistics

- **Enable:** Enable this function.
- **Show data:** Control to show the number of how many people get in and out.
- **Schedule:** Set the time slot for this function.
- **Number:** User can set up to 4 lines to calculate how many people get in and out.
- **Direction:** You can set the direction for the people getting in, the opposite direction is for the people getting out. You can set A->B or B->A.

Note: Only GW78 series IP camera can support this feature, with protocol "Smart".

4.6.3.2 Statistical table

Here will show the Statistics for the people counting, you can select Report type as daily report, weekly report, monthly report or yearly report.

Figure 4-104 Crossing line statistics

4.6.4 Retrieval

Click on "Event->Retrieval->Face detection", as shown in **figure 4-105**. This page you can select the record channel which had triggered face detection and has recording files. Then you can set the Start time and End time.

Click 'Search' to search the face recorded in the specified channel during a period of time.

Figure 4-105 Face detection

4.7 Playback

Right click and select the "Record Playback" to enter the playback interface and you can also click on the playback button in the main menu to enter the playback interface, as shown in the **figure 4-106.**

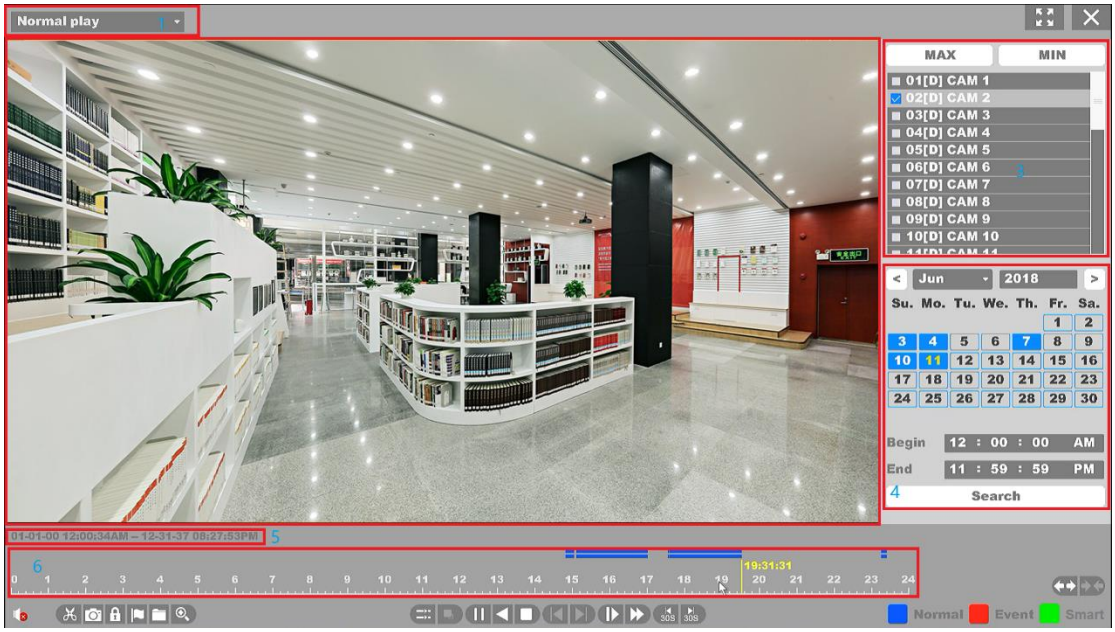


Figure 4-106 Main Interface of Playback

No.	Items	Function
1	Playback Type	NVR support four types playback mode: “Normal Play”, “Event Play”, “Label Play”, “Time Division Play”, “Normal Play (Picture)”
2	Display	The windows display video
3	Channels	You can select the channels for playback in this area
4	Date	Shows the date that have video files and marked blue
5	Time of File	Shows the start time and the end time of files in HDD
6	Time Line	Shows files playing course in this area.

Table 4-7 Area Functions Introduce of Playback

Note:

➢ *The second line shows all the files of the channels you selected. And the first line shows the files of the channel you chose by mouse on the display area. And event files marked red, normal files marked blue.*

No.	Key title	Key function
1		Full screen playback the channels
2		Close the playback interface back to preview interface
3	/	Change time line interval
4	/	Switch of playback channel audio
5	/	Cut the interest video of playing channel
6		Snap a picture of playing channel
7		Lock the file to prevent over writting in HDD
8		Default label, Label the file`

9		File manager. Mange the cut file, locked file, and labeled file
10		Zoom, Zoom the playing channel
11	/	Sync/Async, Switch button of playback mode
12		Main/Sub Stream, Switch button of stream type
13		Start/Pause, Control button of start/pause playback
14		Backward Playback/Pause, Control button of backward playback
15		Stop Playing, Control button of stop playback
16	/	Frame Control, Control step frame and backward frame
17		Slow playback, slow down play speed of playing channels
18		Speed up, speed up playing channels
19	30S / 30S	Forward/Backward 30 sec, forward/backward 30 sec playing channel
20		Normal record, blue means normal
21		Event record, event record marked red
22		Smart record analyzed according to the recorded video

Table 4-8 Buttons of Playback Interface

4.7.1 Normal play

The default playback mode is “Normal playback”. And when you select the channels the date will turn into blue on the date area that means the channels you selected have files in that day. And you can select the date you want to playback on the date area.

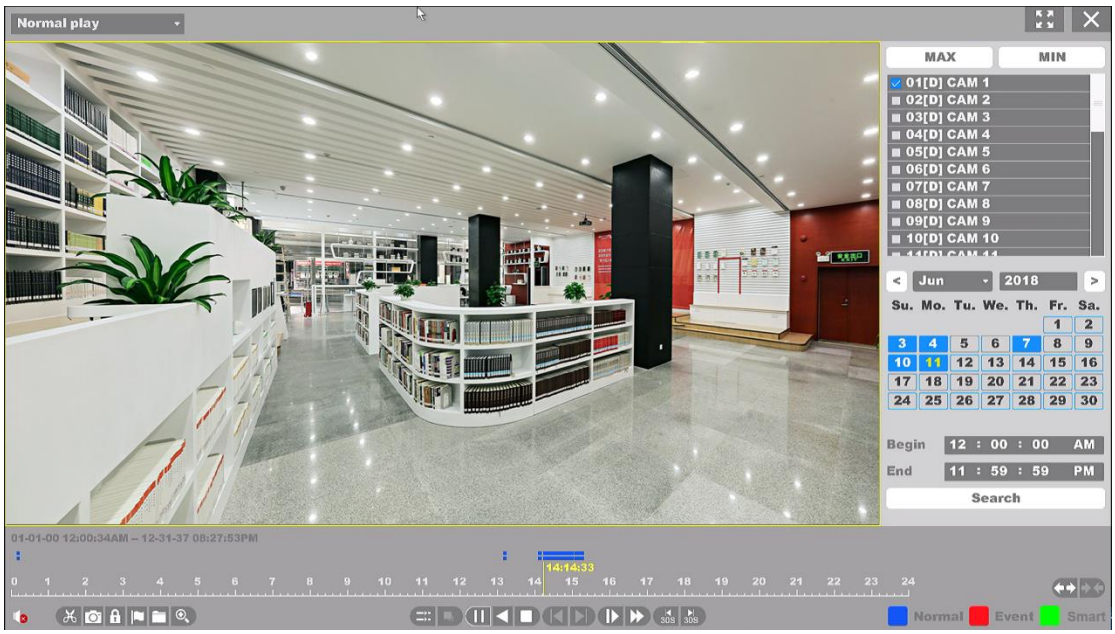


Figure 4-107 Normal Playback Modes

All the operations of these buttons to control the playback, you can refer to the previous table. And the “Cut” button will cut all the files of the channels you’re playing, you can check the files you cut in the “File Manage”.

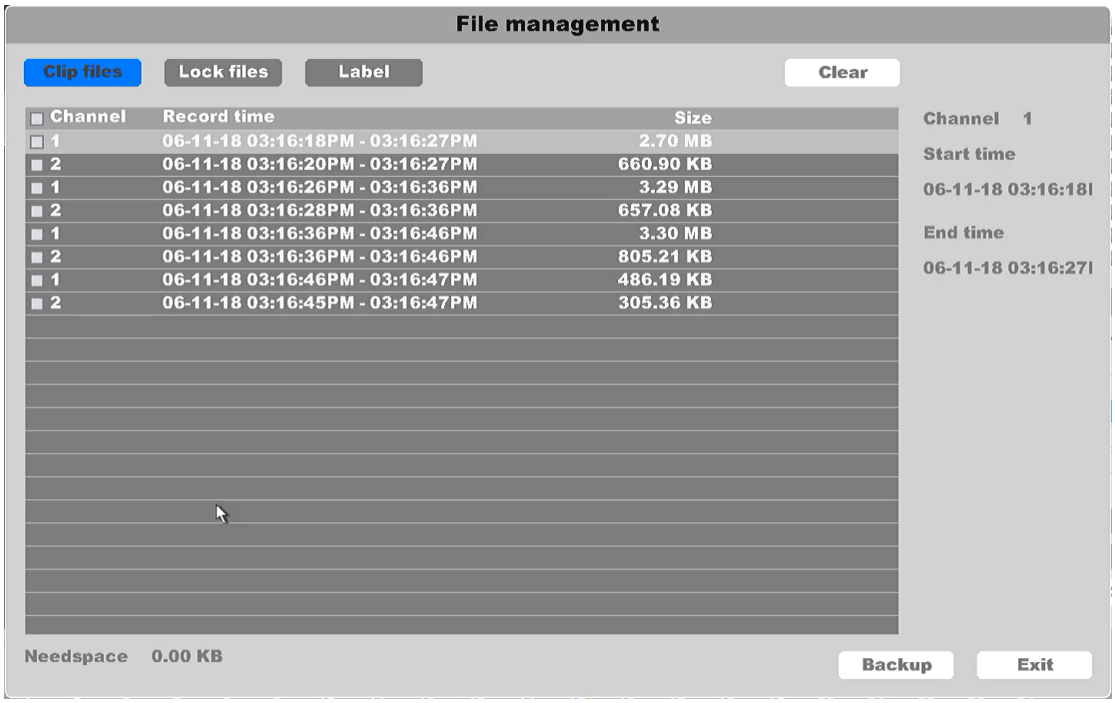


Figure 4-108 Clip files

And you can back up the clip files in this interface.

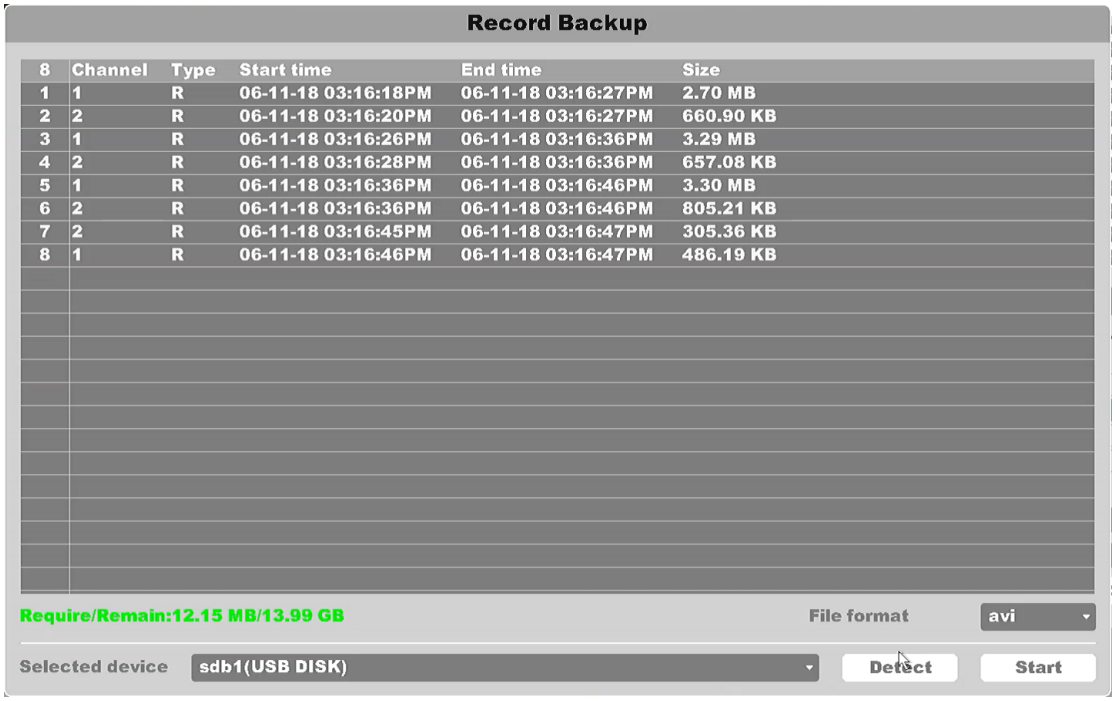


Figure 4-109 Backup the Clip files

The “Lock Record” button will lock the file to stop overwriting with a new file. You can check and back up the locked files in “File Manage”. And you can unlock the locked files in this interface.

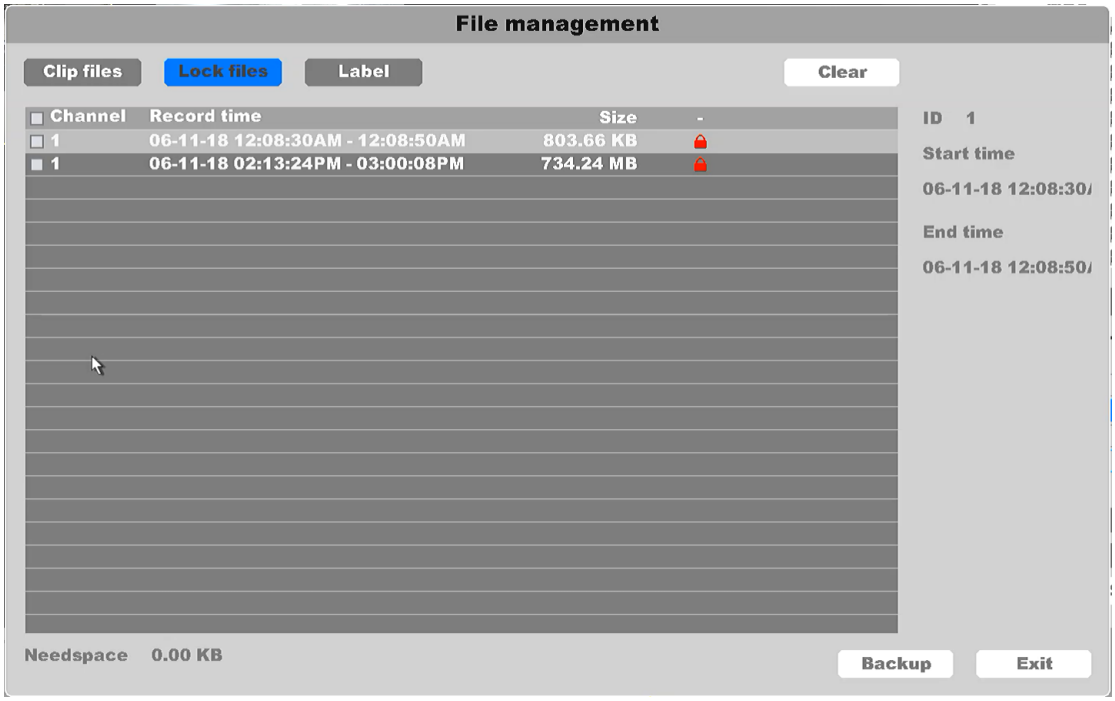


Figure 4-110 Lock Files

Click the “Default Label” button will mark the video as a default label, you can edit the label and check in the “File Manage”.

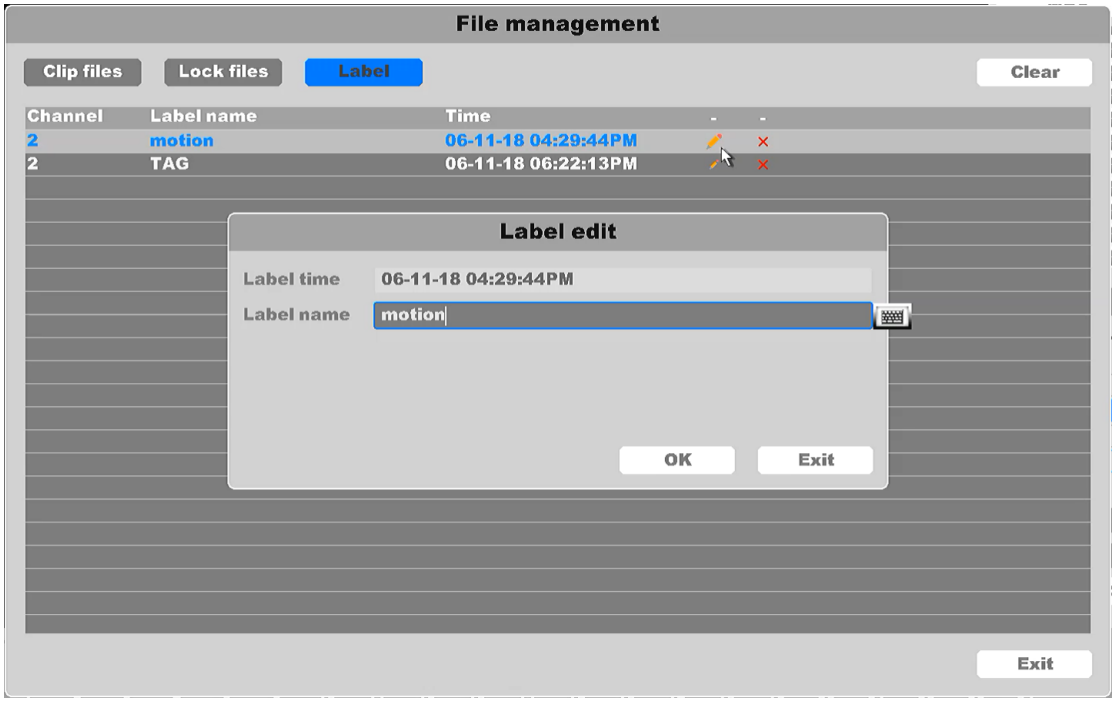


Figure 4-111 Label Manage

The “Main/Sub stream” button can change the video stream into sub stream from main stream, the “Speed up” button can speed up 32 times the channel you selected and speed up 16 channels 2 times maximum.

4.7.2 Event play

Select the “Event Play” enters the event playback mode.

1. You need to chose the event main type, including three event types: “Alarm input”, “Motion detect” and “IA Detect”. And the main type of “IA Detect” including two sub types event “Crossing detect” and “Area intrusion detect”.
2. Select the channels you want to search, set time period, and click search button. Search results as shown in the figure, “Source” means alarm channel and “Chan” means record channel, “Time” means when the alarm happened.
3. The next area shows all the alarm items and you can change the page to find the alarm item you want. And then you can set the play time period before/after of the alarm time.

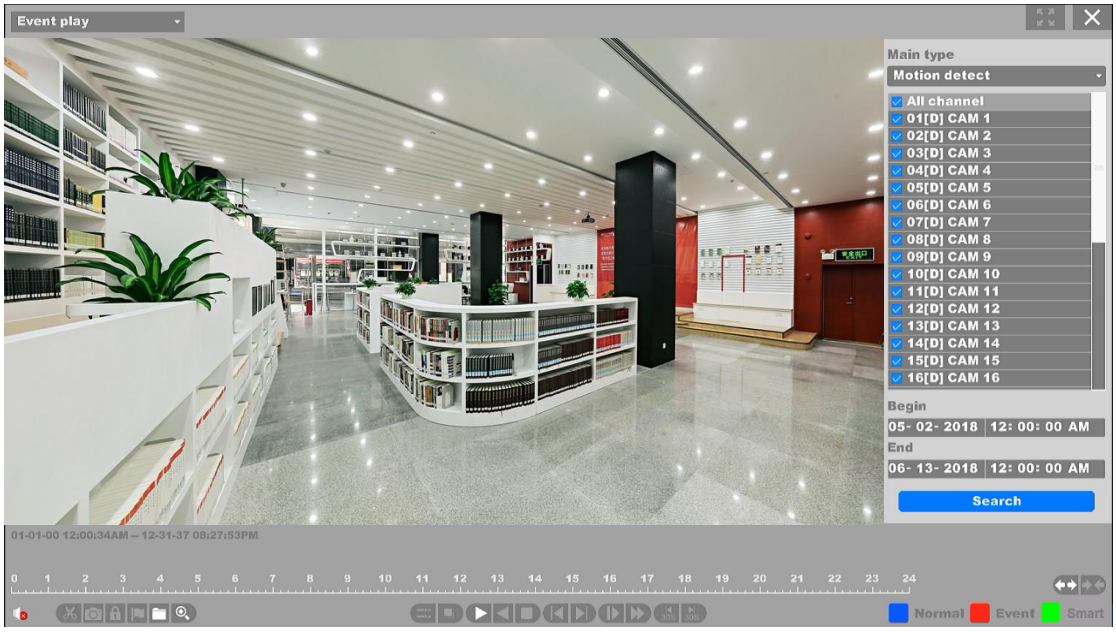


Figure 4-112 Search for Event Playback

Key Picture	Key Title	Key Function
	First	Quickly go to the first page of event search results.
	Prev	Go to the previous page of event search results.
	Next	Go to the next page of event search results.
	Last	Quickly go to the last page of event search results.
	Goto	Click jump to the page you entered into the entry bar.

Table 4-9 Buttons of Event Search Results

You can change the alarm types and channels by click the return button back to the last interface. As for the operations of these buttons you can refer to the previous table. But you can't use the "Sync/Async", "Main/Sub stream", "Frame Control" button in event playback mode.

4.7.3 Label Play

Select the "Label Play" enters the label playback mode.

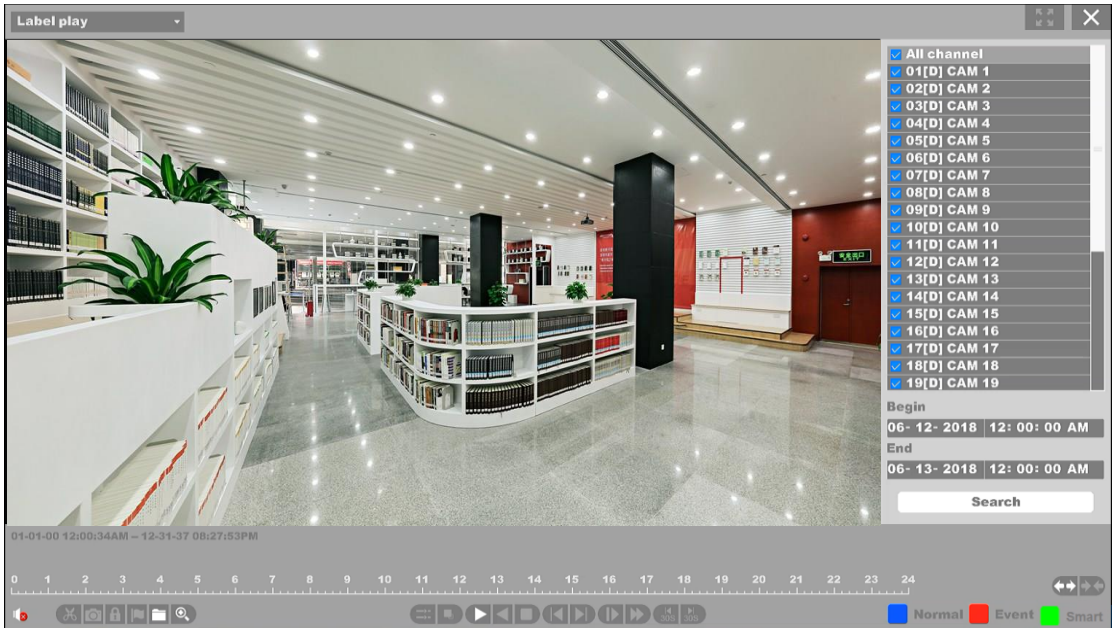


Figure 4-113 Search for Label Playback

1. Select the channels, and set the time period of search.
2. Click the search button, search results as shown in the figure.
3. "Label" means label's name that you can edit in file manage and "Chan" means the channel you tagged, "Time" means the time that was playing when you tag.
4. The next area shows all the labels and you can change the page to find the label items you want. And then you can set the play time period before/after of the label time.
5. You can change the search channels by click the return button back to the last interface.
6. As for the operations of these buttons you can refer to the previous table. But you can't use the "Sync/Async", "Main/Sub stream", "Frame Control" button in label playback mode.

Note:

- *The operations of these buttons you can refer to the last part.*

4.7.4 Smart Play

Select "Smart Play" enters this playback mode. In this section NVR support analyze exist video according to specific rules. Now the rules include "line crossing, Area Intrusion, Motion Detection and Face Detection".

4.7.4.1 Draw Line

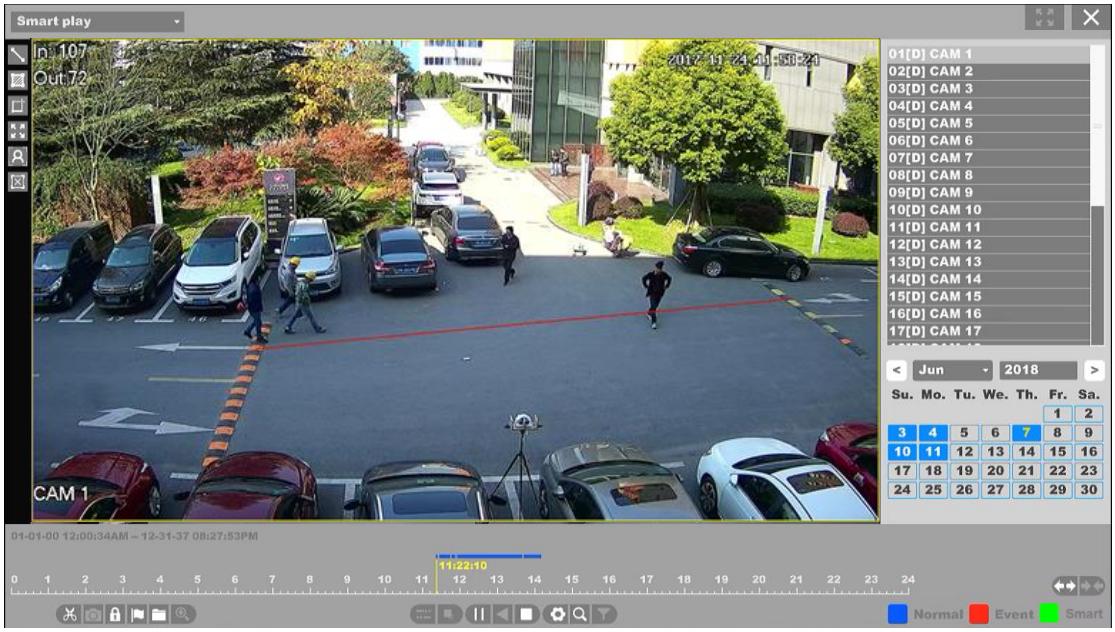


Figure 4-114 Smart Playback – Draw Line

1. First you need select a channel and click “Play”, then the icon of “Draw Line” can be active. You can click to draw a line on the video interface;
2. Click “Setting” button you can specify some setting for playback like “Skip Non-Focus Video” and specify the playback speed for Non-Concerned Video and Attention-Video, also you can specify the time before and after the events from 0 to 600 seconds.
3. Click “Search” button then the result will be shown like figure 4-110, video with line crossing will be marked color “green”, and the video will be played by the setting as you made at step 2.

4.7.4.2 Draw Quadrilateral

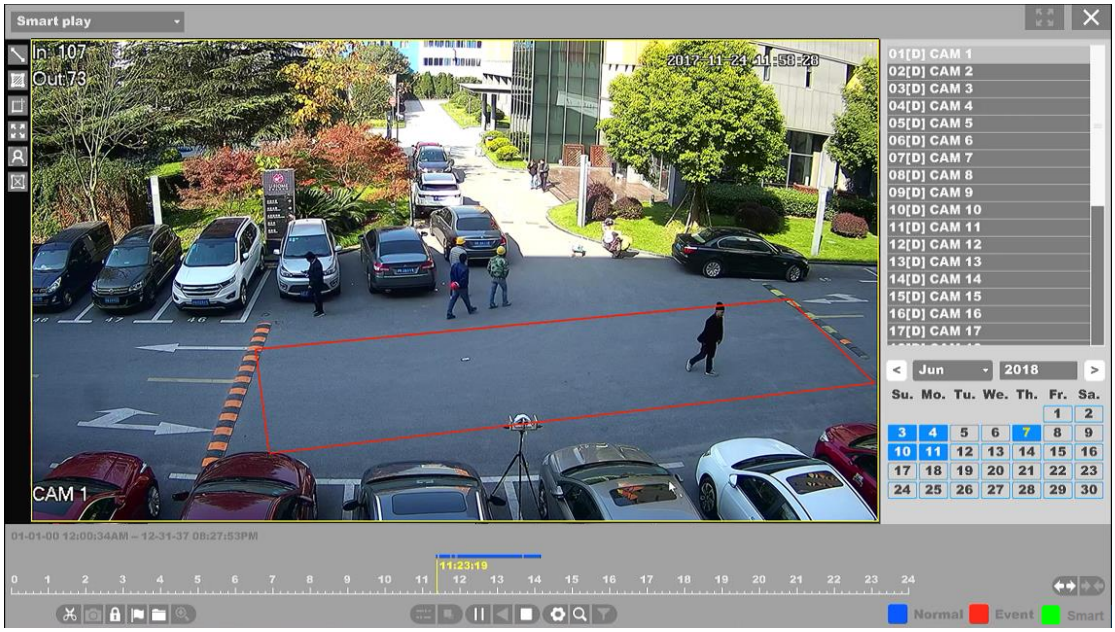


Figure 4-115 Smart Playback – Draw Quadrilateral

1. First you need select a channel and click “Play”, then the icon of “Draw Quadrilateral” can be active. You can click to draw a quadrilateral on the video interface;
2. Click “Setting” button you can specify some setting for playback like “Skip Non Focus Video” and specify the playback speed for Non-Concerned Video and Attention-Video, also you can specify the time before and after the events from 0 to 600 seconds.
3. Click “Search” button then the result will be shown like figure 4-111, video with Area Intrusion will be marked color “green”, and the video will be played by the setting as you made at step 2.

4.7.4.3 Motion Draw Rectangle

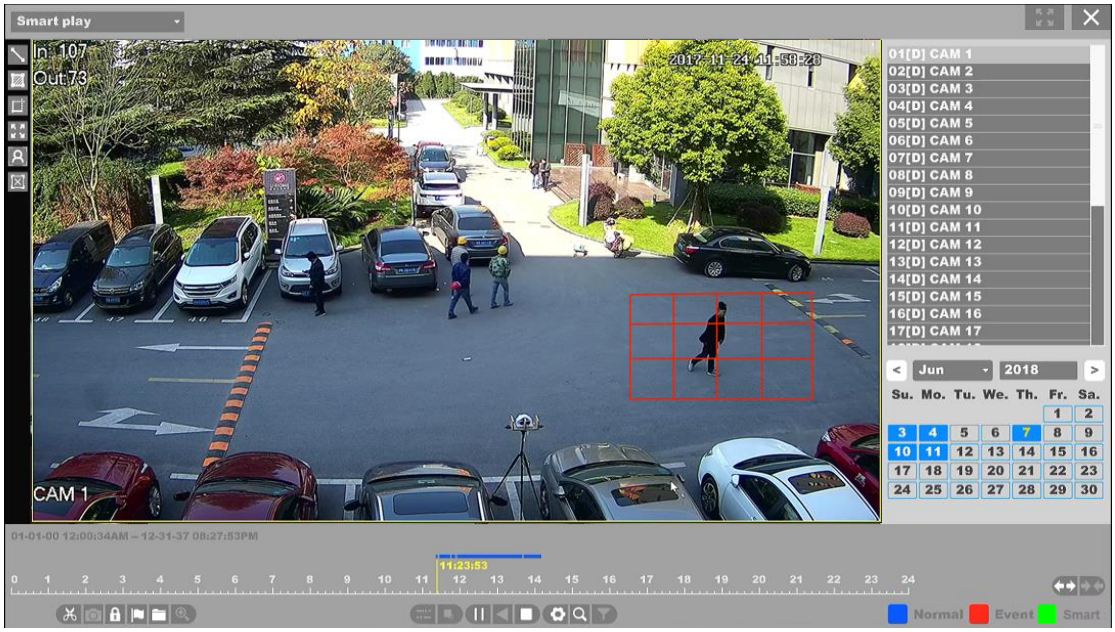


Figure 4-116 Smart Playback – Motion Draw Rectangle

1. First you need select a channel and click “Play”, then the icon of “Motion Draw Rectangle” can be active. You can click it to draw an area on the video interface;
2. Click “Setting” button you can specify some setting for playback like “Skip Non-Focus Video” and specify the playback speed for Non-Concerned Video and Attention-Video, also you can specify the time before and after the events from 0 to 600 seconds.
3. Click “Search” button then the result will be shown like figure 4-112, video with Motion will be marked color “green”, and the video will be played by the setting as you made at step 2.

4.7.4.4 Motion Full Screen

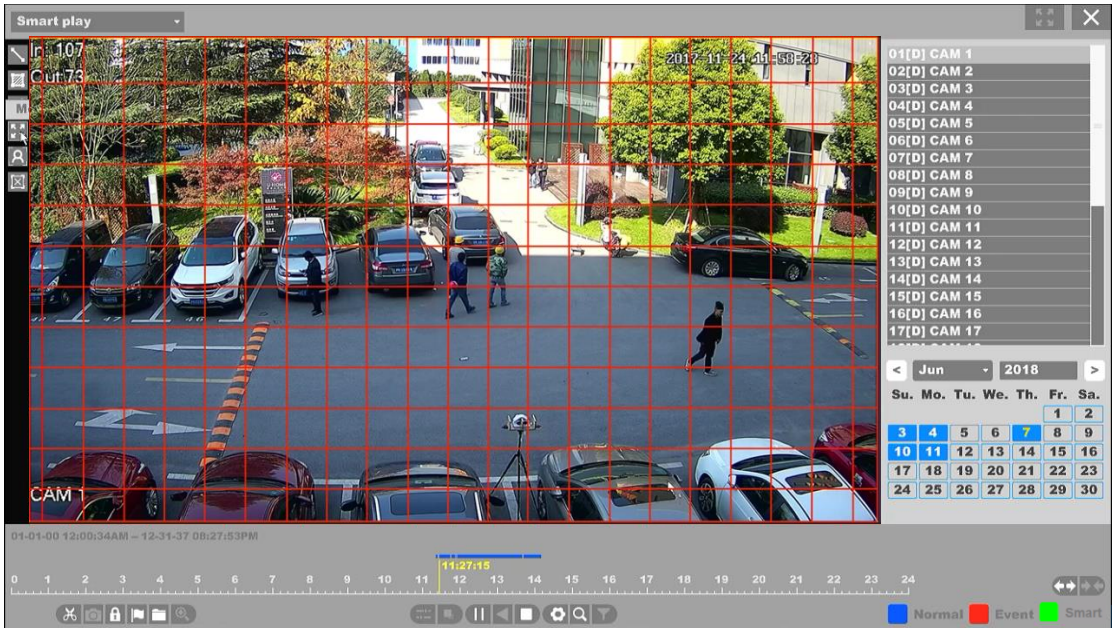


Figure 4-117 Smart Playback – Motion Full Screen

1. First you need select a channel and click “Play”, then the icon of “Motion Full Screen” can be active. You can click it to draw an area on the full video interface;
2. Click “Setting” button you can specify some setting for playback like “Skip Non-Focus Video” and specify the playback speed for Non-Concerned Video and Attention-Video, also you can specify the time before and after the events from 0 to 600 seconds.
3. Click “Search” button then the result will be shown like figure 4-113, video with Motion will be marked color “green”, and the video will be played by the setting as you made at step 2.

4.7.4.5 Face search

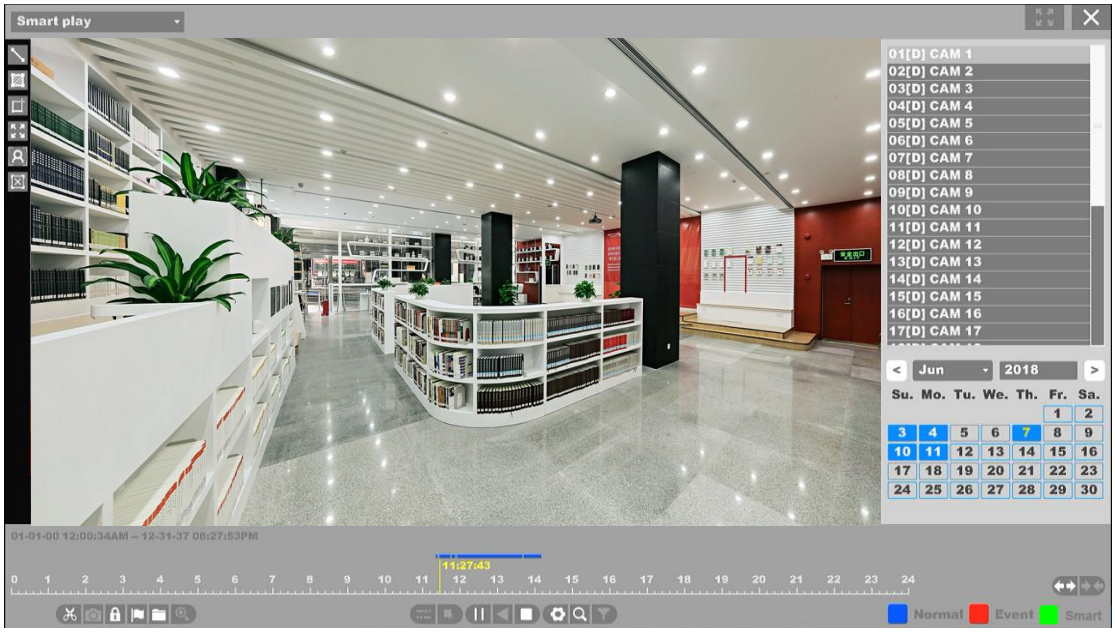


Figure 4-118 Smart Playback – Face Search

1. First you need select a channel and click “Play”, then the icon of “Face search” can be active. The full video interface will be detected by default;
2. Click “Setting” button you can specify some setting for playback like “Skip Non-Focus Video” and specify the playback speed for Non-Concerned Video and Attention-Video, also you can specify the time before and after the events from 0 to 600 seconds.
3. Click “Search” button then the result will be shown like figure 4-114, video with people’s face will be marked color “green”, and the video will be played by the setting as you made at step 2.

Note:

- *Smart Play only work with Qualvision IPCs which support these features.*

4.7.4.6 Clear all

When you click this button that means clear all the lines and rectangles you have drawn before. Then you can draw new lines and specify new rules.

4.7.4 Time Division play

Select the “Time Division Play” enters the time division playback mode.

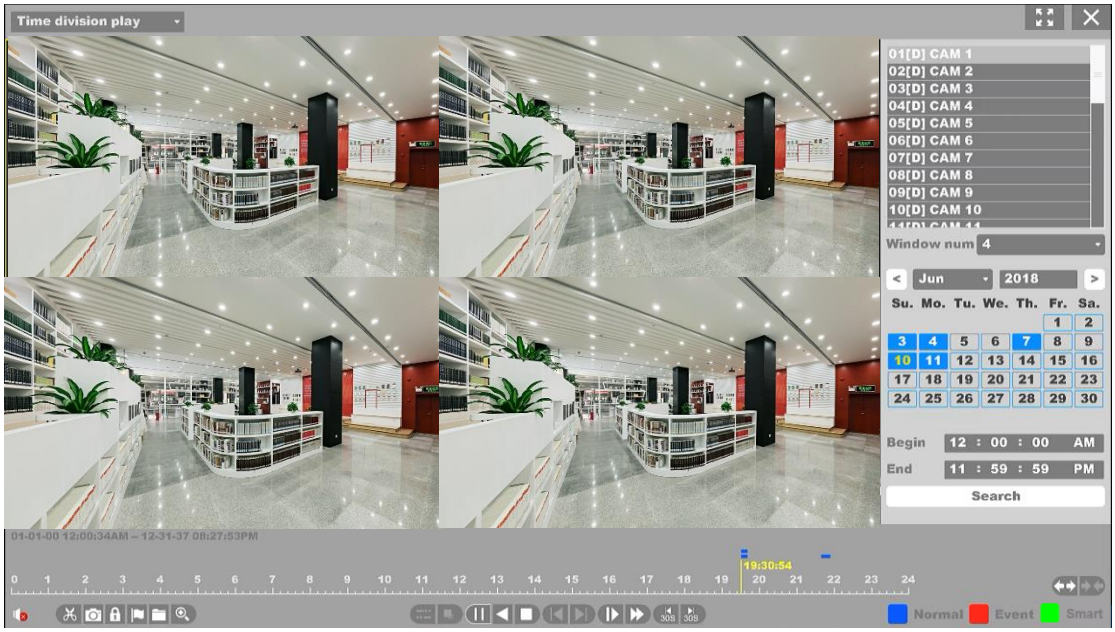


Figure 4-119 Time Division Playback

1. First you need chose the channel and select division windows number to display, from 1-16 windows. For example, if you chose the windows number is 4, the files of the date you chose will be divided into 4 parts.
2. You can change the playing channel but do not need to stop. And change the windows division number when the channel is playing.

As for the operations of these buttons you can refer to the previous table.

4.7.5 Normal Play (Picture)

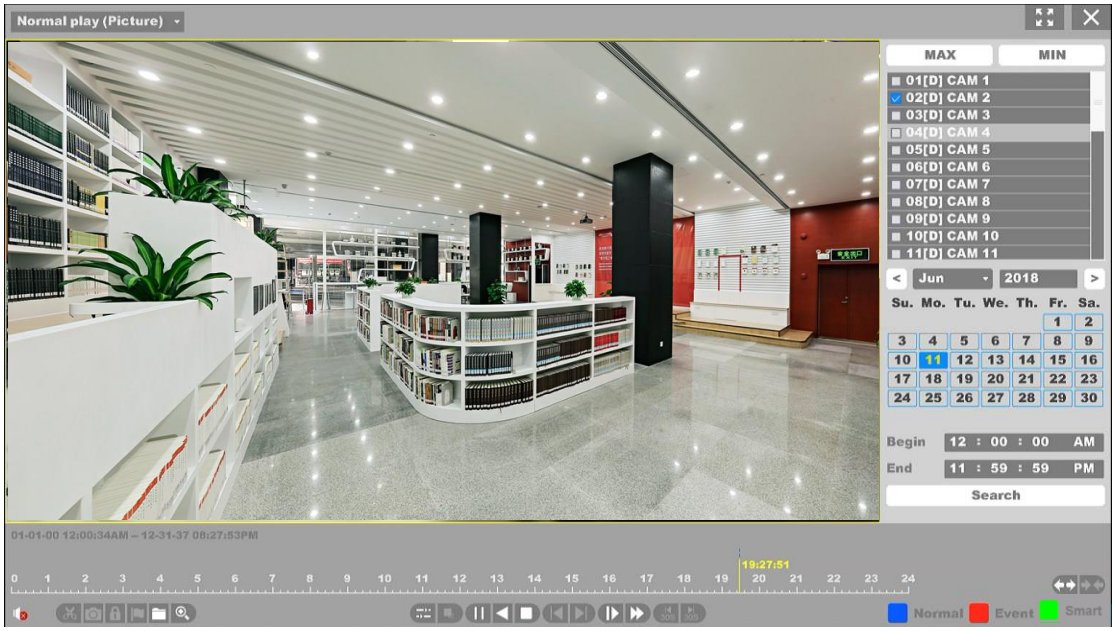


Figure 4-120 Normal Playback of Picture

1. Select the “Normal Play (Picture)” enters the normal playback of pictures mode.
2. Select the channels, the search result as shown in the figure. As for the button of control playback including “File Manage”, ”Sync/Async”, “Start/Pause”, “Backward play”, ”Stop Playing”, “Slow down”, ”Speed up”, and “Time-line Stretch”, “Time-line Shorten”.

The sources of pictures you play are manual snap on preview interface and the manual snap in playback interface.

Note:

- *You can stop playback by right click, and exit the playback interface by keep right click.*
- *If you chose more than one channels to playback, double click can make the channel shows in one screen.*

4.8 Shutdown

Click Shutdown, as shown in the figure.

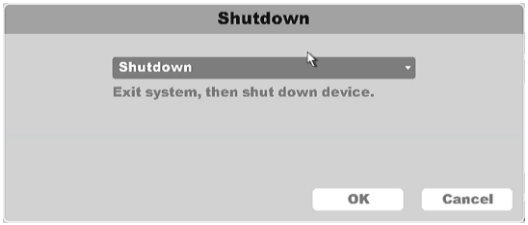


Figure 4-121 Shutdown

- **Shutdown:** Exit system, and then shut down device.
- **Restart:** Exit system, then restart device.
- **Log out:** Password is needed to re-enter the menu after logout.
- **Switch user:** Switch the user and use another account to login.

Chapter 5 WEB Application Manage

5.1 Plug-in download and installation

1. Open your web browser and input the IP address of NVR, such as http://192.168.1.9 (the default IP address), if your IP address has been changed, you can use the new IP address, and press the Enter key to enter the login interface.
2. If it is the first time to login, it will notice you to install the plug-in, you can find it either in CD or download from web site, as shown in the **figure 5-1.**

Figure 5-1 Install the Plug-in

5.2 Web Application Manager Login

1. After plug-in installation, please input the user name and password (The default username is admin and the password is empty), and select language in the interface, shown as **figure 5-2.**
2. Click on login button to go to web preview interface.
3. If you enable the “Save Password”, your password and user name will be remembered the next time you login.

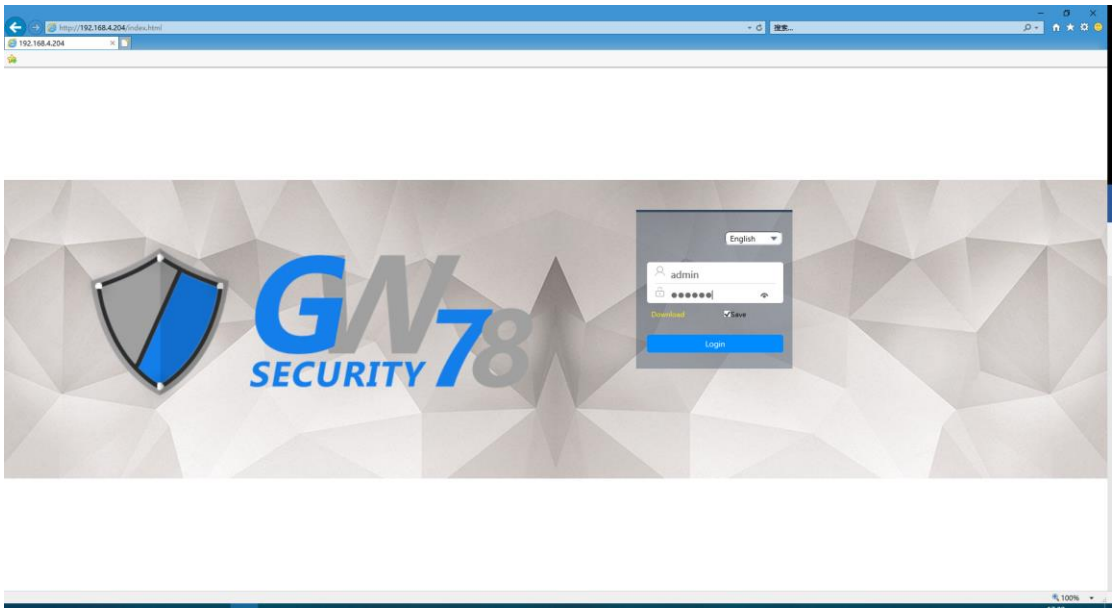


Figure 5-2 Login Interface

5.3 Preview

After you login successfully, you will enter the preview interface, as show in **figure 5-3.**

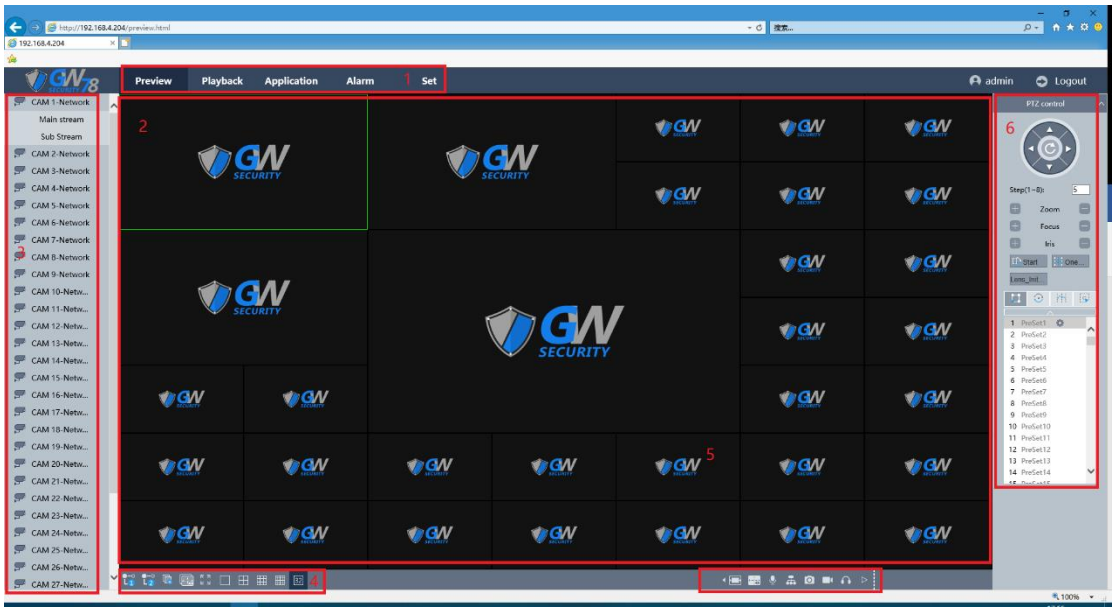


Figure 5-3 Preview Interface

No.	Items	Function Description
1	Function Tab	Main Menu Includes preview, playback, Alarm, Config and Logout.
2	Preview channels	The connection channel of NVR.
3	Device channels	You can open the preview channel in main/sub stream and close the preview channel.
4	Video control	● Open ALL(Main): Open all the preview channels in main

		stream ● Open ALL(Sub):Open all the preview channels in sub stream ● Close All: Close all the preview channels. ● Dynamic Tracking all open/ Full Screen/ Screen Division
5	Other Function	Original Size/ Talk/ Multicast/ Local Snapshot/ Local Record/ Listen
6	PTZ control	Control PTZ directions, add preset and tour etc.

Table 5-1 Function Description of preview area

After login the NVR, you can choose a channel and preview the channel in real time.

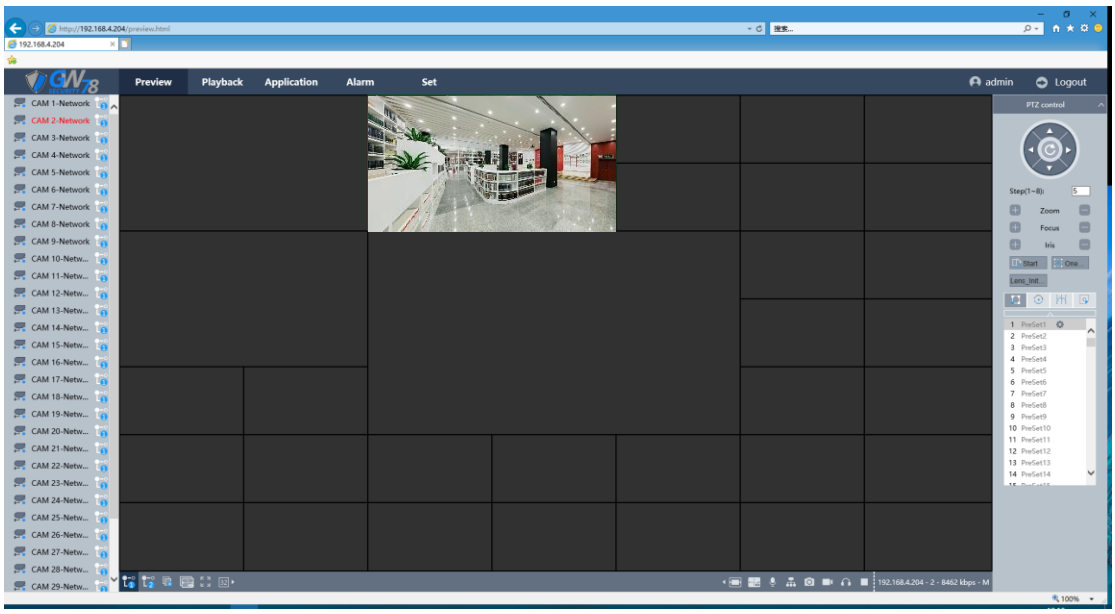


Figure 5-4 Channel Preview Interface

Items	Function Description
Device Snapshot	Capture a picture and save it in the device.
Local Snapshot	Capture a picture and save it in the picture path you have set before on local PC.
Record	Record a video and click it again to stop recording, and save it in the record path you have set before.
Listening	Turn On/Off the audio.
/ Stop	Click the button to open the preview channel, and click to close it.

Table 5-2 function description of preview interface

5.4 Playback

1. Click the playback button to enter playback interface, show as **figure 5-5.**

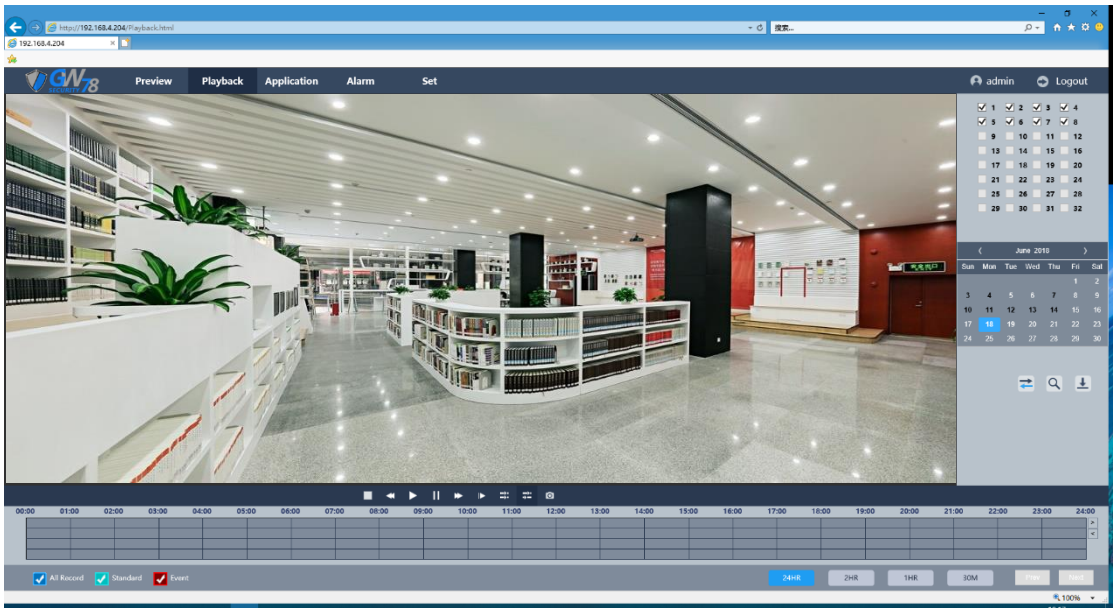


Figure 5-5 Playback Interface

It supports 8 channels playback at the same time, it displays the intraday videos of 8 channels by default, and the default videos are recorded in main stream, if you want to search the videos recorded in sub stream, you have to enable the “Sub Stream “check box .On this page, you can select the any channel and date you want, and then click the Search button, it will display the results of your research.

Note:

- *It support Sync/Async playback mode.*
- *Support cut files.*
- *Support normal & event search.*

1. Click the Play button and it will playback the record file, show as in **figure 5-6.**

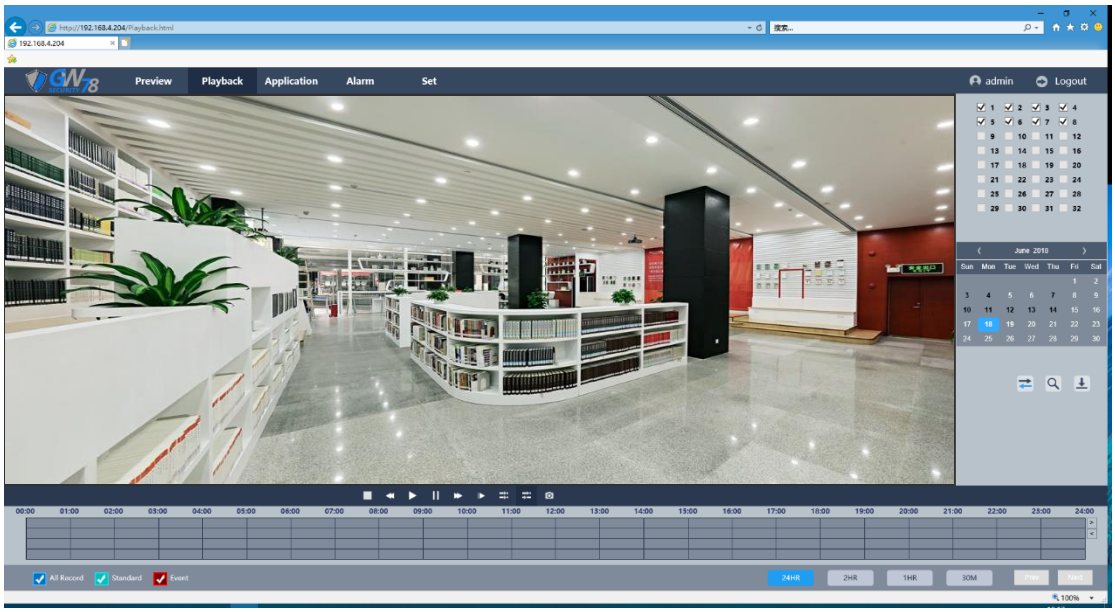


Figure 5-6 Playback Interface

Set the start time and end time of the videos you want to see, click the Search button, and then it will display the matched results. Each video will display its start time and its type, and all the videos in the same channel will display in chronological order.

2. Click the More button, you will turn to the interface of setting more parameters, as show in **figure 5-7.**

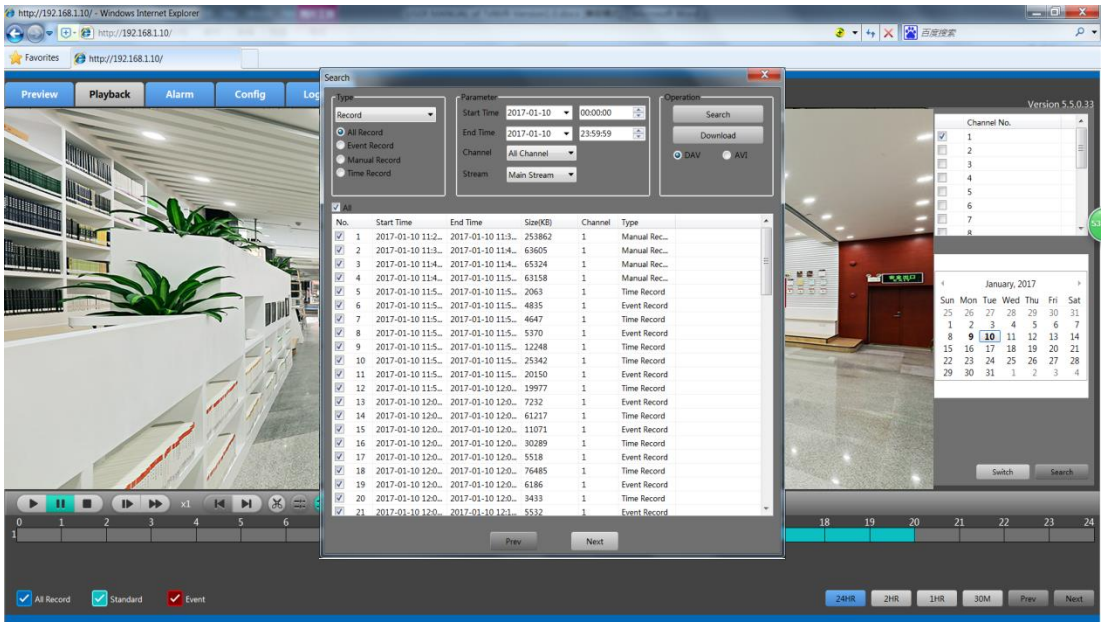


Figure 5-7 More Detail Parameters Setting Interface

In this interface, you can set the more detailed parameters such as start time, end time, channel, stream type, the type of records. Click the Search button then all matched records will be listed below. Check the record file you want to download and click the Download button. System will download the record file in sequence and save to PC. After downloading finishes, the check box of “Download Completed!” will pop-up.

5.5 Alarm

Click the alarm button to enter the alarm setting interface, shown as in the **figure 5-8.**

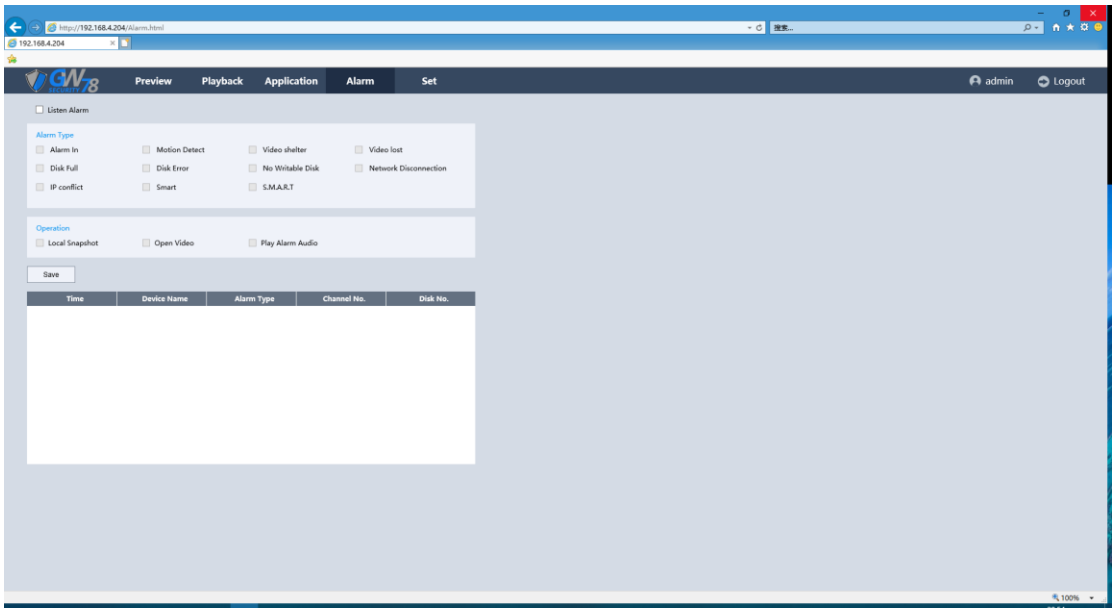


Figure 5-8 Alarm Setting interface

After checking Listen Alarm box, and select the alarm type below, when the device trigger the corresponding alarm, it will display an alarm message to notify you. And link operation will be active.

- **Message:** Auto jump to this page when alarm triggered.
- **Local captures:** Auto-grab screenshots of alarm channel.
- **Open the video:** Opens the channel automatically which trigger the alarm.
- **Play alarm sound:** Play sound when alarm triggered.

5.6 Set

5.6.1 Local Set

Click “Set -> Local Set” to enter the interface, as shown in the **figure 5-9.**

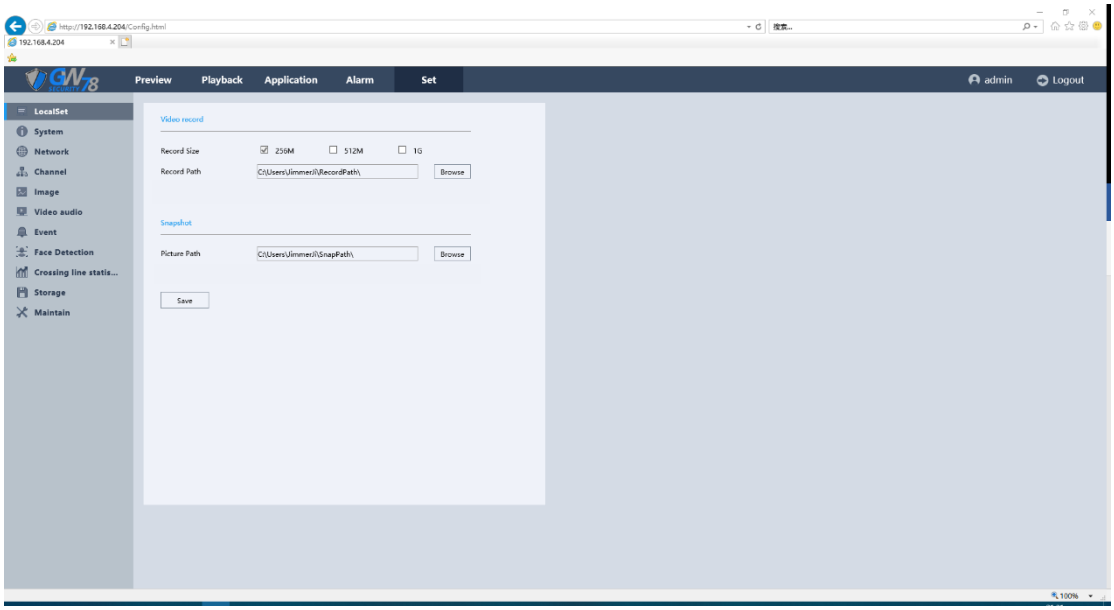


Figure 5-9 Local Set Interface

5.6.2 System

5.6.2.1 Setting

Click “Set ->System ->Setting” to enter the interface, as shown in the **figure 5-10.**

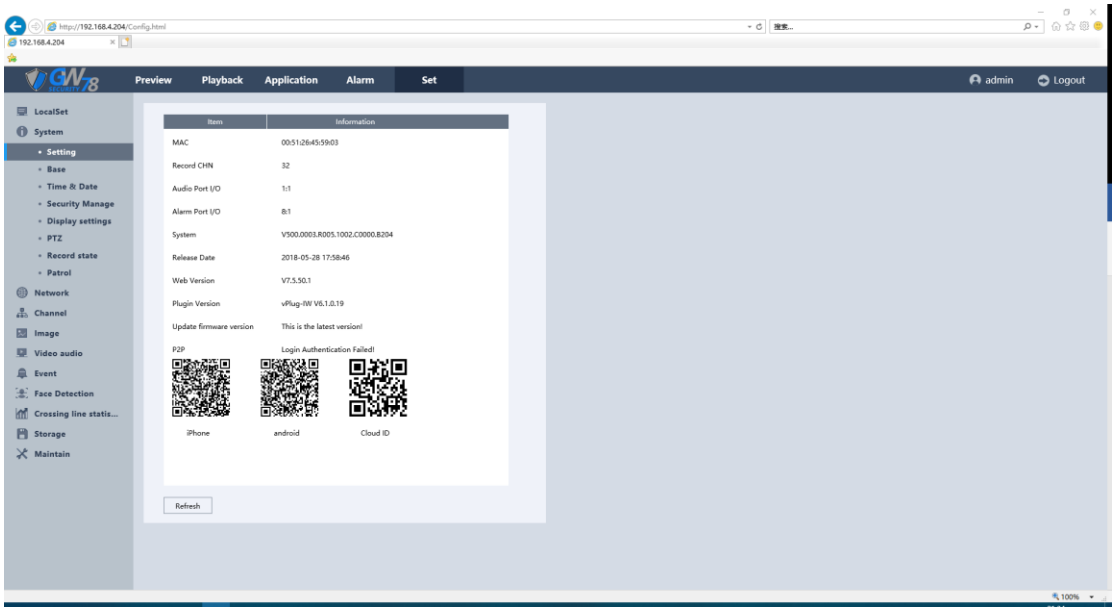


Figure 5-10 Version Information of NVR

It displays the MAC address of NVR, channel numbers, the number of audio input and output, the number of alarm input and output, system version, the release date of software version.

5.6.2.2 Base

Click “Set ->System ->Base” to enter the interface, as shown in the **figure 5-11.**

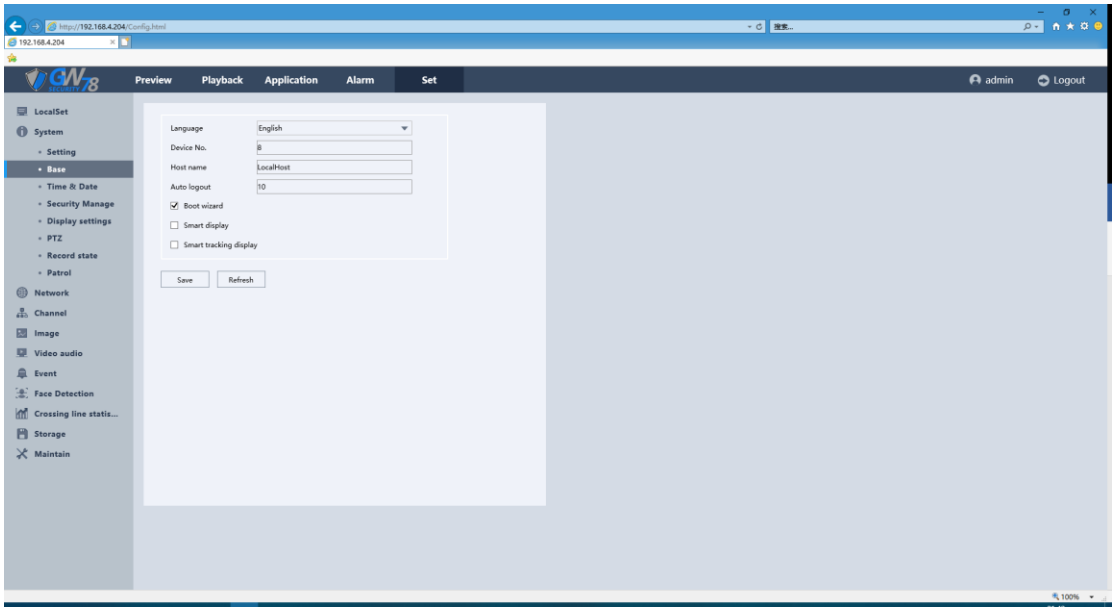


Figure 5-11 Base

- **Language:** There are English, Italian, Russian, Portuguese, Turkish, Persian, and Arabic.
- **Device No.**: The default number is 8, if it is modified to any other number, remote control will not make effect to the NVR.
- **Host Name:** Set the name of NVR.
- **Smart Display:** Click the Smart Display check box, the pre-defined virtual line and pre-defined virtual region will display in the preview channels.

5.6.2.3 Time & Date

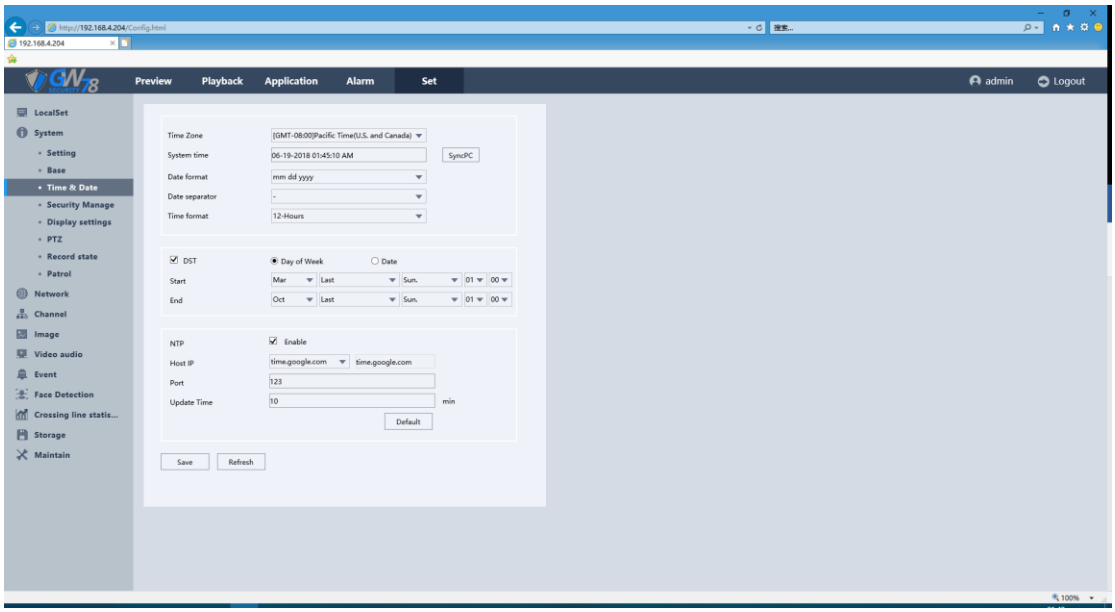


Figure 5-12 Time&Date Setting Interface

Configure the following settings, and then click save button to save the settings.

- **Time Zone:** Select the time zone
- **System Time:** Select the system date and time.
- **Date Format:** Select the date format
- **Time Format:** Select the time format
- **SyncPC:** The time zone and the system time can synchronize your local PC.
- **DST:** Daylight Saving Time (DST).
- **NTP:** A Network Time Protocol (NTP) Server can be configured on your NVR to ensure the accuracy of system date/time.

1. Check the Enable checkbox to enable this feature.
2. Configure the parameters, including Server IP, Port and Update Time.

Click Save button to save all the settings.

5.6.2.4 Security Manage

5.6.2.4.1 Account

Click the **Set->Security Manage->Account**. It is similar to the NVR local settings.

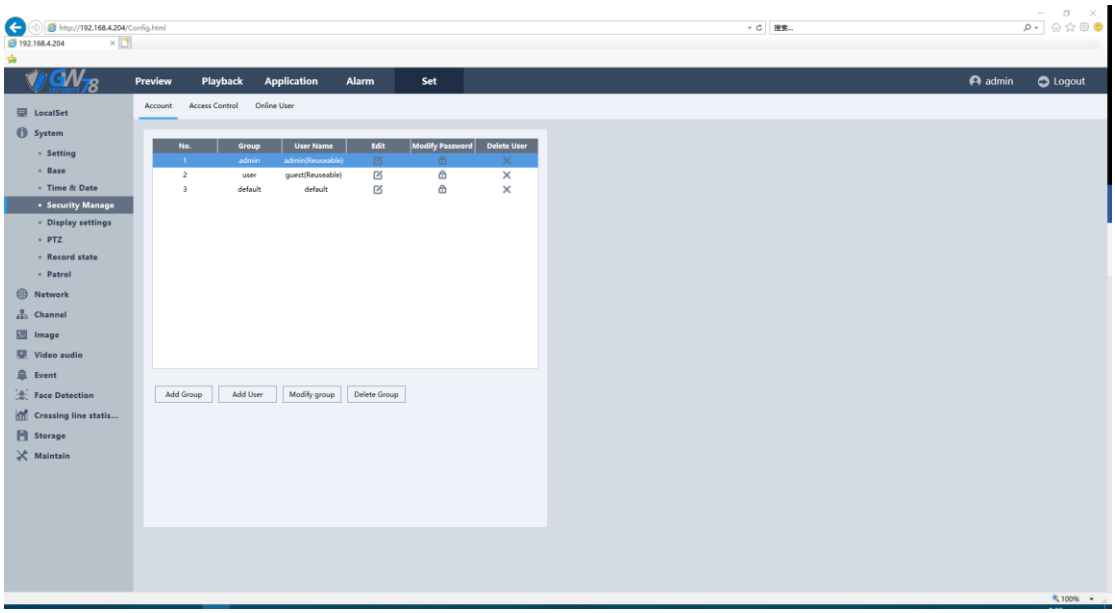


Figure 5-13 Account Setting of NVR by Web

- **User accounts:** Select the account you want to edit, the page will display this user's editing privileges.
- **The formula bar:** Here you can add and modify user rights, change password operation, add or delete the user and group.

5.6.2.4.2 Access Control

Click the **Set->Security Manage->Access Control** to enter the interface, as show in figure 5-14. Select the type of restricted list, Blocked Sites and Trusted Sites are selectable. Input the IP Address manually, click Add IP button on the right, click save button to save the settings. If you want to delete the IP you have set before, left-click an IP address from the IP Blocked list /IP Allowed and click Delete IP.

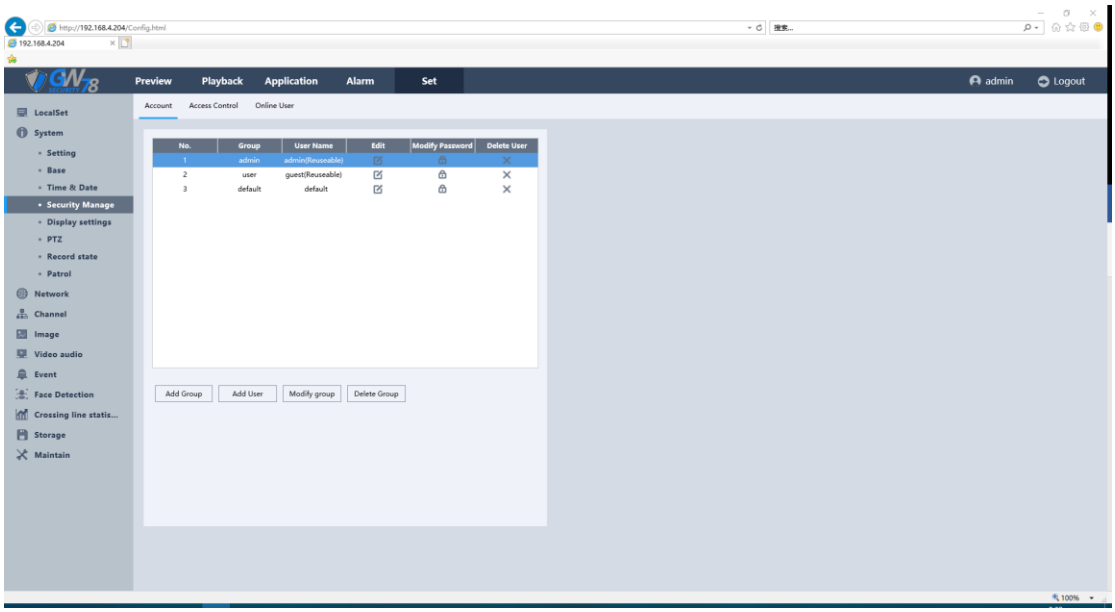


Figure 5-14 Access Control Setting Interface

5.6.2.4.3 Online User

Click the **Set->Security Manage->Online User**. It is similar to the NVR local settings.

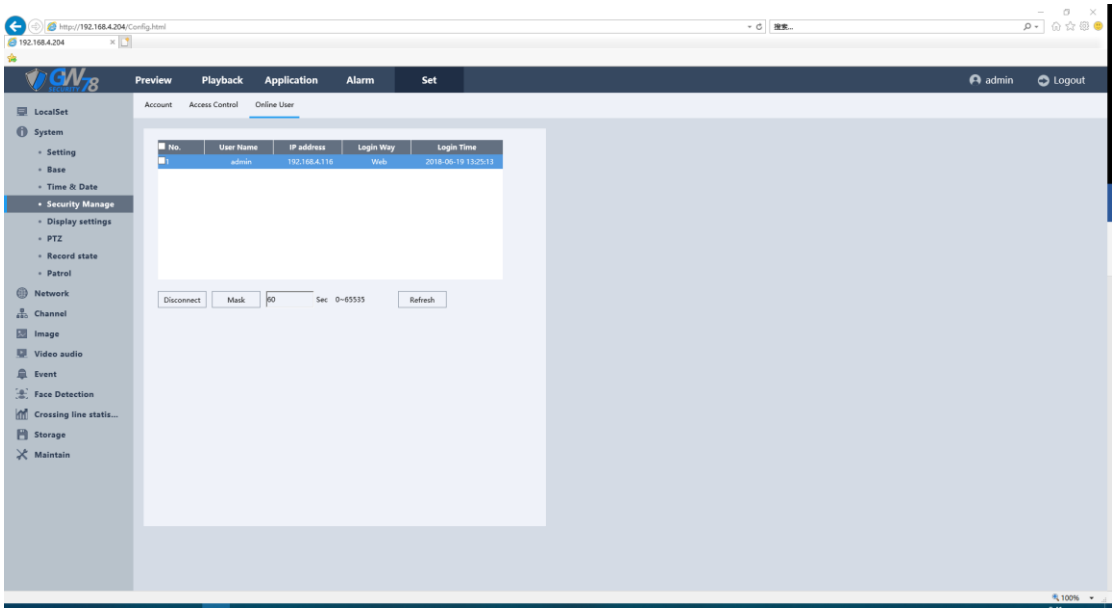


Figure 5-14 Online User Setting Interface

5.6.2.5 Display Settings

Click **Set ->System –>Display** to enter the interface, show as **figure 5-15.**

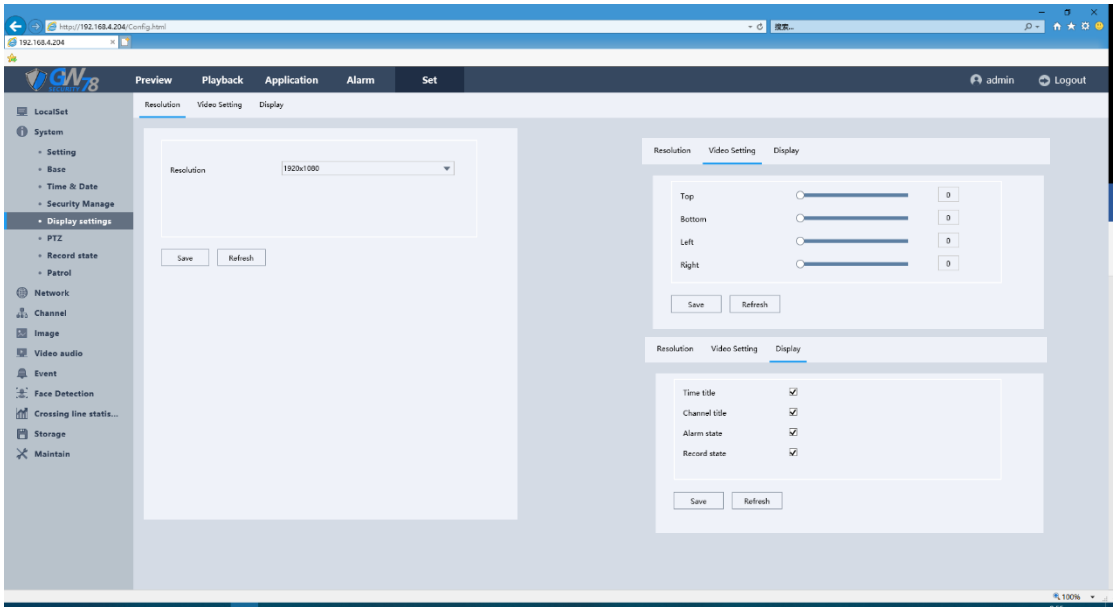


Figure 5-15 Display Adjustment Interface

You can click the check box of time title, channel title, alarm state and record state to enable these function, if time title and channel title are set as enabled, they will appear on the screen of current NVR system. You can modify the parameters of top/bottom/left/right to adjust TV display.

5.6.2.6 PTZ

Click **Set ->System –>PTZ** to enter the interface, show as **figure 5-16.**

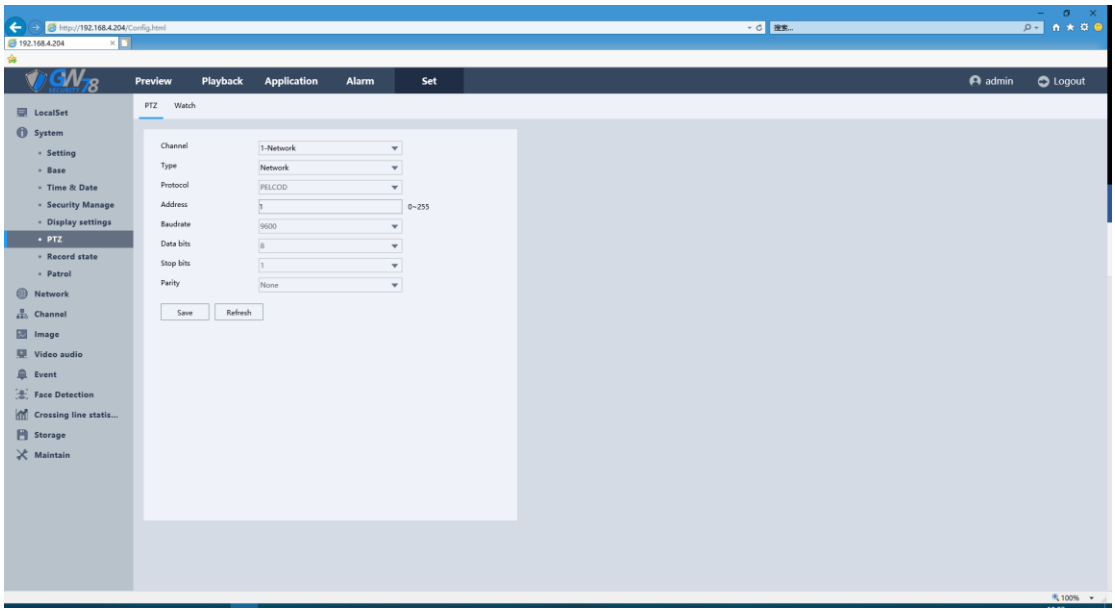


Figure 5-16 PTZ Control Interface

5.6.2.7 Record State

Click **Set ->System –>Record State** to enter the interface, show as **figure 5-17.** On this page you can check the channel name, channel connection status stream type, frame rate, bitrate and resolution.

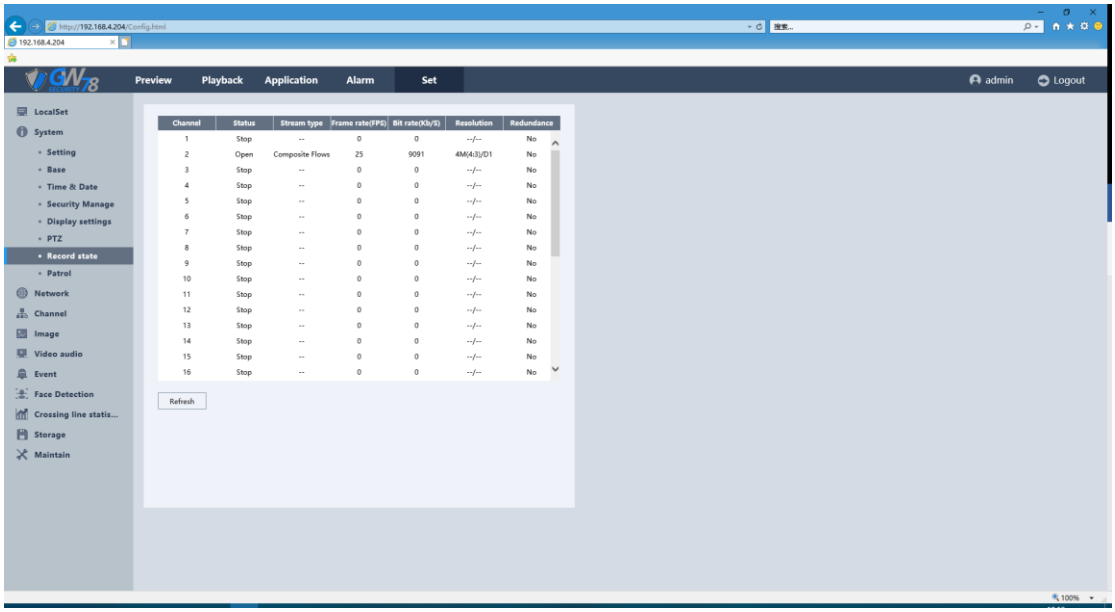


Figure 5-17 Record State Interface

5.6.2.8 Reminder

Click on **Set -> System ->Reminder**, as shown in **figure 5-18.** When enable this function, there will be a reminder box on the GUI when every selected time gap comes, the user who view the monitor need to click OK button to prove that he is on duty, each operation will be kept in log.

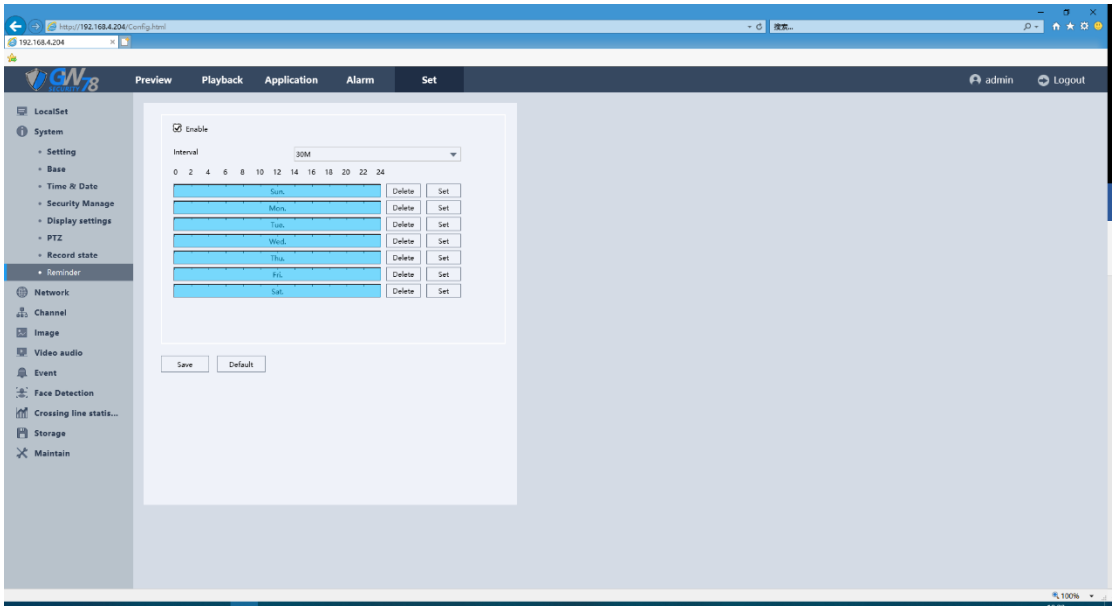


Figure 5-18 Reminder Setting Interface

5.6.3 Network

5.6.3.1 General

5.6.3.1.1 TCP/IP

Click **Set ->Network ->General ->TCP/IP** to enter the interface, as shown in the **figure 5-19.**

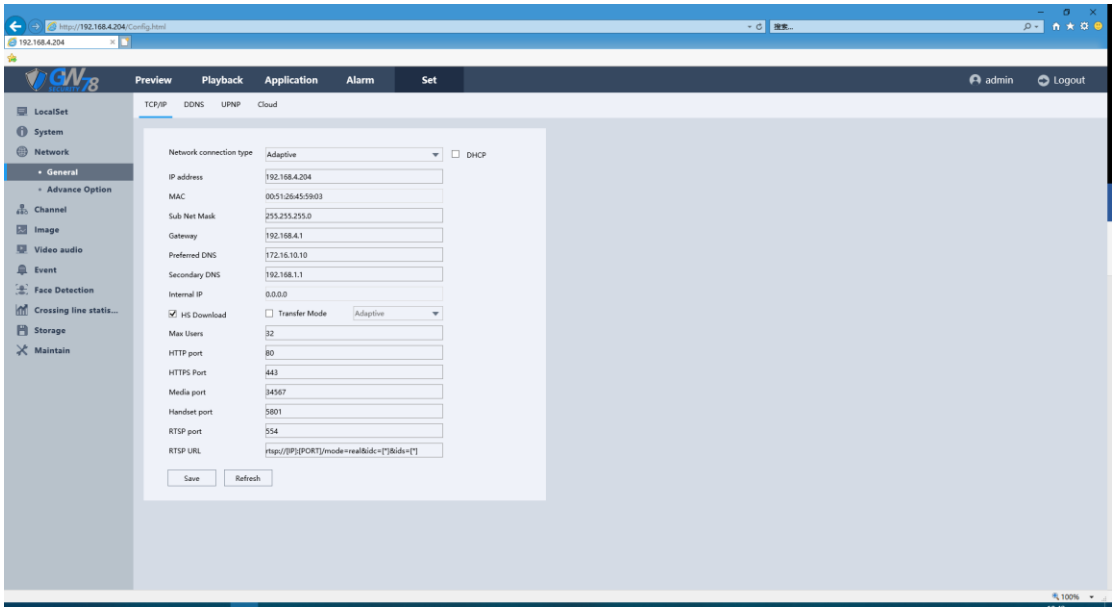


Figure 5-19 General Setting of Network Interface

NVR support Static/DHCP/PPPOE modes. System default network type is DHCP. User can set these parameters as required, including IP Address, MAC, Sub Net Mask, Gateway, DNS, Secondary DNS, Internal IP, Max Users, Media Port, HTTP port, Handset Port.

- **HS Download:** Enable the function, you can download video faster.
- **Transfer Mode :** You can choose a different network policies, quality preferred, fluency preferred and adaptive are for choice

5.6.3.1.2 DDNS

Click **Set ->Network ->General ->DDNS** to enter the interface, as show in **figure 5-20.**

- Click on the Enable to enable the function of DDNS.
- Select DDNS Type: four types are selectable, such as Oray DDNS, CN99 DDNS, DynDNS DDNS, and NOIP DDNS.
- Set the Domain Name, User Name and Password.
- Click Save to save the settings.

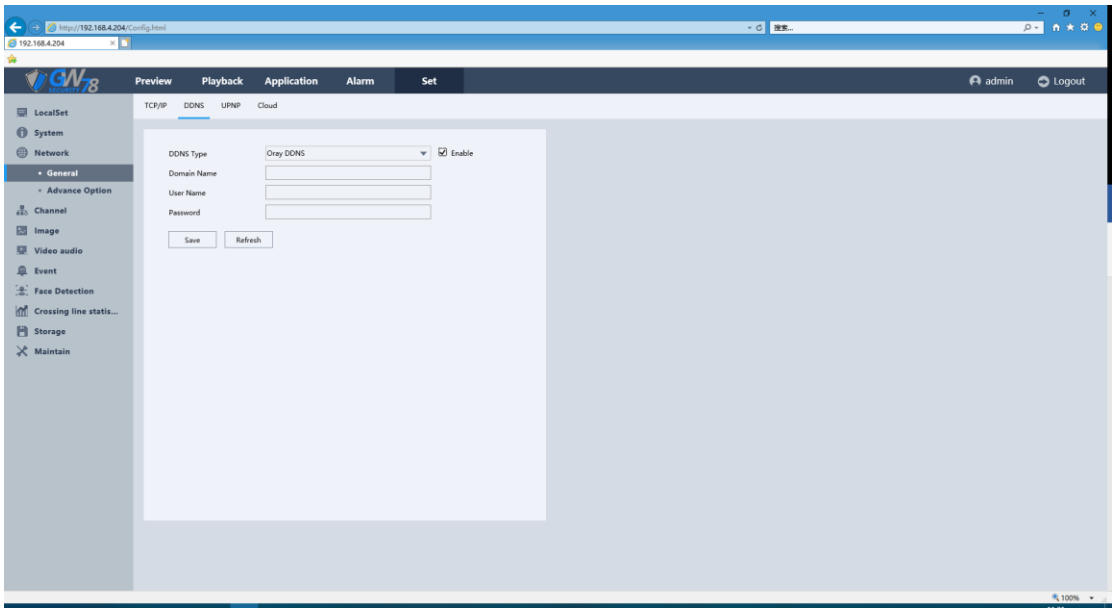


Figure 5-20 DDNS Setting Interface

5.6.3.1.3 UPNP

Click **Set ->Network ->General ->UPNP** to enter the interface, as show in **figure 5-21.**

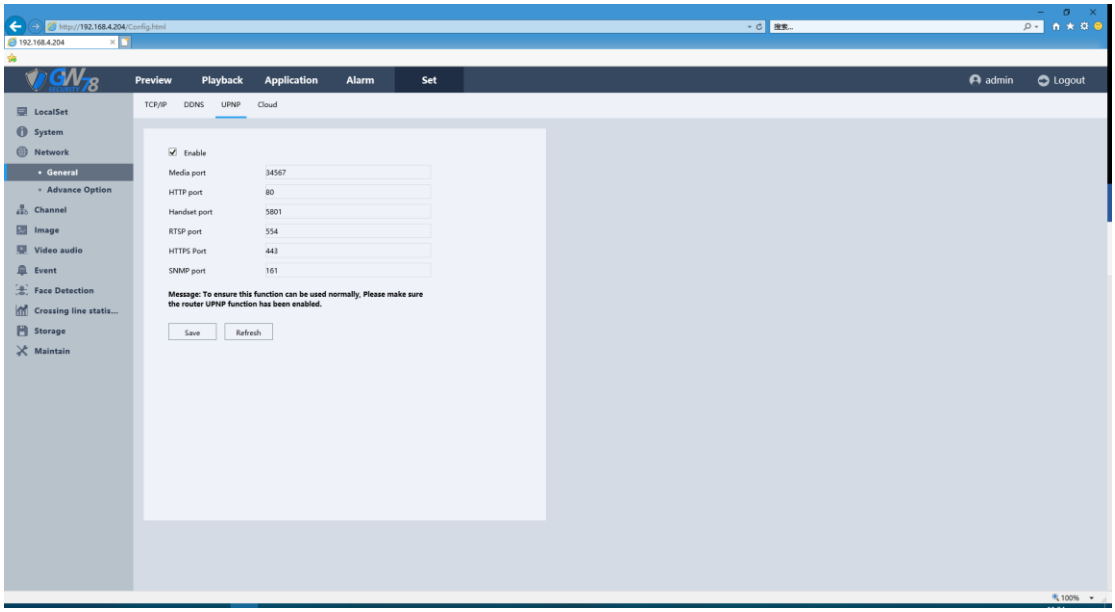


Figure 5-21 UPNP Setting Interface

Note:

- *To ensure this function can be used normally, please make sure the router UPNP function has been enabled.*

5.6.3.1.4 Cloud

Click **Set ->Network ->General ->Cloud** to enter the interface, as show in **figure 5-22.**

Click on Enable checkbox to enable the function of cloud. When the Status is connected, it means cloud function is available for use. You can download iPhone/Android GWEye client software by scanning QR code. How to use GWEye please refer to **User Manual of GWEye.**

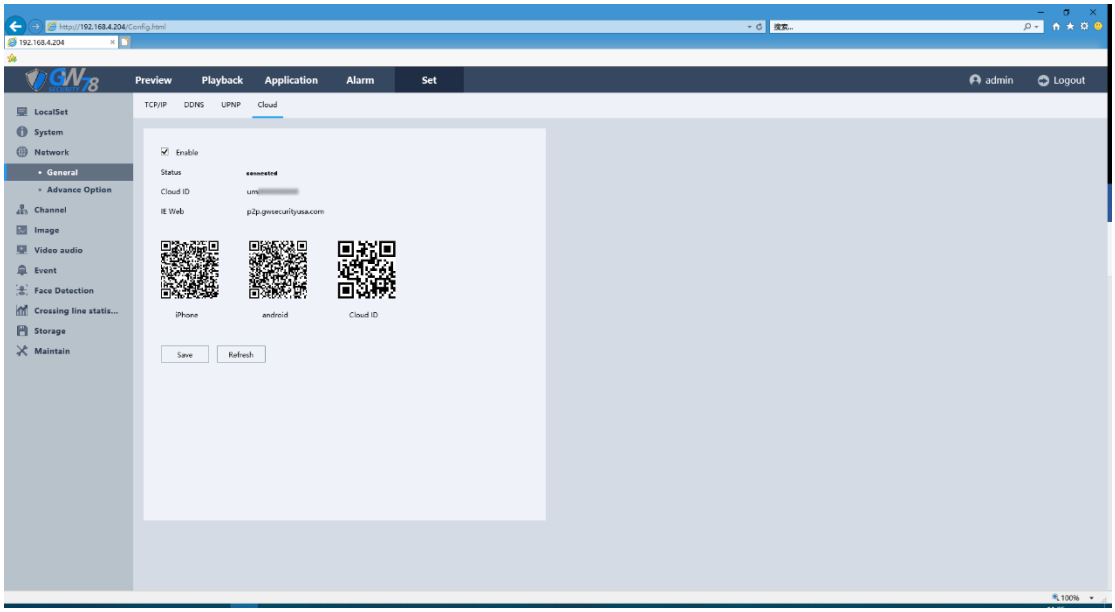


Figure 5-22 Cloud Setting Interface

5.6.3.2 Advance Option

5.6.3.2.1 FTP

Click **Set –>Network -> Advance Option ->FTP** to enter the interface, as show in **figure 5-23.**

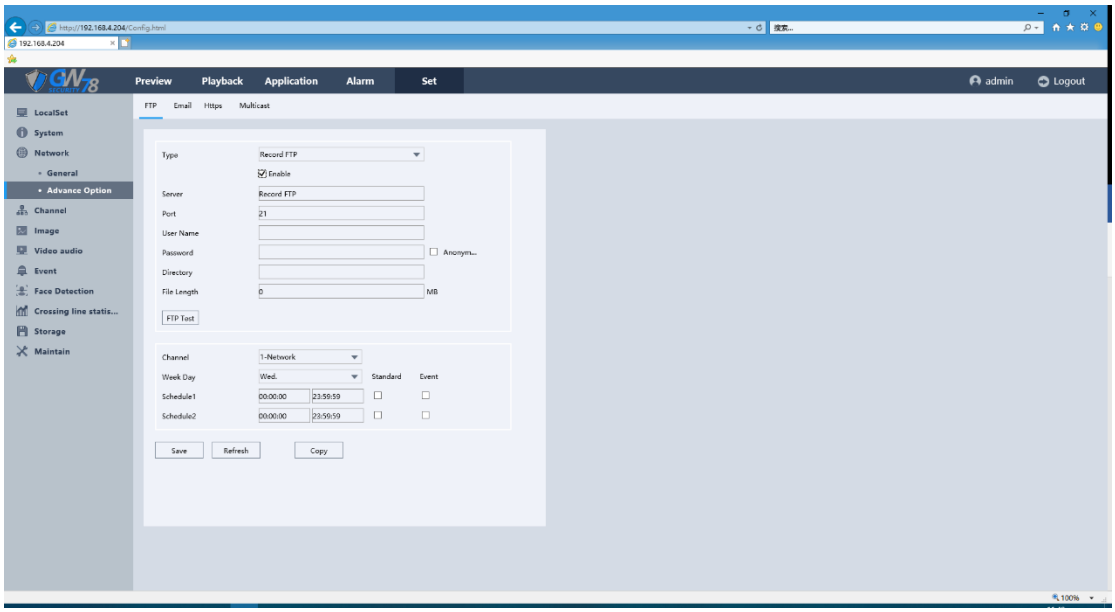


Figure 5-23 FTP Setting Interface

How to configure the FTP:

1. Choose the type of FTP

2. Click the enable check box
3. Configure the FTP Server, port username, password , directory and file length
4. Click save button to save all the settings
5. Click FTP Test button to confirm whether the setting is effective.
6. Set the schedule for each channel
7. Click OK to save all the settings.

5.6.3.2.2 E-mail

Click **Set –>Network -> Advance Option ->Email** to enter the interface, as shown in the **figure 5-24.**

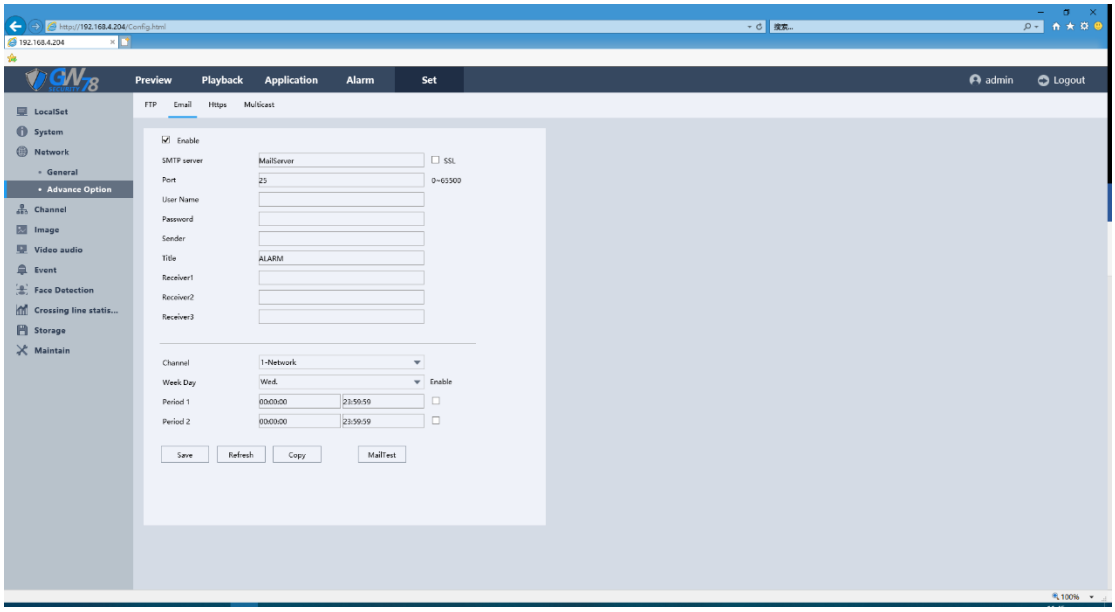


Figure 5-24 E-mail Setting by Web

Before you configure these parameters, you have to click enable button. Then set the relevant parameters, including SMTP server, port, username, password, the email address of sender and receiver. Click Save to save all the settings, Click Mail-Test button to confirm whether the setting is effective.

- **SMTP Server:** The SMTP Server IP address or host name (e.g.smtp.263.net).
- **Port:** The SMTP port. The default TCP/IP port for SMTP is 25.

5.6.3.2.3 Https

Click **Set –>Network -> Advance Option ->Https** to enter the interface, as shown in the **figure 5-25.**

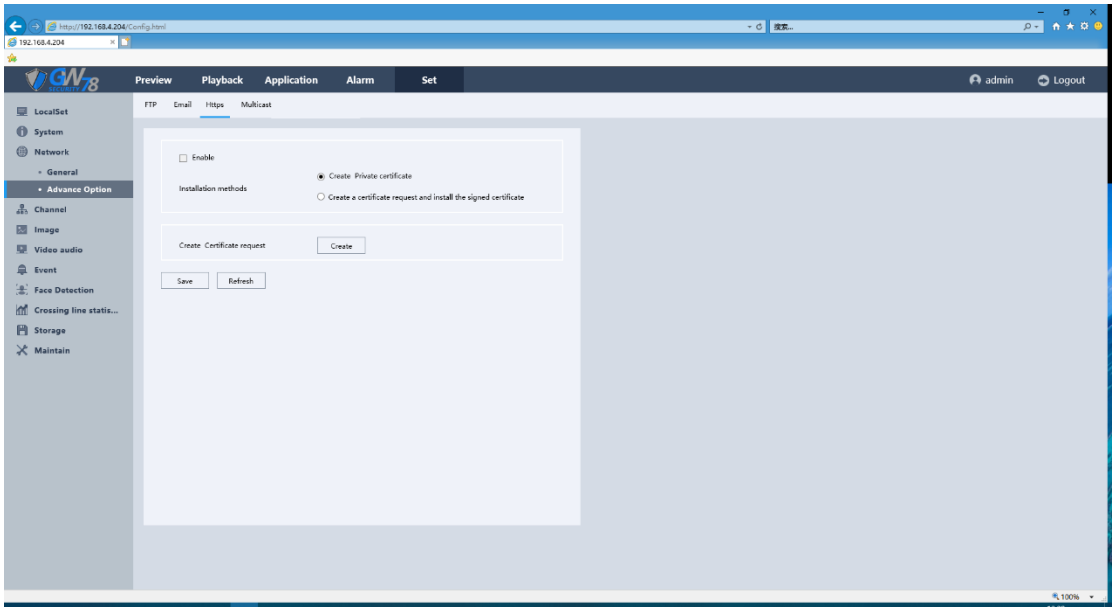


Figure 5-25 Https Setting by Web

5.6.3.2.4 Multicast

Click **Set –>Network -> Advance Option ->Https** to enter the interface, as shown in the **figure 5-26.**

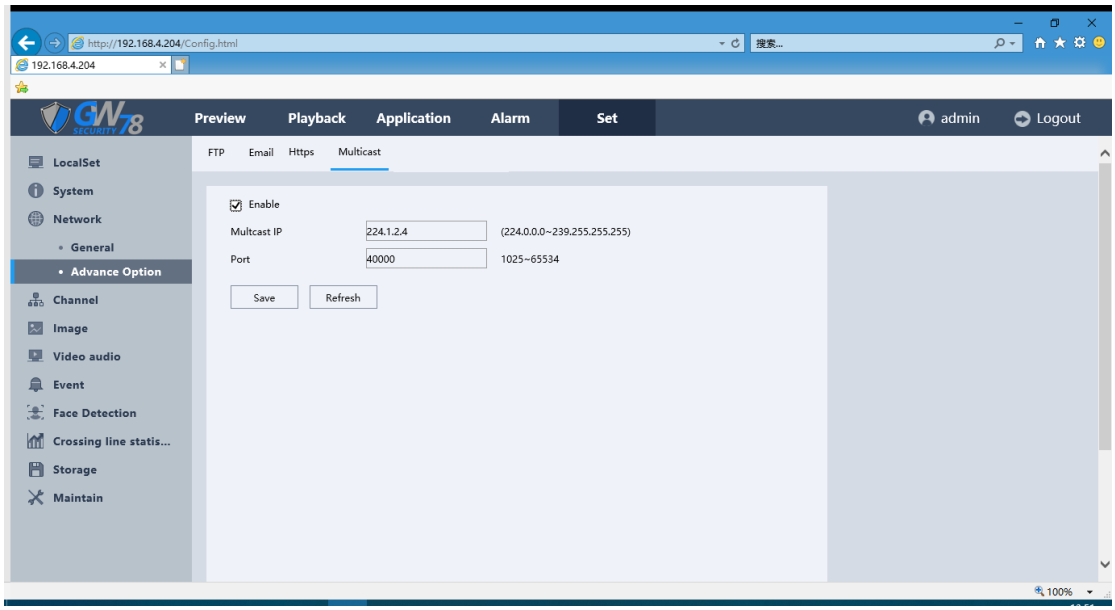


Figure 5-26 Multicast Setting by Web

5.6.4 Channel

5.6.4.1 Digital Channel

Click **Set ->Channel ->Digital Channel**. You can search the IPC in the Internet and set their parameters, including IP address, port, username/password and protocol. As show in **figure 5-27.**

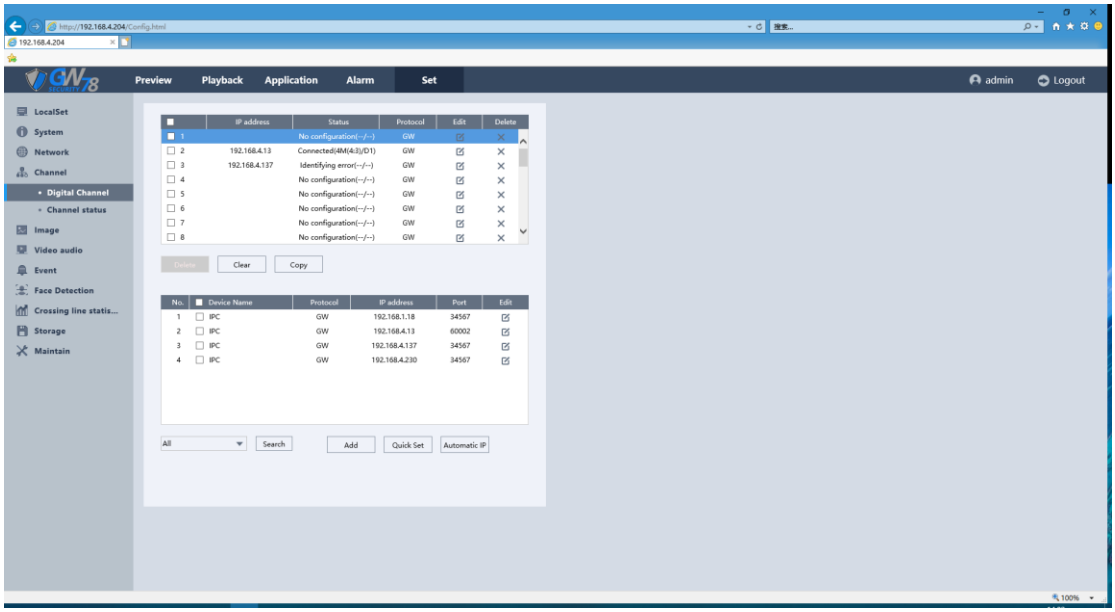


Figure 5-27 Digital Channel of NVR

5.6.4.2 Channel Status

Click **Set ->Channel ->Channel Status.** On this page, you can check the channel name, channel connection status and alarm status, including Motion Detect, Masking and Video Loss. As show in **figure 5-28**.

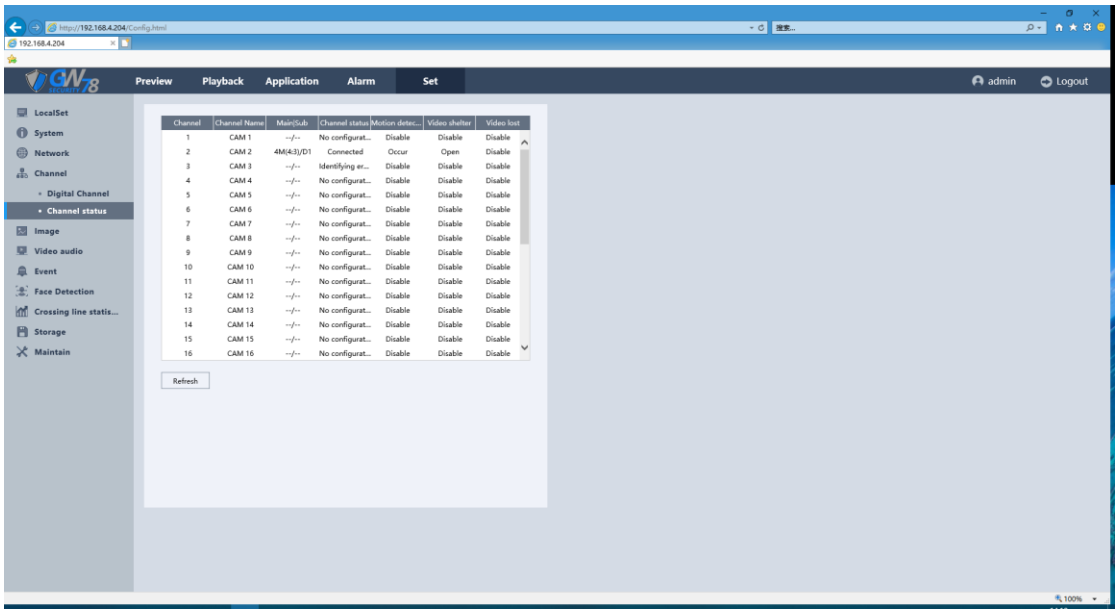


Figure 5-28 Channel Status of NVR

5.6.5 Image

5.6.5.1 Image Configuration

Click **Set ->Image –>Image Configuration** to enter the interface, as show in **figure 5-29.**

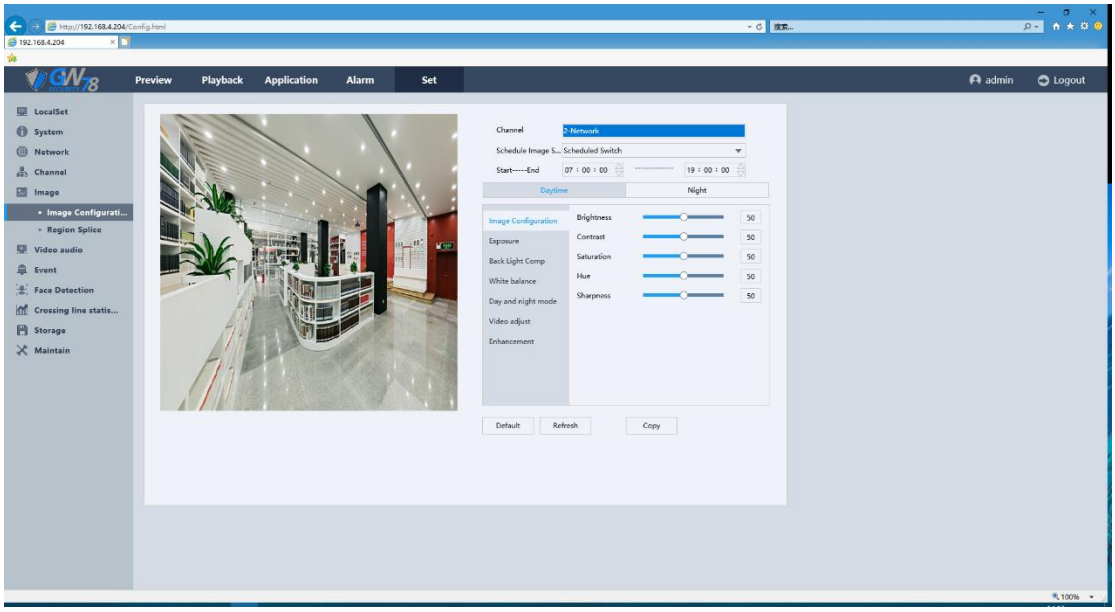


Figure 5-29 Image Configuration Interface

1. Select a channel and then set the relevant parameters, when all the parameters have been configured.
2. If you want to configure the same parameters to another channel, click the Copy button and select any channel you want.
3. Click OK button to save.

5.6.5.2 Cover

Click **Set ->Image –>Cover** to enter the interface, as show in **figure 5-30.** On this page, 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.

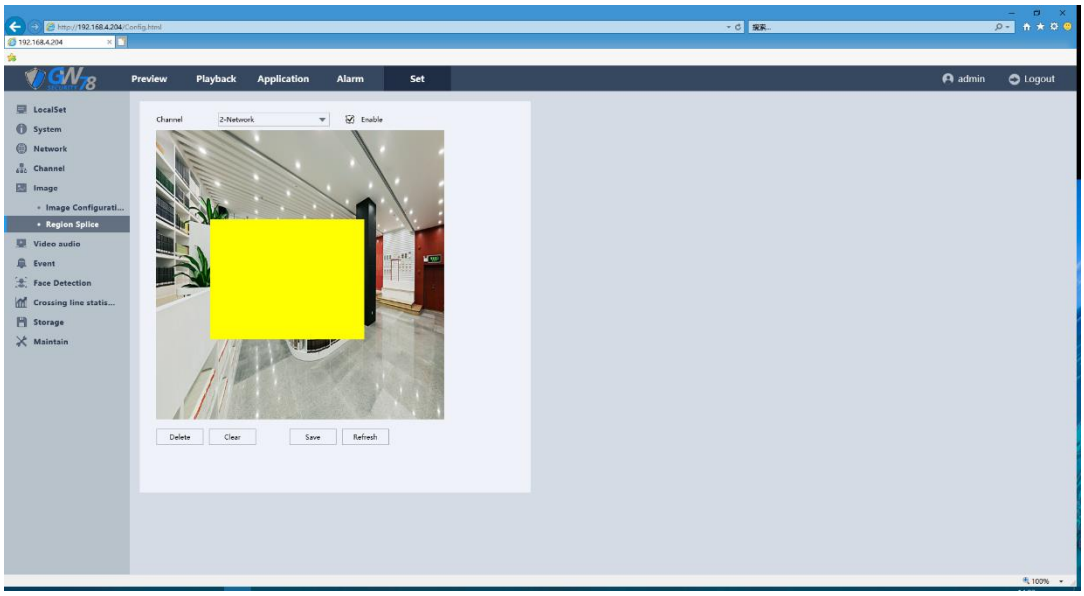


Figure 5-30 Cover Setting Interface

5.6.6 Image

5.6.6.1 Video Setting

Click **Set ->Video –>Video Setting** to enter the interface, as shown in **figure 5-31.**

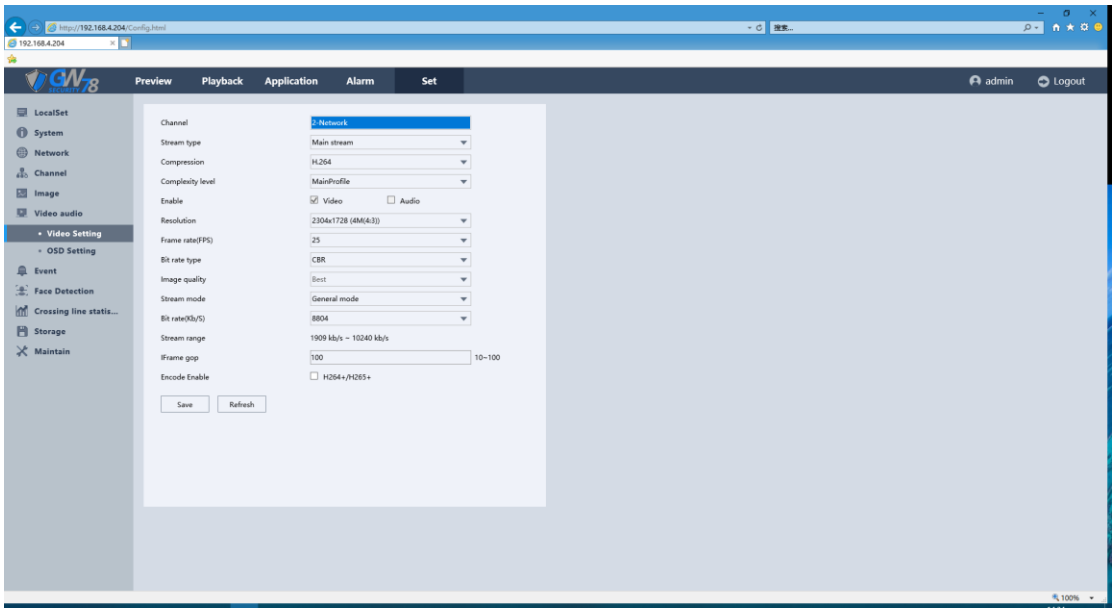


Figure 5-31 Video Setting Interface

5.6.6.2 OSD Setting

Click **Set ->Video –>OSD Setting** to enter the interface, as shown in **figure 5-32.** On this page, you can set the channel title and time title to be viewed or recorded.

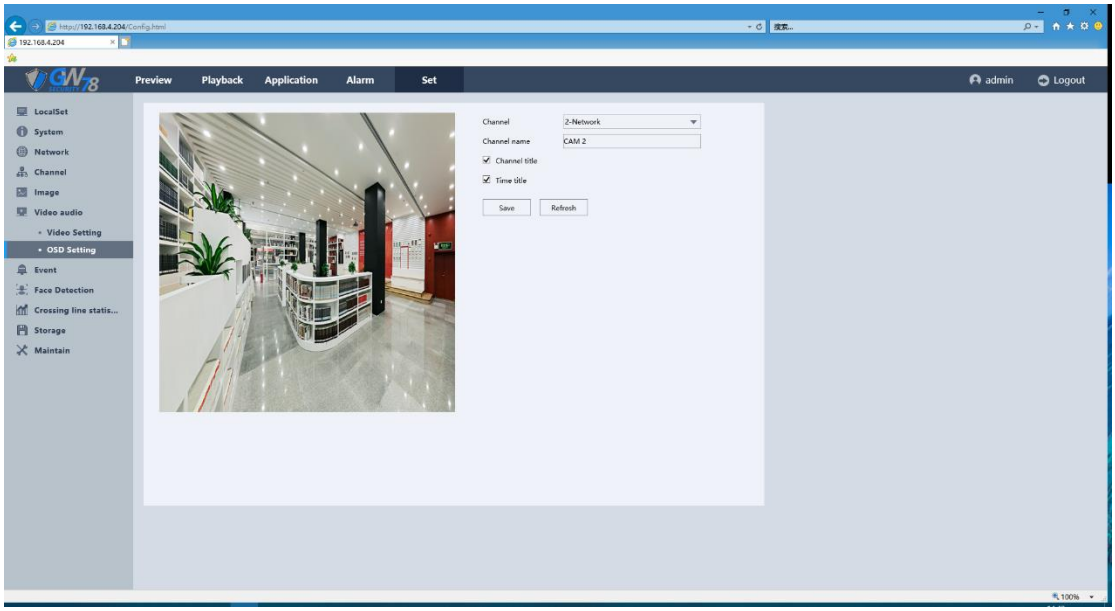


Figure 5-32 OSD Setting Interface

5.6.7 Event

5.6.7.1 Basic Event

The feature is similar to the local alarm of NVR. Event types are composed of **Motion Detection**, **Masking**, **Video lost and System Alert**.
Taking motion detection for example to illustrate:

5.6.7.1.1 Motion Detection

Click the **Set ->Event ->Basic Event ->Motion Detection**. As show in **figure 5-33.**

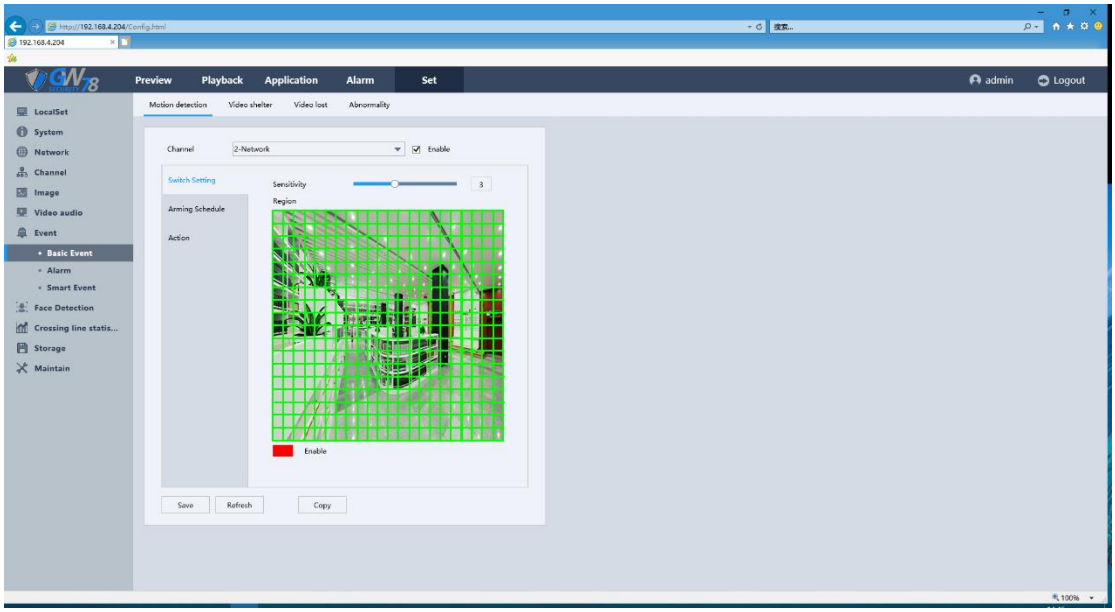


Figure 5-33 Motion Detect Setting by Web

- **Region:** Set the alarm area.
- **Sensitivity:** Change the sensitivity of the motion detection. The higher the sensitivity, the easier to trigger alarm.
- **Channel:** Can be set for each channel.
- **Enable:** Motion detection-enabled switch.
- **Schedule:** Set the alarm time.
- **Alarm Linkage Control:** Include alarm output, show message, buzzer, send Emails, alarm recording, PTZ Act, tour, Buzzer and Snapshot.

5.6.7.1.2 Masking

Click the **Set ->Event ->Basic Event ->Masking**. As show in **figure 5-34**

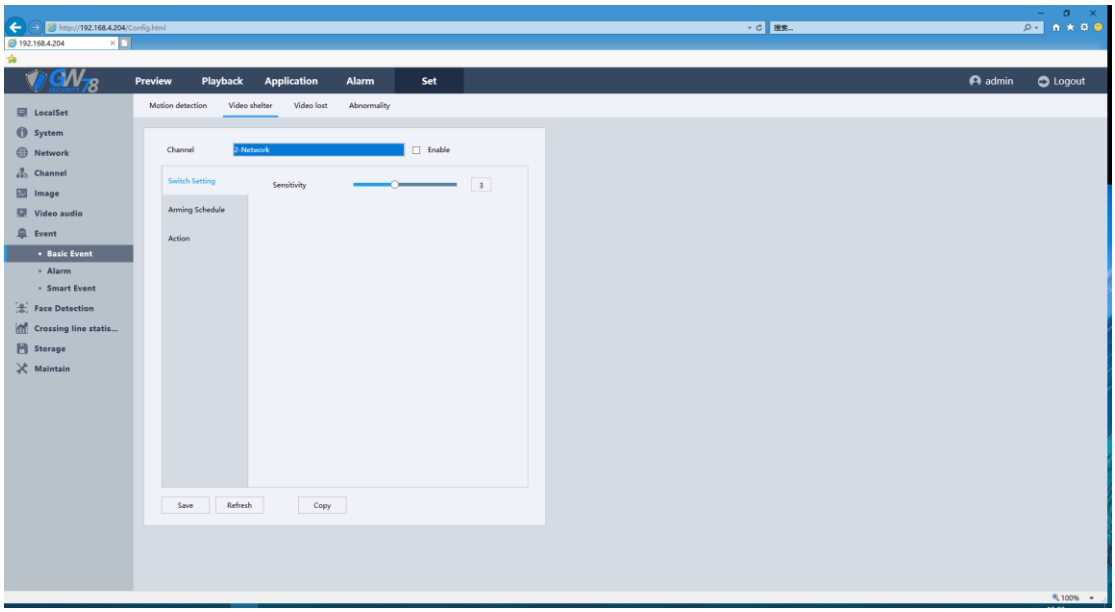


Figure 5-34 Masking Setting by Web

5.6.7.1.3 Video lost

Click the **Set ->Event ->Basic Event ->Video lost**. As show in **figure 5-35.**

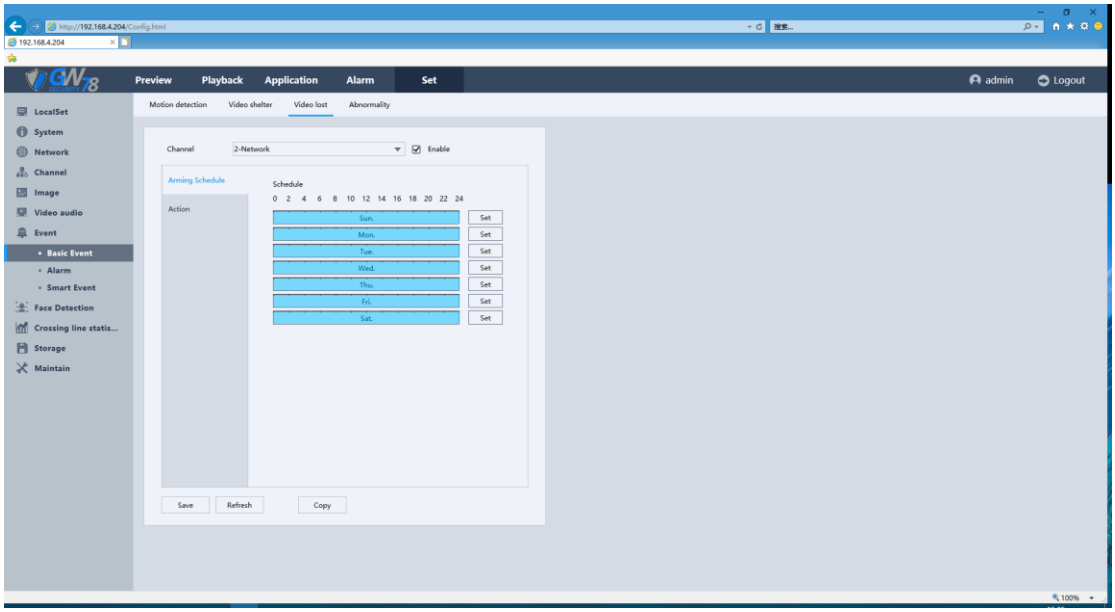


Figure 5-35 Video lost Setting by Web

5.6.7.1.4 System Alert

Click the **Set ->Event ->Basic Event ->System Alert**. As show in **figure 5-36.** It is similar to the local abnormality of the NVR. You can set the alarm recording, screen tips, buzzer alarm, sending Emails, alarm output.

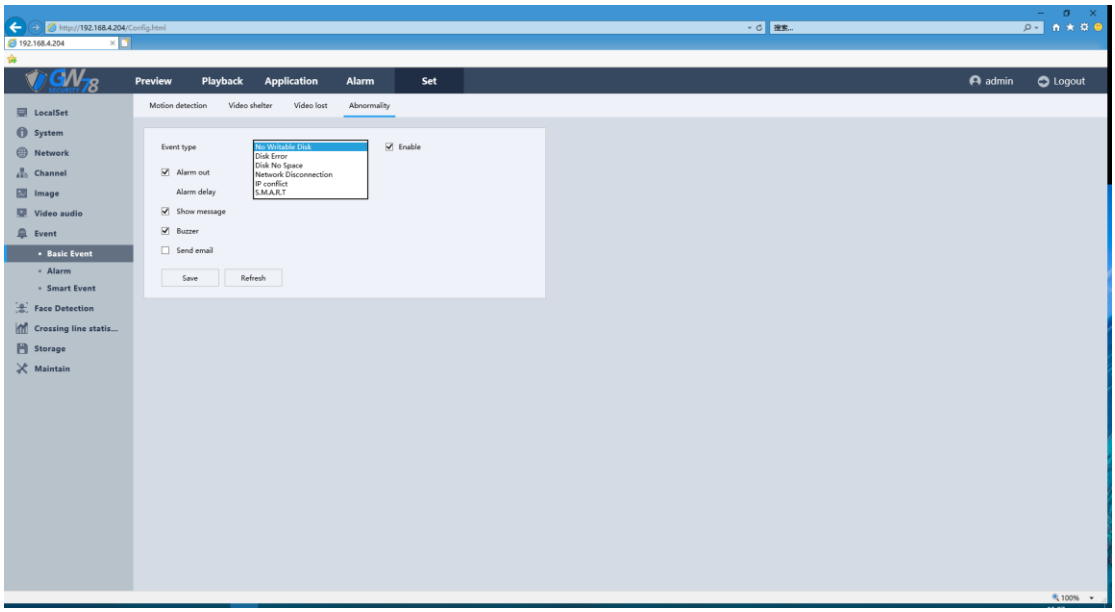


Figure 5-36 System Alert Setting by Web

- **No writable disk:** There is no disk or the disk status is not available, such as read-only disk.
- **Hard disk error:** The connection between the disk and the device is error, such as the data lines are broken.
- **Disk No Space:** Alarm when the remaining space of the hard disk reaches the set value.
- **Network Disconnection:** Alarm when the network cable is disconnected.
- **IP Conflict:** Alarm when the IP address is the same as the others.
- **S.M.A.R.T:** This exception is about HDD health detection. It will be triggered when the HDD of device have some problems and not work under good condition. It supports these methods to remind the user about the exception: Show Message and Buzzer.

5.6.7.2 Alarm

You can set up alarm port and linkage operations.

5.6.7.2.1 Alarm In

Click the **Set ->Event ->Alarm ->Alarm In**. As show in **figure 5-37.**

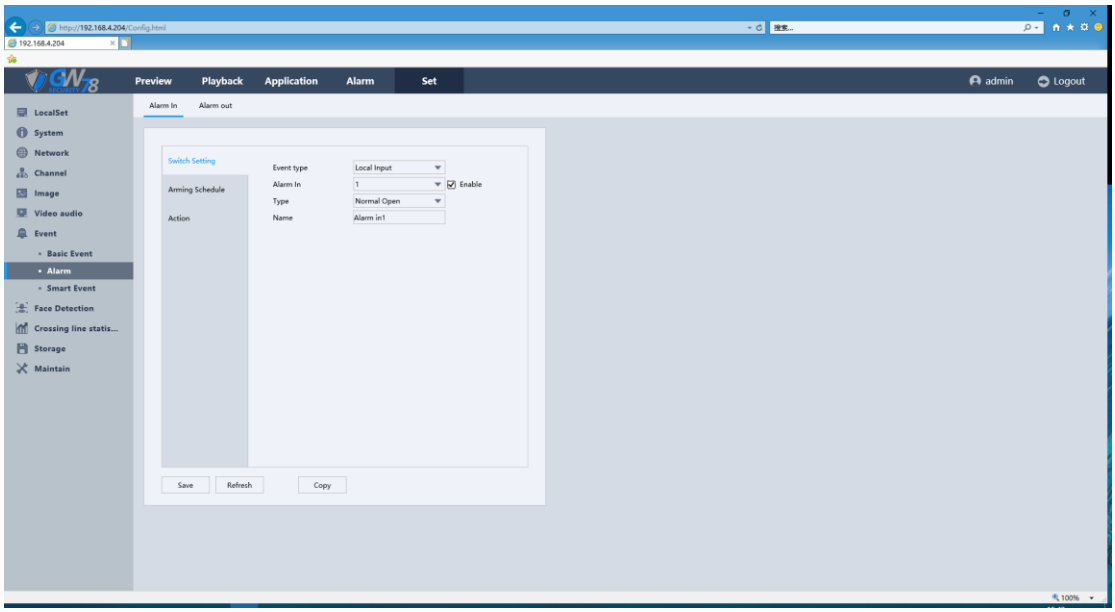


Figure 5-37 Alarm In Setting by Web

5.6.7.2.2 Alarm Out

Click the **Set ->Event ->Alarm ->Alarm Out**. As show in **figure 5-38.**

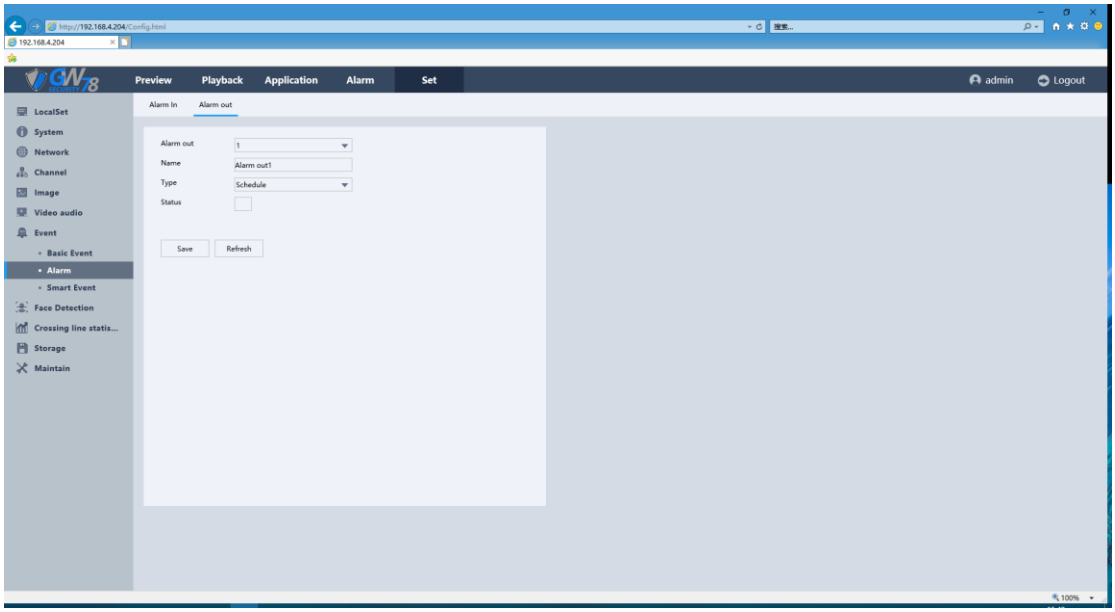


Figure 5-38 Alarm Out Setting by Web

5.6.7.3 Smart Event

5.6.7.3.1 Line Crossing

Click the **Set ->Event -> Smart Event -> Line Crossing**. As show in **figure 5-39.**

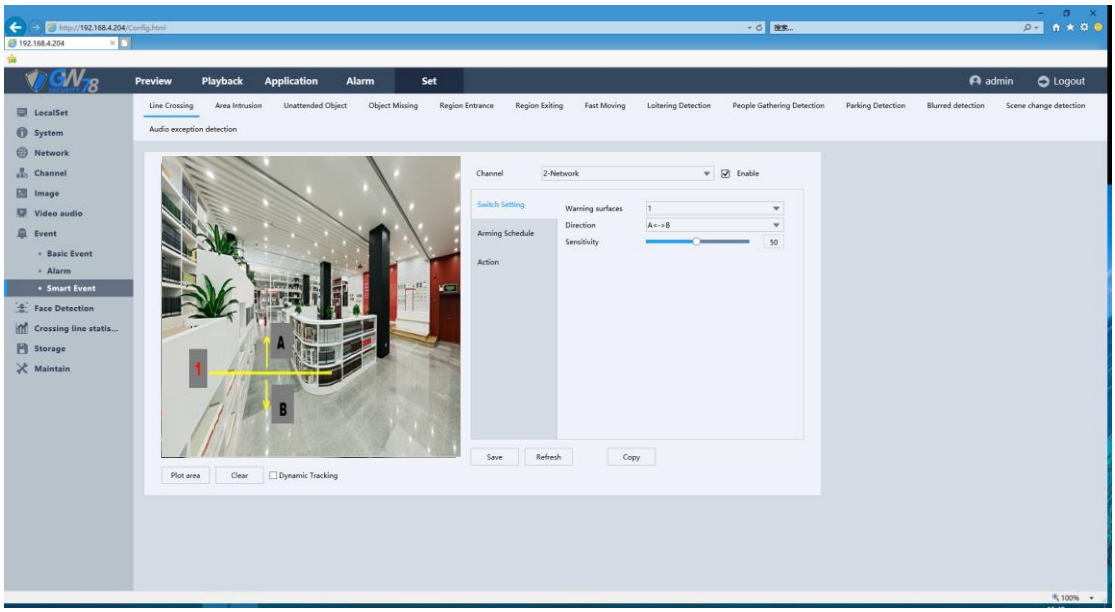


Figure 5-39 Line Crossing Setting

It is similar to the NVR local settings, you can also choose to show the detect boundaries on the preview screen. You can set four lines that have a direction, the device will alarm when it detects the behavior of cross-border.

- **Plot area**: Set the detect boundaries.
- **Sensitivity**: Change the sensitivity of the border detection. The higher the sensitivity, the easier to trigger alarm.
- **Channel**: Can be set for each channel.
- **Enable**: Border detection enabled switch.
- **Arming Schedule**: Set the alarm time.
- **Action**: Include alarm output, show message, buzzer, send Emails, alarm recording, PTZ Act and tour.

5.6.7.3.2 Area Intrusion

Click the **Set ->Event -> Smart Event ->Area Intrusion**. As show in **figure 5-40.**

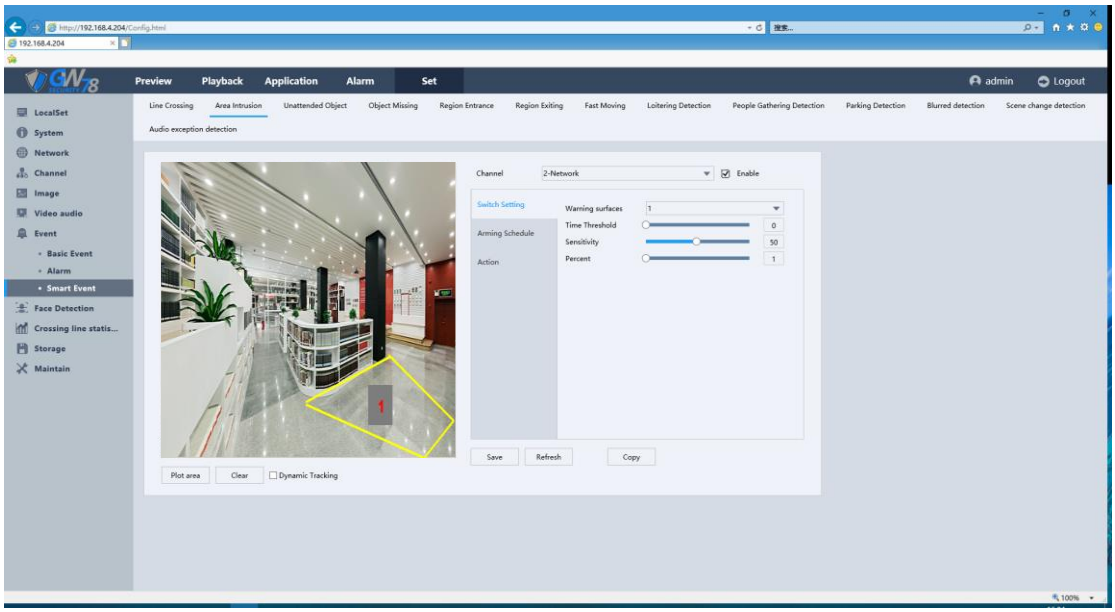


Figure 5-40 Area intrusion Setting

It is similar to the NVR local settings, you can also choose to show the detect areas on the preview screen. You can set four different test areas that have a direction, the device will alarm when it detects the behavior of area intrusion.

- **Plot area:** Set the detect areas.
- **Sensitivity:** Change the sensitivity of the Area Intrusion. The higher the sensitivity, the easier to trigger alarm.
- **Channel:** Can be set for each channel.
- **Enable:** Area Intrusion enabled switch.
- **Arming Schedule:** Set the alarm time.
- **Action:** Include alarm output, show message, buzzer, send Emails, alarm recording, PTZ Act and tour.

5.6.7.3.3 Unattended Object

Click the **Set ->Event -> Smart Event -> Unattended Object**. As show in **figure 5-41.**

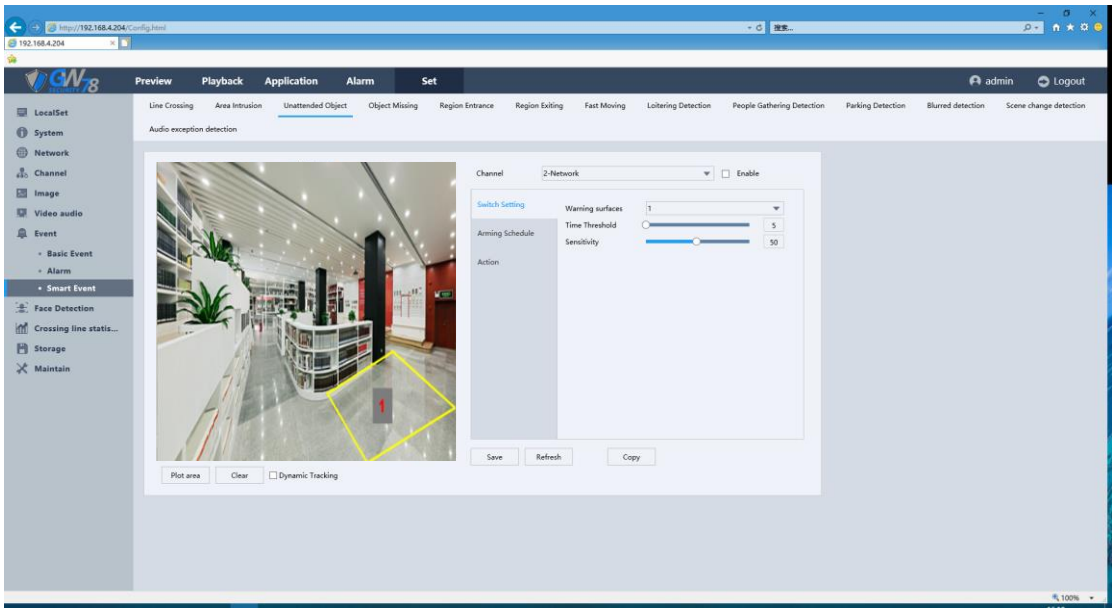


Figure 5-41 Unattached Object Setting

Unattached Object function detects objects that left in a certain pre-defined virtual region, and some certain actions can be taken when the alarm is triggered.

- **Plot area:** Set the detect areas.
- **Sensitivity:** Change the sensitivity of the Area Intrusion. The higher the sensitivity, the easier to trigger alarm.
- **Channel:** Can be set for each channel.
- **Time threshold:** For example, if you set the time threshold is 5 seconds and someone intrude your area about 3 seconds alarm cannot be triggered.
- **Enable:** Area Intrusion enabled switch.
- **Arming Schedule:** Set the alarm time.
- **Action:** Include alarm output, show message, buzzer, send Emails, alarm recording, PTZ Act and tour.

5.6.7.3.4 Object Missing

Click the **Set ->Event -> Smart Event -> Unattached Object**. As show in **figure 5-42.**

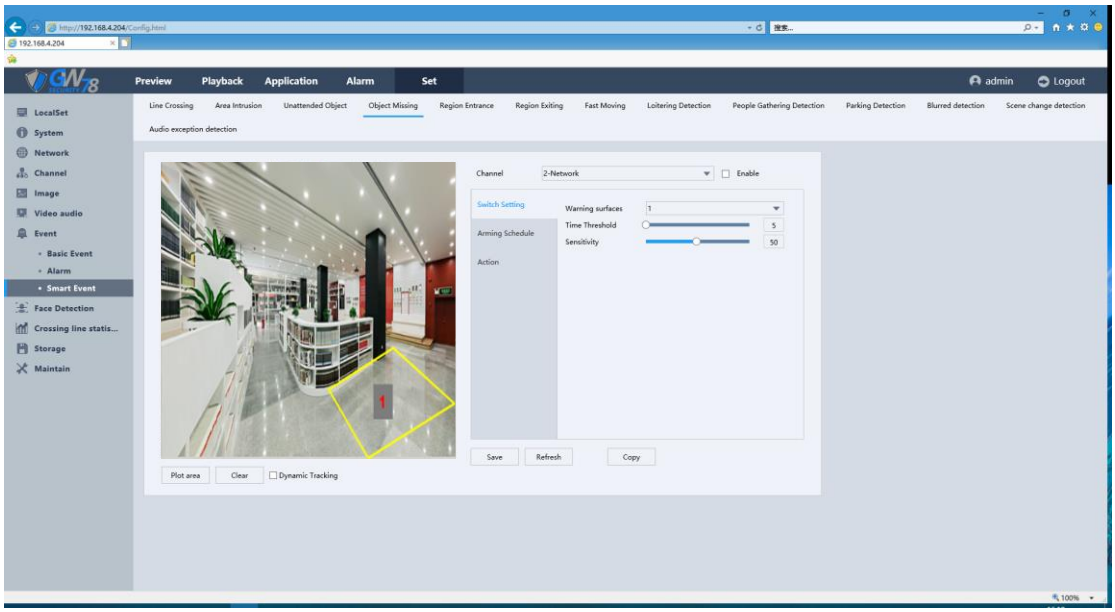


Figure 5-42 Object Missing Setting

Object Missing function detects objects that missing in a certain pre-defined virtual region, and some certain actions can be taken when the alarm is triggered.

- **Plot area:** Set the detect areas.
- **Sensitivity:** Change the sensitivity of the Area Intrusion. The higher the sensitivity, the easier to trigger alarm.
- **Channel:** Can be set for each channel.
- **Time threshold:** For example, if you set the time threshold is 5 seconds and someone intrude your area about 3 seconds alarm cannot be triggered.
- **Enable:** Area Intrusion enabled switch.
- **Arming Schedule:** Set the alarm time.
- **Action:** Include alarm output, show message, buzzer, send Emails, alarm recording, PTZ Act and tour.

5.6.7.3.5 Region Entrance

Click the **Set ->Event -> Smart Event -> Region Entrance**. As show in **figure 5-43.**

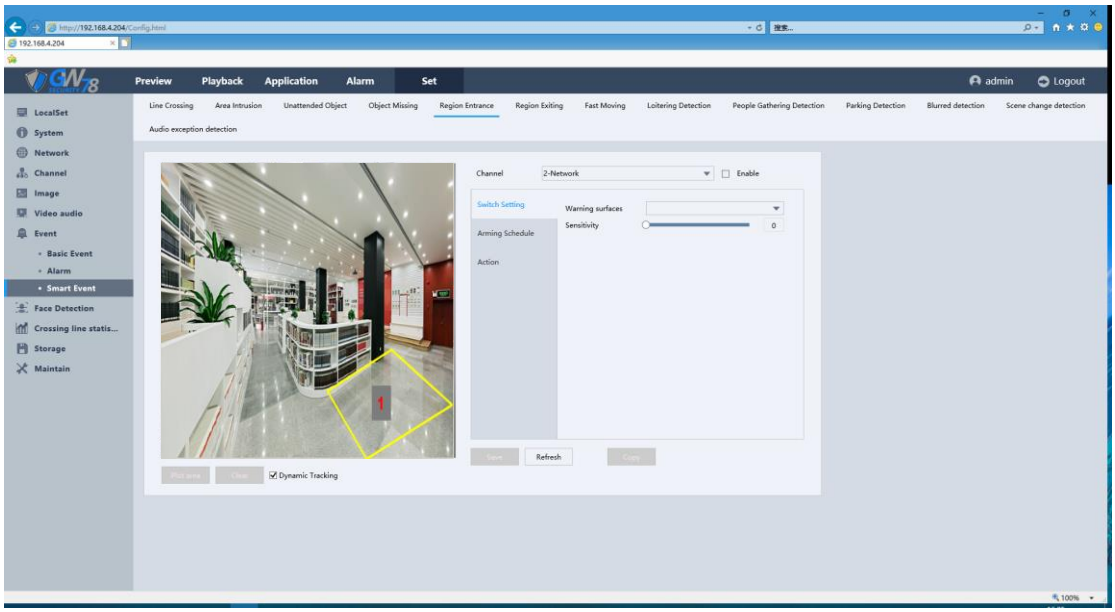


Figure 5-43 Region Entrance Setting

Region Entrance function detects people, vehicle or other objects which enter in a forbidden pre-defined virtual region from outside, and some certain actions can be taken when the alarm is triggered.

- **Plot area:** Set the detect areas.
- **Sensitivity:** Change the sensitivity of the Area Intrusion. The higher the sensitivity, the easier to trigger alarm.
- **Channel:** Can be set for each channel.
- **Enable:** Area Intrusion enabled switch.
- **Arming Schedule:** Set the alarm time.
- **Action:** Include alarm output, show message, buzzer, send Emails, alarm recording, PTZ Act and tour.

5.6.7.3.6 Region Exiting

Click the **Set ->Event -> Smart Event -> Region Exiting**. As show in **figure 5-44.**

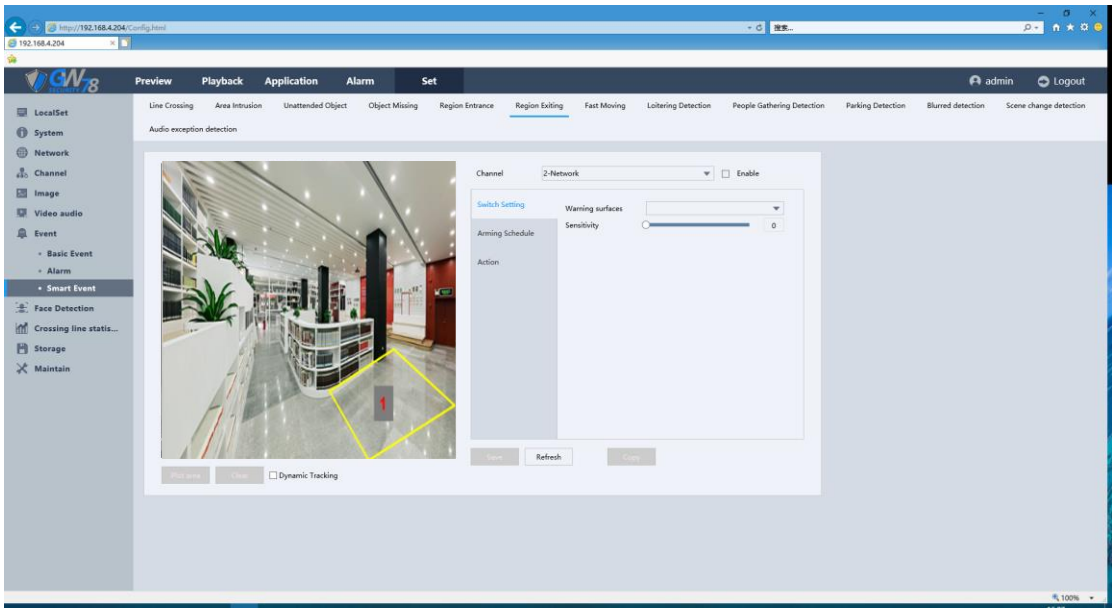


Figure 5-44 Region Exiting Setting

Region Exiting function detects people, vehicle or other objects which exit a forbidden pre-defined virtual region from inside, and some certain actions can be taken when the alarm is triggered.

- **Plot area:** Set the detect areas.
- **Sensitivity:** Change the sensitivity of the Area Intrusion. The higher the sensitivity, the easier to trigger alarm.
- **Channel:** Can be set for each channel.
- **Enable:** Area Intrusion enabled switch.
- **Arming Schedule:** Set the alarm time.
- **Action:** Include alarm output, show message, buzzer, send Emails, alarm recording, PTZ Act and tour.

5.6.7.3.7 Fast Moving

Click the **Set ->Event -> Smart Event -> Fast Moving**. As show in **figure 5-45.**

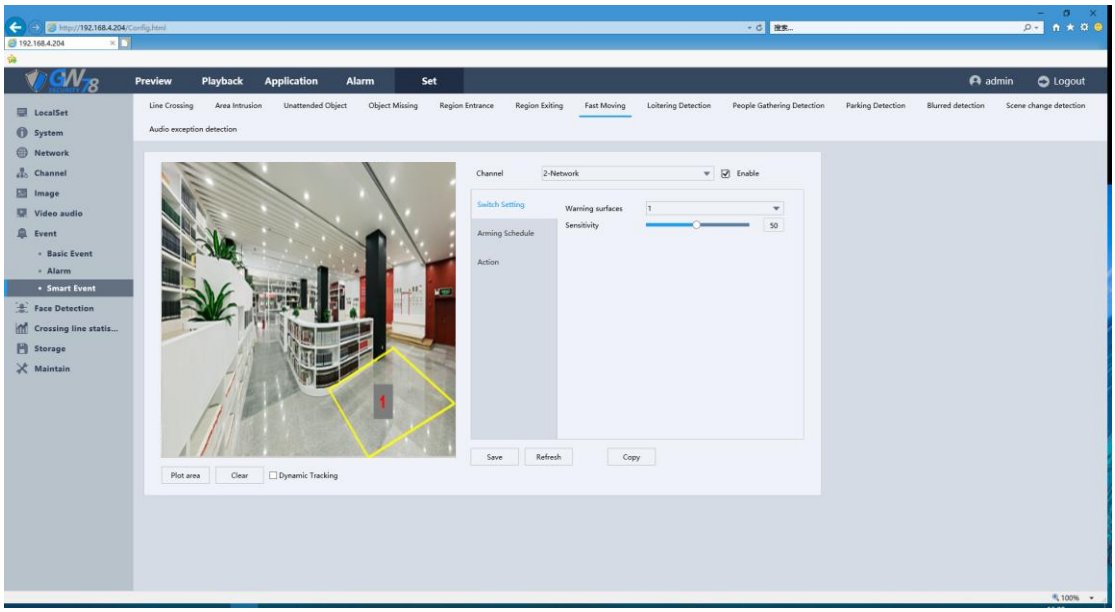


Figure 5-45 Fast Moving Setting

Fast Moving function detects people, vehicle, and some other objects that move with forbidden speed; certain actions can be taken when the alarm is triggered.

- **Plot area:** Set the detect areas.
- **Sensitivity:** Change the sensitivity of the Area Intrusion. The higher the sensitivity the easier it is to trigger alarm.
- **Channel:** Can be set for each channel.
- **Enable:** Area Intrusion enabled switch.
- **Arming Schedule:** Set the alarm time.
- **Action:** Include alarm output, show message, buzzer, send Emails, alarm recording, PTZ Act, and tour.

5.6.7.3.8 Loitering Detection

Click the **Set ->Event -> Smart Event -> Loitering Detection**. As show in **figure 5-46.**

Journey: When people walk into and wander in an area, once the length he has wandered over half of the longest diagonal line of this area, it will trigger the alarm.

Weight: When people go back and forth at least 3 times, or go in a non-linear path within a pre-defined virtual region; certain actions can be taken when the alarm is triggered.

Offsets: When people change his original direction and walk for over half of the area, then it will trigger the alarm.

- **Plot area:** Set the detect areas.
- **Channel:** Can be set for each channel.
- **Switch Setting:** Set warning surface, time threshold and sensitivity.
- **Enable:** Area Intrusion enabled switch.
- **Arming Schedule:** Set the alarm time.
- **Action:** Include alarm output, show message, buzzer, send Emails, alarm recording, PTZ Act, and tour.

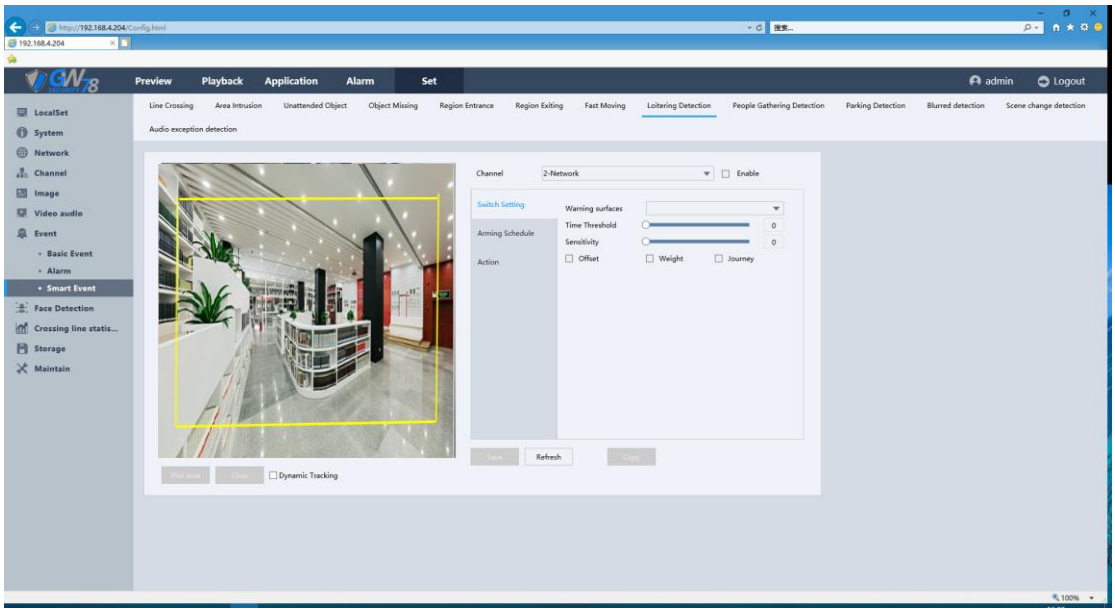


Figure 5-46 Loitering Detection Setting

5.6.7.3.9 People Gathering Detection

Click the **Set ->Event -> Smart Event -> People Gathering Detection**. As show in **figure 5-47.**

People Gathering Detection alarm is triggered when there are many people in a pre-defined virtual region; certain actions can be taken when the alarm is triggered.

Please refer 4.6.11 for detailed information.

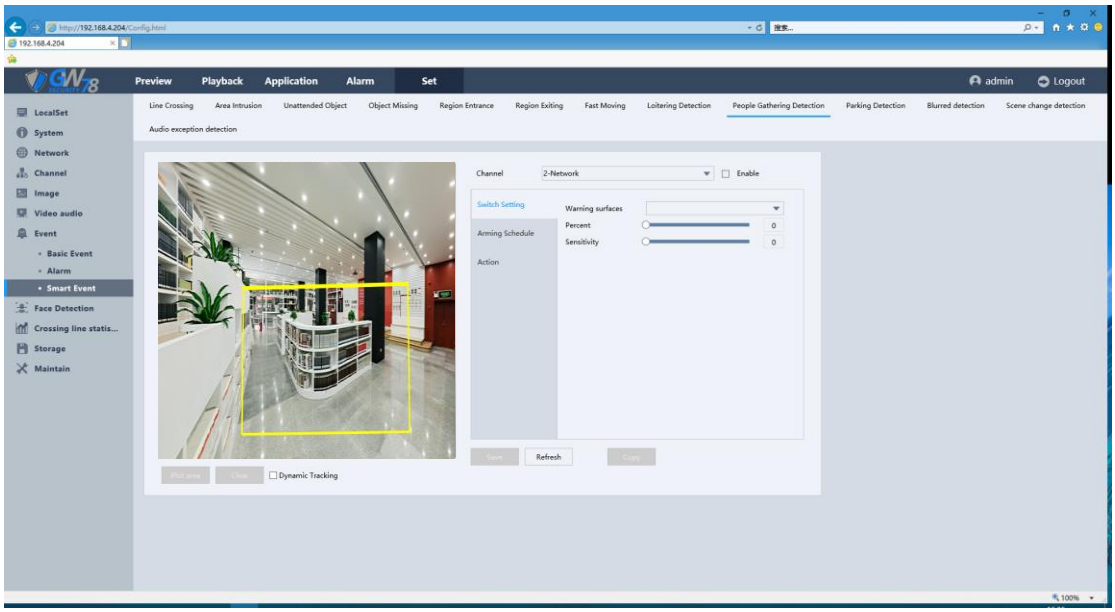


Figure 5-47 People Gathering Detection Setting

5.6.7.3.10 Parking Detection

Click the **Set ->Event -> Smart Event -> Parking Detection**. As show in **figure 5-48.**
Please refer 4.6.1.10 for detailed information.

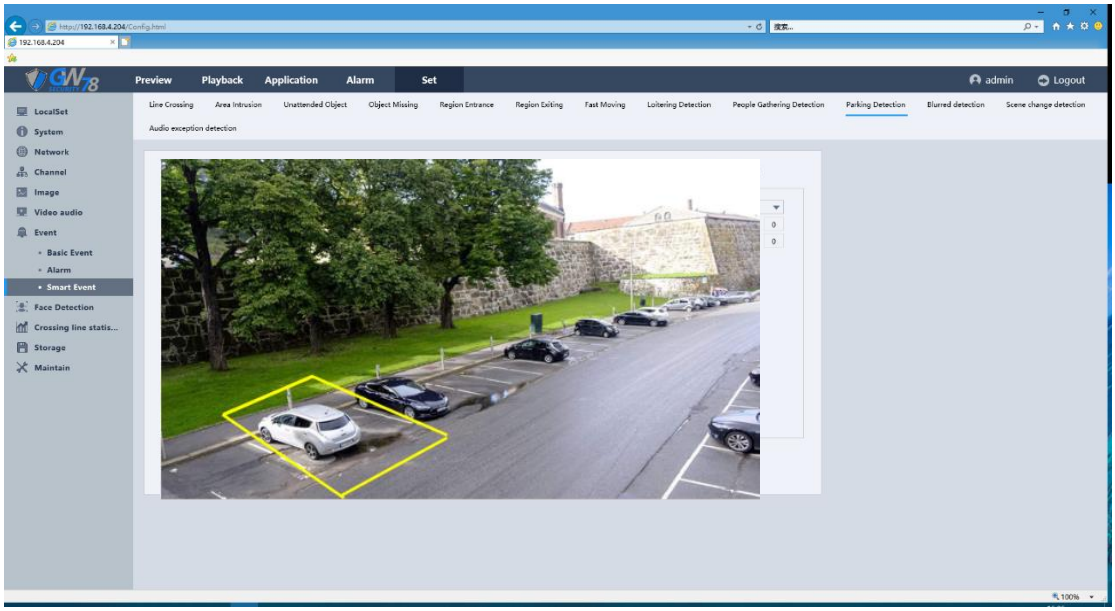


Figure 5-48 Parking Detection Setting

5.6.7.3.11 Blurred Detection

Click the **Set ->Event -> Smart Event -> Blurred Detection**. As show in **figure 5-49.**
Please refer 4.6.2.1.1 for detailed information.

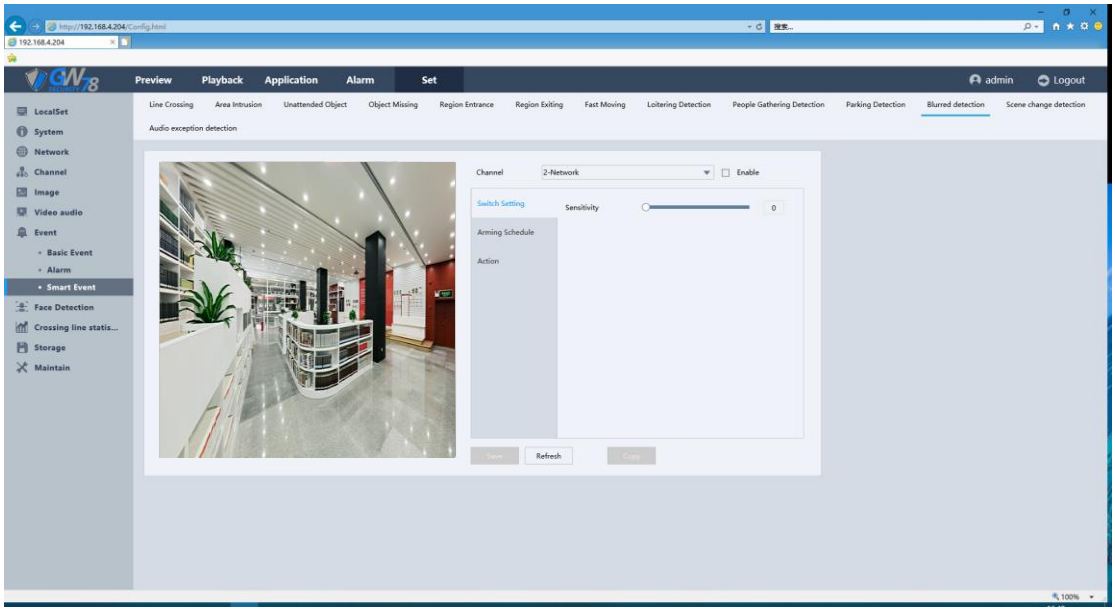


Figure 5-49 Blurred Detection Setting

5.6.7.3.12 Scene Change Detection

Click the **Set ->Event -> Smart Event -> Scene Change Detection**. As show in **figure 5-50.**
Please refer 4.6.2.1.2 Scene Change for detailed information.

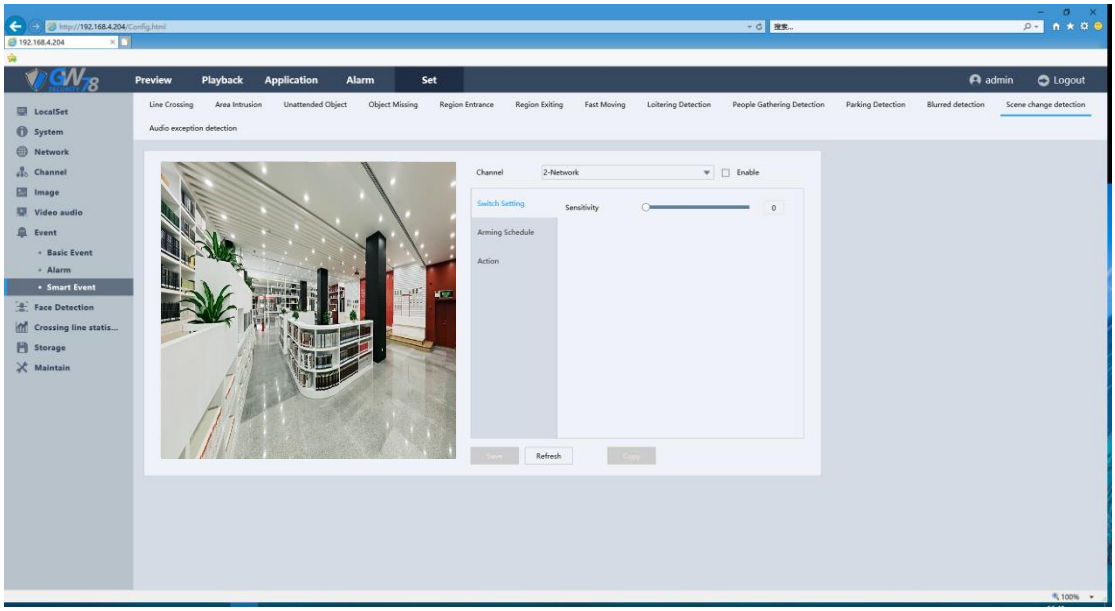


Figure 5-50 Scene Change Detection Setting

5.6.7.3.13 Audio Exception Detection

Click the **Set ->Event -> Smart Event -> Audio Exception Detection**. As show in **figure 5-51.**
Please refer section 4.6.2.2 Audio Exception Detection for detailed information.

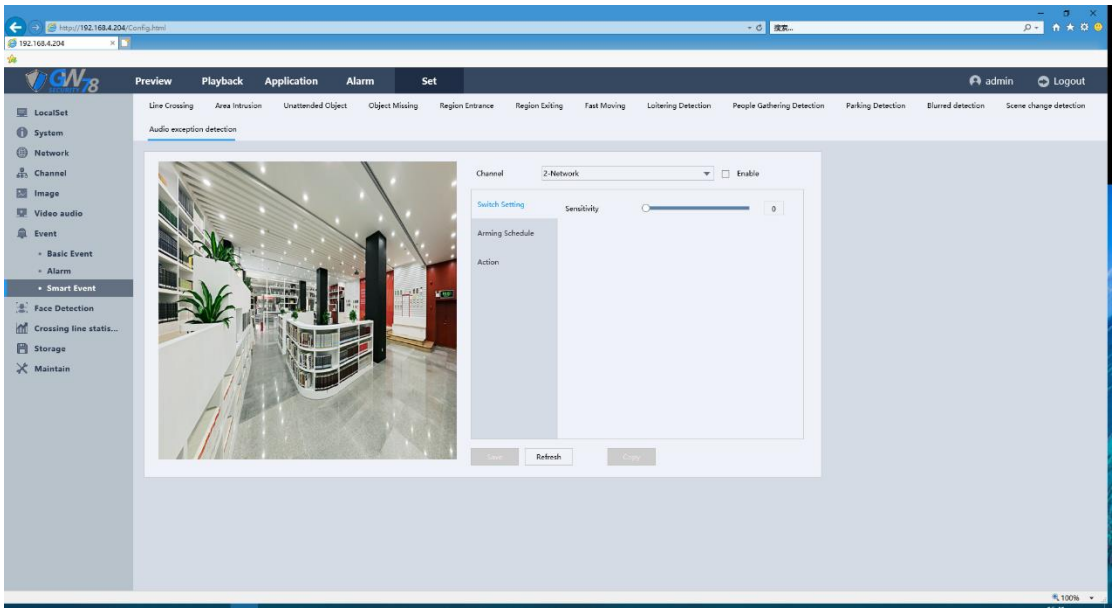


Figure 5-51 Audio Exception Detection Setting

5.6.8 Face Detection

5.6.8.1 Base

Click the **Set ->Face Detection ->Base**. As show in **figure 5-52.**

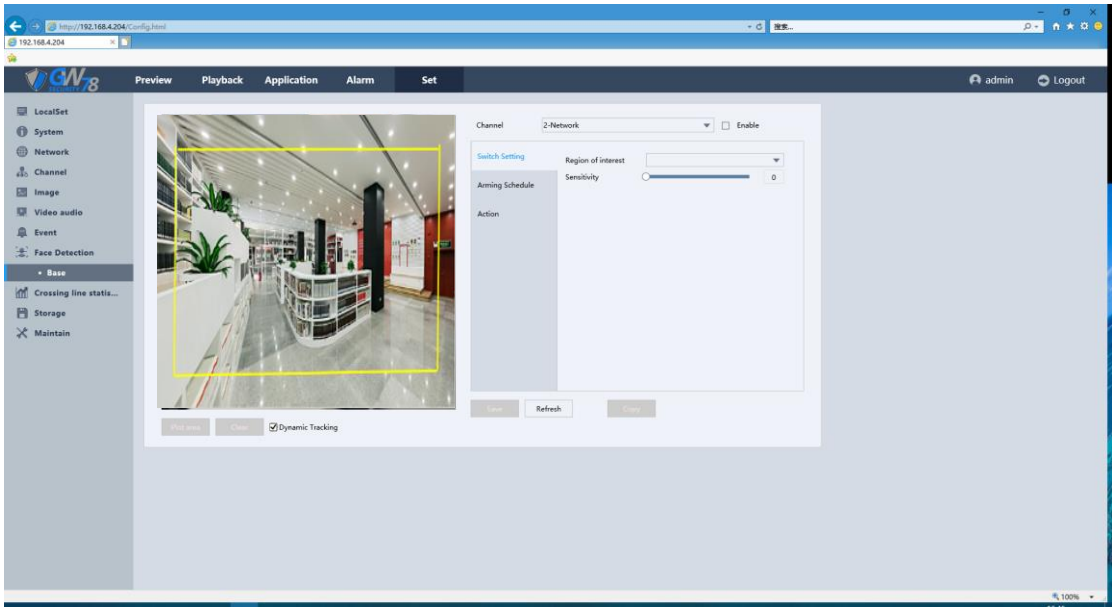


Figure 5-52 Face Detection Setting

5.6.9 Crossing Line Statistics

Click the **Set ->Crossing Line Statistics**. As show in **figure 5-53.**

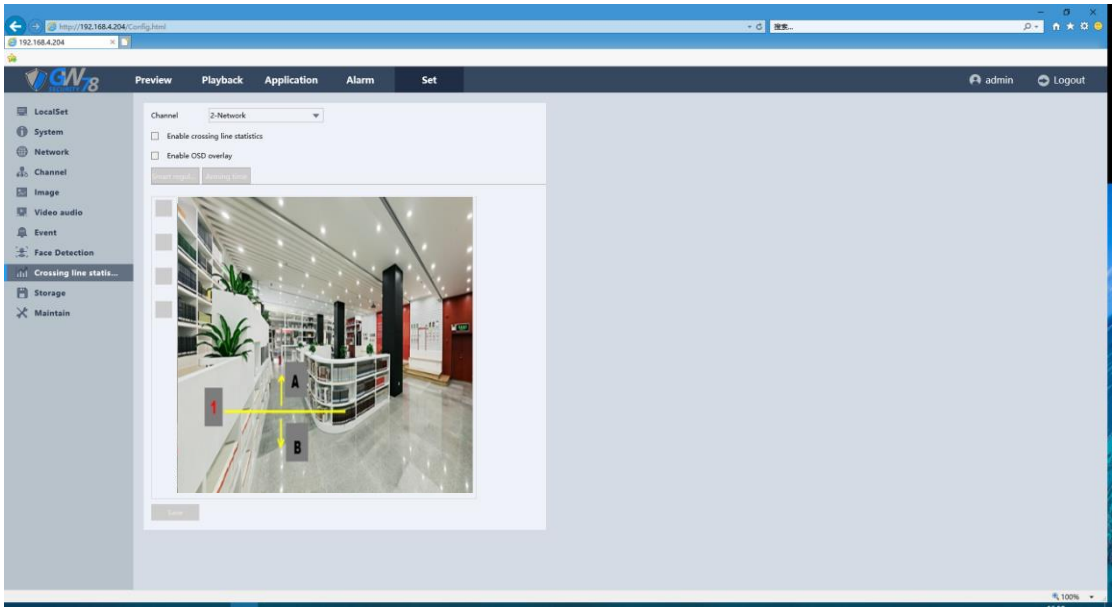


Figure 5-53 Crossing Line Statistics

5.6.10 Storage

5.6.10.1 Record & Snapshot

5.6.10.1.1 Record

Click the **Set -> Storage-> Record & Snapshot-> Record.** As show in **figure 5-54.**

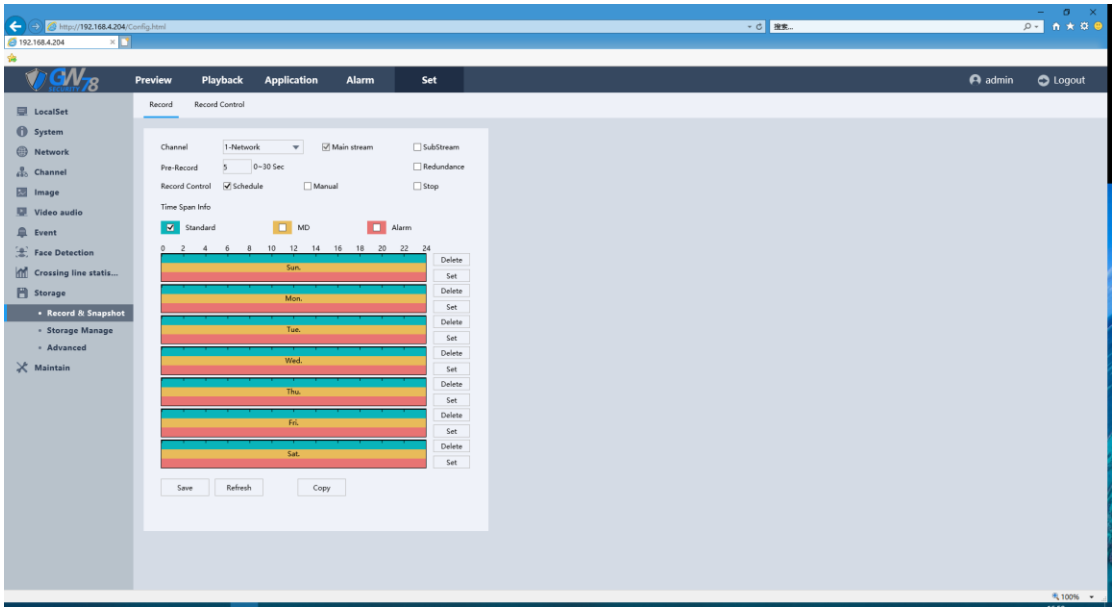


Figure 5-54 Record Schedule Interface

The parameters should be consistent with NVR local setting .Green stands for normal record, yellow stands for motion detection, red stands for I/O trigger record.

- **Channel**: set record type for each channel, mainstream and sub stream are for choice.
- **Pre-record**: Set the pre-record time for each channel.
- **Record Control**: Three kinds of video control such as schedule, manual and stop.

How to configure Record Schedule:

1. You can choose the day of which you want to set the schedule, click the set button on the right.
2. The default is to schedule an all-day recording, to arrange other schedule, set the Start/End time for each period.
3. Select the record type on the right hand side
4. Click Ok to save all the settings.
5. Repeat the above edit schedule steps to schedule recording for other days in the week.

If the schedule can also be applied to other days, click the day you want to configure the same schedule, and click OK.

Note:

- Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other.

5.6.10.1.2 Record Control

Click the **Set -> Storage-> Record & Snapshot->Record Control**. You can quickly set the record control mode for each channel. It is similar to the NVR local settings.

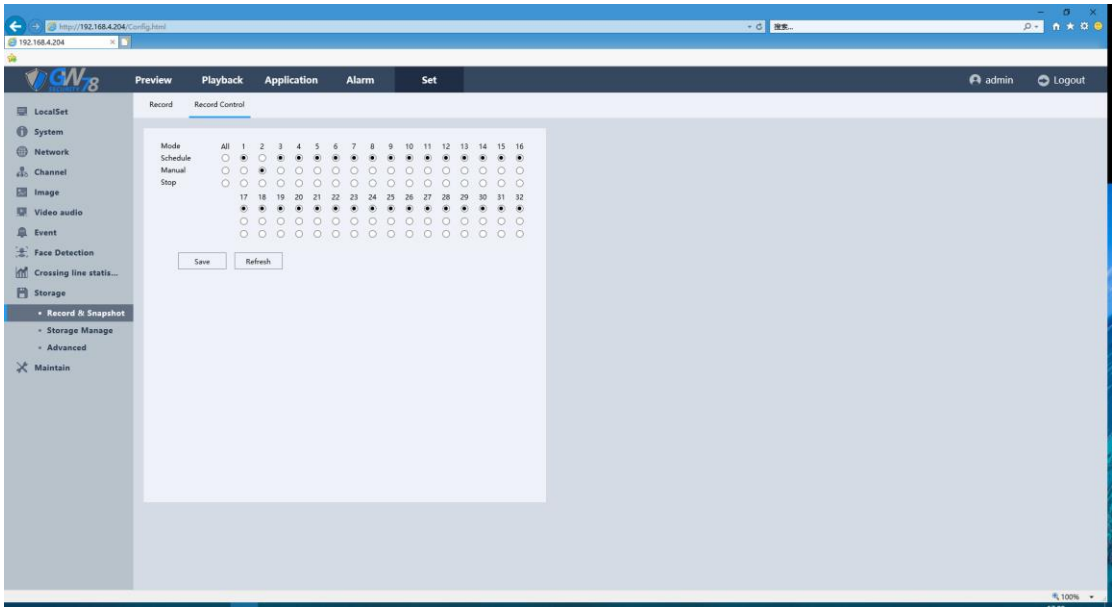


Figure 5-55 Quick Record Control by Web

5.6.10.2 Storage Manage

5.6.10.2.1 Storage Manage

Click the **Set -> Storage-> Storage Manage -> Storage Manage**.

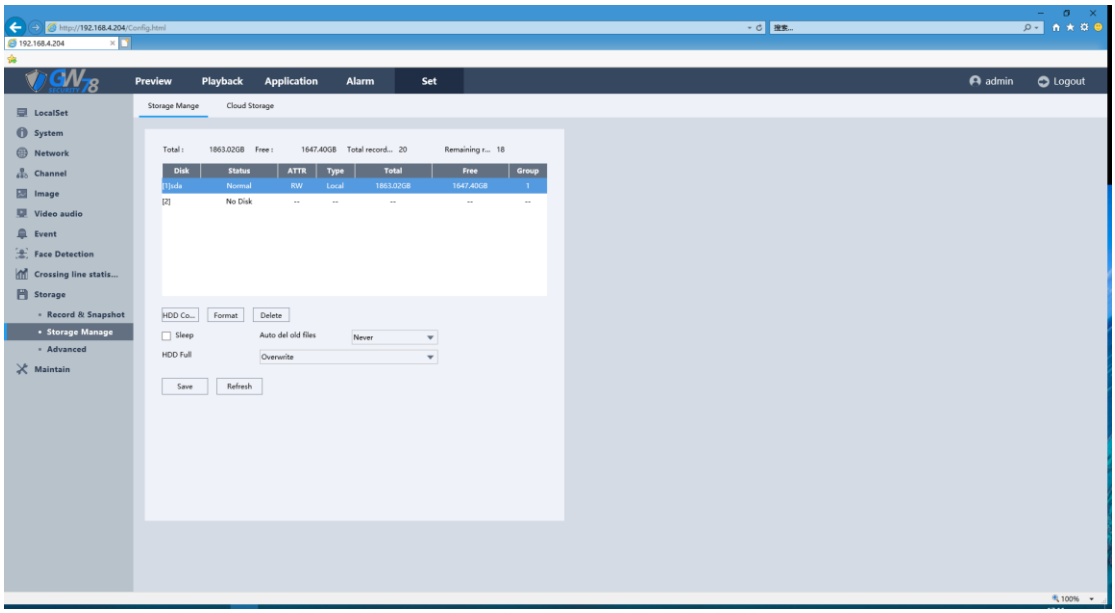


Figure 5-56 Base Setting of HDD

This page shows the status of the device's hard disk. You can set the state of the hard disk read and write. You can decide whether or not to sleep hard disk after a few minutes. In addition, you can also format or delete the hard disk.

- **Hard disk:** Hard disk serial number "[1]sda "Or" [2]sdb ".
- **Status:** "Unformatted" or "normal" or "no disk".
- **Read\write:** The video can be recorded and can be played back.
- **Read only:** The video only can be played back but not be recorded.
- **Redundant:** You can find a completely identical video in the redundant disk. It is a function similar to that of a copy. The entire premise is that you have more than one hard disk.
- **Group:** Set which group the hard disk belongs to.
- **Delete:** Disconnect the connection between the hard disk and the device in logic. Of course, you can also restore the connection between them by clicking on the "Add" button.
- **Format:** Format the hard disk.
- **Sleep:** If the hard disk does not record or not play back in a few minutes, the disk will fall into sleep. This function can enhance the life of the hard disk.

5.6.10.2.2 Cloud Storage

Click the **Set -> Storage-> Storage Manage -> Cloud Storage** to enter the interface, as show in **figure 5-57**.

Our NVR support Google Drive & Dropbox storage. You can set the channels and upload type including 'Record' &'Picture'.

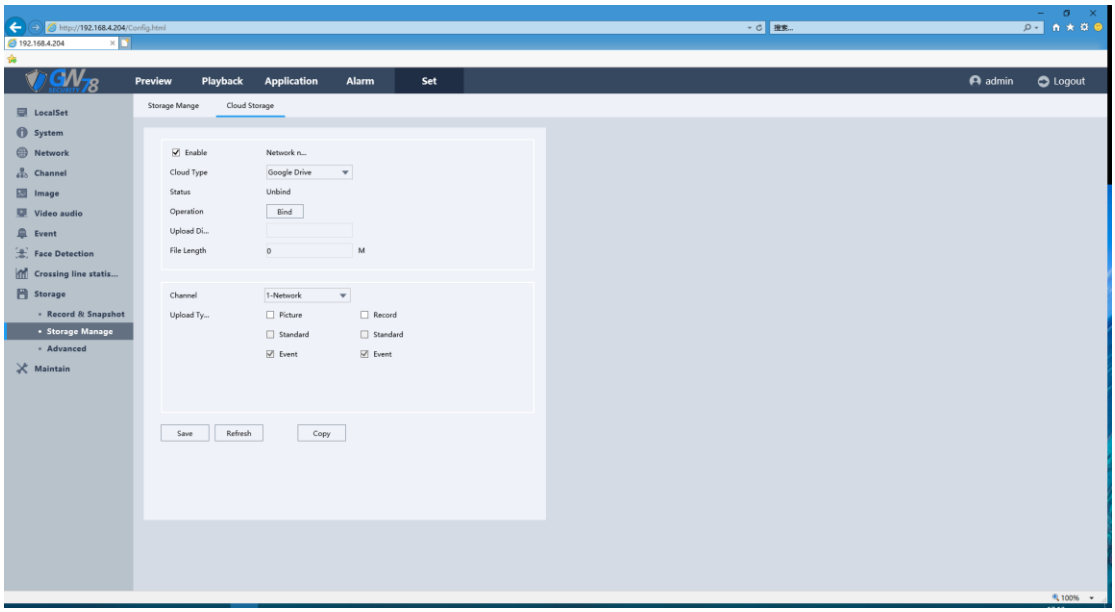


Figure 5-57 Cloud Storage Settings

5.6.10.3 Advanced

5.6.10.3.1 Advanced

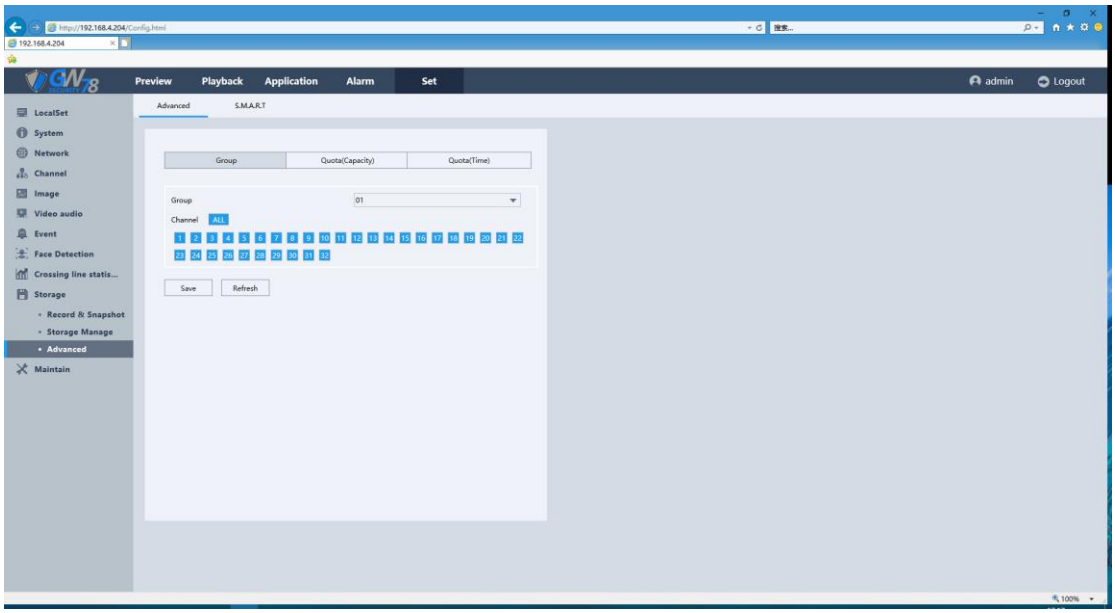


Figure 5-58 Advanced Setting of HDD

This page you can switch the hard disk's storage mode, including the "group" or "quotas". Your device will restart when you switch the mode.

- **Group mode:** You can select several channels attached to a disk group. Then their videos will be recorded in that group.

  Select one disk group number.

  Select several channels attached to the disk group.
- **Quota mode:** You can save videos or pictures for each channel that does not exceed the total volume of space.
- **Record Quota**: You can manually set the quota size of the channel video.
- **Photo Quota**: You can manually set the channel quota size to save the screenshots. Select one channel to set the quota size.

5.6.10.3.2 S.M.A.R.T

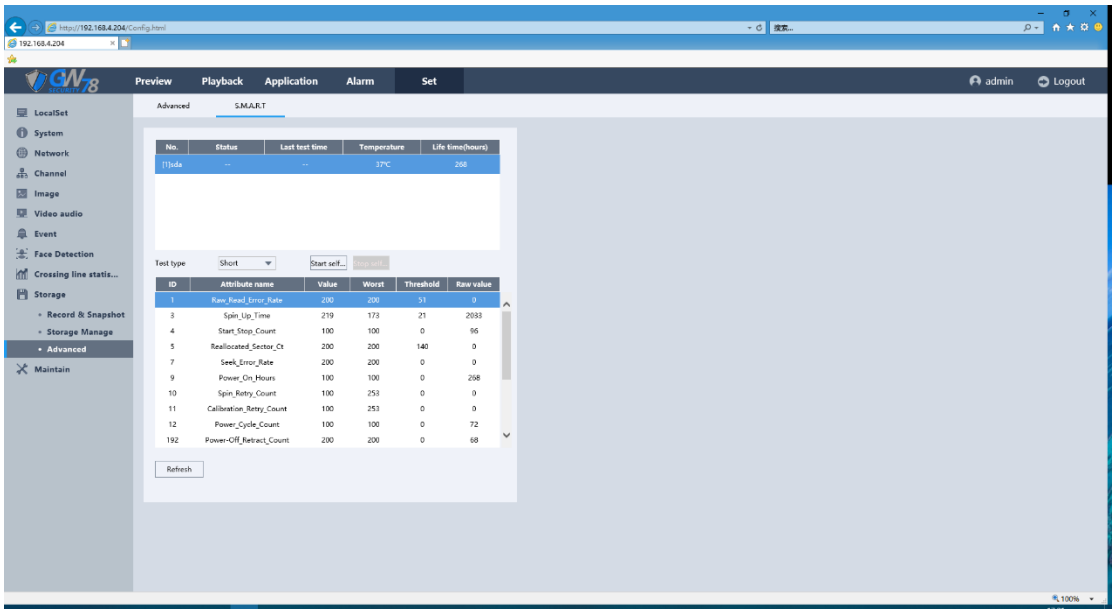


Figure 5-59 S.M.A.R.T Detect of HDD Setting by Web

It is used to detect the hard disk status.

- **S.M.A.R.T**: To detect the hard disk whether it meets the basic requirements for storage.
- **NO.**: Access the hard disk serial number.
- **Status**: Can display the self-test progress in real time. And there will be a test result showing that the hard disk is “Passed "Or" Failed ".
- **Last test time**: A recent self-testing time on the hard disk.
- **Temperature**: Display the hard disk temperature in real time.
- **Life time**: The time hours that your hard disk have been used for.

5.6.11 Maintain

5.6.11.1 Reboot Setting

Click the **Set -> Maintain -> Reboot Setting**. It is similar to the NVR local settings. You can set the time for automatic restart of the NVR.

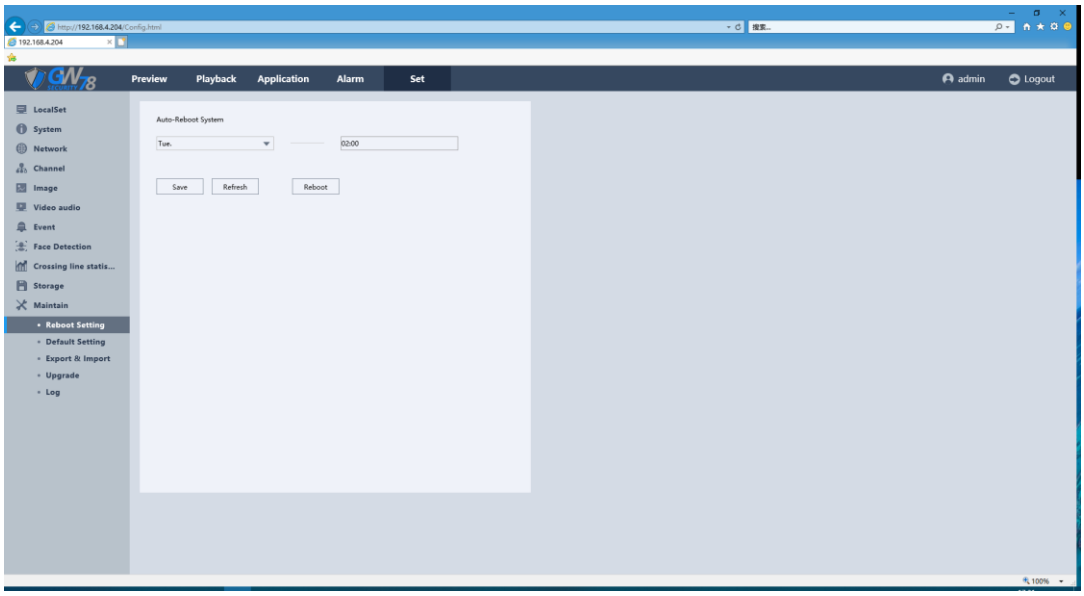


Figure 5-60 Auto Reboot Setting by Web

5.6.11.2 Default Setting

Click the **Set -> Maintain -> Default Setting** to enter the interface, as show in **figure 5-61.**

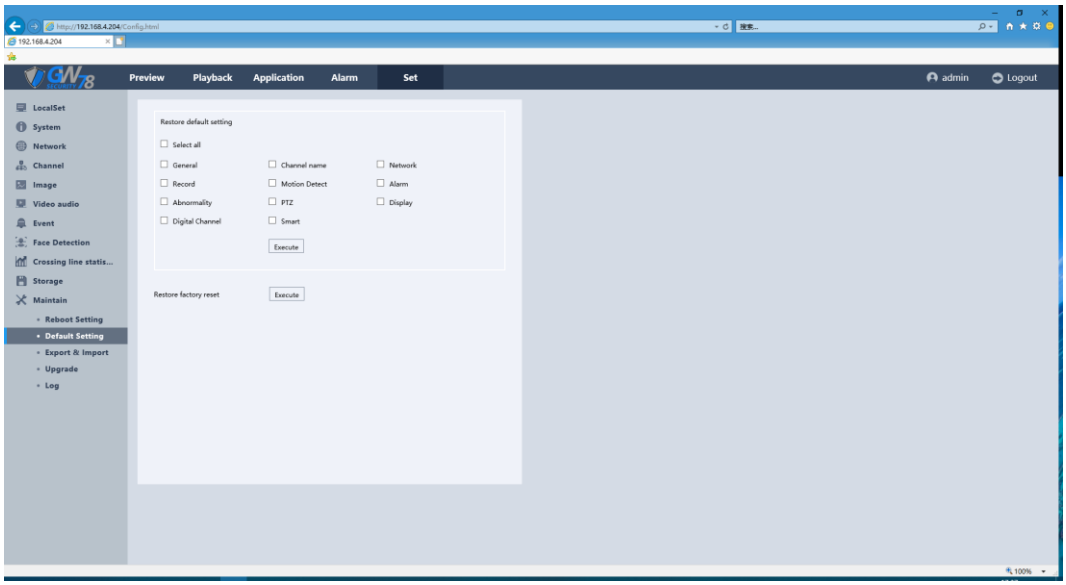


Figure 5-61 Default Setting Interface

1. Click on the checkbox of those item you want to restore, and click the Default button, then all the configurations of the selected item will restore to the default value.
2. Click Export button to export all the configurations of the network camera in a .coi file.
3. Click Import button to import all the configurations of the network camera from a .coi file.

Note:

- *If Network has been chosen in the list, the IP address is also restored to the default IP address, please be careful about this action.*

5.6.11.3 Export & Import

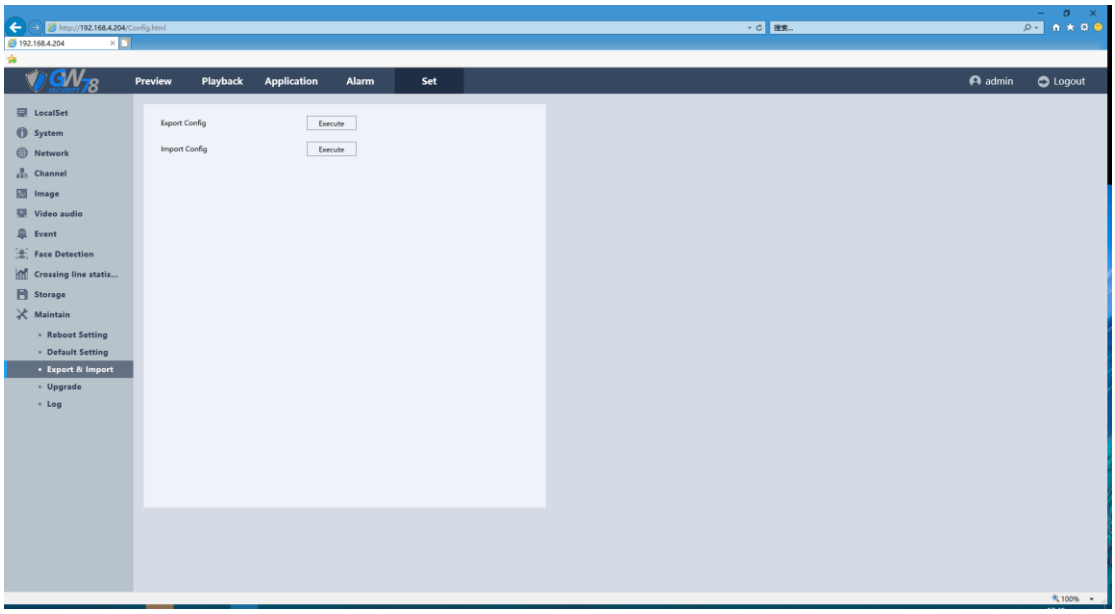


Figure 5-62 Export & Import configuration of NVR by Web

5.6.11.4 Upgrade

Click the **Set-> Maintain->Upgrade**.

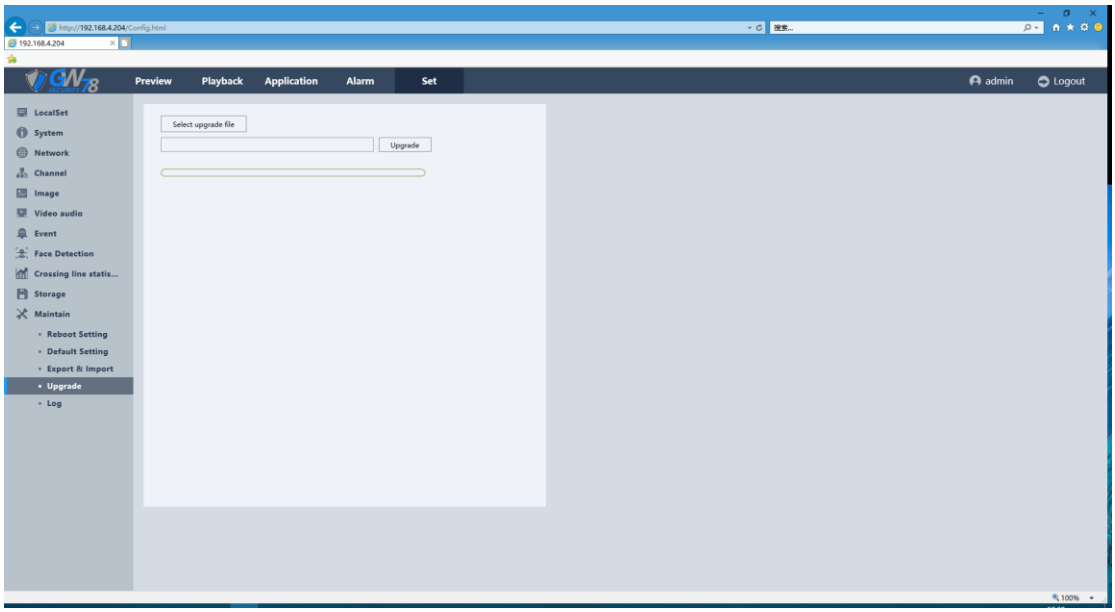


Figure 5-63 Upgrade NVR by Web

1. Select the upgrade file from local storage.
2. Click the upgrade, the device will automatically reboot after.

Note:

- In general, the extension of the upgrade file is ***.upf.

5.6.11.5 Log

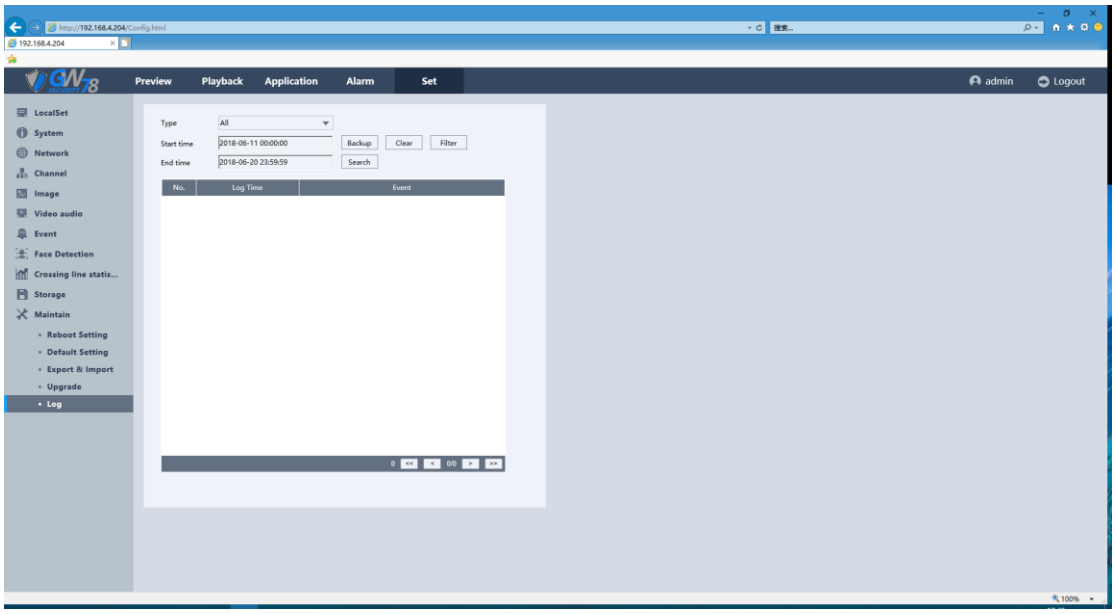


Figure 5-64 Log Setting of NVR

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

- **Backup:** Back up all log files to the local PC.
- **Clear:** Clear all log files.
- **Filter:** You can select the filter items to save the log files, the max number of logs is 4096, when the number of log is beyond 4096, “log full coverage “or “stop” are for choice.
- **Prev / Next:** Up to 900 log files can be displayed each time, when the number of the matched logs beyond 900, you can click on Prev/ Next button to view more log files.

5.7 Logout

Click the logout button, click OK and you will exit to the login page.

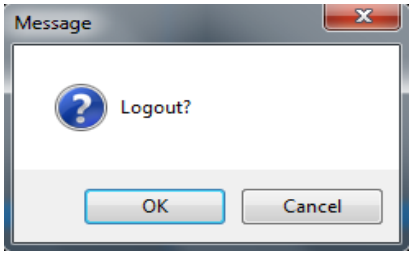


Figure 5-43 Logout the Web Client

Chapter 6 P2P

6.1 Login by username

Web -Remote management of equipment in another way is through P2P Connection access. Open the web browser and input the http://p2p.gwsecurityusa.com , and press the Enter key to enter the login interface.

Figure 6-1 Main Interface of P2P

6.1.1 Register

Click on the "register" button to enter the graphical interface, input your registration information to register. It will show a success message, and then you can login with your account.

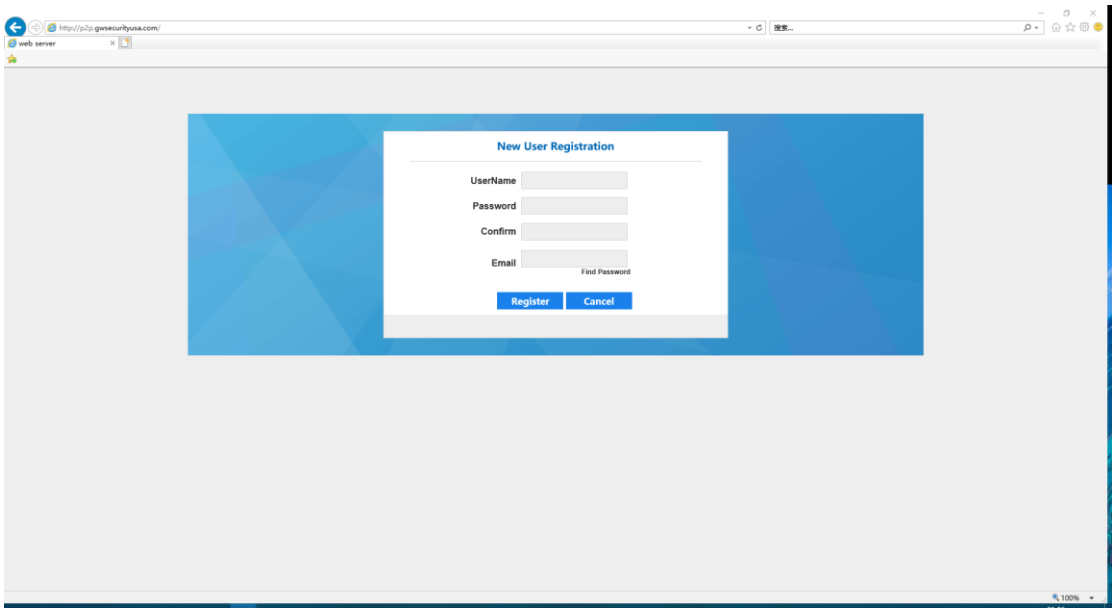


Figure 6-2 Register

6.1.2 My device

This page displays the name and the connection status of added devices. You can refresh the device status and login in a device manually.

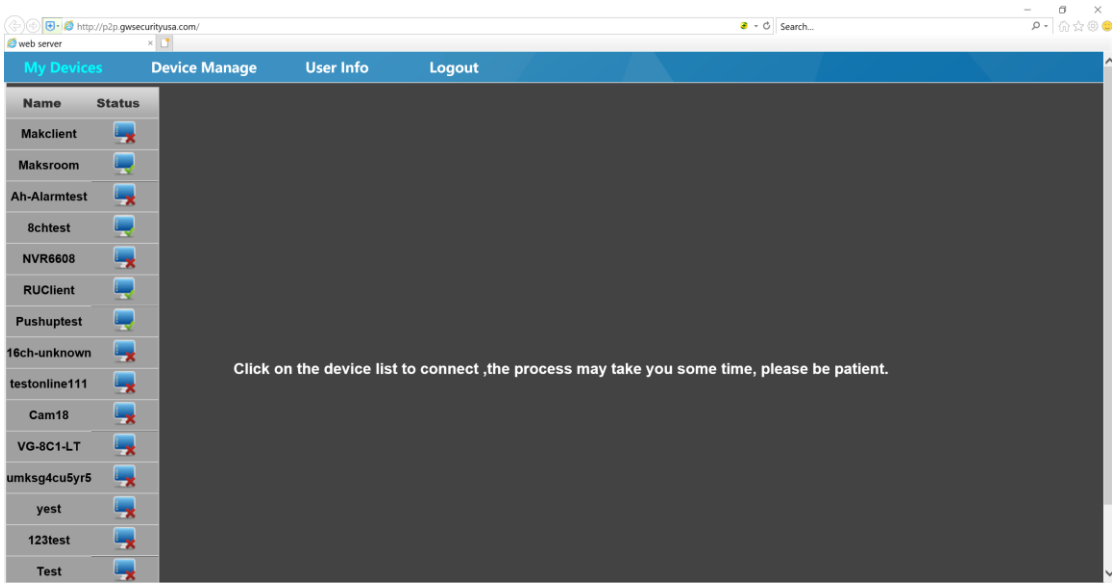


Figure 6-3 Main Interface of P2P after Login

6.1.3 Device Manage

It is empty for the first time when using video surveillance list. Click the Add button and enter the device ID, device name, account number, and then select Add channel.
You can modify and delete the devices that have been added.

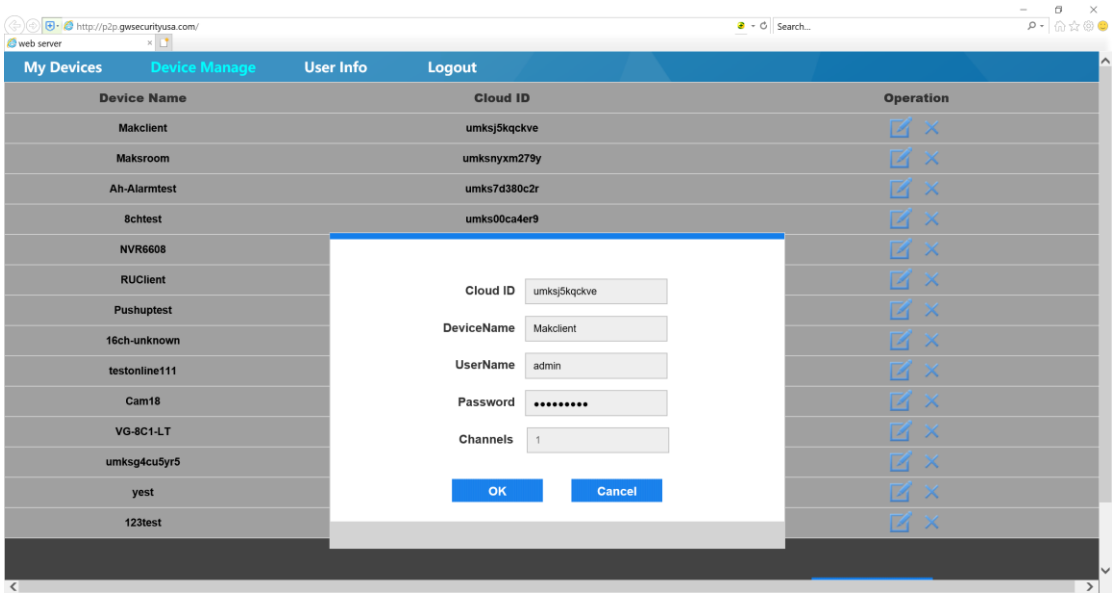


Figure 6-4 Device Manager of P2P

6.1.4 User Info

You can change the password on this page.

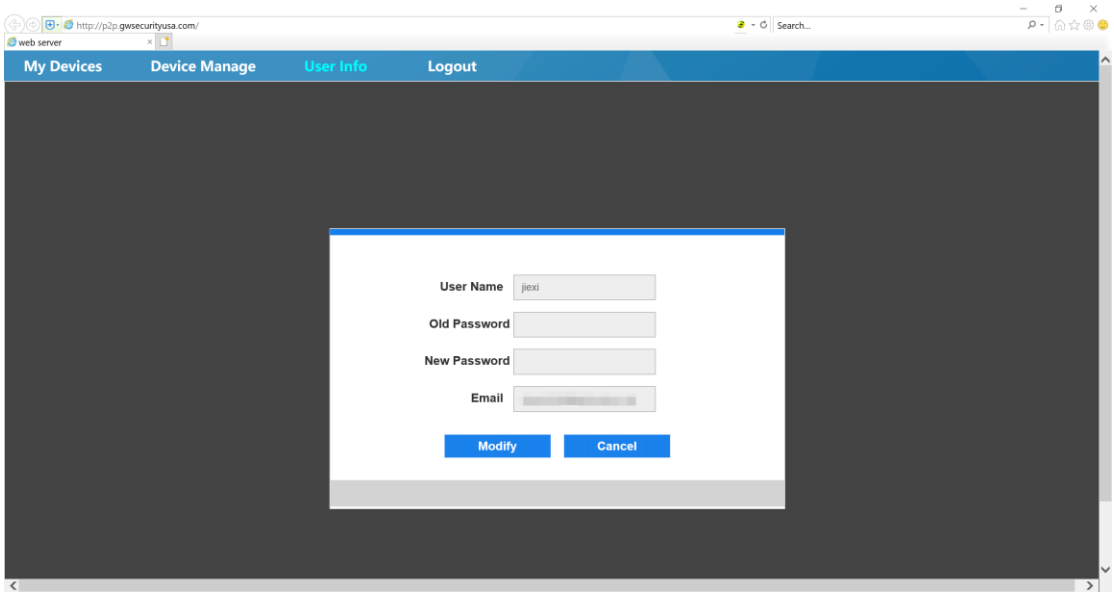


Figure 6-5 User Info of P2P

6.1.5 Logout

Click the Logout button.

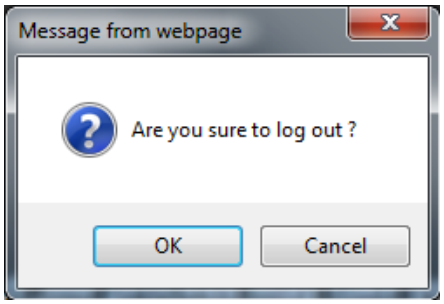


Figure 6-6 Logout P2P

6.2 Login by Cloud ID

By cloud ID is another way to achieve P2P connections.

Figure 6-7 Login by Cloud ID of NVR

Type device for the cloud ID and account, click Log into the graphical interface.

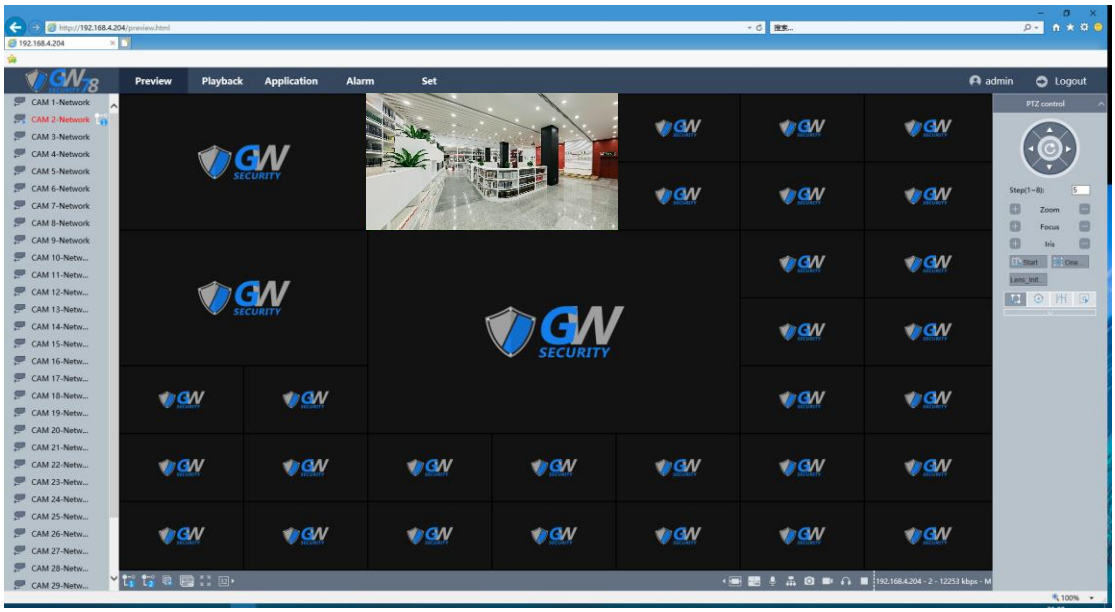


Figure 6-8 Main Interface After Login by Cloud ID of NVR

Note:

➢ *After logging by cloud ID successfully the interface appears the same as when you login by IP address and the operations as well. Please refer to IP address connection parts.*