



# Network Video Recorder User Manual

## Local Operation

Version: V6.5

Date: 2024-03-13

<b>Chapter 1. Safety Regulatory</b> .....	<b>5</b>
<b>Chapter 2. Product Introduction</b> .....	<b>6</b>
2.1 Introduction.....	6
2.2 Product Key Functions.....	6
<b>Chapter 3. Local Operation</b> .....	<b>9</b>
3.1 Wizard Setting.....	9
3.2 Live View.....	20
3.2.1 Target Mode.....	21
3.2.2 Occupancy Mode.....	27
3.2.3 Fisheye Mode.....	33
3.2.4 PTZ Mode.....	34
3.2.5 Two-way Audio.....	35
3.2.6 Event Notification.....	36
3.3 Playback.....	37
3.3.1 General Playback.....	37
3.3.2 Event Playback.....	46
3.3.3 Tag Playback.....	49
3.3.4 Split Playback.....	52
3.3.5 Picture Playback.....	54
3.3.6 File Management.....	58
3.4 Retrieve.....	62
3.4.1 Common Backup.....	62
3.4.2 Event Backup.....	65
3.4.3 Picture Backup.....	70
3.5 Smart Analysis.....	73
3.5.1 Analysis Search.....	74
3.5.2 Analysis Settings.....	88
3.6 Camera.....	122
3.6.1 Camera Management.....	122
3.6.2 Device Search.....	133
3.6.3 PTZ Configuration.....	135
3.6.4 Image.....	149

3.6.5 Audio.....	159
3.6.6 Advanced.....	160
3.6.7 Camera Maintenance.....	160
3.7 Storage.....	169
3.7.1 Video Record.....	170
3.7.2 Snapshot.....	175
3.7.3 Disk Management.....	178
3.7.4 RAID.....	181
3.7.5 Storage Mode.....	184
3.7.6 Auto Backup.....	188
3.8 Event.....	190
3.8.1 Motion Detection.....	190
3.8.2 Video Loss.....	199
3.8.3 Alarm Input.....	206
3.8.4 Alarm Output.....	223
3.8.5 Exception.....	226
3.8.6 VCA.....	228
3.9 Settings.....	257
3.9.1 General.....	257
3.9.2 Layout.....	260
3.9.3 Network.....	263
3.9.4 Audio File Manager.....	273
3.9.5 Holiday.....	274
3.9.6 User.....	275
3.9.7 Access Filter.....	280
3.9.8 Maintenance.....	283
3.9.9 Hot Spare.....	287
3.10 Status.....	289
3.10.1 Device Information.....	289
3.10.2 Network Status.....	290
3.10.3 Camera Status.....	291
3.10.4 Disk Status.....	292

3.10.5 Event Status.....	293
3.10.6 Group Status.....	296
3.10.7 Online Users.....	296
3.10.8 Packet Capture Tool.....	297
3.10.9 Logs.....	298
3.11 Logout.....	300
<b>Chapter 4. Services.....</b>	<b>302</b>

# Chapter 1. Safety Regulatory

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss. The precaution measures are divided into “Warnings” and “Cautions”.

**Warnings:** Serious injury or death may be caused if any of these warnings is neglected.

- This installation must be conducted by a qualified service person and should strictly comply with the electrical safety regulations of the local region.
- To avoid risk of fire and electric shock, do keep the product away from rain and moisture before installed.
- Do not touch components such as heat sinks, power regulators, and processors, which may be hot.
- Source with DC/AC 12V or PoE.
- Please make sure the plug is firmly inserted into the power socket.
- When the product is installed on a wall or ceiling, the device should be firmly fixed.
- If the product does not work properly, please contact your dealer. Never attempt to disassemble the camera by yourself.

**Cautions:** Injury or equipment damage may be caused if any of these cautions are neglected.

- Make sure that the power supply voltage is correct before using the camera.
- Do not store or install the device in extremely hot or cold temperatures, dusty or damp locations, and do not expose it to high electromagnetic radiation.
- Only use components and parts recommended by manufacturer.
- Do not drop the camera or subject it to physical shock.
- To prevent heat accumulation, do not block air circulation around the camera.
- Laser beams may damage image sensors. The surface of image sensors should not be exposed to where a laser beam equipment is used.
- Use a blower to remove dust from the lens cover.
- Use a soft, dry cloth to clean the surface of the camera. Stubborn stains can be removed using a soft cloth dampened with a small quantity of detergent solution, then wipe dry.
- Do not use volatile solvents such as alcohol, benzene or thinners as they may damage the surface finishes.
- Save the package to ensure availability of shipping containers for future transportation.

# Chapter 2. Product Introduction

## 2.1 Introduction

Based on embedded Linux operation system, Milesight NVR Series manages and stores HD video data. It owns multi-disk management systems, front end HD device management system, HD video analysis system and high-capacity system for video. Also, it adopts the technology of high flow capacity data network transmitting&transmission, with multi-channel video decoding, to achieve functions like intelligent management, safe storage, HD decoding, etc.

## 2.2 Product Key Functions

### Basic Information

- Milesight NVR Series includes **NVR Series** (Mini NVR 1000 Series, Pro NVR 5000 Series, Pro NVR 7000 Series, Pro NVR 8000 Series), and **PoE NVR Series** (Mini PoE NVR 1000 Series, PoE NVR 5000 Series and PoE NVR 7000 Series), which can work with Milesight network cameras and connect with third party network cameras that support ONVIF.

### Monitoring

- Support HDMI video output, maximum to 3840\*2160 resolution.
- Support Target Mode, which displays relevant detection results of ANPR and VCA events.
- Support Occupancy Live View.
- Support PAL/NTSC adaptive video input.
- Support multiple screen displaying in live view.
- Support Custom Layout.
- Support 1/4/8/9/12/14/16/32 screen live view. The channel sequence is adjustable.
- Support quick menu and tool bar in live view.
- Support displaying Event Detection Region and the detection frame to track the target.
- Support batch IP editing, setting camera's video parameters and record schedule.
- Support the switch of Live View, manual switch and automatic patrol. The interval of automatic sequence is adjustable.
- Support motion detection and video loss alert.
- Support various PTZ protocols and PTZ operations such as preset, patrol, etc.
- Support the configuration of **Auto Tracking** function on monitor directly.
- Support central zoom in by clicking the mouse at arbitrary area.
- Support 3D positioning control for the PTZ Camera Series and Fisheye Camera Series.

- Support the configuration of privacy mask of camera.
- Support the configuration of Milesight PTZ cameras' Privacy Mask.
- Support OSD title and date configuration.
- Support instant playback.
- Support setting view to Original or Resize.
- Support playback on slave NVR when Milesight N+1 Hot Spare is enabled.
- Support the NVR-side Dewarping function of all cameras on monitor.
- Support the setting of Frame Rate and Bit Rate of different Record Stream Types separately according to the actual situation to achieve bandwidth saving.
- Support both Bundle-stream Mode and Multi-stream Mode of fisheye channels.
- Support Two-way Audio.

## **HDD Management**

- Support hard disk and NAS storage.
- Support S.M.A.R.T technology.
- Support RAID, Group management and Storage Quota.
- Support to set HDD property, including read-only and read/write.
- Support eSATA disk for recording or backup of NVR Pro 8000 Series.

## **Recording/Snapshot and Playback**

- Support ANR (Automatic Network Replenishment) for replenishing the recording gap due to internet interruptions.
- Support recording with Primary Stream, Secondary Stream and Primary + Secondary Stream.
- Support General Playback, Event Playback, Tag Playback, Split Playback and Picture Playback.
- Support to tag and lock video.
- Support holiday schedule.
- Support recycle and non-recycle recording mode.
- Support 12 recording time periods with separate recording types.
- Support pre-record and post-record time setting for motion detection, alarm and VCA recording. And support pre-record setting for manual and schedule recording.
- Support recording/snapshot manually.
- Support digital zoom function at arbitrary area in playback.
- Support pause, rewind, fast play, slow play, skip forward and skip backward when playback, locating in progress bar by dragging the mouse.
- Support up to 128x fast forward playback.
- Support the recording and snapshot in the channels where the events triggered.
- Support Smart Search in Playback.

## **Backup**

- Support N+1 Hot Spare.

- Support Common Backup, Event Backup and Picture Back in Retrieve interface.
- Support export video files or snapshot to USB and eSATA device.
- Support Auto Backup function.
- Support backup device maintenance and management.

## **Alarm & Exception**

- Support motion detection configure and alarm.
- Support video loss alarm, alarm input and alarm output.
- Support Network Disconnected/Disk Full/Record Failed/Disk Error/Disk Uninitialized/No Disk alarms.
- Support VCA alarm, including Region Entrance, Region Exiting, Advanced Motion Detection, Tamper Detection, Line Crossing, Loitering, Human Detection, and Object Left/Removed.
- Support various alarm response such as audible warning, sending email, recording, PTZ action and on/off relay out.
- Support the Picture Attached function for Email Linkage Alarm Action.
- Support Smart Analysis, including ANPR, Face Detection, People Counting, Heat Map and POS.

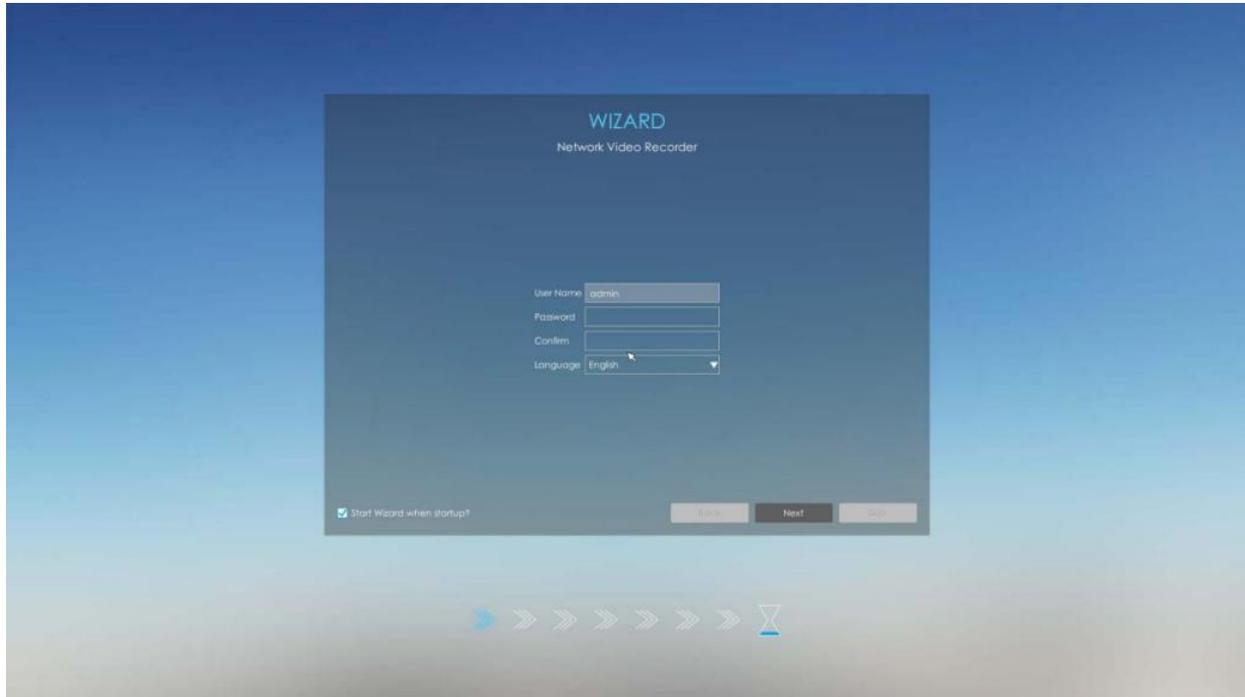
## **Network**

- Equipped with PoE ports for PoE cameras(only available for PoE NVR).
- Support Milesight Cloud.
- Support P2P remote access.
- Support IPv4/IPv6, TCP, UDP, RTP, RTSP, RTCP, HTTP, HTTPS, DNS, DDNS, DHCP, NTP, SNTP, SMTP, SNMP, UPnP.
- Support keyboard control.

## **Other Functions**

- Support multi-level user management, administrator can create multiple users with access rights.
- Support operating and configuring information import/export.
- Support auto reboot.
- Support CGI for Windows and Linux system.

# Chapter 3. Local Operation



## 3.1 Wizard Setting

By default, the Setup Wizard will start once the NVR has been loaded. You can click checkbox to turn off the Wizard when startup.



The Setup Wizard will guide you to complete important settings, which makes NVR more user-friendly.

**Step 1. Set password to active admin account.**

WIZARD  
Network Video Recorder

User Name admin  
Password  
Confirm  
Language English

Start Wizard when startup?

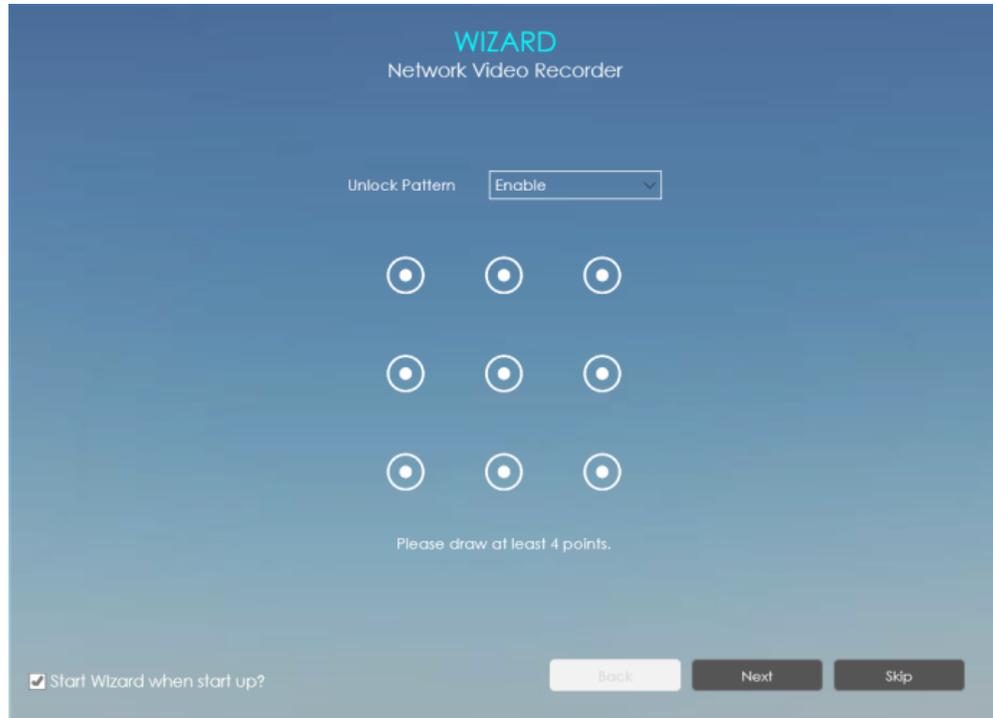
Back Next Skip

 **Note:**

1. Only the NVR firmware version xx.9.0.3 or above supports activation function.
2. Password must be 8 to 32 characters long.
3. Password must contain at least one number and one letter.

**Step 2. Enable Unlock Pattern.**

You can choose whether to enable Unlock Pattern according to your needs and set Unlock Pattern. Unlock Pattern is easy to login the system quickly.



 **Note:**

1. Make sure your NVR's version is 7x.9.0.11 or above.
2. Only the Wizard can enable Unlock Pattern when the NVR is active.

**Step 3. Set security questions which are used for resetting password.**

10 questions are provided, you can select any one to set answer. Beside, customized question is available.

If you skip this step, you can also set it again in Setting -> User interface.

The screenshot shows the 'WIZARD Network Video Recorder' interface. At the top, the title 'WIZARD' is in blue, with 'Network Video Recorder' below it. The main area contains three sets of security questions. Each set consists of a dropdown menu for the question and a text input field for the answer. All three dropdown menus are currently set to 'What's your father's name?'. Below the questions, there is a checkbox labeled 'Start Wizard when startup?' which is checked. At the bottom right, there are three buttons: 'Back', 'Next', and 'Skip'.

 **Note:** Only the NVR firmware version xx.9.0.3 or above supports.

#### Step 4. Date and time setting.

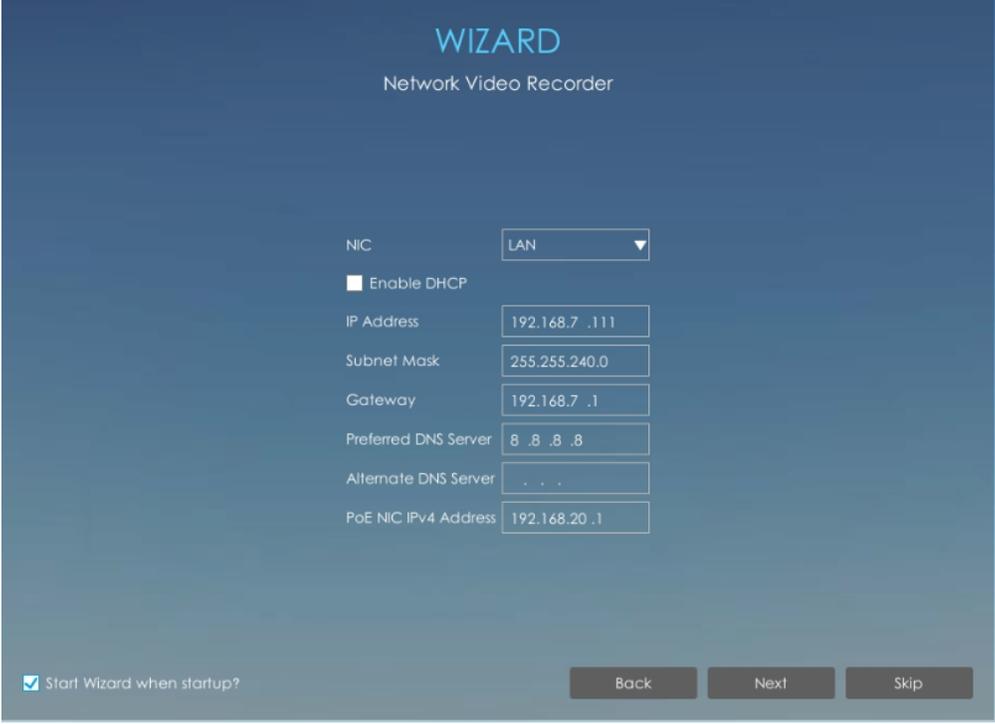
Select the Time Zone and date via NTP or you can set date and time manually.

The screenshot shows the 'WIZARD Network Video Recorder' interface for date and time settings. At the top, the title 'WIZARD' is in blue, with 'Network Video Recorder' below it. The main area contains several settings: 'Time Zone' is set to '(UTC-08:00) United States - Pacific Time'; 'Daylight Saving Time' is set to 'Auto'; 'Synchronize with NTP server' is checked; 'NTP Server' is set to 'pool.ntp.org'; 'Set Date and Time Manually' is unchecked; and 'Set Date and Time' is set to '2019-09-10 02:52:32'. Below these settings, there is a checkbox labeled 'Start Wizard when startup?' which is checked. At the bottom right, there are three buttons: 'Back', 'Next', and 'Skip'.

### Step 5. Network setting.

Input the IP Address, Subnet Mask, Gateway and Preferred DNS Server.

PoE NIC IPv4 Address option is only for PoE NVR Series.

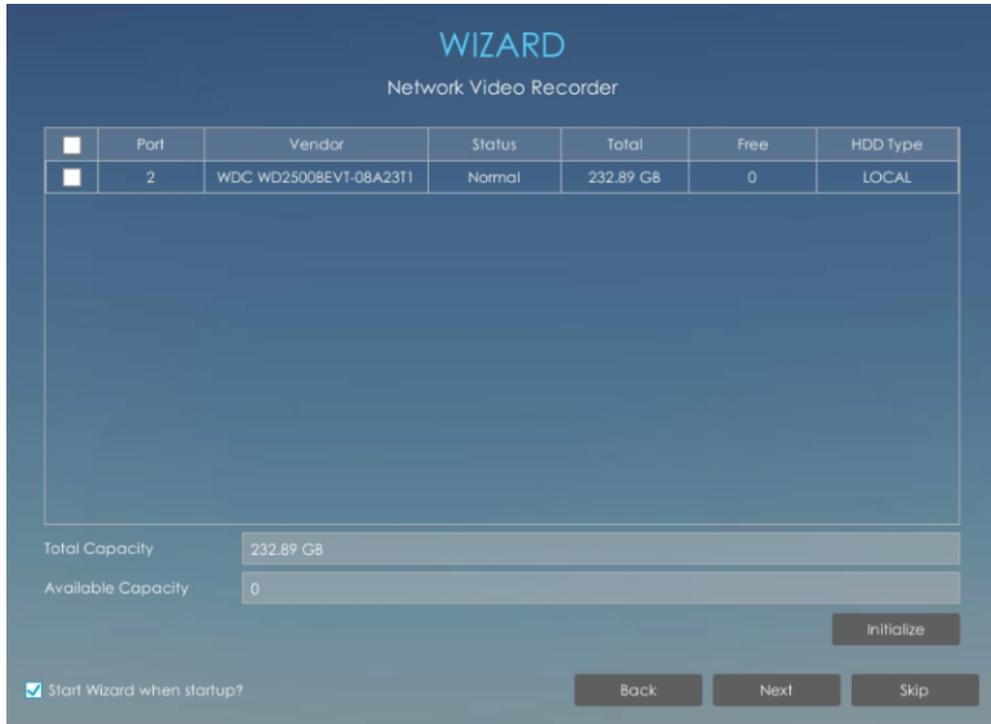


The screenshot shows the 'WIZARD' configuration interface for a Network Video Recorder. The title 'WIZARD' is at the top in light blue, with 'Network Video Recorder' below it. The interface is set against a dark blue background. The configuration fields are as follows:

Field	Value
NIC	LAN
Enable DHCP	<input type="checkbox"/>
IP Address	192.168.7.111
Subnet Mask	255.255.240.0
Gateway	192.168.7.1
Preferred DNS Server	8.8.8.8
Alternate DNS Server	. . .
PoE NIC IPv4 Address	192.168.20.1

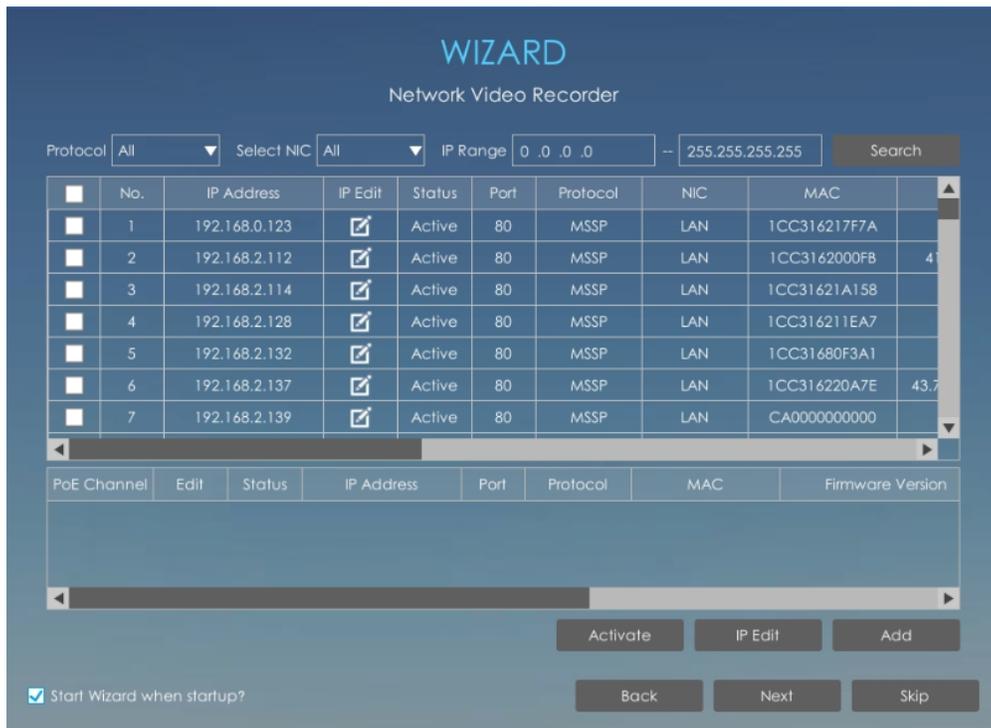
At the bottom left, there is a checked checkbox labeled 'Start Wizard when startup?'. At the bottom right, there are three buttons: 'Back', 'Next', and 'Skip'.

### Step 6. Disk Management.



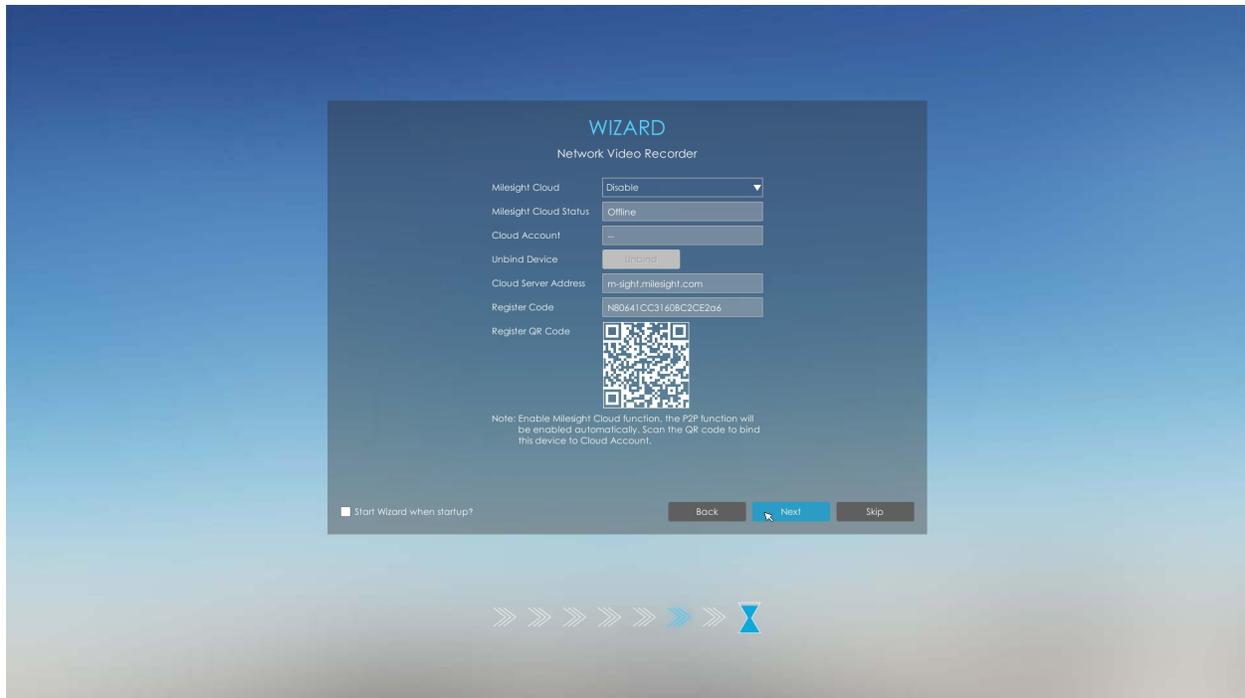
### Step 7. Camera Management.

Search all the cameras in LAN by filtering Protocol and IP Range. Select cameras and click  to add them to NVR.



**Note:**

1. It can auto detect cameras that connected to PoE ports (only for PoE NVR).
2. If camera status shows inactive, please click  to active it first.

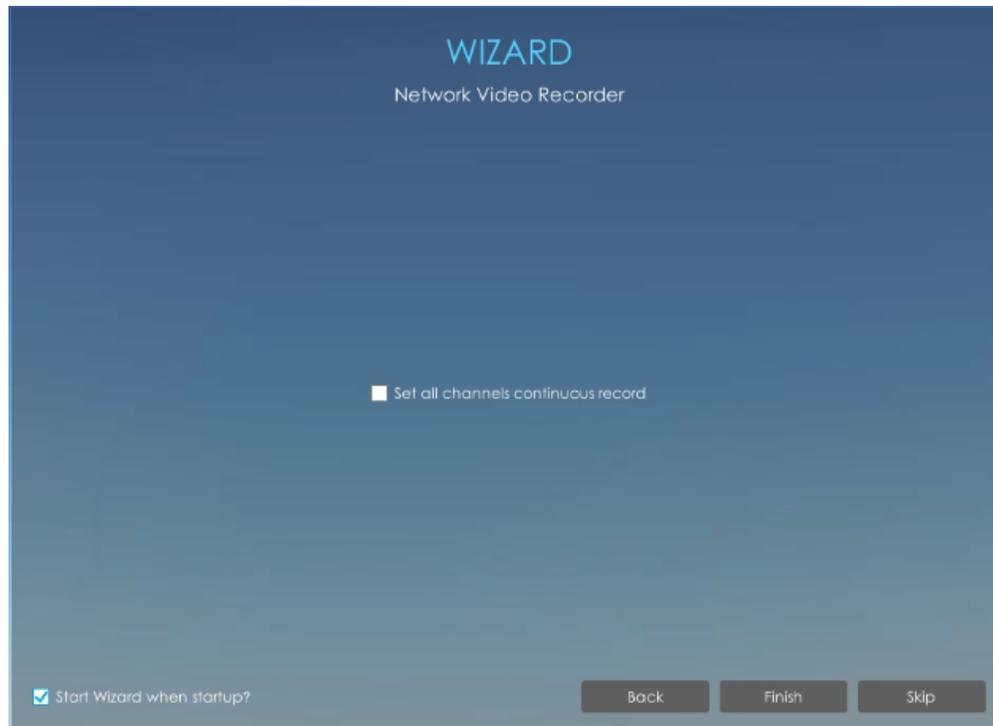
**Step 8.Milesight Cloud**

Select Enable to allow Milesight Cloud Service. Then scan the QR code through M-sight Pro APP to get a remote and real-time view.

**Note:** Only the NVR firmware version xx.9.0.9 or above supports enable in Wizard directly.

**Step 9.Record**

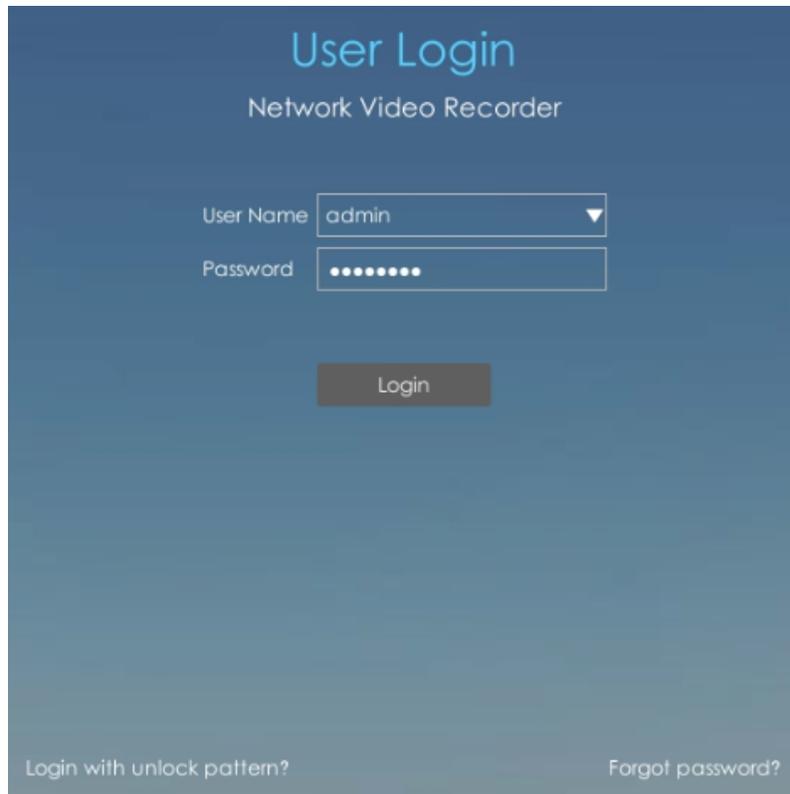
The user can start all channels recording by clicking .



## Step 10.Login

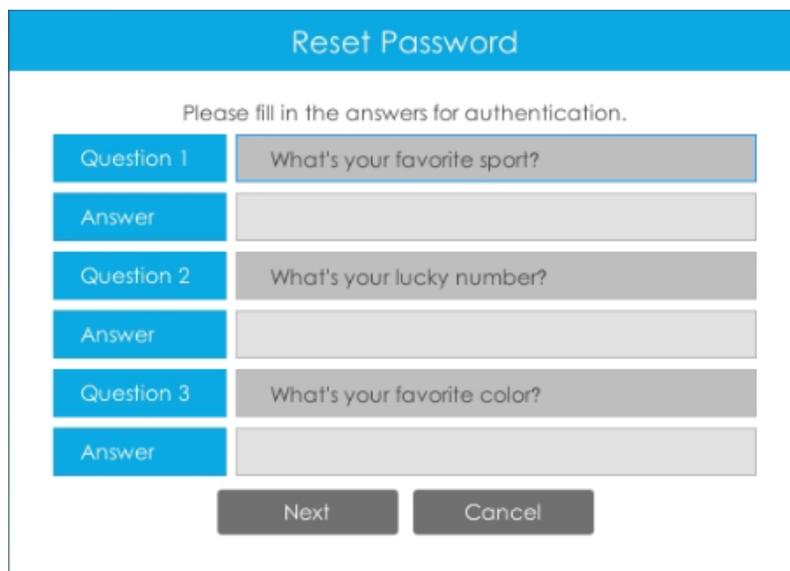
There are two ways to login the system.

**Method 1:** Input the user name and password to login the system.



The image shows a 'User Login' screen for a Network Video Recorder. The title 'User Login' is in a light blue font, with 'Network Video Recorder' below it in a smaller, grey font. There are two input fields: 'User Name' with a dropdown menu showing 'admin' and a small downward arrow, and 'Password' with a masked field of ten dots. A dark grey 'Login' button is centered below the fields. At the bottom, there are two links: 'Login with unlock pattern?' on the left and 'Forgot password?' on the right.

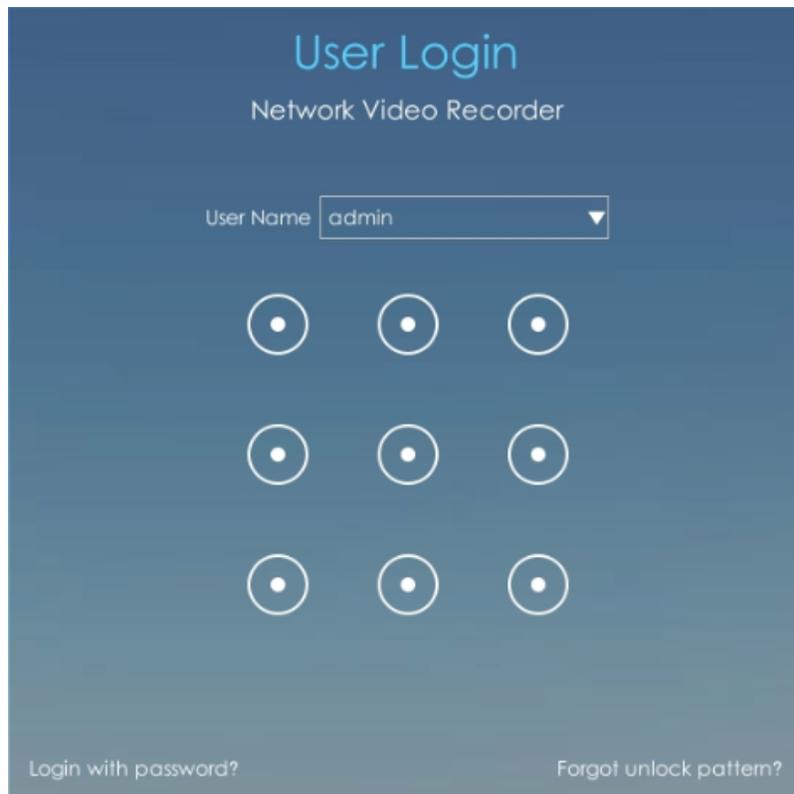
If you forget the password, click [Forgot password?](#) to reset password.



The image shows a 'Reset Password' screen. The title 'Reset Password' is in white text on a blue background. Below the title, it says 'Please fill in the answers for authentication.' There are three sets of questions and answers. Each set consists of a blue box with the question number and a grey box with the question text, followed by a blue box with the word 'Answer' and a grey input field. The questions are: 'Question 1: What's your favorite sport?', 'Question 2: What's your lucky number?', and 'Question 3: What's your favorite color?'. At the bottom, there are two dark grey buttons: 'Next' and 'Cancel'.

 **Note:** Only the NVR firmware version xx.9.0.3 or above supports password reset if you forget it.

**Method 2:** Click [Login with unlock pattern?](#) to login the system with Unlock Pattern if you enable Unlock Pattern.



If you forget Unlock Pattern, click [Forgot unlock pattern?](#) to reset Unlock Pattern.

## Reset Unlock Pattern

Please fill in the password for authentication.

User Name	admin
Password	

 **Note:** When users enter the wrong password for four times, the login locking will be triggered. After being locked, the same user should wait for five minutes to log in again.

## User Login

Network Video Recorder

User Name

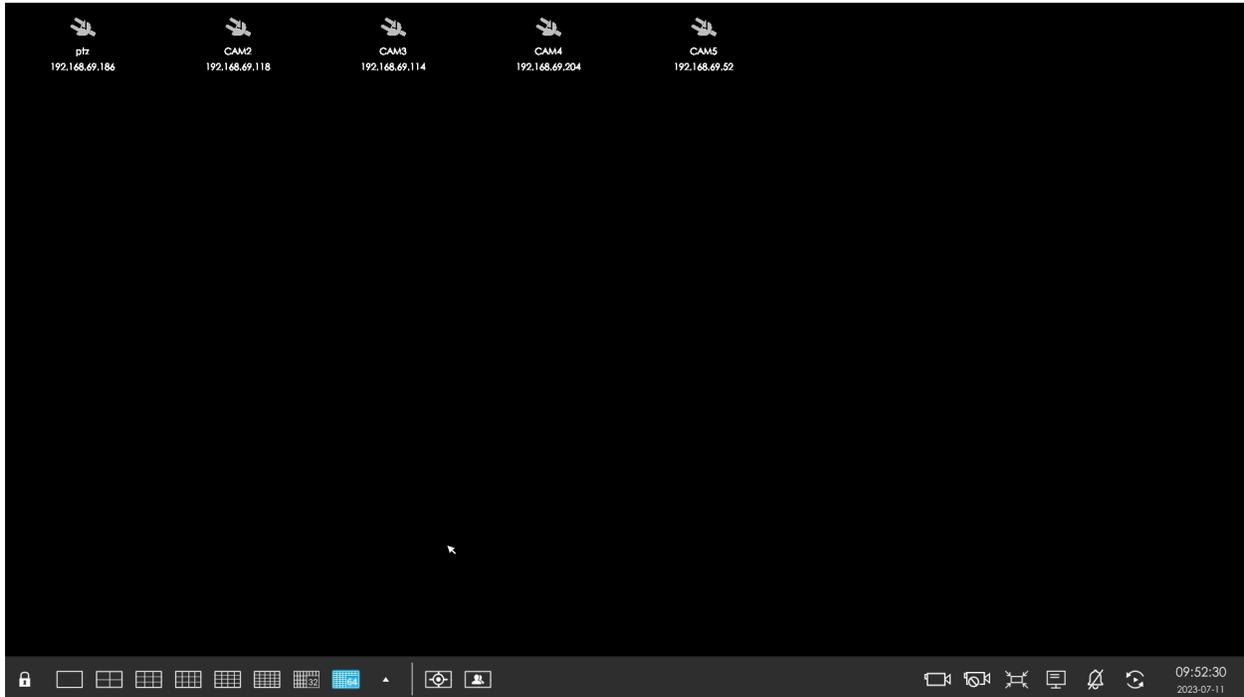
• • •

• • •

• • •

Login failed! 3 attempts left!

## 3.2 Live View



**Main Menu and Tool Bar can pop up and hide automatically at the right side or bottom of the interface.**

**Note:** Tool Bar won't be hidden if there is event notification.



**Table 1.**

Icons	Descriptions	Icons	Descriptions
	Lock/Unlock the tool bar		One screen layout
	4 screen layout		8 screens layout
	1+7 screens layout		9 screens layout

Icons	Descriptions	Icons	Descriptions
	12 screen layout		1+11 screens layout
	2+10 screens layout		16 screen layout
	64 screen layout		Custom layout
	Target Mode		Occupancy Mode
	Start all channels recording (for all displaying channels)		Stop all channels recording (for all displaying channels)
	Adjust image in proportion (for all displaying channels)		Sequence
	<p>Display settings (for all displaying channels, including Play Mode, Color, on/off of Stream Info, Channel Name, Channel Name Font Size, Borderline, Page Info , Time Info and Event Detection Region.)</p> <p> <b>Note:</b></p> <ol style="list-style-type: none"> <li>Support displaying Event Detection Region and the detection frame to track the target when the channel is full screen on Live View interface.</li> <li>Make sure your camera model is MS-CXXXX-XXC, and the camera's version should be 4X.7.0.77 or above.</li> </ol>		<p>The Do Not Disturb function only turns off the notification of the Alarm Actions (for all displaying channels)</p> <p> <b>Note:</b> Do Not Disturb function is not valid for changing corresponding settings.</p>
	Time information, which can be set to display consistently or synchronize with the Toolbar in Display Settings.		

 **Note:** Make sure the NVR's model is MS-N8064-UH for the 64 screen layout function.

### 3.2.1 Target Mode

After entering Target Mode, you can choose to display or hide relevant detection results of ANPR and VCA events in the Target Preview Settings interface.

## Target Preview Settings

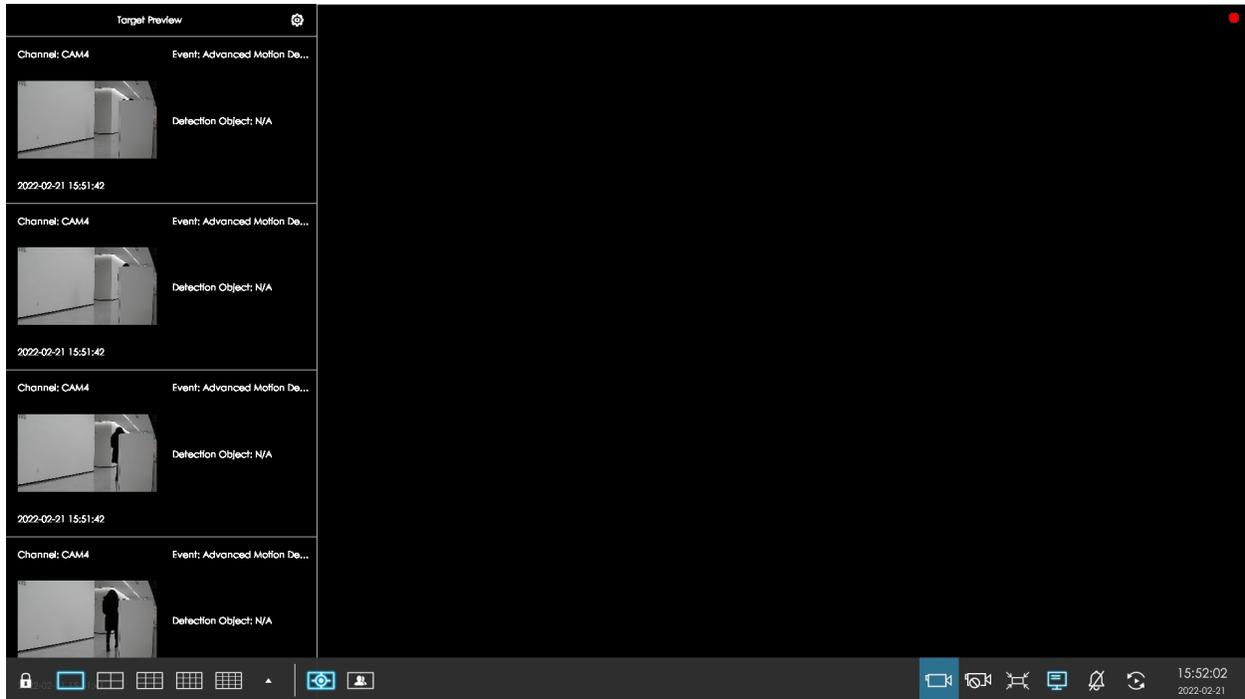
ANPR	Display ▼
VCA	Display ▼

OKCancel

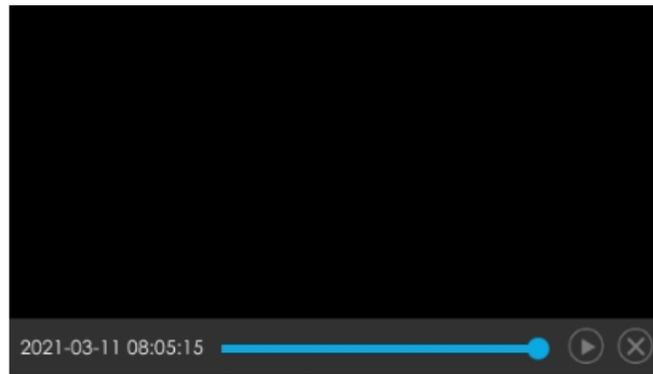
 **Note:**

1. Make sure your camera's version is 4X.7.0.77 or above so that the corresponding results for camera can be displayed in the Target Mode on the NVR side.
2. Make sure your camera model is MS-CXXXX-XXC, which supports the human/vehicle detection object configuration.

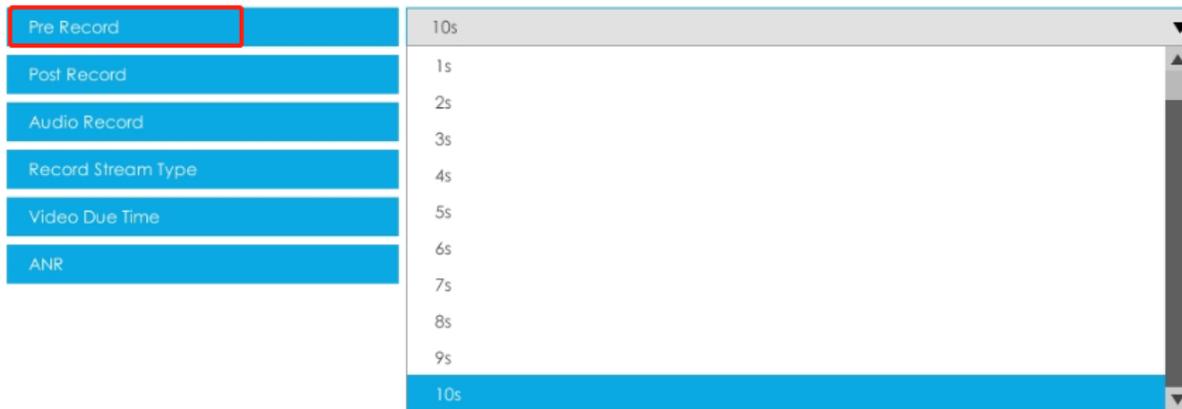
If you choose to display relevant detection results of VCA events, the real-time information including Snapshot, Channel Name, Event, Detection Object and Detected Time will be shown on the left of the interface once being detected. There are three detection results according to the detection object: Human, Vehicle and N/A.



You can click the corresponding record to check the latest X seconds (10s~20s) video.



- $X = 10 + \text{Pre Record Time}$ . You can set Pre Record Time in Storage -> Video Record -> Record Settings interface.

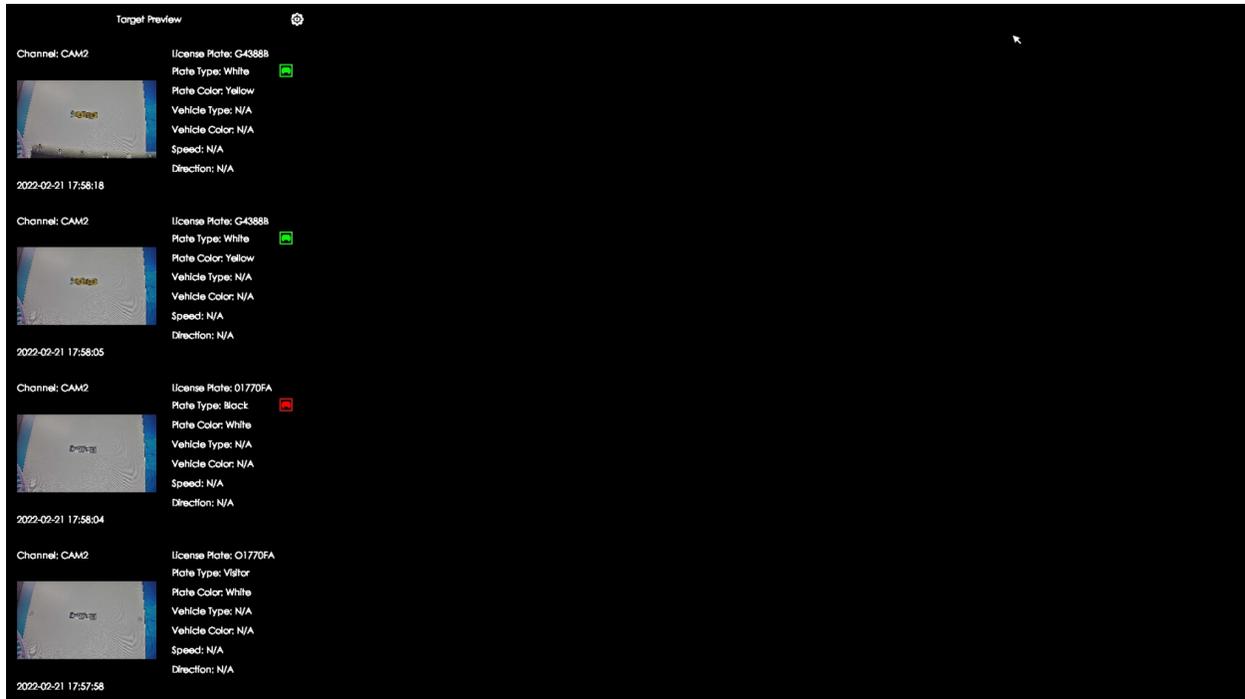


- Ensure that there is available HDD on NVR and correct record settings is made, so that you can check the record on live view.

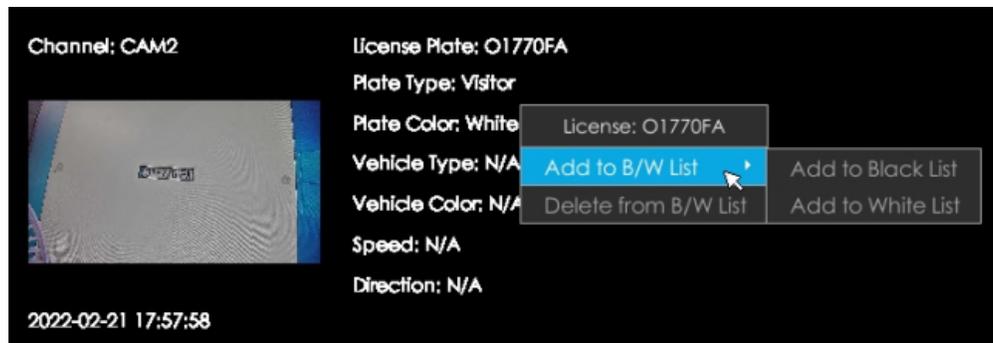
If you choose to display relevant detection results of ANPR, the real-time license plate information including Plate Snapshot, Channel Name, License Plate Number, Detected Time and Plate Type will be shown on the left of the interface once it get detected. There are two license types:

**Table 2.**

Icons	Descriptions	Icons	Descriptions
	License from Black List		License form White List



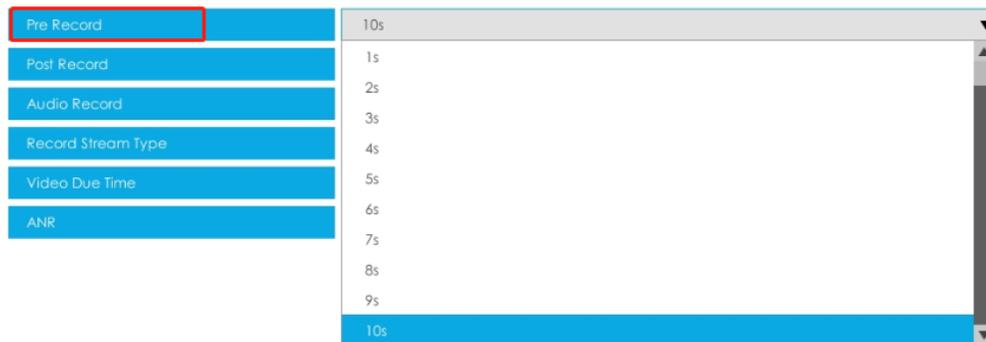
No plate type will be shown if the license plate does not exist in Black/White list. However, you can right click the license plate information to quick add it to Black/White list or delete it from Black/White list.



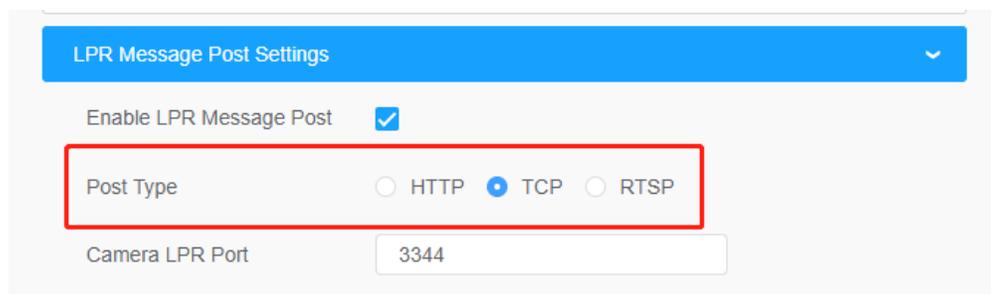
Besides, you can click the license plate information to check the latest X seconds (10s~20s) video.



- $X = 10 + \text{Pre Record Time}$ . You can set Pre Record Time in Storage -> Video Record -> Record Settings interface.

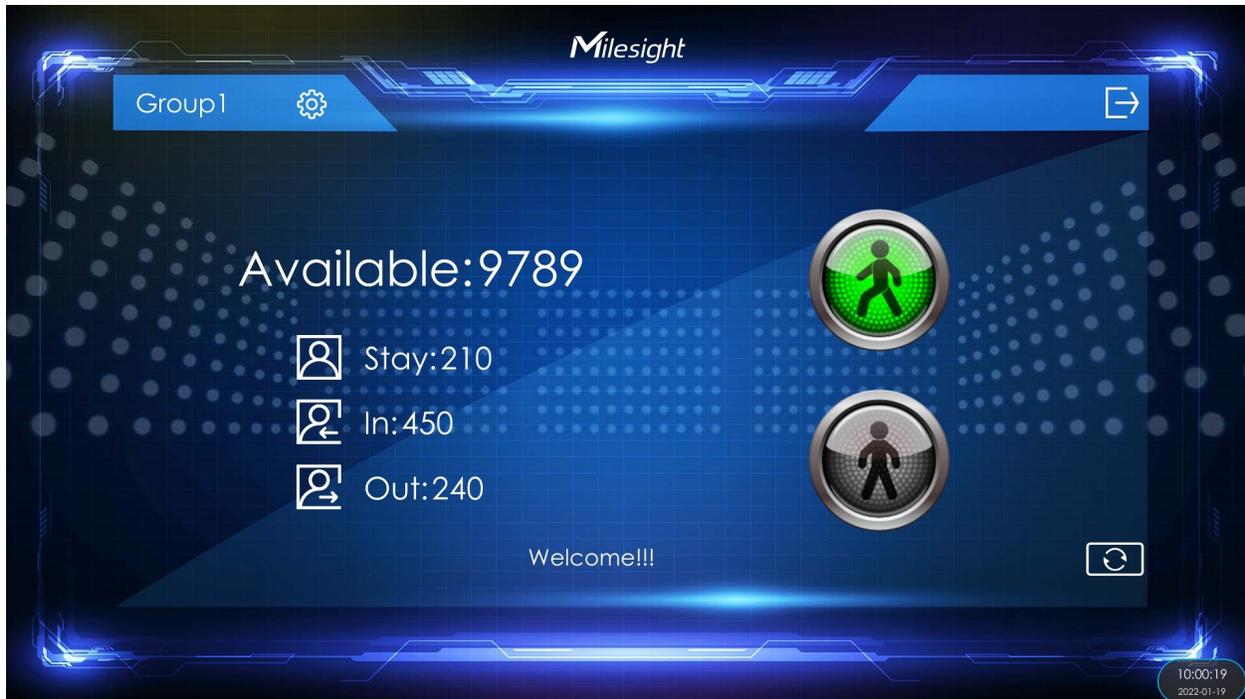


- Ensure that there is available HDD on NVR and correct record settings is made, so that you can check the record on live view.
- Ensure that NVR can get the license plate information. Please set TCP which is the default mode as Post Type. It can be set in Camera web page -> Settings -> LPR -> General Settings interface.



### 3.2.2 Occupancy Mode

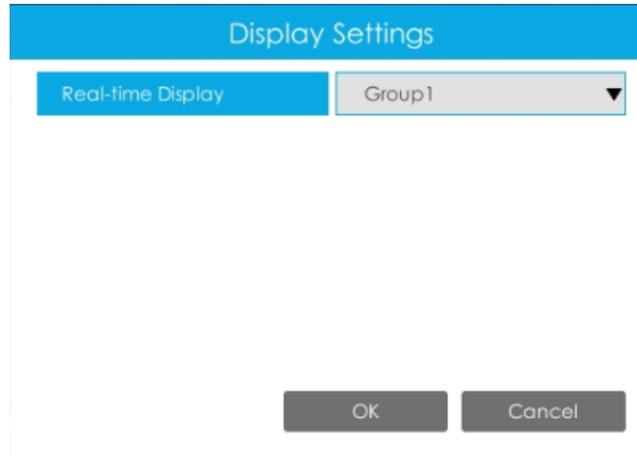
After entering Occupancy Mode, a professional-level Occupancy Live View interface pops up on the screen with full screen coverage. The real-time count results of all cameras within the set group, including the number of people entering, leaving and staying, as well as the traffic light status indicating whether the current number of people staying reaches the set maximum number of people staying, will be displayed in this interface.



**Available:** Display the value of the remaining number of people staying in real time, and the minimum value is 0. (Available value = Max. Stay - Stays, Max. Stay is set in the Smart Analysis -> Analysis Settings -> People Counting interface)

**Stays/In/Out:** Display the number of people staying, entering and leaving in real time. (Stays value = In value - Out value, the minimum number of people staying is 0)

**Display Settings:** Click  to select which Group of data to display in real time.



There are two traffic light states:

Table 3.

Item	Descriptions
<p>Green Light </p>	<p>The current number of people staying doesn't reach the set maximum number of people staying. And below display Reminders of Green Light, Reminders of Green Light is set in the Smart Analysis -&gt; Analysis Settings -&gt; People Counting interface.</p> 

Item	Descriptions
<p>Red Light </p>	<p>The current number of people staying reaches the set maximum number of people staying. And below display Reminders of Red Light, Reminders of Red Light is set in the Smart Analysis -&gt; Analysis Settings -&gt; People Counting interface.</p> 
<p>Reset</p>	<p>Reset the Group counting data in the Occupancy Live View interface.</p>
<p>Exit</p>	<p>Click  to exit the Occupancy Live View interface.</p>

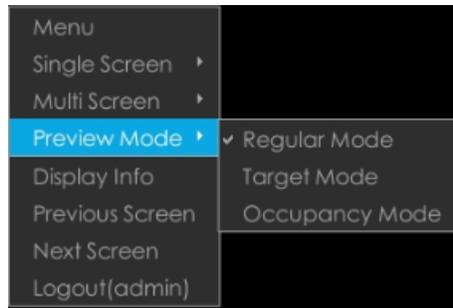
There are multiple icons on each channel displayed in live view, indicating different status of the channel.

**Table 4.**

Icon	Descriptions
	<p>It indicates video loss</p>
	<p>It indicates motion detection alarm</p>
	<p>It indicates that the current channel is recording.</p>
	<p>It indicates exception alarm</p>

Icon	Descriptions
	It indicates VCA alarm

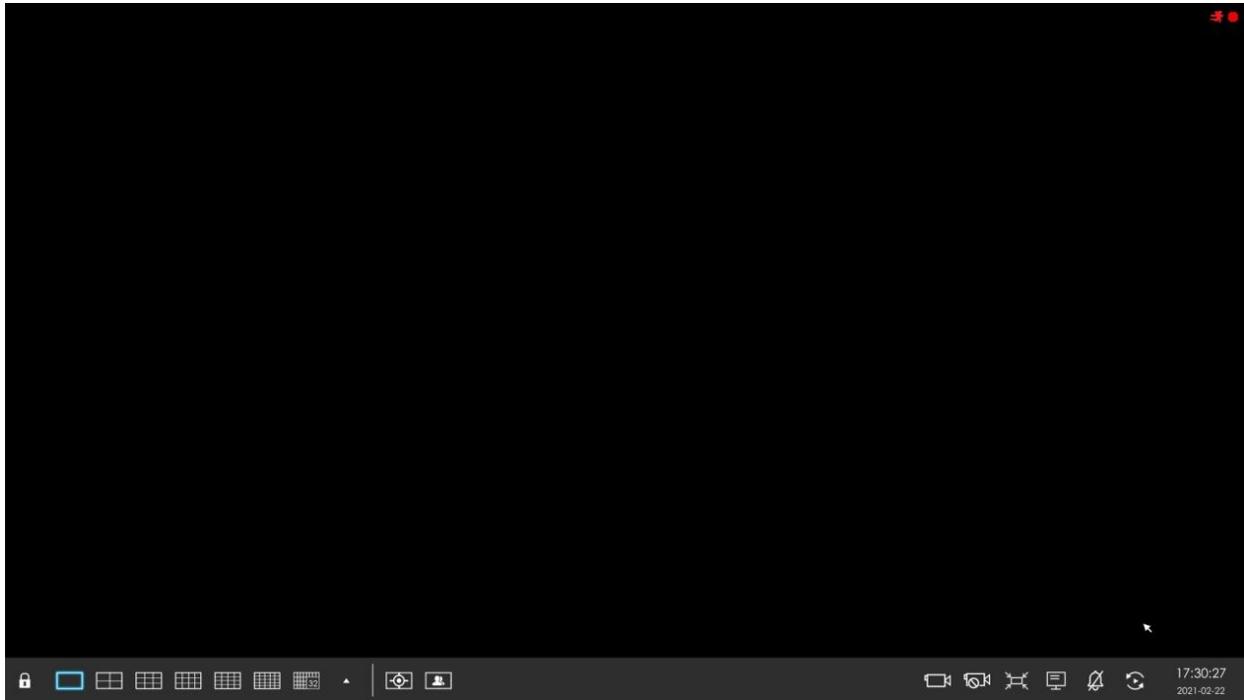
Right click in the Live View and the quick operation menu pops up.



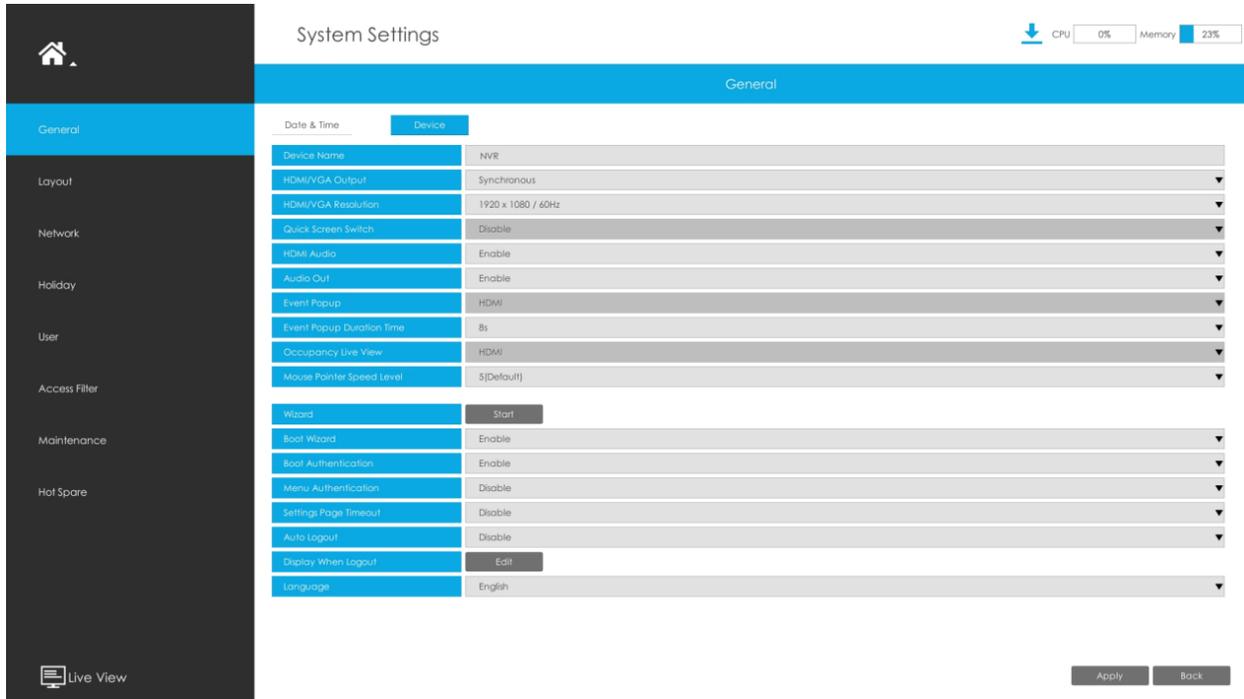
**Table 5.**

Item	Descriptions
Menu	Display Main Menu
Single Screen	The selected channel will be full screen. You could go back to previous screen layout by double clicking the channel
Sub Screen Ctrl	Switch to sub screen to operate (Only for Pro NVR 7000 Series, PoE NVR 7000 Series and Pro NVR 8000 Series)
Multi Screen	Switch to multiple screen layouts
Preview Mode	Regular Mode, Target Mode and Occupancy Mode are available
Display Info	Show channel information, including Camera Number, Bit Rate, Frame Rate and Frame Size
Previous Screen	Switch to previous screen
Next Screen	Switch to next screen
Logout	Log out current user account

- The functions and channel status on the sub screen are the same as that on the main screen of both NVR 7000 Series and NVR 8000 Series.



- For the Sub Screen Ctrl function of Pro/PoE NVR 7000 Series, you can choose whether these two outputs are independent or synchronous. And if you change the option, the modification will take effect after rebooting.



## Quick Operation for single channel

In live view interface, left click the channel, the quick menu will appear.



**Table 6.**

Icons	Descriptions	Icons	Descriptions
	Manually record		Image Configure
	PTZ control		Original/Resize the image
	Audio on/off		Two-way Audio
	Digital zoom		Snapshot manually
	Instant Playback		Fisheye Mode

Icons	Descriptions	Icons	Descriptions
	Close menu		

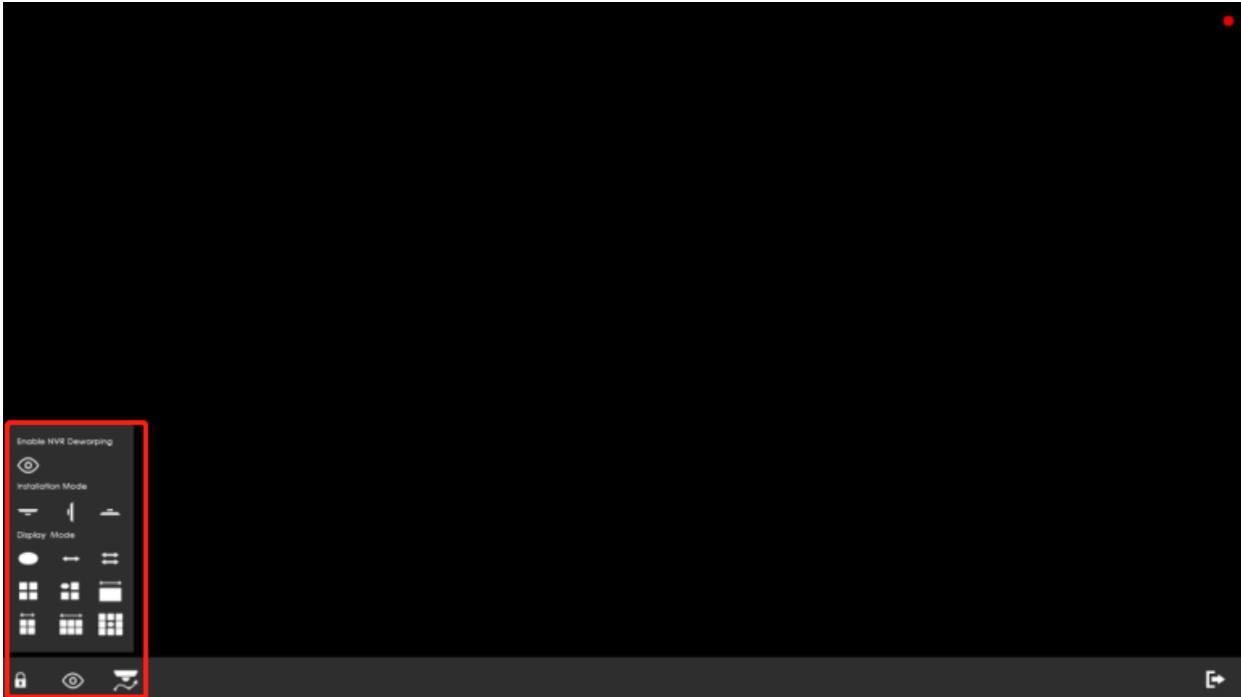
 **Note:** You can right-click to exit the instant playback.

### 3.2.3 Fisheye Mode

Click  to enter Fisheye Mode, which will display full screen fisheye channel. Click  or any other icons in this page to enter NVR-side Dewarping. Then you can set installation modes and display modes for the camera on the Fisheye tool bar. After finished, click  to end Dewarping.

 **Note:**

1. NVR-side Dewarping is available for all devices including third-party devices.
2. Milesight NVR Only supports one channel Dewarping.



**Installation Mode:** Ceiling Mount/ Wall Mount/ Table Mount

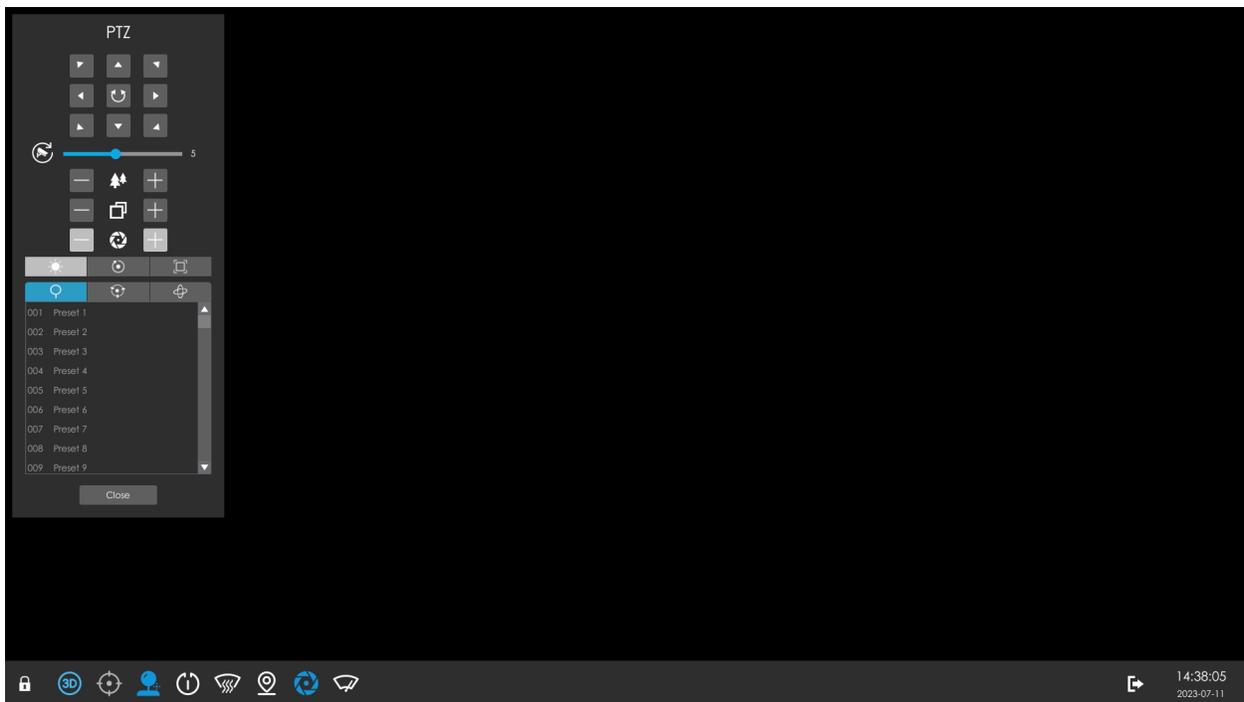
**Display Mode:** 1O/1P/2P/4R/1O3R/1P3R

**Fisheye Auto Tracking:** Comprehensive Fisheye Auto Tracking avoids any details missing by performing the digital Pan/Tilt/Zoom to track the moving objects automatically.

 **Note:** Fisheye Auto Tracking function is only supported in On-board Dewarping and ceiling mode with Regional View on fisheye network camera.

### 3.2.4 PTZ Mode

Click  to enter PTZ mode, and the selected channel will be full screen.



You can do PTZ, Preset, Patrol, Pattern, Lighting for 30s, Lens Initialization and Auxiliary Focus operation in the PTZ panel.

Meanwhile, there are four icons in the tool bar. The descriptions are as below.

**Table 7.**

Icon	Descriptions	Icon	Descriptions
	Lock/Unlock the tool bar		Enable/Disable 3D positioning

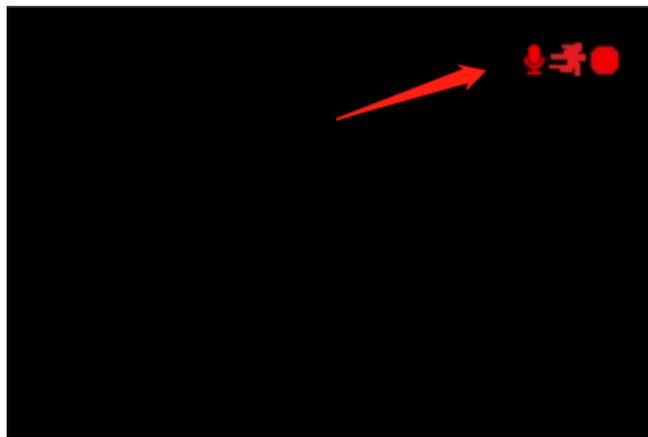
Icon	Descriptions	Icon	Descriptions
	PTZ Manual Tracking		Show/Hide the PTZ control panel
	One-touch patrol		Dehumidifying
	Auto Home		Auto Iris
	Wiper		

 **Note:**

1. Ensure that your camera's version is 4X.7.0.74 or above before you use Lighting for 30s, Lens Initialization, Auxiliary Focus and PTZ Manual Tracking.
2. Fisheye channels also support the PTZ operation, which allows users to adjust the on-board monitoring angle of Fisheye view.

### 3.2.5 Two-way Audio

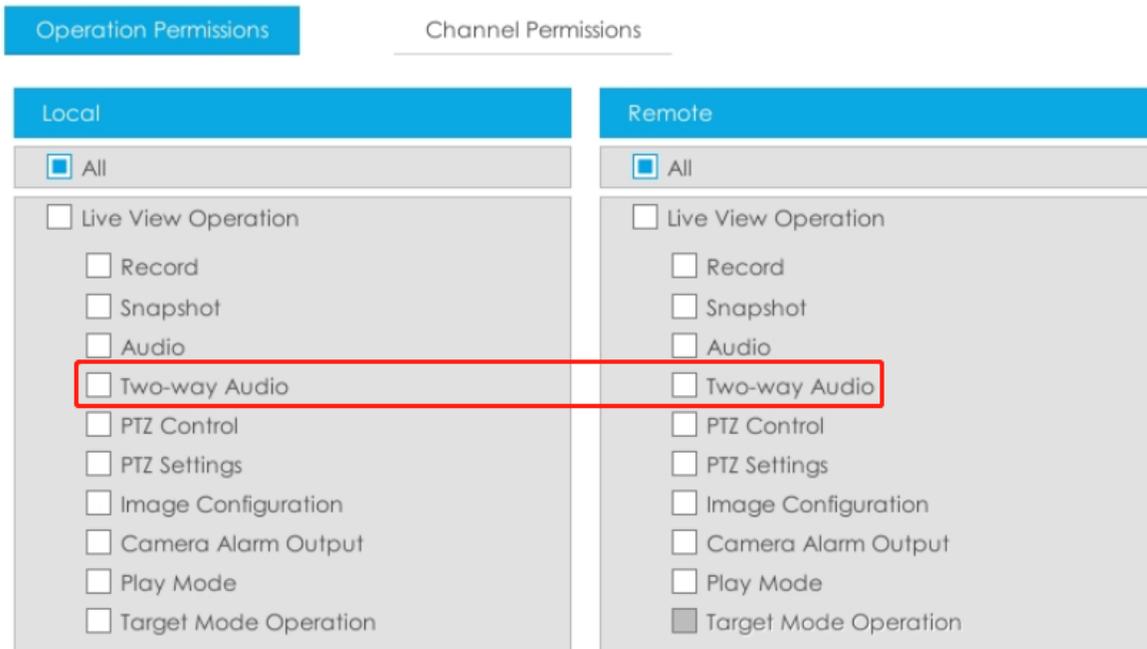
Click  to enable Two-way Audio, which achieves the communication between NVR and camera, so that you can talk with your camera in NVR local monitor side.



 **Note:**

1. Only NVR 7000 and 8000 series that support Two-way Audio now, other series only support Audio function.

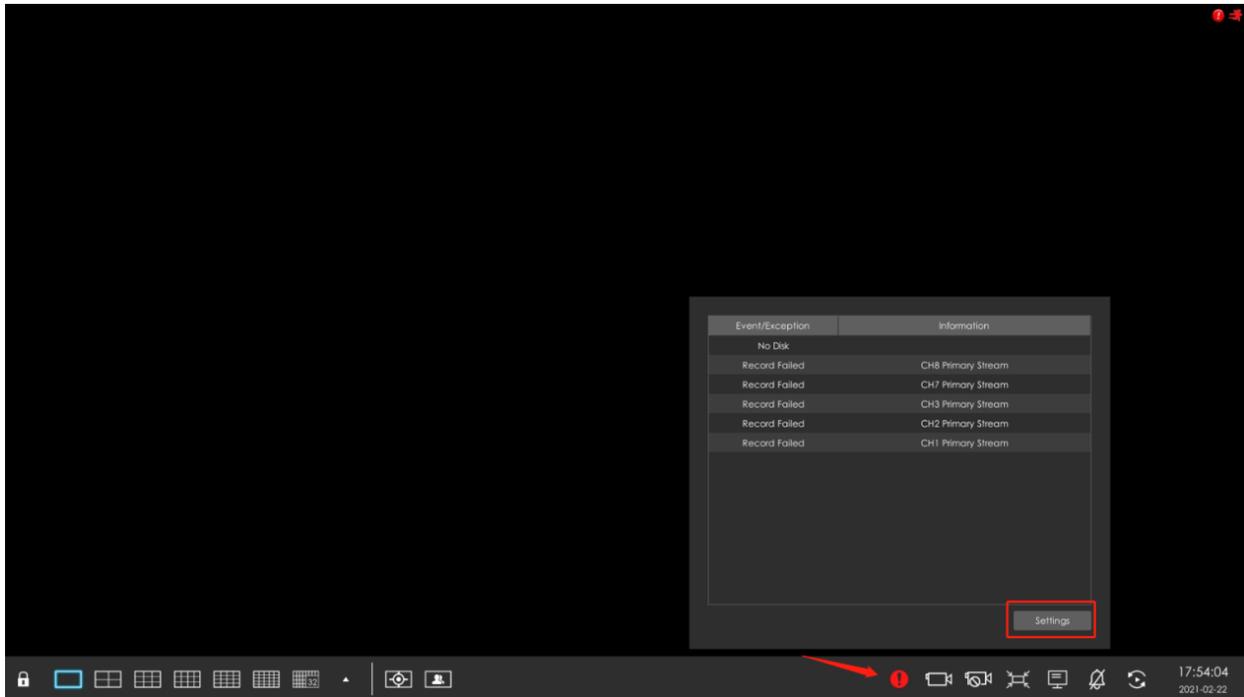
2. The Two-way Audio only supports one channel talking at one time.
3. Two-way Audio and Audio function can not be used together, including Audio of Playback.
4. The audio interface of NVR can only be used alone. When other devices are talking to NVR, it would indicate that the device is busy if you enable Audio or Two-way Audio of other channels at the same time.



### 3.2.6 Event Notification

The prompt icon  will automatically blink in the bottom bar when corresponding event is triggered. You can click it to check alarm details. And it can be unlocked manually.

Also, you can select which alarm notification you want to get by click  .



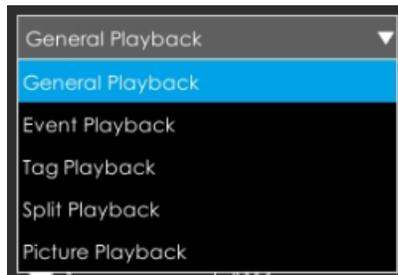
## 3.3 Playback

Playback supports to playback video according to recorded time and to play recorded video files in specified time period. Synchronous playback of multi-channel is supported.

### 3.3.1 General Playback



**Step1. Select General Playback as playback type.**



**Step2. Select Stream Type.**

Primary Stream and Secondary Stream are available.



**Step3. Select channel.**

Select channels you want to do playback. User can click **Select Max** to select maximum channel for playback, 9 channels for Mini (PoE) NVR Series while 16 channels for other NVR. Layout of playback will be automatically adjusted according to the amount of the selected channels.

CH	Name
<input checked="" type="checkbox"/>	1 CAM1
<input checked="" type="checkbox"/>	2 CAM2
<input type="checkbox"/>	3 CAM3
<input type="checkbox"/>	4 CAM4
<input type="checkbox"/>	5 CAM5
<input type="checkbox"/>	6 CAM6
<input type="checkbox"/>	7 CAM7
<input type="checkbox"/>	8 CAM8
<input type="checkbox"/>	9 CAM9
<input type="checkbox"/>	10 CAM10
<input type="checkbox"/>	11 CAM11
<input type="checkbox"/>	12 CAM12
<input type="checkbox"/>	13 CAM13
<input type="checkbox"/>	14 CAM14
<input type="checkbox"/>	15 CAM15
<input type="checkbox"/>	16 CAM16

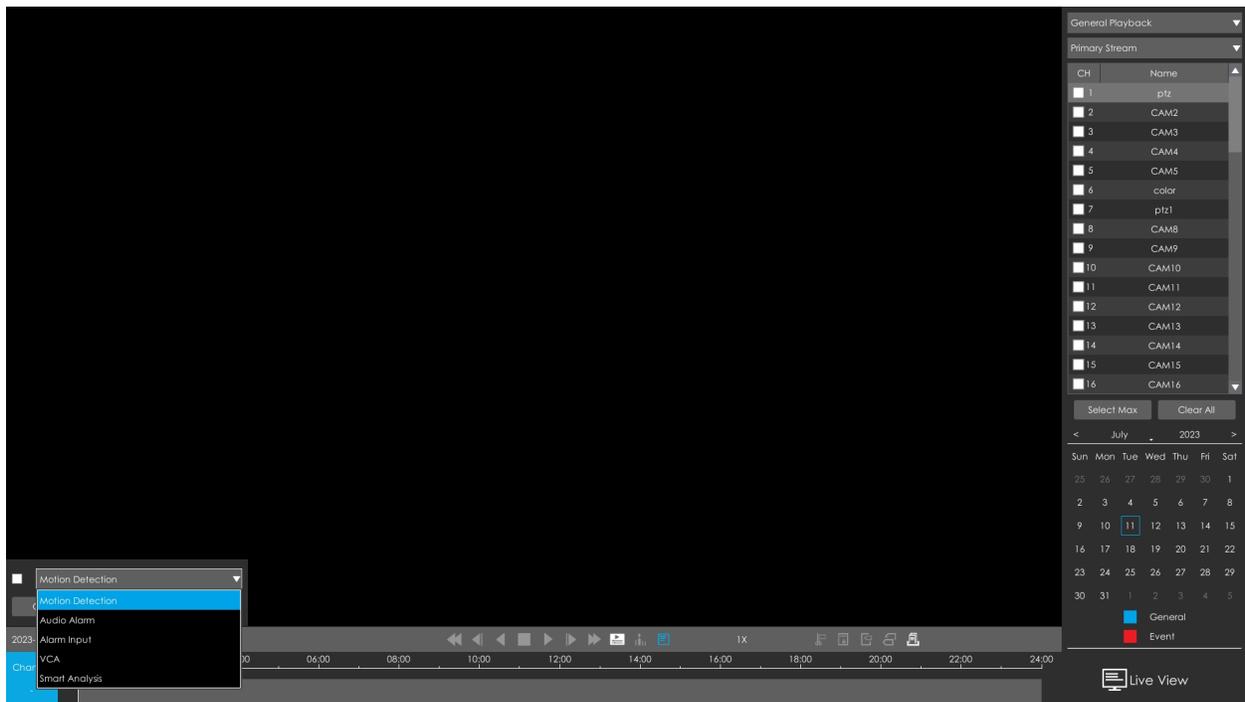
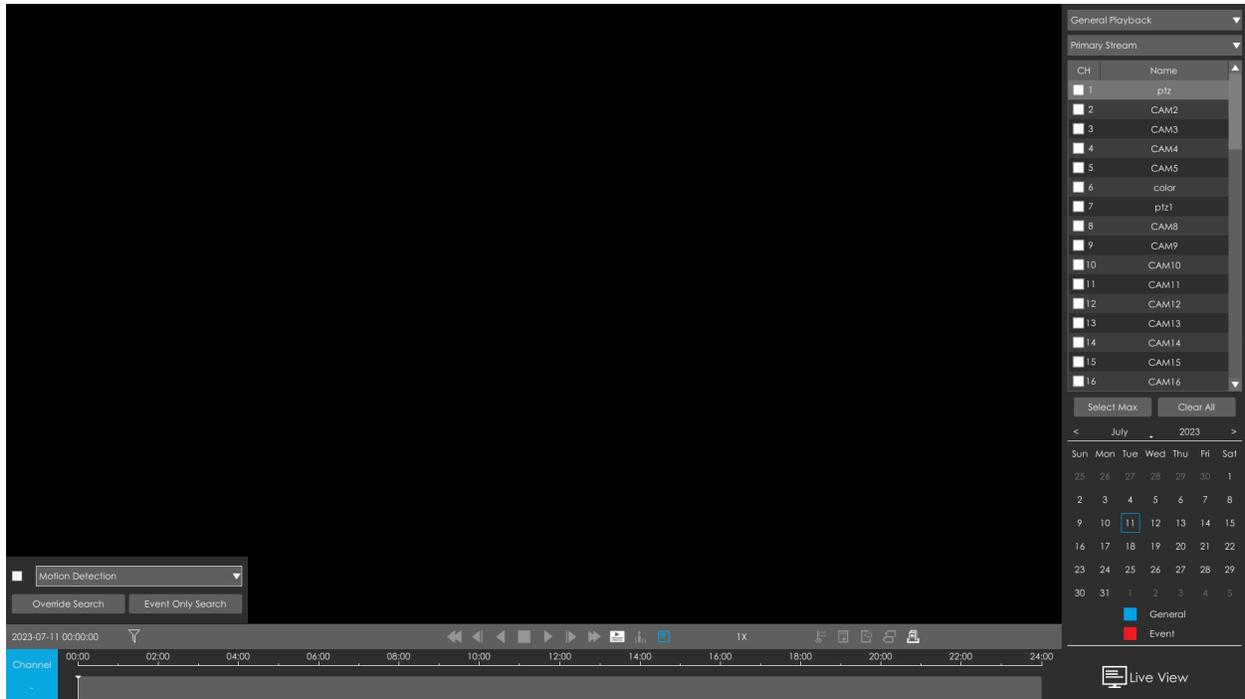
Select Max Clear All

#### Step4. Select date.

The day with blue letters means that there are record files.

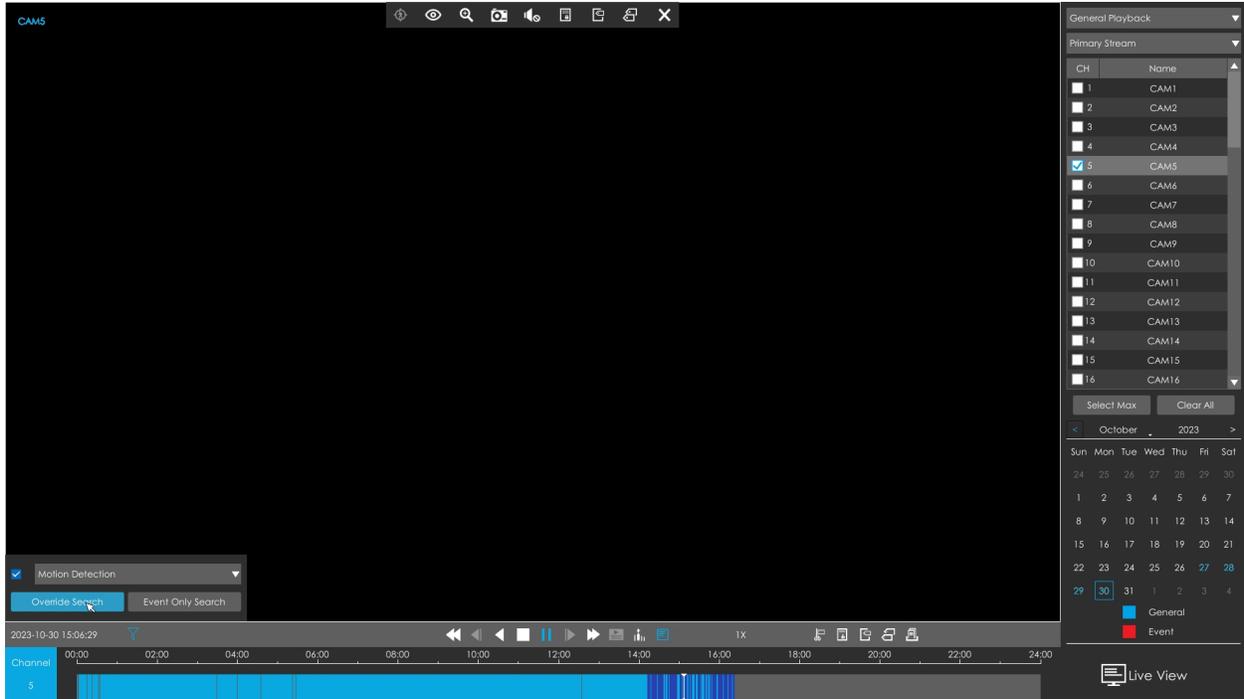
August 2020						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

Step 5. Select Event to filter  different events for a more accurate view.



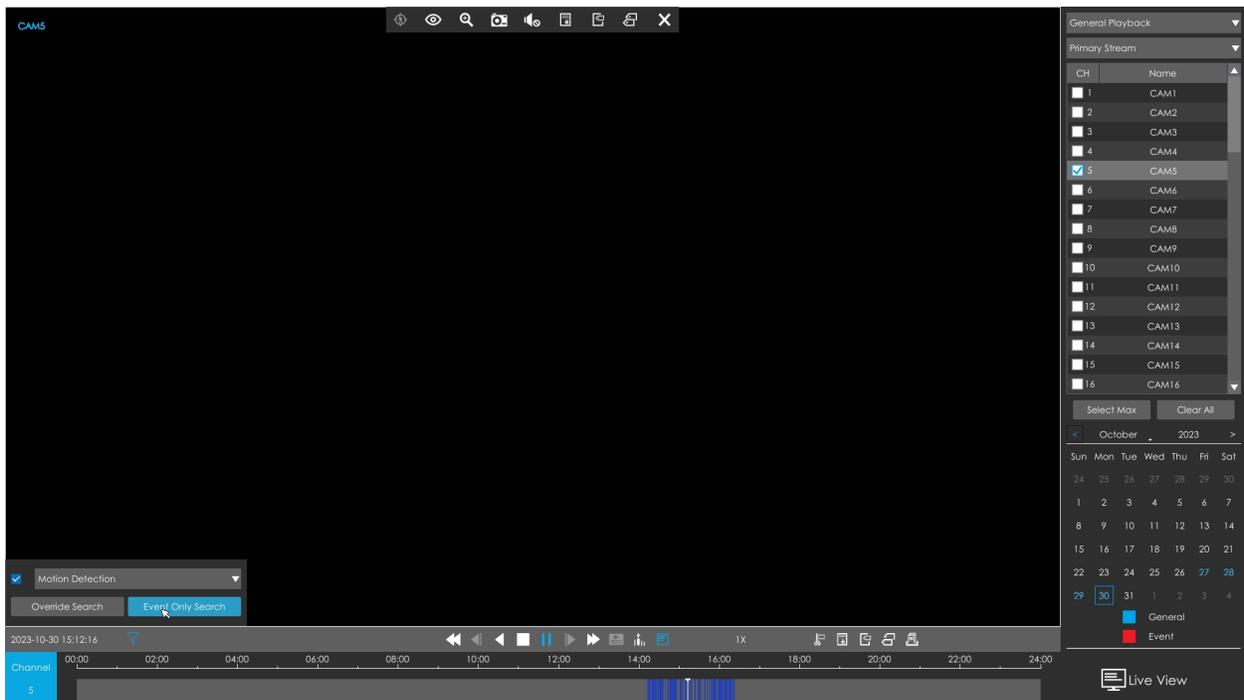
1) If you select Override Search, the events that you search for will be presented in a different color on the original timeline.

### Override Search:



2) If you select Event Only Search, only the video of the event will be presented on the timeline.

### Event Only Search:



 **Note:** This function is only available when you playback with a single channel.

**Step 6. Click  to play.**

Every channel got their own file bar, and there is only one file bar matching with the selected channel. The tool bar can display multiple types record. It shows what kind of event has happened during this period. The symbolic meaning of each color is:

**Blue** --- General

**Red** --- Event

Take this bar above as an example, it means that there are continuous recording and event recording in this period.

 **Note:**

1. You can adjust the speed even when playback is paused.
2. The playback time bar on web page also shows the locked and tagged icons, which is the same as on the monitor.

**Table 8. Description of the buttons**

Icons	Descriptions	Icons	Descriptions
	Smart Search		Digital zoom
	Snapshot		Audio on
	Audio off		Speed down
	Speed up		Step reverse
	Step forward		Rewind
	Play		Stop

Icons	Descriptions	Icons	Descriptions
	Pause		Timeline cutting
	Lock video file		Quick tag
	Custom tag		File Management
	Zoom in time bar		Zoom out time bar
	Best Decoding Performance		Smart Play Speed

**Speed up/down:** You can adjust the speed even when playback is paused.

**Lock Video:** Once the video is locked, the whole file where the video located won't be overwritten. The NVRs support the display of locked icon on the playback bar so that the corresponding files in the playback page can be identified directly. You can also change the lock status in Retrieve interface.

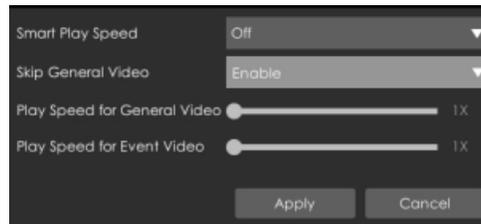
**Tag Video:** Quick Tag and Custom Tag are available for tag operation in Playback interface. The NVRs support the display of tagged icon on the playback bar so that the corresponding files in the playback page can be identified directly. You can backup video via tag in Retrieve interface or do tag playback in Playback interface.

**Best Decoding Performance:** This function is supported for NVR 8000 Series, by which the decoding resources of the other screen can be used for playback when the decoding performance is insufficient. Here are some notes for using this feature below.

 **Note:**

1. This button can be available only when HDMI2/VGA2 of NVR is enabled.
2. This button only exists in General Playback, Event Playback and Tag Playback.
3. Another screen will be black once this function is enabled.
4. The status of this option is temporary. Once you exit the playback interface, this function will automatically turn off. The other screen will restore preview, and the decoding resources of the two screens will be reassigned.

**Smart Play Speed:** You can configure Play Speed for General Video and Event Video and choose to skip General Video according to your preference.



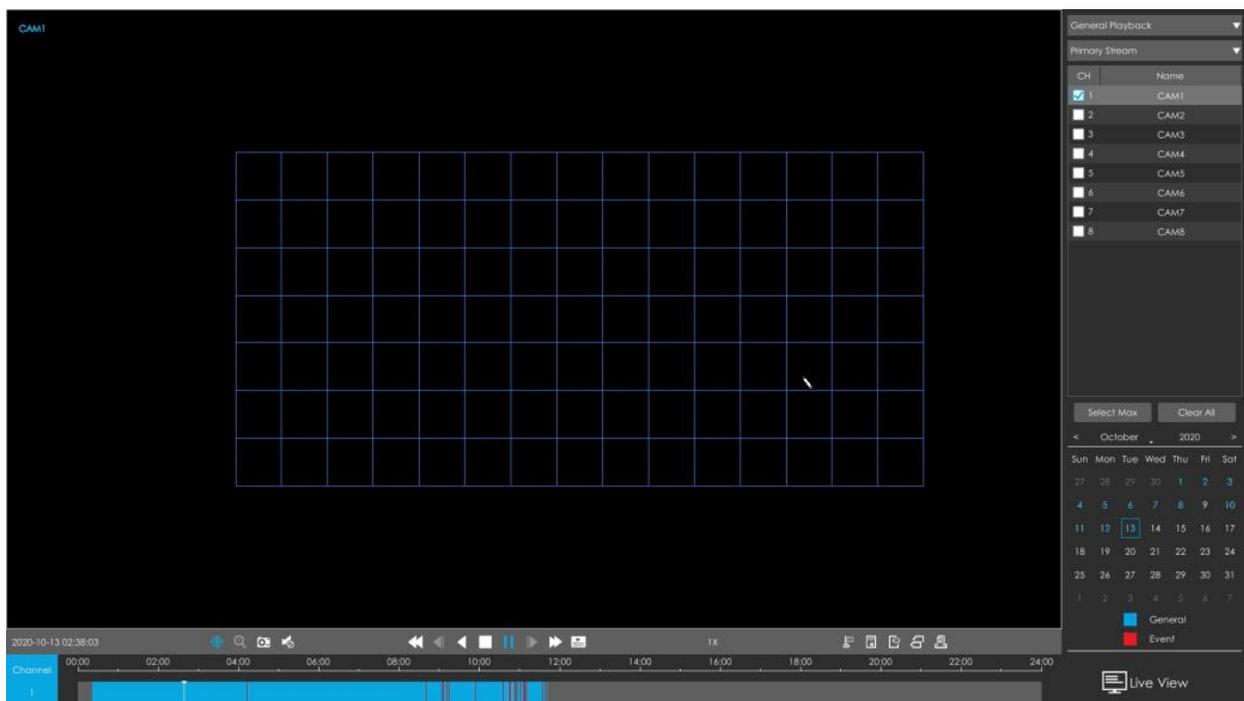
**Note:** Only NVR firmware version xx.9.0.9 or above supports Smart Play Speed.

**Smart Search:** NVR can search out all relevant motion events and play all the event recording files of the selected area. Here are the steps of how to use the function.

(1) Go to Playback interface, select a channel to playback.

(2) Click  to enable Smart Search.

(3) Draw an area in the frame and NVR would play the video files after searching out all motion events of the area.



**Note:**

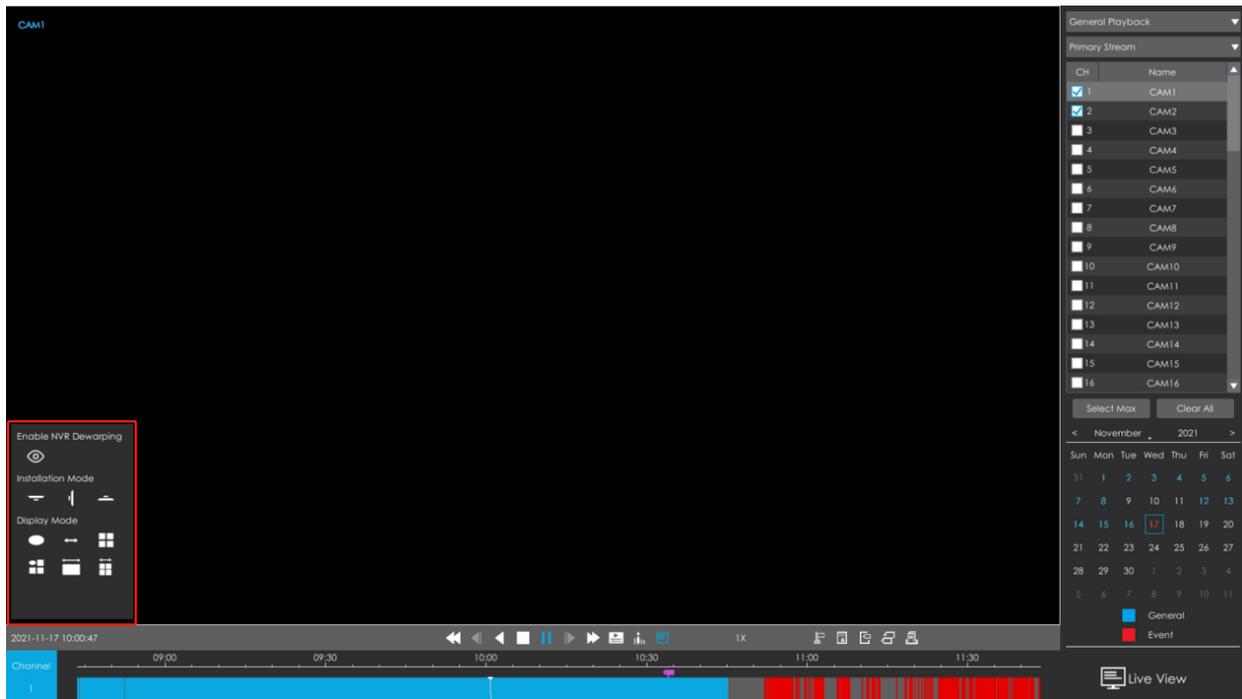
1. Only NVR firmware version xx.9.0.10 or above supports Smart Search

2. Make sure your Camera version is xx.7.0.76 or above.
3. Smart Search and Smart Play Speed can not be used together.
4. Smart Search is available only when playing in a single channel.

**Fisheye Mode:** Click  to enter Fisheye Mode, which will display full screen fisheye channel. Click  or any other icons in this page to enter NVR-side Dewarping. Then you can set installation modes and display modes for the camera on the Fisheye tool bar. After finished, click  to end Dewarping.

 **Note:**

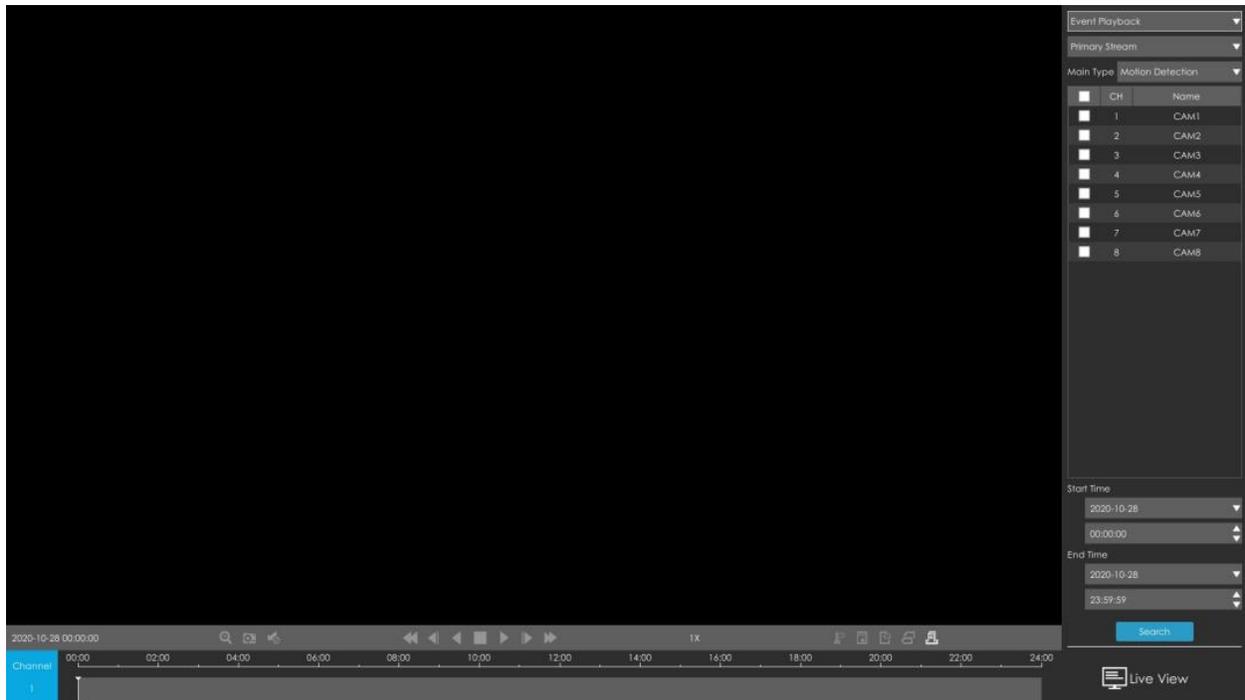
1. NVR-side Dewarping is available for all devices including third-party devices.
2. The NVR Only supports one channel Dewarping.



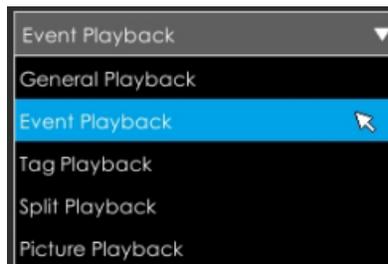
**Installation Mode:** Ceiling Mount/ Wall Mount/ Table Mount

**Display Mode:** 1O/1P/2P/4R/1O3R/1P3R

### 3.3.2 Event Playback

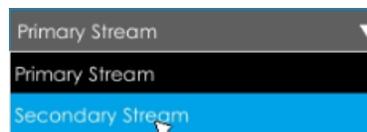


**Step 1. Select Event Playback as playback type.**



**Step 2. Select Stream Type.**

Primary Stream and Secondary Stream are available.



**Step 3. Select channel.**

Select channels you want to do playback. Layout of playback will be automatically adjusted according to the amount of the selected channels.

<input type="checkbox"/>	CH	Name
<input checked="" type="checkbox"/>	1	CAM1
<input type="checkbox"/>	2	CAM2
<input type="checkbox"/>	3	CAM3
<input type="checkbox"/>	4	CAM4
<input type="checkbox"/>	5	CAM5
<input type="checkbox"/>	6	CAM6

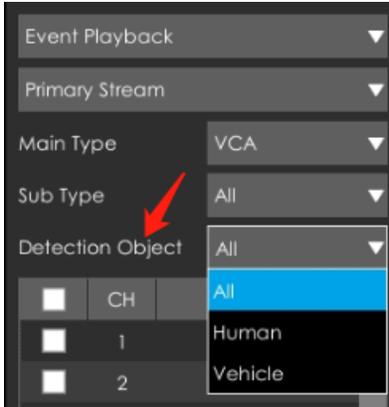
#### Step 4. Select Event Type.



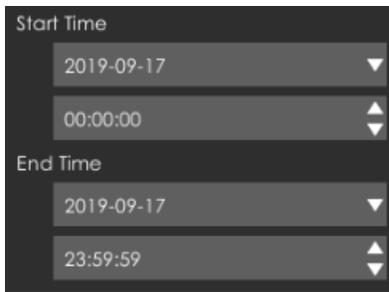
In particular, the Detection Object option is available only if the Main Type is VCA and the Sub Type is one of several VCA events. You can search and playback the video that meets the corresponding conditions according to the selected Detection Object. The Detection Object has three options: All, Human and Vehicle.

The VCA events which support the human/vehicle detection object function are:

- Region Entrance
- Region Exiting
- Advanced Motion Detection
- Line Crossing
- Loitering



**Step 5: Select Start Time and End Time, click "Search" to search the record.**



**Step 6: It would list all videos after clicking "Search". Set pre playback and post playback time, then play the video by clicking .**

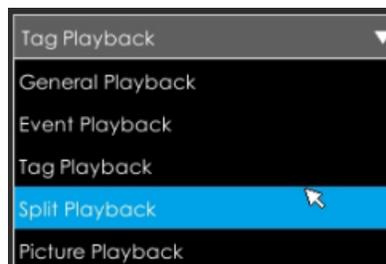


Video Playback Tool Bar Description are the same as General Playback, except for those icons that are not locked or tagged on the playback bar.

### 3.3.3 Tag Playback

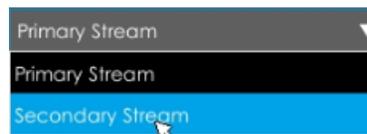


**Step 1. Select Tag Playback as playback type.**



**Step 2. Select Stream Type.**

Primary Stream and Secondary Stream are available.



**Step 3. Select channel.**

Select channels you want to do playback. Layout of playback will be automatically adjusted according to the amount of the selected channels.

<input type="checkbox"/>	CH	Name
<input checked="" type="checkbox"/>	1	CAM1
<input type="checkbox"/>	2	CAM2
<input type="checkbox"/>	3	CAM3
<input type="checkbox"/>	4	CAM4
<input type="checkbox"/>	5	CAM5
<input type="checkbox"/>	6	CAM6

**Step 4. Input tag name or any key words of tag.**

Tag

**Step 5: Select Start Time and End Time.**

Start Time  
 ▼  
 ▲▼

End Time  
 ▼  
 ▲▼

**Step 6: It would list all tagged video after clicking  . Set pre playback and post playback time, then play the tag video by clicking .**



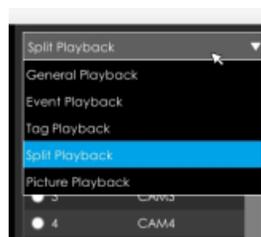
**Video Playback Tool Bar Description are the same as General Playback, except for those icons that are not locked or tagged on the playback bar.**

### 3.3.4 Split Playback

Split Playback allows users to select a video channel and set a time range to divide the video files into several parts in the specified time period according to their needs when watching playback, so that users can watch videos of different time simultaneously.



**Step1. Select Split Playback as playback type.**



**Step2. Select Stream Type.**

Primary Stream and Secondary Stream are available.

**Step3. Select channel.**

Select a channel you want to do play back. You are allowed to select only one channel at one time.

<input type="checkbox"/>	CH	Name
<input checked="" type="checkbox"/>	1	CAM1
<input type="checkbox"/>	2	CAM2
<input type="checkbox"/>	3	CAM3
<input type="checkbox"/>	4	CAM4
<input type="checkbox"/>	5	CAM5
<input type="checkbox"/>	6	CAM6

#### Step4. Set Start Time and End Time.

Set Start Time and End Time and click Search button to search playback records of the chosen channel. The time period should be within 24 hours

Start Time

2019-09-17 ▼

00:00:00 ▲▼

End Time

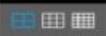
2019-09-17 ▼

23:59:59 ▲▼

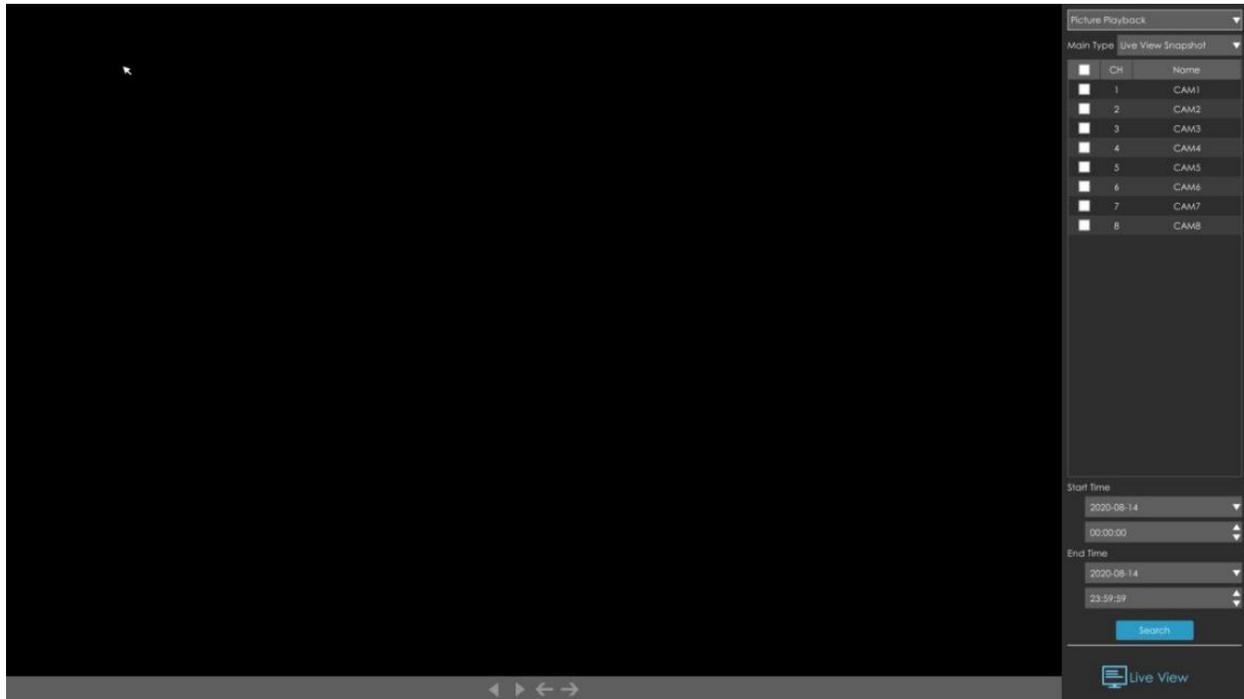
Step5: It would start playing after clicking "Search", displayed in 4 split screens by default.

The screenshot displays the NVR playback interface. The main area is divided into four quadrants, labeled I-1, I-2, I-3, and I-4, each showing a black screen, indicating that the search results are currently empty. On the right side, there is a 'Split Playback' panel. It includes a 'Primary Stream' dropdown menu and a list of channels from CH 1 to CH 20, with names like CAM1 through CAM20. Below the channel list, there are fields for 'Start Time' (2020-07-02 00:00:00) and 'End Time' (2020-07-02 23:59:59), along with a 'Search' button. At the bottom of the interface, there is a timeline showing the date 2020-07-02 and a time range from 00:00 to 24:00. A 'Live View' button is located in the bottom right corner.

**Step6: Select Different Split Screen Numbers.**

Go to  in the Toolbar, which corresponds to 4/9/16 screens playback. You can click any one of them to switch to different layout. It would segment and play the video according to your selection automatically.

*3.3.5 Picture Playback*



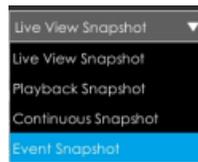
**Step 1. Select Picture Playback as playback type.**



**Step 2. Select channel.**

<input type="checkbox"/>	CH	Name
<input checked="" type="checkbox"/>	1	CAM1
<input type="checkbox"/>	2	CAM2
<input type="checkbox"/>	3	CAM3
<input type="checkbox"/>	4	CAM4
<input type="checkbox"/>	5	CAM5
<input type="checkbox"/>	6	CAM6

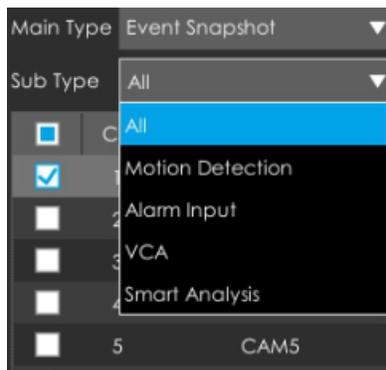
**Step 3. Select Snapshot type, including Live View Snapshot, Playback Snapshot, Continuous Playback and Event Playback.**



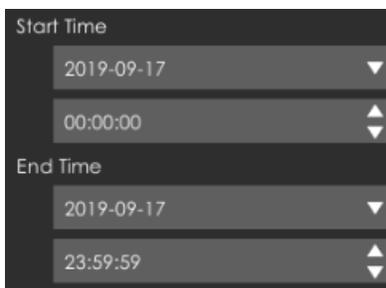
Live View Snapshot and Playback Snapshot refer to the picture file manually captured in Live View and Playback page.

Continuous Snapshot requires you to set continuous snapshot schedule in Storage->Snapshot->Snapshot Schedule interface.

Event Snapshot includes Motion Detection, Alarm Input, VCA and Smart Analysis. Select corresponding event and click Search to get event snapshot files.



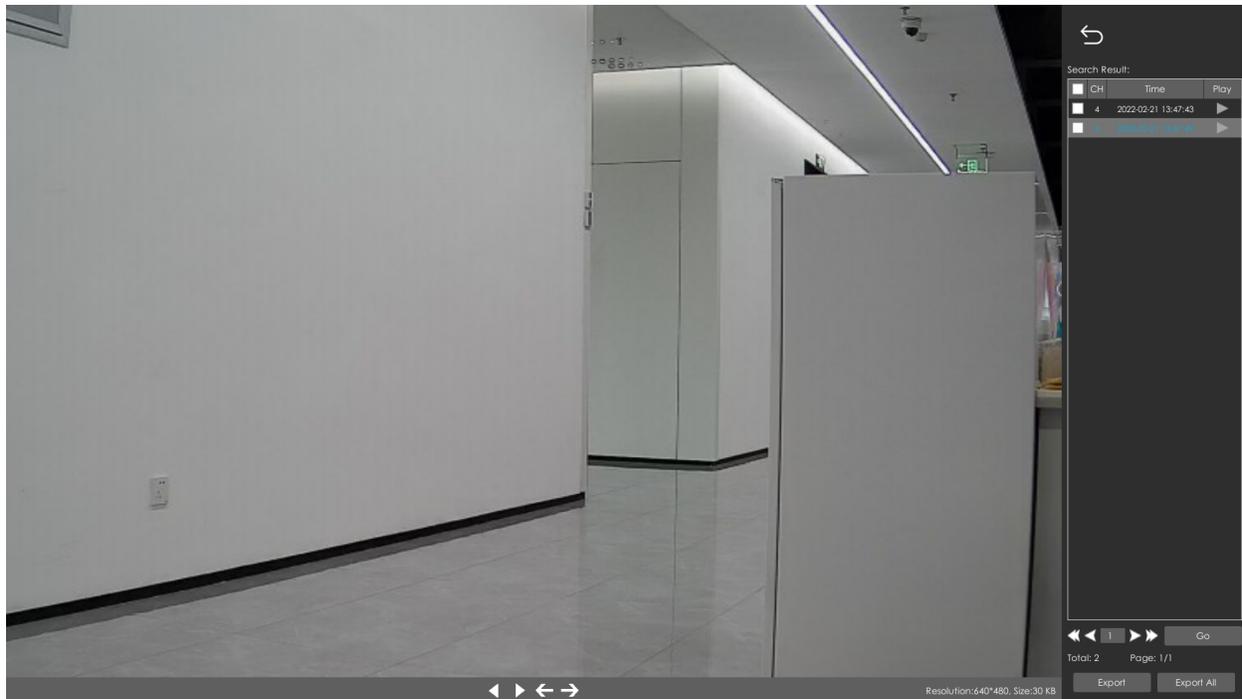
**Step 4: Select Start Time and End Time.**



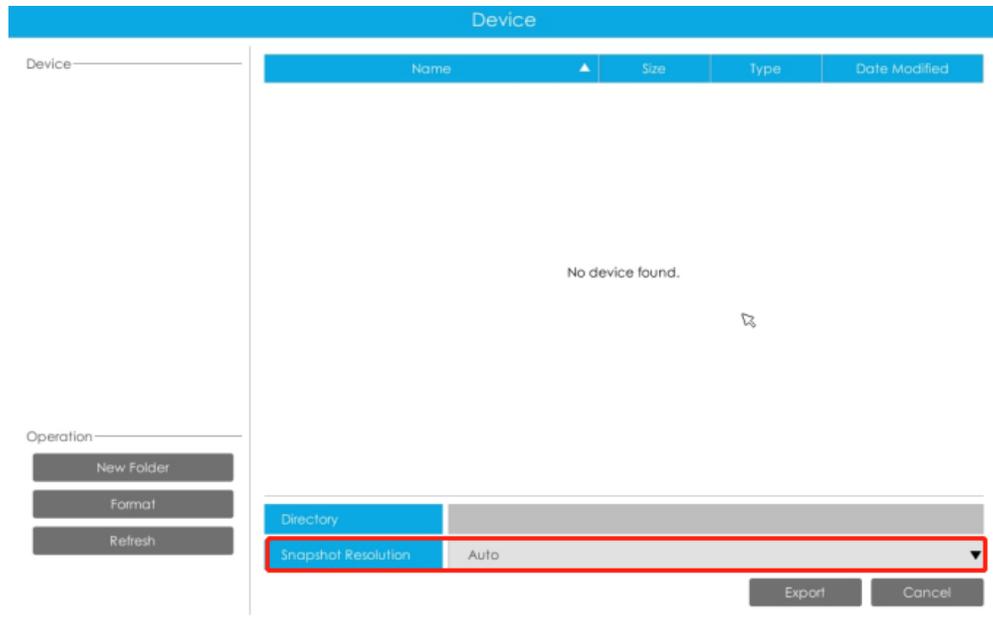
**Step 5: It would list all snapshot after clicking "Search".**

**Click  to play the selected picture, or click  to auto play pictures.**

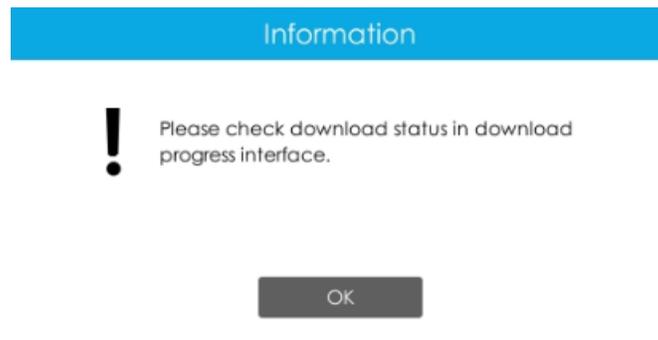
- You can export picture by clicking  or .



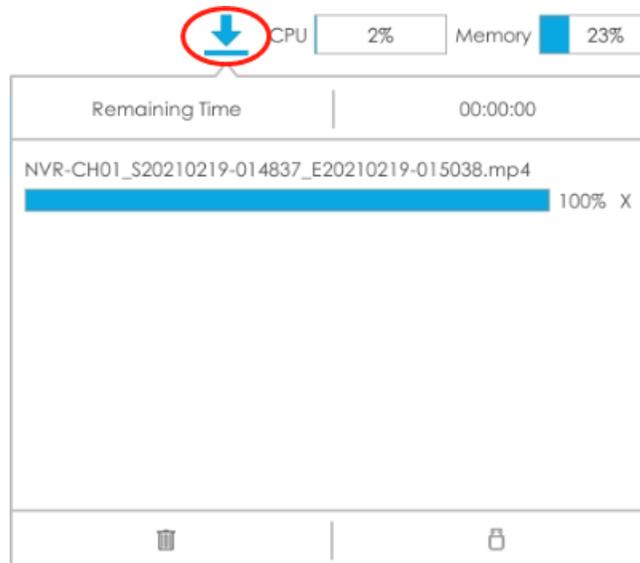
- Select Dictionary and Snapshot Resolution to be exported. The Snapshot Resolution includes Auto, 704\*576, 640\*360, and the default option is Auto.



An information pop up to prompt you to check download status in Download Progress panel when you click .



You can view the file download process in the Download Process panel, including the remaining time required for all files to be downloaded. Click  to delete all download records in the panel. Click  to view the device status and perform the following operations: New Folder, Format and Refresh.



**Note:**

1. Download file can not exceed 100,000 at a time.
2. Only one file can be downloaded at a time, and files are downloaded in the order.

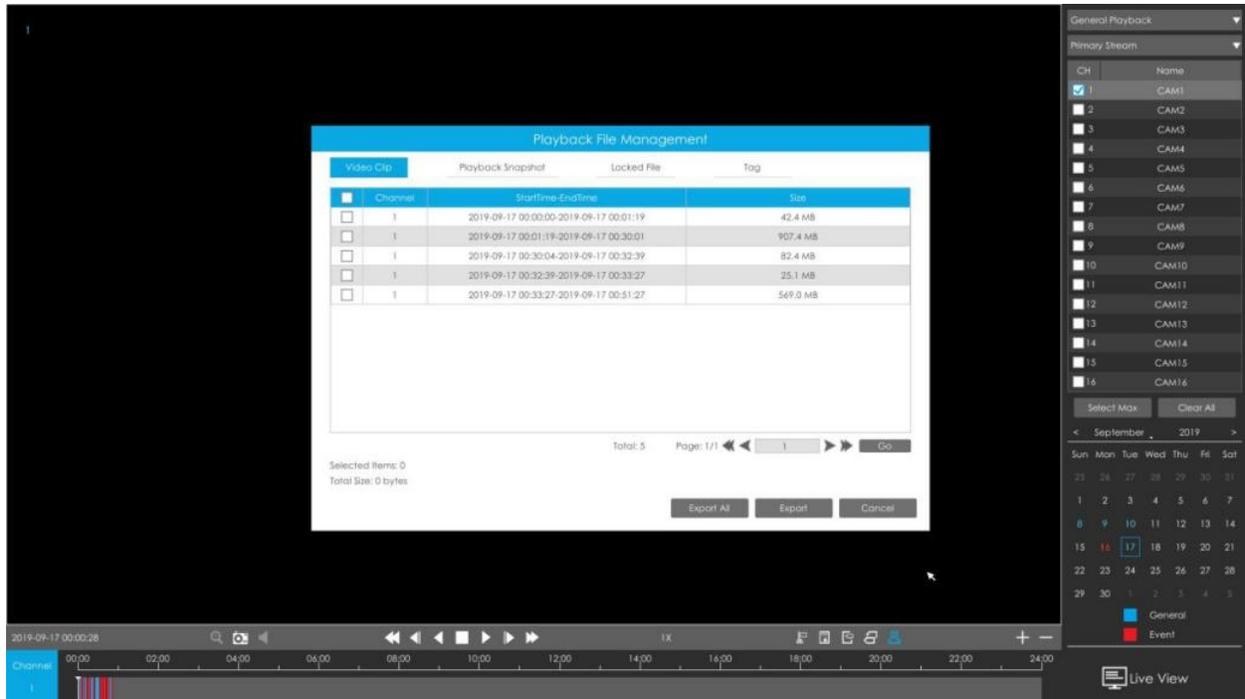
**Table 10.**

Icons	Descriptions	Icons	Descriptions
	Play backward		Play
	Previous picture		Next picture
	Back to search interface		

### 3.3.6 File Management

It would list all the operation you did this time until exit the Playback interface.

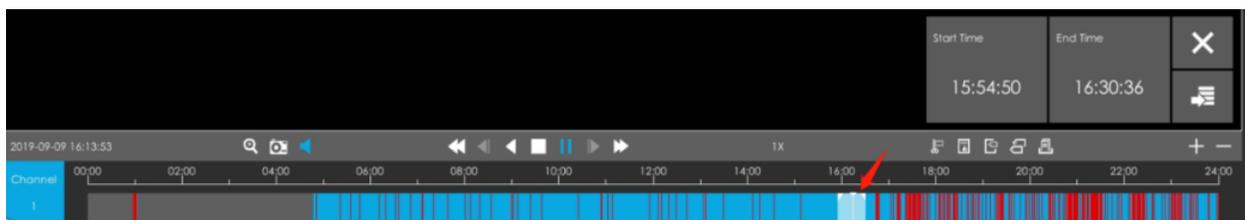
Operation includes clip video, snapshot, lock file and tag. Besides, you can export clipped video, playback snapshot and locked file to USB drives and eSATA.



Take clip video as example.

### Step 1. Cut recorded files.

Select the channel and date you want to backup, then select the time at timeline and click , then drag the timeline to select the start time and end time of video.



Step 2. Click  to pop up File Management interface. Select the video you clipped and click  to export video.

**Playback File Management**

Video Clip    Playback Snapshot    Locked File    Tag

<input type="checkbox"/>	Channel	StartTime-EndTime	Size
<input checked="" type="checkbox"/>	1	2019-09-17 00:00:00-2019-09-17 00:01:19	42.4 MB
<input type="checkbox"/>	1	2019-09-17 00:01:19-2019-09-17 00:30:01	907.4 MB
<input type="checkbox"/>	1	2019-09-17 00:30:04-2019-09-17 00:32:39	82.4 MB
<input type="checkbox"/>	1	2019-09-17 00:32:39-2019-09-17 00:33:27	25.1 MB
<input type="checkbox"/>	1	2019-09-17 00:33:27-2019-09-17 00:51:27	569.0 MB

Total: 5    Page: 1/1    << 1 >>    Go

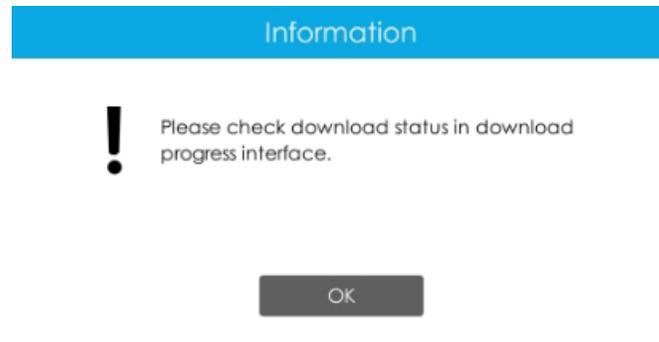
Selected Items: 1  
Total Size: 42.4 MB

Export All    **Export**    Cancel

**Step 4. Select the device to storage exported video and then click Export.**

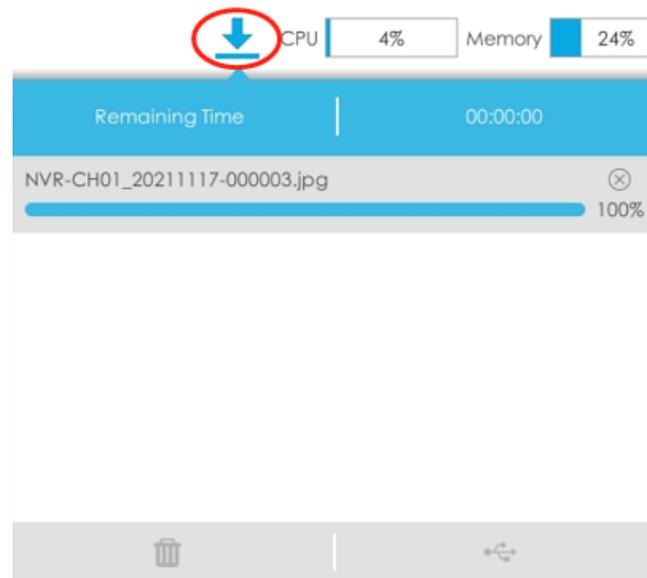
**Note:** You can also directly format and create new folder of storage device here.

**An information pop up to prompt you to check download status in Download Progress panel.**



**Note:** The download time of files depends on the time length of video you want to backup.

You can view the file download process in the Download Process panel, including the remaining time required for all files to be downloaded. Click  to delete all download records in the panel. Click  to view the device status and perform the following operations: New Folder, Format and Refresh.



**Note:**

- Download file can not exceed 100,000 at a time.
- Only one file can be downloaded at a time, and files are downloaded in the order.

## 3.4 Retrieve

### 3.4.1 Common Backup

Support to search out record file according to different stream type, record type and file type you set.

**Common Backup**

Channel

<input type="checkbox"/> All							
<input type="checkbox"/> CAM11111...	<input type="checkbox"/> CAM2	<input type="checkbox"/> CAM3	<input type="checkbox"/> CAM11111...	<input type="checkbox"/> CAM2	<input type="checkbox"/> CAM3	<input type="checkbox"/> CAM3	<input type="checkbox"/> CAM11111...
<input type="checkbox"/> CAM11111...	<input type="checkbox"/> CAM2	<input type="checkbox"/> CAM3	<input type="checkbox"/> CAM11111...	<input type="checkbox"/> CAM2	<input type="checkbox"/> CAM3	<input type="checkbox"/> CAM3	<input type="checkbox"/> CAM11111...

Time

Stream Type: Primary Stream

Record Type: All

File Type: All

Start Time: 2022-08-11 00:00:00

End Time: 2022-08-11 23:59:59

Search

**Step 1: Set the search condition and click  to search video.**

The search result can be shown as a list.

Retrieve

CPU 5% Memory 23%

Common Backup

Common Backup

Event Backup

Picture Backup

Channel: 9 Name: CAM9

2021-02-22 18:08:56

Start Time:2021-02-22 18:08:56

End Time:2021-02-22 18:09:32

File Size:17.8 MB

List

List

Chart

Total Size: 37.2 MB

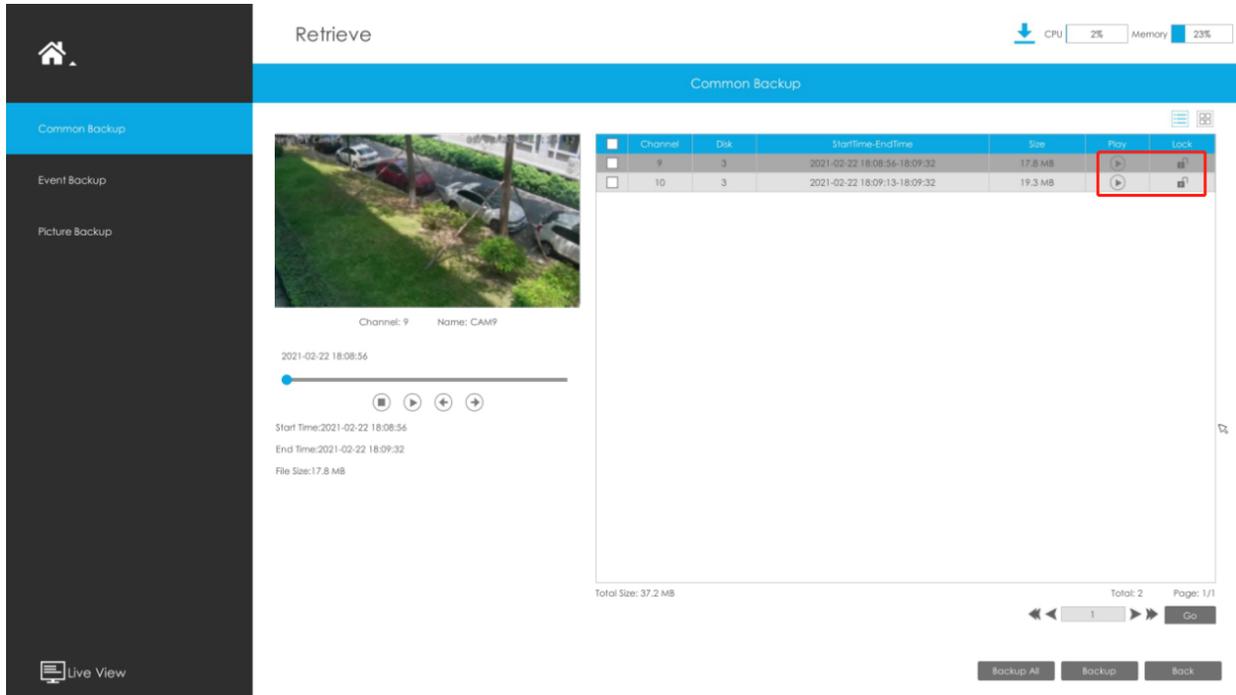
Total: 2 Page: 1/1

Go

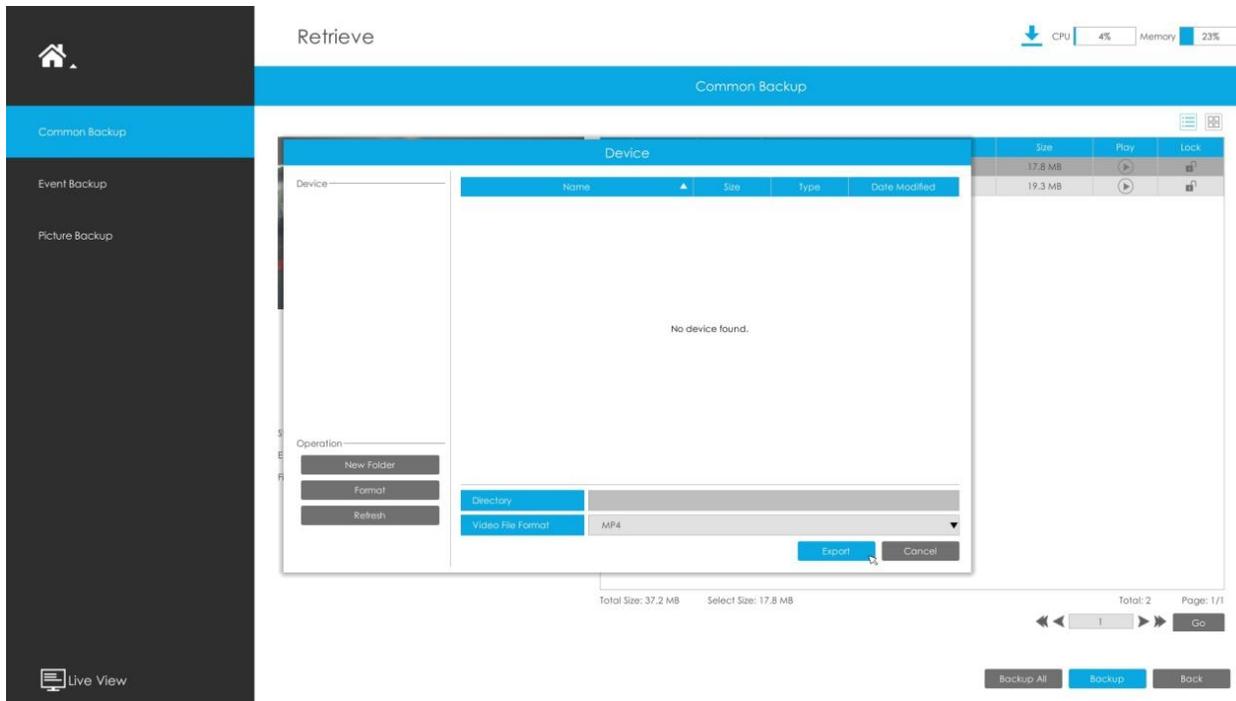
Backup All Backup Back

**Step 2: Select the file you want to backup and click . Also, you can click  to backup all recorded videos.**

In Common Backup interface, play, lock and unlock video are supported. Click  to play and  to lock. Once the video is locked, the whole file where the video located won't be overwritten.

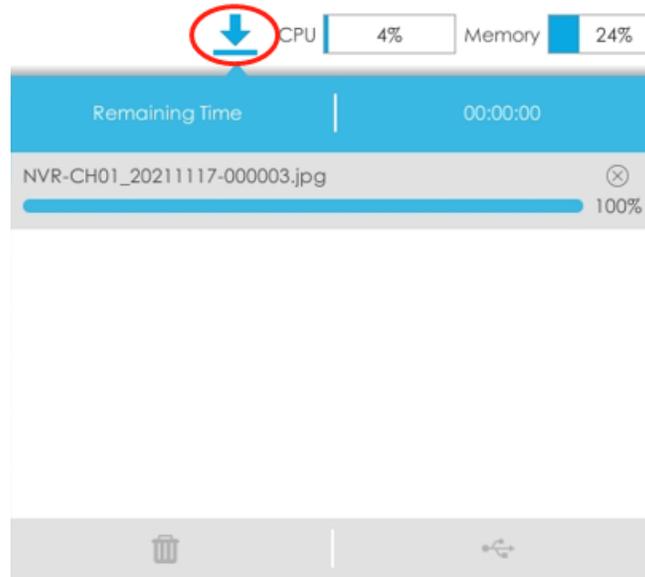


**Step 3: Select the format to be exported, which includes MP4, AVI and PS format and then click  to export selected files.**



You can view the file download process in the Download Process panel, including the remaining time required for all files to be downloaded. Click  to delete all download

records in the panel. Click  to view the device status and perform the following operations: New Folder, Format and Refresh.



 **Note:**

- Download file can not exceed 100,000 at a time.
- Only one file can be downloaded at a time, and files are downloaded in the order.

### 3.4.2 Event Backup

Support to search out and back up picture and video according to event type. The event type includes Motion Detection, Alarm Input, VCA and Smart Analysis.

Retrieve

CPU 2% Memory 23%

Event Backup

Main Type: Motion Detection

Stream Type: Primary Stream

Start Time: 2021-02-22 00:00:00

End Time: 2021-02-22 23:59:59

Pre Playback: 30s

Post Playback: 30s

Channel:  All

<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	<input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/> 6	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 8
<input checked="" type="checkbox"/> 9	<input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 11	<input checked="" type="checkbox"/> 12	<input checked="" type="checkbox"/> 13	<input checked="" type="checkbox"/> 14	<input checked="" type="checkbox"/> 15	<input checked="" type="checkbox"/> 16
<input checked="" type="checkbox"/> 17	<input checked="" type="checkbox"/> 18	<input checked="" type="checkbox"/> 19	<input checked="" type="checkbox"/> 20	<input checked="" type="checkbox"/> 21	<input checked="" type="checkbox"/> 22	<input checked="" type="checkbox"/> 23	<input checked="" type="checkbox"/> 24
<input checked="" type="checkbox"/> 25	<input checked="" type="checkbox"/> 26	<input checked="" type="checkbox"/> 27	<input checked="" type="checkbox"/> 28	<input checked="" type="checkbox"/> 29	<input checked="" type="checkbox"/> 30	<input checked="" type="checkbox"/> 31	<input checked="" type="checkbox"/> 32
<input checked="" type="checkbox"/> 33	<input checked="" type="checkbox"/> 34	<input checked="" type="checkbox"/> 35	<input checked="" type="checkbox"/> 36	<input checked="" type="checkbox"/> 37	<input checked="" type="checkbox"/> 38	<input checked="" type="checkbox"/> 39	<input checked="" type="checkbox"/> 40
<input checked="" type="checkbox"/> 41	<input checked="" type="checkbox"/> 42	<input checked="" type="checkbox"/> 43	<input checked="" type="checkbox"/> 44	<input checked="" type="checkbox"/> 45	<input checked="" type="checkbox"/> 46	<input checked="" type="checkbox"/> 47	<input checked="" type="checkbox"/> 48
<input checked="" type="checkbox"/> 49	<input checked="" type="checkbox"/> 50	<input checked="" type="checkbox"/> 51	<input checked="" type="checkbox"/> 52	<input checked="" type="checkbox"/> 53	<input checked="" type="checkbox"/> 54	<input checked="" type="checkbox"/> 55	<input checked="" type="checkbox"/> 56
<input checked="" type="checkbox"/> 57	<input checked="" type="checkbox"/> 58	<input checked="" type="checkbox"/> 59	<input checked="" type="checkbox"/> 60	<input checked="" type="checkbox"/> 61	<input checked="" type="checkbox"/> 62	<input checked="" type="checkbox"/> 63	<input checked="" type="checkbox"/> 64

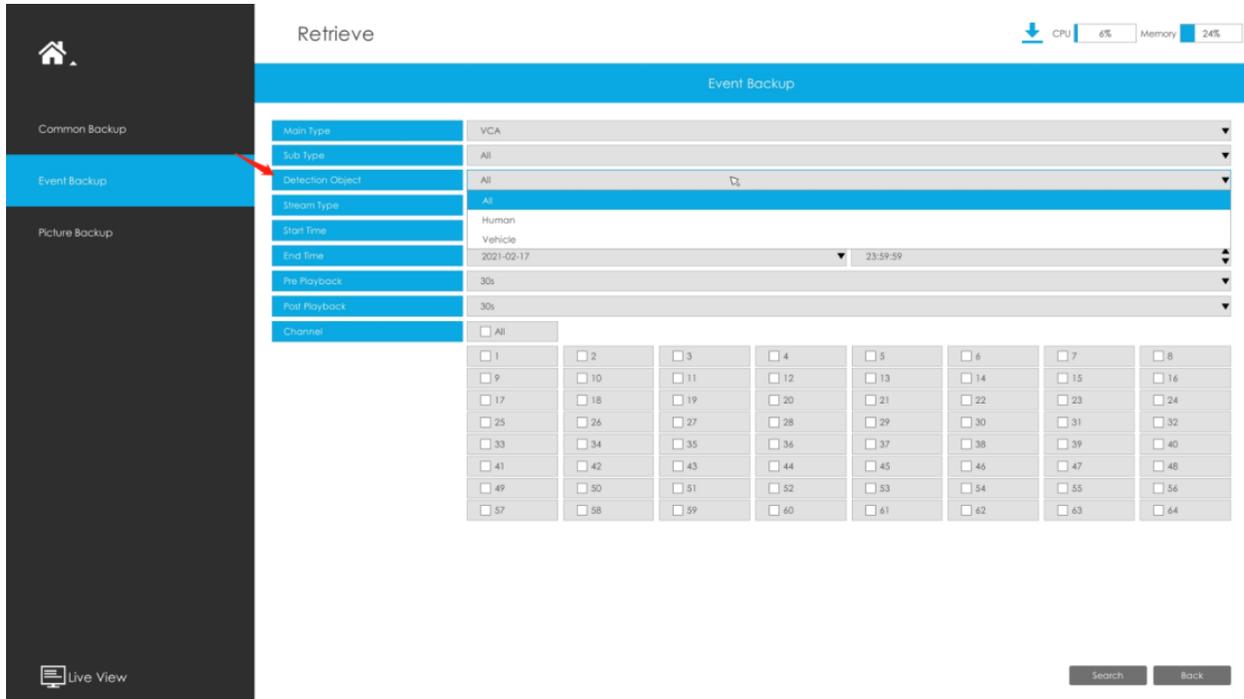
Search Back

Live View

In particular, the Detection Object option is available in the Event Backup interface only if the Main Type is VCA and the Sub Type is one of several VCA events. You can search and back up the results that meet the corresponding conditions according to the selected Detection Object. The Detection Object has three options: All, Human and Vehicle.

The VCA events which support the human/vehicle detection object function are:

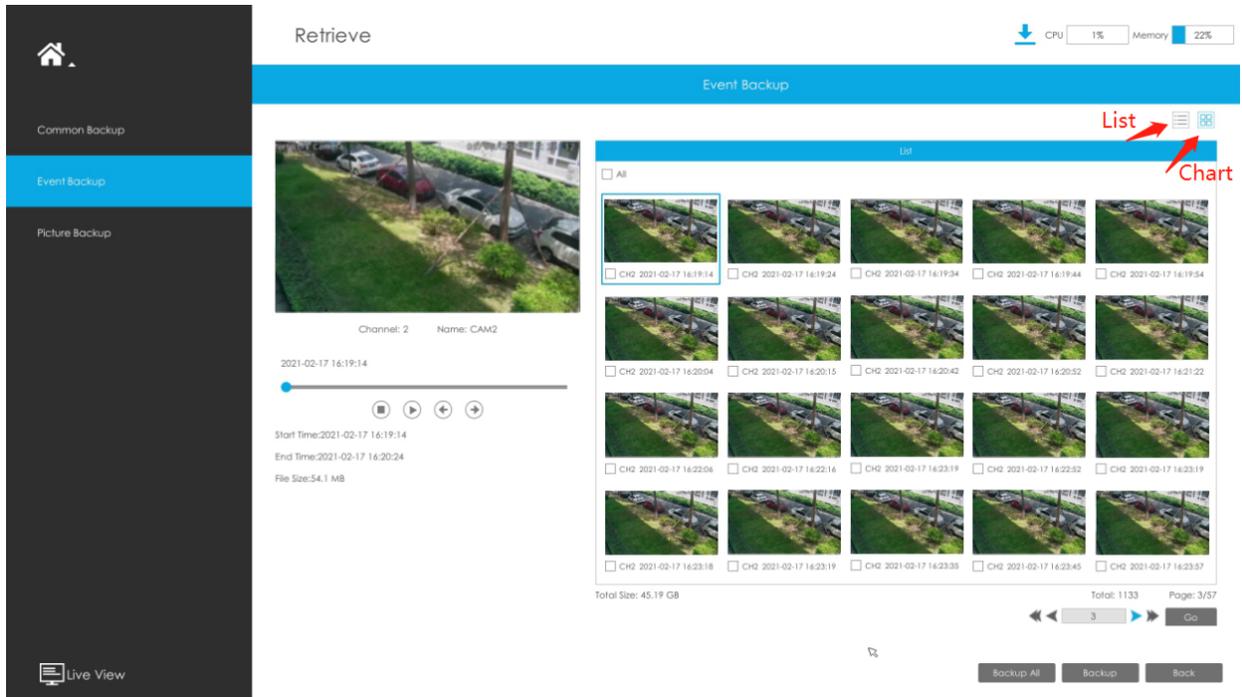
- Region Entrance
- Region Exiting
- Advanced Motion Detection
- Line Crossing
- Loitering



Step 1: Set the search condition and click "Search" button to search video.

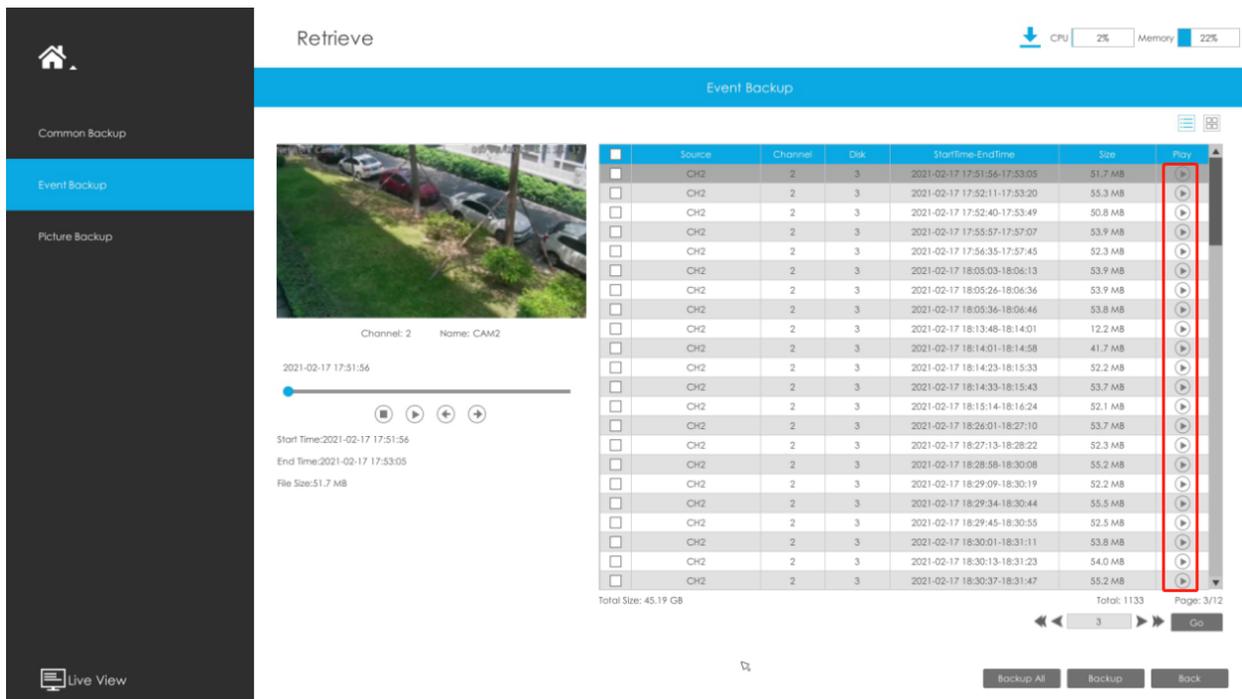


The search result can be chosen as a List or Chart. The default search result presents as a list.



**Step 2: Select the file you want to back up and click "Backup". Also, you can click "Backup All" to backup all recorded videos.**

In Event Backup interface, you can click  to play the video.

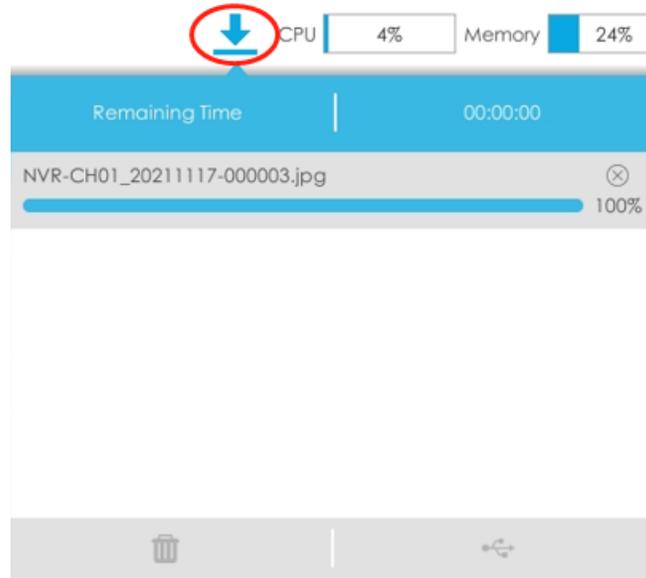


**Step 3: Select the format to be exported, which includes MP4, AVI and PS format and then click **Export** "Backup" to export selected files.**

The screenshot shows the NVR interface with the 'Event Backup' window open. The window has a 'Device' section on the left with a search bar and 'Operation' buttons: 'New Folder', 'Format', and 'Refresh'. Below these are 'Directory' and 'Video File Format' dropdowns, with 'PS' selected. An 'Export' button is visible. The main area shows a table of files with columns: Name, Size, Type, Date Modified, and Play. The table contains 20 rows of file information. At the bottom, there are 'Backup All', 'Backup', and 'Back' buttons. The interface also shows 'Retrieve' at the top, CPU and Memory usage (2% and 25% respectively), and a 'Live View' button in the bottom left.

Name	Size	Type	Date Modified	Play
551:28-07:51:30	2.4 MB			▶
551:47-07:52:38	33.5 MB			▶
551:47-07:52:48	37.6 MB			▶
552:04-07:53:14	45.0 MB			▶
553:22-07:54:09	28.6 MB			▶
554:19-07:54:35	8.5 MB			▶
554:44-07:54:50	5.2 MB			▶
555:08-07:55:34	12.6 MB			▶
555:46-07:55:54	3.2 MB			▶
555:33-07:55:34	1.3 MB			▶
555:46-07:56:43	31.7 MB			▶
555:46-07:56:43	31.7 MB			▶
501:30-08:01:49	6.2 MB			▶
501:59-08:02:40	20.3 MB			▶
501:59-08:02:42	23.0 MB			▶
502:55-08:03:00	2.4 MB			▶
502:37-08:02:42	3.0 MB			▶
502:55-08:03:26	15.6 MB			▶
503:52-08:04:25	18.7 MB			▶
504:21-08:04:25	4.7 MB			▶
504:50-08:05:08	8.7 MB			▶
504:50-08:05:08	6.6 MB			▶

You can view the file download process in the Download Process panel, including the remaining time required for all files to be downloaded. Click  to delete all download records in the panel. Click  to view the device status and perform the following operations: New Folder, Format and Refresh.

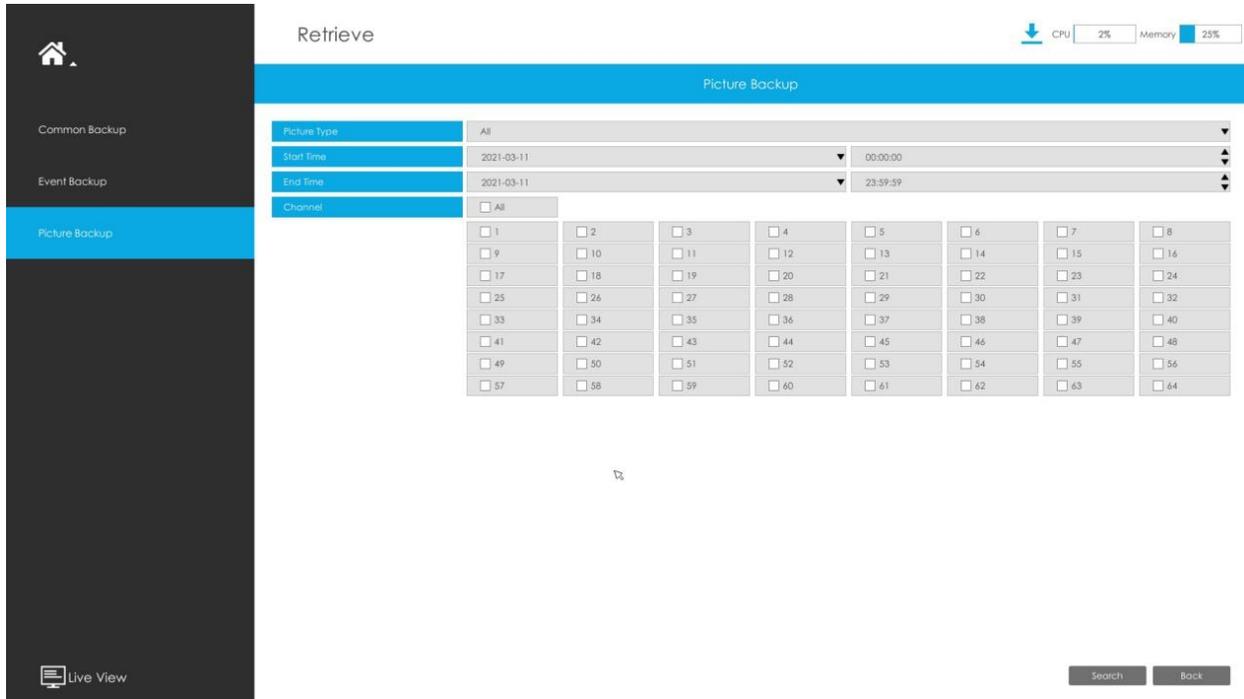


 **Note:**

- Download file can not exceed 100,000 at a time.
- Only one file can be downloaded at a time, and files are downloaded in the order.

### 3.4.3 *Picture Backup*

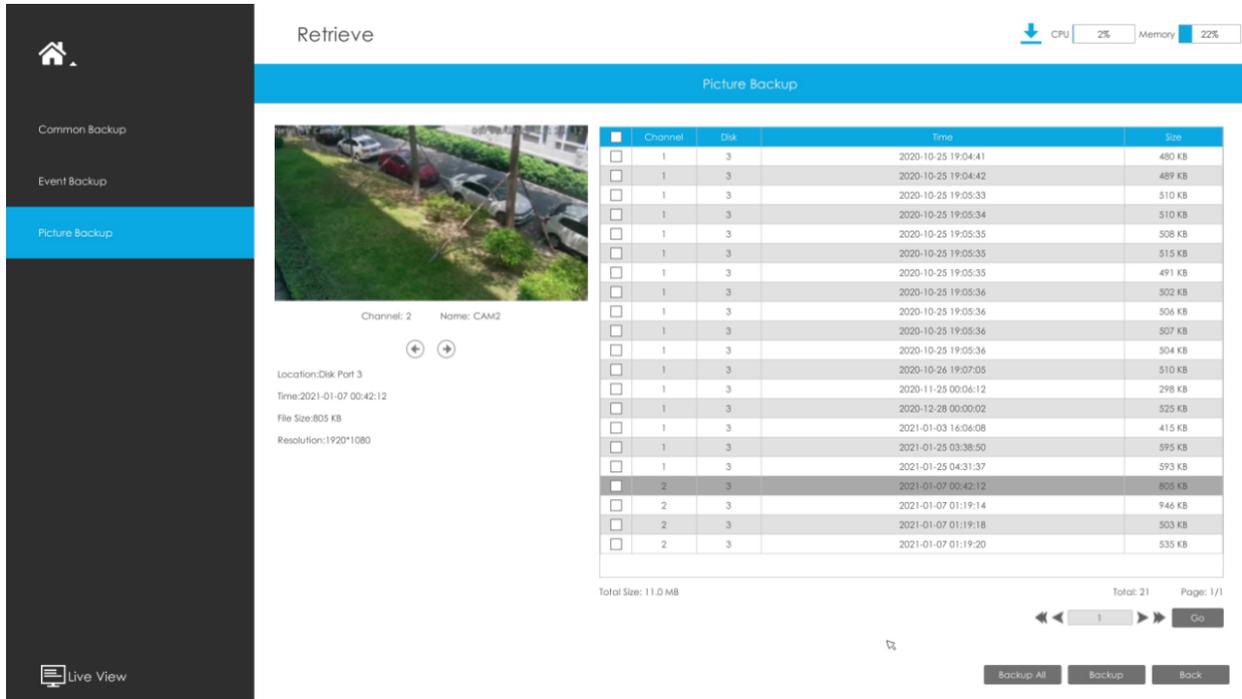
Support to search out and back up picture according to picture type. The picture type includes All, Live View Snapshot, Playback Snapshot and Event Playback.



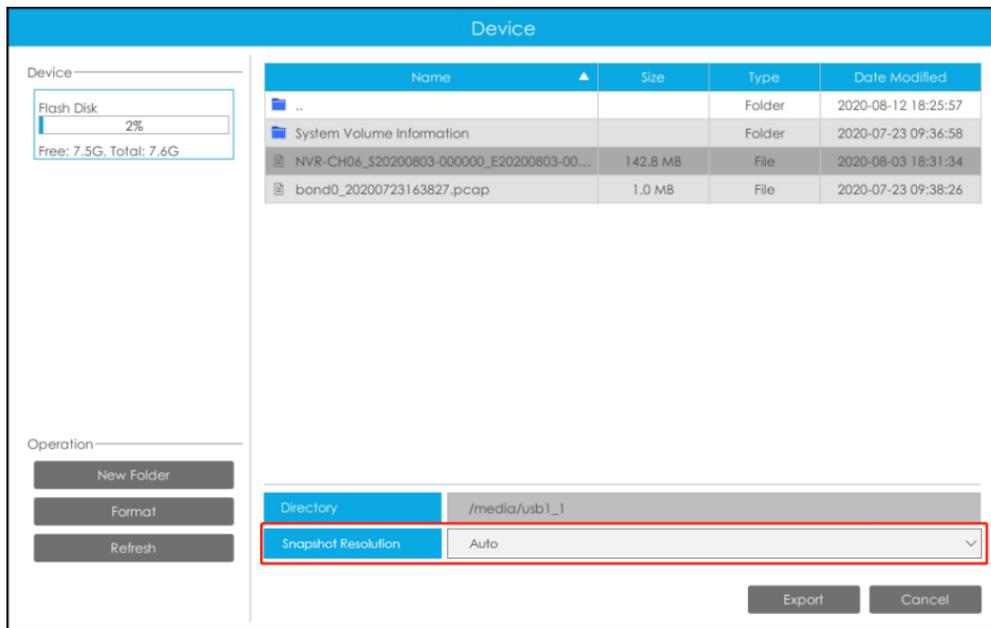
**Step 1: Set the search condition and click "Search" button to search video.**



**Step 2: Select the file you want to back up and click Backup . Also, you can click Backup All to back up all recorded videos.**

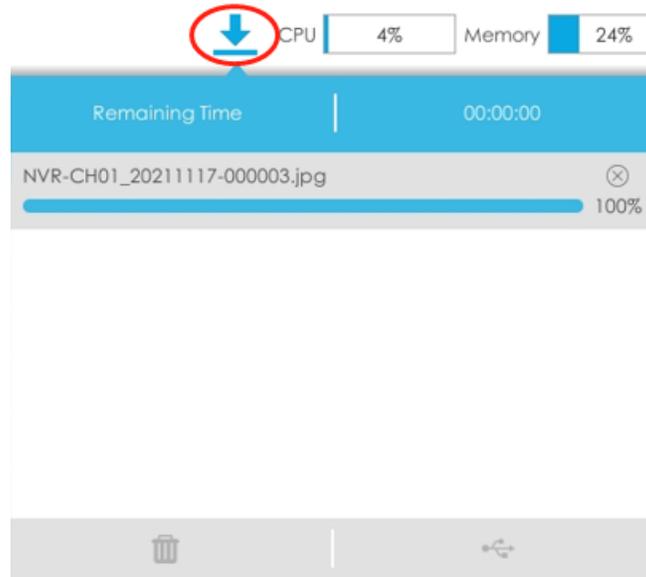


**Step 3: Select the Snapshot Resolution which includes Auto, 704\*576 and 640\*360, and click  to export selected snapshots.**



You can view the file download process in the Download Process panel, including the remaining time required for all files to be downloaded. Click  to delete all download

records in the panel. Click  to view the device status and perform the following operations: New Folder, Format and Refresh.



 **Note:**

- Download file can not exceed 100,000 at a time.
- Only one file can be downloaded at a time, and files are downloaded in the order.

### 3.5 Smart Analysis

You can get ANPR logs, Face Detection results, People Counting results and Heat Map results in the page, as well as Settings for ANPR, Face Detection, People Counting and Heat Map.

The screenshot shows the 'Smart Analysis' interface with the 'ANPR' section selected. The left sidebar contains navigation options: Home, Analysis Search, ANPR, Face Detection, People Counting, Heat Map, POS, and Analysis Settings. The main area displays search filters for ANPR logs. At the top right, system status shows CPU at 3% and Memory at 30%. The filters include:

- Channel:** A grid of checkboxes for channels 1 through 16, with 'All' selected.
- License Plate Type:** All
- License Plate:** (Empty)
- Plate Color:** All
- Vehicle Type:** All
- Vehicle Color:** All
- Vehicle Speed:** All
- Direction:** All
- Start Time:** 2022-01-06, 00:00:00
- End Time:** 2022-01-06, 23:59:59

Buttons for 'Search' and 'Back' are located at the bottom right of the filter area.

### 3.5.1 Analysis Search

#### 3.5.1.1 ANPR

You can Search and Backup ANPR logs.

This screenshot shows the 'Smart Analysis' interface with the 'ANPR' section selected. The left sidebar is identical to the previous screenshot. The main area displays search filters for ANPR logs. At the top right, system status shows CPU at 4% and Memory at 36%. The filters include:

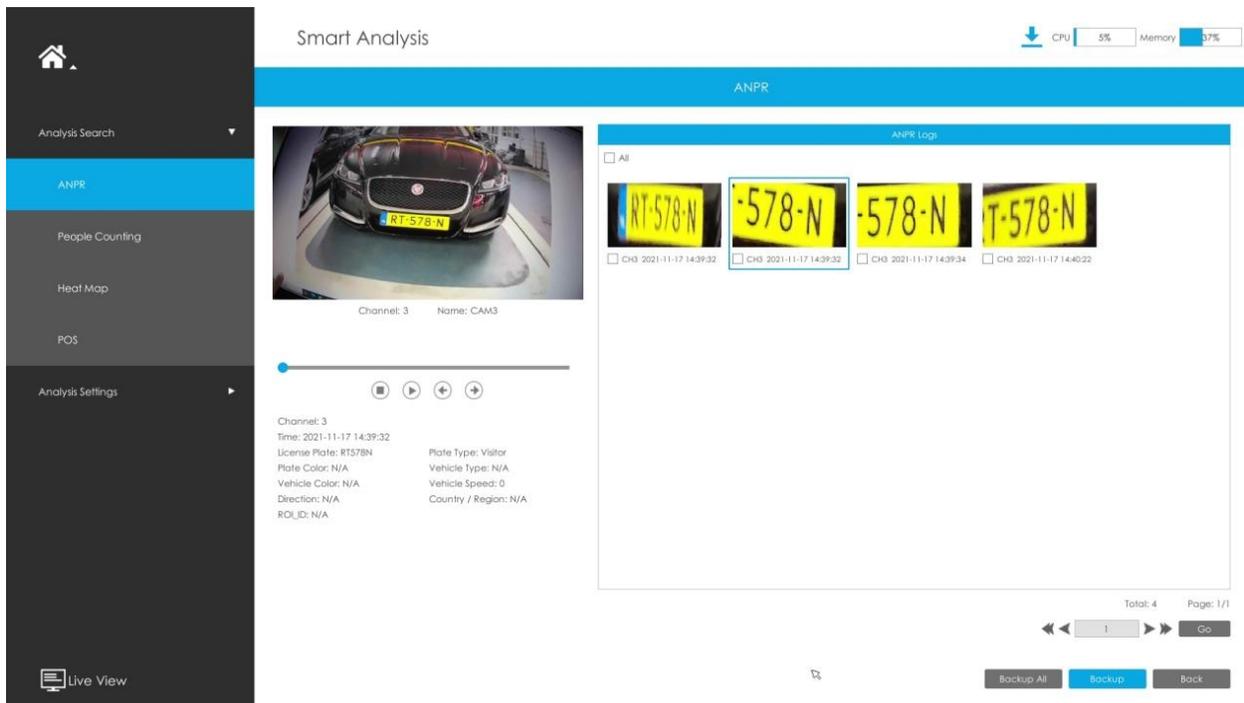
- Channel:** A grid of checkboxes for channels 1 through 64, with 'All' selected.
- License Plate Type:** All
- License Plate:** (Empty)
- Plate Color:** All
- Vehicle Type:** All
- Vehicle Color:** All
- Vehicle Speed:** All
- Direction:** All
- Start Time:** 2021-11-17, 00:00:00
- End Time:** 2021-11-17, 23:59:59

Buttons for 'Search' and 'Back' are located at the bottom right of the filter area.

Input corresponded information and click search button  to search and you will get a whole ANPR logs list. License plate snapshot will be shown on the logs list while the complete image video and license plate information will be shown on the left of the page. The License Plate Type option is convenient for users to quickly filter the black list, white list and visitor according to the license plate types. Users can also filter ANPR results by Plate Color, Vehicle Type, Vehicle Color, Vehicle Brands, Vehicle Speed and Direction.

 **Note:**

1. Ensure that your NVR model is MS-NXXXX-XXT or MS-NXXXX-XXH.



You can click  to play the video.

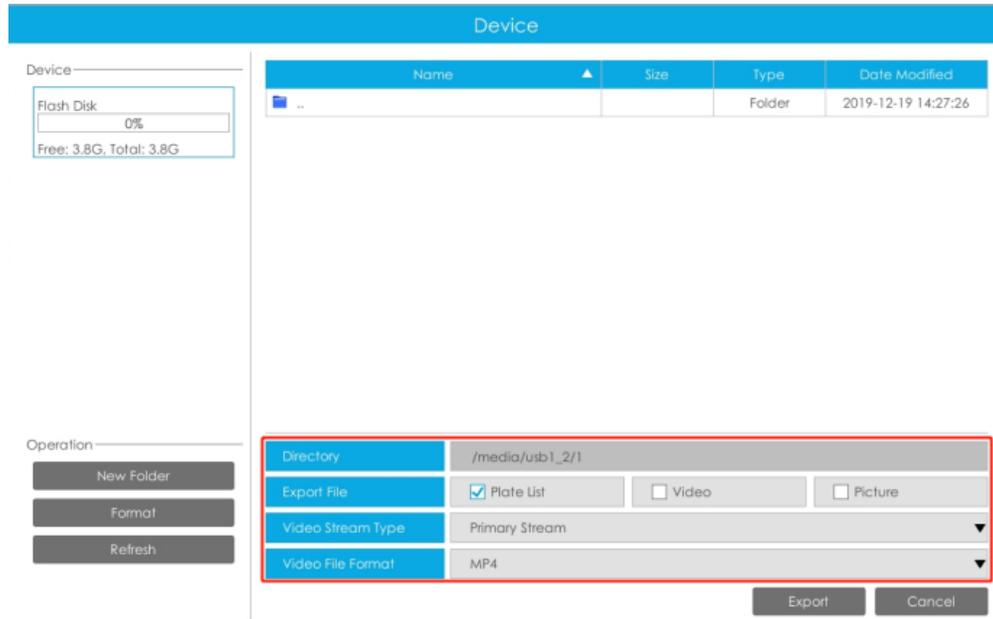


There are two methods to backup ANPR logs.

- Backup license plates you want.

**Step1:** Tick license plates you want to backup and click backup button .

**Step2:** Select the export file type, video stream type and video file format, then click export button.



- Backup all.

**Step1:** Click backup all  button.

**Step2:** Select the export file type, video stream type and video file format, then click export button.

Then you will get corresponding file as selected export file type.

### 3.5.1.2 Face Detection

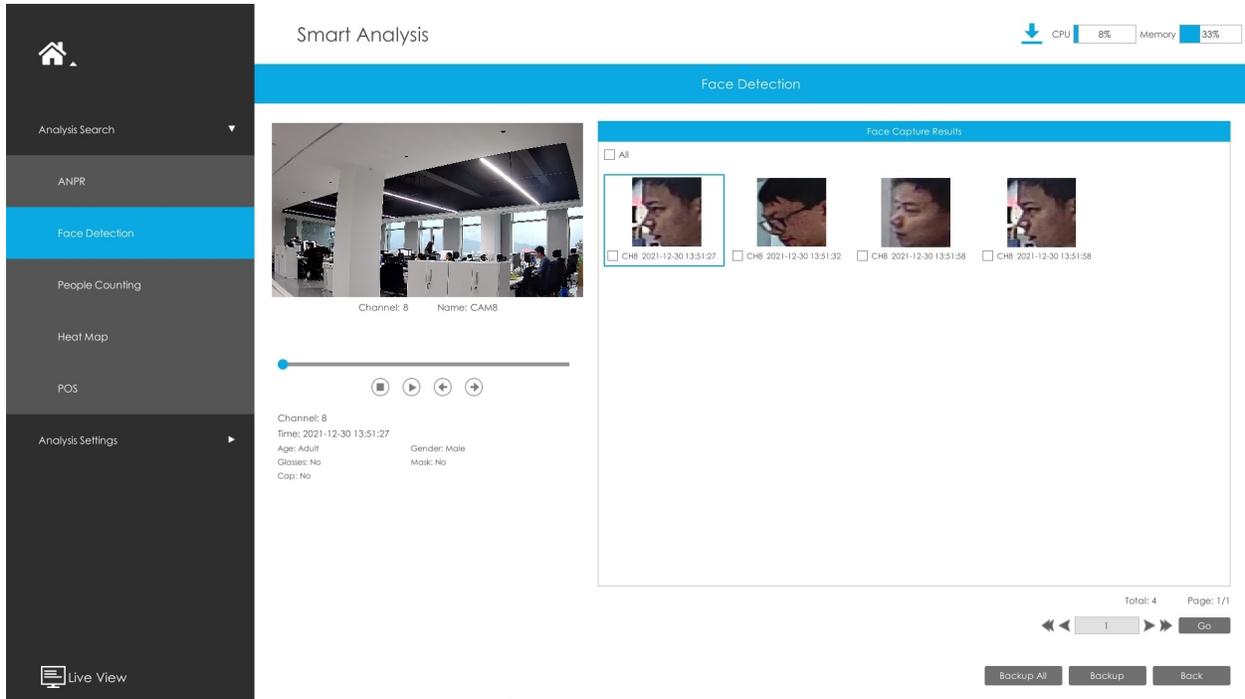
You can Search and Backup the results of Face Detection.

The screenshot shows the 'Smart Analysis' interface with the 'ANPR' section selected. The interface includes a sidebar on the left with navigation options: Analysis Search, ANPR, People Counting, Heat Map, POS, and Analysis Settings. The main area displays a grid of channel selection buttons (1-64) and various filter options: License Plate Type, License Plate, Plate Color, Vehicle Type, Vehicle Color, Vehicle Speed, and Direction. Time filters for Start Time and End Time are also present. A 'Search' button is highlighted in the bottom right corner.

Input corresponded information and click search button  to search and you will get the results of Face Detection. Face snapshots will be shown on the results list while the complete image video and face attribute information will be shown on the left of the page. Users can filter Face Detection results by Face Attributes including Age, Gender, Glasses, Mask and Cap.

#### Note:

- Make sure your camera is AI Series and version is V4x.7.0.79-r25 or above.
- Make sure your NVR model is xxxx-xxT/H.



You can click  to play the video.



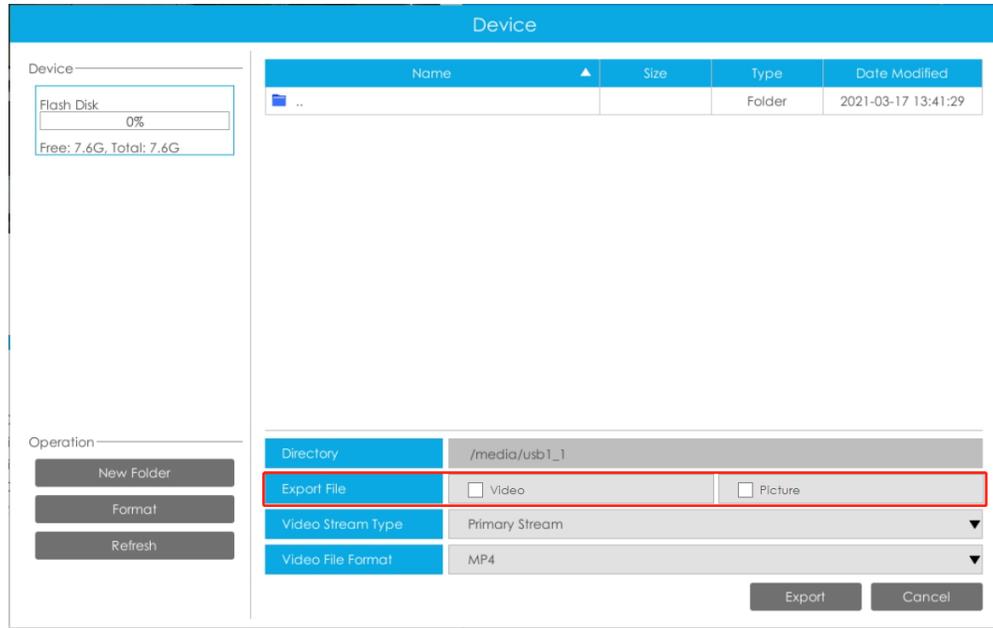
There are two methods to backup Face Detection results.

- Backup Face Detection logs you want.

**Step1:** Tick the face detection results you want to backup and click backup button



**Step2:** Select the export file type, video stream type and video file format, then click export button.



- Backup all.

**Step1:** Click backup all  button;

**Step2:** Select the export file type, video stream type and video file format, then click export button.

Then you will get corresponding file as selected export file type.

### 3.5.1.3 People Counting

You can Search and Backup the results of People Counting.

**Step1:** Entering search conditions.

**Search Type:** Select the search type first, including People Counting by Camera, People Counting by Group and Regional People Counting.

(1) Select “People Counting by Camera”:

**Channel:** Check the corresponding channels. It supports simultaneous search of multi-channel reports.

**Line:** Check the detection lines. It supports simultaneous search of multi-channel reports.

**Report Type:** Daily Report, Weekly Report, Monthly Report and Annual Report are available.

**Statistic Type:** People Entered, People Exited and Sum are available.

**Start Time:** Input the time from which you want to Search.

(2) Select “People Counting by Group”:

**Group:** Select the groups.

**Report Type:** Daily Report, Weekly Report and Monthly Report are available.

**Statistic Type:** People Entered, People Exited and Sum are available.

**Start Time:** Input the time from which you want to Search.

(3) Select “Regional People Counting”:

**Channel:** Check the corresponding channels. It supports simultaneous search of multi-channel reports.

**Region:** Check the detection regions. It supports simultaneous search of multi-region reports.

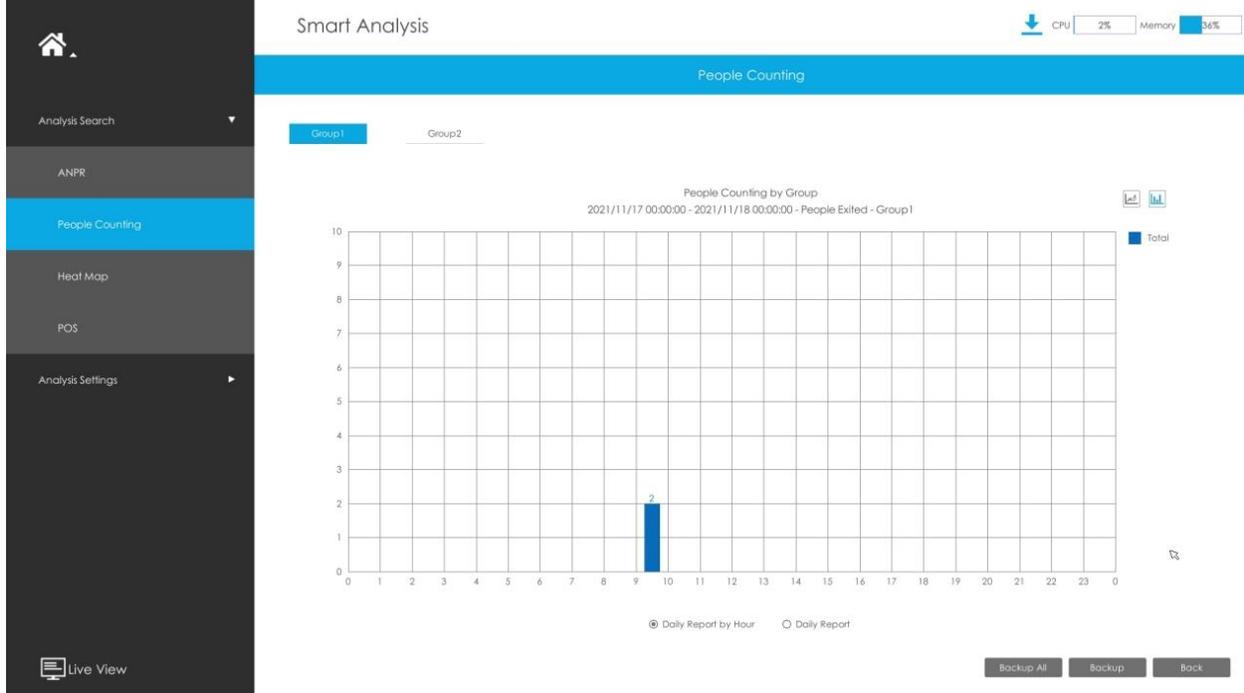
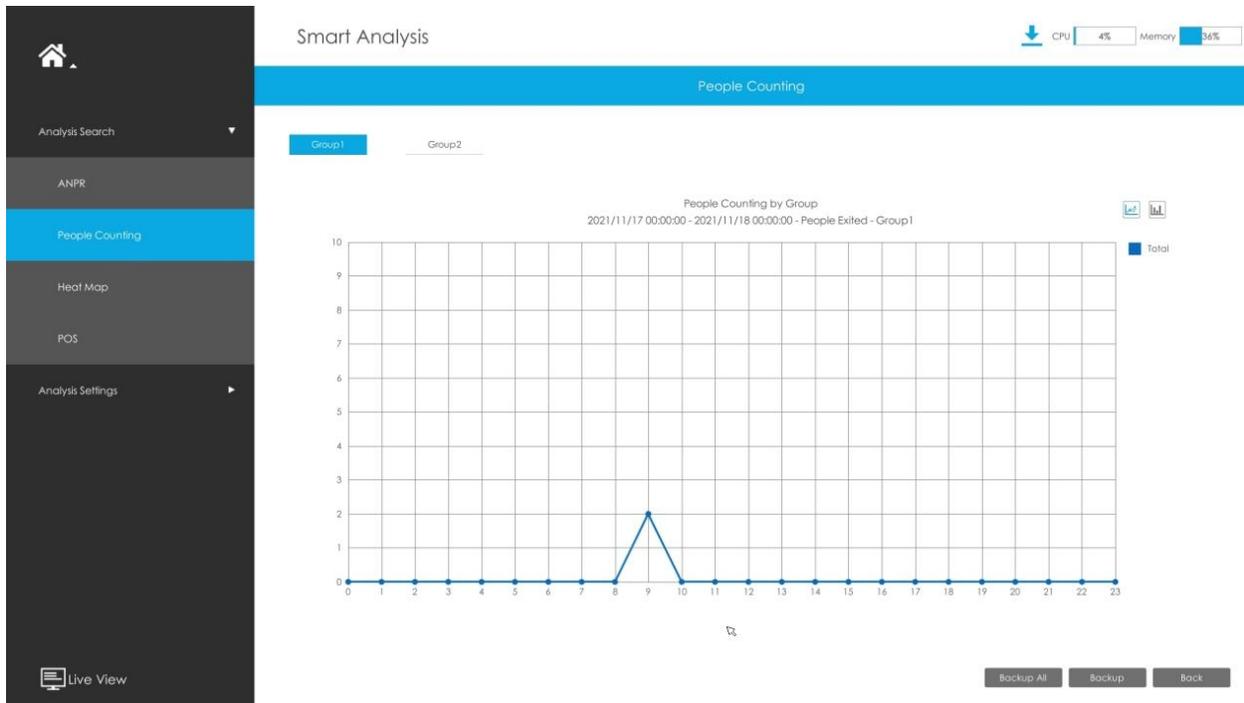
**Length of Stay:** Choose the length of stay.

**Report Type:** Daily Report, Weekly Report and Monthly Report are available.

**Start Time:** Input the time from which you want to Search.

**Step2:** Click  to obtain the corresponding result. There are two ways to show the results of People Counting: Line Chart and Bar Chart.

And then you can click  to export it.



**Step3:** You can backup the results of People Counting. For People Counting by Group, you can back up the results in two ways:

(1) Backup the group you want.

**Step1:** Choose the group you want to backup and click backup button ;

**Step2:** Select the file format, and then click export button.

The screenshot shows the 'Device' interface with a file list and operation options. The file list is as follows:

Name	Size	Type	Date Modified
..		Folder	2021-02-07 02:03:47
System Volume Information		Folder	2021-02-01 11:53:52
MSFImage_40.7.0.76-r3	34.6 MB	File	2020-11-10 13:41:46
NVR-CH01_S20210124-000205_E20210124-00...	221.1 MB	File	2021-01-24 19:06:54
NVR-CH01_S20210124-000205_E20210124-00...	221.1 MB	File	2021-01-24 19:15:10
NVR-CH03_S20210127-003718_E20210127-01...	988.4 MB	File	2021-01-27 18:53:24
NVR_Counting_Group3_20210124192516.png	26 KB	File	2021-01-24 19:25:16
NVR_Counting_Group3_20210124192527.pdf	312 KB	File	2021-01-24 19:25:26
NVR_Counting_Group3_20210124192532.csv	960 bytes	File	2021-01-24 19:25:32

On the left, the 'Device' dropdown is set to 'Flash Disk' with a progress bar at 19% and 'Free: 6.2G, Total: 7.6G'. Below it, the 'Operation' section contains buttons for 'New Folder', 'Format', and 'Refresh'. At the bottom, the 'Directory' is '/media/usb1\_1' and the 'File Format' is set to 'CSV'. 'Export' and 'Cancel' buttons are located at the bottom right.

(2) Backup all.

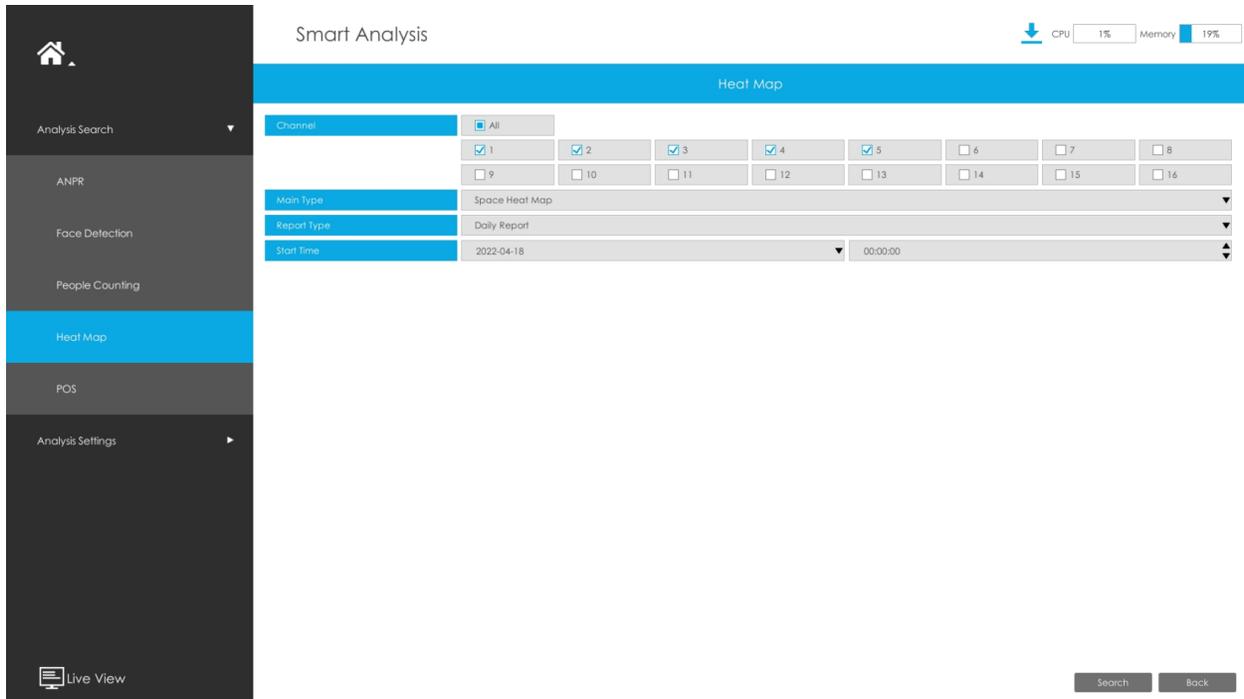
**Step1:** Click backup all button ;

**Step2:** Select the file format, and then click export button.

Then you will get corresponding file.

### 3.5.1.4 Heat Map

You can Search and Export Heat Map results.

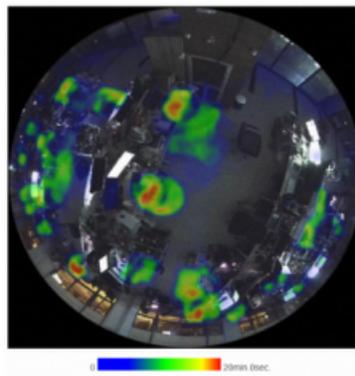


**Step1:** Entering search conditions.

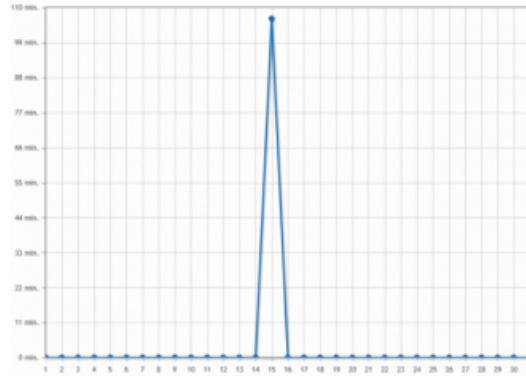
**Step2:** Check the corresponding channels. It supports simultaneous search of multi-channel reports.

**Step3:** Select the Main Type. Space Heat Map and Time Heat Map are available.

(1) Space Heat Map: Space Heat Map will be presented as a picture with different colors. Different colors represent different heat values. Red represents the highest and blue represents the lowest.



(2) Time Heat Map: Time heat map will be presented as a line chart to show the heat at different times.



**Step4:** Select the Report Type. Daily Report, Weekly Report, Monthly Report and Annual Report are available.

**Step5:** Input the time from which you want to Search.

**Step6:** Click  to obtain the corresponding result and then you can click  to export it.

### 3.5.1.5 POS

You can Search and Backup the results of POS.

Smart Analysis

CPU 7% Memory 24%

POS

POS No.  All

1  2  3  4  5  6  7  8

9  10  11  12  13  14  15  16

POS Content

Start time 2021-10-20 00:00:00

End time 2021-10-20 23:59:59

Search Back

Live View

**Step1:** Entering search conditions.

**POS No.:** Select the POS number first.

**POS Content:** Enter the POS information keywords you want to search.

**Start Time:** Input the start time from which you want to search.

**End Time:** Input the end time from which you want to search.

**Step2:** Click  to obtain the corresponding result.

Smart Analysis

CPU 5% Memory 27%

POS

Channel: 11 Name: CAM11

2021-11-01 14:33:41

Time: 2021-11-01 14:33:41

POS information:  
POS 111111  
POS 222222  
POS 333333

<input checked="" type="checkbox"/>	POS No.	Time	POS Information	Play
<input checked="" type="checkbox"/>	1	2021-11-01 14:32:33	111111	
<input checked="" type="checkbox"/>	1	2021-11-01 14:33:41	POS 111111 POS 222222 POS 333333	

Total: 2 Page: 1/1

Backup All Backup Back

You can click  to play the video.



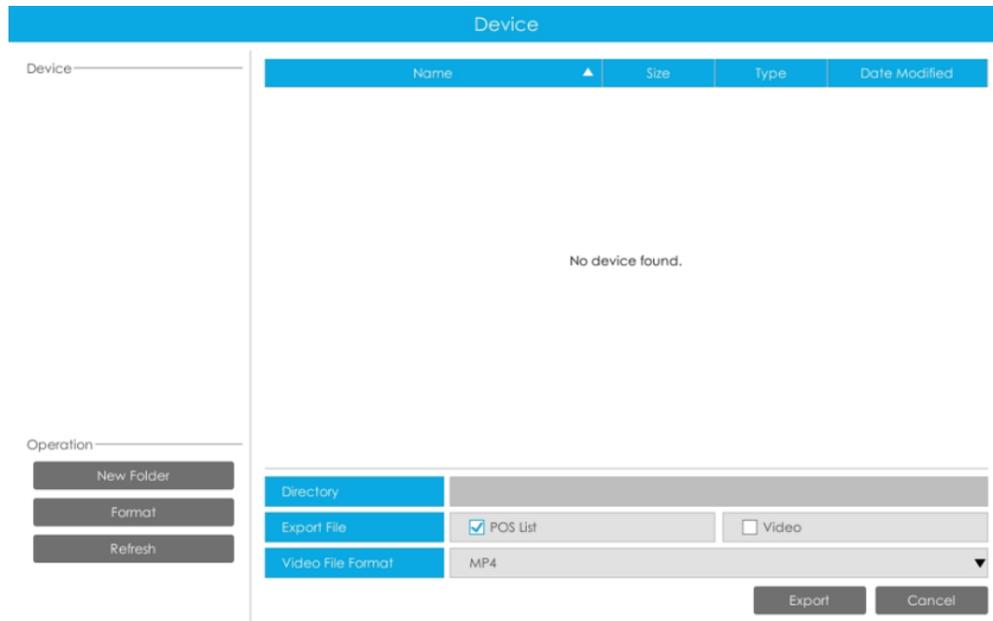
There are two methods to backup POS results.

(1) Backup the POS information you want.

**Step1:** Tick the POS information you want to backup and click backup button



**Step2:** Select the export file type and video file format, then click export button.



(2) Backup all.

**Step1:** Click backup all  button.

**Step2:** Select the export file type and video file format, then click export button.

Then you will get corresponding file as selected export file type.

## 3.5.2 Analysis Settings

### 3.5.2.1 ANPR

ANPR settings consist of Settings, List Management, Black List Mode, White List Mode and Visitor Mode. Here are some notes for using ANPR function.

#### Note:

- Insert available HDD to NVR.
- Upgrade your device to corresponded firmware version.
  - Camera: V4X.7.0.72-r16 or above
  - NVR: V7X.9.0.7-r7 or above
- Ensure both camera and NVR support LPR/ANPR function. Up to 16 ANPR channels are supported for Milesight NVR.
- Ensure that NVR can get license plate information. Please set TCP which is the default mode as Post Type. It can be set in Camera web page Settings -> LPR -> General Settings interface.

LPR Message Post Settings
▼

Enable LPR Message Post

Post Type
 HTTP
 TCP
 RTSP

Camera LPR Port

## Settings

Do as following 5 steps to enable ANPR function. Camera will start to detect license plate and NVR will start to receive license plate information once these steps are done.

The screenshot displays the ANPR configuration interface. On the left, a sidebar contains navigation options: Home, Analysis Search, Analysis Settings, ANPR (selected), People Counting, and Heat Map. The main content area is titled 'Smart Analysis' and shows system metrics (CPU 2%, Memory 27%) and a grid for license plate detection. The ANPR settings are expanded, showing the following configuration:

- ANPR:**
- License:** JAEB922ACT381E6F76AAC10543A61A2035A286118E856FE33958FA10DD2164F6F384280FAA
- License Status:** Valid
- Processing Resolution:** 1280\*720
- LPR Night Mode:** Disable
- Effective Time:** [Edit]
- Detection Settings:** [Edit]

At the bottom of the settings panel, there are 'Apply' and 'Back' buttons.

**Step 1:** Select a channel and enable ANPR function;

**License:** Generated by camera's information

**License Status:** Show present license status, including Valid, Invalid, Expired, Inactivated

**Step 2:** Select processing resolution. The further distance you detect, the higher resolution is needed. 1280\*720 by default;

**Step 3:** Enable LPR Night Mode, then you can set LPR Night Mode Effective Time. There are two options available: Customize and Auto. Auto option supports automatic switch between day and night.

LPR Night Mode	Enable
LPR Night Mode Effective Time	Customize
Start Time	18:00:00
End Time	06:00:00
Level	<input type="range" value="4"/>
LPR Night Mode	Enable
LPR Night Mode Effective Time	Auto
Day to Night Value	<input type="range" value="36"/> 36 <input type="button" value="Reset"/>
Night to Day Value	<input type="range" value="82"/> 82 <input type="button" value="Reset"/>
IR Light Sensor Value	0
Level	<input type="range" value="4"/>

**Note:** Make sure your camera's version is 4X.7.0.77 or above so that the Auto option for LPR Night Mode Effective Time is available.

**Step 4:** Set ANPR function effective time;

**Step 5:** Set detection parameters including Detection Trigger, Confidence Level, License Plate Format, Repeat Plate Checktime and Features Identification;

### Detection Settings

Detection Trigger	Always
Confidence Level	<input type="range" value="4"/>
Repeat Plate Checktime	0 <input type="button" value="▲"/> <input type="button" value="▼"/> Milliseconds (0~60000ms)
License Plate Format	<input type="button" value="Edit"/>
Features Identification	<input type="checkbox"/> All <input type="checkbox"/> Region <input type="checkbox"/> Direction <input type="checkbox"/> ROI_ID

**Detection Trigger:** Always and Camera Alarm Input are available. It will only detect information when alarm input is triggered if you select Camera Alarm Input.

**Confidence Level:** You can set the Confidence Level, and the higher the level, the more accurate the identification is.

**Repeat Plate Checktime:** The same license plate information won't be received on NVR within the time you set.

**License Plate Format:** Set corresponding License Plate Format to screen out license plates conforming to the count and format you set to improve recognition accuracy.

License Plate Format

ID	License Plate Character Count	License Plate Format	Enable	Edit	Delete
0	All	*	<input checked="" type="checkbox"/>	-	-
	-	-	-	-	-

Push Correct Character Count Results Only

Enable ▼

Format Example: AA111\*  
A - Letters Only  
1 - Numbers Only  
\* - Unrestricted Type

OK

Cancel

Apply

- Click to add a License Plate Format.
- Select License Plate Character Count, which is 1-10.

**Note:**

1. Make sure your camera Version is 8.0.3-LPRn-r3 or above.
2. Make sure that the camera's model is Intelligent Traffic Series.

- Fill in License Plate Format you want to detect. A stands for Letters, 1 stands for numbers and \* stands for unrestricted type.

**Push Correct Character Count Results Only:**

If the count of the detected license doesn't match your configuration, it will push correct character count results by completing or reducing characters automatically.

**Note:**

1. Make sure your camera Version is 4X.7.0.74 or above.
2. You can add 8 rules at most.

**Features Identification:** The selected features identification will be shown in ANPR logs interface.

**Step 6:** Set the detected ROI region which can be up to 4 regions. License plate will only be detected in the ROI regions.

Support that LPR detection areas can be drawn as an irregular quadrilateral.



Channel: 12      Name: CAM12

Please draw the screen for settings.

ID	Name	Edit	Delete
1	ROI_1		

**Note:**

1. Make sure your camera is Version 8.0.3-LPRn-r3 or above.
2. Make sure that the camera's model is Intelligent Traffic Series.

## List Management

Make a license plate list for your own NVR ANPR system. You can upload license plates and set them with different license type here. 10000 plates can be added at most.

The screenshot displays the 'List Management' interface within the NVR ANPR system. The interface includes a sidebar on the left with navigation options: 'Analysis Search', 'Analysis Settings', 'ANPR', 'People Counting', and 'Heat Map'. The main content area is titled 'Smart Analysis' and 'ANPR'. It features a 'List Management' tab, a search bar, and a table with columns for 'License Plate', 'Plate Type', 'Edit', and 'Delete'. A single entry is visible with 'MS1111' and 'White'. At the bottom, there are buttons for 'Add', 'Delete List', 'Import', 'Export', and 'Back', along with a 'Download Template' link.

There are two methods to add license plates:

- Add one by one.

**Step 1:** Click Add button  ;

**Step 2:** Input the license plate and select license type;

**Step 3:** Click OK and then the license plate will be added into the list;

The screenshot shows the 'Add License Plate' dialog box. It has a title bar 'Add License Plate' and two input fields: 'License Plate' with the value 'MS2222' and 'Plate Type' with the value 'Black'. There are 'OK' and 'Cancel' buttons at the bottom.

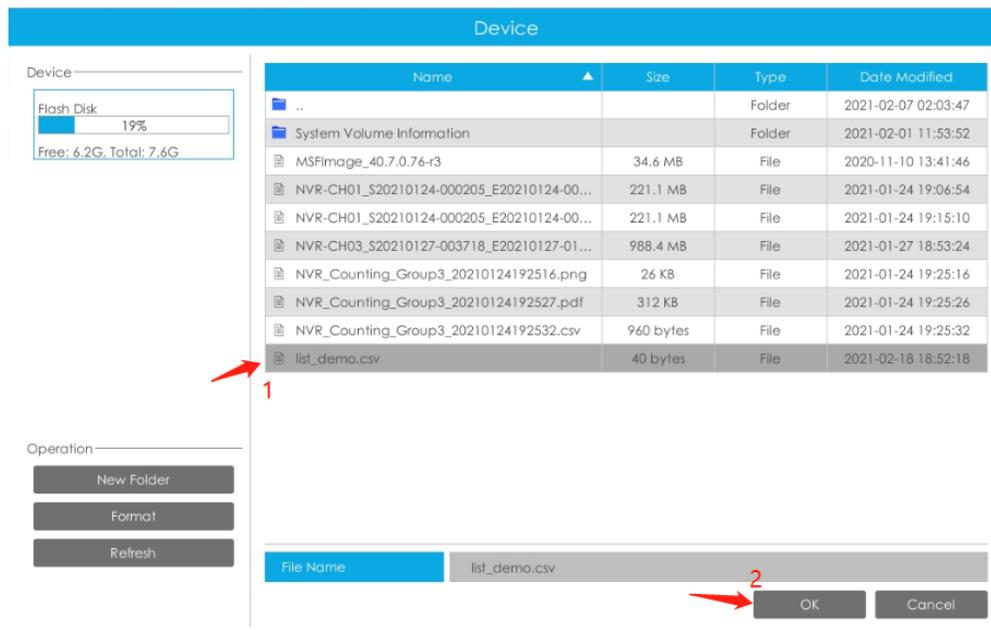
- Batch adding by importing template.

**Step 1:** Click  , select USB device folder and click OK to download Template;

**Step 2:** Input all license type and license plate number as Template shows;

	A	B
1	Type	Plate
2	White	2008ZGZ
3	Black	34AB1234
4		

**Step 3:** Click Import button  , select the file and click OK to add all license plates into list.



### Black List Mode/White List Mode/Visitor Mode

We provide you three modes for better event management, which is based on two license types.

**Black List Mode:** Manage event for license plates in black list.

**White List Mode:** Manage event for license plates in white list.

**Visitor Mode:** Manage event for those license plates do not have license type.

Smart Analysis

CPU 3% Memory 28%

ANPR

Settings List Management **Black List Mode** White List Mode Visitor Mode

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64

Channel: 12 Name: CAM12

Black List Mode

Effective Time Edit

Action Edit

Apply Back

Live View

**Step 1:** Enable Black List Mode/White List Mode/Visitor Mode as your demand;

**Step 2:** Set effective time which means Mode works during that;

**Step 3:** Set action including Audible Warning, Email Linkage, Event Popup, PTZ Action, Alarm Output, White LED and Trigger Channels Record.

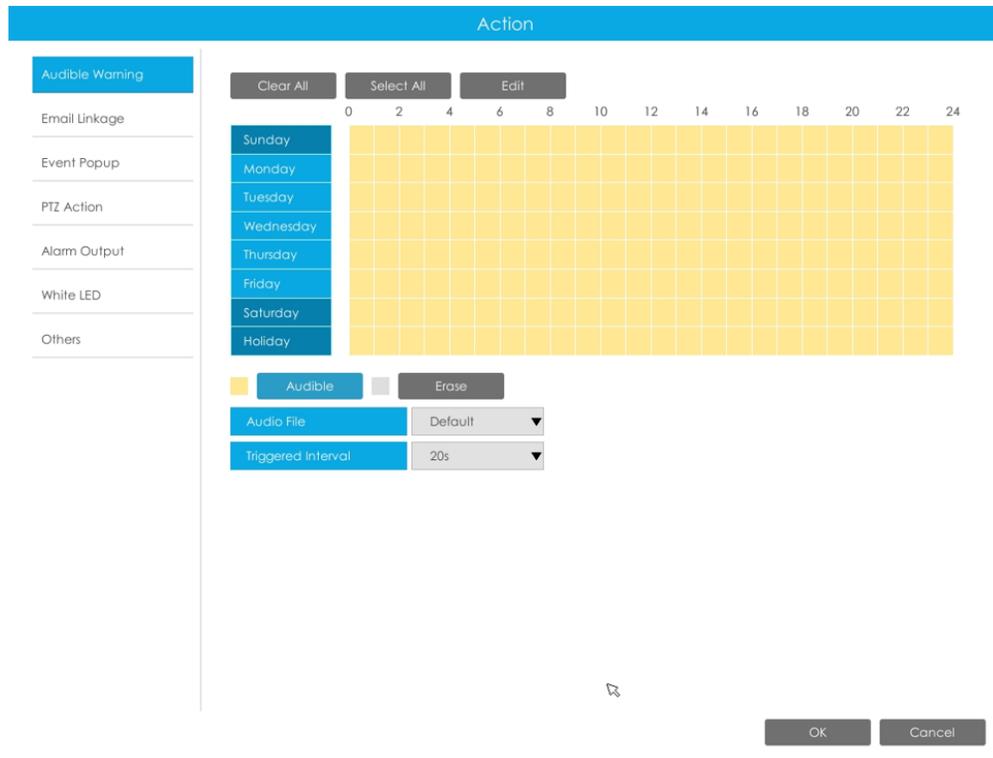
**Audible Warning:** NVR will trigger an audible warning when event is detected.

The user can set effective schedule as following two ways:

1. Select the operation type: Audible or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit record effective time manually.

**Audio File:** Users can select the audio file as needed for audible warning. The default is an audible beep.

**Triggered Interval:** The effective interval between two actions when event triggered.



**Email Linkage:**NVR will send an email to the address you set before.

The user can set effective schedule as following two ways:

1. Select the operation type, Email and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

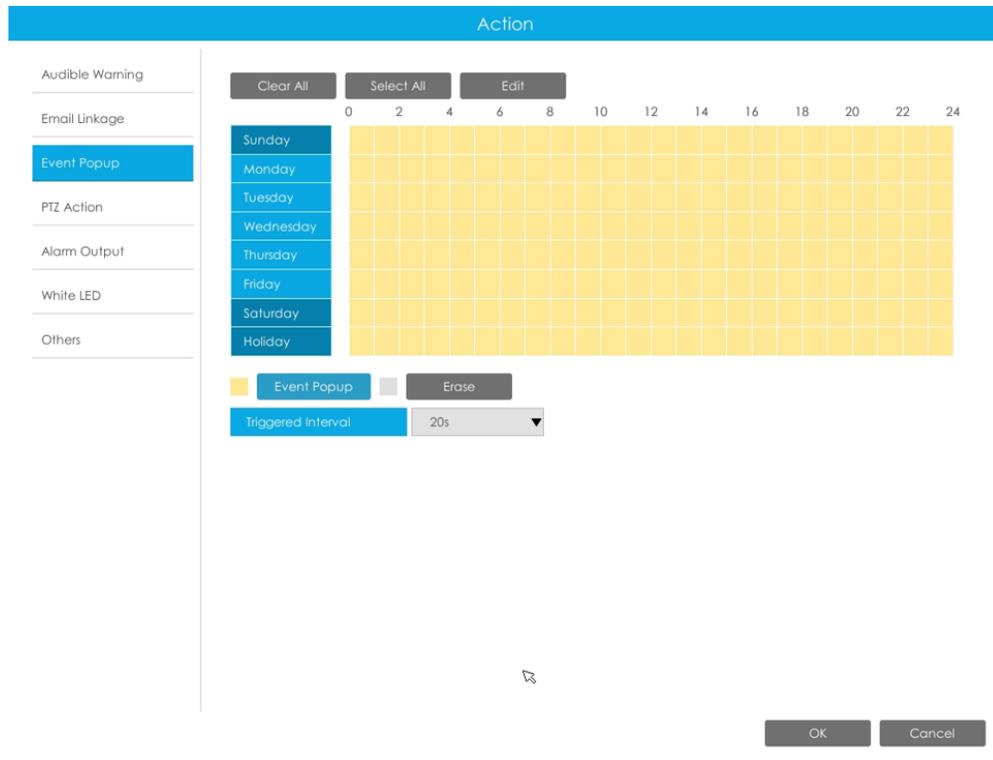
**Triggered Interval:**The effective interval between two actions when event triggered.

**Picture Attached:** Select whether to attach picture when sending Emails. If you enable it, you will receive alarm emails with one event captured picture attached.

**Event Popup:** Trigger alarm screen popup to full screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Device'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.

1. Select the operation type, Event Popup and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

**Triggered Interval:** The effective interval between two actions when event triggered.



**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.

User can set effective schedule as following two ways:

1. Select the operation type: PTZ or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

And you can add PTZ Action by clicking .

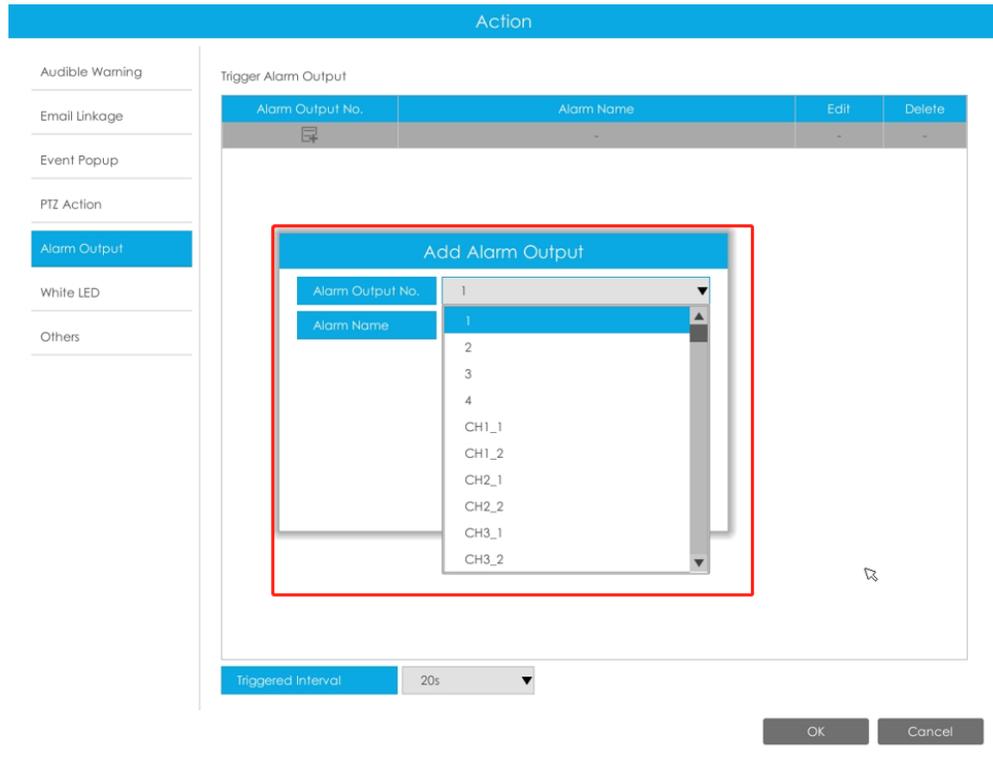
**Channel:** Select the channel which supports this function.

**Action Type:** Preset and Patrol are available.

**No.:** Select the number of Preset or Patrol.

**Alarm Output:** Trigger alarm output when alarm is triggered. For NVR Alarm Output, the relevant alarm output will be firstly listed, such as, 1, 2.etc. As for camera Alarm Output, it will display as CHx\_x (such as CH1\_1) according to the camera channel and corresponding alarm number.

**Triggered Interval:**The effective interval between two actions when event triggered.



**White LED:**Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

User can set effective schedule as following two ways:

1. Select the operation type, White LED and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

**Triggered Interval:**The effective interval between two actions when event triggered.

And you can add White LED by clicking .

**Channel:** Select the channel which supports this function.

**Flash Mode:** Twinkle and Always are available.

**Flash Time:** Set the time for White LED flashing. When the Flash Mode is Twinkle, the range of Flash Time is 1~10 and the default value is 3. When the Flash Mode is Always, the range of Flash Time is 1~60 and the default value is 5.

**Others:** Trigger selected channels to record when alarm is triggered.

Action

Audible Warning

Email Linkage

Event Popup

PTZ Action

Alarm Output

White LED

Others

Trigger Channels Record

All

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16
<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24
<input type="checkbox"/> 25	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30	<input type="checkbox"/> 31	<input type="checkbox"/> 32
<input type="checkbox"/> 33	<input type="checkbox"/> 34	<input type="checkbox"/> 35	<input type="checkbox"/> 36	<input type="checkbox"/> 37	<input type="checkbox"/> 38	<input type="checkbox"/> 39	<input type="checkbox"/> 40
<input type="checkbox"/> 41	<input type="checkbox"/> 42	<input type="checkbox"/> 43	<input type="checkbox"/> 44	<input type="checkbox"/> 45	<input type="checkbox"/> 46	<input type="checkbox"/> 47	<input type="checkbox"/> 48
<input type="checkbox"/> 49	<input type="checkbox"/> 50	<input type="checkbox"/> 51	<input type="checkbox"/> 52	<input type="checkbox"/> 53	<input type="checkbox"/> 54	<input type="checkbox"/> 55	<input type="checkbox"/> 56
<input type="checkbox"/> 57	<input type="checkbox"/> 58	<input type="checkbox"/> 59	<input type="checkbox"/> 60	<input type="checkbox"/> 61	<input type="checkbox"/> 62	<input type="checkbox"/> 63	<input type="checkbox"/> 64

Trigger Channels Snapshot

All

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16
<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24
<input type="checkbox"/> 25	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30	<input type="checkbox"/> 31	<input type="checkbox"/> 32
<input type="checkbox"/> 33	<input type="checkbox"/> 34	<input type="checkbox"/> 35	<input type="checkbox"/> 36	<input type="checkbox"/> 37	<input type="checkbox"/> 38	<input type="checkbox"/> 39	<input type="checkbox"/> 40
<input type="checkbox"/> 41	<input type="checkbox"/> 42	<input type="checkbox"/> 43	<input type="checkbox"/> 44	<input type="checkbox"/> 45	<input type="checkbox"/> 46	<input type="checkbox"/> 47	<input type="checkbox"/> 48
<input type="checkbox"/> 49	<input type="checkbox"/> 50	<input type="checkbox"/> 51	<input type="checkbox"/> 52	<input type="checkbox"/> 53	<input type="checkbox"/> 54	<input type="checkbox"/> 55	<input type="checkbox"/> 56
<input type="checkbox"/> 57	<input type="checkbox"/> 58	<input type="checkbox"/> 59	<input type="checkbox"/> 60	<input type="checkbox"/> 61	<input type="checkbox"/> 62	<input type="checkbox"/> 63	<input type="checkbox"/> 64

Note: This page's configuration will not be copied into other channels.

**Note:**

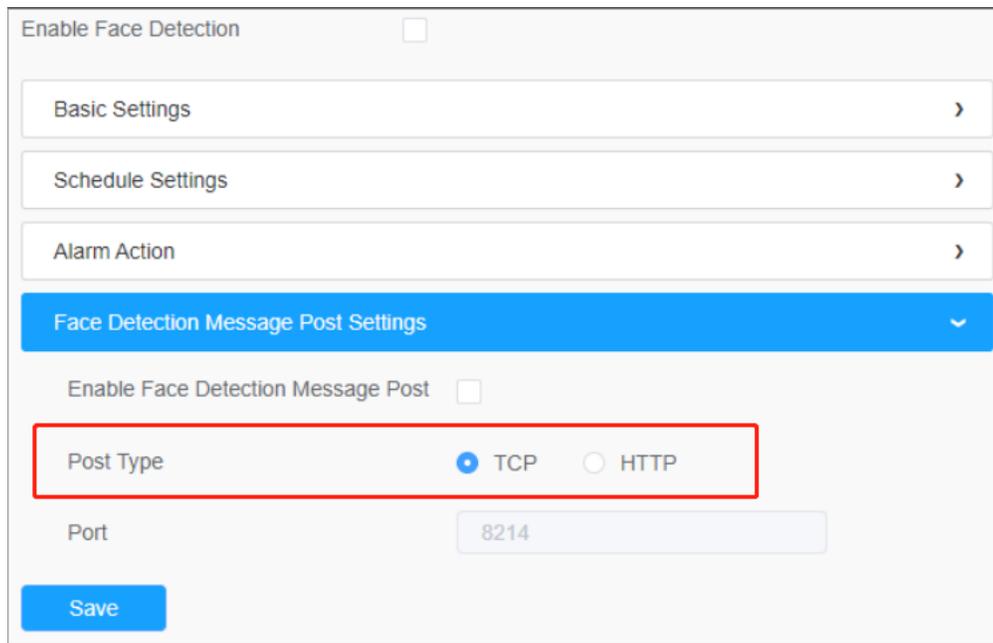
1. The list is exclusive for NVR, working with all LPR cameras you add. It won't synchronize with the list on camera side.
2. Do not forget to enable these modes, set effective time and record action for corresponded mode, ensuring that you can get real-time video when license plate is detected (Effective time and record action is enabled by default.)

### 3.5.2.2 Face Detection

Face Detection settings consist of Face Capture and Advanced. Here are some notes for using Face Detection function.

 **Note:**

1. Ensure that there is available HDD on NVR and correct record settings is made, so that you can check the record on live view.
2. Ensure that NVR can get the face information. Please set TCP which is the default mode as Post Type. It can be set in Camera web page -> Event -> Face Detection -> Face Capture interface.



Enable Face Detection

Basic Settings >

Schedule Settings >

Alarm Action >

Face Detection Message Post Settings ▾

Enable Face Detection Message Post

Post Type  TCP  HTTP

Port 8214

Save

3. Make sure your camera is AI Series and version is V4x.7.0.79-r25 or above.
4. Make sure your NVR model is MS-Nxxxx-xxT/H.

### Face Capture

Smart Analysis

CPU 2% Memory 30%

Face Detection

Face Capture Advanced

Detection Region

Min. Detection Size

Channel: 9 Name: CAM9

Face Detection:  Enable

Min. Detection Size: 30

Region Edit: Detection Region

Edit Operation: Set All Delete All

Face Capture Settings: Edit

Effective Time: Edit

Action: Edit

Shield Region ID	Name	Enable	Delete

Apply Back

**Step 1:** Select a channel and enable Face Detection function;

**Step 2:** Set Min. Detection Size;

**Step 3:** Set detection region or Shield Region, you can draw the polygon region on the

screen directly, or you can also click  or  to select or delete the entire region. Only the faces in the detection region will be detected, and the faces in the shield region will not be detected.

**Step 4:** Make configuration for face capture snapshot.

Face Capture Settings

Capture Mode	Quality Priority ▼
Capture Quality	<input type="range" value="20"/> 20
Target Snapshot Type	Face Only ▼
Background Snapshot	Disable ▼
Snapshot	1 ▼

**Capture Mode:** Quality Priority, Timeliness Priority, Customize are available.

- **Quality Priority:** In this mode, it will push a face screenshot of best quality when the face is detected.
- **Timeliness Priority:** In this mode, it will push a face screenshot in the shortest time when the face is detected.
- **Customize:** In this mode, you can customize some detect conditions, including Snapshot Interval, Oblique Face Angle Limit, Pitching Face Angle Limit, Side Face Angle Limit, Blur Limit.

 **Note:** It is recommended to choose Quality Priority Mode.

**Target Snapshot Type:** Face Only, Upper Body, Whole Body are available.

- **Face Only:** Capture the screenshot of face only.
- **Upper Body:** Capture the screenshot of upper body.
- **Whole Body:** Capture the screenshot of whole body.

If you check the "Background" option, it will take another screenshot of the entire image.

 **Note:** Whether or not the "Background" option is checked, the camera will push the entire image to the NVR side.

**Snapshot Interval:** 80 milliseconds, 200 milliseconds, 500 milliseconds, 1 second, 2 seconds and 4

seconds are available. This option is optional for Customize mode.

**Oblique Face Angle Limit:** Set Oblique Face Angle Limit to 1~180. The larger the value, the larger angle the oblique face that can be detected. This option is optional for Customize mode.

**Pitching Face Angle Limit:** Set Pitching Face Angle Limit to 1~180. The larger the value, the larger angle the pitching face that can be detected. This option is optional for Customize mode.

**Side Face Angle Limit:** Set Side Face Angle Limit to 1~180. The larger the value, the larger angle the side face that can be detected. This option is optional for Customize mode.

**Blur Limit:** Set Blur Limit to 1~10. The larger the value, the more blurred the face can be detected. This option is optional for Customize mode.

**Snapshot:** Set the number of screenshot to 1~5. It will take screenshot based on the snapshot interval you set.

**Step 5:** Set Face Detection function effective time;

**Step 6:** Set action including Audible Warning, Email Linkage, Event Popup, PTZ Action, Alarm Output, White LED and Trigger Channels Record.

For detailed settings of these actions, please refer to [Alarm Action \(page 95\)](#).

 **Note:** The following functions cannot be enabled at the same time as Face Detection.

- VCA
- People Counting&Regional People Counting
- Corridor Mode
- Auto Tracking

## Advanced

Here you can enable Attribute Recognition and configure the attributes you want to detect. Or enable the Face Privacy Mode for Face Detection.

The screenshot shows the 'Smart Analysis' interface. On the left is a dark sidebar with a home icon and menu items: 'Analysis Search', 'Analysis Settings', 'ANPR', 'Face Detection' (highlighted in blue), 'People Counting', 'Heat Map', and 'POS'. At the bottom of the sidebar is a 'Live View' icon. The main content area is titled 'Smart Analysis' and has a top right status bar showing 'CPU 7%' and 'Memory 32%'. Below this is a 'Face Detection' header. Underneath, there are two tabs: 'Face Capture' and 'Advanced'. A large black video feed area is on the left, with 'Channel: 8' and 'Name: CAM8' below it. To the right of the video feed is a 2x8 grid of numbered channels (1-16). Below the video feed, there are two settings sections: 'Attribute Recognition Settings' with an 'Edit' button, and 'Face Privacy' with a dropdown menu set to 'Enable'. A red box highlights these two sections, and a red arrow points to the 'Face Privacy' dropdown. At the bottom right of the main area are 'Apply' and 'Back' buttons.

**Attribute Recognition Settings:** The attributes include Age, Gender, Glasses, Mask and Cap. Users can choose the attributes as needed.

**Face Privacy:** When Face Privacy Mode is enabled, the detected faces in the face detection area will be mosaic automatically.

**Note:**

1. Attribute Recognition function cannot be used together with Face Privacy function
2. To enable Face Privacy Mode, the video parameters will be changed to the recommended configuration as shown below:

- H.265 video codec (all streams)
- Primary Stream: 1080P@25fps
- Secondary Stream: 704\*576@25fps
- Tertiary Stream: Disabled

### 3.5.2.3 People Counting

#### People Counting Settings

People counting is able to count that how many people enter or exit during the setting period.

The screenshot displays the 'Smart Analysis' interface with the 'People Counting' settings page. The top right shows system status: CPU 4% and Memory 23%. The page is divided into several sections:

- Navigation Sidebar:** Includes 'Analysis Search', 'Analysis Settings', 'ANPR', 'Face Detection', 'People Counting' (highlighted), 'Heat Map', and 'POS'. A 'Live View' icon is at the bottom.
- Header:** 'Smart Analysis' and 'People Counting'.
- Sub-headers:** 'People Counting Settings', 'Occupancy Live View Settings', 'Regional People Counting Settings', and 'Report Auto Backup Settings'.
- Channel View:** A grid of 16 channels (1-16) with channel 1 selected. Below it, a camera view for 'Channel: 1' (Name: CAM1) shows four vertical detection lines labeled #1#, #2#, #3#, and #4#. Each line has 'In' and 'Out' counters at the bottom.
- Configuration Panel:**
  - Minimum Size (1x1-320x240):** 3 x 3
  - Maximum Size (1x1-320x240):** 320 x 240
  - Line:** 1
  - People Counting:**  Enable
  - Direction:** B->A
  - Line Edit:** Edit
  - Sensitivity:** Slider set to 5
  - Object Size Limits:** Edit
  - Counting Information:** Edit
  - Alarm Trigger:** Total Counting
  - Thresholds:** Edit
  - People Counting Schedule:** Edit
  - Action:** Edit
- Buttons:** Copy, Apply, Back

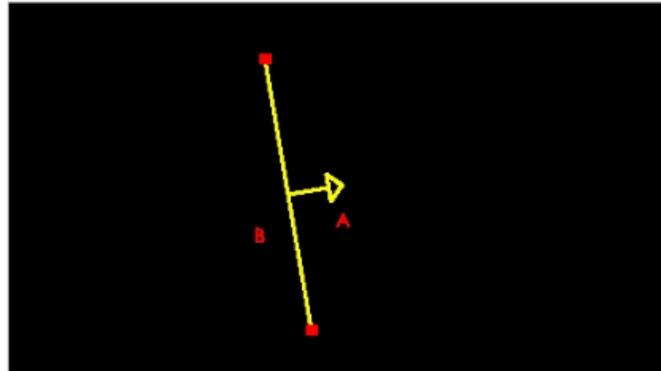
#### Step1. Enable Channel Event.

Select Channel and Detection Line, then enable People Counting.

This close-up shows the configuration for a specific channel and line. The 'Line' dropdown is set to 4, and the 'People Counting' checkbox is checked, indicating it is enabled.

#### Step 2. Set Detection Lines.

Select the direction and draw the line after clicking **Edit** button.



Channel: 1      Name: CAM1

 **Note:** It supports drawing up to 4 detection lines and configures them individually.

### Step 3. Set Object Size Limits.

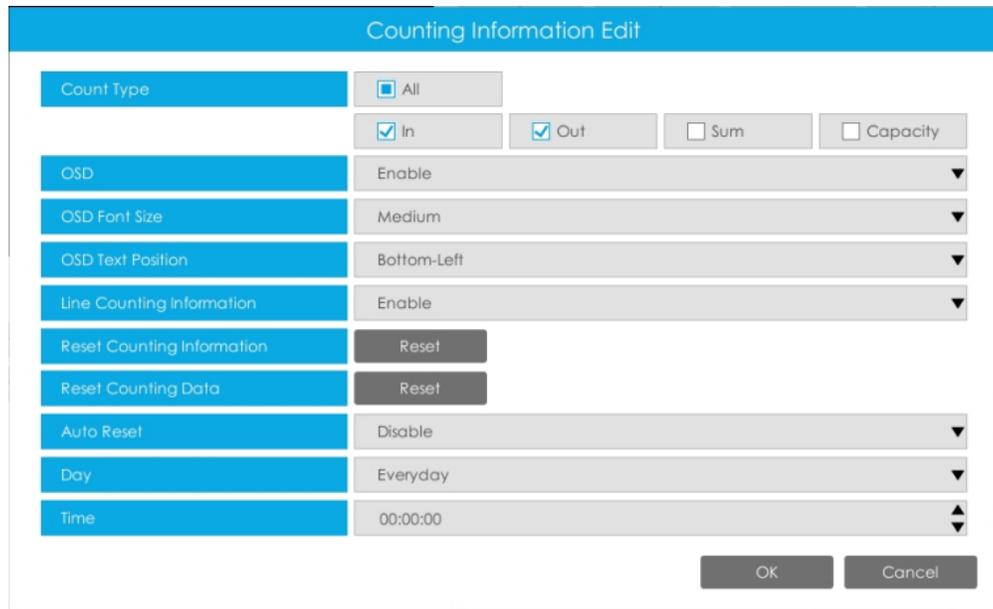
<input type="radio"/> Minimum Size(1x1~320x240)	3	X	3
<input type="radio"/> Maximum Size(1x1~320x240)	320	X	240

**Minimum Size:** The Min. Size means that only if the object size is bigger than the frame, the settings for People Counting will take effect.

**Maximum Size:** The Max. Size means the opposite, only if the object size is smaller than the frame you drew on the screen, the settings for People Counting will take effect.

### Step 4. Set Detecting Sensitivity.

### Step 5. Set Counting Information by clicking "Edit" button.



**Table 11.**

Parameters	Function Introduction
<b>Count Type</b>	Users can choose the information they want to display in Live Video.
<b>OSD</b>	Enable/disable the OSD shown.
<b>OSD Font Size</b>	The font size of the OSD display.
<b>OSD Text Position</b>	The text position of the OSD display.
<b>Line Counting Information</b>	Enable/disable the line counting information.
<b>Reset Counting Information</b>	Click this button to clear the count information on the OSD
<b>Reset Counting Data</b>	Click this button to clear the count information in the database.  <b>Note:</b> After enabling this option, the count information of the search interface will also be cleared.
<b>Auto Reset</b>	It is used to automatically clear the counting information according to your settings.
<b>Day</b>	The day of Auto Reset.
<b>Time</b>	The time of Auto Reset.

**Step 6. Set Alarm Trigger and Alarm Action.**

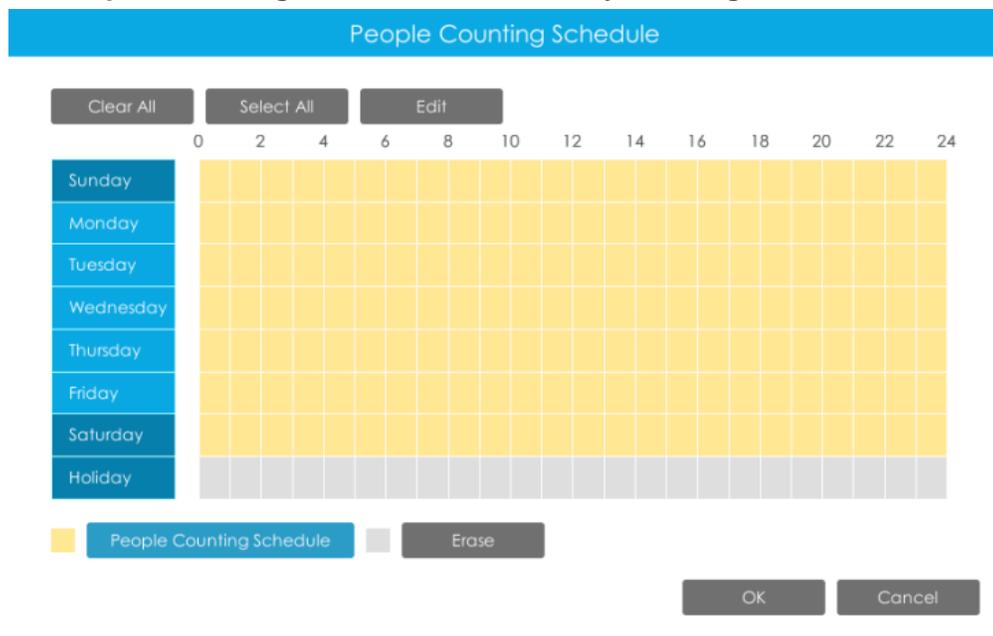
Line	1
People Counting	<input checked="" type="checkbox"/> Enable
Direction	B->A
Line Edit	Edit
Sensitivity	<input type="range" value="5"/>
Object Size Limits	Edit
Counting Information	Edit
Alarm Trigger	Total Counting
Thresholds	Edit
People Counting Schedule	Edit
Action	Edit

**Table 12.**

Parameters	Function Introduction												
<p style="text-align: center;"><b>Alarm Trigger</b></p>	<p>Alarm will be triggered when the thresholds reaches to a certain value from 1 to 9999. Total Counting and Single Counting are available. You can set the Alarm Thresholds of In/Out/Capacity/Sum.</p> <div data-bbox="685 987 1282 1524" style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p style="text-align: center; background-color: #0070C0; color: white; margin: 0;">Thresholds</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #0070C0; color: white;">In</td> <td style="text-align: center;"><input type="checkbox"/> 9999</td> <td style="text-align: right;">1~9999</td> </tr> <tr> <td style="background-color: #0070C0; color: white;">Out</td> <td style="text-align: center;"><input type="checkbox"/> 9999</td> <td style="text-align: right;">1~9999</td> </tr> <tr> <td style="background-color: #0070C0; color: white;">Capacity</td> <td style="text-align: center;"><input type="checkbox"/> 9999</td> <td style="text-align: right;">1~9999</td> </tr> <tr> <td style="background-color: #0070C0; color: white;">Sum</td> <td style="text-align: center;"><input type="checkbox"/> 9999</td> <td style="text-align: right;">1~9999</td> </tr> </table> <p style="text-align: right; margin-top: 10px;"> <input type="button" value="OK"/> <input type="button" value="Cancel"/> </p> </div> <p> <b>Note:</b></p> <ul style="list-style-type: none"> <li>For Total Counting, the thresholds are the sum of the total number of 4 detection lines.</li> <li>For Single Counting, the threshold is for the selected detection line.</li> </ul>	In	<input type="checkbox"/> 9999	1~9999	Out	<input type="checkbox"/> 9999	1~9999	Capacity	<input type="checkbox"/> 9999	1~9999	Sum	<input type="checkbox"/> 9999	1~9999
In	<input type="checkbox"/> 9999	1~9999											
Out	<input type="checkbox"/> 9999	1~9999											
Capacity	<input type="checkbox"/> 9999	1~9999											
Sum	<input type="checkbox"/> 9999	1~9999											

Parameters	Function Introduction
<p><b>Alarm Action</b></p>	<p>Set action including Audible Warning, Email Linkage, PTZ Action, Alarm Output, White LED, HTTP Notification and Others. For detailed settings of these actions, please refer to <a href="#">Alarm Action (page 95)</a>.</p> <p> <b>Note:</b></p> <ul style="list-style-type: none"> <li>• The alarm action is effective on 4 detection lines simultaneously.</li> <li>• If you enable External Output and choose Constant External Output Action Time, when the thresholds reach to a certain value you set, External Output Action alarm time will be always constant till the alarm is released.</li> </ul>

**Step 7. Set People Counting detection schedule by clicking "Edit" button.**



**Step 8. Click [Copy to Camera] to copy the same configuration to other channels.**

**Occupancy Live View Settings**

You can configure information about Occupancy Live View on the page.

 **Note:** Make sure your camera's version is 4X.7.0.77 or above.

### Step 1. Set Group.

**Group Settings:** Click  to pop up the Group Settings interface. Then you can click  to add Group in the interface, and edit the Group Name and select the Channels to join the Group in the Add Group interface. You can add up to 9 Groups.

Add Group

Group No.	3
Group Name	Group3
Channel	<input checked="" type="checkbox"/> All <input checked="" type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input checked="" type="checkbox"/> 4 <input checked="" type="checkbox"/> 5 <input checked="" type="checkbox"/> 6 <input checked="" type="checkbox"/> 7 <input checked="" type="checkbox"/> 8

### Step 2. Select a Group from the added Groups.

Group

1

**Group Name:** The corresponding Group Name will be automatically obtained according to the Group No. you choose. You can modify the Group Name by clicking  on the corresponding Group in the Group Settings interface.

### Step 3. Enable People Counting for the selected Group.

People Counting

Enable

### Step 4. Set the relevant parameters of People Counting.

**Max. Stays:** Set the maximum number of people staying from 1 to 99999, the default value is 99999.

**Reminders of Green Light:** Set the prompt when Green Light is on in the Occupancy Live View interface, up to 45 characters. The default prompt is “Welcome!!!”.

**Reminders of Red Light:** Set the prompt when Red Light is on in the Occupancy Live View interface, up to 45 characters. The default prompt is “Please wait till the green light turns on.”.

**Font Size:** Select the font size of the prompt. There are three options: Small, Medium and Large.

**Live View Counting Reset:** Reset the Group counting data in the Occupancy Live View interface.

**Live View Counting Auto Reset/Day/Time:** The Group counting data is automatically reset at the set time when Live View Counting Auto Reset is enabled.

Live View Counting Auto Reset	Enable
Day	Everyday
Time	00:00:00

**NVR Counting Reset:** Reset the Group counting data stored in NVR side, and also reset the Group counting data in the Occupancy Live View interface.

**Alarm Action:** Alarm is triggered when the number of people staying in the current group reaches the set maximum number of people staying. You can set alarm action including Audible Warning, Email Linkage, PTZ Action, Alarm Output and White LED.

For detailed settings of these actions, please refer to [Alarm Action \(page 95\)](#)

### Regional People Counting Settings

When enabling Regional People Counting, users can check the real-time number of people and the time of each person's stay in the detection region.

Smart Analysis

CPU 4% Memory 23%

People Counting

People Counting Settings | Occupancy Live View Settings | **Regional People Counting Settings** | Report Auto Backup Settings

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

Channel: 1 Name: CAM1

- Minimum Size(1x1-320x240) 3 X 3
- Maximum Size(1x1-320x240) 320 X 240

Region No. 1

**Regional People Counting**  Enable

Region Edit

Object Size Limits Edit

Sensitivity 5

Max. Stay 60 1~60

Min. Stay 1 1~60

Max. Length of Stay 30 1~1800s

Regional People Counting Schedule Edit

Action Edit

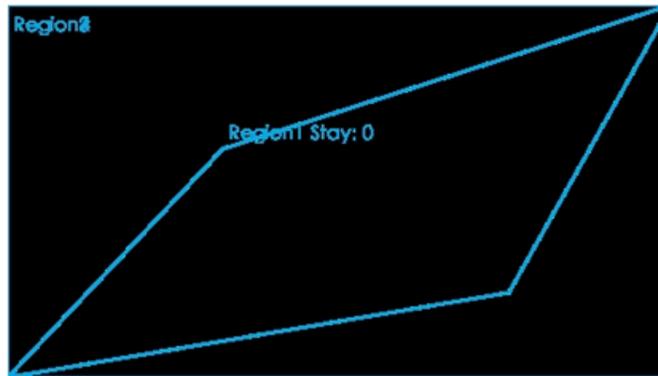
Copy Apply Back

**Step 1. Select channel and the region number to configure, then enable Regional People Counting.**

Region No.	1
Regional People Counting	<input checked="" type="checkbox"/> Enable

**Note:** Ensure that your camera model is MS-CXXXX-XXC and camera version is 4X.7.0.78 or above.

**Step 2. Set detection region.**



**Step3.Set Minimum Size and Maximum Size.**

<input type="radio"/> Minimum Size(1x1~320x240)	3	X	3
<input type="radio"/> Maximum Size(1x1~320x240)	320	X	240

**Minimum Size:** The Min. Size means that only if the object size is bigger than the frame, the settings for Regional People Counting will take effect.

**Maximum Size:** The Max. Size means the opposite, only if the object size is smaller than the frame you drew on the screen, the settings for Regional People Counting will take effect.

**Step4.Set Sensitivity.**

Level 1~10 are available, the default level is 5. The higher the sensitivity, the easier the moving subjects to be recorded in the result.

Sensitivity 5

**Step5. Set alarm trigger. Alarm will be triggered when the threshold exceeds the certain value.**

Max. Stay	<input type="checkbox"/> 60	1-60
Min. Stay	<input type="checkbox"/> 1	1-60
Max. Length of Stay	<input type="checkbox"/> 30	1-1800s

**Step 6. Set detection schedule by clicking "Edit" button.**

Regional People Counting Schedule	Edit
Action	Edit

Copy      Apply      Back

**Step 7. Set alarm action including Audible Warning, Email Linkage, Event Popup, PTZ Action, Alarm Output, White LED and Trigger Channels Record.**

For detailed settings of these actions, please refer to [Alarm Action \(page 95\)](#).

**Report Auto Backup Settings**

Here users can configure Auto Backup of People Counting reports. Then you can periodically export .CSV reports of the last day, last week, or all to the external device or Email.

The screenshot displays the 'Report Auto Backup Settings' configuration page. The left sidebar contains navigation options: Home, Analysis Search, Analysis Settings, ANPR, Face Detection, People Counting (highlighted), Heat Map, and POS. The main content area is titled 'Smart Analysis' and includes system status indicators for CPU (2%) and Memory (20%). The 'People Counting' section is active, showing sub-tabs for 'People Counting Settings', 'Occupancy Live View Settings', 'Regional People Counting Settings', and 'Report Auto Backup Settings'. The configuration includes:
 

- Report Type: People Counting by Camera
- Report Auto Backup: Enable
- Channel: All (checked), 1-16 (checked)
- Day: Everyday
- Time: 00:00:00
- File Format: CSV
- Line: All (checked), Total (checked), Line 1-4 (checked)
- Backup Time Range: Last Day
- Backup to: External Device (checked), Email (unchecked)

 The bottom right corner features 'Apply' and 'Back' buttons.

**Step 1:** Select Report Type including People Counting by Camera, People Counting by Group and Regional People Counting.

**Step 2:** Enable Report Auto Backup, and then select the Channel or Group.

**Step 3:** Set the day and the time.

Day	Everyday
Time	16:41:00

**Step4:** Select the Detection Line.

**Step 5:** Select Backup Time Range including Last Day and Export All.

**Step 6:** Users can export the reports to the external device or Email.

### 3.5.2.4 Heat Map

Mileight NVRs support the configuration of the Heat Map function of Mileight cameras on NVR directly and you can search and export the results of Heat Map in Smart Analysis.

#### Heat Map

The screenshot shows the 'Smart Analysis' interface with the 'Heat Map' configuration page. The sidebar on the left contains navigation options: Analysis Search, Analysis Settings, ANPR, Face Detection, People Counting, Heat Map (highlighted), and POS. The main content area features a grid for the Heat Map, a settings panel, and a status bar. The status bar indicates CPU usage at 3% and Memory usage at 23%. The settings panel includes:
 

- Heat Map:  Enable
- Sensitivity: Slider set to 5 (range 1-10)
- Min. Object Size: Slider set to 10 (range 1-100)
- Min. Dwell Time: Slider set to 30 (range 1-300)
- Scene Change Adaptability: Slider set to 5 (range 1-10)
- Region: Buttons for 'Set All' and 'Delete All'
- Heatmap Schedule: Button for 'Edit'

 At the bottom right, there are buttons for 'Copy', 'Apply', and 'Back'.

**Sensitivity:** Level 1~10 are available, the default level is 5. The higher the sensitivity, the easier the moving subjects to be recorded in the result.

**Min. Object Size:** Set the minimum object size from 1 to 100, the default value is 10. Objects smaller than this value will not be recorded in the result.

**Min. Dwell Time:** Set the minimum dwell time from 1 to 300, the default value is 30. If the object stays in the area longer than the set "Minimum Dwell Time", it will not be recorded in the result.

**Scene Change Adaptability:** Level 1~10 are available, the default level is 5. Scene Change Adaptability indicates the camera's adaptability to scene changes, which can increase the accuracy of detection. The camera adapts better to faster changing scenes if the value is higher.

**Heat Map Region:** Draw the screen to set the detection area. You can click "Set All" button to select all areas, or "Clear All" button to remove the current drawn area.

**Heatmap Schedule:** Set Heat Map schedule by clicking "Edit" button..

 **Note:**

1. Ensure that your camera's version is 4X.7.0.74 or above.
2. Please configure Heat Map schedule on camera side.
3. The Heat Map function only works on the following cameras:

Fisheye: Ensure that the dewarping mode is 1O and the dewarping rule is On-board Dewarping.

Panoramic Mini Bullet: Ensure to turn on the Lens Distort Correct function.

### Report Auto Backup Settings

Here users can configure Auto Backup of Heat Map reports. Then you can periodically export .CSV reports of the last day, last week, or all to the external device or Email.

**Step 1:** Enable Report Auto Backup, and then select the channels.

**Step 2:** Set the day and the time.

Day	Everyday
Time	16:41:00

**Step 3:** Select Report Type including Space Heat Map and Time Heat Map.

**Step 4:** Select Backup Time Range including Last Day and Export All.

**Step 5:** Users can export the reports to the external device or Email.

### 3.5.2.5 POS

You can configure some basic POS information here. When the communication between the POS machine and NVR is available and POS function is enabled on NVR side, NVR can obtain the information transmitted by the POS machine and display the POS information on the configured channel Live View.

POS No.	1
POS	Enable
POS Name	POS 1
POS Protocol	General
Connection Mode	TCP
Connection Mode Settings	Edit
Live View Display	Enable
Display Channel	3
Display Region	Reset
Character Encoding	Unicode(UTF-8)
Font Size	Large
Font Color	Cyan
Overlay Mode	Page
Display Time	5
Timeout	5
Privacy Settings	Edit
Effective Time	Edit
Action	Edit

Channel: 3    Name: CAM3

Apply    Back

**Step 1:** Select the POS number and enable POS function;

**POS Name:** You can customize the POS name as needed

**POS Protocol:** Display the POS communication protocol. The default is General

**Connection Mode:** Select the connection mode with the POS machine, TCP or UDP is optional

**Connection Mode Settings:** Set the IP address and POS Port of the POS machine

**Step 2:** You can enable the Live View Display. When enabled, POS information will be displayed in the Live View and the preview box of each configuration page;

**Display Channel:** Select the channel on which POS information will be displayed

**Note:** The information of different POS machines cannot be displayed in the same channel to prevent information overlap.

**Display Region:** Draw the area in the channel where POS information is displayed

**Character Encoding:** The encoding format of the information transmitted by the POS machine. The default is Unicode (UTF-8)

**Font Size:** Set the font size of POS information

**Font Color:** Set the font color of POS information

**Overlay Mode:** Set the overlay mode when the channel display area is full in the Live View. Page or Roll is optional

**Display Time:** Set the display time of single POS information in the Live View

**Timeout:** Set the expiration time of POS information, and multiple messages sent within the set time will be merged into the same message again

**Privacy Settings:** Some information can be set to \* as needed to protect privacy

**Step 3:** Set POS function effective time;

**Step 4:** Alarm is triggered when NVR obtains the information transmitted by the POS machine. You can set alarm action including Audible Warning, Email Linkage, PTZ Action, Alarm Output, White LED and Others.

For detailed settings of these actions, please refer to **3.5.2.1 ANPR**.

## **3.6 Camera**

Before configuration, please ensure that the camera is connected to the same network as your NVR and that the network setting for your NVR is properly set.

### **3.6.1 Camera Management**

**Camera Settings**

CPU 1% Memory 27%

**Camera Management**

Channel: 1 Name: CAM1

**Batch Settings**

- Channel: 6
- Channel Name: CAM6
- Protocol: ONVIF
- IP Address:
- Port: 80
- Transport Protocol: Auto
- User Name: admin
- Password:
- Time Setting:
- Sync Time With NVR

Test Add

Channel	Channel Name	Edit	Delete	Status	IP Address	Channel ID	Port	Protocol	MAC	Firmware Version	Model
1	CAM1				192.168.14.102	-	8081	ONVIF	1CC316210991	40.7.0.78	MS-C2912-FFB
2	CAM2				192.168.14.103	-	8083	ONVIF	1CC316219804	40.7.0.78	MS-C2942-B
3	CAM3				192.168.14.104	-	8084	ONVIF	1CC316238D13	40.7.0.78	MS-C2942-B
4	CAM4				192.168.14.105	1	8085	ONVIF	1CC316220D8D	43.7.0.78	MS-C9674-PB
5	CAM5				192.168.7.234	-	80	ONVIF	1CC316287C75	45.7.0.78	MS-C2864-RFPC

Free Receiving Bandwidth: 129.31Mbps

Edit Authentication Delete Refresh Back

### Step 1. Add camera.

### Method 1. Add camera through Device Search interface. 'Camera'-'>'Device Search'.

**Camera Settings**

CPU 11% Memory 99%

**Device Search**

Protocol: All Select NIC: All IP Range: 0.0.0.0 - 255.255.255.255 Search

No.	IP Address	IP Edit	Status	Port	Protocol	NIC	MAC	Firmware Version	Model	Vendor
1	192.168.32.2		Active	80	MSSP	LAN	1CC3162166FA	41.7.0.77-a3	MS-C4463-PB	Mileight
2	192.168.20.3		Active	80	MSSP	LAN	1CC316263374	41.7.0.73-7	MS-C5373-PB	Mileight
3	192.168.20.4		Active	80	MSSP	LAN	1CC31621A468	41.7.0.70	MS-C2962-FPB	Mileight
4	192.168.32.5		Active	80	MSSP	LAN	1CC3162166F3	41.7.0.76-3	MS-C4463-PB	Mileight
5	192.168.32.6		Active	80	MSSP	LAN	1CC316216707	41.7.0.77-vca-1cp	MS-C4463-PB	Mileight
6	192.168.32.7		Active	80	MSSP	LAN	1CC31621670A	41.7.0.76	MS-C4463-PB	Mileight
7	192.168.32.8		Active	80	MSSP	LAN	1CC316216703	41.7.0.76	MS-C4463-PB	Mileight
8	192.168.32.9		Active	80	MSSP	LAN	1CC3162166F2	41.7.1.76	DEM-C3762	IPCAM
9	192.168.32.10		Active	80	MSSP	LAN	1CC31621658C	41.7.0.77-a2	MS-C4463-PB	Mileight
10	192.168.31.11		Active	80	MSSP	LAN	1CC31621657D	41.7.0.70	MS-C4463-PB	Mileight
11	192.168.32.11		Active	80	MSSP	LAN	1CC316216619	41.7.0.76	MS-C4463-PB	Mileight
12	192.168.31.12		Active	80	MSSP	LAN	1CC3162104CF	40.7.0.70	MS-C2963-PB	Mileight
13	192.168.32.12		Active	80	MSSP	LAN	1CC31621671E	41.7.0.76	MS-C4463-PB	Mileight
14	192.168.10.13		Active	80	MSSP	LAN	1CC3161228A3	31.7.0.75-a7	MS-C2941-X301PA	Mileight
15	192.168.31.13		Active	80	MSSP	LAN	1CC316210565	40.7.0.70	MS-C2963-PB	Mileight
16	192.168.32.13		Active	80	MSSP	LAN	1CC316216708	41.7.0.76	MS-C4463-PB	Mileight
17	192.168.32.14		Active	80	MSSP	LAN	1CC316216705	41.7.0.76	MS-C4463-PB	Mileight
18	192.168.31.15		Active	80	MSSP	LAN	1CC316210725	40.7.0.70	MS-C2963-PB	Mileight
19	192.168.32.15		Active	80	MSSP	LAN	1CC316216706	41.7.0.76	MS-C4463-PB	Mileight
20	192.168.10.16		Active	80	MSSP	LAN	1CC3161228F7	31.7.0.75	MS-C8241-X36PA	Mileight
21	192.168.31.16		Active	80	MSSP	LAN	1CC3162106F0	40.7.0.70	MS-C2963-PB	Mileight
22	192.168.32.16		Active	80	MSSP	LAN	1CC316216704	41.7.0.76	MS-C4463-PB	Mileight
23	192.168.10.17		Active	80	MSSP	LAN	1CC3161129C8	31.7.0.75	MS-C8164-FIPA	Mileight
24	192.168.31.17		Active	80	MSSP	LAN	1CC3162165AC	41.7.0.71	MS-C4463-PB	Mileight
25	192.168.32.17		Active	80	MSSP	LAN	1CC316216709	41.7.0.76	MS-C4463-PB	Mileight
26	192.168.31.18		Active	80	MSSP	LAN	1CC316210558	40.7.0.70	MS-C2963-PB	Mileight

Activate IP Edit Add Back

1. Select IP Range, NIC and Protocol, which includes ALL, ONVIF and MSSP.

Protocol: All | Select NIC: All | IP Range: 0.0.0.0 -- 255.255.255.255 | Search

2. Click  button to search cameras at the same LAN with NVR.

Protocol: All | Select NIC: All | IP Range: 0.0.0.0 -- 255.255.255.255 | Search

No.	IP Address	IP Edit	Status	Port	Protocol	NIC	MAC	Firmware Version	Model	Vendor	
<input type="checkbox"/>	1	192.168.32.2	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC3162166FA	41.7.0.77-a3	MS-C4463-PB	Milesight
<input type="checkbox"/>	2	192.168.20.3	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC316263374	41.7.0.73-r7	MS-C5373-PB	Milesight
<input type="checkbox"/>	3	192.168.20.4	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC31621A468	41.7.0.70	MS-C2962-FPB	Milesight
<input type="checkbox"/>	4	192.168.32.5	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC3162166F3	41.7.0.76-r3	MS-C4463-PB	Milesight
<input type="checkbox"/>	5	192.168.32.6	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC316216707	41.7.0.77-vco-1cp	MS-C4463-PB	Milesight
<input type="checkbox"/>	6	192.168.32.7	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC31621670A	41.7.0.76	MS-C4463-PB	Milesight
<input type="checkbox"/>	7	192.168.32.8	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC316216703	41.7.0.76	MS-C4463-PB	Milesight
<input type="checkbox"/>	8	192.168.32.9	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC3162166F2	41.7.1.76	OEM-C3762	IPCAM
<input type="checkbox"/>	9	192.168.32.10	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC31621658C	41.7.0.77-a2	MS-C4463-PB	Milesight
<input type="checkbox"/>	10	192.168.31.11	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC31621657D	41.7.0.70	MS-C4463-PB	Milesight
<input type="checkbox"/>	11	192.168.32.11	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC316216619	41.7.0.76	MS-C4463-PB	Milesight
<input type="checkbox"/>	12	192.168.31.12	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC3162106CF	40.7.0.70	MS-C2963-PB	Milesight
<input type="checkbox"/>	13	192.168.32.12	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC31621671E	41.7.0.76	MS-C4463-PB	Milesight

3. Select one channel, click  button, input password and click  button to finish.

Add

MAC	1CC316282E16
Channel	6 ▼
Channel Name	CAM6
Protocol	MSSP ▼
IP Address	192.168.10.18
Port	80
Transport Protocol	Auto ▼
User Name	admin
Password	
Time Setting	<input type="checkbox"/> Sync Time With NVR

OK
Cancel

4. Check  to **batch adding** the network cameras if they are with the same password, you can choose TCP, UDP or Auto transport protocol for it. Click  to finish batch adding.

**MSSP:** You can search out all Milesight cameras which have different network segment in the LAN.

**Batch Add**

User Name	admin	
Password	••••••••	
Transport Protocol	Auto ▼	
IP Address	MAC	Result
192.168.14.102	1CC316210991	
192.168.14.105	1CC316220D8D	

**Method 2. Add camera through camera management interface. 'Camera'->'Camera Management'.**

Camera Settings

CPU 1% Memory 27%

Camera Management

Camera Management Batch Settings

Channel: 6  
 Channel Name: CAM6  
 Protocol: ONVIF  
 IP Address:  
 Port: 80  
 Transport Protocol: Auto  
 User Name: admin  
 Password:  
 Sync Time With NVR

Channel	Channel Name	Edit	Delete	Status	IP Address	Channel ID	Port	Protocol	MAC	Firmware Version	Model
1	CAM1				192.168.14.102	-	8081	ONVIF	1CC316210991	40.7.0.78	MS-C2912-FFB
2	CAM2				192.168.14.103	-	8083	ONVIF	1CC316219804	40.7.0.78	MS-C2942-B
3	CAM3				192.168.14.104	-	8084	ONVIF	1CC316238D13	40.7.0.78	MS-C2942-B
4	CAM4				192.168.14.105	1	8085	ONVIF	1CC316220D8D	43.7.0.78	MS-C9674-P8
5	CAM5				192.168.7.234	-	80	ONVIF	1CC316287C75	45.7.0.78	MS-C2864-RFPC

Free Receiving Bandwidth: 129.31Mbps

Edit Authentication Delete Refresh Back

Select channel ID, input complete information, then click [Add] button.

There are three protocols available for camera connection:

- **ONVIF:** You can add any ONVIF IP cameras with ONVIF protocols.

Channel: 4

Channel Name: CAM4

Protocol: ONVIF

IP Address: 192.168.7.223

Port: 80

Transport Protocol: UDP

User Name: admin

Password: .....

Time Setting:  Sync Time With NVR

Test Add

- **RTSP:** You can add any IP cameras with RTSP protocol streams (Port: 554). It needs you to input complete resource path of the IP camera to add it. Take Milesight device for example, the resource path of main stream is “rtsp://IP:port/main” and secondary stream is “rtsp://IP:port/sub”. The length of RTSP can be up to 128 bits.

Channel	4
Channel Name	CAM4
Protocol	RTSP
Primary	rtsp://192.168.7.223/main
Secondary	rtsp://192.168.7.223/sub
Transport Protocol	UDP
User Name	admin
Password	••••••••
Time Setting	<input checked="" type="checkbox"/> Sync Time With NVR

- **MSSP:** You can add Milesight cameras which are in the same LAN with MSSP protocol.

Channel	4
Channel Name	CAM4
Protocol	MSSP
IP Address	192.168.7.223
Port	80
Transport Protocol	UDP
User Name	admin
Password	••••••••
Time Setting	<input checked="" type="checkbox"/> Sync Time With NVR

 **Note:** Support RTSP over HTTPS transmission between Milesight IPC and NVR.

You can select MSSP as the Protocol and choose Encryption for the Transport Protocol.

- **Milesight DDNS:** You can add Milesight cameras via Milesight DDNS. After enabling DDNS on Milesight camera and selecting “ddns.milesight.com” as provider, you can add the camera via the Domain Address “ddns.milesight.com/MAC address”.

Channel	2
Channel Name	CAM2
Protocol	Milesight DDNS
Domain Address	ddns.milesight.com/24F03C
Transport Protocol	Auto
User Name	admin
Password	••••••••
Time Setting	<input type="checkbox"/> Sync Time With NVR

You can add offline cameras to Milesight NVRs by method2. As long as the device information you fill in is correct, NVR will determine whether the device is connected and update the camera status automatically.

**Note:**

1. When adding a fisheye camera in Multi-Stream Mode, NVR would distinguish all of its channels as independent channels for adding, which depends on its Display Mode. For Example, if a Fisheye camera's Display Mode is 1O3R, there would be 4 Channels to be added. The original view gets Channel ID as 1, and the first region view gets Channel ID as 2, and so on. Thus you can select the ID to add as your demand.

Camera Channel Add

Channel ID

All

1
  2
  3
  4

2. Only Fisheye camera has Channel ID.

Channel	Channel Name	Edit	Delete	Status	IP Address	Channel ID	Port	Protocol	MAC	Firmware Version	Model
1	CAM1				192.168.14.102	-	8081	ONVIF	1CC316210991	40.7.0.78	MS-C2962-FPB
2	CAM2				192.168.14.103	-	8083	ONVIF	1CC316219804	40.7.0.78	MS-C2961-EB
3	CAM3				192.168.14.104	-	8084	ONVIF	1CC316238D13	40.7.0.78	MS-C2942-8
4	CAM4				192.168.14.105	1	8085	ONVIF	1CC316220D8D	43.7.0.78	MS-C9674-PB
5	CAM5				192.168.7.234	-	80	ONVIF	1CC316287C75	45.7.0.78	MS-C2864-RFPC

**Step 2. Check the connection status.**

After adding the IP channels, click  button on Camera Management interface, then  appears under Status.

Channel	Channel Name	Edit	Delete	Status	IP Address	Channel ID	Port	Protocol	MAC	Firmware Version	Model
1	CAM1				192.168.14.102	-	8081	ONVIF	1CC316210991	40.7.0.78	MS-C2962-FPB
2	CAM2				192.168.14.103	-	8083	ONVIF	1CC316219804	40.7.0.78	MS-C2961-EB
3	CAM3				192.168.14.104	-	8084	ONVIF	1CC316238D13	40.7.0.78	MS-C2942-B
4	CAM4				192.168.14.105	1	8085	ONVIF	1CC316220D8D	43.7.0.78	MS-C9674-PB
5	CAM5				192.168.7.234	-	80	ONVIF	1CC316287C75	45.7.0.78	MS-C2864-RFPC

If it shows the  icon, users can move the mouse to the corresponding icon in the status bar to check the reason for the disconnection.

Channel	Channel Name	Edit	Delete	Status	IP Address	Channel ID	Port	Protocol	MAC	Firmware Version	Model
1	CAM1			 <small>Disconnected: Unknown Error</small>	192.168.14.102	-	8081	ONVIF			

### Step 3. Configure camera.

#### Configure one camera

After successfully adding the camera, click  to re-edit the channel info.

Camera Edit

Settings
Parameters

Channel	1
Channel Name	CAM1
Protocol	ONVIF
IP Address	192.168.9.189
Port	80
Transport Protocol	UDP
User Name	admin
Password	*****
Time Setting	<input type="checkbox"/> Sync Time With NVR

OK
Cancel
Apply

Go to Parameters page to re-edit parameters of this channel, select the Record Stream Type as General or Event to set different parameters separately. It is recommended to set lower parameters for General Stream to save certain storage. Click [OK] to save after your configuration.

Camera Edit

Settings
Parameters

**Primary Stream**

Record Stream Type	General ▼
Video Codec	General
Frame Size	Event
Max Frame Rate	20 ▼
Bit Rate	8192 ▼
Bitrate Control	CBR ▼
I-frame Interval	40 ▼
Smart Stream	Off ▼
Audio	<input type="checkbox"/> Enable

**Secondary Stream**

Secondary Stream	<input checked="" type="checkbox"/> Enable
Video Codec	H.264 ▼
Frame Size	640*480 ▼
Max Frame Rate	25 ▼
Bit Rate	512 ▼
Bitrate Control	CBR ▼
I-frame Interval	50 ▼
Smart Stream	Off ▼

OK Cancel Apply

 **Note:**

1. Event Record Stream Configuration includes Events like Motion Detection, VCA, Camera Alarm Input and Smart Analysis.
2. For Fisheye camera, you can change its Transfer Mode, Installation Mode, Display Mode and Channel ID through Camera Edit Settings interface.

Settings	Parameters
Channel	4
Channel Name	CAM4
Protocol	MSSP
IP Address	192.168.20.19
Port	4
Transport Protocol	UDP
Transfer Mode	Multi-Channel Mode
On-board Installation Mode	Ceiling
On-board Display Mode	1P1O3R
Channel ID	1
User Name	admin
Password	*****
Time Setting	<input type="checkbox"/> Sync Time With NVR

OK Cancel Apply

3. Make sure your camera's firmware version is 4X7.0.75 or above.

### Batch configuring camera

Click [Batch Settings](#), select multiple channels and set parameters of cameras.

Camera Management

Device Search

PTZ Configuration

Image

Audio

Advanced

Camera Maintenance

Live View

## Camera Settings

↓ CPU 4%
Memory 23%

Camera Management

Camera Management

Channel: 1    Name: CAM1

Batch Settings

Transport Protocol	
Video Codec	
Frame Size	
Max Frame Rate	
Bit Rate	
Bitrate Control	
I-frame Interval	
Smart Stream	

Secondary Stream	
Video Codec	
Frame Size	
Max Frame Rate	
Bit Rate	
Bitrate Control	
I-frame Interval	
Smart Stream	
Time Setting	<input type="checkbox"/> Sync Time With NVR

Channel	Channel Name	Edit	Delete	Status	IP Address	Channel ID	Port	Protocol	MAC	Firmware Version	Model	
<input type="checkbox"/>	1	CAM1				192.168.68.42	-	80	MSSP	1CC316500027	61.8.0.2-Image307-afd...	MS-C2971-X23RPE
<input type="checkbox"/>	2	CAM2				192.168.69.161	-	80	MSSP	1CC316282E02	45.8.25.3-a4	MS-C5341-X23PC
<input type="checkbox"/>	3	CAM3				192.168.69.135	-	8088	MSSP			
<input type="checkbox"/>	4	CAM4				192.168.69.166	-	80	MSSP			
<input type="checkbox"/>	5	CAM5				192.168.69.182	-	80	MSSP			
<input type="checkbox"/>	6	CAM6				192.168.69.162	-	80	MSSP	1CC316112A89	31.8.0.3-a4	MS-C2962-1F1PA
<input type="checkbox"/>	7	CAM7				192.168.69.204	-	80	MSSP	1CC3162851CC	45.7.0.79-r1-o5	MS-C2866-X4RPC
<input type="checkbox"/>	9	CAM9				192.168.69.60	-	80	MSSP	1CC31611407E	45.8.0.2-1PR1-r1	MS-C2967-X23RIPC

Free Receiving Bandwidth: 135.50Mbps

### Step 4. Delete camera.

You can delete this channel by clicking , or you can select multiple devices and then click Delete to delete.

Channel	Channel Name	Edit	Delete	Status	IP Address	Channel ID	Port	Protocol	MAC	Firmware Version	Model	
<input checked="" type="checkbox"/>	1	CAM1				192.168.14.102	-	8081	ONVIF	1CC316210991	40.7.0.78	MS-C2962-FPB
<input type="checkbox"/>	2	CAM2				192.168.14.103	-	8083	ONVIF	1CC316219804	40.7.0.78	MS-C2961-EB
<input type="checkbox"/>	3	CAM3				192.168.14.104	-	8084	ONVIF	1CC316238D13	40.7.0.78	MS-C2942-B
<input type="checkbox"/>	4	CAM4				192.168.14.105	1	8085	ONVIF	1CC316220D8D	43.7.0.78	MS-C9674-PB
<input type="checkbox"/>	5	CAM5				192.168.7.234	-	80	ONVIF	1CC316287C75	45.7.0.78	MS-C2864-RFPC

Free Receiving Bandwidth: 129.31Mbps

### Step 5. Configure PoE Channel(Only for PoE NVR)

1. Connect Milesight camera to PoE port, it will detect the camera automatically.

2. If the camera's password is the same with NVR admin password, it will be successfully authenticated and be changed into the same network segment with internal NIC IPv4 address, then the camera will be connected successfully.

3. If the camera's password is different with NVR admin password, the PoE channel will show disconnect status. You need to input the camera's password by clicking

**Edit Authentication** to realize authentication ( you can also multi-select the devices and then click this button). Then the camera will be changed into the same network segment with internal NIC IPv4 address and will be successfully connected. Next time, NVR will use the password you input to authenticate this camera when you re-plug it.

 **Note:**

1. When NVR detects the inactive camera connected via PoE port, the camera will synchronize the password of NVR, and then camera will be successfully connected. For Fisheye camera in Multi-stream Mode, it would add all channels by default.
2. The steps for adding the third party PoE cameras plugged into The PoE NVR:
  - Set camera's IP segment to the same as NVR PoE NIC before plugging to PoE NVR;
  - Select PoE for NIC in Device Search interface, click Search button to search out cameras;
  - Select cameras and click Add button to add them.



### 3.6.2 Device Search

Select Protocol and NIC, then set the IP range, and click **Search** to quickly search the IP devices that support selected protocol and NIC at the same LAN with NVR.

Protocol		All	Select NIC	All	IP Range	0 . 0 . 0 . 0	--	255.255.255.255	Search	
No.	IP Address	IP Edit	Status	Port	Protocol	NIC	MAC	Firmware Version	Model	Vendor
<input type="checkbox"/>	1	192.168.32.2	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC3162166FA	MS-C4463-PB	Milesight
<input type="checkbox"/>	2	192.168.20.3	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC316263374	MS-C5373-PB	Milesight
<input type="checkbox"/>	3	192.168.20.4	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC31621A468	MS-C2962-FPB	Milesight
<input type="checkbox"/>	4	192.168.32.5	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC3162166F3	MS-C4463-PB	Milesight
<input type="checkbox"/>	5	192.168.32.6	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC316216707	MS-C4463-PB	Milesight
<input type="checkbox"/>	6	192.168.32.7	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC31621670A	MS-C4463-PB	Milesight
<input type="checkbox"/>	7	192.168.32.8	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC316216703	MS-C4463-PB	Milesight
<input type="checkbox"/>	8	192.168.32.9	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC3162166F2	OEM-C3762	IPCAM
<input type="checkbox"/>	9	192.168.32.10	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC31621658C	MS-C4463-PB	Milesight
<input type="checkbox"/>	10	192.168.31.11	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC31621657D	MS-C4463-PB	Milesight
<input type="checkbox"/>	11	192.168.32.11	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC316216619	MS-C4463-PB	Milesight
<input type="checkbox"/>	12	192.168.31.12	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC3162106CF	MS-C2963-PB	Milesight
<input type="checkbox"/>	13	192.168.32.12	<input checked="" type="checkbox"/>	Active	80	MSSP	LAN	1CC31621671E	MS-C4463-PB	Milesight

If the camera status shows Inactive, please select camera and click "Activate" button to activate it first before adding to NVR.

Besides, you can select channels and click "IP Edit" to **batch editing** their IP information.

For Fisheye camera in Multi-stream Mode, it would add all channels by default when batch editing the IP information.

IP Edit

MAC	1CC31622010B
Protocol	MSSP ▼
IP Address	192.168.7 .202
Subnet Mask	255.255.240.0
Gateway	192.168.7 .2
DNS	8 .8 .8 .8
Port	4200
User Name	admin
Password	

OK
Cancel

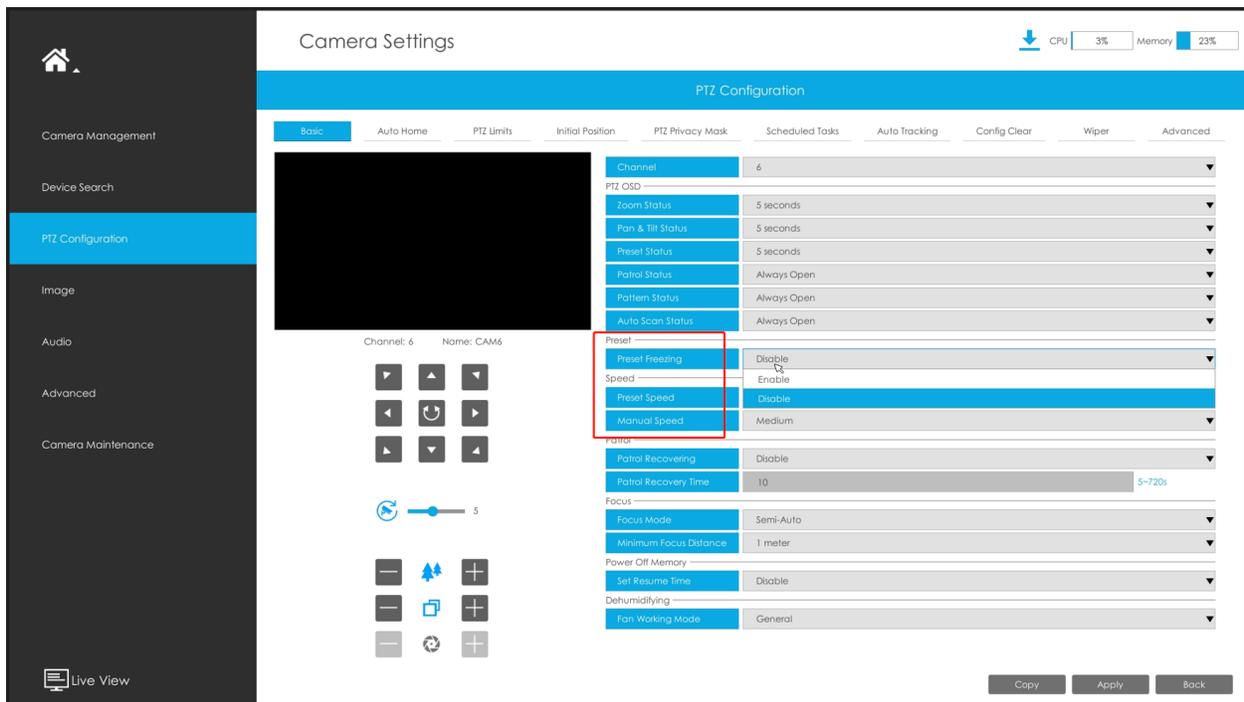
### 3.6.3 PTZ Configuration

#### Configuration

##### [Preset]

Preset can be set to move your PTZ camera to a desired preset position. The preset position is the preparation for Patrol.

**Step1. Use the PTZ direction key to rotate the position of preset. Then choose a preset number and click  to save a preset position. Up to 300 presets could be set.**



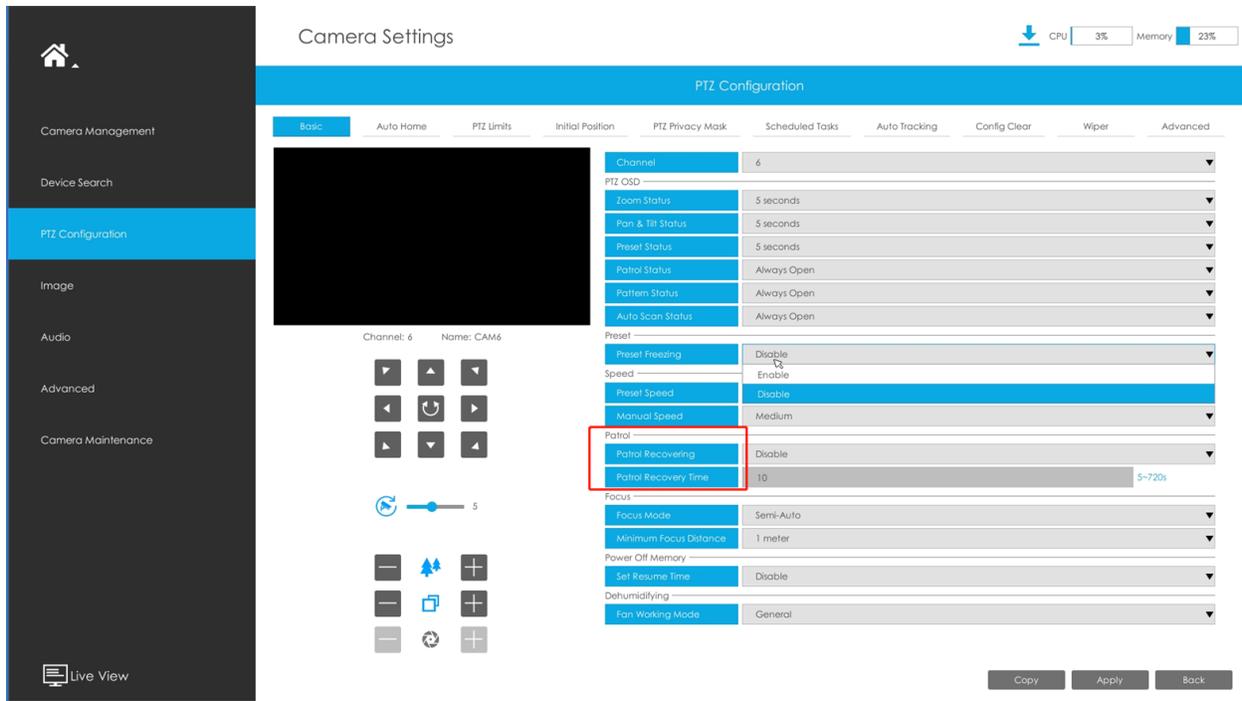
**Step2. Choose a preset number and click  to delete the preset position.**

**Step3. Choose a preset number and click  to check the preset position.**

##### [Pattern]

The camera will patrol back and forth in a constant speed. There is only one start point and one end point.

**Step1. Select a pattern and click . Up to 4 patterns could be set.**



**Step2.** Drag the mouse or click 8 direction keys by mouse to rotate PTZ.

**Step3.** Click  to save the PTZ movement patterns.

**Step4.** Click  to preview the pattern. Click  to stop.

**[PTZ Operation]**



**Table 13.**

Icons	Descriptions	Icons	Descriptions
	PTZ direction control and auto scan button		PTZ speed
	Zoom +, Focus +, Iris +		Zoom -, Focus -, Iris -
	Zoom		Focus
	Iris		

## Basic

Users can configure the functions and parameters about Pan/Tilt/Zoom.

**Step1.** Select channel.

**Step2.** Configure the PTZ OSD parameter. You can set the Zoom status, Pan&Tilt Status, Preset Status with Always Close/Always Open/2s/5s/10s, and Patrol Status, Pattern Status, Auto Scan Status with Always Open/ Always Close

**Step3.** If you enabled Preset Freezing, the live view of preset position will be showed directly instead of showing both the moving path to the position and the live view. It can also reduce the use of bandwidth in the digital network system.

**Step4.** Set Speed.

**Preset Speed:** It determines the speed of calling presets. Level 1~10 are available

**Manual Speed:** It is only for Speed Dome, and it determines the PTZ speed of Manually control. Low/ Medium/ High are available

**Step5.** Set Patrol.

**Patrol Recovering:** Enable Patrol Recovering

**Patrol Recovering Time:** Set time for Patrol Recovering, which is between 5 to 720 seconds

**Step6.** Set Focus.

**Focus Mode:** Three focus modes are available: Auto/Semi-Auto/Manual

**Minimum focus Distance:** Set the minimum focus distance to adjust the step length of each focus. 1 meter, 1.5 meters, 3 meters, 6 meters, 10 meters and 20 meters are available. The default minimum focus distance is 1 meter

**Step7.** Set Power Off Memory

If the camera stop working for a longer time than predefined, the position of it will be recorded. And it will resume to the position after going back to the normal work from power off. You can set the resume time to 30 seconds, 60 seconds, 300 seconds or 600 seconds to record its position

**Step8.** Set Dehumidifying.

**Fan Working Mode:** Three fan working modes are available: General/Enhancement/Constant  
**General:** The fans are turned on from 4am to 7am and 5pm to 8pm every day

**Enhancement:** The fans are turned on from 5pm to 7am every day

**Constant:** The fans work 24 hours a day

**Auto Home**

The NVR supports setting Auto Home for PTZ camera. Auto Home allows the PTZ camera to return to a predefined Home Position automatically after a period of latency time.

Camera Settings

CPU 1% Memory 18%

PTZ Configuration

Basic Auto Home PTZ Limits Initial Position PTZ Privacy Mask Scheduled Tasks Auto Tracking Config Clear Wiper Advanced

Channel: 7 Name: ptz1

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64

Auto Home  Enable

Latency Time 5 5-720s

Auto Home Mode Preset

Auto Home Mode Number Current Location Call

Apply Back

You can set up the Auto Home feature by following steps:

**Step1.** Select channel and enable Auto Home.

**Step2.** Set a latency time to trigger Auto Home mode, 5-720s.

**Step3.** Select a predefined preset in the list, press “Call” to check the location. Also support to select current location.

### PTZ Limits

The NVR supports setting PTZ Limits for PTZ camera. The PTZ camera can be programmed to move within the configurable PTZ Limits (Left/Right).

The screenshot shows the 'Camera Settings' interface with the 'PTZ Configuration' tab selected. The interface includes a navigation menu on the left, a main content area, and a status bar at the top right. The PTZ Configuration tab is active, displaying a grid of PTZ presets (1-64) and a list of presets (001-014). The PTZ Limits section is expanded, showing options for Limit Mode (Manual Limit), PTZ Limits (checked), and Mode Status (Not Limited). There are also fields for Left Limit and Right Limit, and a Clear All button.

**Step1.** Check the checkbox to enable the PTZ Limit function.

**Step2.** Choose the limit mode as Manual limit or scanning limit.

- **Manual Limit:**

When Manual limit stops are set, you can operate the PTZ control panel manually only in the limited surveillance area.

- **Scan Limit:**

When Scan limit stops are set, the auto scan is performed only in the limited surveillance area.

**Step3.** Click the PTZ controller buttons to set the left/right limit stops; you can also call the defined presets and set them as the limits of the PTZ camera.

**Step4.** Click Set to save the limits or Clear to clear the limits.

## Initial Position

The screenshot displays the 'Camera Settings' interface for PTZ Configuration. The top right corner shows system status: CPU 1% and Memory 18%. The main interface is divided into several sections:

- Navigation Sidebar:** Includes Camera Management, Device Search, PTZ Configuration (active), Image, Audio, Advanced, and Camera Maintenance. A 'Live View' button is at the bottom.
- PTZ Configuration Header:** Shows 'Camera Settings' and 'PTZ Configuration'. Below it are tabs for Basic, Auto Home, PTZ Limits, Initial Position (selected), PTZ Privacy Mask, Scheduled Tasks, Auto Tracking, Config Clear, Wiper, and Advanced.
- PTZ Grid:** A 8x8 grid of numbered positions from 1 to 64. Position 7 is highlighted in blue.
- Preset List:** A scrollable list of 14 presets, labeled '001 Preset 1' through '014 Preset 14'. A 'Preset' dropdown menu is positioned above the list.
- Control Buttons:** A set of directional arrows (up, down, left, right) and a 'Preset' button are located to the left of the grid. Below the grid are buttons for 'Initial Position', 'Set', 'Clear', and 'Call'.
- Channel Info:** Below the grid, it shows 'Channel: 7' and 'Name: ptz1'.
- Back Button:** A 'Back' button is located at the bottom right of the interface.

You can configure the Initial Position for PTZ cameras as a zero point.

**Step1.** Click the PTZ control buttons as the Initial Position of the PTZ bullet, you can also call a defined preset and set it as the Initial Position.

**Step2.** Click Set to save the position as the Initial Position.

## PTZ Privacy Mask

The NVR supports setting privacy mask for PTZ camera. Different from the general Privacy Mask, it is featured with a 3D coordinate system to protect object's privacy and keep the specified area masked through manual operations from monitoring no matter how cameras pan/tilt/zoom.

Camera Settings

CPU 1% Memory 18%

PTZ Configuration

Basic Auto Home PTZ Limits Initial Position **PTZ Privacy Mask** Scheduled Tasks Auto Tracking Config Clear Wiper Advanced

Channel: 7 Name: ptz1

PTZ Privacy Mask  Enable

Region Type Mask

Mask Color White

Region Add Clear Delete All

ID	Name	Type	Enable	Active Zoom Ratio	Edit	Area Edit	Delete
1	PTZ Privacy Mask 1	White	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Note: Support up to 24 mask and 4 mosaic areas.

Apply Back

You can add a privacy mask by following steps:

**Step1.** Select channel and enable Privacy Mask.

**Step2.** Select the Region Type as Mask or Mosaic.

**Step3.** Drag the mouse to select the area which needs to be protected on the live view window and then click "Add" button to add the area to the table. You can add 24 masks and 4 mosaic areas at most and each zone can be enabled and disabled. Please note that the areas added to the table will not take effect until you click "Save".

**Note:**

- Ensure that your camera model isn't Lite series, or camera's version isn't 40.X.X.XX, 41.X.X.XX, and 46.X.X.XX.
- Ensure that your NVR version is V7x.9.0.14 or above, and camera version is Vxx.7.0.79 or above to support the mosaic area.

**Step4.** Click  to edit PTZ Privacy Mask Name, the Privacy Mask Type and Active Zoom Ratio.

The screenshot displays the 'Camera Settings' interface for PTZ Configuration. The 'PTZ Privacy Mask' tab is active, showing a grid of 64 mask areas (8x8) and a list of 14 presets. A dialog box titled 'PTZ Privacy Mask Edit' is open, allowing configuration for 'PTZ Privacy Mask 1'. The dialog fields are: Name (PTZ Privacy Mask 1), Mask Color (White), and Active Zoom Ratio (1). There is an 'Enable' checkbox checked. Below the dialog is a table of existing masks:

ID	Name	Type	Enable	Active Zoom Ratio	Edit	Area Edit	Delete
1	PTZ Privacy Mask 1	White	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	PTZ Privacy Mask 2	White	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Buttons for 'OK', 'Cancel', 'Add', 'Clear', and 'Delete All' are visible. A note at the bottom states: 'Note: Support up to 24 Privacy Mask areas.' The interface also shows system status (CPU 2%, Memory 23%) and a sidebar with navigation options like 'Camera Management', 'Device Search', 'PTZ Configuration', 'Image', 'Audio', 'Advanced', and 'Camera Maintenance'.

**Step4.** Select "OK" to save the settings.

#### Note:

1. Ensure that your camera's version is 4X.7.0.73 or above.
2. There are two interfaces for Privacy Mask configuration. PTZ Privacy Mask is only applied in PTZ cameras while Privacy Mask can also be applied in other cameras.

## Scheduled Tasks

The NVR supports setting scheduled tasks for PTZ camera. You can configure the PTZ camera to perform a certain action automatically in a user-defined time period.

The screenshot shows the 'Camera Settings' interface. The top right corner displays system status: CPU 1% and Memory 18%. The main content area is titled 'PTZ Configuration' and has several sub-tabs: Basic, Auto Home, PTZ Limits, Initial Position, PTZ Privacy Mask, **Scheduled Tasks**, Auto Tracking, Config Clear, Wiper, and Advanced. The 'Scheduled Tasks' sub-tab is active, showing a table with the following data:

Channel	7
Scheduled Tasks	<input checked="" type="checkbox"/> Enable
Schedule Settings	<a href="#">Edit</a>
Latency Time	5 <small>5-720s</small>

At the bottom right of the interface, there are three buttons: Copy, Apply, and Back.

You can edit Scheduled Tasks by following steps:

**Step1.** Select channel and enable Scheduled Tasks.

**Step2.** Click [Edit](#) to set the schedule and task details.

**Step3.** Set the Task Recovery Time (from 5 to 720 seconds). You can set the time(a period of inactivity) before the PTZ camera starts the schedule and task details.

**Step4.** Click [OK](#) to save all the configurations.

#### Note:

- The Schedule Tasks feature is only supported by the front-end version XX.8.0.3-c4-t4 of the IPC.
- The time of each task cannot be overlapped. Up to 10 tasks can be configured for each day.
- The Scheduled Tasks function is prior to Auto Home function. When these two functions are set at the same time, only the Scheduled Tasks function takes effect.
- You can click button to select or close all schedule of different kinds of tasks.

## Auto tracking

PTZ camera series supports to track the moving objects automatically after you configure this function.

Camera Settings

CPU 4% Memory 23%

PTZ Configuration

Basic Auto Home PTZ Limits Initial Position PTZ Privacy Mask Scheduled Tasks **Auto Tracking** Config Clear Wiper Advanced

Channel: 6 Name: CAM6

Auto Tracking  Enable

Show Tracking  Enable

Region Set All Delete All

Sensitivity 10

Max. Tracking Time 5 5-300s

Tracking Zoom Ratio Auto Mode

Tracking Zoom Ratio Settings Set

Auto Tracking Schedule Edit

Please set the tracking zoom ratio by adjusting the zoom button.

This channel does not support this function.

Copy Apply Back

**Step1.** Check the checkbox to enable Auto Tracking.

**Step2.** Enable "Report to Motion Detection" to trigger Motion Detection alarm during auto tracking.

**Step3.** Enable "Show Tracking" to show tracking in Auto Tracking function.

**Step4.** Set detection region.

**Step5.** Set detecting sensitivity.

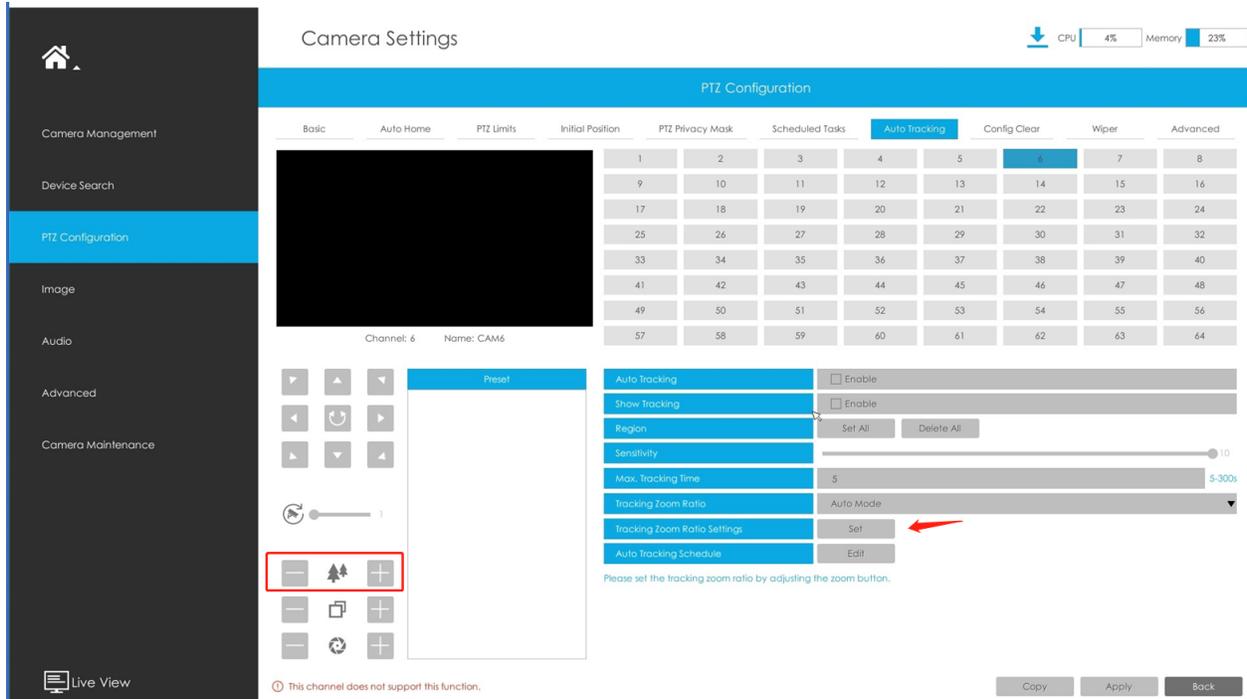
**Step6.** Set Max. Tracking Time which must be between 5~300s. The camera will stop tracking when the tracking time is used up.

**Step7.** Select Tracking Zoom Ratio, which includes Auto Mode and Customize.

- Tracking Zoom Ratio is used to adjust the zoom ratio of the moving object when using Auto Tracking. PTZ would adjust the zoom ratio automatically according to the distance and speed of moving object under Auto Mode. If select Customize, PTZ would adjust to the zoom ratio you set before when tracking the target.

- How to set Customize Tracking Zoom Ratio:

- Set zoom ratio by    button.
- Click "Set" to save your configuration.



**Step8.** Check the type of tracking object as Human or Vehicle.

**Step9.** Click "Edit" to edit Auto Tracking Schedule which will be synchronized to IP Camera.

**Step10.** Click [Copy to Camera] to copy the same configuration to other channels.

**Step11.** Click "Apply"to apply configurations.

**Note:** Ensure that your camera's version is 4X.7.0.75 or above.

### Config Clear

Here you can clear PTZ configurations, including all PTZ configurations, Presets, Patrols, Patterns, Auto Homes, PTZ Limits, Initial Position (PTZ Bullet), Privacy Masks and Scheduled Tasks.

Camera Settings

CPU 1% Memory 19%

PTZ Configuration

Basic Auto Home PTZ Limits Initial Position PTZ Privacy Mask Scheduled Tasks Auto Tracking **Config Clear** Wiper Advanced

Channel 7

Config Clear

All

All Presets  All Patrols  All Patterns

All Auto Homes  All PTZ Limits  All Scheduled Tasks

All Privacy Masks  Initial Position  Auto Tracking

Copy Apply Back

## Wiper

Here you can turn on the smart wiper function to control the wiper of speed dome camera. After the smart wiper function is enabled, the wiper of the speed dome camera will automatically start working in rainy weather, and the working frequency of the wiper will be adjusted intelligently according to the rainfall.

The screenshot shows the 'Camera Settings' interface. On the left is a dark sidebar with navigation options: Camera Management, Device Search, PTZ Configuration (highlighted), Image, Audio, Advanced, and Camera Maintenance. At the bottom of the sidebar is a 'Live View' button. The main content area is titled 'Camera Settings' and 'PTZ Configuration'. At the top right, there are status indicators for CPU (2%) and Memory (19%). Below the title, there are several tabs: Basic, Auto Home, PTZ Limits, Initial Position, PTZ Privacy Mask, Scheduled Tasks, Auto Tracking, Config Clear, Wiper (selected), and Advanced. The 'Wiper' tab is active, showing a configuration table with two rows: 'Channel' set to '8' and 'Auto Wiper' set to 'On'. At the bottom right of the main area, there are three buttons: 'Copy', 'Apply', and 'Back'.

 **Note:** The Wiper function is available in AI 36X/42X Speed Dome with Smart Rain-Sensing Wiper.

### Advanced

Choose a channel and set the PTZ parameters. Besides, you can click "Copy" to copy the same configuration to other channels.

Camera Settings

CPU 1% Memory 19%

PTZ Configuration

Basic Auto Home PTZ Limits Initial Position PTZ Privacy Mask Scheduled Tasks Auto Tracking Config Clear Wiper **Advanced**

Channel	8
Connection Type	ONVIF
Baud Rate	9600
Data Bit	8
Stop Bit	1
Checksum Bit	None
Protocol	PELCO_D
Address	1

Copy Apply Back

Live View

### Note:

1. Settings for a PTZ camera must be configured before it can be used. Make sure that the PTZ and RS-485 of the NVR are connected properly.
2. The PTZ protocol and address of IP channel must be consistent with those of the PTZ decoder.

## 3.6.4 Image

### 3.6.4.1 Display

Camera Settings

CPU 4% Memory 23%

Image

Display Enhancement Day/Night Settings OSD Privacy Mask ROI

Channel: 1 Name: CAM1

Power Line Frequency 60Hz

Smart IR Mode Customize

IR LED Level 100 Reset

Outdoor/Indoor Mode Outdoor

Day/Night Mode Auto Mode

Day to Night Value 36 Reset

Night to Day Value 82 Reset

IR Light Sensor Value 0

Corridor Mode Off

Image Rotation Off

Keep Correct Aspect Ratio Off

Copy Apply Back

**Step1. Select channel.**

**Step2. Set the configuration.**

**Power Line Frequency:** 50Hz and 60Hz are available.

**Day/Night Mode:** Set the Day/Night mode for the channel.

**White LED Light Control:** There are four options available, you can select one to meet your need.

**Auto mode:** Automatically turn on/off LED lights with the change of day and night. You can adjust the sensitivity and delay time in this mode.

**Always On:** Keep LED lights on.

**Off:** Turn off LED lights.

**Customize:** You can set the time for turning on and off the LED lights.

**Note:** Make sure the camera's model is MS-Cxx64-(R)UPD and version is 5x.7.0.77 or above

**Smart IR Mode:** With the combination of the High Beam and Low Beam, The IR LEDs technology has been upgraded to provide better image clarity and quality regardless of the object distance. Also, the Low Beam and High Beam's brightness can be adjusted manually or automatically on the basis of the Zoom ratio. Moreover, with the IR anti-reflection panel,

the infrared light transmittance is highly increased. Support to set the strength of the IR to Auto Mode or Customize to achieve the best effect.

**Near view IR level:** Adjust the light strength of Low-Beams LED light level from 0 to 100.

**Far view IR level:** Adjust the light strength of High-Beams LED light level from 0 to 100.

**White LED Level:** Adjust the White LED level from 0 to 100.

**IR Strength Value:** The current value of Low-Beams LED and High-Beams LED light value.

**IR LED Level:** Adjust the IR LED level from 0 to 100.

**Day/Night Switch Refocus:** With this option enabled, the camera will refocus when switching between day mode and night mode.

**Outdoor/Indoor Mode:** Set Outdoor/Indoor mode for the channel.

**Day to Night Sensitivity:** Set the Sensitivity to trigger Night Mode.

**Night to Day Sensitivity:** Set the Sensitivity to trigger Day Mode.

**Day to Night Value:** Set the Minimum illumination intensity to trigger Night Mode.

**Night to Day Value:** Set the Maximum illumination intensity to trigger Day Mode.

**IR Light Sensor Value:** Shows the current value of IR light sensor.

**Corridor Mode:** Set corridor mode.

**Image Rotation:** Set image rotation.

**Smoked Dome Cover:** This function is only for Pro Dome. If Pro Dome is equipped with a Smoked Dome Cover, enable this function to display a normal image.

**Local Display Video:** Select NTSC or PAL for local display.

**Keep Correct Aspect Ratio:** With this option enabled, the camera will prevent the image from distortion when resolution ratio is changed.

**Zoom Limit:** Set the Zoom Limit.

 **Note:**

1. Smoked Dome Cover is only supported for Pro Dome and PTZ Dome cameras.
2. Smart IR Mode and IR LED Level are supported for cameras with IR LEDs.
3. White LED Level is only supported for PTZ Bullet cameras.

4. Day to Night Sensitivity and Night to Day Sensitivity under Auto Mode are only available under Auto Mode when camera are 180° Panoramic Bullet and Mini Bullet whose firmware version is 4X.7.0.74 or above.
5. White LED Light Control is only supported for MS-Cxx64-(R)UPD(camera version is 5x.7.0.77 or above).
6. Zoom Limit is only supported for the PTZ Network Camera with optical zoom of 20X or above.

**Step 3. Copy the image settings to other channels by clicking "Copy" on the bottom of the windows.**

**Step 4. Select "Apply" to save the settings.**

### 3.6.4.2 Enhancement

You can set Image Enhancement on NVR, and the configuration will be synchronized to Camera.

The screenshot displays the 'Camera Settings' interface for an NVR. The 'Image' tab is selected, showing a grid of camera channels (1-64) and a settings table for channel 7 (Name: ptz1). The settings table includes options for White Balance, Defog Mode, Digital Image Stabilization, Exposure Mode, IR Balance Mode, Reduce Motion Blur, Deblur Level, BLC/WDR/HLC Mode, BLC/WDR/HLC, and BLC Region. At the bottom right, there are buttons for Copy, Apply, and Back.

**Step1. Select channel.**

**Step2. Set the configuration.**

**Reduce Motion Blur:** Enable this function to reduce the motion blur of objects effectively.

You can adjust the deblur level from 1 to 100.

**Reduce Video Stuttering:** This function is only supported by the cameras of 5MP@20fps to decrease the unstable phenomenon.

**White Balance:** Choose a white balance mode for the channel.

**Defog Mode:** Better image effect in foggy weather.

**Digital Image Stabilization:** Decrease the blur and shakiness of the image.

**Exposure Mode:** Auto Mode, Manual Mode, and Schedule Mode are available.

**IR Balance Mode:** Turn on to avoid IR overexposure.

**BLC/WDR/HLC Mode:** Click to choose Single Mode, Day/Night Mode or Schedule Mode.

**BLC/WDR/HLC:** Click to configure Back Light Compensation, Wide Dynamic Range or High Light Control.

**Wide Dynamic Range:** Off, Customize, and On are available.

**Wide Dynamic Level:** Set WDR with Low/High/Auto level.

**BLC Region:** Off, Customize, and Centre are available (in single mode, only enable when WDR is disable).

**HLC Level:** Select level for HLC.

**Anti-flicker Level:** Reduce flickers that appear on screen in some lighting conditions and there are 10 levels of anti-flicker adjustments.

**Step 3. Copy the image settings to other channels by clicking "Copy" oon the bottom of the windows.**



**Step 4. Select "Apply" to save the settings.**

### 3.6.4.3 Day/Night Settings

Camera Settings

CPU 2% Memory 19%

Image

Display Enhancement Day/Night Settings OSD Privacy Mask ROI

Channel: 7 Name: ptz1

Template	Time	Exposure Level	Minimum Shutter	Maximum Shutter	Limit Gain Level	IR-CUT Latency	IR-CUT	IR LED	Color Mode	Edit
-	Night	5	1/50	1/100000	100	5s	Off	IR LED On	B/W	<input type="checkbox"/>
-	Day	5	1/50	1/100000	100	5s	On	All LED Off	Color	<input type="checkbox"/>
1	-	5	1/25	1/100000	100	5s	Off	All LED Off	B/W	<input type="checkbox"/>
2	-	5	1/25	1/100000	100	5s	Off	All LED Off	B/W	<input type="checkbox"/>
3	-	5	1/25	1/100000	100	5s	Off	All LED Off	B/W	<input type="checkbox"/>
4	-	5	1/25	1/100000	100	5s	Off	All LED Off	B/W	<input type="checkbox"/>
5	-	5	1/25	1/100000	100	5s	Off	All LED Off	B/W	<input type="checkbox"/>

Template Schedule Copy Apply Back

**Step 1. Select channel.**

**Step 2. Set the configuration.**

**Exposure Level:** Level 0~10 are available to meet your need.

**Minimum Shutter:** Set the Minimum Shutter to 1~1/100000s.

**Maximum Shutter:** Set the Maximum Shutter to 1~1/100000s.

**Limit Gain Level:** Set the Limit Gain Level to 1~100.

**IR-CUT Latency:** The interval time of switching one mode to another.

**IR-CUT:** Turn on or turn off IR-CUT.

**IR LED:** Turn on or turn off IR-LED.

**Color Mode:** Select B/W or Color mode under Day/Night mode.

**Edit:** Edit the parameters above.

**Step 3. Copy the image settings to other channels by clicking "Copy" on the bottom of the windows.**



**Step 4. Select "Apply" to save the settings.**

### 3.6.4.4 OSD

You can set OSD (On Screen Display) on NVR, and the OSD will be synchronized to Camera.

Camera Settings

CPU 4% Memory 23%

Image

Display Enhancement Day/Night Settings **OSD** Privacy Mask ROI

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

Channel: 1 Name: CAM1

Video Stream: All Streams

Font Size: Medium

Show Video Title:  Enable

Video Title: lianyong20X

Title Position: Top-Left

Show timestamp:  Enable

Date Position: Top-Right

Date Format: DD/MM/YYYY

Copy Apply Back

**Step 1. Select channel.**

**Step 2. Select Video Stream, including All Streams, Primary Stream and Secondary Stream.**

**Step 3. Select OSD Font Size, including Smallest, Small, Medium, Large, Largest and Auto.**

**Step 4. Enable video title and timestamp.**

Video Stream	All Streams	Show Timestamp	<input type="checkbox"/> Enable
Font Size	Medium	Date Position	Top-Right
Show Video Title	<input type="checkbox"/> Enable	Date Format	DD/MM/YYYY
Video Title	lianyong20X		
Title Position	Top-Left		

**Show Video Title:** Enable it and the video title will be shown on screen.

**Title Position:** Set the position for the video title: Top-Left or Top-Right.

**Date Position:** Set the position for the date: Top-Left, Top-Right, Bottom-Left or Bottom-Right.

**Date Format:** Set format for date: YYYY-MM-DD, MM/DD/YY or DD/MM/YYYY.

**Step 5. Copy the OSD settings to the other channels by clicking the "Copy" button on the button of the windows.**

**Step 6. Select "Apply" to save the settings.**



### 3.6.4.5 Privacy Mask

The NVR supports to set privacy mask. It is used to cover some privacy area which is not proper to appear on monitor.

Camera Settings

CPU 5% Memory 30%

Image

Display Enhancement Day/Night Settings OSD Privacy Mask ROI

Channel: 9 Name: CAM9

ID	Name	Type	Enable	Edit	Delete
1	Mask1	White	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Mask2	Mosaic	<input checked="" type="checkbox"/>	-	<input type="checkbox"/>

Note: Support up to 24 mask and 4 mosaic areas.

Copy Apply Back

You can add a privacy mask by following steps:

**Step1. Select channel and enable privacy mask.**

**Step2. Select the Region Type as Mask or Mosaic.**

**Step 3. Drag the mouse to select the area which needs to be protected on the live view window and then click "Add" button to add the area to the table. You can add 24 masks and 4 mosaic areas at most and each zone can be enabled and disabled. Please note that the areas added to the table will not take effect until you click "Apply".**

**Note:**

- Ensure that your camera model isn't Lite series, or camera's version isn't 40.X.X.XX, 41.X.X.XX, and 46.X.X.XX.
- Ensure that your NVR version is V7x.9.0.14 or above, and camera version is Vxx.7.0.79 or above to support the mosaic area.

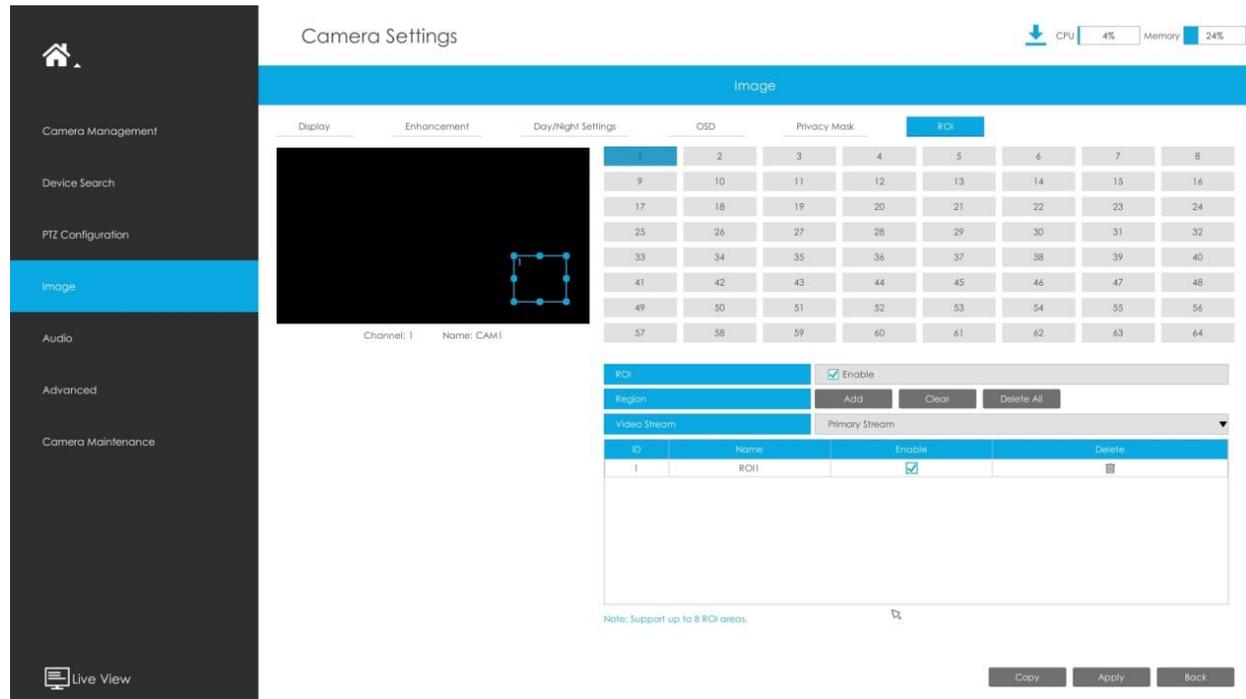
**Step3. Copy the privacy area to the other channels by clicking the "Copy" button on the button of the windows.**

**Step4. Select "Apply" to save the settings.**

**Note:** Ensure the firmware version of the network camera is 4X.7.0.70 or above.

### 3.6.4.6 ROI

The NVR supports to set ROI (Region Of Interest). It is an image cropping feature designed to assist users in achieving bandwidth and storage optimization.



The screenshot shows the 'Camera Settings' interface for 'CAM1'. The 'Image' tab is selected, and the 'ROI' sub-tab is active. A preview window shows a blue ROI box on a black background. Below the preview, the 'Channel: 1' and 'Name: CAM1' are displayed. To the right, a grid of 64 ROI slots is shown, with the first slot (ID 1) selected. Below the grid, the 'ROI' section is enabled, and the 'Region' is set to 'ROI'. The 'Video Stream' section is set to 'Primary Stream'. A table below shows the ROI configuration:

ID	Name	Enable	Delete
1	ROI	<input checked="" type="checkbox"/>	

At the bottom of the interface, there are 'Copy', 'Apply', and 'Back' buttons. A note at the bottom left states: 'Note: Support up to 8 ROI areas.'

You can add a ROI by following steps:

**Step1. Select channel and enable ROI.**

**Step2. Set the video stream type to achieve bandwidth and storage optimization, including Primary Stream and Secondary Stream. And drag the mouse to select the area in the preview window. Then click "Add"**

**button to add the area to the table. You can add 8 areas at most and each zone can be enabled and disabled. Please note that the areas added to the table will not take effect until you click "Apply".**

**Step3. Copy the ROI area to the other channels by clicking the "Copy" button on the bottom of the windows.**

**Step4. Select "Apply" to save the settings.**

**Note:** Ensure the firmware version of the network camera is 4X.7.0.70 or above.

### 3.6.5 Audio

Camera Settings

CPU 3% Memory 22%

Audio

Channel: 2 Name: CAM2

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64

Audio: Enable

Audio Mode: Both Audio Input & Output

Audio Input

Denoise: Enable

Encoding: G.711-ULaw

Input Mode: Mic Input

Sample Rate: 8KHz

Input Gain: 00

Audio Output

Auto Gain Control: Enable

Output Volume: 00

Copy Apply Back

This audio function allows to configure the audio interface parameters for camera.

**Enable Audio:** Check on the check box to enable audio feature.

**Denoise:** Set it as On/Off. When you set the function on, the noise detected can be filtered.

**Encoding:** G.711-ULaw, G.711-ALaw, AAC LC, G.722 and G.726 are available.

**Sample Rate:** 8KHz, 16KHz, 32KHz, 44.1KHz, and 48KHz are available.

**Audio Bit Rate:** The function is available only for AAC LC, and supports up to 256kbps.

**Input Gain:** Input audio gain level, which is 0-100.

**Auto Gain Control:** This function is only for H.265 series, improve the quality of audio.

**Output Volume:** Adjust volume of output.

 **Note:** Make sure you camera version is xx.7.0.76 or above.

## 3.6.6 Advanced

### 3.6.6.1 Watermark

The screenshot shows the 'Camera Settings' interface for 'CAM1'. The 'Advanced' tab is selected, and the 'Watermark' sub-tab is active. A video preview window is currently black. To the right of the preview is a grid of 64 numbered buttons (1-64) for selecting channels. Below the grid, the 'Watermark' checkbox is checked, and the 'Watermark String' is set to 'IP CAMERA'. At the bottom right, there are 'Copy', 'Apply', and 'Back' buttons.

You can add a watermark by following steps:

**Step 1. Select channel.**

**Step 2. Click the checkbox to enable Watermark.**

**Step 3. Enter Watermark String.**

**Step 4. Copy the image settings to other channels by clicking "Copy" on the bottom of the windows.**

**Step 5. Select "Apply" to save the settings.**

 **Note:** Watermark only appears when exporting by a third party.

## 3.6.7 Camera Maintenance

Milesight NVRs support both Online Upgrade and Local Upgrade of Milesight Cameras. Also, Milesight NVRs support batch maintenance of cameras including Import&Export

Configuration, Reboot, Reset, etc., making Milesight NVRs become the central management site to manage the cameras more easily.

## Local Upgrade

**Step 1.** Click "Browse" and select the corresponding firmware you downloaded in your USB.

The screenshot shows the 'Camera Maintenance' interface with the 'Local Upgrade' tab selected. A 'Browse' button is highlighted with a red box. Below it is a table of camera channels with their upgrade status.

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	od	Upgrade Progress
<input type="checkbox"/>	1	CAM1	192.168.68.42	-	MSSP	1CC31650027	61.8.0.2-image307-ppd-a1	...	-
<input type="checkbox"/>	2	CAM2	192.168.69.161	-	MSSP	1CC31628E02	45.8.25.3-a4	...	-
<input type="checkbox"/>	3	CAM3	192.168.69.135	-	MSSP			...	-
<input type="checkbox"/>	4	CAM4	192.168.69.166	-	MSSP			...	-
<input type="checkbox"/>	5	CAM5	192.168.69.182	-	MSSP			...	-
<input type="checkbox"/>	6	CAM6	192.168.69.162	-	MSSP	1CC316112AB9	31.8.0.3-a4	...	-
<input type="checkbox"/>	7	CAM7	192.168.69.204	-	MSSP	1CC3162851CC	45.7.0.79-r1-a5	...	-
<input type="checkbox"/>	9	CAM9	192.168.69.60	-	MSSP	1CC31611407E	45.8.0.2-LPR1-r1	...	-

**Step 2.** Check if you need to reset settings to factory default (except IP Address and User Information) after upgrade.

**Camera Settings** CPU 7% Memory 23%

**Camera Maintenance**

Local Upgrade | Online Upgrade | Import/Export Configuration | Reboot | Reset | Diagnosis Information | Logs

Firmware

Reset  Reset settings to factory default (except IP Address and User information)

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	od	Upgrade Progress
<input type="checkbox"/>	1 CAM1	✓	192.168.68.42	-	MSSP	1CC316500027	61.8.0.2-Image307-spd-a1	...	-
<input type="checkbox"/>	2 CAM2	✓	192.168.69.161	-	MSSP	1CC316282E02	45.8.25.3-a4	...	-
<input type="checkbox"/>	3 CAM3	⚠	192.168.69.135	-	MSSP				-
<input type="checkbox"/>	4 CAM4	⚠	192.168.69.166	-	MSSP				-
<input type="checkbox"/>	5 CAM5	⚠	192.168.69.182	-	MSSP				-
<input type="checkbox"/>	6 CAM6	✓	192.168.69.162	-	MSSP	1CC316112A89	31.8.0.3-a4	...	-
<input type="checkbox"/>	7 CAM7	✓	192.168.69.204	-	MSSP	1CC3162851CC	45.7.0.79-r1-a5	...	-
<input type="checkbox"/>	9 CAM9	✓	192.168.69.60	-	MSSP	1CC31611407E	45.8.0.2-LPR1-r1	...	-

**Step 3.** Choose the corresponding channel you want to upgrade and click "Upgrade" to upgrade the camera.

**Camera Settings** CPU 7% Memory 23%

**Camera Maintenance**

Local Upgrade | Online Upgrade | Import/Export Configuration | Reboot | Reset | Diagnosis Information | Logs

Firmware

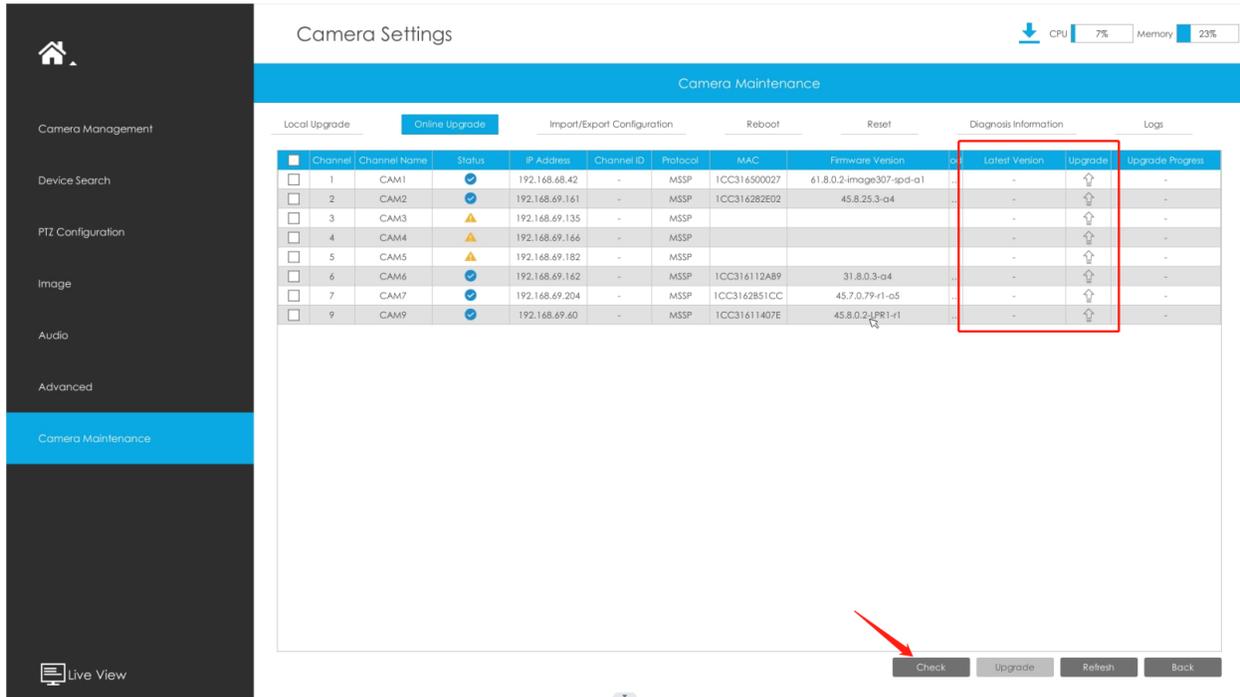
Reset  Reset settings to factory default (except IP Address and User information)

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	od	Upgrade Progress
<input type="checkbox"/>	1 CAM1	✓	192.168.68.42	-	MSSP	1CC316500027	61.8.0.2-Image307-spd-a1	...	-
<input type="checkbox"/>	2 CAM2	✓	192.168.69.161	-	MSSP	1CC316282E02	45.8.25.3-a4	...	-
<input type="checkbox"/>	3 CAM3	⚠	192.168.69.135	-	MSSP				-
<input type="checkbox"/>	4 CAM4	⚠	192.168.69.166	-	MSSP				-
<input type="checkbox"/>	5 CAM5	⚠	192.168.69.182	-	MSSP				-
<input type="checkbox"/>	6 CAM6	✓	192.168.69.162	-	MSSP	1CC316112A89	31.8.0.3-a4	...	-
<input type="checkbox"/>	7 CAM7	✓	192.168.69.204	-	MSSP	1CC3162851CC	45.7.0.79-r1-a5	...	-
<input type="checkbox"/>	9 CAM9	✓	192.168.69.60	-	MSSP	1CC31611407E	45.8.0.2-LPR1-r1	...	-

**Online Upgrade**

**Step 1.** Click "Check" to confirm whether there is a new version for the camera added to NVR.

If there is a new version for camera, the icon  in corresponding Upgrade column will turn blue and the latest version will be displayed in Latest Version column.



Camera Settings

CPU 7% Memory 23%

Camera Maintenance

Local Upgrade Online Upgrade Import/Export Configuration Reboot Reset Diagnosis Information Logs

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	Latest Version	Upgrade	Upgrade Progress
<input type="checkbox"/>	1	CAM1		192.168.68.42	-	MSSP	1CC316500027	61.8.0.2-Image307-ppd-a1		-
<input type="checkbox"/>	2	CAM2		192.168.69.161	-	MSSP	1CC316282E02	45.8.25.3-a4		-
<input type="checkbox"/>	3	CAM3		192.168.69.135	-	MSSP				-
<input type="checkbox"/>	4	CAM4		192.168.69.166	-	MSSP				-
<input type="checkbox"/>	5	CAM5		192.168.69.182	-	MSSP				-
<input type="checkbox"/>	6	CAM6		192.168.69.162	-	MSSP	1CC316112AB9	31.8.0.3-a4		-
<input type="checkbox"/>	7	CAM7		192.168.69.204	-	MSSP	1CC3162B51CC	45.7.0.79-r1-o5		-
<input type="checkbox"/>	9	CAM9		192.168.69.60	-	MSSP	1CC31611407E	45.8.0.2-PR1-r1		-

Live View

Check Upgrade Refresh Back

**Step 2.** There are two ways to confirm the upgrade.

- Click the blue icon in corresponding Upgrade column to upgrade camera.

The screenshot shows the 'Camera Maintenance' section of the NVR interface. At the top right, there are system status indicators: CPU 7% and Memory 23%. Below this is a navigation bar with tabs: Local Upgrade, Online Upgrade (selected), Import/Export Configuration, Reboot, Reset, Diagnosis Information, and Logs. A table lists 9 cameras with columns for Channel, Channel Name, Status, IP Address, Channel ID, Protocol, MAC, Firmware Version, Id, Latest Version, Upgrade, and Upgrade Progress. The 'Upgrade' column contains an upward-pointing arrow icon for each camera. A red rectangular box highlights this column. At the bottom right of the table area, there are buttons for 'Check', 'Upgrade', 'Refresh', and 'Back'.

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	Id	Latest Version	Upgrade	Upgrade Progress
<input type="checkbox"/>	1 CAM1	✔	192.168.68.42	-	MSSP	1CC316500027	61.8.0.2-image307-spd-a1	...	-	↑	-
<input type="checkbox"/>	2 CAM2	✔	192.168.69.161	-	MSSP	1CC316282E02	45.8.25.3-a4	...	-	↑	-
<input type="checkbox"/>	3 CAM3	⚠	192.168.69.135	-	MSSP			...	-	↑	-
<input type="checkbox"/>	4 CAM4	⚠	192.168.69.166	-	MSSP			...	-	↑	-
<input type="checkbox"/>	5 CAM5	⚠	192.168.69.182	-	MSSP			...	-	↑	-
<input type="checkbox"/>	6 CAM6	✔	192.168.69.162	-	MSSP	1CC316112AB9	31.8.0.3-a4	...	-	↑	-
<input type="checkbox"/>	7 CAM7	✔	192.168.69.204	-	MSSP	1CC3162B51CC	45.7.0.79-r1-o5	...	-	↑	-
<input type="checkbox"/>	9 CAM9	✔	192.168.69.60	-	MSSP	1CC31611407E	45.8.0.2-PR1-r1	...	-	↑	-

- A way to achieve batch upgrade. Just select the cameras you want to upgrade and then click "Upgrade" button.

This screenshot is identical to the one above, showing the 'Camera Maintenance' interface. The table of camera settings is the same. A red arrow points to the 'Upgrade' button located at the bottom right of the interface, below the table.

### Import/Export Configuration

**Step 1.** Choose the corresponding channel you want to import/export configuration files.

The screenshot shows the 'Camera Settings' interface with the 'Camera Maintenance' section active. The 'Import/Export Configuration' tab is selected. Below the file selection options, there is a table of channels. The first column of the table contains checkboxes, with the first checkbox (for Channel 1) highlighted by a red box.

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	od	Progress
<input type="checkbox"/>	1	CAM1	192.168.68.42	-	MSSP	1CC316500027	61.8.0.2-image307-afd-a1	...	-
<input type="checkbox"/>	2	CAM2	192.168.69.161	-	MSSP	1CC316282E02	45.8.25.3-a4	...	-
<input type="checkbox"/>	3	CAM3	192.168.69.135	-	MSSP				-
<input type="checkbox"/>	4	CAM4	192.168.69.166	-	MSSP				-
<input type="checkbox"/>	5	CAM5	192.168.69.182	-	MSSP				-
<input type="checkbox"/>	6	CAM6	192.168.69.162	-	MSSP	1CC316112A89	31.8.0.3-a4	...	-
<input type="checkbox"/>	7	CAM7	192.168.69.204	-	MSSP	1CC3162851CC	45.7.0.79-11-a5	...	-
<input type="checkbox"/>	9	CAM9	192.168.69.60	-	MSSP	1CC31611407E	45.8.0.2-LPR1-r1	...	-

- **Import Configuration File:**

**Step 2.** Click "Browse" and select a .cfg file.

**Step 3.** Click "Import" to import a configuration file.

- **Export Configuration File:**

**Step 2.** Click "Backup" to export configuration file.

Camera Settings

Camera Maintenance

Local Upgrade Online Upgrade **Import/Export Configuration** Reboot Reset Diagnosis Information Logs

Import Configuration File

Configuration File  1 2

Export Configuration File

Export Directory

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	od	Progress
<input type="checkbox"/>	1	CAM1	192.168.68.42	-	MSSP	1CC316500027	61.8.0.2-image307-spd-a1	...	-
<input type="checkbox"/>	2	CAM2	192.168.69.161	-	MSSP	1CC316282E02	45.8.25.3-a4	...	-
<input type="checkbox"/>	3	CAM3	192.168.69.135	-	MSSP			...	-
<input type="checkbox"/>	4	CAM4	192.168.69.166	-	MSSP			...	-
<input type="checkbox"/>	5	CAM5	192.168.69.182	-	MSSP			...	-
<input type="checkbox"/>	6	CAM6	192.168.69.162	-	MSSP	1CC316112AB9	31.8.0.3-a4	...	-
<input type="checkbox"/>	7	CAM7	192.168.69.204	-	MSSP	1CC3162851CC	45.7.0.79-r1-a5	...	-
<input type="checkbox"/>	9	CAM9	192.168.69.60	-	MSSP	1CC31611407E	45.8.0.2-LPR1-r1	...	-

Refresh Back

## Reboot

**Step 1.** Choose the corresponding channel you want to reboot.

**Step 2.** Click “Reboot” button to restart the selected channels.

Camera Settings

Camera Maintenance

Local Upgrade Online Upgrade Import/Export Configuration **Reboot** Reset Diagnosis Information Logs

1

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	od	Reboot Progress
<input type="checkbox"/>	1	CAM1	192.168.68.42	-	MSSP	1CC316500027	61.8.0.2-image307-spd-a1	...	-
<input type="checkbox"/>	2	CAM2	192.168.69.161	-	MSSP	1CC316282E02	45.8.25.3-a4	...	-
<input type="checkbox"/>	3	CAM3	192.168.69.135	-	MSSP			...	-
<input type="checkbox"/>	4	CAM4	192.168.69.166	-	MSSP			...	-
<input type="checkbox"/>	5	CAM5	192.168.69.182	-	MSSP			...	-
<input type="checkbox"/>	6	CAM6	192.168.69.162	-	MSSP	1CC316112AB9	31.8.0.3-a4	...	-
<input type="checkbox"/>	7	CAM7	192.168.69.204	-	MSSP	1CC3162851CC	45.7.0.79-r1-a5	...	-
<input type="checkbox"/>	9	CAM9	192.168.69.60	-	MSSP	1CC31611407E	45.8.0.2-LPR1-r1	...	-

2

Reboot Refresh Back

## Reset

**Step 1.** Choose the corresponding channel you want to reset.

**Step 2.** Enable the “Keep the IP” option to keep the IP configuration when resetting the selected channels. And enable the “Keep the User” option to keep the User configuration when resetting the selected channels.

**Step 3.** Click “Reset” button to reset the selected cameras to factory default settings.

Camera Settings

CPU 4% Memory 23%

Camera Maintenance

Local Upgrade Online Upgrade Import/Export Configuration Reboot **Reset** Diagnosis Information Logs

Keep the IP Configuration

Keep the User Information

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	Log	Reset Progress
<input type="checkbox"/>	1 CAM1	●	192.168.68.42	-	MSSP	1CC316500027	61.8.0.2-image307-spd-a1	...	-
<input type="checkbox"/>	2 CAM2	●	192.168.69.161	-	MSSP	1CC316282E02	45.8.25.3-a4	...	-
<input type="checkbox"/>	3 CAM3	▲	192.168.69.135	-	MSSP			...	-
<input type="checkbox"/>	4 CAM4	▲	192.168.69.166	-	MSSP			...	-
<input type="checkbox"/>	5 CAM5	▲	192.168.69.182	-	MSSP			...	-
<input type="checkbox"/>	6 CAM6	●	192.168.69.162	-	MSSP	1CC316112A89	31.8.0.3-a4	...	-
<input type="checkbox"/>	7 CAM7	●	192.168.69.204	-	MSSP	1CC3162851CC	45.7.0.79-r1-a5	...	-
<input type="checkbox"/>	9 CAM9	●	192.168.69.60	-	MSSP	1CC31611407E	45.8.0.2-LPR1-r1	...	-

**Reset** Refresh Back

## Diagnosis Information

**Step 1.** Choose the corresponding channel you want to diagnose the information.

**Step 2.** Click “Backup” button to export the diagnosis file .

Camera Settings

CPU 4% Memory 23%

Camera Maintenance

Local Upgrade Online Upgrade Import/Export Configuration Reboot Reset **Diagnosis Information** Logs

Export Directory Browse Backup

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	Backup Progress
<input type="checkbox"/>	1	CAM1	192.168.68.42	-	MSSP	1CC316500027	61.8.0.2-image307-spd-a1	...
<input type="checkbox"/>	2	CAM2	192.168.69.161	-	MSSP	1CC316282E02	45.8.25.3-a4	...
<input type="checkbox"/>	3	CAM3	192.168.69.135	-	MSSP			...
<input type="checkbox"/>	4	CAM4	192.168.69.166	-	MSSP			...
<input type="checkbox"/>	5	CAM5	192.168.69.182	-	MSSP			...
<input type="checkbox"/>	6	CAM6	192.168.69.162	-	MSSP	1CC316112AB9	31.8.0.3-a4	...
<input type="checkbox"/>	7	CAM7	192.168.69.204	-	MSSP	1CC3162851CC	45.7.0.79-r1-o5	...
<input type="checkbox"/>	9	CAM9	192.168.69.60	-	MSSP	1CC31611407E	45.8.0.2-LPR1-r1	...

Refresh Back

## Logs

The user can check, search and export channel logs in Logs interface. By selecting the Main Type, Sub Type, Start Time and End Time, which can narrow down the scale of logs, you can search for logs that you need.

**Step 1.** Choose the corresponding channel you want to search for logs.

**Step 2.** Select the Main Type, Sub Type, Start Time and End Time

**Step 3.** Click "Backup" to export searched logs to media device.

Camera Settings
CPU 4% Memory 23%

**Camera Maintenance**

Local Upgrade
Online Upgrade
Import/Export Configuration
Reboot
Reset
Diagnosis Information
Logs

Main Type
All Types

Sub Type
All

Start Time
2022-10-17
00:00:00

End Time
2022-10-17
23:59:59

Export Directory
Browse

<input type="checkbox"/>	Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	od	Backup Progress
<input type="checkbox"/>	1	CAM1	✔	192.168.68.42	-	MSSP	1CC314500027	61.8.0.2-image307-spd-a1	...	-
<input type="checkbox"/>	2	CAM2	✔	192.168.69.161	-	MSSP	1CC316282E02	45.8.25.3-a4	...	-
<input type="checkbox"/>	3	CAM3	⚠	192.168.69.135	-	MSSP			...	-
<input type="checkbox"/>	4	CAM4	✔	192.168.69.166	-	MSSP			...	-
<input type="checkbox"/>	5	CAM5	⚠	192.168.69.182	-	MSSP			...	-
<input type="checkbox"/>	6	CAM6	✔	192.168.69.162	-	MSSP	1CC316112AB9	31.8.0.3-a4	...	-
<input type="checkbox"/>	7	CAM7	✔	192.168.69.204	-	MSSP	1CC3162851CC	45.7.0.79-r1-a5	...	-
<input type="checkbox"/>	9	CAM9	✔	192.168.69.60	-	MSSP	1CC31611407E	45.8.0.2-LPR1-r1	...	-

Backup
Refresh
Back

Live View

## 3.7 Storage

### Preparation for Record

**Step1. Ensure your NVR has been installed and the HDD has been initialized, please check it on “Storage” -> ”Disk Management” interface.**

Storage

CPU 4% Memory 23%

Disk Management

Disk Management General Settings

	Port	Vendor	Status	Total	Free	Property	Type	Group	Edit	Delete
<input type="checkbox"/>	4	WDC WD10EJRX-89N74Y0	Warning	931.51 GB	0	R/W	Local	1		-

Total Capacity 931.51 GB

Available Capacity 0

Note: It is risky to the data safety if too much bandwidth is occupied by NAS.

Add Refresh Initialize Back

Live View

## Step2. Ensure that the HDD has sufficient storage space.

Enable [Recycle Mode] in the case of insufficient capacity of storage device on Storage -> Disk Management -> General Settings interface .

**Recycle Mode:** You can enable or disable Recycle Mode for all storage device.

**eSATA Function:** Both storage and backup are available.

**Note:** eSATA Function is only available for NVR 8000 Series.

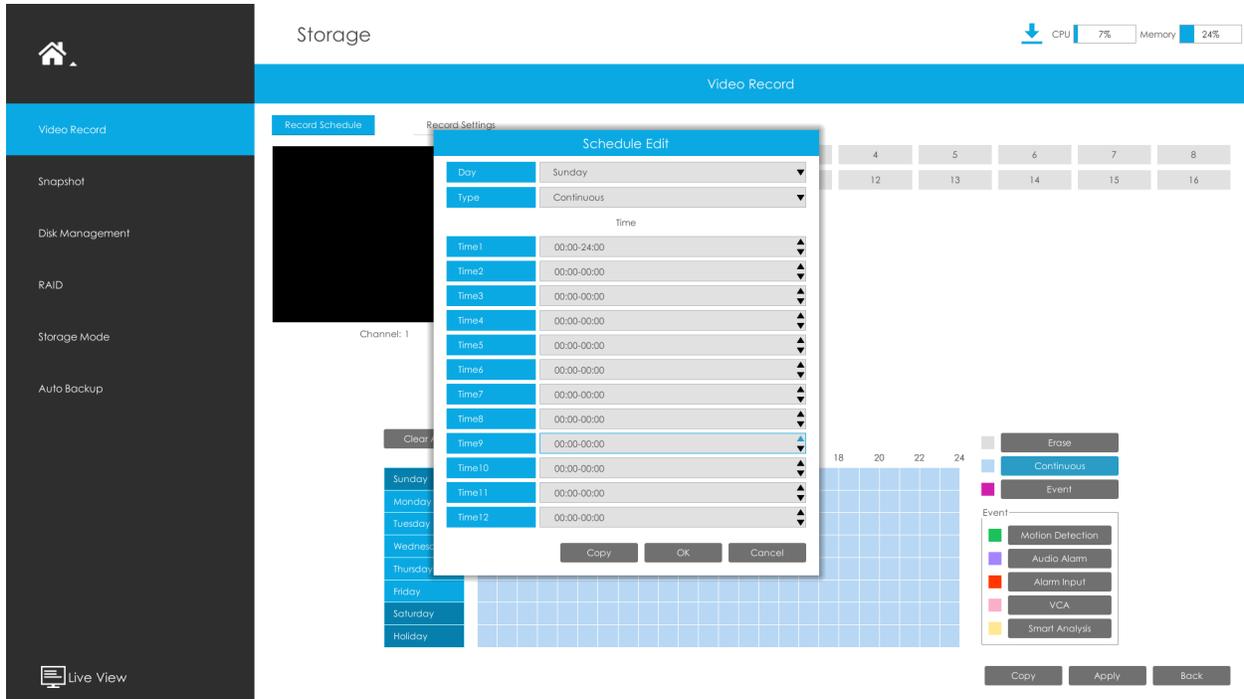
## 3.7.1 Video Record

### Record Schedule

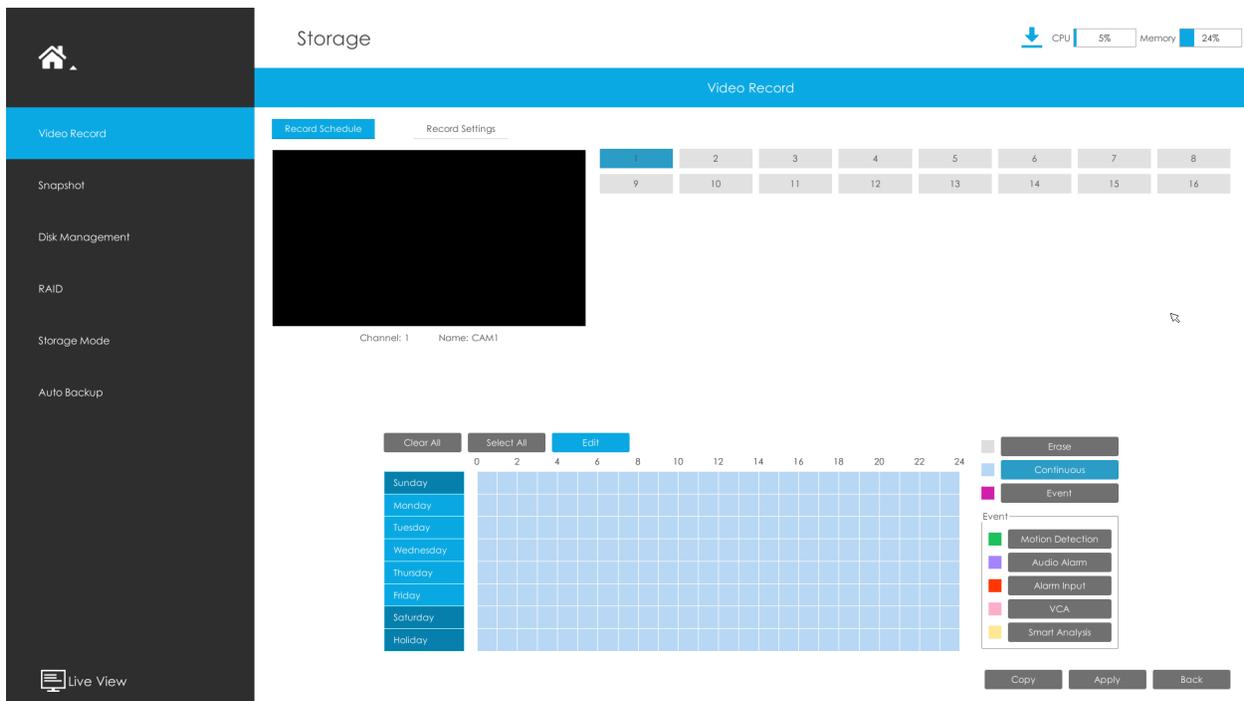
**Step 1.Select channel.**

**Step 2.Set record schedule.**

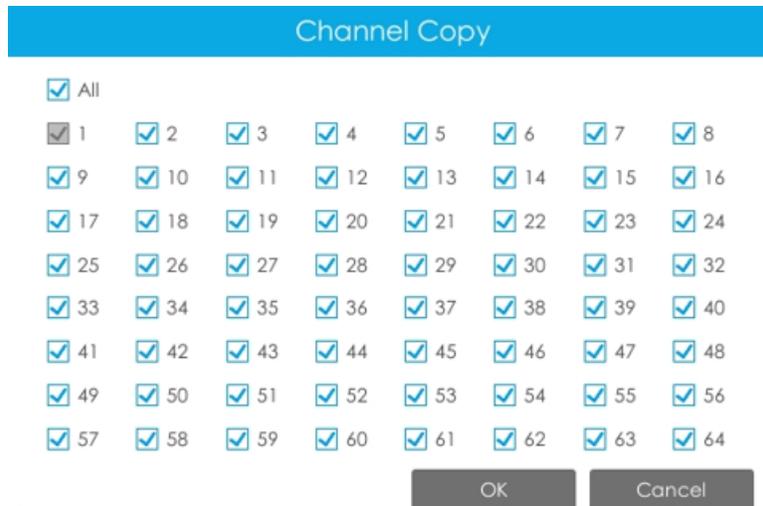
**Method 1:** Click "Edit" to edit schedule. Select Day, Record Type and Time to finish editing.



**Method 2:** Select operation type: Continuous, Event (including Motion, Alarm, VCA and Smart Analysis) or Erase. Then drag a square in the time table to set record effective time. It is convenient for you to set or clear all corresponding schedule by clicking "Select All" or "Clear All".

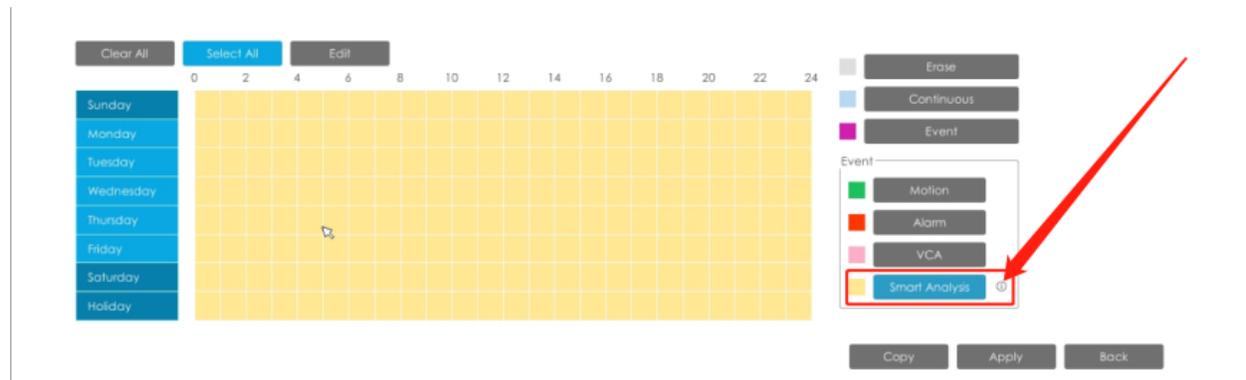


**Step 3.** Click "Copy" to copy the same record configuration to other channels.



**Note:** Here are steps for setting ANPR record correctly so that NVR will record when license plate is detected.

**Step 1:** Set Smart Analysis as Record Type in Storage -> Video Record -> Record Schedule interface; The exclamation mark next to Smart Analysis is used to indicate that Smart Analysis includes ANPR.



**Step 2:** Ensure Black List Mode or White List Mode or Visitor Mode is enabled as your demand.

**Step 3:** Effective time and Trigger Channels Record action of Black List Mode/White List Mode/Visitor Mode are set (Full effective time and trigger channel record are set by default).

Action

Audible Warning

Email Linkage

Event Popup

PTZ Action

Alarm Output

White LED

Others

Trigger Channels Record

All

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16
<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24
<input type="checkbox"/> 25	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30	<input type="checkbox"/> 31	<input type="checkbox"/> 32
<input type="checkbox"/> 33	<input type="checkbox"/> 34	<input type="checkbox"/> 35	<input type="checkbox"/> 36	<input type="checkbox"/> 37	<input type="checkbox"/> 38	<input type="checkbox"/> 39	<input type="checkbox"/> 40
<input type="checkbox"/> 41	<input type="checkbox"/> 42	<input type="checkbox"/> 43	<input type="checkbox"/> 44	<input type="checkbox"/> 45	<input type="checkbox"/> 46	<input type="checkbox"/> 47	<input type="checkbox"/> 48
<input type="checkbox"/> 49	<input type="checkbox"/> 50	<input type="checkbox"/> 51	<input type="checkbox"/> 52	<input type="checkbox"/> 53	<input type="checkbox"/> 54	<input type="checkbox"/> 55	<input type="checkbox"/> 56
<input type="checkbox"/> 57	<input type="checkbox"/> 58	<input type="checkbox"/> 59	<input type="checkbox"/> 60	<input type="checkbox"/> 61	<input type="checkbox"/> 62	<input type="checkbox"/> 63	<input type="checkbox"/> 64

Trigger Channels Snapshot

All

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16
<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24
<input type="checkbox"/> 25	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30	<input type="checkbox"/> 31	<input type="checkbox"/> 32
<input type="checkbox"/> 33	<input type="checkbox"/> 34	<input type="checkbox"/> 35	<input type="checkbox"/> 36	<input type="checkbox"/> 37	<input type="checkbox"/> 38	<input type="checkbox"/> 39	<input type="checkbox"/> 40
<input type="checkbox"/> 41	<input type="checkbox"/> 42	<input type="checkbox"/> 43	<input type="checkbox"/> 44	<input type="checkbox"/> 45	<input type="checkbox"/> 46	<input type="checkbox"/> 47	<input type="checkbox"/> 48
<input type="checkbox"/> 49	<input type="checkbox"/> 50	<input type="checkbox"/> 51	<input type="checkbox"/> 52	<input type="checkbox"/> 53	<input type="checkbox"/> 54	<input type="checkbox"/> 55	<input type="checkbox"/> 56
<input type="checkbox"/> 57	<input type="checkbox"/> 58	<input type="checkbox"/> 59	<input type="checkbox"/> 60	<input type="checkbox"/> 61	<input type="checkbox"/> 62	<input type="checkbox"/> 63	<input type="checkbox"/> 64

Note: This page's configuration will not be copied into other channels.

## Record Settings

Make general configuration for selected channels. Click "Copy" to copy the same configuration to other channels.

**Channel:** Select the channel which will be set.

**Pre Record :** Event pre-record duration time. It will start recording before the event is triggered.

**Post Record:** Event post-record duration time. It will keep recording after the event is over.

**Audio Record:** Select to record audio or not.

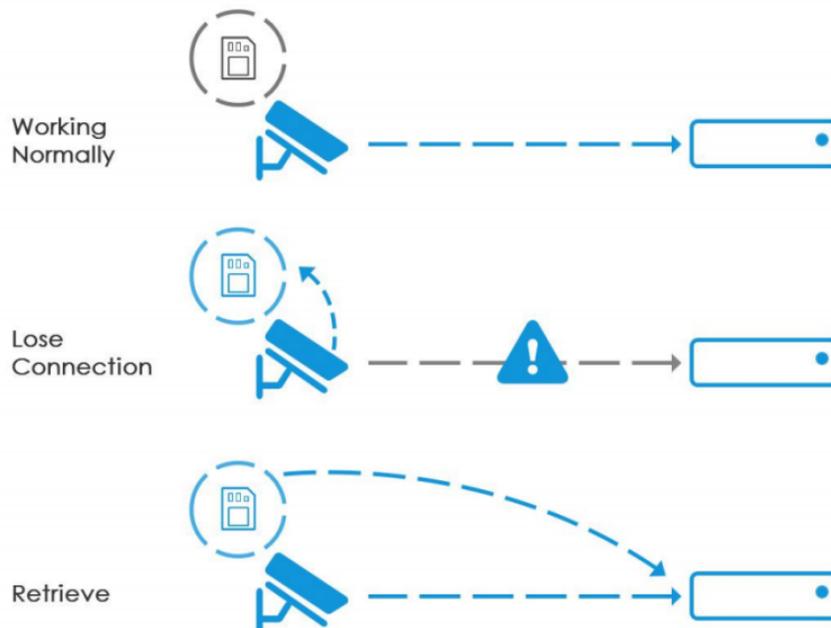
**Record Stream Type:** Select Main stream or sub stream for record. Primary+Secondary Stream is available for NVR model ends with T & G and make sure the version of the G series is 7X.9.0.19 or above.

. If secondary stream is selected for recording while it is disabled, a prompt indicating that the secondary stream is unavailable will pop up.

**Video Due Time:** Set the due time of recording files, 1~120days or unlimit are available.

**ANR (Automatic Network Replenishment) :** Can automatically replenish the recording gap due to internet interruptions. As the picture shows below, NVR stores videos when the

network connection between NVR and cameras is normal. When the connection lost, the camera would start continuous recording and store videos in SD card instead. Then after reconnection, NVR automatically retrieves the missed videos from camera's SD card in a period of time to prevent data missing.



Here are some notes for using ANR below:

 **Note:**

1. Ensure that your devices are with the correct firmware versions.
  - Camera: V4X.7.0.72 or above
  - NVR: V7X.9.0.6 or above
  - Firmware download link: <https://www.milesight.com/support/download#firmware>
2. Camera should be equipped with on-board SD card.
3. Camera should be added to NVR by MSSP protocol.
4. No matter whether NVR has recording schedule or not, camera will do ANR recording and then retrieve back to NVR after reconnection.

The screenshot shows the 'Storage' configuration page with the 'Video Record' tab selected. The left sidebar contains navigation options: Video Record, Snapshot, Disk Management, RAID, Storage Mode, and Auto Backup. The top right shows system status: CPU 5% and Memory 24%. The main area is divided into 'Record Schedule' and 'Record Settings'. The 'Record Settings' section includes a 16-day calendar grid and a list of settings:

Pre Record	Disable
Post Record	3min
Audio Record	Enable
Record Stream Type	Primary Stream
Video Dup Time	Unlimit
ANR	Disable

At the bottom right, there are 'Copy', 'Apply', and 'Back' buttons.

No matter whether NVR has recording schedule or not, camera will do ANR recording and then retrieve back to NVR after reconnection.

### 3.7.2 Snapshot

The screenshot shows the 'Storage' configuration page with the 'Snapshot' tab selected. The left sidebar contains navigation options: Video Record, Snapshot, Disk Management, RAID, Storage Mode, and Auto Backup. The top right shows system status: CPU 8% and Memory 24%. The main area is divided into 'Snapshot Schedule' and 'Snapshot Settings'. The 'Snapshot Settings' section includes a 16-day calendar grid and a list of settings:

Erase	Continuous
Event	Event

The 'Event' list includes: Motion Detection, Audio Alarm, Alarm Input, VCA, and Smart Analysis. At the bottom right, there are 'Copy', 'Apply', and 'Back' buttons.

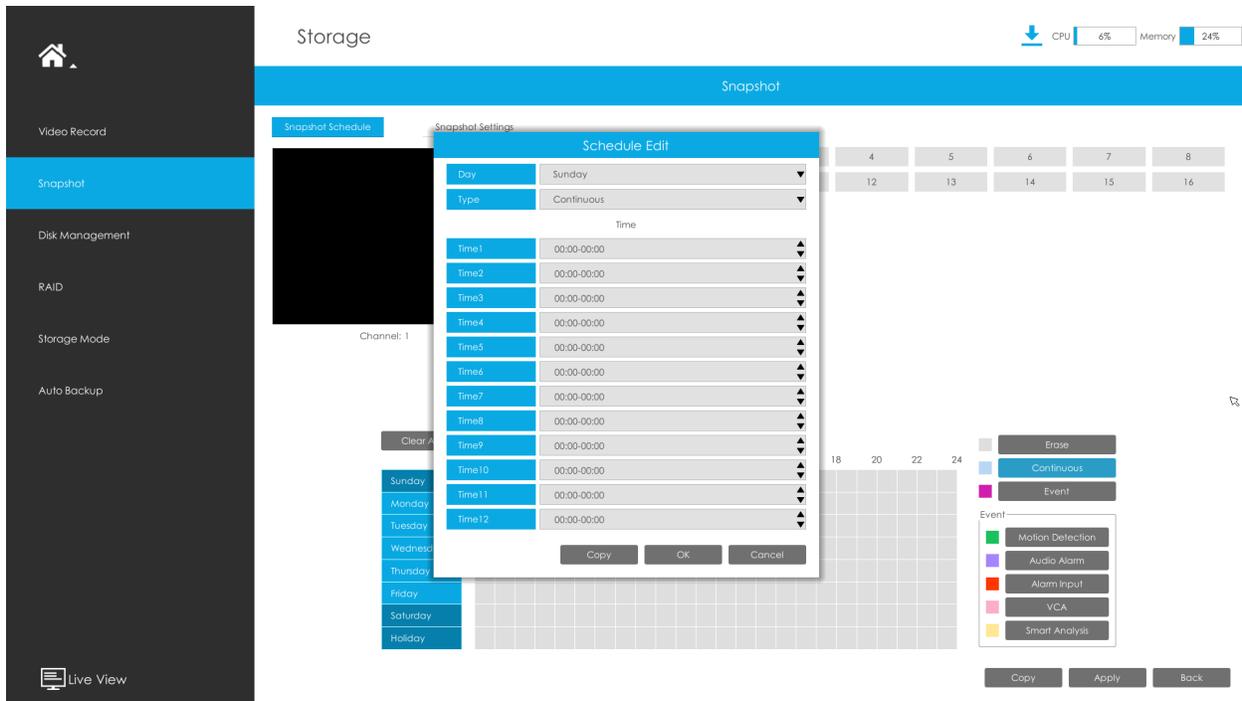
**Note:** NVR models ending with the letter C do not support this function.

## Snapshot Schedule

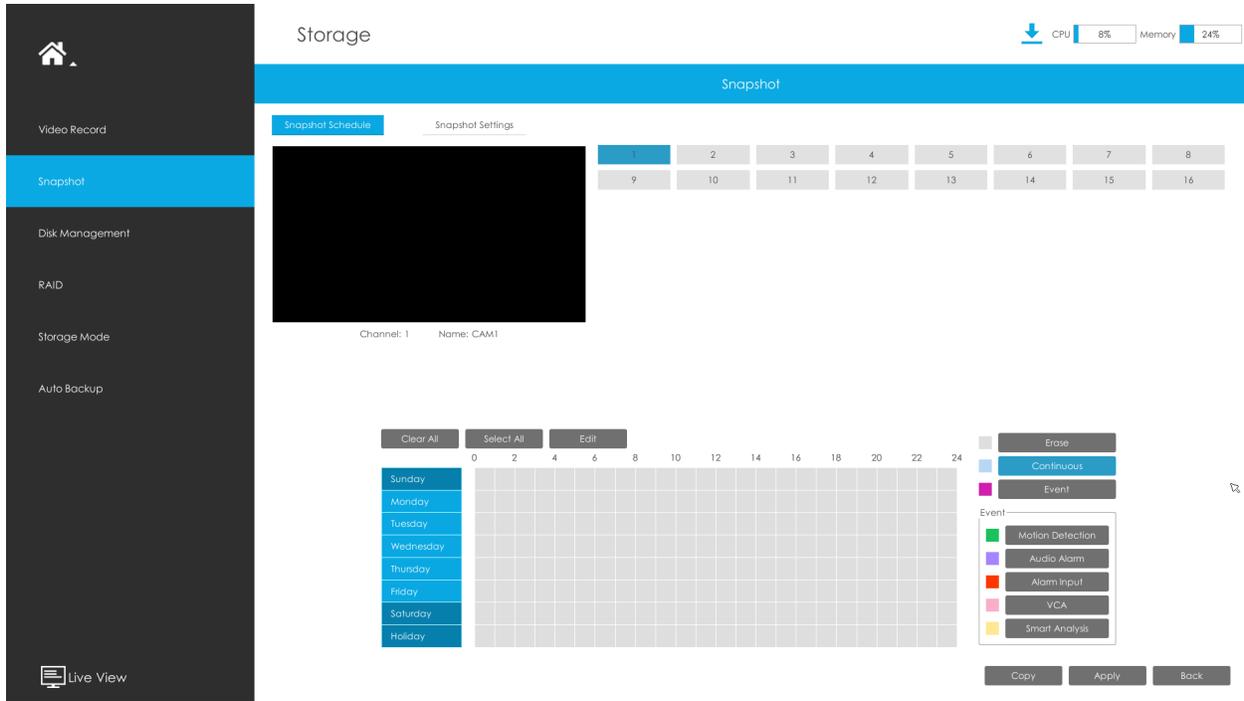
**Step 1.**Select channel.

**Step 2.**Set snapshot schedule.

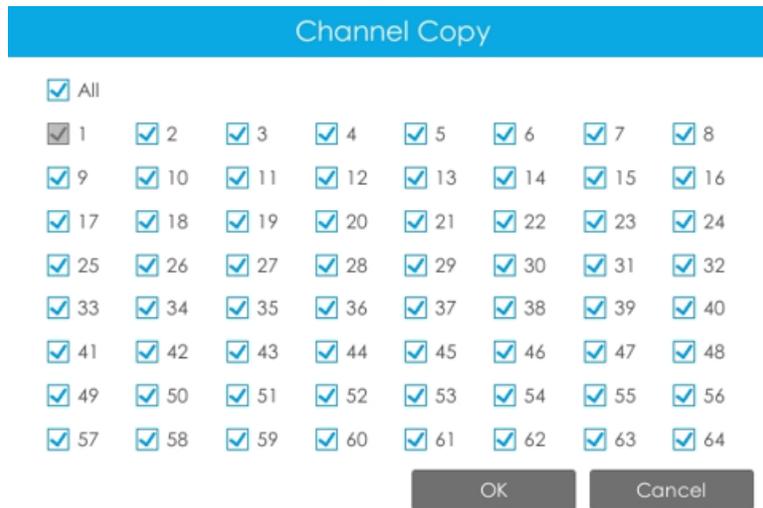
**Method 1:** Click "Edit" to edit schedule. Select Day and Time to finish editing.



**Method 2:** Select operation type: Continuous, Event or Erase. Event record includes events like Motion Detection, Alarm, VCA and Smart Analysis, which can be searched in Event Playback. Then drag a square in the time table to set record effective time. It is convenient for you to set or clear all corresponding schedule by clicking "Select All" or "Clear All".



**Step 3. Click "Copy" to copy the same snapshot configuration to other channels.**



### Snapshot Settings

Make general configuration for selected channels. Click "Copy" to copy the same configuration to other channels.

**Channel:** Select the channel which will be set.

**Snapshot Interval:** Set the snapshot Interval, 3~86400 seconds are available.

**Snapshot Due Time:** Set the due time of snapshot files, 1~120days or unlimit are available.

### 3.7.3 Disk Management

You can check Disk status, add Network Disk and set Recycle Mode here.

#### Diak Mangement

**Property:** R/W and Read-only are available for this option.

**Note:** Initializing the HDD before you set record schedule to ensure that record properly works.

Storage

CPU 4% Memory 23%

Disk Management

Disk Management General Settings

	Port	Vendor	Status	Total	Free	Property	Type	Group	Edit	Delete
<input type="checkbox"/>	4	WDC WD10EJRX-89N74Y0	Warning	931.51 GB	0	R/W	Local	1		

Total Capacity 931.51 GB

Available Capacity 0

Note: It is risky to the data safety if too much bandwidth is occupied by NAS.

Add Refresh Initialize Back

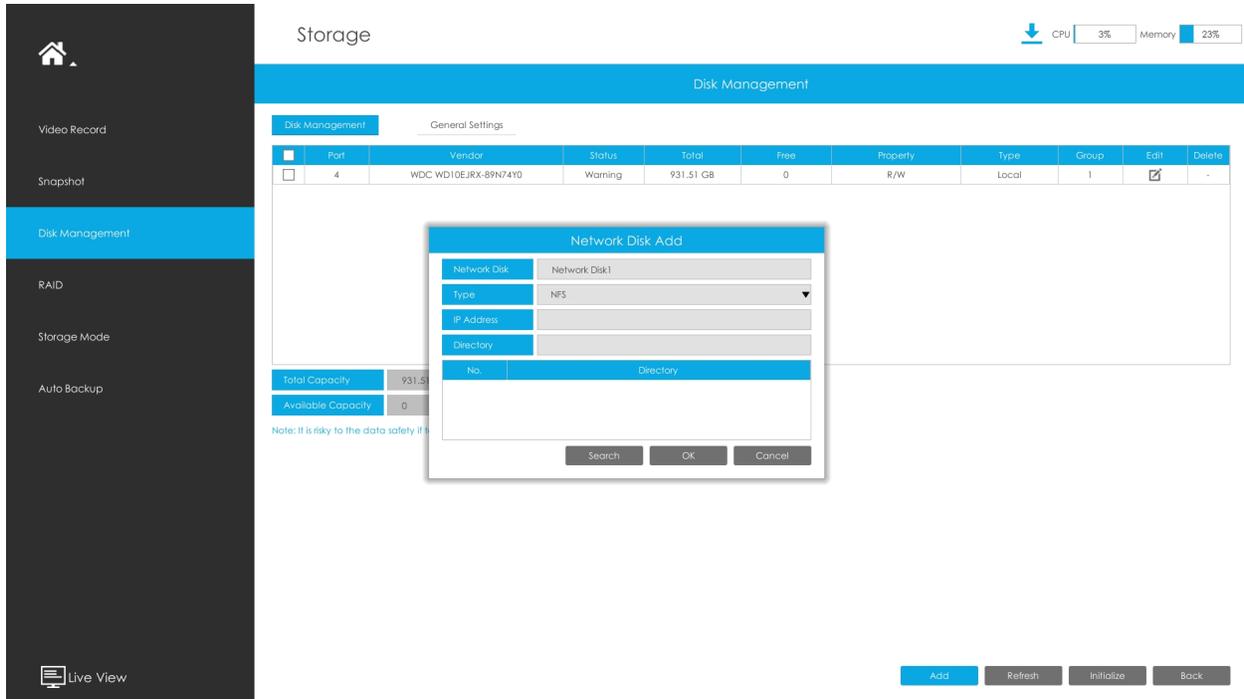
Live View

## Network Disk

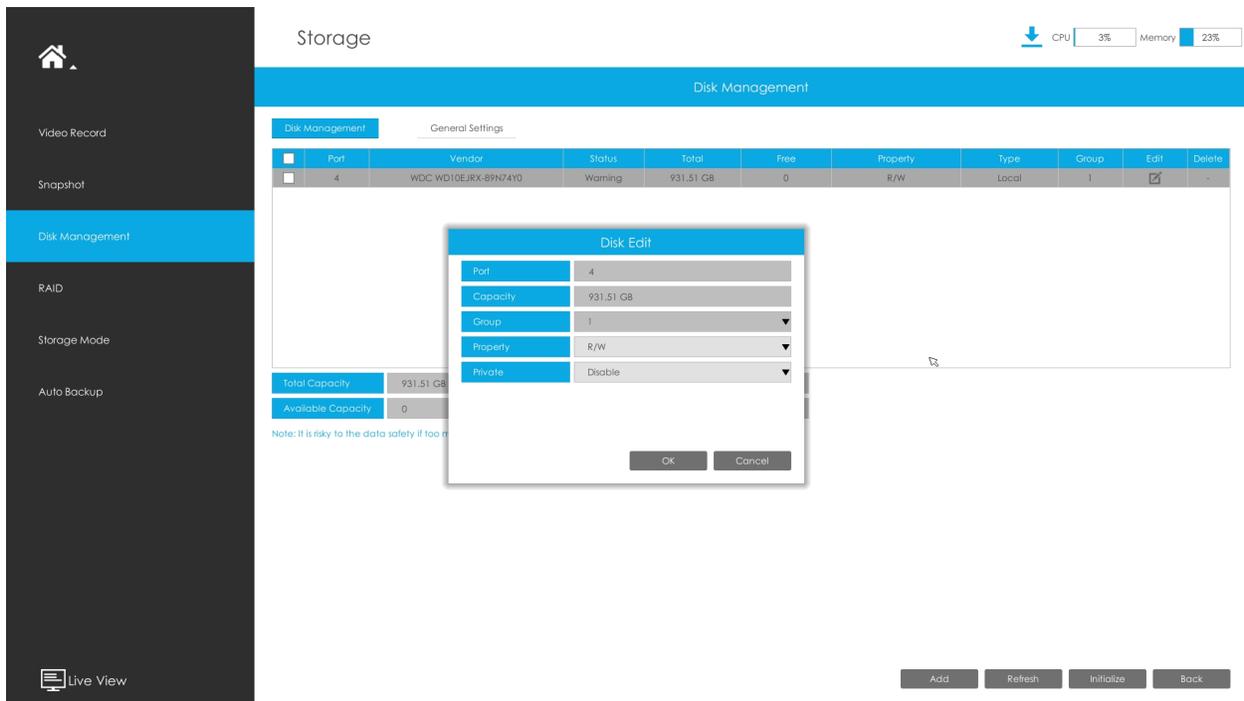
NAS (Network-Attached Storage) should be available within the network and properly configured to store the recorded files and snapshots. You can click and then input corresponded NAS information to add NAS.

### Note:

1. NAS with NFS format is the only type for network disk adding.
2. It's recommended to use Hard Disk rather than Network Disk.



Edit the Property by clicking . After that the storage device will be ready.



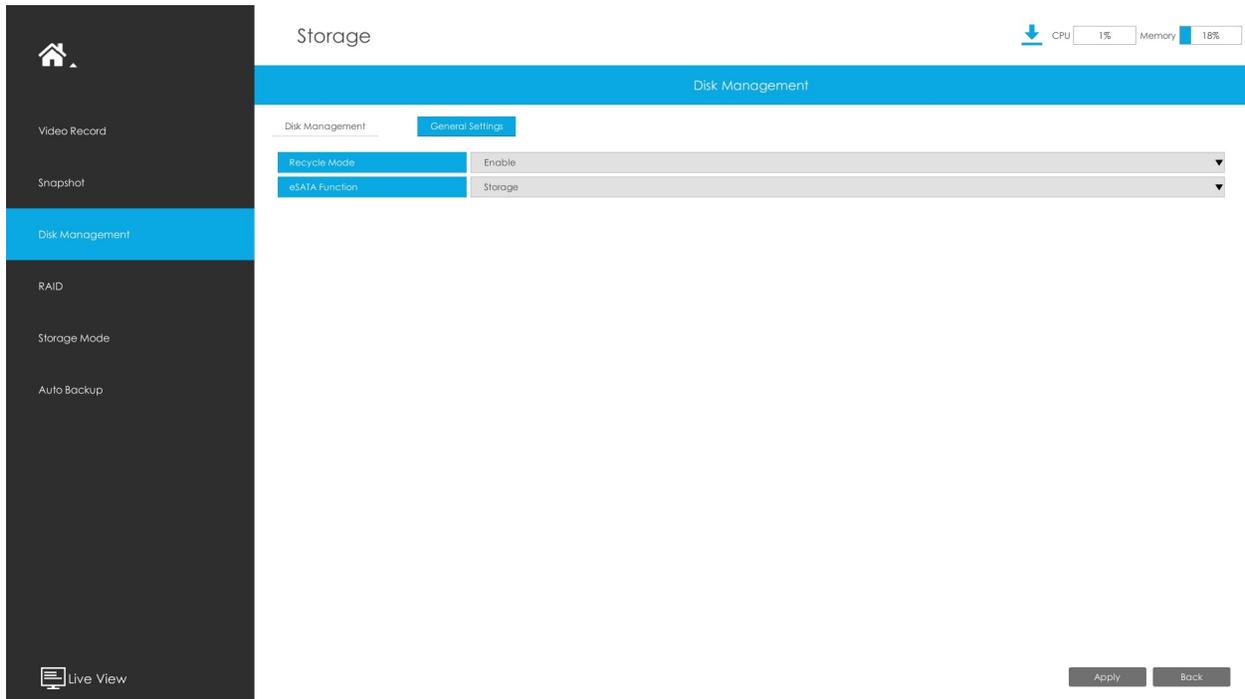
**HDD Type:** RAID means RAID, NAS means network attached storage while LOCAL means normal disk mode.

## General Settings

**Recycle Mode:** You can enable or disable Recycle Mode for all storage devices.

**eSATA Function:** Both storage and backup are available.

 **Note:** eSATA Function is only available for NVR 8000 Series.



The screenshot displays the 'Storage' configuration page in an NVR web interface. The page title is 'Storage' and it includes system status indicators for CPU (1%) and Memory (18%). The main content area is titled 'Disk Management' and contains two tabs: 'Disk Management' and 'General Settings'. Under 'General Settings', there are two dropdown menus: 'Recycle Mode' set to 'Enable' and 'eSATA Function' set to 'Storage'. A sidebar on the left contains navigation options: Video Record, Snapshot, Disk Management (highlighted), RAID, Storage Mode, and Auto Backup. At the bottom right, there are 'Apply' and 'Back' buttons.

### 3.7.4 RAID

The screenshot displays the RAID configuration page in a web interface. On the left is a dark sidebar with a home icon at the top and menu items: Video Record, Snapshot, Disk Management, RAID (highlighted in blue), Storage Mode, and Auto Backup. At the bottom of the sidebar is a 'Live View' button. The main content area is titled 'Storage' and 'RAID'. In the top right corner, there are system status indicators: a download icon, CPU usage at 5%, and Memory usage at 24%. Below the title, there is a 'RAID Mode' section with a toggle switch set to 'Enable'. Underneath is a 'Physical Disk' table with the following data:

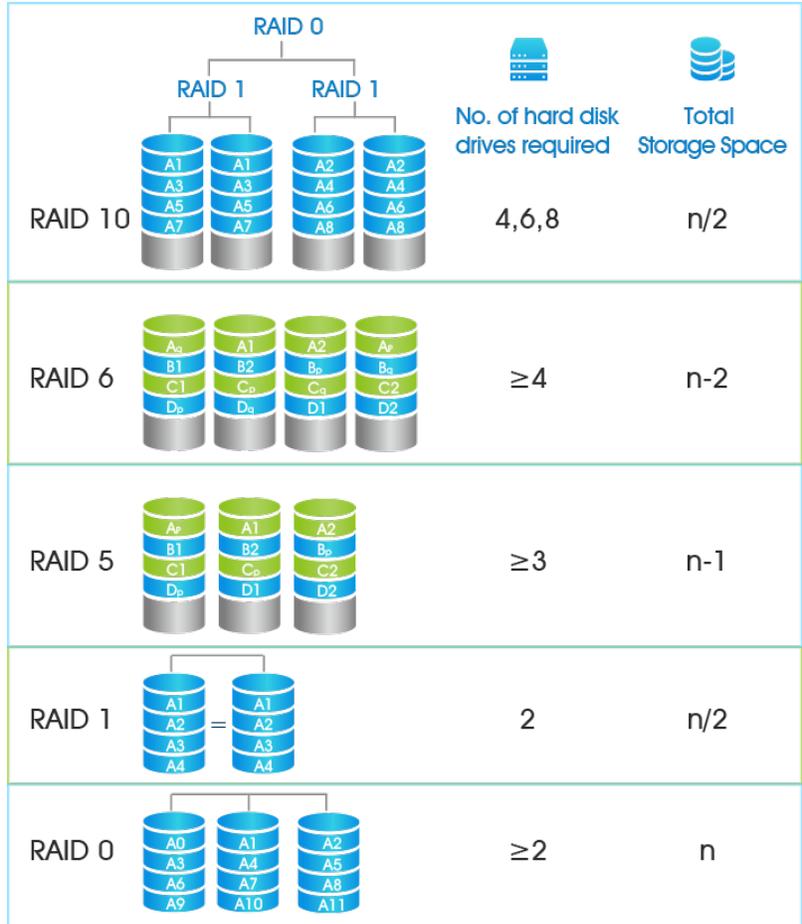
	Port	Vendor	Status	Capacity	Type	Hot Spare
<input type="checkbox"/>	4	WDC WD10EJRX-89N74YD	Warning	931.51 GB	Local	<input type="checkbox"/>

Below the physical disk table is a 'Quick Create' button and a 'Create' button. Underneath is an 'Array' table with the following headers:

No.	Name	Physical Disk	RAID Capacity	Status	Level	Hot Spare	Rebuild	Delete	Task

At the bottom right of the main area are 'Apply' and 'Back' buttons.

RAID (Redundant Array of Independent Disks) is a storage technology that combines multiple disk drive components into a logical unit. A RAID setup stores data over multiple hard disk drives to provide enough redundancy so that data can be recovered if one disk fails.



**Step1. Enable RAID. NVR will reboot after enabling.**

**Step2. Select HDD and click "Create" or "Quick Create" to create a new array. New array will be available after a while.**

The screenshot displays the 'Storage' management page in an NVR interface. On the left is a dark sidebar with navigation options: Home, Video Record, Snapshot, Disk Management, RAID (highlighted), Storage Mode, and Auto Backup. At the bottom of the sidebar is a 'Live View' icon. The main content area is titled 'Storage' and 'RAID'. At the top right, there are system status indicators for CPU (5%) and Memory (24%). Below the title, there is a 'RAID Mode' section with an 'Enable' checkbox. A 'Physical Disk' table lists a single disk with the following details:

No.	Port	Vendor	Status	Capacity	Type	Hot Spare
1	4	WDC WD10EJRX-89N74YD	Warning	931.51 GB	Local	<input type="checkbox"/>

A 'RAID Create' dialog box is open in the center, showing the following configuration:

RAID Name	RAID
RAID Type	RAID 0
HDD Port	<input checked="" type="checkbox"/> 4
RAID Capacity	0

Below the dialog, there are 'Create' and 'Cancel' buttons. At the bottom right of the RAID section, there are 'Quick Create' and 'Create' buttons. At the very bottom of the page, there are 'Apply' and 'Back' buttons.

**Hot Spare:** A disk can be used as the hot spare for any array created in the system.

**Rebuild:** When the array is in Degraded status, the device can start rebuilding the array automatically with the hot spare disk to ensure the high security and reliability of the data.

**Note:**

1. RAID only available for 4K H.265 NVR 7000/8000 Series and 4K H.265 PoE NVR 7000 Series.
2. Support more than 16TB capacity for creating the RAID, and the RAID data can be read and written normally. This meets users' storage requirements for larger capacity.
3. Quick Create only for RAID5.

### 3.7.5 Storage Mode

#### Quota

You can configure the storage capacity of each channel, including snapshots and recording, making storage allocation more flexible.

**Step 1. Enable Quota.**

Quota Enable

**Step 2. Select the channel in which you want to enable Quota. Then the used record capacity and the used snapshot capacity of the corresponding channel are automatically displayed.**

Channel 1

Used Record Capacity (GB) 78

Used Snapshot Capacity (GB) 1

**Step 3. Set Quota for record and snapshot separately. And the Quota range from 4 to 16384 GB. The default value is 0 GB.**

Record Quota (GB) 78 4-16384

Snapshot Quota (GB) 0 4-16384

**Step 4. Click "Apply" to take effect the configuration of the current interface.**

Click "Copy" to pop up the Channel Copy interface, then the Quota configuration of the selected channel can be copied to the channel you want, and click "OK" to take effect the configuration.

## Channel Copy

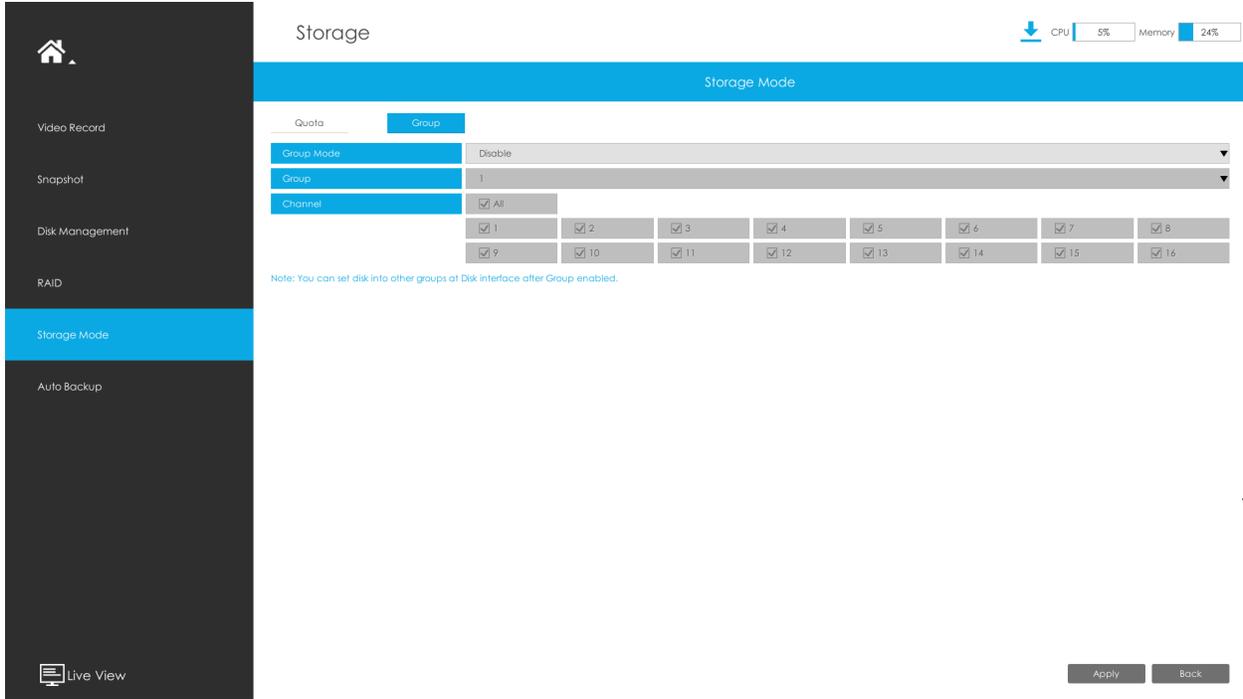
All

<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16
<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24
<input type="checkbox"/> 25	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30	<input type="checkbox"/> 31	<input type="checkbox"/> 32
<input type="checkbox"/> 33	<input type="checkbox"/> 34	<input type="checkbox"/> 35	<input type="checkbox"/> 36	<input type="checkbox"/> 37	<input type="checkbox"/> 38	<input type="checkbox"/> 39	<input type="checkbox"/> 40
<input type="checkbox"/> 41	<input type="checkbox"/> 42	<input type="checkbox"/> 43	<input type="checkbox"/> 44	<input type="checkbox"/> 45	<input type="checkbox"/> 46	<input type="checkbox"/> 47	<input type="checkbox"/> 48
<input type="checkbox"/> 49	<input type="checkbox"/> 50	<input type="checkbox"/> 51	<input type="checkbox"/> 52	<input type="checkbox"/> 53	<input type="checkbox"/> 54	<input type="checkbox"/> 55	<input type="checkbox"/> 56
<input type="checkbox"/> 57	<input type="checkbox"/> 58	<input type="checkbox"/> 59	<input type="checkbox"/> 60	<input type="checkbox"/> 61	<input type="checkbox"/> 62	<input type="checkbox"/> 63	<input type="checkbox"/> 64

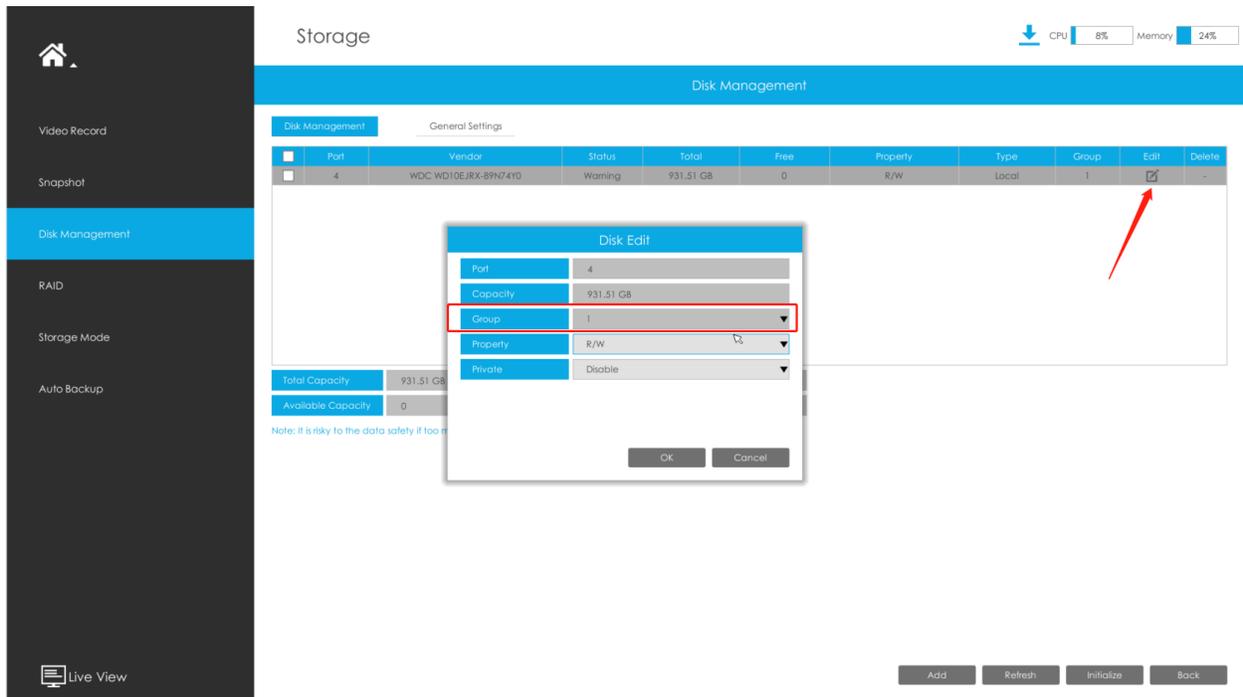
The Quota status of each channel will be displayed in a table at the bottom of the Storage Mode -> Quota interface.

### Group

You can divide disks into different groups, which is able to storage different channels' recorded files into different groups.

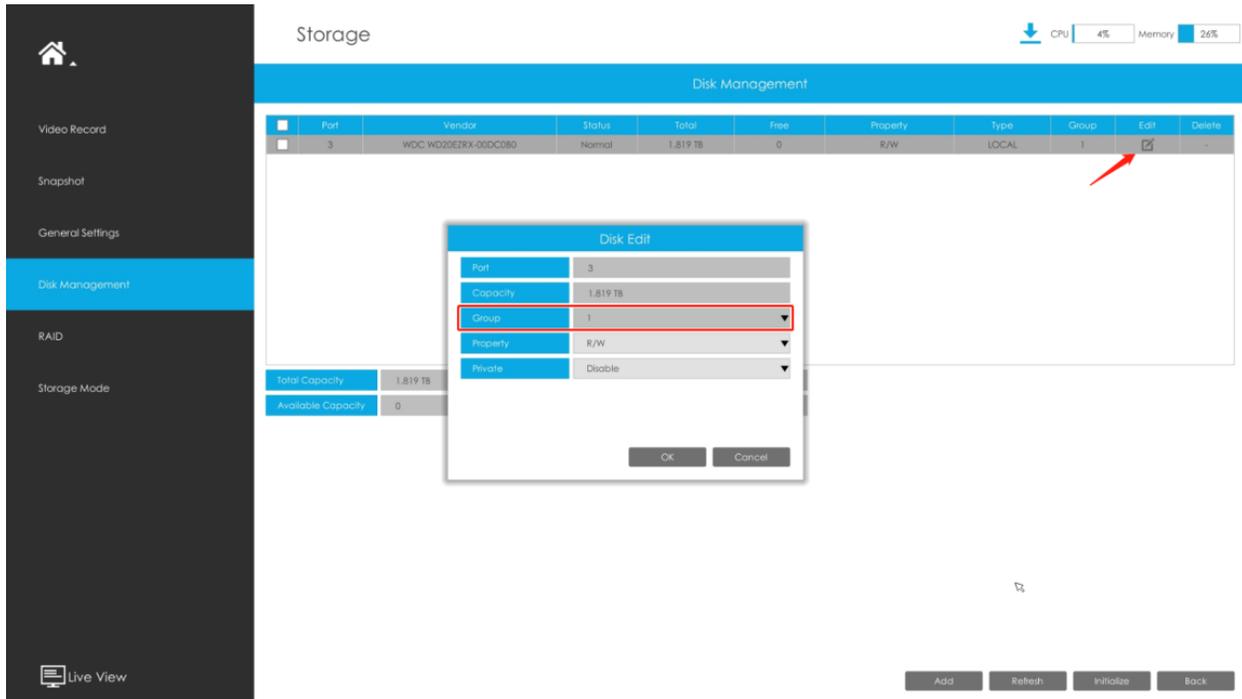


### Step 1. Enable Group.

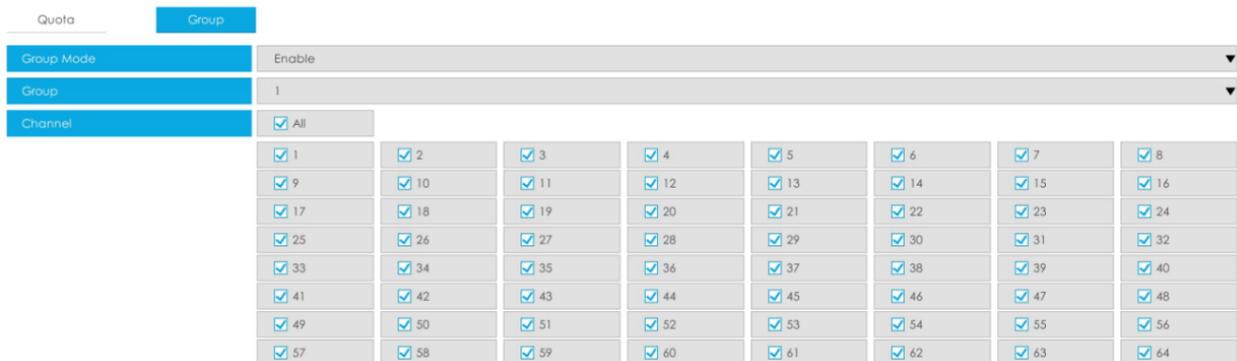


**Step 2. Switch to Disk Management interface. Click and set the group number of every disk.**

**Note:** You can add 16 groups at most.



**Step 3. Select group and channels which you want to record into this group.**



### 3.7.6 Auto Backup

The screenshot shows the 'Storage' configuration page with the 'Auto Backup' section selected. The settings are as follows:

Setting	Value
Auto Backup	Disable
Storage Device	Select Device
Available Capacity	-
Backup Start Time	Everyday 00:00:00
Backup Channel	<input type="checkbox"/> All, <input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3, <input type="checkbox"/> 4, <input type="checkbox"/> 5, <input type="checkbox"/> 6, <input type="checkbox"/> 7, <input type="checkbox"/> 8, <input type="checkbox"/> 9, <input type="checkbox"/> 10, <input type="checkbox"/> 11, <input type="checkbox"/> 12, <input type="checkbox"/> 13, <input type="checkbox"/> 14, <input type="checkbox"/> 15, <input type="checkbox"/> 16
Backup Stream Type	Primary Stream
Backup File Type	MP4
Recycle	Enable
Backup Status	
Last Successful Backup	

Note: The latest 24 hours' video will be backed up.

Buttons: Apply, Back

### Step 1. Enable Auto Backup.

Auto Backup: Enable

### Step 2. Select Storage Device as USB Device, NAS or eSATA disk.

Storage Device: Select Device

**Note:** eSATA disk is only supported on NVR 8000 series.

### Step 3. Set Backup Start Time.

Backup Start Time: Everyday 20:14:00

**Step 4.** Check the checkbox to select Backup Channel. You can also click  All to select all channels.

**Step 5.** Set Backup Stream Type to Primary Stream or Secondary Stream.

**Step 6.** Set Backup File Type to MP4, AVI or PS.

**Step 7.** You can enable or disable Recycle Mode for Auto Backup function.

**Step 8.** Click "Apply" to save the settings, and the latest 24 hours' video will be automatically backed up to the storage device.

**Note:**

- You can check Auto Backup status in the Backup Status bar, and the corresponding status is as follows.
  - No Storage Device
  - Unsupported Storage Device Format
  - Standby
  - Working (xx%)
- If there are already successfully backed up videos, the time when the backup ends will be displayed in Last Successful Backup bar.

## 3.8 Event

### 3.8.1 Motion Detection

The screenshot shows the 'Event Settings' interface for 'Motion Detection'. The interface includes a sidebar with navigation options: Motion Detection, Video Loss, Alarm Input, Alarm Output, Exception, and VCA. The main area displays a grid for selecting a region, a table of region numbers (1-64), and configuration options for Motion Detection, Region, Sensitivity, Effective Time, and Action. The Sensitivity slider is set to 10. The interface also displays CPU (3%) and Memory (24%) usage.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64

Channel: 1    Name: CAM1

Motion Detection:  Enable

Region:

Sensitivity:

Effective Time:

Action:

Copy    Apply    Back

#### Step 1. Enable Motion Detection.

Select channel , Sensitivity and click  to enable Motion Detection.

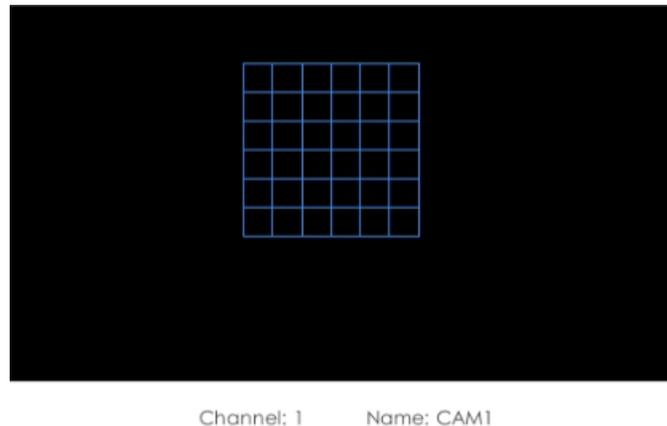
1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64

Motion Detection	<input checked="" type="checkbox"/> Enable
Region	Set All Delete All
Sensitivity	<input type="range" value="10"/>
Effective Time	Edit
Action	Edit

### Step2: Set the area for triggering motion detection.

You can set the area by dragging a square on live view window.



 **Note:** The motion detection area will be synchronized to Camera.

### Step3. Set Effective Time of motion detection by clicking "Edit".

NVR receives the alarm when effective time has been set. It will be more convenient by clicking "Select All" or "Clear All" to set or clear all time settings.

### Step 4. Set Action for motion detection alarm by clicking "Edit".

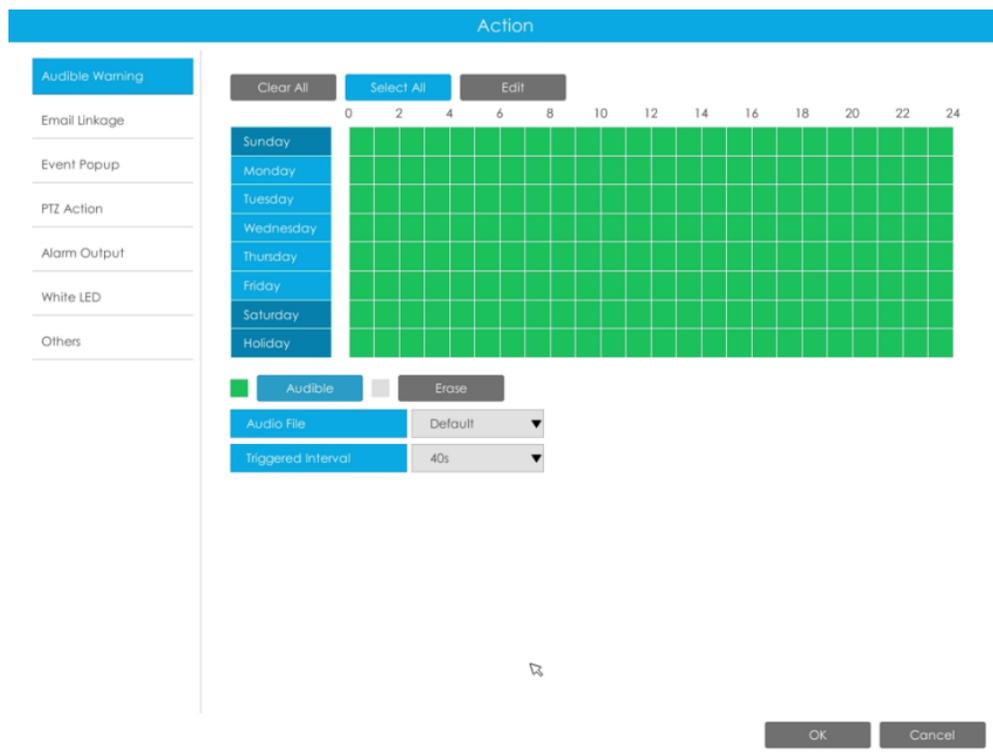
**Audible Warning:** NVR will trigger an audible warning when event is detected.

The user can set effective schedule as following two ways:

1. Select the operation type: Audible or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit record effective time manually.

**Audio File:** Users can select the audio file as needed for audible warning. The default is an audible beep.

**Triggered Interval:**The effective interval between two actions when event triggered.



**Email Linkage:**NVR will send an email to the address you set before.

The user can set effective schedule as following two ways:

1. Select the operation type, Email and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

**Triggered Interval:**The effective interval between two actions when event triggered.

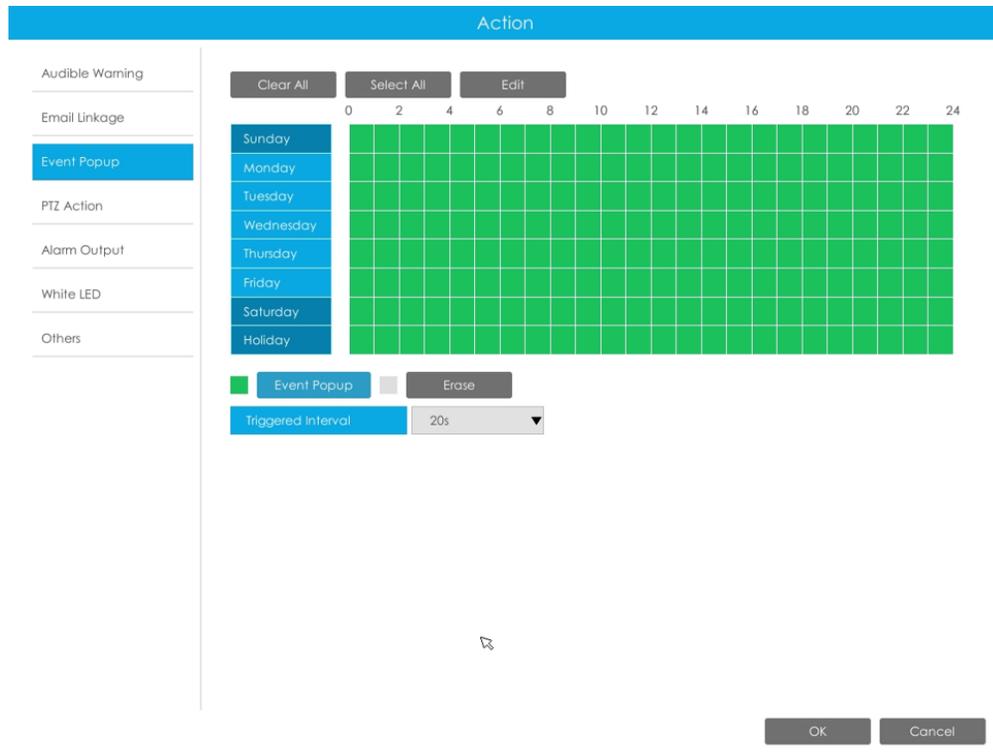
**Picture Attached:** Select whether to attach picture when sending Emails. If you enable it, you will receive alarm emails with one event captured picture attached.

The screenshot shows the 'Action' configuration window. On the left is a sidebar with a menu: Audible Warning, Email Linkage (highlighted), Event Popup, PTZ Action, Alarm Output, White LED, and Others. The main area has a header 'Action' and three buttons: 'Clear All', 'Select All', and 'Edit'. Below these is a time table with columns for hours (0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24) and rows for days (Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Holiday). The entire grid is filled with green. Below the grid are two rows of controls: a green square next to 'Email' and a grey square next to 'Erase'; a 'Triggered Interval' dropdown set to '20s'; and a 'Picture Attached' dropdown set to 'Enable'. At the bottom right are 'OK' and 'Cancel' buttons.

**Event Popup:** Trigger alarm screen popup to full screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Device'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.

1. Select the operation type, Event Popup and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

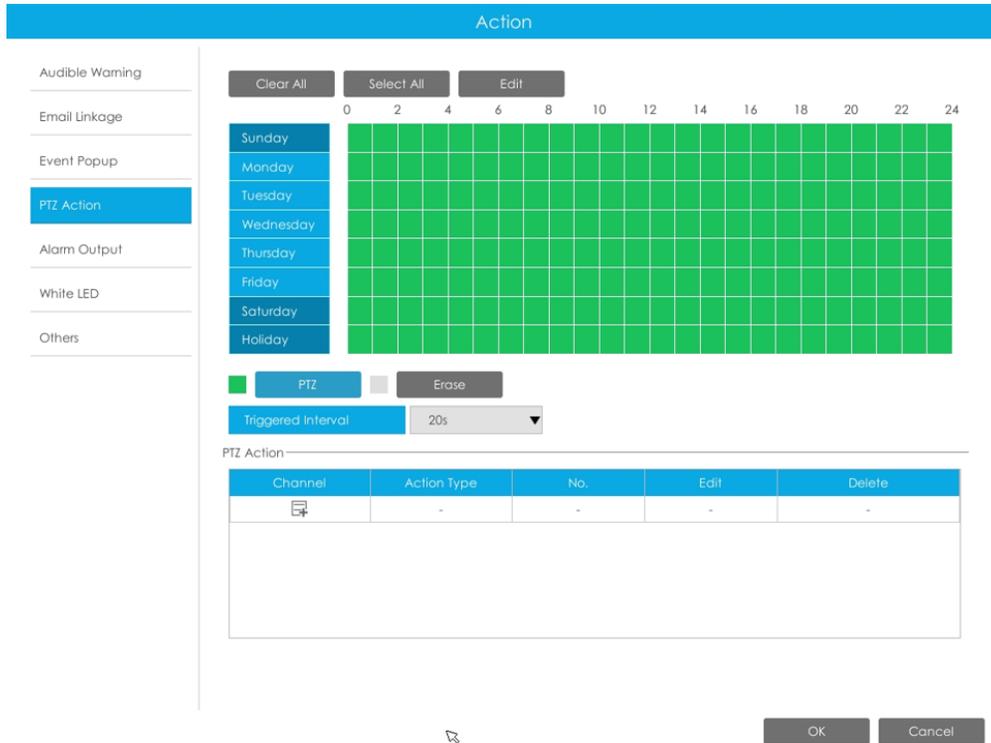
**Triggered Interval:** The effective interval between two actions when event triggered.



**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.

User can set effective schedule as following two ways:

1. Select the operation type: PTZ or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.



And you can add PTZ Action by clicking .



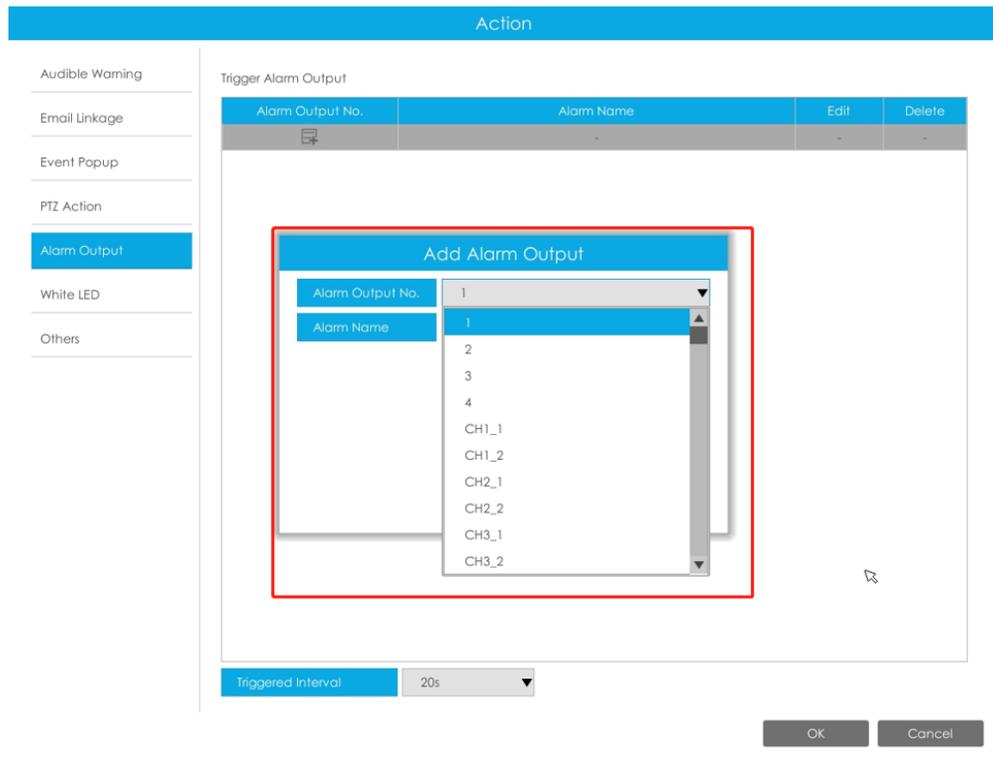
**Channel:** Select the channel which supports this function.

**Action Type:** Preset and Patrol are available.

**No.:** Select the number of Preset or Patrol.

**Alarm Output:** Trigger alarm output when alarm is triggered. For NVR Alarm Output, the relevant alarm output will be firstly listed, such as, 1, 2.etc. As for camera Alarm Output, it will display as CHx\_x (such as CH1\_1) according to the camera channel and corresponding alarm number.

**Triggered Interval:**The effective interval between two actions when event triggered.



**White LED:**Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

User can set effective schedule as following two ways:

1. Select the operation type, White LED and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

**Triggered Interval:**The effective interval between two actions when event triggered.

And you can add White LED by clicking .

**Channel:** Select the channel which supports this function.

**Flash Mode:** Twinkle and Always are available.

**Flash Time:** Set the time for White LED flashing. When the Flash Mode is Twinkle, the range of Flash Time is 1~10 and the default value is 3. When the Flash Mode is Always, the range of Flash Time is 1~60 and the default value is 5.

**Others:** Trigger selected channels to record when alarm is triggered.

Action

Audible Warning

Email Linkage

Event Popup

PTZ Action

Alarm Output

White LED

Others

Trigger Channels Record

All

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16
<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24
<input type="checkbox"/> 25	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30	<input type="checkbox"/> 31	<input type="checkbox"/> 32
<input type="checkbox"/> 33	<input type="checkbox"/> 34	<input type="checkbox"/> 35	<input type="checkbox"/> 36	<input type="checkbox"/> 37	<input type="checkbox"/> 38	<input type="checkbox"/> 39	<input type="checkbox"/> 40
<input type="checkbox"/> 41	<input type="checkbox"/> 42	<input type="checkbox"/> 43	<input type="checkbox"/> 44	<input type="checkbox"/> 45	<input type="checkbox"/> 46	<input type="checkbox"/> 47	<input type="checkbox"/> 48
<input type="checkbox"/> 49	<input type="checkbox"/> 50	<input type="checkbox"/> 51	<input type="checkbox"/> 52	<input type="checkbox"/> 53	<input type="checkbox"/> 54	<input type="checkbox"/> 55	<input type="checkbox"/> 56
<input type="checkbox"/> 57	<input type="checkbox"/> 58	<input type="checkbox"/> 59	<input type="checkbox"/> 60	<input type="checkbox"/> 61	<input type="checkbox"/> 62	<input type="checkbox"/> 63	<input type="checkbox"/> 64

Trigger Channels Snapshot

All

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16
<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24
<input type="checkbox"/> 25	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30	<input type="checkbox"/> 31	<input type="checkbox"/> 32
<input type="checkbox"/> 33	<input type="checkbox"/> 34	<input type="checkbox"/> 35	<input type="checkbox"/> 36	<input type="checkbox"/> 37	<input type="checkbox"/> 38	<input type="checkbox"/> 39	<input type="checkbox"/> 40
<input type="checkbox"/> 41	<input type="checkbox"/> 42	<input type="checkbox"/> 43	<input type="checkbox"/> 44	<input type="checkbox"/> 45	<input type="checkbox"/> 46	<input type="checkbox"/> 47	<input type="checkbox"/> 48
<input type="checkbox"/> 49	<input type="checkbox"/> 50	<input type="checkbox"/> 51	<input type="checkbox"/> 52	<input type="checkbox"/> 53	<input type="checkbox"/> 54	<input type="checkbox"/> 55	<input type="checkbox"/> 56
<input type="checkbox"/> 57	<input type="checkbox"/> 58	<input type="checkbox"/> 59	<input type="checkbox"/> 60	<input type="checkbox"/> 61	<input type="checkbox"/> 62	<input type="checkbox"/> 63	<input type="checkbox"/> 64

Note: This page's configuration will not be copied into other channels.

OK
Cancel

**Note:** Make sure you have set correct schedule for record and snapshot before setting the Event Action.

**Step5. Click "Copy" and  to copy the same configuration to other channels.**

Event Settings

↓ CPU 2% Memory 21%

Motion Detection

Motion Detection

Video Loss

Alarm Input

Alarm Output

Exception

VCA

Live View

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
36	37	38	39	40	44	45	46
47	48	52	53	54	55	56	60
61	62	63	64				

Channel Copy

All

<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16
<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24
<input type="checkbox"/> 25	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30	<input type="checkbox"/> 31	<input type="checkbox"/> 32
<input type="checkbox"/> 33	<input type="checkbox"/> 34	<input type="checkbox"/> 35	<input type="checkbox"/> 36	<input type="checkbox"/> 37	<input type="checkbox"/> 38	<input type="checkbox"/> 39	<input type="checkbox"/> 40
<input type="checkbox"/> 41	<input type="checkbox"/> 42	<input type="checkbox"/> 43	<input type="checkbox"/> 44	<input type="checkbox"/> 45	<input type="checkbox"/> 46	<input type="checkbox"/> 47	<input type="checkbox"/> 48
<input type="checkbox"/> 49	<input type="checkbox"/> 50	<input type="checkbox"/> 51	<input type="checkbox"/> 52	<input type="checkbox"/> 53	<input type="checkbox"/> 54	<input type="checkbox"/> 55	<input type="checkbox"/> 56
<input type="checkbox"/> 57	<input type="checkbox"/> 58	<input type="checkbox"/> 59	<input type="checkbox"/> 60	<input type="checkbox"/> 61	<input type="checkbox"/> 62	<input type="checkbox"/> 63	<input type="checkbox"/> 64

OK
Cancel

Copy
Apply
Back

## 3.8.2 Video Loss

### Step 1. Select a channel.

Event Settings

CPU 2% Memory 21%

Video Loss

Channel: 1 Name: CAM1

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64

Action Edit

Copy Back

Live View

### Step 2. Set Action for video loss by clicking "Edit".

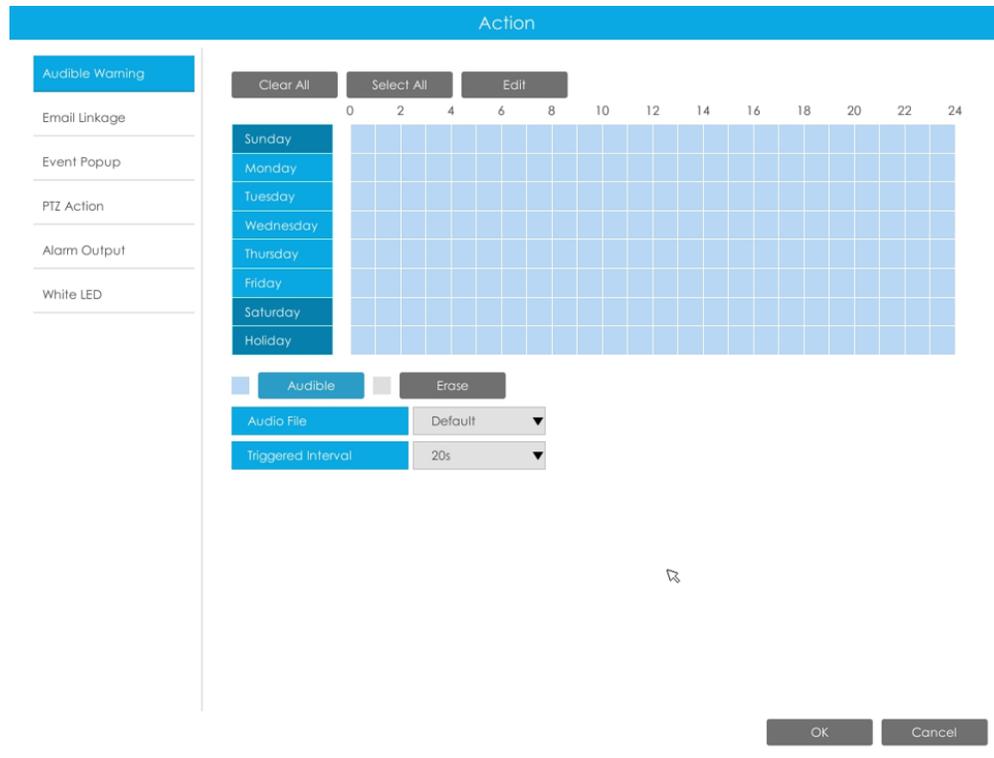
**Audible Warning:** NVR will trigger an audible warning when event is detected.

The user can set effective schedule as following two ways:

1. Select the operation type: Audible or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit record effective time manually.

**Audio File:** Users can select the audio file as needed for audible warning. The default is an audible beep.

**Triggered Interval:** The effective interval between two actions when event triggered.



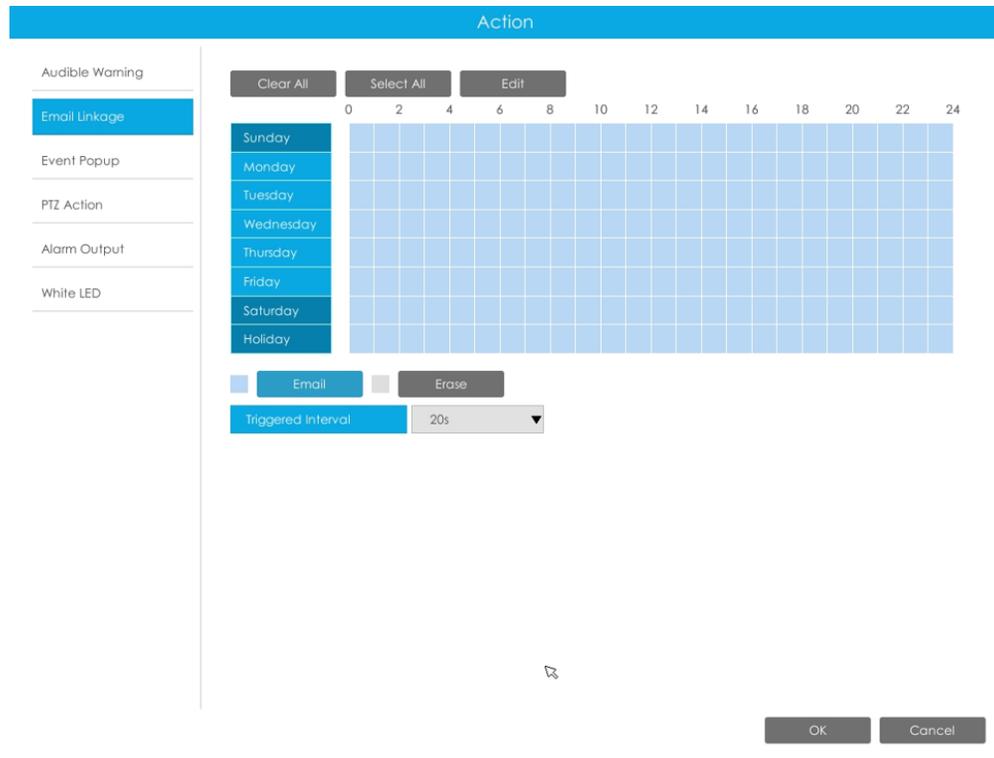
**Email Linkage:**NVR will send an email to the address you set before.

The user can set effective schedule as following two ways:

1. Select the operation type, Email and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

**Triggered Interval:**The effective interval between two actions when event triggered.

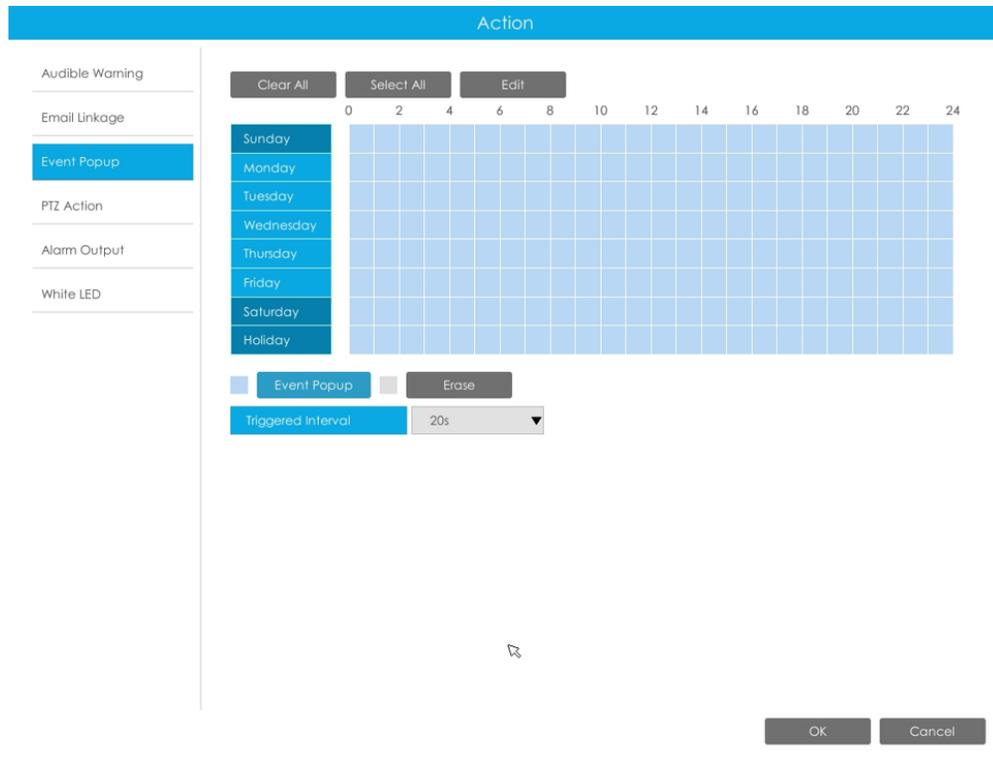
**Picture Attached:** Select whether to attach picture when sending Emails. If you enable it, you will receive alarm emails with one event captured picture attached.



**Event Popup:** Trigger alarm screen popup to full screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Device'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.

1. Select the operation type, Event Popup and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

**Triggered Interval:** The effective interval between two actions when event triggered.



**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.

User can set effective schedule as following two ways:

1. Select the operation type: PTZ or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

And you can add PTZ Action by clicking .

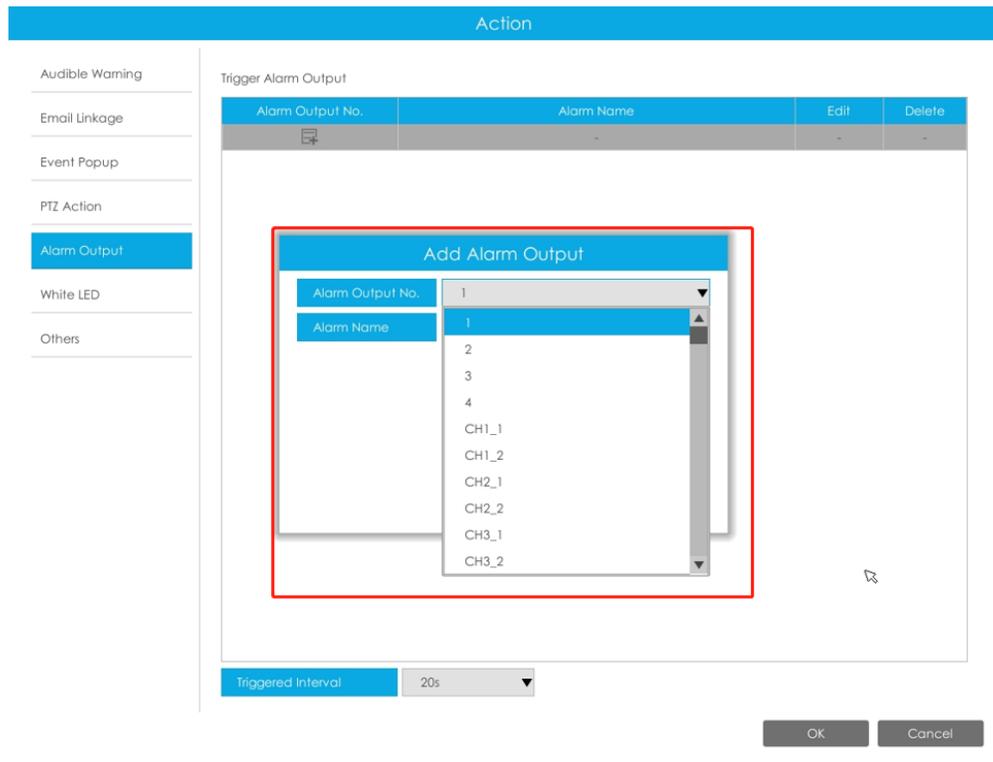
**Channel:** Select the channel which supports this function.

**Action Type:** Preset and Patrol are available.

**No.:** Select the number of Preset or Patrol.

**Alarm Output:** Trigger alarm output when alarm is triggered. For NVR Alarm Output, the relevant alarm output will be firstly listed, such as, 1, 2.etc. As for camera Alarm Output, it will display as CHx\_x (such as CH1\_1) according to the camera channel and corresponding alarm number.

**Triggered Interval:**The effective interval between two actions when event triggered.



**White LED:**Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

User can set effective schedule as following two ways:

1. Select the operation type, White LED and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

**Triggered Interval:**The effective interval between two actions when event triggered.

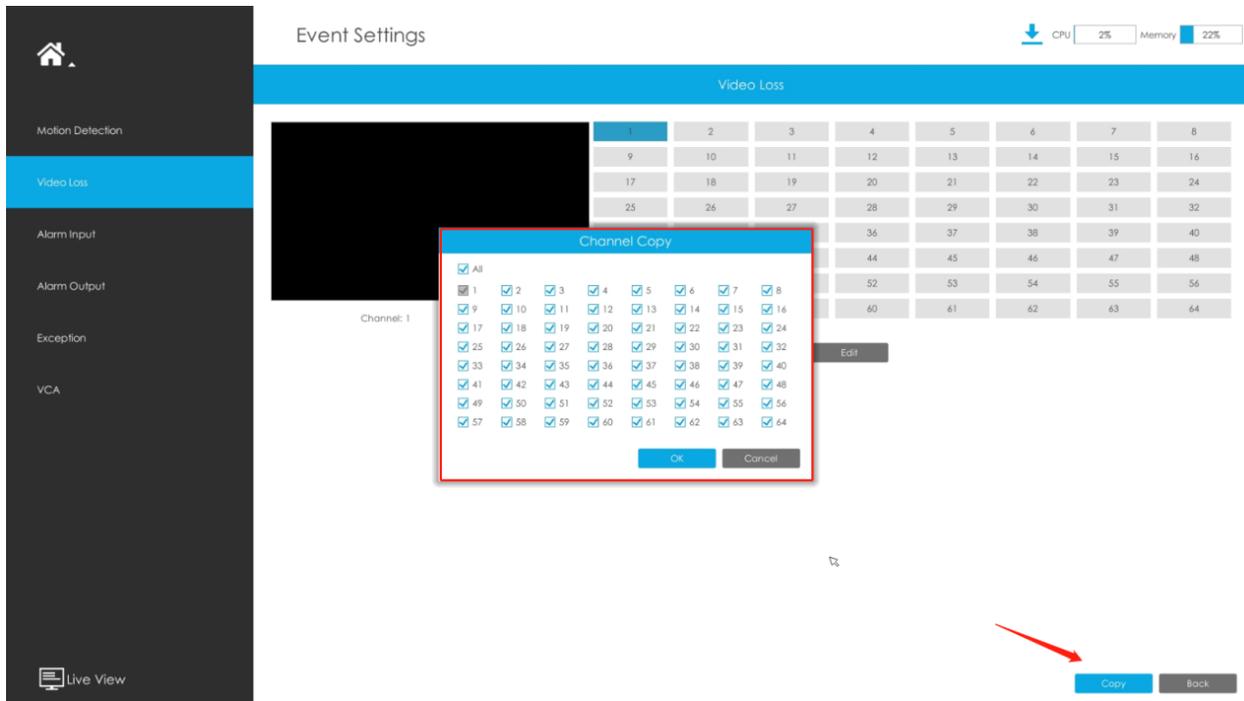
And you can add White LED by clicking .

**Channel:** Select the channel which supports this function.

**Flash Mode:** Twinkle and Always are available.

**Flash Time:** Set the time for White LED flashing. When the Flash Mode is Twinkle, the range of Flash Time is 1~10 and the default value is 3. When the Flash Mode is Always, the range of Flash Time is 1~60 and the default value is 5.

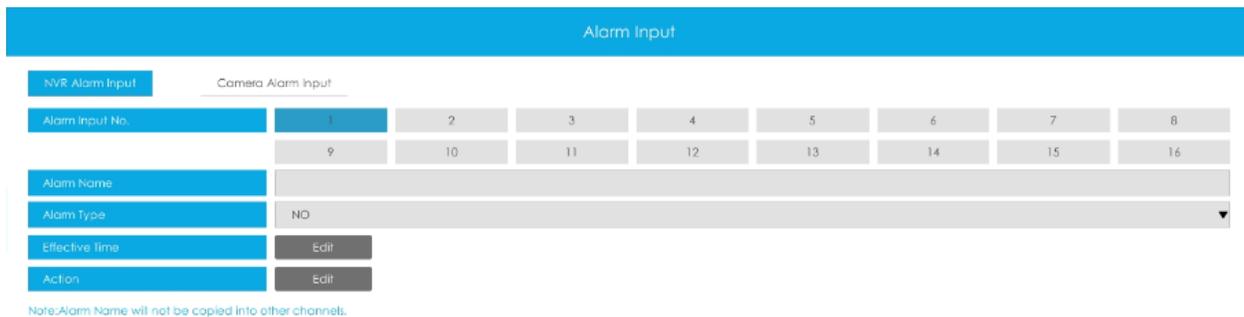
**Step5.** Click "Copy" and  to copy the same configuration to other channels.



### 3.8.3 Alarm Input

#### 3.8.3.1 NVR Alarm Input

**Step 1. Set Alarm input Number, Alarm Name and Alarm Type.**



**Alarm Input No.:** The channel which has input signal.

**Alarm Name:** Set a name for the alarm.

**Alarm Type:** Choose NO or NC alarm type for the alarm.

**Linkage Action:** Choose Alarm or Disarming by clicking the slide-drop bar.

- If you select the Alarm option, you will be able to configure the following setting.

**Step 2. Set effective time for alarm input by clicking corresponding "Edit".**

**Step 3. Set action for alarm input by clicking corresponding "Edit".**

**Audible Warning:**NVR will trigger an audible warning when event is detected.

The user can set effective schedule as following two ways:

1. Select the operation type: Audible or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit record effective time manually.

**Audio File:** Users can select the audio file as needed for audible warning. The default is an audible beep.

**Triggered Interval:**The effective interval between two actions when event triggered.

The screenshot displays the 'Action' configuration window. On the left, a sidebar lists action types: Audible Warning (selected), Email Linkage, Event Popup, PTZ Action, Alarm Output, White LED, and Others. The main area features a grid for scheduling, with days of the week (Sunday through Holiday) on the vertical axis and time intervals (0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24) on the horizontal axis. The grid cells are currently orange, indicating the 'Audible' action is selected. Above the grid are buttons for 'Clear All', 'Select All', and 'Edit'. Below the grid, there are radio buttons for 'Audible' (selected) and 'Erase'. Further down, there are dropdown menus for 'Audio File' (set to 'Default') and 'Triggered Interval' (set to '20s'). At the bottom right, there are 'OK' and 'Cancel' buttons.

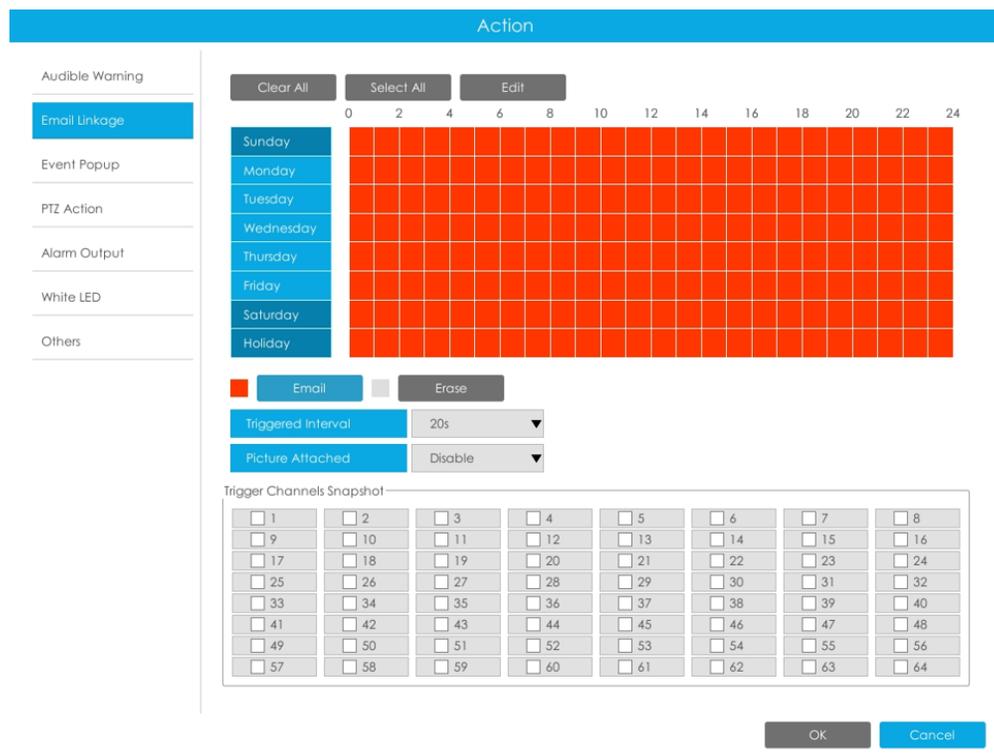
**Email Linkage:**NVR will send an email to the address you set before.

The user can set effective schedule as following two ways:

1. Select the operation type, Email and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

**Triggered Interval:**The effective interval between two actions when event triggered.

**Picture Attached:** Select whether to attach picture when sending Emails. If you enable it, you will receive alarm emails with one event captured picture attached.



**Event Popup:**Trigger alarm screen popup to full screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Device'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.

1. Select the operation type, Event Popup and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

**Triggered Interval:**The effective interval between two actions when event triggered.

Action

Audible Warning

Email Linkage

Event Popup

PTZ Action

Alarm Output

White LED

Others

Clear All
Select All
Edit

	0	2	4	6	8	10	12	14	16	18	20	22	24
Sunday													
Monday													
Tuesday													
Wednesday													
Thursday													
Friday													
Saturday													
Holiday													

■ Event Popup    ■ Erase

Triggered Interval 20s ▼

Trigger Channel Event Popup

Numbers of Channel 1 ▼

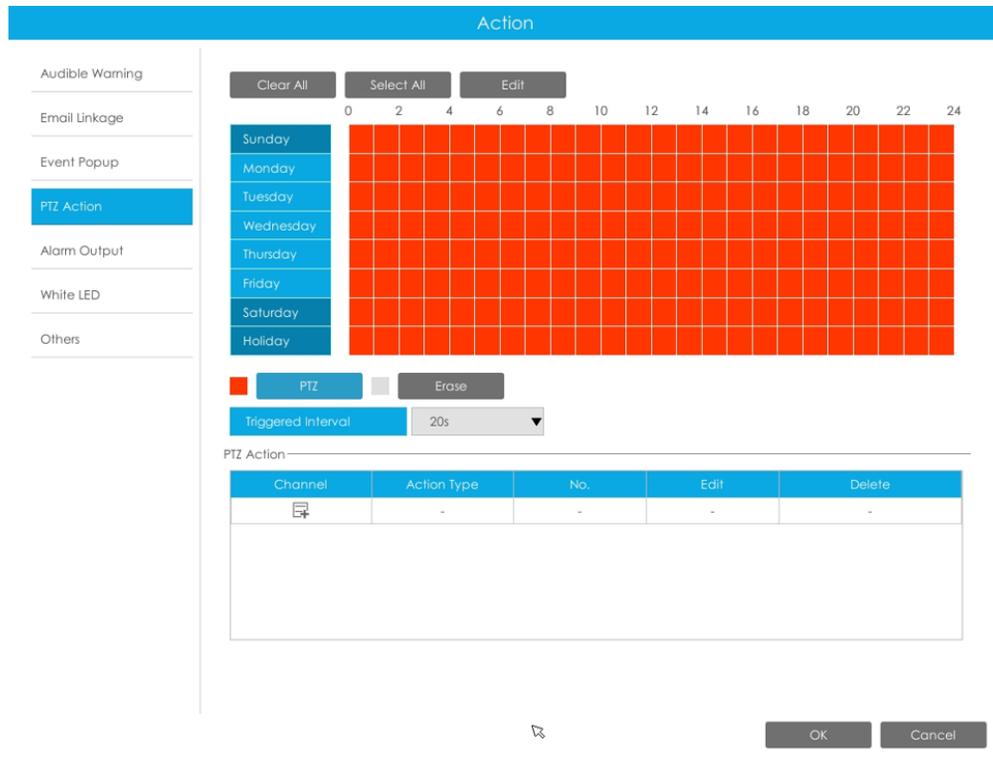
Channel Select Channel ▼

OK    Cancel

**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.

User can set effective schedule as following two ways:

1. Select the operation type: PTZ or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking Select All or Clear All to set or clear all time settings.
2. Click Edit to edit effective time manually.



And you can add PTZ Action by clicking .



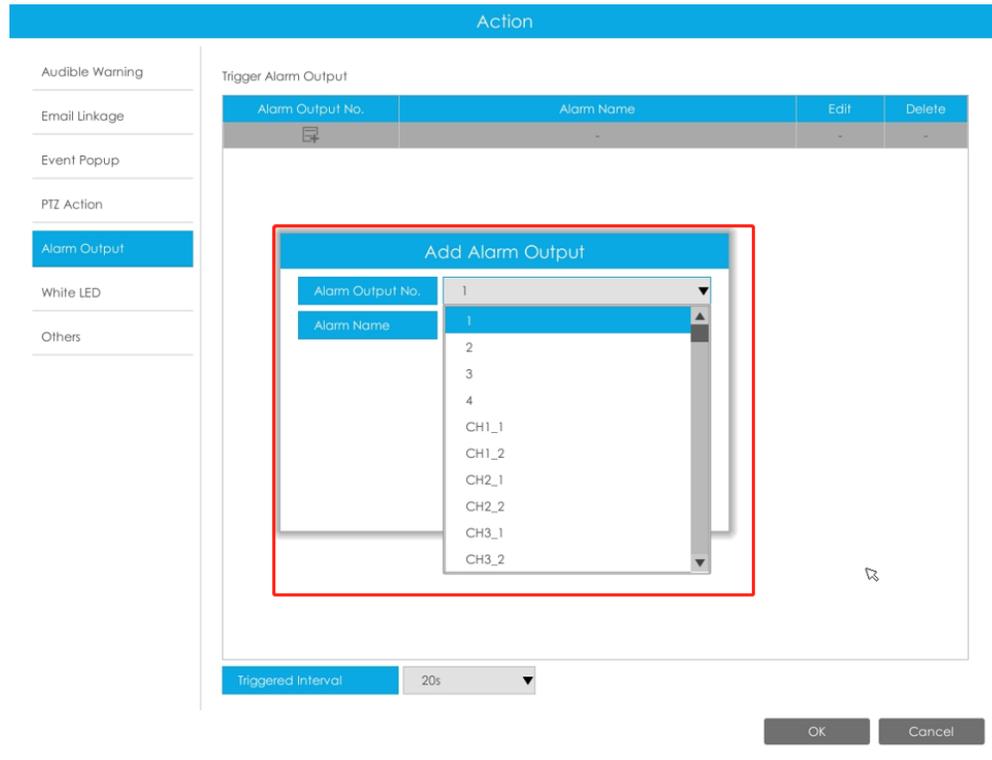
**Channel:** Select the channel which supports this function.

**Action Type:** Preset and Patrol are available.

**No.:** Select the number of Preset or Patrol.

**Alarm Output:** Trigger alarm output when alarm is triggered. For NVR Alarm Output, the relevant alarm output will be firstly listed, such as, 1, 2.etc. As for camera Alarm Output, it will display as CHx\_x (such as CH1\_1) according to the camera channel and corresponding alarm number.

**Triggered Interval:**The effective interval between two actions when event triggered.



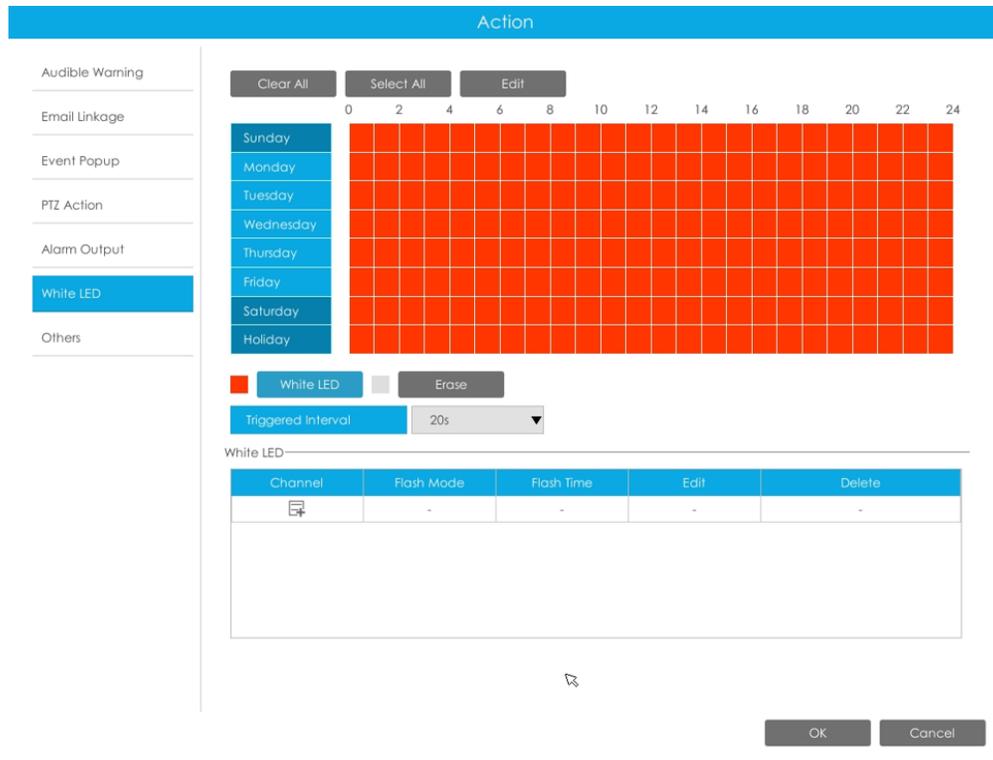
**White LED:**Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

User can set effective schedule as following two ways:

1. Select the operation type, White LED and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

**Triggered Interval:**The effective interval between two actions when event triggered.



And you can add White LED by clicking



**Channel:** Select the channel which supports this function.

**Flash Mode:** Twinkle and Always are available.

**Flash Time:** Set the time for White LED flashing. When the Flash Mode is Twinkle, the range of Flash Time is 1~10 and the default value is 3. When the Flash Mode is Always, the range of Flash Time is 1~60 and the default value is 5.

**Others:** Trigger selected channels to record when alarm is triggered.

Action

Audible Warning

Email Linkage

Event Popup

PTZ Action

Alarm Output

White LED

Others

Trigger Channels Record

All

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16
<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24
<input type="checkbox"/> 25	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30	<input type="checkbox"/> 31	<input type="checkbox"/> 32
<input type="checkbox"/> 33	<input type="checkbox"/> 34	<input type="checkbox"/> 35	<input type="checkbox"/> 36	<input type="checkbox"/> 37	<input type="checkbox"/> 38	<input type="checkbox"/> 39	<input type="checkbox"/> 40
<input type="checkbox"/> 41	<input type="checkbox"/> 42	<input type="checkbox"/> 43	<input type="checkbox"/> 44	<input type="checkbox"/> 45	<input type="checkbox"/> 46	<input type="checkbox"/> 47	<input type="checkbox"/> 48
<input type="checkbox"/> 49	<input type="checkbox"/> 50	<input type="checkbox"/> 51	<input type="checkbox"/> 52	<input type="checkbox"/> 53	<input type="checkbox"/> 54	<input type="checkbox"/> 55	<input type="checkbox"/> 56
<input type="checkbox"/> 57	<input type="checkbox"/> 58	<input type="checkbox"/> 59	<input type="checkbox"/> 60	<input type="checkbox"/> 61	<input type="checkbox"/> 62	<input type="checkbox"/> 63	<input type="checkbox"/> 64

Trigger Channels Snapshot

All

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16
<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24
<input type="checkbox"/> 25	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30	<input type="checkbox"/> 31	<input type="checkbox"/> 32
<input type="checkbox"/> 33	<input type="checkbox"/> 34	<input type="checkbox"/> 35	<input type="checkbox"/> 36	<input type="checkbox"/> 37	<input type="checkbox"/> 38	<input type="checkbox"/> 39	<input type="checkbox"/> 40
<input type="checkbox"/> 41	<input type="checkbox"/> 42	<input type="checkbox"/> 43	<input type="checkbox"/> 44	<input type="checkbox"/> 45	<input type="checkbox"/> 46	<input type="checkbox"/> 47	<input type="checkbox"/> 48
<input type="checkbox"/> 49	<input type="checkbox"/> 50	<input type="checkbox"/> 51	<input type="checkbox"/> 52	<input type="checkbox"/> 53	<input type="checkbox"/> 54	<input type="checkbox"/> 55	<input type="checkbox"/> 56
<input type="checkbox"/> 57	<input type="checkbox"/> 58	<input type="checkbox"/> 59	<input type="checkbox"/> 60	<input type="checkbox"/> 61	<input type="checkbox"/> 62	<input type="checkbox"/> 63	<input type="checkbox"/> 64

Note: This page's configuration will not be copied into other channels.

OK
Cancel

**Step 4: Copy alarm input settings to other input interface by clicking "Copy".**

Home

Motion Detection

Video Loss

Alarm Input

Alarm Output

Exception

VCA

Live View

CPU 1% Memory 22%

Alarm Input

NVR Alarm Input

Camera Alarm Input

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16

Alarm Name

Alarm Type

Effective Time

Action

Note: Alarm Name will not be copied

Alarm Input Copy

All

1  2  3  4  5  6  7  8

9  10  11  12  13  14  15  16

OK
Cancel

Copy
Apply
Back

- If you choose the Disarming option, you will be able to configure the following settings.

The screenshot displays the 'Event Settings' page for an NVR. The left sidebar contains navigation options: Motion Detection, Audio Alarm, Video Loss, Alarm Input (highlighted), Alarm Output, Exception, and VCA. The main area is titled 'Event Settings' and 'Alarm Input'. It features a table for 'Alarm Input No.' with columns 1 through 16. Below the table, there are fields for 'Alarm Name', 'Alarm Type' (set to NO), and 'Linkage Action' (set to Disarming). The 'Action' section includes several checkboxes: All, Audible Warning, Record, Email Linkage, Snapshot, Event Popup, PTZ Action, Alarm Output, White LED, and HTTP Notification. A note states: 'Note: Alarm Name will not be copied into other channels.' At the bottom right, there are 'Apply' and 'Back' buttons.

## Step 2: Set action for alarm input by selecting the check-box.

When the disarming function is enable and the alarm input is connected to the trigger key, you can disarm or arm with one click.

### Here's how to arm and disarm your device:

1. Enable the event and choose the action that will be executed when the event is triggered. This could include sending an email or recording a video, etc;
2. Connect the No.1 alarm input interface to the key and ensure it is physically linked;
3. Turn on the Disarming feature and check the corresponding action box;

After you finish configuring the settings mentioned above, press the designated key to disarm all the actions that you have selected.

To re-enable the event action, just need to release the key to arm.

For instance, when Motion Detection is triggered, the record will start. If Disarming is turned on and the "Record" option is checked, even though the motion is triggered, it will not record

when the button is pressed, thus achieving disarming. If you release the key, the motion will be triggered and the record will occur, thus achieving arming.

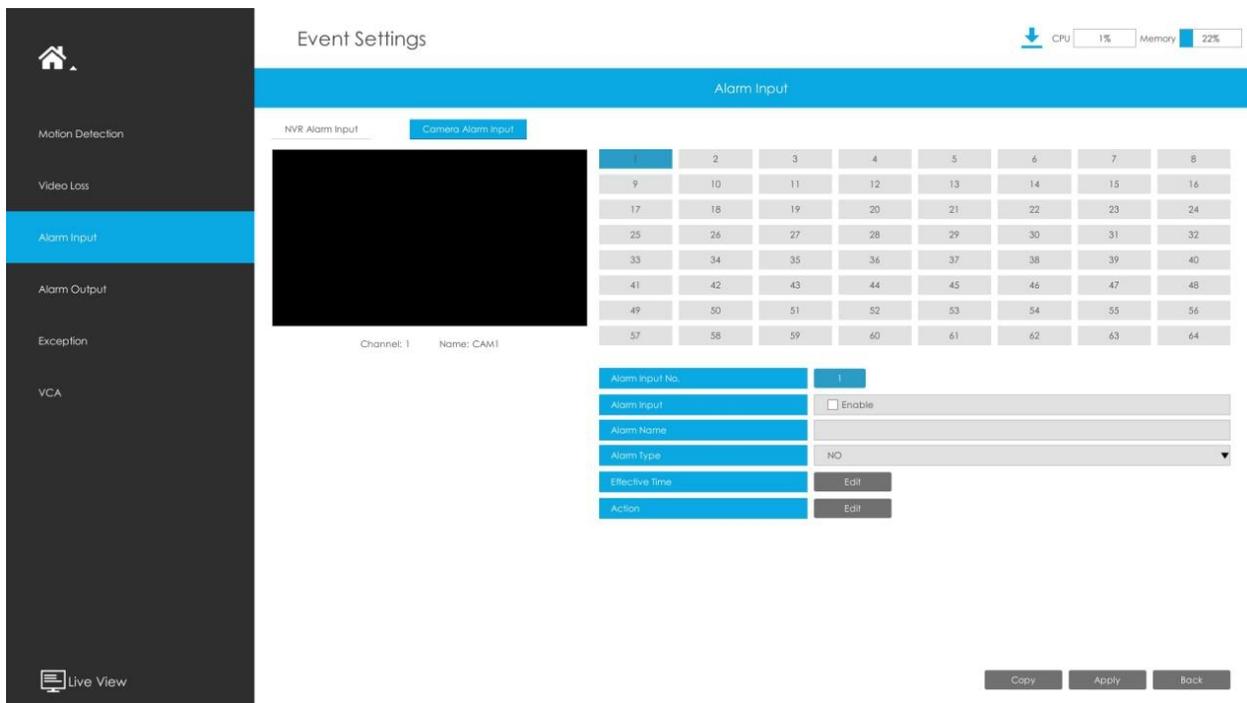
#### **Note:**

- What will be displayed only when the Alarm Input No is chosen 1 as Disarming.
- The disarming and arming functions are effective for all channels of the NVR.

### 3.8.3.2 Camera Alarm Input

Milesight NVRs support configuring the Alarm Input of Milesight cameras directly.

#### **Step 1. Set Alarm Input Number, Enable Alarm Input, Set Alarm Name and Alarm Type**



The screenshot shows the 'Event Settings' interface for 'Camera Alarm Input'. The left sidebar contains navigation options: Motion Detection, Video Loss, Alarm Input (selected), Alarm Output, Exception, and VCA. The main area displays a grid of 64 alarm input channels (1-64). Below the grid, the configuration for 'Channel: 1' (Name: CAM1) is shown:

- Alarm input No.: 1
- Alarm input:  Enable
- Alarm Name: [Text input field]
- Alarm Type: NO (dropdown menu)
- Effective Time: [Edit button]
- Action: [Edit button]

At the bottom right, there are buttons for 'Copy', 'Apply', and 'Back'. System status indicators at the top right show CPU at 1% and Memory at 22%.

**Alarm Input No.:** The channel which has input signal.

**Alarm Input:** Click "Enable" to enable alarm input of this channel.

**Alarm Name:** Set a name for the alarm.

**Alarm Type:** Choose NO or NC alarm type for the alarm.

**Step 2. Set effective time for Alarm Input by clicking corresponding "Edit".**

**Step 3. Set action for alarm input by clicking corresponding "Edit".**

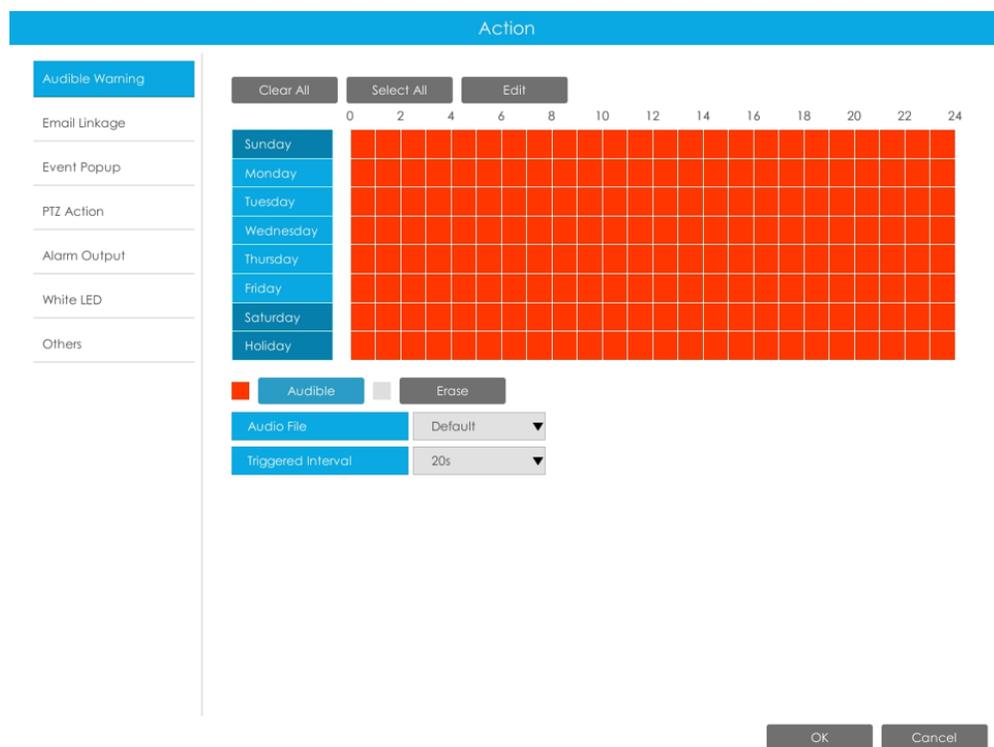
**Audible Warning:** NVR will trigger an audible warning when event is detected.

The user can set effective schedule as following two ways:

1. Select the operation type: Audible or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit record effective time manually.

**Audio File:** Users can select the audio file as needed for audible warning. The default is an audible beep.

**Triggered Interval:**The effective interval between two actions when event triggered.



**Email Linkage:**NVR will send an email to the address you set before.

The user can set effective schedule as following two ways:

1. Select the operation type, Email and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

**Triggered Interval:**The effective interval between two actions when event triggered.

**Picture Attached:** Select whether to attach picture when sending Emails. If you enable it, you will receive alarm emails with one event captured picture attached.

The screenshot shows the 'Action' configuration window. On the left is a sidebar with menu items: Audible Warning, Email Linkage (highlighted), Event Popup, PTZ Action, Alarm Output, White LED, and Others. The main area has a header 'Action' and three buttons: 'Clear All', 'Select All', and 'Edit'. Below these is a grid with days of the week (Sunday to Holiday) on the y-axis and hours (0 to 24) on the x-axis. A legend shows a red square for 'Email' and a grey square for 'Erase'. Below the legend are two dropdown menus: 'Triggered Interval' set to '20s' and 'Picture Attached' set to 'Disable'. At the bottom is a 'Trigger Channels Snapshot' section with a grid of checkboxes for channels 1 through 64. 'OK' and 'Cancel' buttons are at the bottom right.

**Event Popup:** Trigger alarm screen popup to full screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Device'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.

1. Select the operation type, Event Popup and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

**Triggered Interval:** The effective interval between two actions when event triggered.

Action

- Audible Warning
- Email Linkage
- Event Popup
- PTZ Action
- Alarm Output
- White LED
- Others

Clear All
Select All
Edit

	0	2	4	6	8	10	12	14	16	18	20	22	24
Sunday													
Monday													
Tuesday													
Wednesday													
Thursday													
Friday													
Saturday													
Holiday													

Event Popup
 
 Erase

Triggered Interval
20s

Trigger Channel Event Popup

Numbers of Channel
1

Channel
Select Channel

OK
Cancel

**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.

User can set effective schedule as following two ways:

1. Select the operation type: PTZ or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking Select All or Clear All to set or clear all time settings.
2. Click Edit to edit effective time manually.

And you can add PTZ Action by clicking .

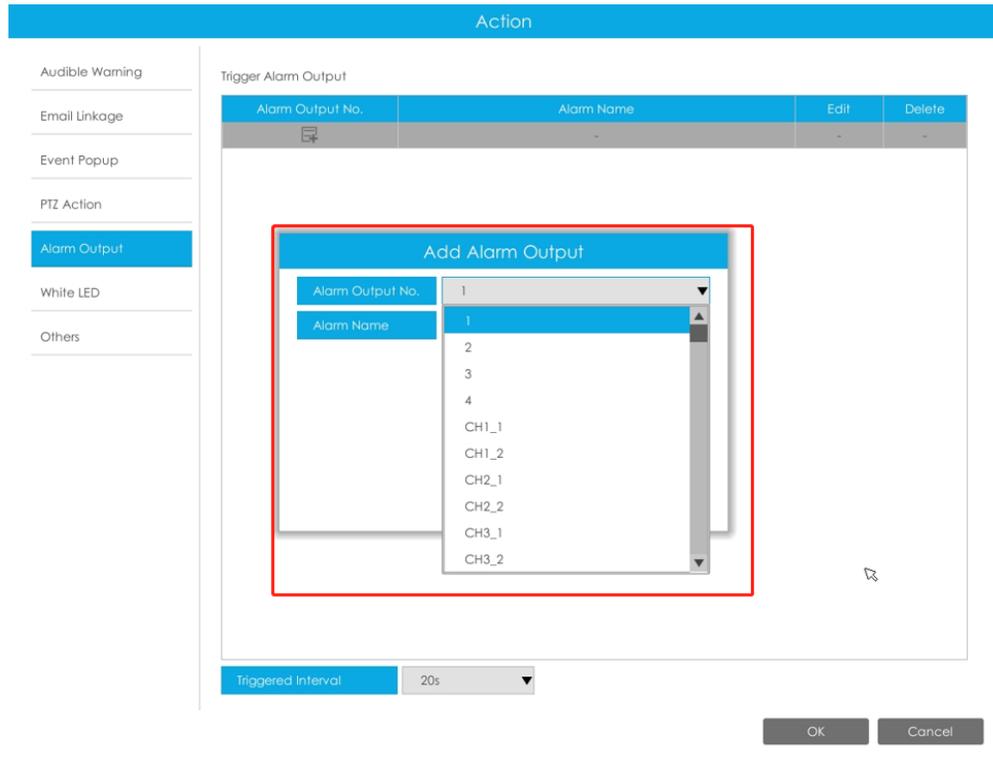
**Channel:** Select the channel which supports this function.

**Action Type:** Preset and Patrol are available.

**No.:** Select the number of Preset or Patrol.

**Alarm Output:** Trigger alarm output when alarm is triggered. For NVR Alarm Output, the relevant alarm output will be firstly listed, such as, 1, 2.etc. As for camera Alarm Output, it will display as CHx\_x (such as CH1\_1) according to the camera channel and corresponding alarm number.

**Triggered Interval:**The effective interval between two actions when event triggered.



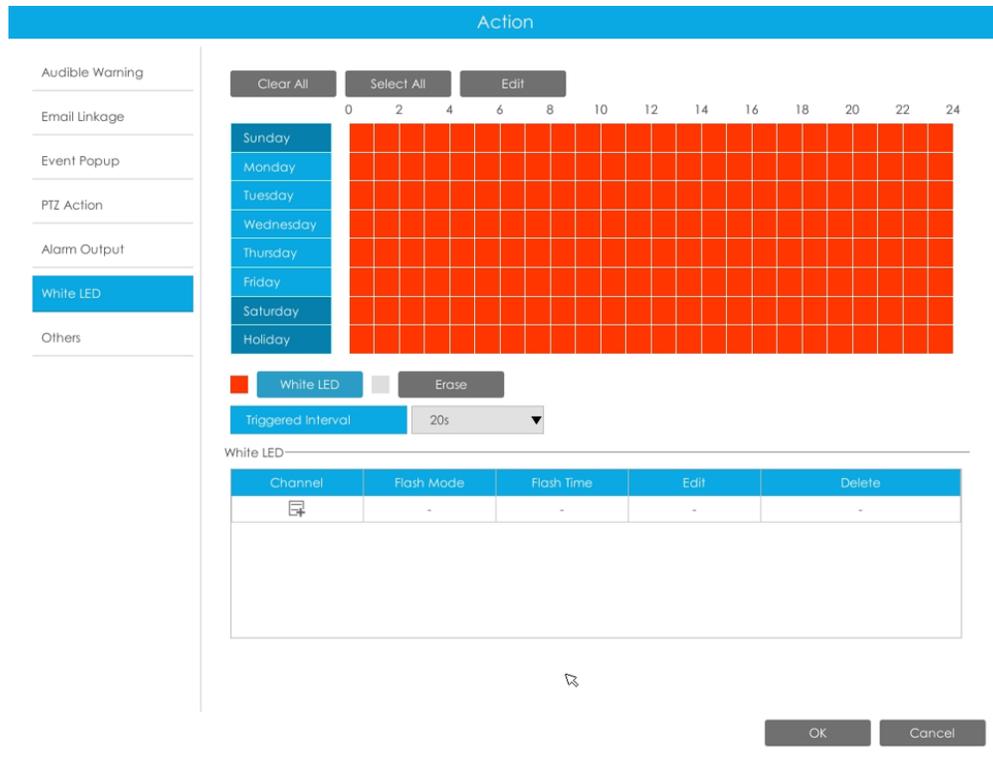
**White LED:**Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

User can set effective schedule as following two ways:

1. Select the operation type, White LED and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

**Triggered Interval:**The effective interval between two actions when event triggered.



White LED

Channel	Flash Mode	Flash Time	Edit	Delete
	-	-	-	-

And you can add White LED by clicking .



**Channel:** Select the channel which supports this function.

**Flash Mode:** Twinkle and Always are available.

**Flash Time:** Set the time for White LED flashing. When the Flash Mode is Twinkle, the range of Flash Time is 1~10 and the default value is 3. When the Flash Mode is Always, the range of Flash Time is 1~60 and the default value is 5.

**Others:** Trigger selected channels to record when alarm is triggered.

Action

Audible Warning

Email Linkage

Event Popup

PTZ Action

Alarm Output

White LED

Others

Trigger Channels Record

All

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16
<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24
<input type="checkbox"/> 25	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30	<input type="checkbox"/> 31	<input type="checkbox"/> 32
<input type="checkbox"/> 33	<input type="checkbox"/> 34	<input type="checkbox"/> 35	<input type="checkbox"/> 36	<input type="checkbox"/> 37	<input type="checkbox"/> 38	<input type="checkbox"/> 39	<input type="checkbox"/> 40
<input type="checkbox"/> 41	<input type="checkbox"/> 42	<input type="checkbox"/> 43	<input type="checkbox"/> 44	<input type="checkbox"/> 45	<input type="checkbox"/> 46	<input type="checkbox"/> 47	<input type="checkbox"/> 48
<input type="checkbox"/> 49	<input type="checkbox"/> 50	<input type="checkbox"/> 51	<input type="checkbox"/> 52	<input type="checkbox"/> 53	<input type="checkbox"/> 54	<input type="checkbox"/> 55	<input type="checkbox"/> 56
<input type="checkbox"/> 57	<input type="checkbox"/> 58	<input type="checkbox"/> 59	<input type="checkbox"/> 60	<input type="checkbox"/> 61	<input type="checkbox"/> 62	<input type="checkbox"/> 63	<input type="checkbox"/> 64

Trigger Channels Snapshot

All

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16
<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24
<input type="checkbox"/> 25	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30	<input type="checkbox"/> 31	<input type="checkbox"/> 32
<input type="checkbox"/> 33	<input type="checkbox"/> 34	<input type="checkbox"/> 35	<input type="checkbox"/> 36	<input type="checkbox"/> 37	<input type="checkbox"/> 38	<input type="checkbox"/> 39	<input type="checkbox"/> 40
<input type="checkbox"/> 41	<input type="checkbox"/> 42	<input type="checkbox"/> 43	<input type="checkbox"/> 44	<input type="checkbox"/> 45	<input type="checkbox"/> 46	<input type="checkbox"/> 47	<input type="checkbox"/> 48
<input type="checkbox"/> 49	<input type="checkbox"/> 50	<input type="checkbox"/> 51	<input type="checkbox"/> 52	<input type="checkbox"/> 53	<input type="checkbox"/> 54	<input type="checkbox"/> 55	<input type="checkbox"/> 56
<input type="checkbox"/> 57	<input type="checkbox"/> 58	<input type="checkbox"/> 59	<input type="checkbox"/> 60	<input type="checkbox"/> 61	<input type="checkbox"/> 62	<input type="checkbox"/> 63	<input type="checkbox"/> 64

Note: This page's configuration will not be copied into other channels.

**Step4: Copy alarm input settings to other input interface by clicking "Copy".**

Event Settings

↓ CPU 1% █ Memory 22%

Alarm Input

NVR Alarm Input

Camera Alarm Input

Alarm Input No.

Alarm Name

Alarm Type

Effective Time

Action

Note: Alarm Name will not be copied.

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

Alarm Input Copy

All

1  2  3  4  5  6  7  8

9  10  11  12  13  14  15  16



## 3.8.4 Alarm Output

### 3.8.4.1 NVR Alarm Output

The screenshot shows the 'Event Settings' page with the 'Alarm Output' tab selected. The interface includes a sidebar with navigation options: Home, Motion Detection, Video Loss, Alarm Input, Alarm Output (selected), Exception, and VCA. At the top right, there are system status indicators for CPU (2%) and Memory (22%). The main content area is titled 'Alarm Output' and contains two tabs: 'NVR Alarm Output' (active) and 'Camera Alarm Output'. Under the 'NVR Alarm Output' tab, there are four buttons for 'Alarm Output No.' (1, 2, 3, 4), with '1' selected. Below these are input fields for 'Alarm Name', a dropdown for 'Alarm Type' (set to 'NO'), and a dropdown for 'Delay' (set to '5s'). An 'Effective Time' field is present with an 'Edit' button. A note states: 'Note: Alarm Name will not be copied into other channels.' At the bottom right, there are 'Copy', 'Apply', and 'Back' buttons.

#### Step 1. Set Alarm output channel, Alarm Name, Alarm Type and Record Channels.

This close-up screenshot focuses on the configuration fields for the 'NVR Alarm Output' tab. It shows the 'Alarm Output No.' buttons (1, 2, 3, 4) with '1' selected. Below are the 'Alarm Name' text input field, the 'Alarm Type' dropdown menu (set to 'NO'), and the 'Delay' dropdown menu (set to '5s').

**Alarm Output No.:** The channel which will output the alarm signal.

**Alarm Name:** Set a name for the alarm.

**Alarm Type:** Choose NO or NC alarm type for the alarm.

**Delay:** The output time for alarm. If the output alarm lasts too long, you can select the Manually Clear to stop it.

#### Step 2. Set effective time for alarm output by clicking corresponding "Edit".

The user can set effective schedule as following two ways:

1. Select the operation type: Alarm Output or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking “Select All” or “Clear All” to set or clear all time settings.
2. Click “Edit” to edit record effective time manually.



**Step 3: Copy alarm output settings to other output interface by clicking “Copy”.**

### 3.8.4.2 Camera Alarm Output

Milesight NVRs support the upgrade of Milesight Cameras.

**Step 1. Set Alarm output channel, Alarm Name, Alarm Type and Record Channels.**

The screenshot displays the 'Event Settings' interface for 'Alarm Output'. The left sidebar contains navigation options: Home, Motion Detection, Video Loss, Alarm Input, Alarm Output (highlighted), Exception, and VCA. The main content area shows a grid of 64 channels (1-64) and a configuration form for the selected channel (Channel: 1, Name: CAM1). The form includes fields for Alarm Output No. (1), Alarm Name, Alarm Type (NC), Delay (5s), and an Effective Time field with an 'Edit' button. A 'Live View' button is at the bottom left, and 'Copy', 'Apply', and 'Back' buttons are at the bottom right.

**Alarm Output No.:** The alarm output number of the corresponding channel which has input signal.

**Alarm Name:** Set a name for the alarm.

**Alarm Type:** Choose NO or NC alarm type for the alarm.

**Delay:** The output time for alarm. If the output alarm lasts too long, you can select the Manually Clear to stop it.

**Step 2. Set effective time for alarm output by clicking corresponding "Edit".**

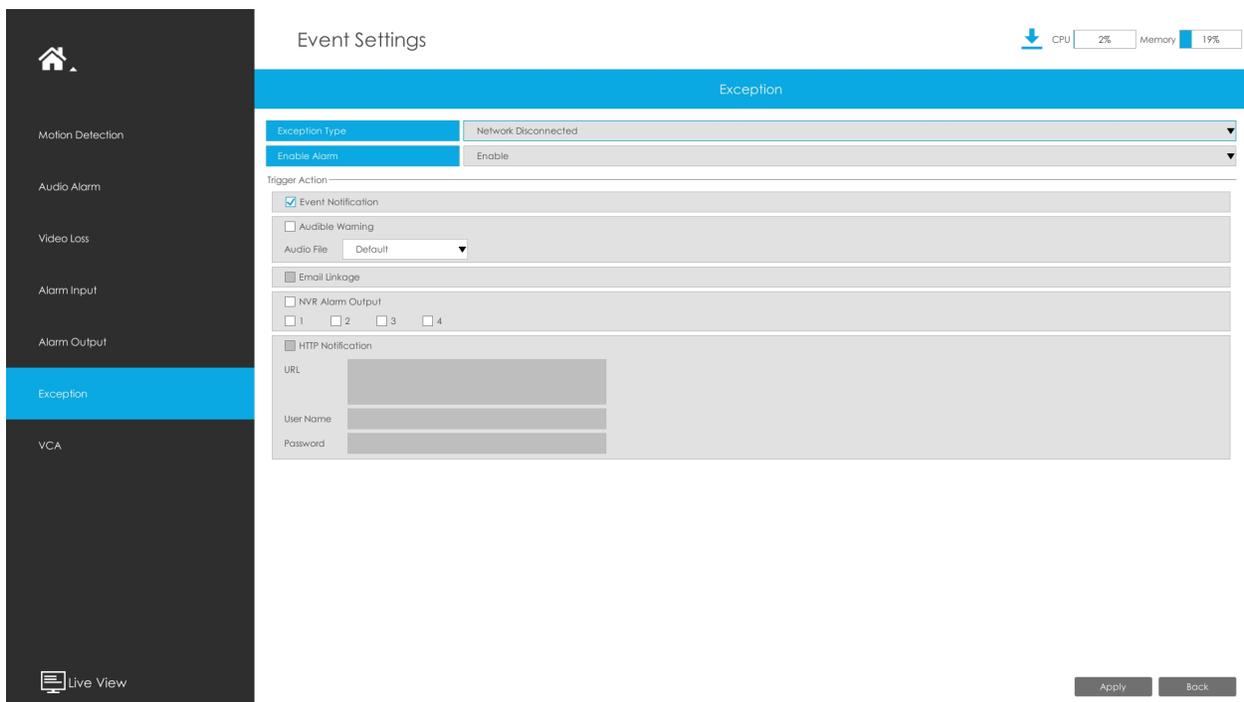
The user can set effective schedule as following two ways:

1. Select the operation type: Alarm Output or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking "Select All" or "Clear All" to set or clear all time settings.
2. Click "Edit" to edit record effective time manually.

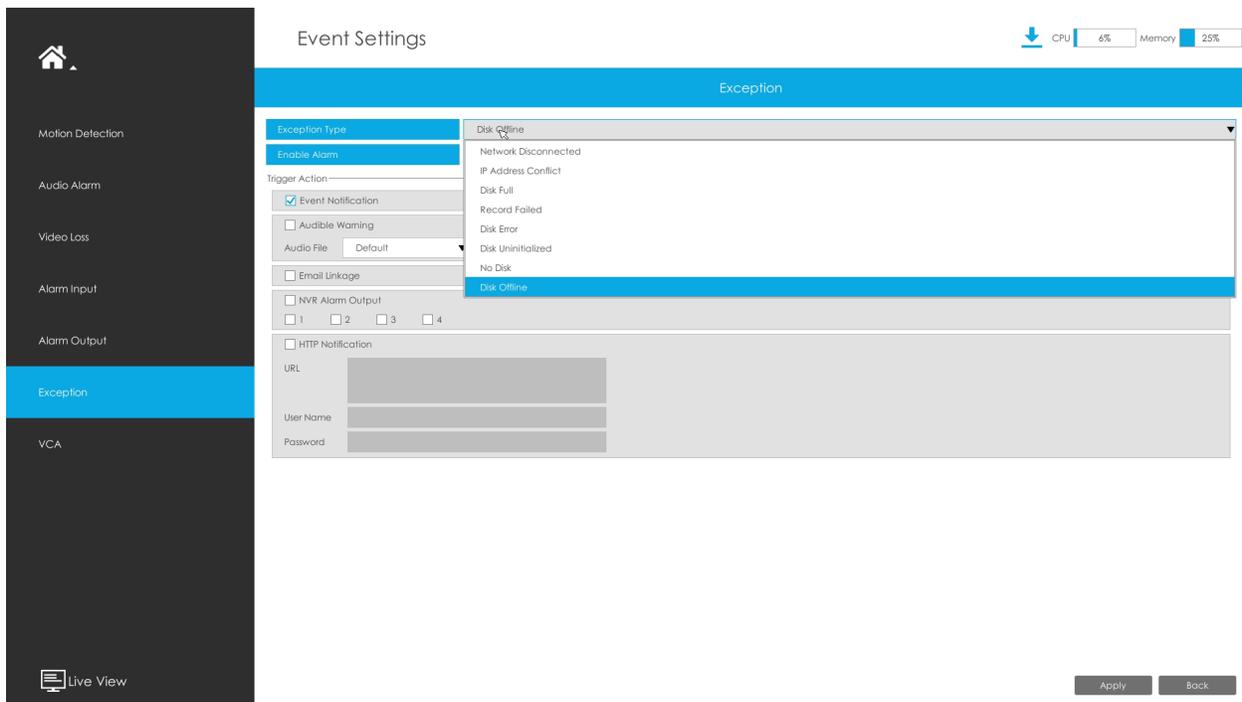


**Step 3: Copy alarm output settings to other output interface by clicking “Copy”.**

### 3.8.5 Exception



**Step1. Select Exception Type.**



**Network Disconnected:** Loss of network.

**IP Address Conflict:** The IP of the NVR within the same LAN is the same as that of other devices.

**Disk Full:** Disk full. It usually happens when recycle Mode is OFF.

**Record Failed:** Recording fails, including HDD Failed, HDD Full and so on.

**Disk Error:** Failed to recognize HDD.

**Disk Uninitialized:** Disk is uninitialized.

**No Disk:** There is no storage device.

**Step2. Select Action includes Event Notification, Audible Warning, Email Linkage and Alarm Output.**

**Event Notification:** You will get a notification in Live View if an alarm is triggered.

**Audible Warning:** NVR will trigger an audible warning. You can select the audio file as needed for audible warning. The default is an audible beep.

**Email Linkage:** An alarm Email will be sent if an alarm is triggered.

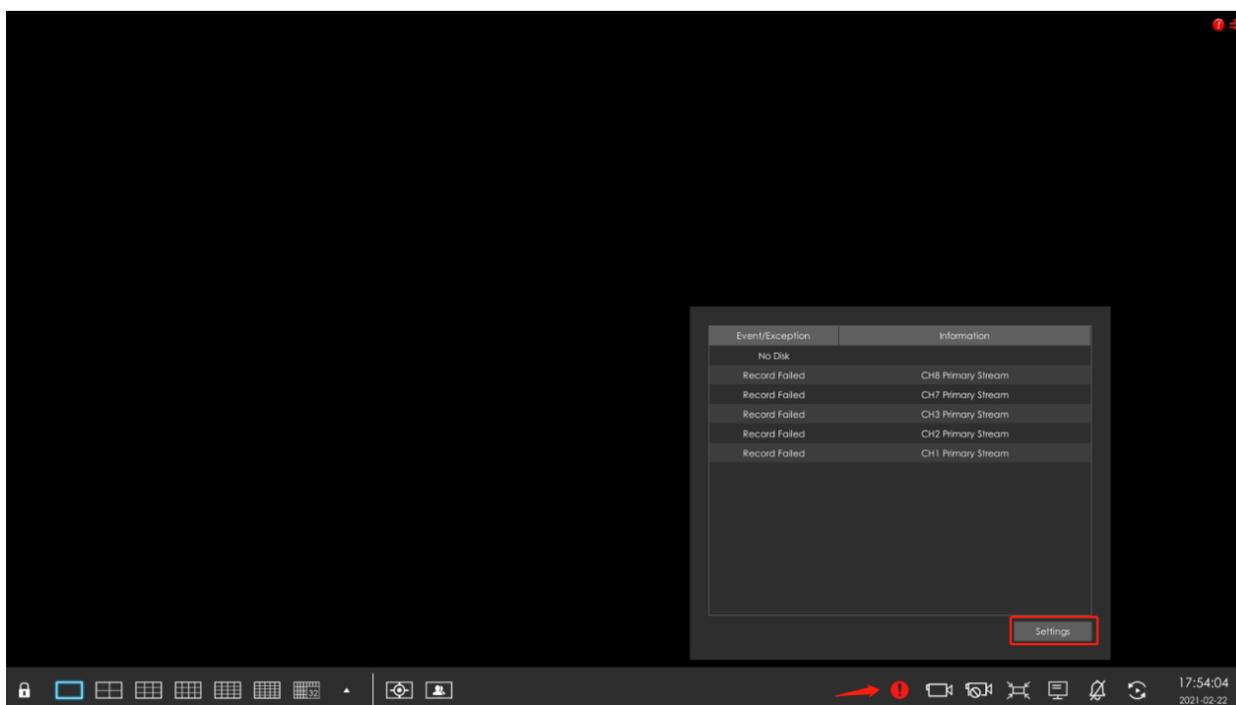
**Trigger Interval:** Set the interval to send Emails when detecting Record Failed Event (Only Record Failed Event supports to set trigger interval when sending emails).

**Alarm Output:** NVR will trigger the corresponding Alarm Output.

Trigger Action

<input checked="" type="checkbox"/> Event Notification
<input type="checkbox"/> Audible Warning
Audio File <span>Default</span>
<input type="checkbox"/> Email Linkage
<input type="checkbox"/> NVR Alarm Output
<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4

The prompt icon will automatically blink in the bottom bar when corresponding event is triggered. And it can be unlocked manually.



### 3.8.6 VCA

It uses Milesight Video Content Analysis technology which is applied in a wide range of domains including entertainment, health-care, retail, automotive, transport, home automation, safety and security. Milesight VCA functions provides advanced, accurate smart video analysis for Milesight network cameras. It enhances the performance of network cameras through 10 detection modes which are divided into basic function and advanced function, enabling the comprehensive surveillance function and quicker response of cameras to different monitoring scenes.

### 3.8.6.1 Region Entrance

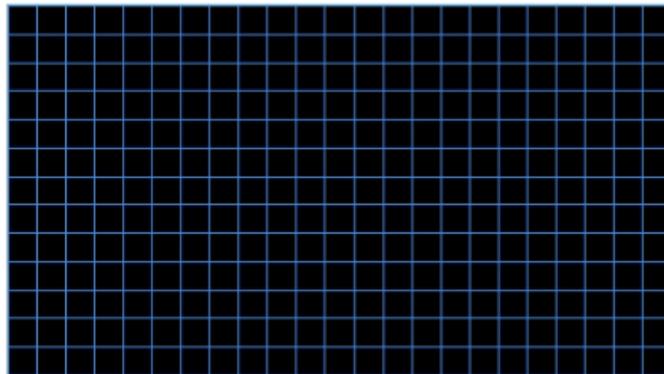
Region entrance helps to protect a specific area from potential threat of suspicious person's or object's entrance. An alarm will be triggered when objects enter the selected regions by enabling region entrance.

**Step1. Select Channel and Region No, then enable Region Entrance.**

Region No.	1
Region Entrance	<input checked="" type="checkbox"/> Enable

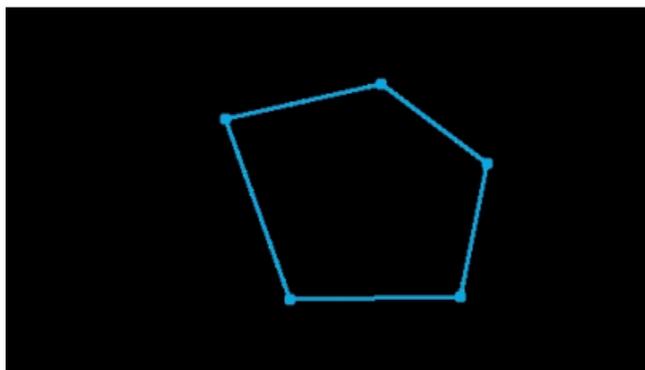
**Step 2. Set entrance detection region.**

You can click "Edit" button to edit the detection region. Also, you can edit the area by clicking "Edit" button. And you can set or clear all set region by directly clicking "Set All" or "Clear All".



Channel: 4      Name: CAM4

For cameras with the firmware version higher than 4X.7.0.78, it supports drawing polygon detection region for VCA function.



Channel: 2      Name: CAM2

### Step 3. Set the Object Size Limits.

You can edit Minimum Size and Maximum Size by clicking "Edit" button.

<input type="radio"/> Minimum Size(1x1~320x240)	3	X	3
<input type="radio"/> Maximum Size(1x1~320x240)	320	X	240

**Minimum Size:** The Min. Size means that only if the object size is bigger than the frame, the settings for Region Entrance will take effect.

**Maximum Size:** The Max. Size means the opposite, only if the object size is smaller than the frame you drew on the screen, the settings for Region Entrance will take effect.

### Step4. Set Sensitivity.

The sensitivity can be configured to detect various movement according to different requirements. When the level of sensitivity is low, slight movement won't trigger the alarm.

Sensitivity

5

### Step5. Select the Detection Object.

Human or Vehicle or both are selected as the detection object according to the need. Only the selected detection object can trigger the alarm.

Detection Object

 Human Vehicle

#### Note:

1. Make sure your camera's version is 4X.7.0.77 or above, which supports the human/vehicle detection object.
2. Make sure your camera model is MS-CXXXX-XXC, which supports the human/vehicle detection object.

### Step6. Set Effective Time of region entrance by clicking "Edit".

NVR receives the alarm when effective time has been set. It will be more convenient by clicking "Select All" or "Clear All" to set or clear all time settings.

Effective Time

Clear All
Select All
Edit

	0	2	4	6	8	10	12	14	16	18	20	22	24
Sunday													
Monday													
Tuesday													
Wednesday													
Thursday													
Friday													
Saturday													
Holiday													

Effective Time

Erase

OK
Cancel

### Step 7. Set Action for region entrance alarm by clicking "Edit".

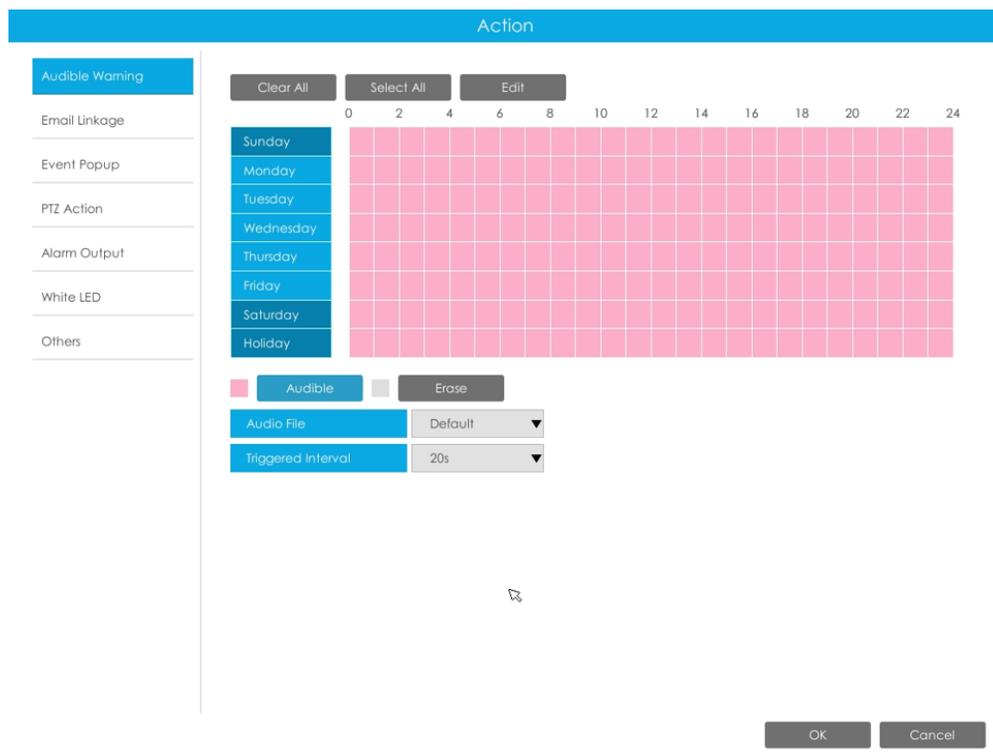
**Audible Warning:**NVR will trigger an audible warning when event is detected.

The user can set effective schedule as following two ways:

1. Select the operation type: Audible or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit record effective time manually.

**Audio File:** Users can select the audio file as needed for audible warning. The default is an audible beep.

**Triggered Interval:**The effective interval between two actions when event triggered.



**Email Linkage:**NVR will send an email to the address you set before.

The user can set effective schedule as following two ways:

1. Select the operation type, Email and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

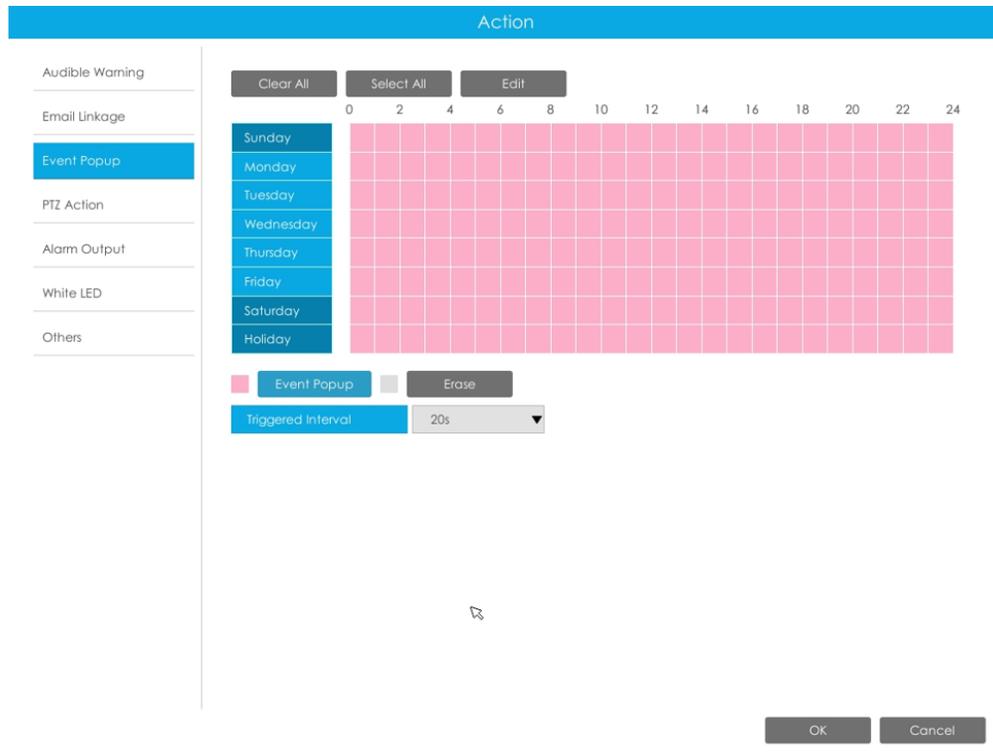
**Triggered Interval:**The effective interval between two actions when event triggered.

**Picture Attached:** Select whether to attach picture when sending Emails. If you enable it, you will receive alarm emails with one event captured picture attached.

**Event Popup:** Trigger alarm screen popup to full screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Device'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.

1. Select the operation type, Event Popup and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

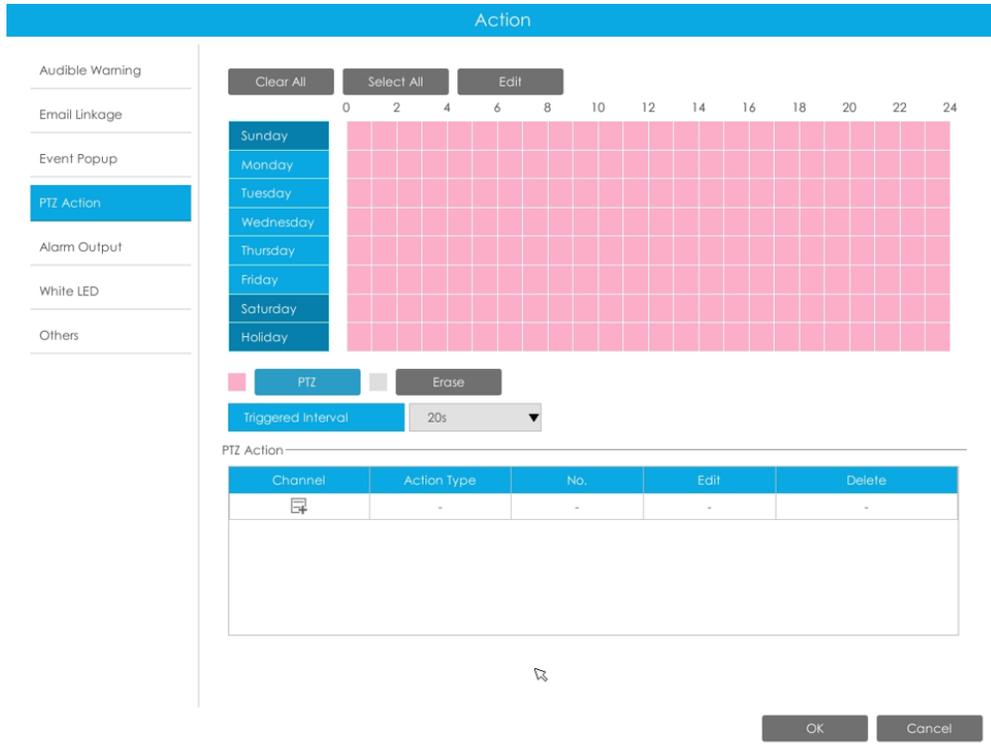
**Triggered Interval:** The effective interval between two actions when event triggered.



**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.

User can set effective schedule as following two ways:

1. Select the operation type: PTZ or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.



And you can add PTZ Action by clicking .



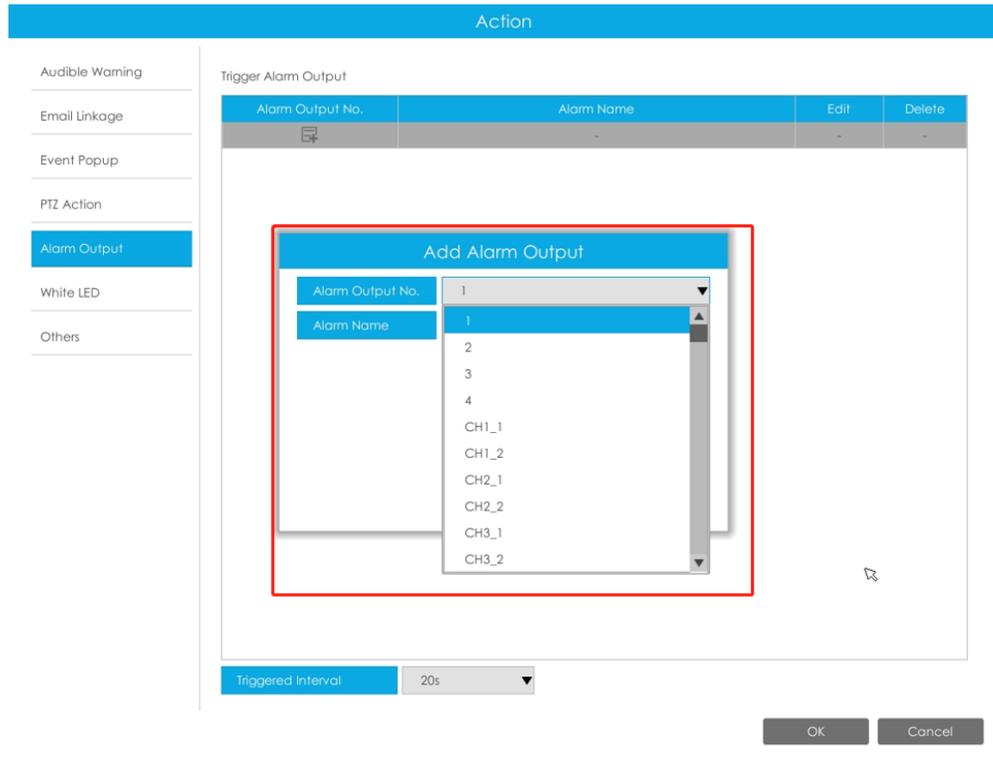
**Channel:** Select the channel which supports this function.

**Action Type:** Preset and Patrol are available.

**No.:** Select the number of Preset or Patrol.

**Alarm Output:** Trigger alarm output when alarm is triggered. For NVR Alarm Output, the relevant alarm output will be firstly listed, such as, 1, 2.etc. As for camera Alarm Output, it will display as CHx\_x (such as CH1\_1) according to the camera channel and corresponding alarm number.

**Triggered Interval:**The effective interval between two actions when event triggered.



**White LED:**Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

User can set effective schedule as following two ways:

1. Select the operation type, White LED and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
2. Click **Edit** to edit effective time manually.

**Triggered Interval:**The effective interval between two actions when event triggered.

And you can add White LED by clicking .

**Channel:** Select the channel which supports this function.

**Flash Mode:** Twinkle and Always are available.

**Flash Time:** Set the time for White LED flashing. When the Flash Mode is Twinkle, the range of Flash Time is 1~10 and the default value is 3. When the Flash Mode is Always, the range of Flash Time is 1~60 and the default value is 5.

**Others:** Trigger selected channels to record when alarm is triggered.

Action

Audible Warning

Email Linkage

Event Popup

PTZ Action

Alarm Output

White LED

Others

Trigger Channels Record

All

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16
<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24
<input type="checkbox"/> 25	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30	<input type="checkbox"/> 31	<input type="checkbox"/> 32
<input type="checkbox"/> 33	<input type="checkbox"/> 34	<input type="checkbox"/> 35	<input type="checkbox"/> 36	<input type="checkbox"/> 37	<input type="checkbox"/> 38	<input type="checkbox"/> 39	<input type="checkbox"/> 40
<input type="checkbox"/> 41	<input type="checkbox"/> 42	<input type="checkbox"/> 43	<input type="checkbox"/> 44	<input type="checkbox"/> 45	<input type="checkbox"/> 46	<input type="checkbox"/> 47	<input type="checkbox"/> 48
<input type="checkbox"/> 49	<input type="checkbox"/> 50	<input type="checkbox"/> 51	<input type="checkbox"/> 52	<input type="checkbox"/> 53	<input type="checkbox"/> 54	<input type="checkbox"/> 55	<input type="checkbox"/> 56
<input type="checkbox"/> 57	<input type="checkbox"/> 58	<input type="checkbox"/> 59	<input type="checkbox"/> 60	<input type="checkbox"/> 61	<input type="checkbox"/> 62	<input type="checkbox"/> 63	<input type="checkbox"/> 64

Trigger Channels Snapshot

All

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16
<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24
<input type="checkbox"/> 25	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30	<input type="checkbox"/> 31	<input type="checkbox"/> 32
<input type="checkbox"/> 33	<input type="checkbox"/> 34	<input type="checkbox"/> 35	<input type="checkbox"/> 36	<input type="checkbox"/> 37	<input type="checkbox"/> 38	<input type="checkbox"/> 39	<input type="checkbox"/> 40
<input type="checkbox"/> 41	<input type="checkbox"/> 42	<input type="checkbox"/> 43	<input type="checkbox"/> 44	<input type="checkbox"/> 45	<input type="checkbox"/> 46	<input type="checkbox"/> 47	<input type="checkbox"/> 48
<input type="checkbox"/> 49	<input type="checkbox"/> 50	<input type="checkbox"/> 51	<input type="checkbox"/> 52	<input type="checkbox"/> 53	<input type="checkbox"/> 54	<input type="checkbox"/> 55	<input type="checkbox"/> 56
<input type="checkbox"/> 57	<input type="checkbox"/> 58	<input type="checkbox"/> 59	<input type="checkbox"/> 60	<input type="checkbox"/> 61	<input type="checkbox"/> 62	<input type="checkbox"/> 63	<input type="checkbox"/> 64

Note: This page's configuration will not be copied into other channels.

**Step8. Click [Copy] to copy the same configuration to other channels.**

### 3.8.6.2 Region Exiting

Region exiting is to make sure that any person or object won't exit the area that is being monitored. Any exit of people or objects will trigger an alarm.

The screenshot shows the 'Event Settings' page with the 'VCA' section selected. The 'Region Exiting' tab is active, displaying a grid of 16 regions. Region 5 is highlighted. Below the grid, a preview shows a blue polygon labeled 'Region1' on a black background. The configuration table below the preview is as follows:

Minimum Size (x1~320x240)	3	X	3
Maximum Size (x1~320x240)	320	X	240

The configuration panel on the right includes:

- Region No.: 1
- Region Exiting:  Enable
- Region: Finish, Set All, Delete All
- Object Size Limits: Edit
- Sensitivity: Slider set to 5
- Detection Object:  Human,  Vehicle
- Effective Time: Edit
- Action: Edit

Buttons at the bottom right: Copy, Apply, Back.

**Step1. Select Channel and Region No, then enable Region Exiting.**

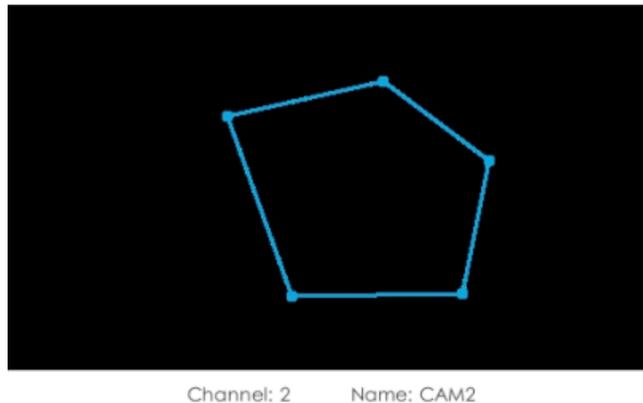
This close-up shows the configuration for Region No. set to 1 and Region Exiting checked and enabled.

**Step 2. Set exit detection region.**

You can click "Edit" button to edit the detection region. Also, you can edit the area by clicking "Edit" button. And you can set or clear all set region by directly clicking "Set All" or "Clear All".

The screenshot shows a video feed from Channel 4 (CAM4) with a blue grid overlay representing the detection region.

For cameras with the firmware version higher than 4X.7.0.78, it supports drawing polygon detection region for VCA function.



### Step 3. Set the Object Size Limits.

You can edit Minimum Size and Maximum Size by clicking "Edit" button.

<input type="radio"/> Minimum Size(1x1~320x240)	3	X	3
<input type="radio"/> Maximum Size(1x1~320x240)	320	X	240

**Minimum Size:** The Min. Size means that only if the object size is bigger than the frame, the settings for Region Entrance will take effect.

**Maximum Size:** The Max. Size means the opposite, only if the object size is smaller than the frame you drew on the screen, the settings for Region Entrance will take effect.

### Step4. Set Sensitivity.

The sensitivity can be configured to detect various movement according to different requirements. When the level of sensitivity is low, slight movement won't trigger the alarm.



### Step5. Select the Detection Object.

Human or Vehicle or both are selected as the detection object according to the need. Only the selected detection object can trigger the alarm.

Detection Object	<input checked="" type="checkbox"/> Human	<input checked="" type="checkbox"/> Vehicle
------------------	---	---

**Note:**

1. Make sure your camera's version is 4X.7.0.77 or above, which supports the human/vehicle detection object.
2. Make sure your camera model is MS-CXXXX-XXC, which supports the human/vehicle detection object.

**Step6. Set Effective Time of region entrance by clicking "Edit".**

NVR receives the alarm when effective time has been set. It will be more convenient by clicking "Select All" or "Clear All" to set or clear all time settings.



**Step 7. Set Action for region entrance alarm by clicking "Edit".**

For detailed settings of these actions, please refer to [Alarm Action \(page 231\)](#)

**Step8. Click [Copy] to copy the same configuration to other channels.**

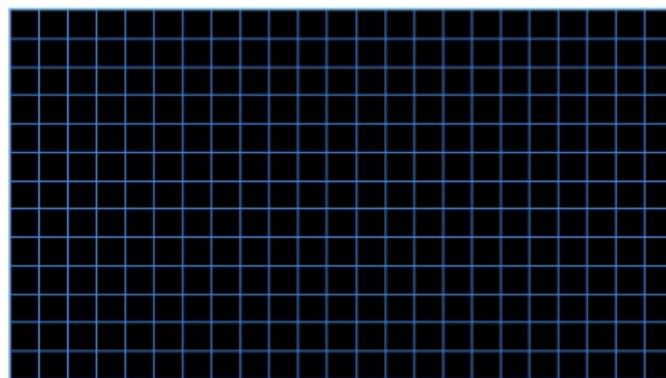
### 3.8.6.3 Advanced Motion Detection

Different from traditional motion detection, advanced motion detection can filter out “noise” such as lighting changes, natural tree movements, etc. When an object moves in the selected area, it will trigger alarm.

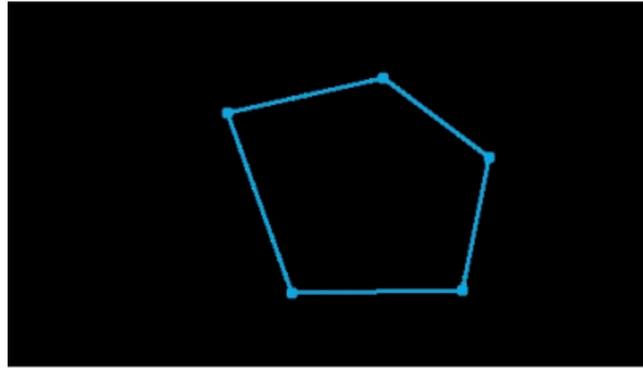
**Step1. Select Channel and Region No, then enable Advanced Motion Detection.**

**Step 2. Set advanced motion detection region.**

You can click "Edit" button to edit the detection region. Also, you can edit the area by clicking "Edit" button. And you can set or clear all set region by directly clicking "Set All" or "Clear All".



For cameras with the firmware version higher than 4X.7.0.78, it supports drawing polygon detection region for VCA function.



Channel: 2      Name: CAM2

### Step 3. Set the Object Size Limits.

You can edit Minimum Size and Maximum Size by clicking "Edit" button.

<input type="radio"/> Minimum Size(1x1~320x240)	3	X	3
<input type="radio"/> Maximum Size(1x1~320x240)	320	X	240

**Minimum Size:** The Min. Size means that only if the object size is bigger than the frame, the settings for Region Entrance will take effect.

**Maximum Size:** The Max. Size means the opposite, only if the object size is smaller than the frame you drew on the screen, the settings for Region Entrance will take effect.

### Step4. Set Sensitivity.

The sensitivity can be configured to detect various movement according to different requirements. When the level of sensitivity is low, slight movement won't trigger the alarm.

Sensitivity  5

### Step5. Select the Detection Object.

Human or Vehicle or both are selected as the detection object according to the need. Only the selected detection object can trigger the alarm.

Detection Object  Human  Vehicle

#### Note:

1. Make sure your camera's version is 4X.7.0.77 or above, which supports the human/vehicle detection object.

2. Make sure your camera model is MS-CXXXX-XXC, which supports the human/vehicle detection object.

### Step 6. Set Ignore Short-Lived Motion.

The motion within the set time will be ignored and won't trigger the alarm, making the detection more accurate and efficient.

Region No.	1
Advanced Motion Detection	<input checked="" type="checkbox"/> Enable

 **Note:** Make sure your camera's version is 4X.7.0.77 or above.

### Step7. Set Effective Time of region entrance by clicking "Edit".

NVR receives the alarm when effective time has been set. It will be more convenient by clicking "Select All" or "Clear All" to set or clear all time settings.

Effective Time

Clear All
Select All
Edit

	0	2	4	6	8	10	12	14	16	18	20	22	24
Sunday													
Monday													
Tuesday													
Wednesday													
Thursday													
Friday													
Saturday													
Holiday													

Effective Time

Erase

OK
Cancel

### Step 8. Set Action for advanced motion detection alarm by clicking "Edit".

For detailed settings of these actions, please refer to [Alarm Action \(page 231\)](#)

### Step9. Click [Copy] to copy the same configuration to other channels.

### 3.8.6.4 Tamper Detection

Tamper Detection is used to detect possible tampering like the camera being unfocused, obstructed or moved. This functionality alerts security staff immediately when any above-mentioned actions occur.

#### Step1.Select channel and enable Tamper Detection.

The screenshot displays the 'Event Settings' page for VCA. The left sidebar contains navigation options: Motion Detection, Video Loss, Alarm Input, Alarm Output, Exception, VCA (selected), and Live View. The main content area shows 'Event Settings' with system status (CPU 9%, Memory 20%) and a grid of event categories. The 'Tamper Detection' category is selected, showing a grid of 16 regions. Region 5 is highlighted. Below the grid, the channel is identified as 'Channel: 5' and 'Name: CAM5'. The configuration panel for Tamper Detection includes:
 

- Tamper Detection:**  Enable
- Sensitivity:** A slider set to 9.
- Effective Time:** Edit
- Action:** Edit

 At the bottom right, there are 'Copy', 'Apply', and 'Back' buttons.

#### Step 2. Set Sensitivity.

The sensitivity can be configured to detect various movements according to different requirements. When the level of sensitivity is low, slight movement won't trigger the alarm.



#### Step3. Set Effective Time of region entrance by clicking "Edit".

NVR receives the alarm when effective time has been set. It will be more convenient by clicking "Select All" or "Clear All" to set or clear all time settings.



**Step 4. Set Action for tamper detection alarm by clicking "Edit".**

For detailed settings of these actions, please refer to [Alarm Action \(page 231\)](#).

**Step5. Click [Copy] to copy the same configuration to other channels.**

### 3.8.6.5 Line Crossing

Line Crossing detection is designed to work in most indoor and outdoor environment. An event will be triggered every time when the camera detects objects crossing a defined virtual line.

Settings steps are shown as follows:

The screenshot shows the 'Event Settings' page for VCA. The 'Line Crossing' tab is selected. A video preview window shows a yellow line on a black background with red arrows indicating direction. Below the preview, there are settings for 'Minimum Size' and 'Maximum Size'. To the right, a configuration table is shown:

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

Below the table, the configuration for line 1 is shown:

- Line: 1
- Line Crossing:  Enable
- Direction: A->B
- Line Edit: Edit
- Object Size Limits: Edit
- Sensitivity: 5
- Detection Object:  Human,  Vehicle
- Effective Time: Edit
- Action: Edit

At the bottom right, there are 'Copy', 'Apply', and 'Back' buttons.

**Step 1. Select Channel and enable Line Crossing.**

**Step 2. Choose detection line number.**

Line Crossing

Line 1

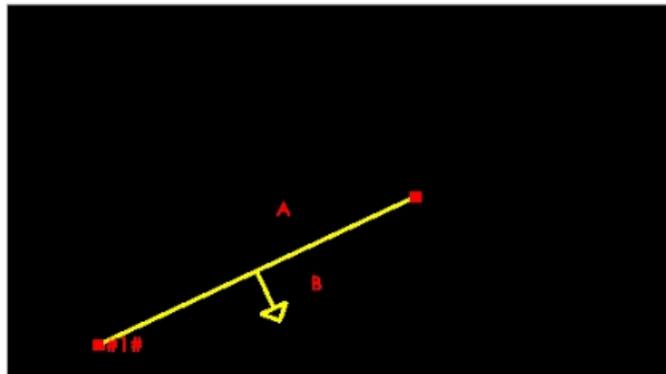
**Step 3. Define its direction.**

It allows to set up to four lines at a time. There are three direction modes to choose for triggering alarm. "A-->B" means when there is any object crossing the line from the "A" side to the "B" side, the alarm will be triggered. "B-->A" vice versa. "A <-> B" means that the alarm will be triggered when objects cross line from either side.

Direction A->B

**Step 4. Draw detection lines.**

And you can edit the line by clicking "Edit" button.



Channel: 4      Name: CAM4

**Note:** Each Line Crossing configuration works separately and do not affect each other.

### Step 5. Set the Object Size Limits.

You can edit Minimum Size and Maximum Size by clicking "Edit" button.

<input type="radio"/> Minimum Size(1x1~320x240)	3	X	3
<input type="radio"/> Maximum Size(1x1~320x240)	320	X	240

**Minimum Size:** The Min. Size means that only if the object size is bigger than the frame, the settings for Region Entrance will take effect.

**Maximum Size:** The Max. Size means the opposite, only if the object size is smaller than the frame you drew on the screen, the settings for Region Entrance will take effect.

### Step 6. Set Sensitivity.

The sensitivity can be configured to detect various movement according to different requirements. When the level of sensitivity is low, slight movement won't trigger the alarm.

Sensitivity

### Step 7. Select the Detection Object.

Human or Vehicle or both are selected as the detection object according to the need. Only the selected detection object can trigger the alarm.

Detection Object  Human  Vehicle

**Note:**

1. Make sure your camera's version is 4X.7.0.77 or above, which supports the human/vehicle detection object.

2. Make sure your camera model is MS-CXXXX-XXC, which supports the human/vehicle detection object.

**Step8. Set Effective Time of region entrance by clicking "Edit".**

NVR receives the alarm when effective time has been set. It will be more convenient by clicking "Select All" or "Clear All" to set or clear all time settings.



**Step 9. Set Action for line crossing alarm by clicking "Edit".**

For detailed settings of these actions, please refer to [Alarm Action \(page 231\)](#).

**Step10. Click [Copy] to copy the same configuration to other channels.**

### 3.8.6.6 Loitering

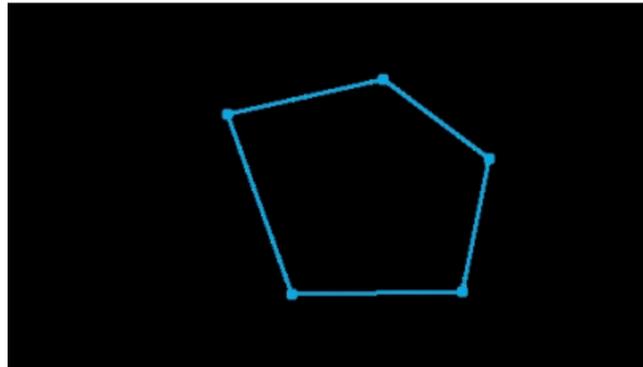
When objects are loitering in a defined area for a specific period of time, it would trigger an alarm.

**Step1. Select Channel and Region No, then enable Loitering.**

**Step 2. Set Loitering detected region.**

You can click "Edit" button to edit the detection region. Also, you can edit the area by clicking "Edit" button. And you can set or clear all set region by directly clicking "Set All" or "Clear All".

For cameras with the firmware version higher than 4X.7.0.78, it supports drawing polygon detection region for VCA function.



Channel: 2      Name: CAM2

### Step 3. Set the Object Size Limits.

You can edit Minimum Size and Maximum Size by clicking "Edit" button.

<input type="radio"/> Minimum Size(1x1~320x240)	3	X	3
<input type="radio"/> Maximum Size(1x1~320x240)	320	X	240

**Minimum Size:** The Min. Size means that only if the object size is bigger than the frame, the settings for Region Entrance will take effect.

**Maximum Size:** The Max. Size means the opposite, only if the object size is smaller than the frame you drew on the screen, the settings for Region Entrance will take effect.

### Step 4. Set Min. Loitering Time.

After setting minimum loitering time from 3s to 1800s, any objects loitering in the selected area over the minimum loitering time will trigger the alarm.

Min. Loitering Time (3-300s)	7
------------------------------	---

### Step5. Select the Detection Object.

Human or Vehicle or both are selected as the detection object according to the need. Only the selected detection object can trigger the alarm.

Detection Object	<input checked="" type="checkbox"/> Human	<input checked="" type="checkbox"/> Vehicle
------------------	---	---

 **Note:**

- Make sure your camera's version is 4X.7.0.77 or above, which supports the human/vehicle detection object.
- Make sure your camera model is MS-CXXXX-XXC, which supports the human/vehicle detection object.

**Step6. Set Effective Time of region entrance by clicking "Edit".**

NVR receives the alarm when effective time has been set. It will be more convenient by clicking "Select All" or "Clear All" to set or clear all time settings.



**Step 7. Set Action for loitering alarm by clicking "Edit".**

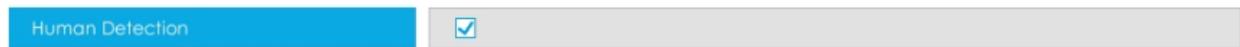
For detailed settings of these actions, please refer to [Alarm Action \(page 231\)](#).

**Step8. Click [Copy] to copy the same configuration to other channels.**

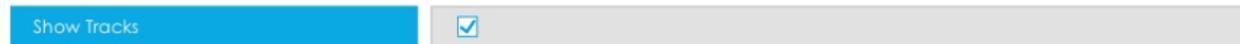
### 3.8.6.7 Human Detection

Human detection is used for figuring out whether an object is a human or not.

### Step 1. Select channel and enable Human Detection.

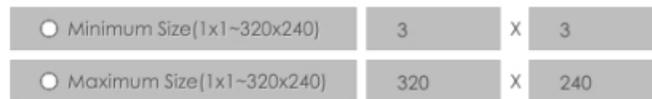


### Step 2. Enable Show Tracks or not.



### Step 3. Set the Object Size Limits.

You can edit Minimum Size and Maximum Size by clicking "Edit" button.



**Minimum Size:** The Min. Size means that only if the object size is bigger than the frame, the settings for Region Entrance will take effect.

**Maximum Size:** The Max. Size means the opposite, only if the object size is smaller than the frame you drew on the screen, the settings for Region Entrance will take effect.

### Step 4. Set Effective Time of human detection by clicking "Edit".

NVR receives the alarm when effective time has been set. It will be more convenient by clicking "Select All" or "Clear All" to set or clear all time settings.



**Step 5. Set Action for human detection alarm by clicking "Edit".**

For detailed settings of these actions, please refer to [Alarm Action \(page 231\)](#).

**Step 6. Click [Copy] to copy the same configuration to other channels.**

### 3.8.6.8 Object Left/Removed

Object Left can detect and prompt an alarm if an object is left in a pre-defined region. Object Removed can detect and prompt an alarm if an object is removed from a pre-defined region.

 **Note:** You need to upgrade the NVR to V7x.9.0.4-r2 or above to support this function.

**Step1. Select Channel and Region No, then enable Object Left or Object Removed (Or you can enable both features at the same time).**

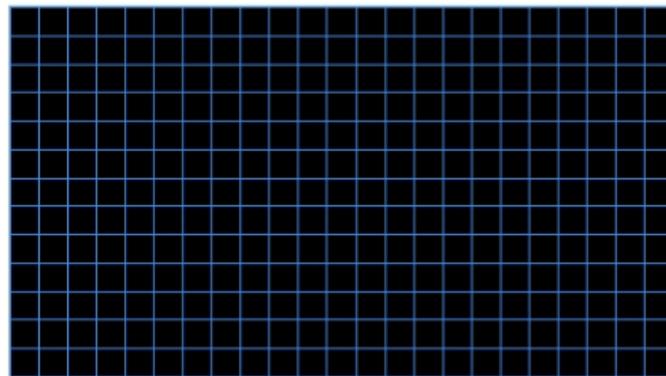
The screenshot shows the 'Event Settings' page with the 'VCA' tab selected. The left sidebar contains navigation options: Motion Detection, Video Loss, Alarm Input, Alarm Output, Exception, and VCA. The main area displays a video feed for Channel 5 (CAM5) with a blue rectangular region labeled 'Region 1' overlaid. Below the video feed are two radio buttons for 'Minimum Size [1x1-320x240]' (selected) and 'Maximum Size [1x1-320x240]'. To the right is a configuration table for Region 1:

Region No.	1
Object Left	<input checked="" type="checkbox"/> Enable
Object Removed	<input checked="" type="checkbox"/> Enable
Region	Edit
Object Size Limits	Edit
Min.Time(5-1800s)	5
Sensitivity	10
Effective Time	Edit
Action	Edit

At the bottom right, there are 'Copy', 'Apply', and 'Back' buttons.

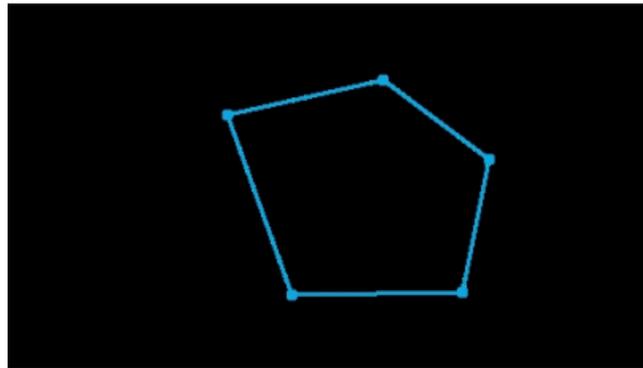
## Step 2. Set Loitering detected region.

You can click "Edit" button to edit the detection region. Also, you can edit the area by clicking "Edit" button. And you can set or clear all set region by directly clicking "Set All" or "Clear All".



Channel: 4 Name: CAM4

For cameras with the firmware version higher than 4X.7.0.78, it supports drawing polygon detection region for VCA function.



Channel: 2      Name: CAM2

### Step 3. Set the Object Size Limits.

You can edit Minimum Size and Maximum Size by clicking "Edit" button.

<input type="radio"/> Minimum Size(1x1~320x240)	3	X	3
<input type="radio"/> Maximum Size(1x1~320x240)	320	X	240

**Minimum Size:** The Min. Size means that only if the object size is bigger than the frame, the settings for Region Entrance will take effect.

**Maximum Size:** The Max. Size means the opposite, only if the object size is smaller than the frame you drew on the screen, the settings for Region Entrance will take effect.

### Step 4. Set Min. Time.

After setting minimum time from 3s to 1800s, any objects are left in the selected area or removed from the selected area over the minimum time will trigger the alarm.

Region No.	1
Object Left	<input checked="" type="checkbox"/> Enable
Object Removed	<input checked="" type="checkbox"/> Enable

### Step 5. Set Sensitivity.

The sensitivity can be configured to detect various movement according to different requirements. When the level of sensitivity is low, slight movement won't trigger the alarm.

Sensitivity  5

### Step 4. Set Effective Time of Object Left/Removed by clicking "Edit".

NVR receives the alarm when effective time has been set. It will be more convenient by clicking "Select All" or "Clear All" to set or clear all time settings.



**Step 5. Set Action for Object Left/Removed alarm by clicking "Edit".**

For detailed settings of these actions, please refer to [Alarm Action \(page 231\)](#).

Step 6. Click [Copy] to copy the same configuration to other channels.

## 3.9 Settings

### 3.9.1 General

#### Date & Time

It is for setting up the Time parameters of NVR, including Time Zone, Daylight Saving Time, Time Setting, Server Address, NTP Sync, Interval, etc.

System Settings

CPU 4% Memory 23%

General

Date & Time

Item	Value
Current System Time	2022-10-17 23:00:22
Time Zone	((UTC-08:00) United States - Pacific Time)
Daylight Saving Time	Auto
Time Setting	NTP Server
Server Address	pool.ntp.org
NTP Sync	Enable
Interval	1440 (1-43200min)

Apply Back

**Server Address:**Support to Enter the address of NTP Server manually.

**NTP Sync:**Set the time of NVR to synchronize with the NTP server.

**Interval:**The interval for synchronizing with NTP server can be set and support NTP Interval ranging from 1 to 43200 minutes.

## Device

It is for setting up the general parameters of NVR, including Device Name, HDMI/VGA Resolution, Language, HDMI2/VGA2, HDMI Audio, Audio Out, etc.

**Device Name:** Set the device name.

**HDMI1/VGA1Resolution:** Set the output resolution of HDMI1/VGA1 port.

**HDMI2/VGA2:** Enable it to use HDMI2/VGA2 port.

**HDMI2/VGA2Resolution:** Set the output resolution of HDMI2/VGA2 port.

**Quick Screen Switch:** After enabling Quick Screen Switch function, you can double-click the mouse to switch the main-screen and sub-screen control. The main-screen and sub-screen can be configured separately and have their own display settings which enable you to have different liveview or playback display layouts simultaneously, offering a more efficient and explicit surveillance.

**HDMI1 Audio:** Enable it to use HDMI1 Audio.

**Audio Out:** Enable Audio Out.

**Event Popup:** Select the port to display the alarm popup.

**Event Popup Duration Time:** The display duration time for the alarm popup screen. If users select “Manually Clear”, the live view will exit the alarm screen popup status only after manual operation.

**Occupancy Live View:** Select the port to display the Occupancy Live View.

**Mouse Pointer Speed Level:** Adjust the speed of mouse on monitor. From 1 to 7, there are 7 levels to choose. The default level is 5.

**Table 14.**

Level	Adjusted speed
1	0.2 times the current speed
2	0.3 times the current speed
3	0.5 times the current speed
4	the current speed
5(Default)	2 times the current speed
6	3 times the current speed
7	4 times the current speed

**Boot Wizard:** Enable it to pop up boot wizard after rebooting.

**Boot Authentication:** Enable it to authenticate the user after rebooting.

**Menu Authentication:** Enable it to authenticate the user every time when you click menu.

**Settings Page Timeout:** The interface will switch to Live View automatically according to the time you set.

**Auto Logout:** Users will log out automatically when there is no operation within the set time period.

**Display When Logout:** Set display mode of the live view interface when users log out. There are three options: Regular Mode, Occupancy Mode and Target Mode.

The screenshot shows the 'System Settings' interface for an NVR. The 'General' tab is selected. The settings are organized into two sections: 'Date & Time' and 'Device'. The 'Device' section contains the following settings:

Setting	Value
Device Name	NVR
HDMI/VGA Output	Synchronous
HDMI/VGA Resolution	1920 x 1080 / 60Hz
Quick Screen Switch	Disable
HDMI Audio	Enable
Audio Out	Enable
Event Popup	HDMI
Event Popup Duration Time	8s
Occupancy Live View	HDMI
Mouse Pointer Speed Level	S(Default)
Wizard	Start
Boot Wizard	Enable
Boot Authentication	Enable
Menu Authentication	Disable
Settings Page Timeout	Disable
Auto Logout	Disable
Display When Logout	Edit
Language	English

At the bottom right of the settings area, there are 'Apply' and 'Back' buttons. The sidebar on the left includes a 'Live View' button at the bottom.

**Note:** Not all NVR supports all the configurations above. For example, only NVR 8000 Series supports HDMI2/VGA2, Event Popup options and switching between the main-screen and sub-screen.

### 3.9.2 Layout



### Step 1. Select Screen Output.

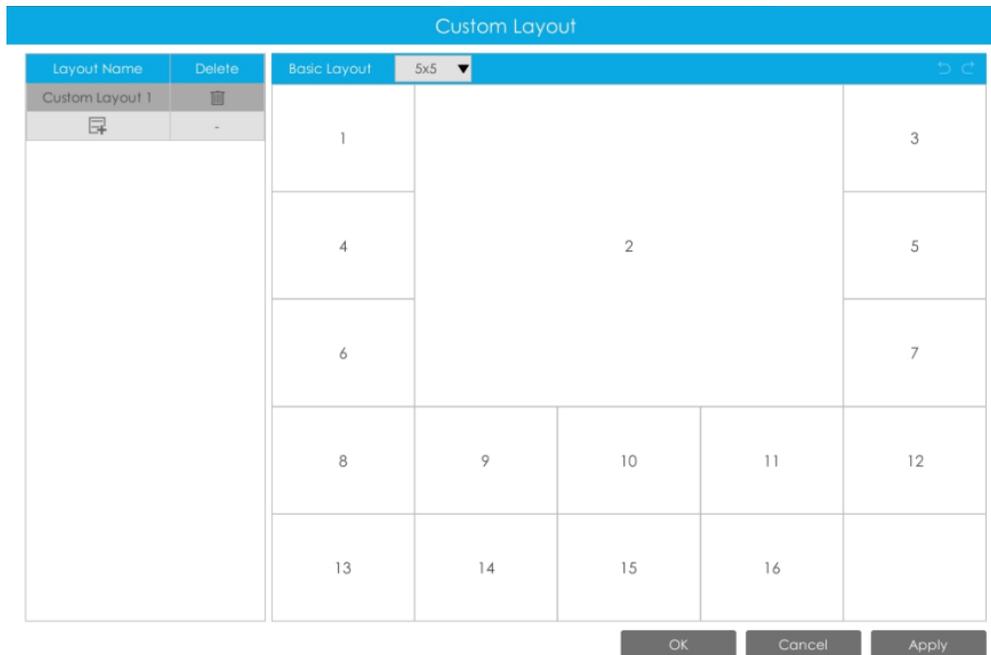
You can configure layout for different Screen Output separately to meet the needs of monitoring different scenarios through different Screen Output.

 **Note:** Only NVR 7000 Series and NVR 8000 Series support this function.

### Step 2. Select a layout format.



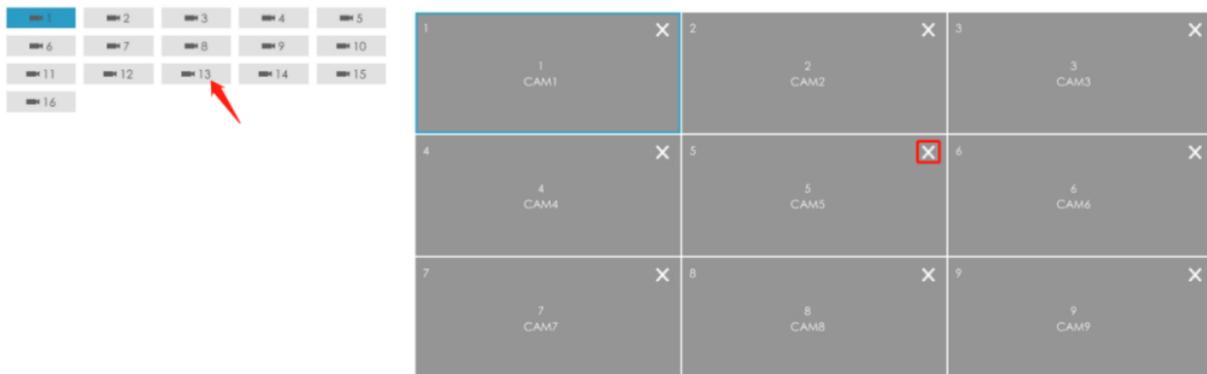
You can select 1/4/8/9/12/1+11/2+10/16 or Custom Layout. If you choose Custom Layout, please click  button, then click  button to add a new custom layout. Then drag the screen to customize the layout, click the "Apply" button and then click "OK" to save the custom layout.



 **Note:** You can create a custom layout based on a basic layout, and it supports up to 5\*5 basic layout.

**Step 3. Set desired channels.**

Click  to close a channel. Select a window and then select a desired channel to add in. Click "Apply" to save the settings or click "Reset" to reset the layout.



**Step 4. Select whether to apply settings of current layout to others.**



### 3.9.3 Network

#### 3.9.3.1 Basic

##### **Working Mode**

It supports three working modes of Multi-address, Load Balance and Net Fault-tolerance.

For Multi-address mode, you can set LAN1 or LAN2 as the default route according to the needs.

 **Note:** Only Pro NVR 7000 Series and Pro NVR 8000 Series support this function.

The system supports two IP address format: IPv4 and IPv6

##### **IPv4**

Enable IPv4 DHCP to auto search IP. When enable DHCP function, you can not modify IP/ Subnet mask/ Gateway.

Disable IPv4 DHCP to modify IP/ Subnet mask/ Gateway manually.

##### **IPv6**

Manual/ Router Advertisement/ DHCPv6 are available.

##### **DNS Server**

Preferred DNS Server: DNS server IP address.

Alternate DNS Server: DNS server alternate address.

Network							
Basic	UPnP	DDNS	Email	P2P	PPPoE	SNMP	More
LAN							
IPv4 DHCP	Disable			IPv4 Mode	Manual		
IPv4 Address	192.168.7.111			IPv4 Address			
IPv4 Subnet Mask	255.255.240.0			IPv4 Prefix Length			
IPv4 Gateway	192.168.7.1			IPv4 Gateway			
Preferred DNS Server	192.168.5.1						
Alternate DNS Server	. . .						
MTU(Byte)	1500						
MAC	1C:C3:16:0A:30:92						
PoE NIC IPv4 Address	192.168.20.1						

### Note:

1. Check the DHCP check-box when there is a DHCP server running in the networks.
2. Once DHCP is enabled, DNS will change accordingly.
3. The valid range of MTU is 1200~1500.
4. Do not input an IP address conflicting with another device.
5. Working mode option is only for NVR 7000/8000 Series. Internal NIC IPv4 Address is only for PoE NVR Series.

### 3.9.3.2 UPnP

With the function enabled, you don't need to configure the port mapping for each port in router, it will do the port mapping in router automatically once **router supports UPnP**.

Network							
Basic	UPnP	DDNS	Email	Milesight Cloud	PPPoE	SNMP	More
UPnP	Disable						
Forwarding Type	Auto						
Port Type	Edit	External Port	Internal Port	Status			
HTTP	<input checked="" type="checkbox"/>	21202	80	Invalid			
RTSP	<input checked="" type="checkbox"/>	23202	554	Invalid			

### 3.9.3.3 DDNS

Using DDNS to solve the dynamic IP address problem.

Check DDNS check-box to enable it, then select a DDNS Server and input the user name, password and host name. Do not forget to save the configuration.

Milesight has its own DDNS server. Please do port forwarding for HTTP port and RTSP port before enabling **Milesight DDNS**. Then input corresponding information and you can use <http://ddns.milesight.com:MAC> to access device remotely.

**Note:** “Host Name” must begin with letters, and it can only contain number, letters, and hyphen.

Network							
Basic	UPnP	DDNS	Email	Milesight Cloud	PPPoE	SNMP	More
DDNS	Disable						
Provider	ddns.milesight.com						
External HTTP Port	80						
External RTSP Port	554						
DDNS URL	http://ddns.milesight.com/0AE8D2						
DDNS Status	Not Running						

### 3.9.3.4 Email

A screenshot will be sent to the receivers when alarm is triggered.

Network							
Basic	UPnP	DDNS	Email	Milesight Cloud	PPPoE	SNMP	More
Email	Enable						
User Name	alison@milesight.com						
Password	*****						
SMTP Server	smtp.gmail.com						
SMTP Port	465						
Sender Email Address	alison@gmail.com						
Receiver Email Address 1	alison@163.com						
Receiver Email Address 2							
Receiver Email Address 3							
Encryption	<input type="checkbox"/> TLS <input checked="" type="checkbox"/> SSL						
<input type="checkbox"/> Host Name	http://						

**Enable Email selection and then begin configuration.**

**Username:** The E-mail address you choose to send emails. Please input **full email address**.

**Password:** The password of the E-mail.

**SMTP Server:** The SMTP Server of your E-mail.

**SMTP Port:** The port of SMTP Server. It's usually 25.

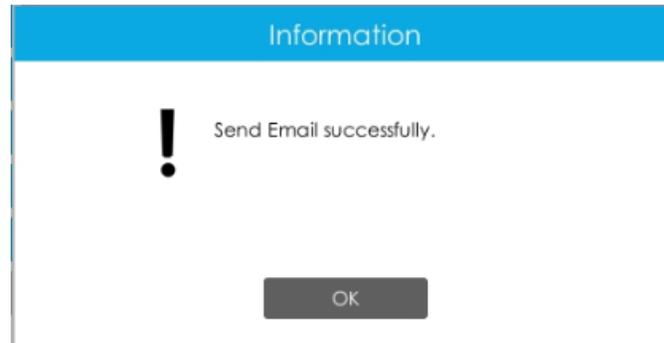
**Sender Email Address:** It must be same as [User name].

**Receiver Email Address:** E-mail Address for the receivers.

**Encryption:** Security Protocol of email sending, including TLS and SSL.

**Host Name:** It will be attached in the email.

Select "Test" to check if the Mail function is workable.



**Note:** If your NVR has a port forwarding IP for Host Name, please input the complete address that contains the port.

### 3.9.3.5 Milesight Cloud

You can add the devices to M-sight Pro app via Milesight Cloud, which can bind the devices with the cloud accounts. You can log into the cloud account directly on the APP, no need to add devices repeatedly.

Click "Enable" and "Apply" to enable Milesight Cloud.

After enabling, you can add the NVR on the APP M-Sight Pro for live view via scanning the QR code on Milesight Cloud page directly, or inputting the register code manually.

Network

Basic   UPNP   DDNS   Email   **Milesight Cloud**   PPPoE   SNMP   More

Milesight Cloud	Enable
Milesight Cloud Status	Online
Cloud Account	Alison
Unbind Device	Unbind
Cloud Server Address	m-sight.milesight.com
Register Code	N70161CC3160AE8D2770
Register QR Code	

Note: Enable Milesight Cloud function, the P2P function will be enabled automatically. Scan the QR code to bind this device to Cloud Account.

Apply   Back

If you enable Milesight Cloud function, the P2P function will be enabled automatically.

 **Note:**

1. Please make sure that NVR is available for internet before enabling.
2. Please make sure your NVR version is V7X.9.0.12 or above, and the APP version is V3.1.0.5 or above.

### 3.9.3.6 PPPoE

PPPoE combines PPP protocol with Ethernet, by which Ethernet hosts can connect to a remote access concentrator via a simple bridging device.

Network

Basic   UPNP   DDNS   Email   Milesight Cloud   **PPPoE**   SNMP   More

PPPoE	Disable
Dynamic IP	0 . 0 . 0 . 0
User Name	
Password	
Confirm Password	

Note: If both UPNP and PPPoE are enabled, only PPPoE will take effect.

 **Note:** If both UPnP and PPPoE are enabled, only PPPoE will take effect.

### 3.9.3.7 SNMP

SNMP is an abbreviation of Simple Network Management Protocol, which is convenient for NVR to be monitored and managed in the whole network environment. The SNMP is widely used in many network devices, software and systems.

Before setting the SNMP, please download the SNMP software and manage to receive the NVR information via SNMP port. By setting the Trap Address, the NVR can send the alarm event and exception messages to the surveillance center.

Network							
Basic	UPnP	DDNS	Email	Milesight Cloud	PPPoE	SNMP	More
SNMP V1		Disable					▼
SNMP V2c		Disable					▼
Read Community		public					
Write Community		private					
SNMP V3		Disable					▼
Read Security Name							
Level of Security		no auth, no priv					▼
Write Security Name							
Level of Security		no auth, no priv					▼
SNMP Port		161					

**SNMP v1/2c/3:** The version of SNMP. Please select the version of your SNMP software.

SNMP v1: No security protection

SNMP v2c: Require password for access

SNMP v3: Support encryption on the premise that the HTTPS protocol must be enabled.

**Read Community:** Input the name of Read Community

**Write Community:** Input the name of Write Community

**Read Security Name:** Input the name of Read Security Community

**Level of Security:** There are three levels available: (auth, priv), (auth, no priv) and (no auth, no priv)

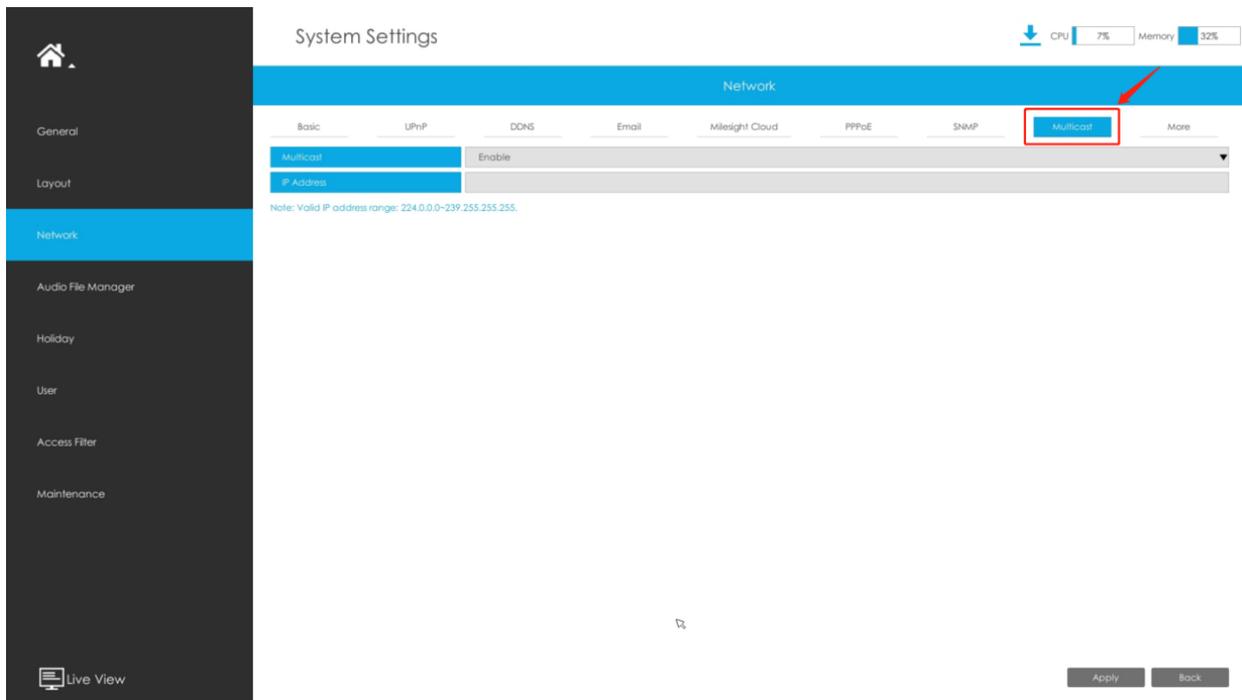
**Write Security Name:** Input the name of Write Security Community

**Level of Security:** There are three levels available: (auth, priv), (auth, no priv) and (no auth, no priv)

**SNMP Port:** The default of the SNMP port is 161.

### 3.9.3.8 Multicast

Enable multicast to reduce the load of the NVR, and the video can still be previewed normally when the NVR is multi-connected. Users just need to enable multicast and enter the IP address.



The screenshot displays the 'System Settings' interface for an NVR. The left sidebar contains navigation options: General, Layout, Network (highlighted), Audio File Manager, Holiday, User, Access Filter, and Maintenance. The main content area is titled 'System Settings' and shows a 'Network' section. The 'Network' section has tabs for Basic, UPnP, DDNS, Email, Mileight Cloud, PPPoE, SNMP, Multicast (highlighted with a red box), and More. The 'Multicast' tab is active, showing a 'Multicast' setting set to 'Enable' and an 'IP Address' field. A note below the IP address field states: 'Note: Valid IP address range: 224.0.0.0~239.255.255.255.' The top right of the interface shows system status: CPU 7% and Memory 32%. At the bottom right, there are 'Apply' and 'Back' buttons.

**Note:** Valid IP address range: 224.0.0.0~239.255.255.255.

### 3.9.3.9 More

The screenshot shows the 'System Settings' interface with the 'Network' tab selected. The left sidebar contains navigation options: General, Layout, Network (highlighted), Audio File Manager, Holiday, User, Access Filter, Maintenance, and Hot Spare. At the top right, system status shows CPU at 3% and Memory at 23%. The Network settings are organized into tabs: Basic, UPnP, DDNS, Email, Milesight Cloud, PPPoE, SNMP, and More. The 'Basic' tab is active, displaying a list of settings:

Setting	Value
SSH	Enable
SSH Port	22
HTTP Port	80
HTTPS Port	443
RTSP Port	554
POP Port	38800
Push Message	Enable
Push Stream Type	Auto
Push Message Settings	Edit

At the bottom right of the settings area, there are 'Apply' and 'Back' buttons.

## SSH

Enable or disable SSH access. Secure Shell (SSH) has many functions; it can replace Telnet, and also provides a secure channel for FTP, POP, even for PPP.

### SSH Port

The default SSH port is 22. Only for R&D debugging.

### HTTP Port

The default HTTP port is 80. Please modify HTTP ports according to actual application.

#### Note:

1. The default HTTP port for IE browser is 80.
2. HTTP port is used for remote network access for 4k/H.265 NVR Series.

### HTTPS Port

The default HTTPS port is 443. Please modify HTTPS ports according to actual application.

#### Note:

1. The default HTTPS port for IE browser is 443.

2. HTTPS port is used for remote network access for 4k/H.265 NVR Series.

## RTSP Port

Real Time Streaming Protocol (RTSP) is an application layer protocol in TCP/IP protocol system.

The default RTSP port is 554. Please modify RTSP port according to actual application.

### Note:

1. RTSP port is used for remote network live view.
2. RTSP port valid range is 554 or 1024~65535.
3. The RTSP format of Milesight NVR is "rtsp://IP:RTSP port/ch\_xxx".
  - IP: The IP address of NVR;
  - RTSP port: The default RTSP port is 554;
  - ch\_xxx: The first number of xxx represents stream type, 1 for main stream and 4 for sub stream. The last two represents channel number, which start from '00' ('00' means channel 1). Take 'rtsp://192.168.8.179:554/ch\_402' as an example:
  - The IP address of NVR is 192.168.8.179.
  - The RTSP port is 554.
  - The stream type is sub stream and the channel number is 3.

## POS Port

It is the communication port between NVR and the POS machine. The default POS port is 38800.

## Push Message

With this option enabled, you can receive the alarm message on the mobile application.

## Push Stream Type

Select which video stream will be pushed to APP . Auto, Primary Stream and Secondary Stream are available.

 **Note:** Only NVR model ends with letter T support this option.

## Push Message Settings

### (1) Camera Event

The screenshot shows the 'Push Message Settings' window with the 'Camera Event' tab selected. The 'NVR Event' dropdown is set to '1'. Under 'Push Event Type', the following options are checked:

- All
- Motion Detection
- Region Entrance
- Advanced Motion Detection
- Line Crossing
- Human Detection
- Alarm Input (1, 2)
- Video Loss
- Region Exiting
- Tamper Detection
- Loitering
- Object Left/Removed
- ANPR
- Black List
- White List
- Visitor List

Buttons at the bottom: Copy, OK, Cancel.

Select Push Event Type which will be pushed to APP . There are different Push Event Types for every channel to choose, which means every camera added in this NVR can choose what Event Type it wants to push, like Motion Detection, Video Loss, Region Entrance, Region Exiting, Advanced Motion Detection, Tamper Detection, Line Crossing, Loitering Human Detection, Object Left/Removed, Alarm Input and ANPR(Only for MS-NXXXX-XXT/H).

**(2) NVR Event**

The screenshot shows the 'Push Message Settings' window with the 'NVR Event' tab selected. The 'Camera Event' tab is also visible. Under 'Alarm Input', the following options are checked:

- All
- 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16

Under 'POS', the following options are checked:

- All
- 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16

Buttons at the bottom: OK, Cancel.

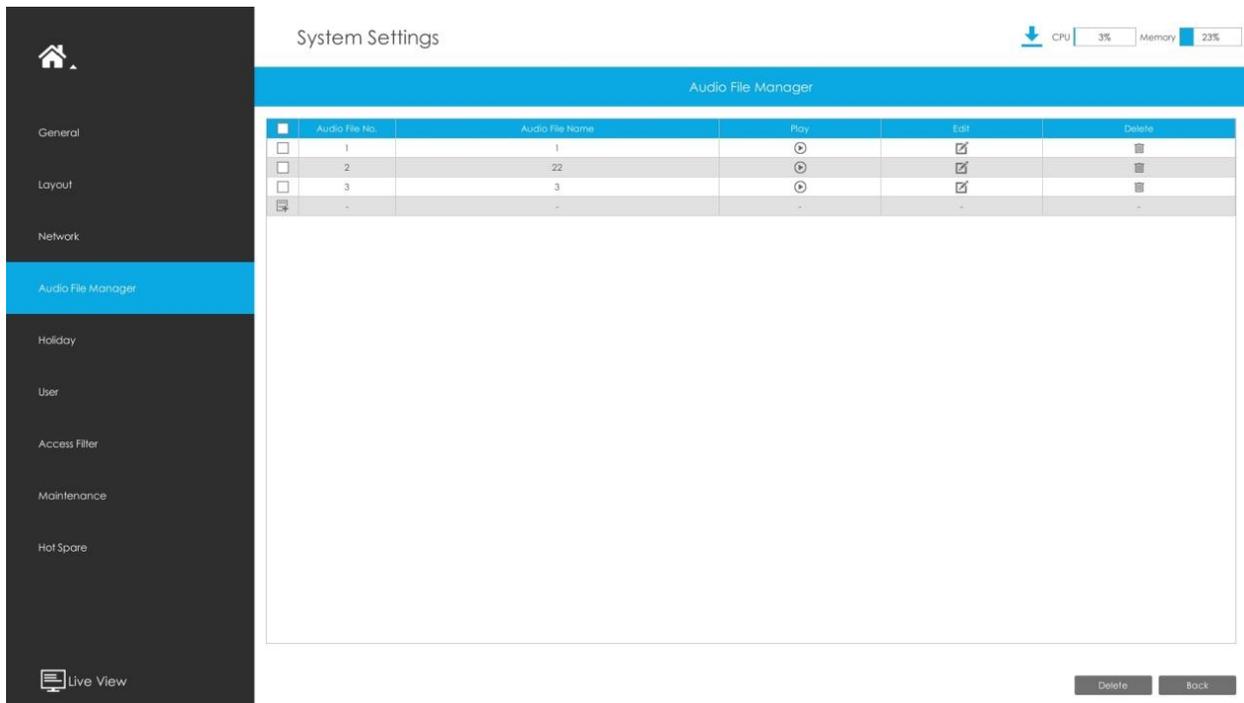
Select channels which you want to push the Alarm Input Event or the POS Event of NVR.

 **Note:** There would not have NVR Event interface if your NVR doesn't have alarm input interface.

### 3.9.4 Audio File Manager

Here you can upload up to 10 audio files.

 **Note:** Ensure that the NVR hardware has an Audio Output interface.



System Settings CPU 3% Memory 23%

Audio File Manager

<input type="checkbox"/>	Audio File No.	Audio File Name	Play	Edit	Delete
<input type="checkbox"/>	1	1			
<input type="checkbox"/>	2	22			
<input type="checkbox"/>	3	3			
	-	-	-	-	-

Delete Back

#### Add a new audio file

Click , then select an audio file from the external device and enter the audio file name, and then click "OK" to add a new audio file.

 **Note:** Ensure that the audio file format is ".wav", the codec type is PCM/PCMU/PCMA, 64kbps or 128kbps bitrate and doesn't exceed 500K.

**Audio File Add**

Audio File		Browse
Audio File Name		

Note: Only support '.wav' audio files with codec type PCM/PCMU/PCMA, 64kbps or 128kbps bitrate and no more than 500k

OK Cancel

### Play audio file

Select an audio file and click  to play the audio file.

### Edit audio file

Select an audio file and click  to edit the audio file name.

### Delete audio file

Select an audio file and click  to delete the audio file name.

In addition, you can also check multiple audio files and click "Delete" to delete them.

## 3.9.5 Holiday

It can configure the record or image capture schedule for holidays of the current year.

System Settings CPU 1% Memory 20%

Holiday

ID	Holiday Name	Status	Start Date	End Date	Edit
1	Holiday	Disable	1-1	1-1	
2	Holiday	Disable	1-1	1-1	
3	Holiday	Disable	1-1	1-1	
4	Holiday	Disable	1-1	1-1	
5	Holiday	Disable	1-1	1-1	
6	Holiday	Disable	1-1	1-1	
7	Holiday	Disable	1-1	1-1	
8	Holiday	Disable	1-1	1-1	
9	Holiday	Disable	1-1	1-1	
10	Holiday	Disable	1-1	1-1	
11	Holiday	Disable	1-1	1-1	
12	Holiday	Disable	1-1	1-1	
13	Holiday	Disable	1-1	1-1	
14	Holiday	Disable	1-1	1-1	
15	Holiday	Disable	1-1	1-1	
16	Holiday	Disable	1-1	1-1	
17	Holiday	Disable	1-1	1-1	
18	Holiday	Disable	1-1	1-1	
19	Holiday	Disable	1-1	1-1	
20	Holiday	Disable	1-1	1-1	
21	Holiday	Disable	1-1	1-1	
22	Holiday	Disable	1-1	1-1	
23	Holiday	Disable	1-1	1-1	
24	Holiday	Disable	1-1	1-1	
25	Holiday	Disable	1-1	1-1	
26	Holiday	Disable	1-1	1-1	
27	Holiday	Disable	1-1	1-1	

[Back](#)

Click to edit holiday information, including Holiday Name, Holiday Enable, Style, Start Date and End Date. Then click "OK" to save the configuration.

Holiday Edit

Holiday Name	Holiday
Holiday	<input checked="" type="checkbox"/> Enable
Style	By Month ▼
Start Date	January ▼ 1 ▼
End Date	February ▼ 1 ▼

\* Holiday schedule takes precedence over other schedules.

OK
Cancel
Apply

### 3.9.6 User

System Settings

CPU 5% Memory 14%

User

User Security Question

ID	User Name	User Level	Edit Limits	Edit Password	Delete
1	admin	Admin	-	<input type="checkbox"/>	-
2	ll	Operator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	pp	Operator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Live View

Add Back

### Note:

1. If the NVR firmware version is below xx.7.0.6, the default user name is “admin” and the default password is “123456”.
2. If the NVR firmware version is between xx.7.0.6 and xx.9.0.3, the default user name is “admin” and the default password is “ms1234”.
3. If the NVR firmware version is xx.9.0.3 or above, please set the password before login.

### Add a new user

Click "Add", input user information, then click "Edit" to configure the user permission, and click "OK" to add a new user.

 **Note:**

1. The user name can only contain letters and number. There are two user levels with different authority: Operator and Viewer.
2. You can set Unlock Pattern for the user after enabling it.

### Edit user limits

Select a user, when the background color changes into dark gray, click  to edit user permissions. User Permissions include Operation Permissions and Channel Permissions.

- “Local” means that the privilege to the monitor connected with NVR.

- “Remote” means that the privilege to web settings.

Edit User Permissions

Operation Permissions
Channel Permissions

Local	Remote
<input checked="" type="checkbox"/> All	<input checked="" type="checkbox"/> All
<input checked="" type="checkbox"/> Live View Operation <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Record</li> <li><input checked="" type="checkbox"/> Snapshot</li> <li><input checked="" type="checkbox"/> Audio</li> <li><input checked="" type="checkbox"/> Two-way Audio</li> <li><input checked="" type="checkbox"/> PTZ Control</li> <li><input checked="" type="checkbox"/> PTZ Settings</li> <li><input checked="" type="checkbox"/> Image Configuration</li> <li><input checked="" type="checkbox"/> Camera Alarm Output</li> <li><input checked="" type="checkbox"/> Play Mode</li> <li><input checked="" type="checkbox"/> Target Mode Operation</li> </ul>	<input checked="" type="checkbox"/> Live View Operation <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Record</li> <li><input checked="" type="checkbox"/> Snapshot</li> <li><input checked="" type="checkbox"/> Audio</li> <li><input checked="" type="checkbox"/> Two-way Audio</li> <li><input checked="" type="checkbox"/> PTZ Control</li> <li><input checked="" type="checkbox"/> PTZ Settings</li> <li><input checked="" type="checkbox"/> Image Configuration</li> <li><input checked="" type="checkbox"/> Camera Alarm Output</li> <li><input checked="" type="checkbox"/> Play Mode</li> <li><input type="checkbox"/> Target Mode Operation</li> </ul>
<input checked="" type="checkbox"/> Playback Operation <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Snapshot</li> <li><input checked="" type="checkbox"/> Audio</li> <li><input checked="" type="checkbox"/> Tag</li> <li><input checked="" type="checkbox"/> Lock</li> <li><input checked="" type="checkbox"/> File Export</li> </ul>	<input checked="" type="checkbox"/> Playback Operation <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Snapshot</li> <li><input checked="" type="checkbox"/> Audio</li> <li><input checked="" type="checkbox"/> Tag</li> <li><input type="checkbox"/> Lock</li> <li><input checked="" type="checkbox"/> File Export</li> </ul>
<input checked="" type="checkbox"/> Retrieve	<input checked="" type="checkbox"/> Retrieve
<input checked="" type="checkbox"/> Smart Analysis	<input checked="" type="checkbox"/> Smart Analysis
<input checked="" type="checkbox"/> Camera	<input checked="" type="checkbox"/> Camera
<input checked="" type="checkbox"/> Storage	<input checked="" type="checkbox"/> Storage
<input checked="" type="checkbox"/> Event	<input checked="" type="checkbox"/> Event
<input type="checkbox"/> Settings	<input type="checkbox"/> System
<input checked="" type="checkbox"/> Status & Logs	<input checked="" type="checkbox"/> Status & Logs
<input type="checkbox"/> Shutdown/Reboot	<input type="checkbox"/> Reboot

OK
Cancel

Edit User Permissions

Operation Permissions
Channel Permissions

Local				Remote			
<input checked="" type="checkbox"/> Live View				<input checked="" type="checkbox"/> Live View			
<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input checked="" type="checkbox"/> 4
<input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/> 6	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 8	<input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/> 6	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 8
<input checked="" type="checkbox"/> 9	<input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 11	<input checked="" type="checkbox"/> 12	<input checked="" type="checkbox"/> 9	<input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 11	<input checked="" type="checkbox"/> 12
<input checked="" type="checkbox"/> 13	<input checked="" type="checkbox"/> 14	<input checked="" type="checkbox"/> 15	<input checked="" type="checkbox"/> 16	<input checked="" type="checkbox"/> 13	<input checked="" type="checkbox"/> 14	<input checked="" type="checkbox"/> 15	<input checked="" type="checkbox"/> 16
<input checked="" type="checkbox"/> Playback				<input checked="" type="checkbox"/> Playback			
<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input checked="" type="checkbox"/> 4
<input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/> 6	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 8	<input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/> 6	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 8
<input checked="" type="checkbox"/> 9	<input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 11	<input checked="" type="checkbox"/> 12	<input checked="" type="checkbox"/> 9	<input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 11	<input checked="" type="checkbox"/> 12
<input checked="" type="checkbox"/> 13	<input checked="" type="checkbox"/> 14	<input checked="" type="checkbox"/> 15	<input checked="" type="checkbox"/> 16	<input checked="" type="checkbox"/> 13	<input checked="" type="checkbox"/> 14	<input checked="" type="checkbox"/> 15	<input checked="" type="checkbox"/> 16

OK
Cancel

## Edit user password

Select a user, when the background color changes into dark gray, click  to modify password after enabling Change Password. You can also click "Edit" to set Unlock Pattern after enabling Unlock Pattern.

Sync new password to current connected PoE channels is available for PoE NVR Series.

Edit User

Admin Password	••••••••
User Name	alison
Change Password	Enable ▼
New Password	••••••••
Confirm Password	••••~•••••
User Level	Viewer ▼
User Permissions	Edit
Unlock Pattern	Disable ▼
Set Unlock Pattern	Edit

### Delete user

Select a user and click to delete a user.

### Modify Security Question

Input Admin Password, select security question and answer. Click "Apply" to save.

User

User	Security Question
Admin Password	••••••~••••••
Security Question 1	What's your favorite sport? ▼
Security Answer 1	
Security Question 2	What's your lucky number? ▼
Security Answer 2	
Security Question 3	What's your favorite color? ▼
Security Answer 3	

**Note:**

1. This option is available for the NVR firmware version xx.9.0.3 or above.
2. Security question is used for resetting admin password if you forget current one.

### 3.9.7 Access Filter

Enable Access Filter to restrict or open the access to device address added via IP or MAC.

System Settings

CPU 2% Memory 23%

Access Filter

Access Filter: Enable

Filter Type: Allow

	Address	Edit	Delete
<input type="checkbox"/>	192.168.7.22	<input type="checkbox"/>	<input type="checkbox"/>

Buttons: Add, Delete, Apply, Back

### Step 1. Enable Access Filter.

Access Filter: Enable

### Step 2. Select Filter Type.

There are two options: Deny and Allow.

Deny: Only restrict the access to the added device address.

Allow: Only open the access to the added device address.

Filter Type: Allow

Deny

Allow

### Step 3. Add Address.

Click "Add" to add device address. You can add the address via IP or MAC.

**Method 1:** Add the address via IP. You can choose the IP address rule according to your needs. There are two rules: Single and Range.

The screenshot shows a dialog box titled "Add Address". It has three main input fields: "Address Type" is set to "IP Address", "IP Address Rule" is set to "Single", and the "IP Address" field contains three dots "...". At the bottom right, there are two buttons: "OK" and "Cancel".

The screenshot shows a dialog box titled "Add Address". It has three main input fields: "Address Type" is set to "IP Address", "IP Address Rule" is set to "Range", and the "IP Address" field contains two boxes with three dots "...", separated by a hyphen "-". At the bottom right, there are two buttons: "OK" and "Cancel".

**Method 2:** Add the address via MAC.

The screenshot shows a dialog box titled "Add Address". It has two main input fields: "Address Type" is set to "MAC Address" and the "MAC Address" field contains five dots ".....". At the bottom right, there are two buttons: "OK" and "Cancel".

**Step 4.** Then click "Apply" to make Access Filter effective.

You can click  in the Access Filter interface to edit the corresponding address again.

Edit Address

Address Type	IP Address ▼
IP Address Rule	Single ▼
IP Address	192.168.111.1

OK
Cancel

 **Note:**

- If Access Filter is enabled and Filter type is Allow, but no address is added to the table, then no address is allowed to Access the NVR.
- If Access Filter is enabled and Filter type is Deny, but no address is added to the table, then all addresses are allowed to Access the NVR.

## 3.9.8 Maintenance

### Local Upgrade



- General
- Layout
- Network
- Holiday
- User
- Access Filter
- Maintenance
- Hot Spare

 Live View

System Settings
CPU 1% Memory 21%

Maintenance

Local Upgrade
Online Upgrade
Import/Export Configuration
Auto Reboot
Reset
Diagnosis Information

Firmware

Browse

Reset

Reset settings to factory default (except IP Address and User Information)

Note: The upgrading process will take 5-10 minutes, please don't disconnect power of the device during the process. The device will reboot automatically after upgrading.

Upgrade
Back

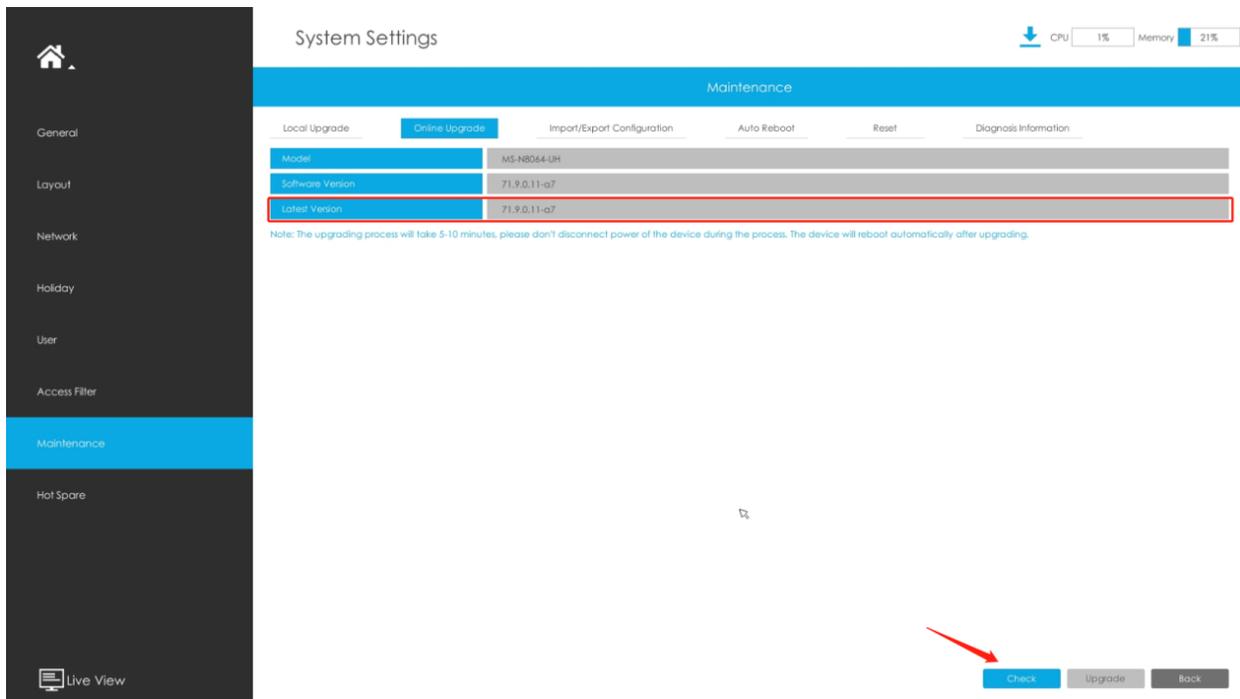
**Step1.** Click "Browse" and select the corresponding firmware you downloaded in your USB;

**Step2.** Check if you need to reset settings to factory default (except IP Address and User Information) after upgrade;

**Step 3.** Click "Upgrade" to confirm the upgrade.

 **Note:** The system will auto reboot after confirming upgrade.

## Online Upgrade



The screenshot shows the 'System Settings' interface with the 'Maintenance' section selected. The 'Online Upgrade' tab is active, displaying a table with the following data:

Model	MS-N8064-UH
Software Version	71.9.0.11-a7
Latest Version	71.9.0.11-a7

Below the table, a note states: "Note: The upgrading process will take 5-10 minutes, please don't disconnect power of the device during the process. The device will reboot automatically after upgrading." At the bottom right, there are three buttons: 'Check', 'Upgrade', and 'Back'. A red arrow points to the 'Check' button.

**Step1.** Click "Check" to confirm whether there is a new version;

If there is a new version, the Latest Version column will display corresponding information.

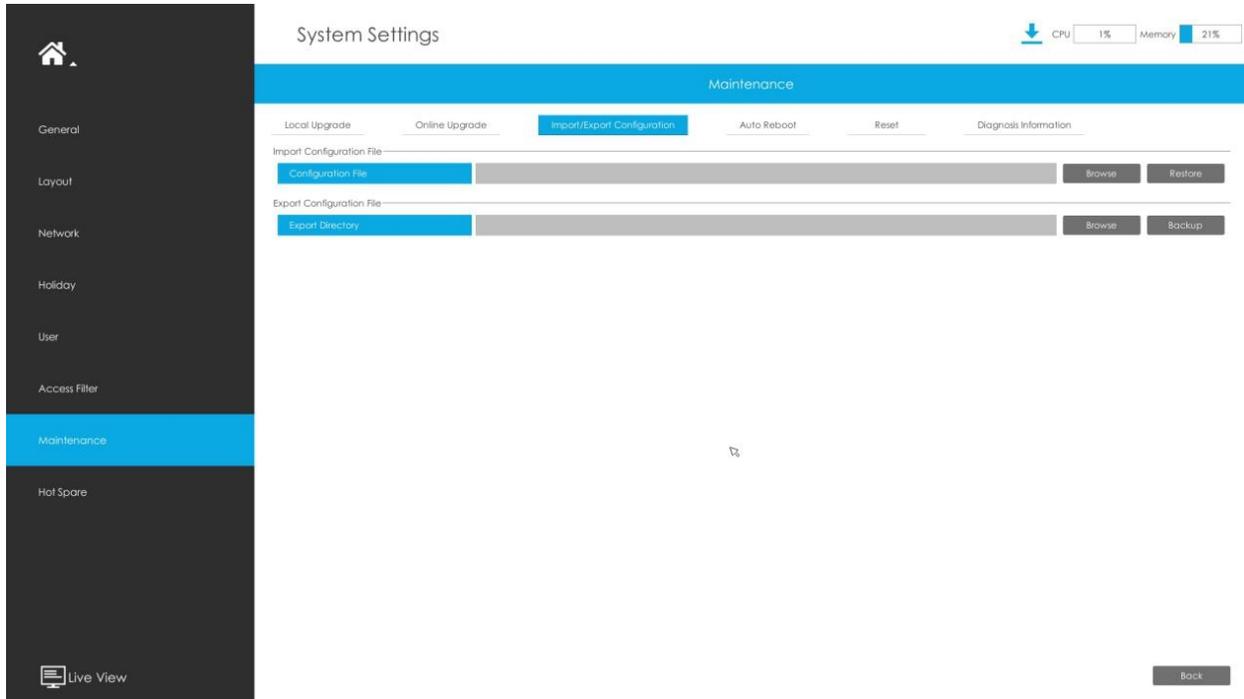
**Step2.** Click "Upgrade" to confirm the upgrade.

 **Note:** The system will auto reboot after confirming upgrade.

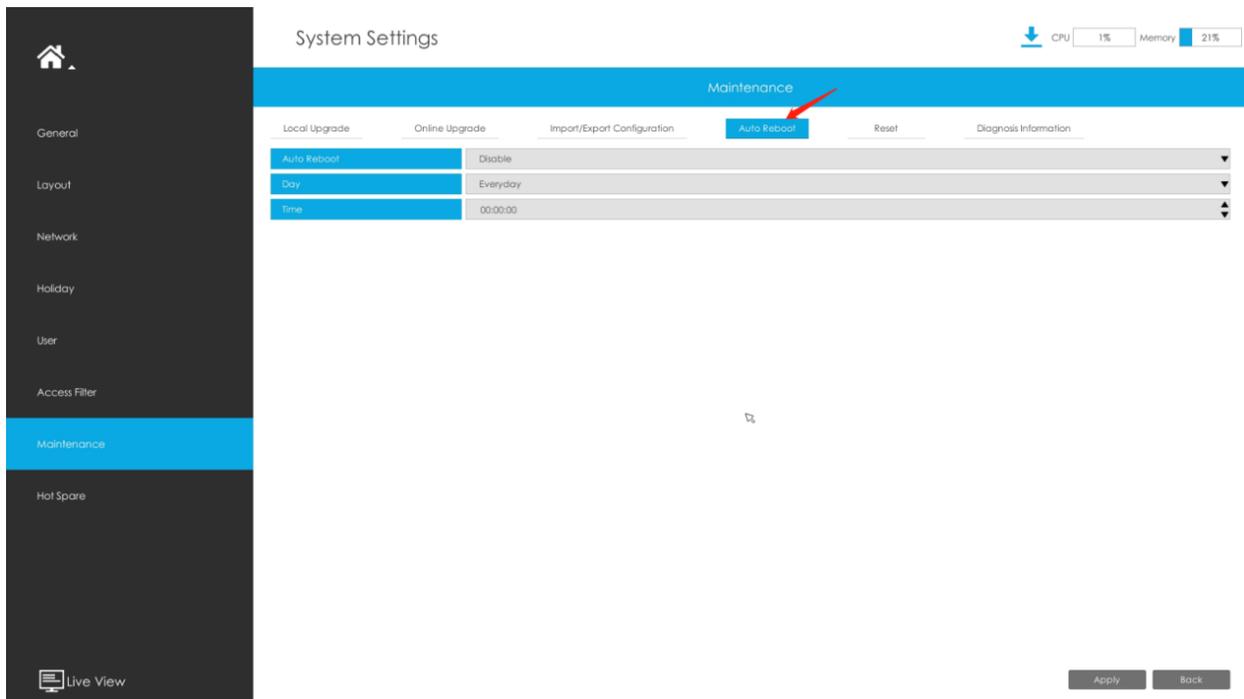
## Import/Export Configuration

**Import Configuration File:** Select a .cfg file and then click "Restore" to import configuration to your NVR.

**Export Configuration File:** Select a folder and then click "Backup" to export configuration to USB device.



## Auto Reboot



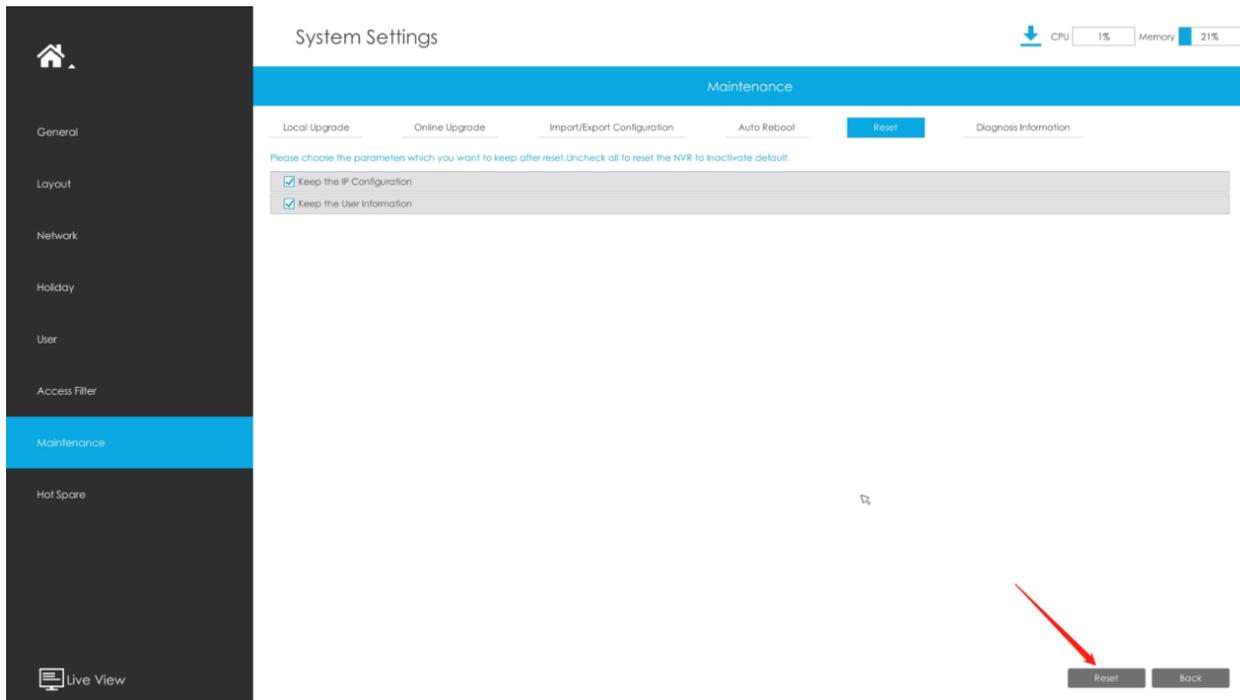
You can set day and time for reboot, and **the NVR will reboot automatically at the time you set.**

**Day:** Everyday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday and Sunday.

**Time:** Adjustable range from 00:00:00 to 23:59:59.

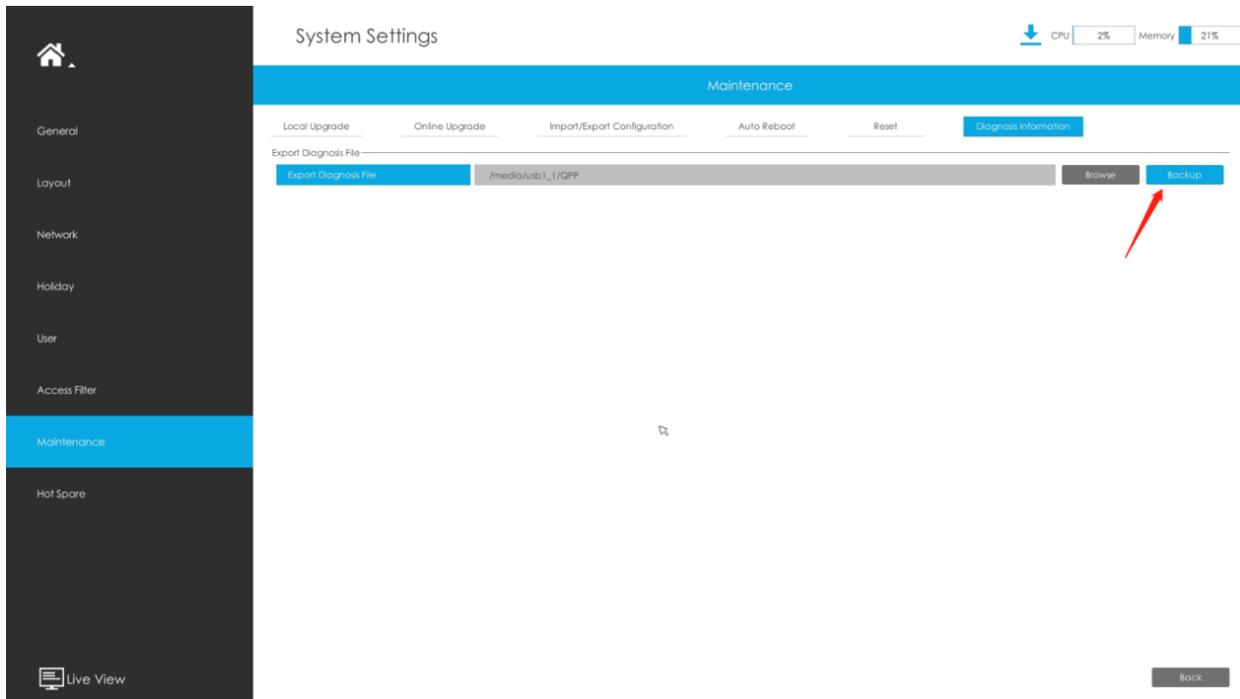
## Reset

All parameters can be reset to default settings by clicking "Reset".



## Diagnosis Information

Click "Browse" to select the path to save the diagnosis file on the USB device. And then click "Backup" to export the diagnosis file.



### 3.9.9 Hot Spare

Configured as the architecture of N pcs Master NVRs and 1 hot spare Slave NVR, N+1 Hot Spare guarantees the data integrity and reliability of video surveillance system. If any one of the Master NVRs fails, the Slave NVR can take over the channel information to ensure video recording. Meanwhile, when the failed NVR recovered, the Slave NVR will send the recorded data back.

#### Master Mode:

**Step 1:** Select Master Mode as Hot Spare Mode.

**Step 2:** Input Slave IP Address, Slave Admin Password and Apply.

Hot Spare	
Hot Spare Mode	Master Mode
Slave IP Address	192.168.40.42
Slave Admin Password	*****
Slave Status	Link is up (Ready)

#### Slave Mode:

**Step 1:** Select Slave Mode as Hot Spare Mode and click Apply. NVR will change to Slave mode successfully after rebooting.

**Step 2:** Add Master which is up to 32.

Hot Spare

Hot Spare Mode
Slave Mode

Master List

No.	IP Address	MAC Address	Model

Refresh
Add

Master Status

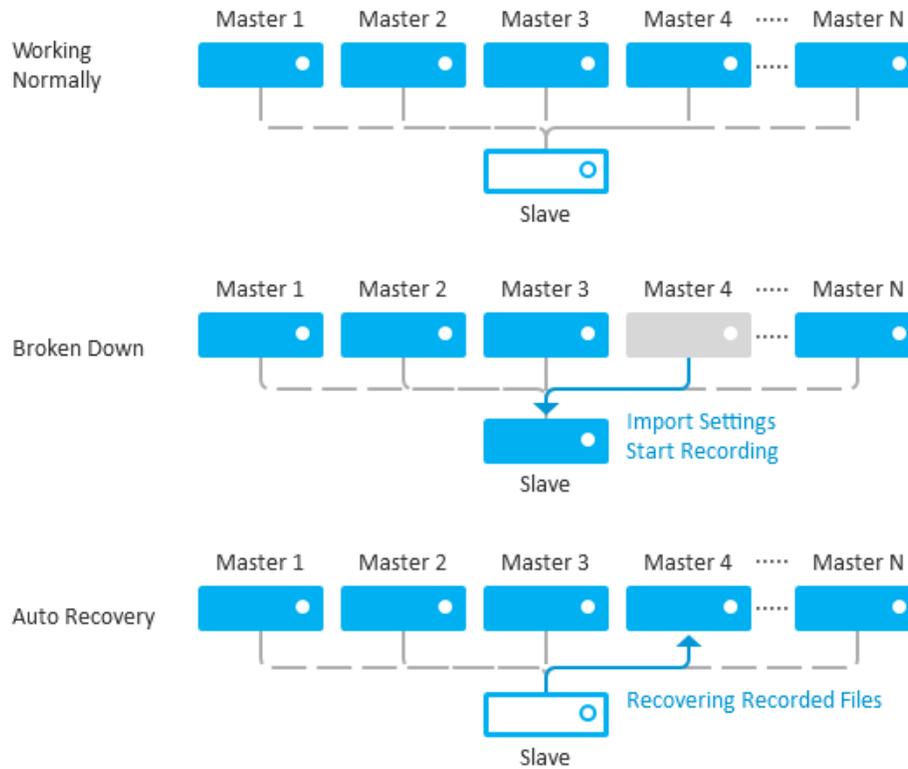
No.	IP Address	MAC Address	Model	Connection Status	Working Status	Delete
1	192.168.40.44	1CC3160A7EF4	MS-N7032-UH	Online	Normal	🗑️

For example, there are three NVRs in LAN, 192.168.5.200, 192.168.5.201 and 192.168.5.202.

If you want to set 192.168.5.200 and 192.168.5.201 as Master NVR, and set 192.168.5.202 as Slave NVR. You can operate as following steps.

- Set 192.168.5.200 and 192.168.5.201 to Master Mode. And then input the IP and account information of 192.168.5.202 as Slave.
- Set 192.168.5.202 to Slave Mode. And then add 192.168.5.200 and 192.168.5.201 to its Master List.

After Master and Slave match successfully, Hot Spare function begins to work.



#### Note:

1. Only MS-N7016-UH, MS-N7032-UH, MS-N8032-UH and MS-N8064-UH support N+1 Hot Spare function.
2. It is recommended to set Master NVR and Slave NVR up with the same NVR model.

## 3.10 Status

You can have a quick view of the information of the device, network, camera, disk and event. This part is only for your rapid reference. If you want to make any configuration, please go to corresponding parts accordingly.

### 3.10.1 Device Information

#### Device Information

Device Information include Model, MAC Address, SN Address, Hardware Version, Software Version, and Uptime.

Device Information	
Model	MS-N7016-UPH
MAC Address	1C:C3:16:0A:E8:D2
SN Address	7420150003
Hardware Version	V2.0
Software Version	71.9.0.14-a4
Uptime	14:26:09 up 39 min

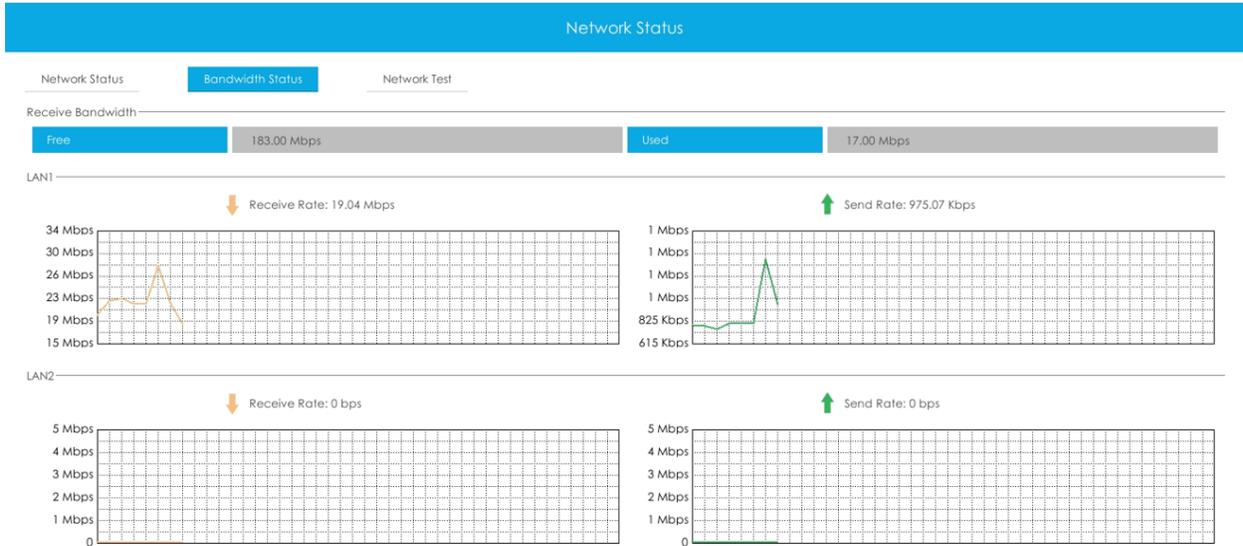
### 3.10.2 Network Status

Network Status includes three main parts: Network Status and Bandwidth Status.

#### Network Status

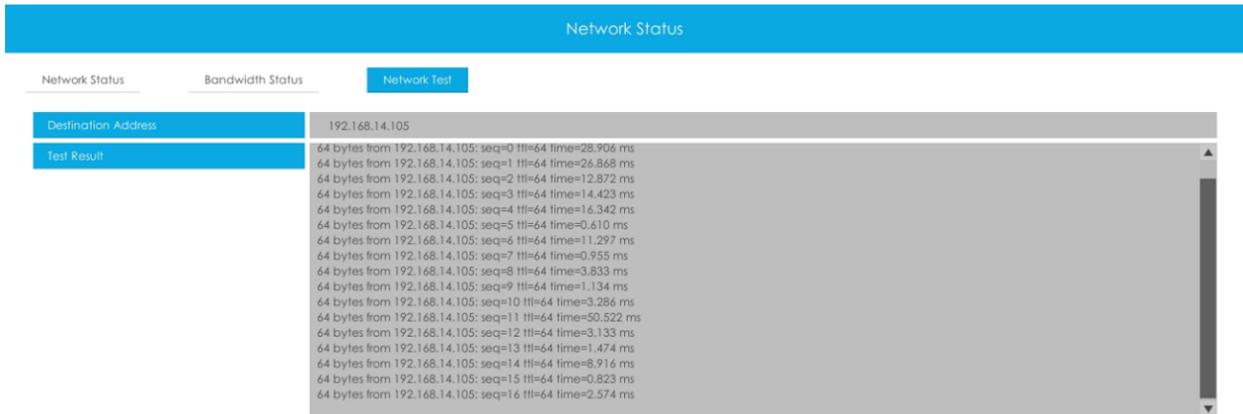
Network Status			
Network Status	Bandwidth Status	Network Test	
LAN1			
Connection	Link is up	Mode	100 Mbps FULL
IPv4 DHCP	Disable	IPv6 Mode	Manual
IPv4 Address	192.168.7.103	IPv6 Address	
IPv4 Subnet Mask	255.255.240.0	IPv6 Prefix Length	
IPv4 Gateway	192.168.7.2	IPv6 Gateway	
Preferred DNS Server	8.8.8.8	MTU[Byte]	1500
Alternate DNS Server		MAC	1C:C3:16:0A:25:F6
LAN2			
Connection	Link is down	Mode	
IPv4 DHCP	Disable	IPv6 Mode	Manual
IPv4 Address	192.168.10.200	IPv6 Address	
IPv4 Subnet Mask	255.255.255.0	IPv6 Prefix Length	
IPv4 Gateway	192.168.10.1	IPv6 Gateway	
Preferred DNS Server	8.8.8.8	MTU[Byte]	1500
Alternate DNS Server		MAC	1C:C3:16:0A:25:F7

#### Bandwidth Status



### Network Test

Users can quickly know the network status between the NVR and the destination address such as the camera or computer.



### 3.10.3 Camera Status

Channel Status includes Channel, Name, IP Address, Record, Frame Rate, Bit Rate, Frame Size and Status.

Camera Status							
Channel Status							
Channel	Name	IP Address	Record	Frame Rate	Bit Rate	Frame Size	Status
1	CAM1	192.168.14.103	Off	31 fps	4.33 Mbps	1920x1080	✓
2	CAM2	192.168.14.105	On	25 fps	7.00 Mbps	3000x3000	✓
3	CAM3	192.168.7.119	On	25 fps	4.01 Mbps	1920x1080	✓
4	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-

The PoE Port Status is only for PoE NVR, it will show you the current power and connection status of PoE ports.

Camera Status				
PoE Port Status				
PoE Port	IP Address	Current Power Consumption	Status	
1	--	--	--	
2	--	--	--	
3	--	--	--	
4	--	--	--	
5	--	--	--	
6	--	--	--	
7	--	--	--	
8	--	--	--	
Total Power Consumption		0.00W		
Remaining Power Consumption		120.00W		

Note:

- The rated power consumption of all PoE ports is 120.00W.
- When the total power consumption exceeds the rated value, the system will close PoE ports in the order of channel numbers from large to small until the total power is less than the rated power.

### 3.10.4 Disk Status

#### Disk Status

Disk Status includes Port, Vendor, Status, Total(GB), Free(GB), HDD Type and Group. The user can see the Total Capacity (GB) and Available Capacity (GB) as well.

Disk Status							
Disk Status		S.M.A.R.T					
Port	Vendor	Status	Total	Free	Property	HDD Type	Group
2	WDC WD2500BEVT-08A23T1	Normal	232.89 GB	217.00 GB	R/W	LOCAL	1
Total Capacity		232.89 GB					
Available Capacity		217.00 GB					

### S.M.A.R.T

S.M.A.R.T is a monitoring system of HDD that detects anticipating failures of HDD and reports them with various indicators.

**Test Type:** Fast and Full are available.

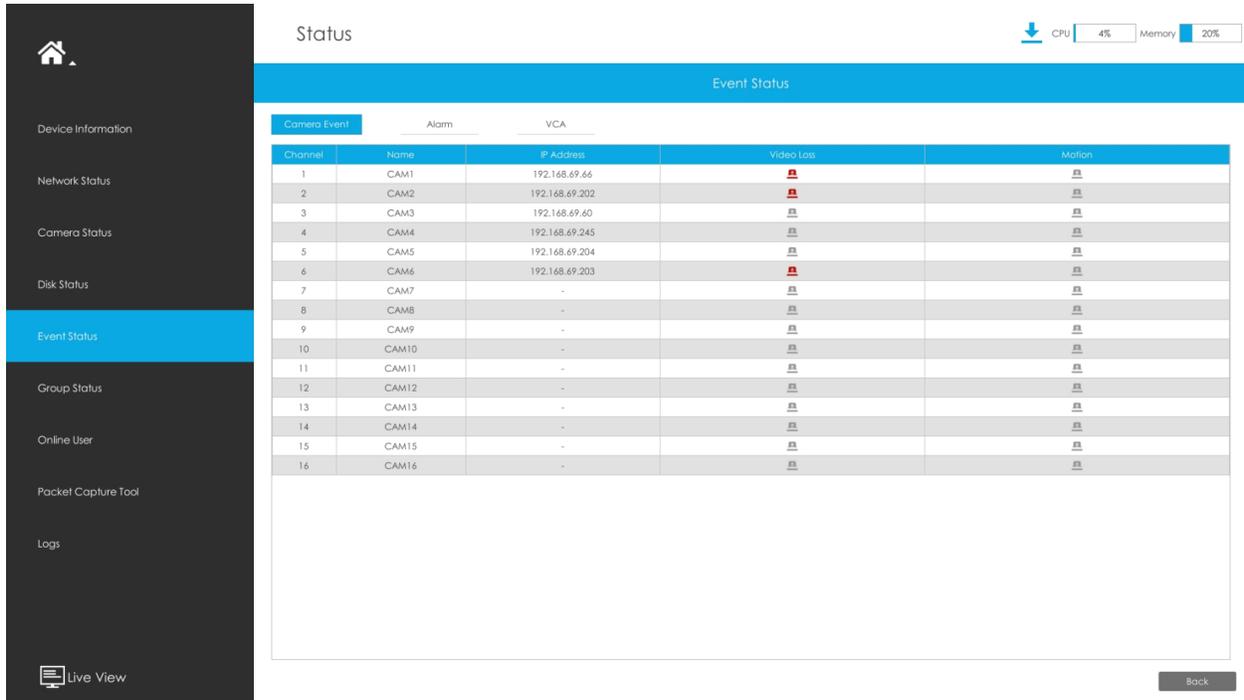
**Self-evaluation:** If the HDD is in good condition, it will pass the self-evaluation.

Disk Status						
Disk Status		S.M.A.R.T				
ID	Attribute Name	Value	Worst	Threshold	Raw Value	Status
01	Raw_Read_Error_Rate	200	200	51	2	OK
03	Spin_Up_Time	142	131	21	1866	OK
04	Start_Stop_Count	1	1	0	516529	OK
05	Reallocated_Sector_Ct	200	200	140	0	OK
07	Seek_Error_Rate	100	253	51	0	OK
09	Power_On_Hours	49	49	0	37266	OK
0A	Spin_Retry_Count	100	100	0	0	OK
Port	2					
Test Process						
Test Type	FAST					
Temperature[°C]	35					
Uptime	37266					
Self-evaluation	PASSED					
All-evaluation	In good condition					
S.M.A.R.T Test	Test					

## 3.10.5 Event Status

### Camera Event

The user can check Camera Event here, including Video Loss, Motion and I/O.  will turn into  when the corresponding alarm is triggered.



Status ↓ CPU 4% Memory 20%

Event Status

Camera Event			Alarm	VCA
Channel	Name	IP Address	Video Loss	Motion
1	CAM1	192.168.69.66		
2	CAM2	192.168.69.202		
3	CAM3	192.168.69.60		
4	CAM4	192.168.69.245		
5	CAM5	192.168.69.204		
6	CAM6	192.168.69.203		
7	CAM7	-		
8	CAM8	-		
9	CAM9	-		
10	CAM10	-		
11	CAM11	-		
12	CAM12	-		
13	CAM13	-		
14	CAM14	-		
15	CAM15	-		
16	CAM16	-		

Back

### Alarm Input/Output

The user can check Alarm Input and Output list here if NVR has corresponded interface.

 will turn into  when the corresponding alarm is triggered. For NVR alarm input or output, the relevant alarm input or output will be firstly listed, such as, 1, 2.etc, as for camera alarm input or output, it will display as CHx\_x (such as CH1\_1) according to the camera channel and corresponding alarm number.

Status
CPU 4% Memory 20%

Event Status

Camera Event
Alarm
VCA

Alarm Input List

No.	Alarm Name	Alarm Type	Status
1		NO	
2		NO	
3		NO	
4		NO	
5		NO	
6		NO	
7		NO	
8		NO	
9		NO	
10		NO	
11		NO	

Alarm Output List

No.	Alarm Name	Alarm Type	Delay	Status
1		NO	5s	
2		NO	5s	
3		NO	5s	
4		NO	5s	
CH1_1	-	-	-	-
CH1_2	-	-	-	-
CH2_1	-	-	-	-
CH2_2	-	-	-	-
CH3_1	-	NC	5s	
CH3_2	-	-	-	-
CH4_1	-	NC	5s	

[Back](#)

## VCA

It shows the VCA status. will turn into when the corresponding alarm is triggered.

Status
CPU 8% Memory 20%

Event Status

Camera Event
Alarm
VCA

Channel	Name	IP Address	Region Entrance	Region Exiting	Unced Motion Defect	Tamper Detection	Line Crossing	Loitering	Human Detected	Object Left/Removed
1	CAM1	192.168.69.66								
2	CAM2	192.168.69.202								
3	CAM3	192.168.69.60								
4	CAM4	192.168.69.245								
5	CAM5	192.168.69.204								
6	CAM6	192.168.69.203								
7	CAM7	-								
8	CAM8	-								
9	CAM9	-								
10	CAM10	-								
11	CAM11	-								
12	CAM12	-								
13	CAM13	-								
14	CAM14	-								
15	CAM15	-								
16	CAM16	-								

[Back](#)

### 3.10.6 Group Status

Check Group Status. The status of the all created Groups can be sorted by Group or Channel.

The screenshot shows the 'Group Status' interface. The sidebar on the left contains the following menu items: Device Information, Network Status, Camera Status, Disk Status, Event Status, **Group Status**, Online User, Logs, and Live View. The main content area is titled 'Status' and 'Group Status'. It features a table with columns for Group, Disk, and Channel. The table is sorted by Group, showing 16 groups. The first group (Group 1) has a Disk status of '-' and a Channel of '1,2'. The second group (Group 2) has a Disk status of '3' and a Channel of '-'. Groups 3 through 16 all have a Disk status of '-' and a Channel of '-'. The interface also displays system status: CPU 2% and Memory 21%.

Group	Disk	Channel
1	-	1,2
2	3	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-

### 3.10.7 Online Users

Users who are remotely connecting to the NVR in real time can be listed in Online users interface. The list includes User Name, User Level, IP Address and User Login Time.

The screenshot shows the 'Status' page of an NVR. On the left is a navigation menu with options: Device Information, Network Status, Camera Status, Disk Status, Event Status, Group Status, Online User (highlighted), Packet Capture Tool, and Logs. At the bottom left is a 'Live View' icon. The main content area is titled 'Online User' and features a table with the following data:

No.	User Name	User Level	IP Address	User Login Time	Add to Access Filter
1	admin	Admin	192.168.7.25	2021-06-24 23:04:46	[+]

At the bottom right of the table area are 'Refresh' and 'Back' buttons.

The IP address can be added to Access Filter interface from Online User interface directly.

This screenshot shows the 'Online User' interface with a red box highlighting the '+' icon in the 'Add to Access Filter' column of the table. A red arrow points to this icon. Below the table, a modal dialog box titled 'Information' is displayed with the message 'Add successfully.' and an 'OK' button.

### 3.10.8 Packet Capture Tool

Input IP, Port and select a path, then click [Start] to start capture and click [End] to stop. The captured package will be saved in the selected path.

The screenshot displays the 'Status' page of an NVR interface. On the left is a dark sidebar with navigation options: Home, Device Information, Network Status, Camera Status, Disk Status, Event Status, Group Status, Online User, Packet Capture Tool (highlighted), and Logs. At the bottom of the sidebar is a 'Live View' icon. The main content area is titled 'Status' and shows system metrics: CPU at 0% and Memory at 25%. Below this is the 'Packet Capture Tool' configuration section, which includes a table with the following fields:

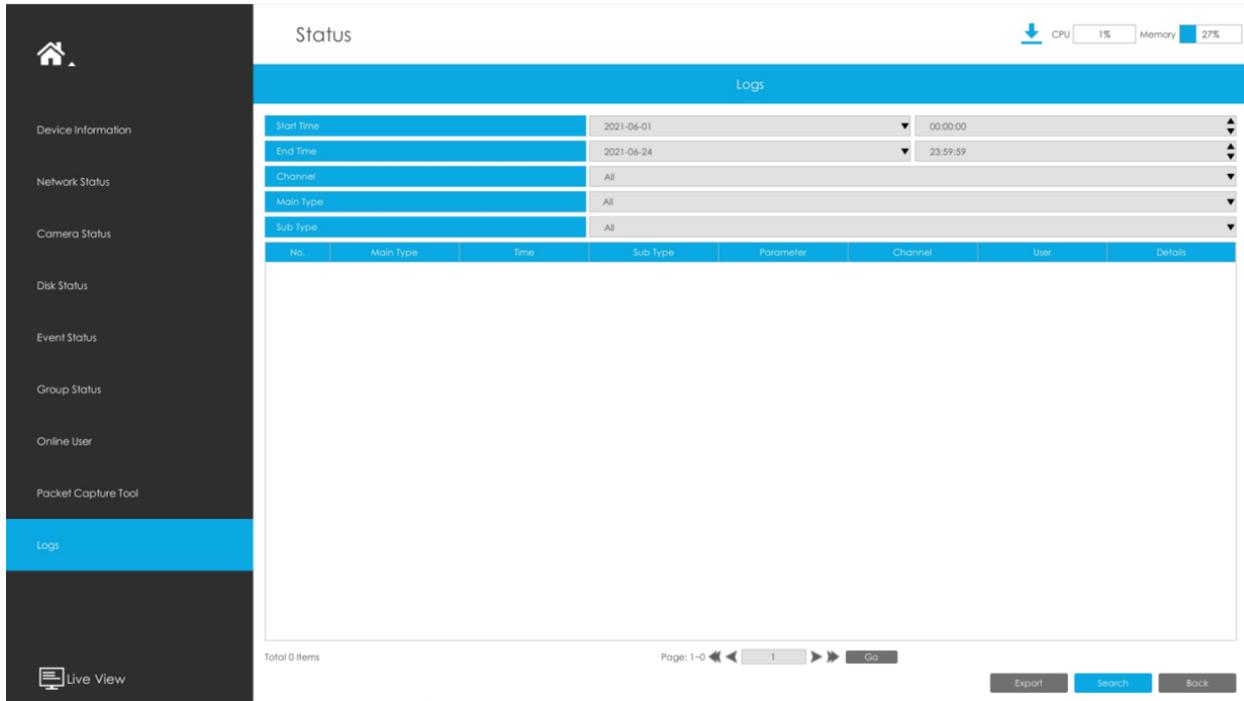
Field	Value
IP	
Port	
NIC	eth0
Export Directory	<input type="text"/> <input type="button" value="Browse"/>

At the bottom right of the main area, there are three buttons: 'Start', 'End', and 'Back'.

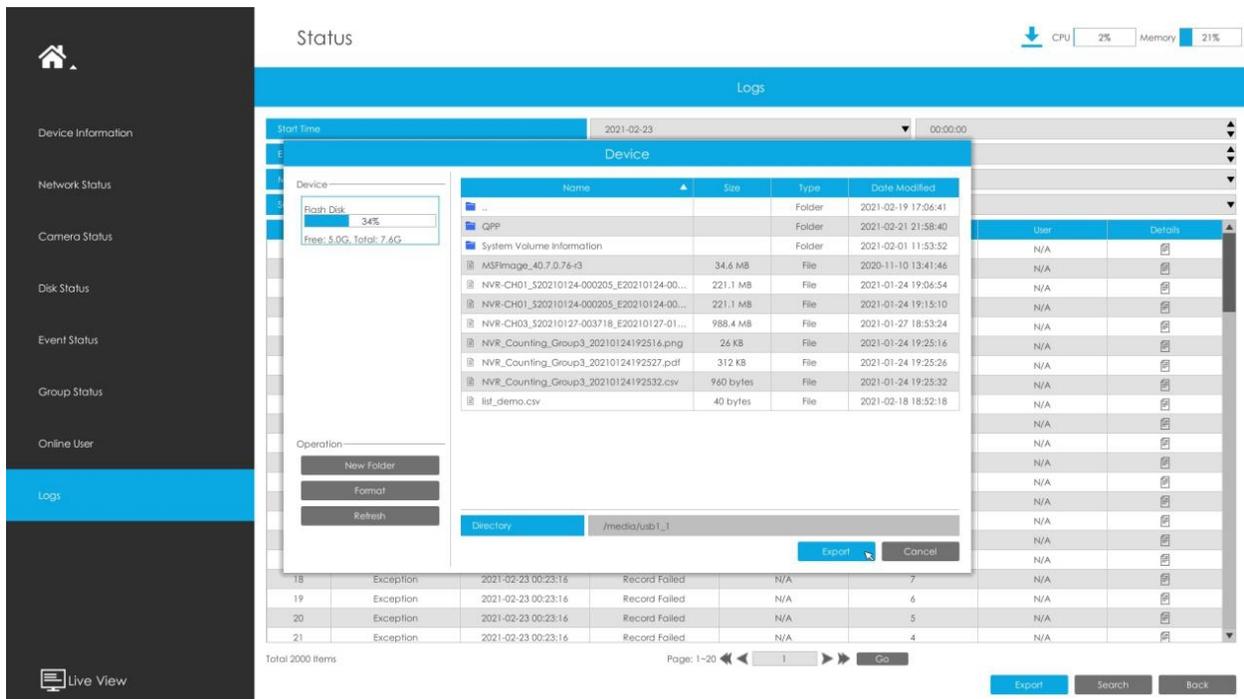
 **Note:** It is recommended to capture packets not more than 3 minutes on the local monitor side.

### 3.10.9 Logs

The user can check, search and export logs in Logs interface. By selecting the Start Time, End Time, Channel, Main Type and Sub Type, which can narrow down the scale of logs, you can search for logs that you need.



Click "Export" to export searched logs to media device.



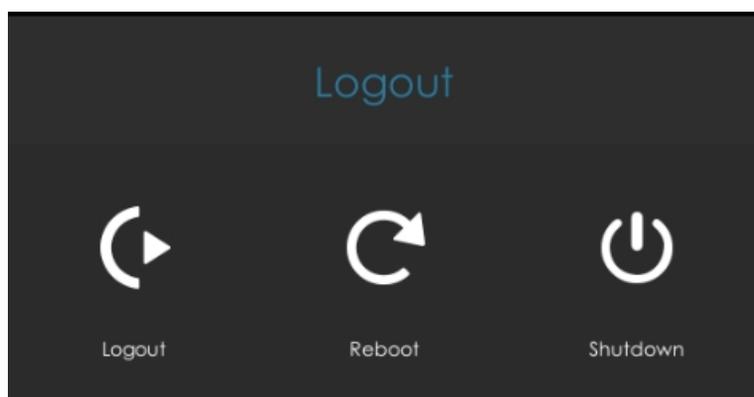
In particular, for the following types of events, the Information about detection object that triggers the event is displayed in the Log Information.

- Region Entrance
- Region Exiting
- Advanced Motion Detection
- Line Crossing
- Loitering

Details	
Time	2020-10-27 00:37:53
Type	Event-Stop Line Crossing Alarm
Local User	N/A
Host IP Address	N/A
Parameter	N/A
Channel	2
Log Information	<div style="border: 1px solid #ccc; padding: 5px;">                     Channel:2                      Stream Type: Primary Stream  <span style="border: 1px solid red; padding: 2px;">Detection Object: Human</span> </div>

Previous Next Back

### 3.11 Logout



**Logout:** Exit the current login account.

**Reboot:** Restart the NVR.

**Shutdown:**Close the NVR.

# Chapter 4. Services

Milesight provides customers with timely and comprehensive technical support services. End-users can contact your local dealer to obtain technical support. Distributors and resellers can contact directly with Milesight for technical support.

Technical Support Mailbox: [support@milesight.com](mailto:support@milesight.com)

Web: <http://www.milesight.com>

Online Problem Submission System: <http://www.milesight.com/support/feedback.asp>

## **MILESIGHT CHINA**

TEL: +86-592-5922772

Add: Building C09, Software Park Phase III, Xiamen 361024, Fujian, China