



# Network Video Recorder User Manual

V5.14



## 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.

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

<p><b>Warnings:</b> Please follow these safeguards to prevent injury or death.</p>	<p><b>Cautions:</b> Please follow these safeguards to prevent potential injury or material damage.</p>



### Warnings

- ◆ 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
- ◆ Do not touch components such as heat sinks, power regulators, and processors, which may be hot
- ◆ Source with DC 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

- ◆ 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

## EU Conformity Statement



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 2004/30/EC, the LVD Directive 2014/35/EU, the RoHS Directive 2011/65/EU.



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



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

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# 1. Product Introduction

## 1.1 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.

## 1.2 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 on monitor.
- 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 Transcoding for remote playback.
- 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 of NVR Pro 8000 Series.
- 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, People Counting and Object Left/Removed(Optional).
- 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.

## Network


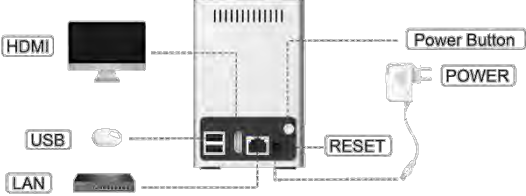
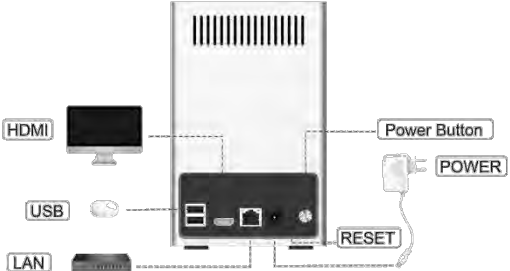

- Equipped with PoE ports for PoE cameras(only available for PoE NVR).
- Support remote search, playback and download of video files.
- Support remote acquiring and configuring of parameters.
- Support remote import and export of device parameters.
- Support Milesight Cloud.
- Support P2P remote access.
- Support IPv4/IPv6, TCP, UDP, RTP, RTSP, RTCP, HTTP, HTTPS, DNS, DDNS, DHCP, NTP, SNTP, SMTP, SNMP, UPnP.
- Support remote acquiring of device status, system log and alarm status.
- Support remote operate system maintenance by initialize hard disk, add NAS, upgrade firmware and auto reboot, etc.
- Support upload alarm and exceptions to remote host.
- Support remote manual start or stop of recording.
- Support remote manual start or stop of alarm output.
- Support remote BMP image capturing.
- Support remote PTZ control.
- Support keyboard control.
- Built-in WEB Server.

## 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.
- Support Plugin-Free mode.

## 2. Hardware

### 2.1 Panel Buttons

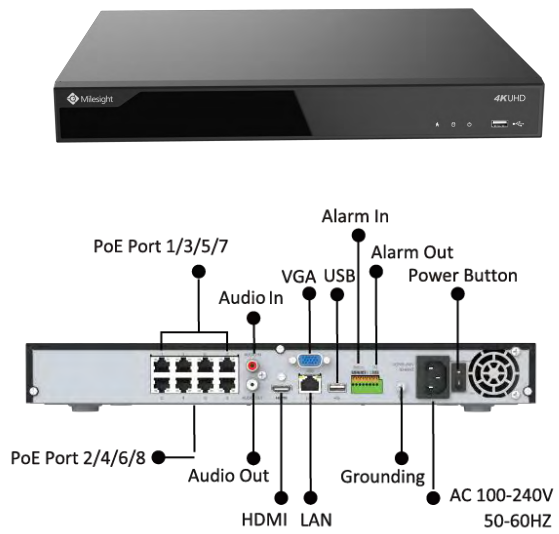
Model	Hardware/Interface
<p><b>4K H.265 Mini NVR 1000 Series</b></p>	<p><b>MS-N1004-UC/MS-N1008-UC:</b></p> 
	<p><b>MS-N1009-UT (Firmware version: 71.xx.xx.xx):</b></p> 
	<p><b>MS-N1009-UNT:</b></p> 
<p><b>4K H.265 Pro NVR 5000 Series</b></p>	<p><b>MS-N5008-UC:</b></p> 

	<p><b>MS-N5008-UT/MS-N5016-UT:</b></p>
<p><b>4K H.265 Pro NVR 7000 Series</b></p>	<p><b>MS-N7016-UH/MS-N7032-UH:</b></p>
<p><b>4K H.265 Pro NVR 8000 Series</b></p>	<p><b>MS-N8032-UH/MS-N8064-UH:</b></p>
	<p><b>MS-N1004-UPC/MS-N1008-UPC:</b></p>
	<p><b>MS-N1009-UPT:</b></p>



**4K H.265 PoE NVR Series**

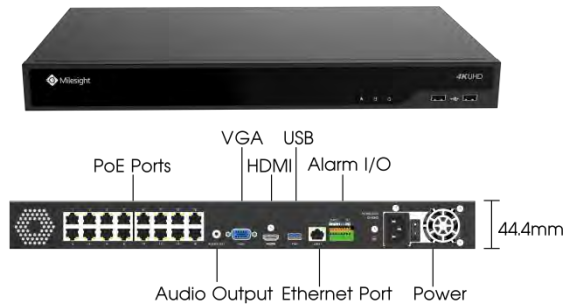
**MS-N5008-UPC:**



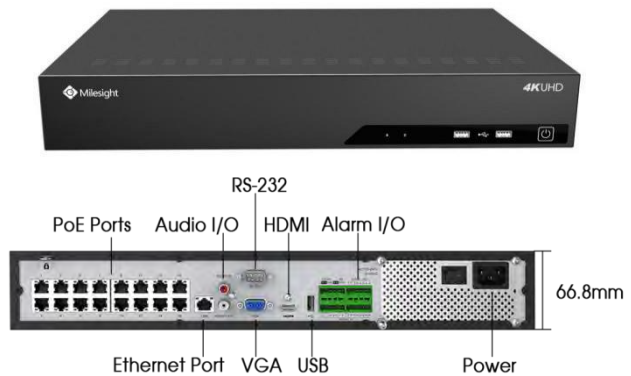
**MS-N5008-UPT:**



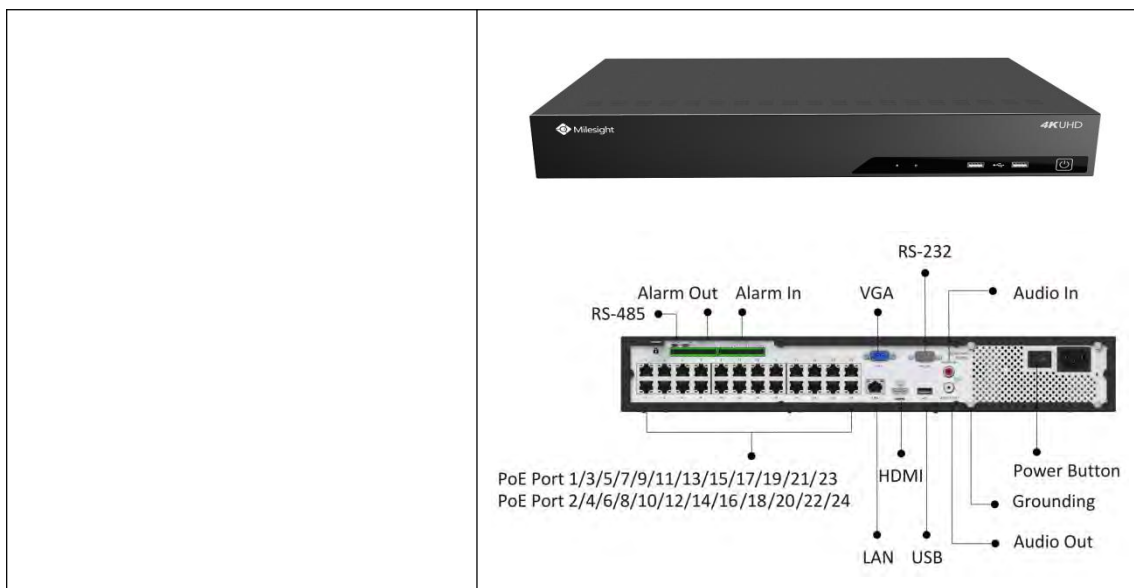
**MS-N5016-UPT:**



**MS-N7016-UPH:**



**MS-N7032-UPH:**



## 2.2 Using a USB Mouse

Item	Click	Description
Left Button	Single- click	Live view: select the channel and show the toolbar of live view. Menu: select and confirm.
	Double-click	Switch between single screen to multi-screen when in live view mode and playback mode.
	Click and drag	(1) Control rotation direction in PTZ mode. (2) Set the target area in motion detection, VCA and privacy mask alarm settings. (3) Drag to set the digital zoom area. (4) Drag the channel and the time scroll bar.
Right Button	Single-click	Live view: shows pop-up menu. Menu: exit and go to Live View.
Scroll-wheel	Scroll up	Scroll up the page.
	Scroll down	Scroll down the page.

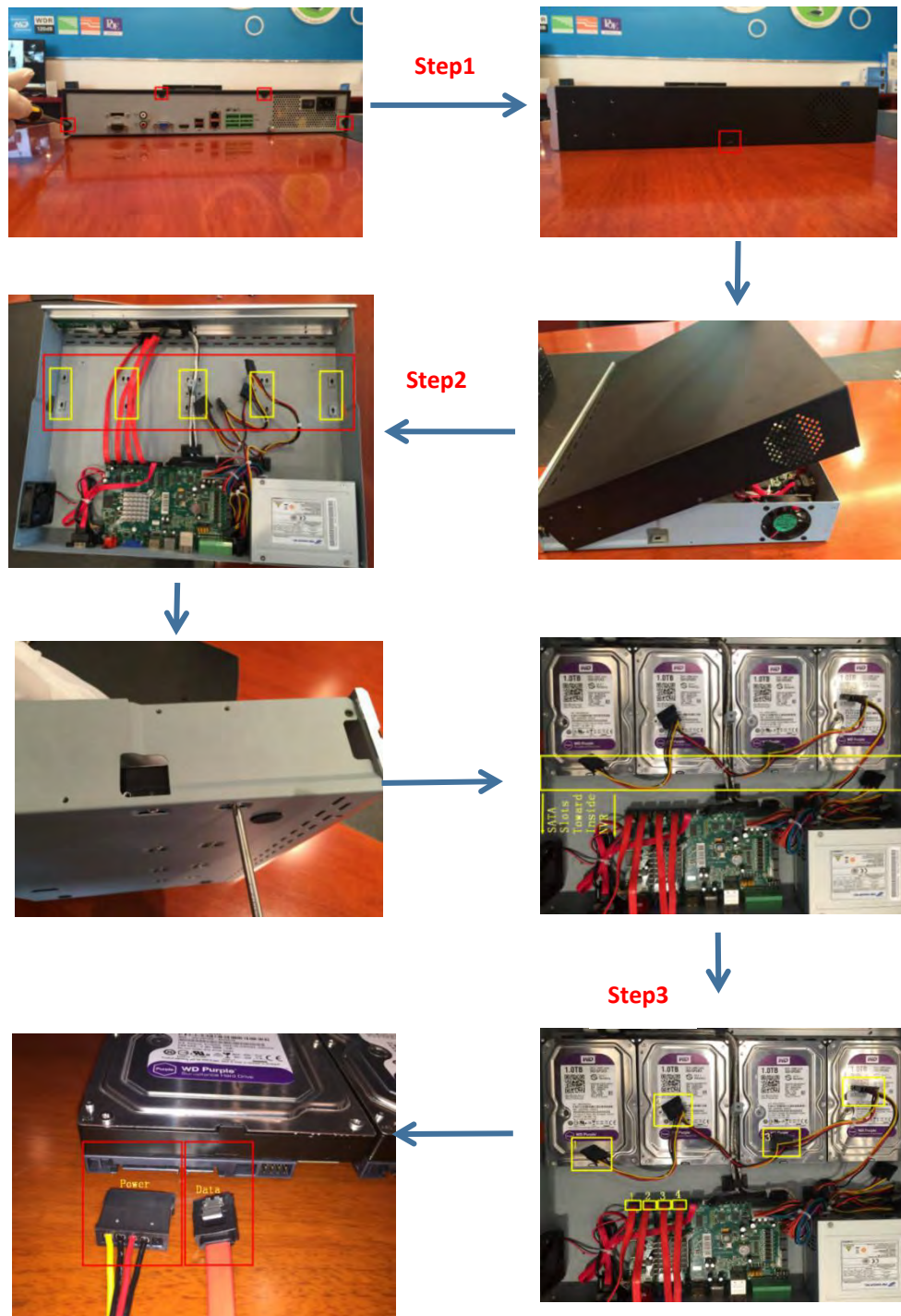
## 2.3 Hard Disk Installation

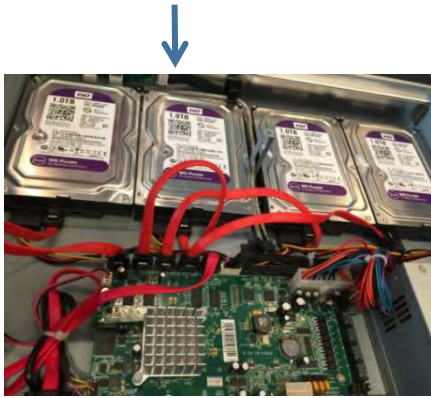
### 2.3.1 MS-N7000 series Hard Disk Installation

Step1. Unscrew the back and both sides' screws to open the upper lid.

Step2. Install the hard disks into NVR with screws shown in below pictures. (SATA Slots of hard disk should be toward inside NVR.)

Step3. Join the power and data connectors to corresponding hard disk.





## 2.3.2 MS-N8000 series Hard Disk Installation

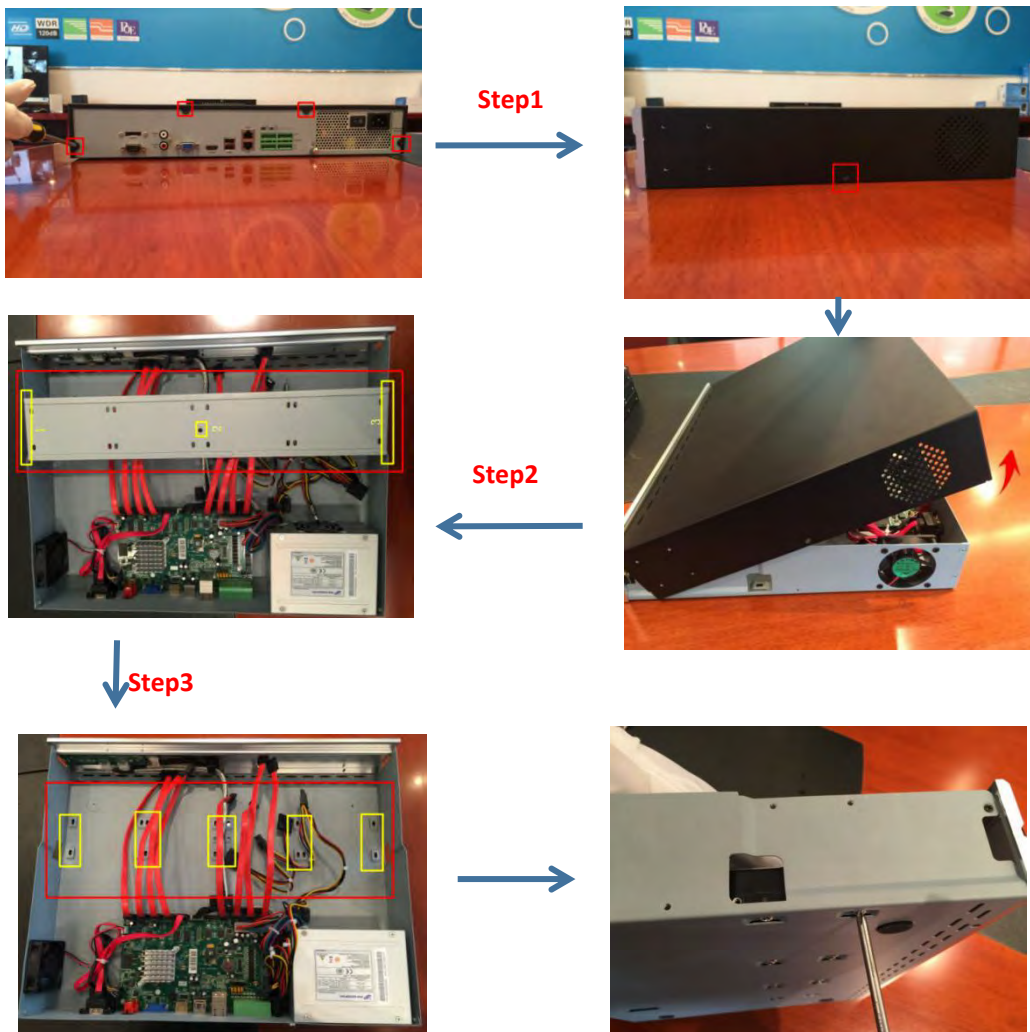
**Step1.** Unscrew the back and both sides' screws to open the upper lid.

**Step2.** Uninstall the upper hard disk panel.

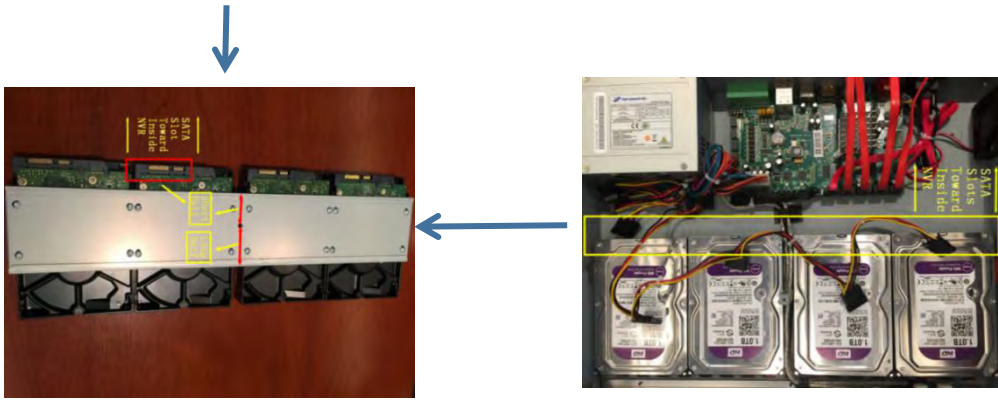
**Step3.** Install the hard disks into NVR with screws shown in below pictures.(SATA slots of hard disks should be toward inside NVR)

**Step4.** Join the power connectors to corresponding hard disks.(Install lower hard disk panel before upper one)

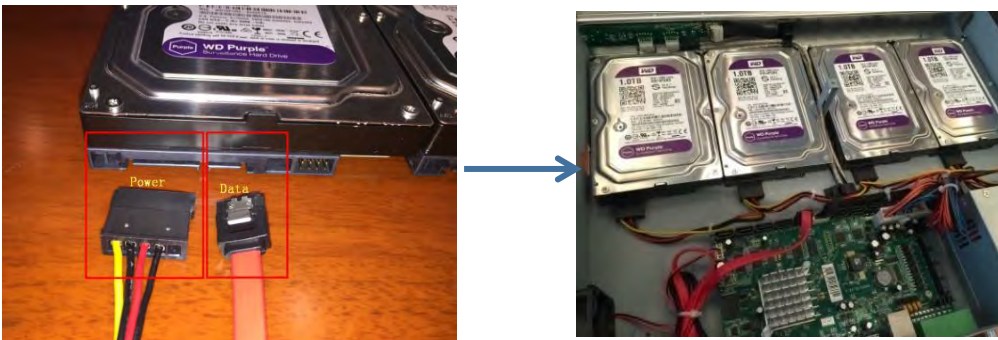
**Step5.** Join the data connectors to corresponding hard disk.(Check the connection by below sequence)







Step4 ↓



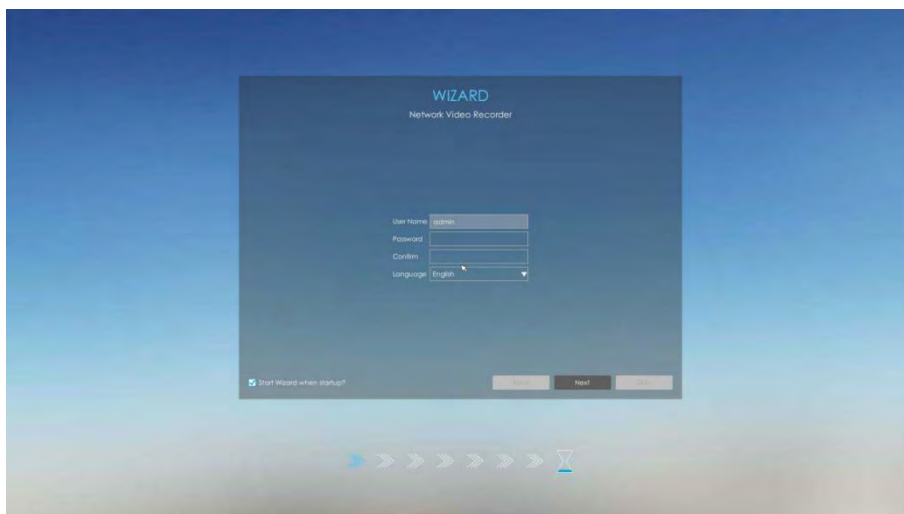
Step5 ↓



**Note:**

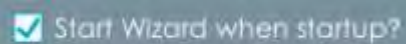
1. The SATA slots are in SHORT HALF side and the SATA slot toward inside NVR.
2. The data connector sequence of MS-N7000 series is different from MS-N8000 series'.

## 3. Local Operation



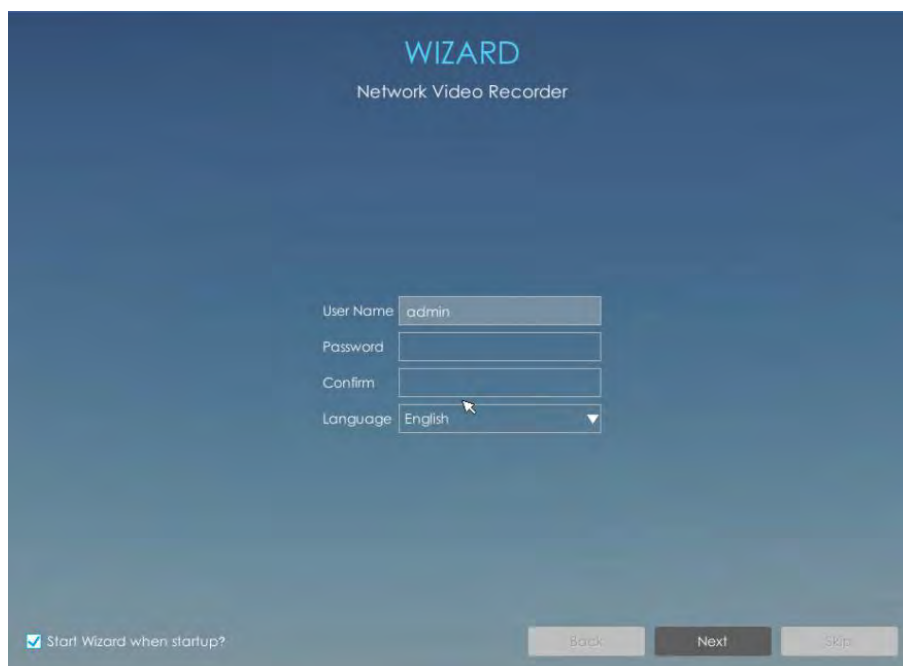
### 3.1 Wizard Setting

By default, the Setup Wizard will start once the NVR has been loaded. You can click check-box 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.**

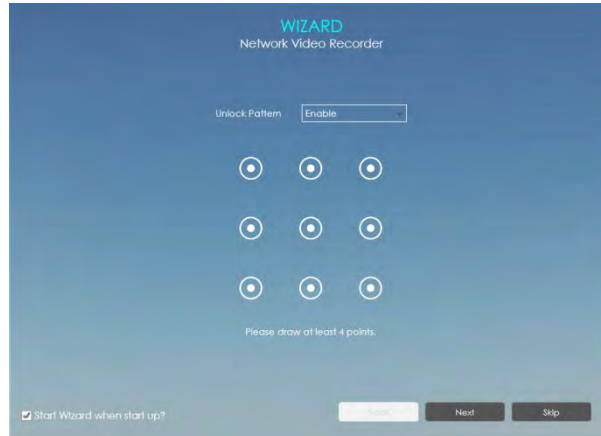


**Note:**

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.

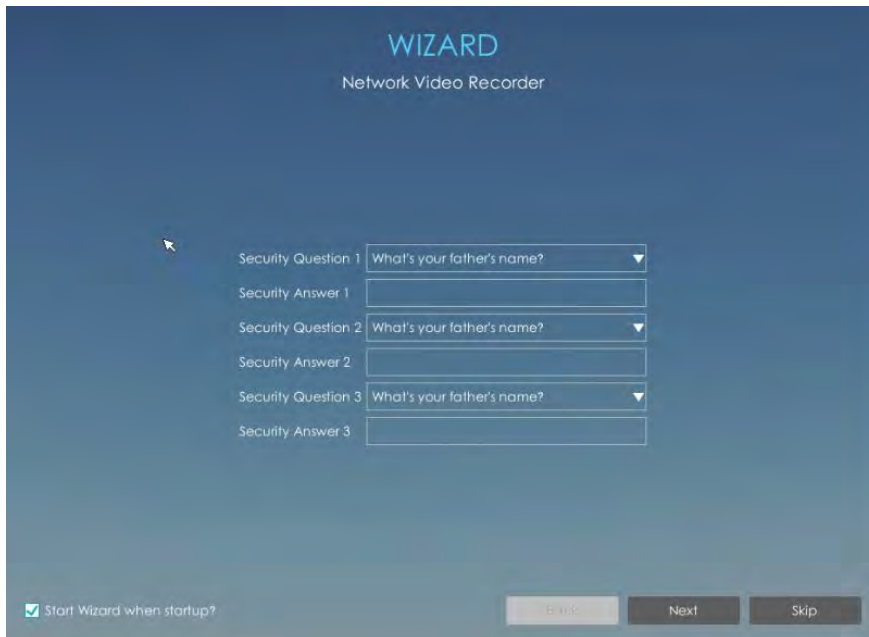
**Note:**

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.

**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. The 'Time Zone' is set to '(UTC-08:00) United States - Pacific Time'. 'Daylight Saving Time' is set to 'Auto'. The 'Synchronize with NTP server' checkbox is checked, and the 'NTP Server' is 'pool.ntp.org'. The 'Set Date and Time' field shows '2019.08.10 02:29:33'. At the bottom, there is a checkbox for 'Start Wizard when startup?' which is checked, and three buttons: 'Back', 'Next', and 'Skip'.

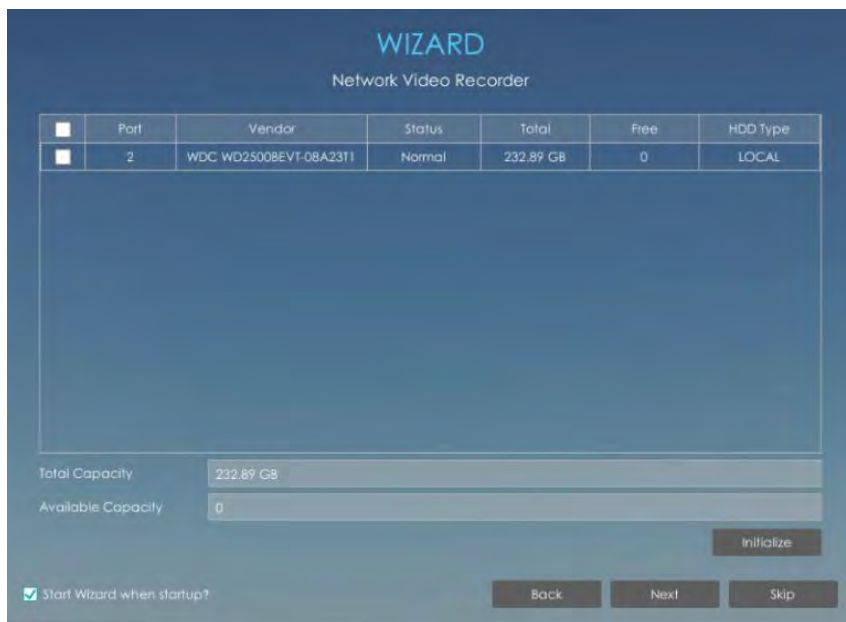
**Step 5. Network setting.**

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 Network Video Recorder' interface for network configuration. The 'NIC' is set to 'LAN'. The 'Enable DHCP' checkbox is unchecked. The 'IP Address' is '192.168.7.111', 'Subnet Mask' is '255.255.240.0', 'Gateway' is '192.168.7.1', 'Preferred DNS Server' is '8.8.8.8', and 'Alternate DNS Server' is empty. The 'PoE NIC IPv4 Address' is '192.168.20.1'. At the bottom, there is a checkbox for 'Start Wizard when startup?' which is checked, and three buttons: 'Back', 'Next', and 'Skip'.

**Step 6. Disk Management.**

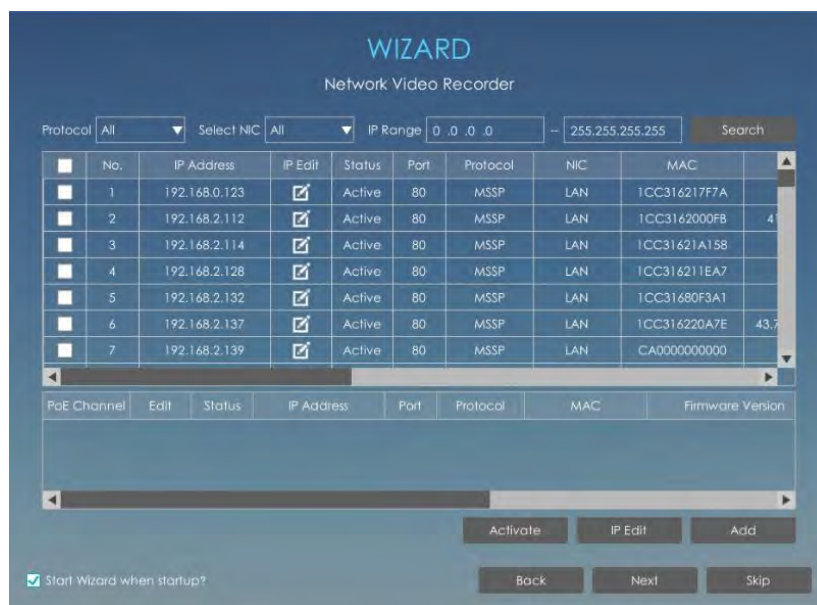


### Step 7. Camera Management.

Search all the cameras in LAN by filtering Protocol and IP Range. Select cameras and click



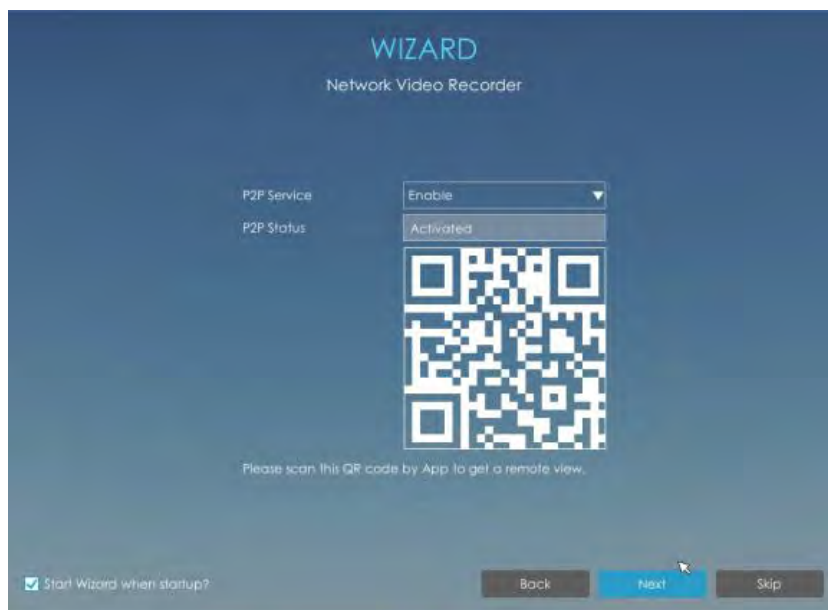
to add them to NVR.



### 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. P2P



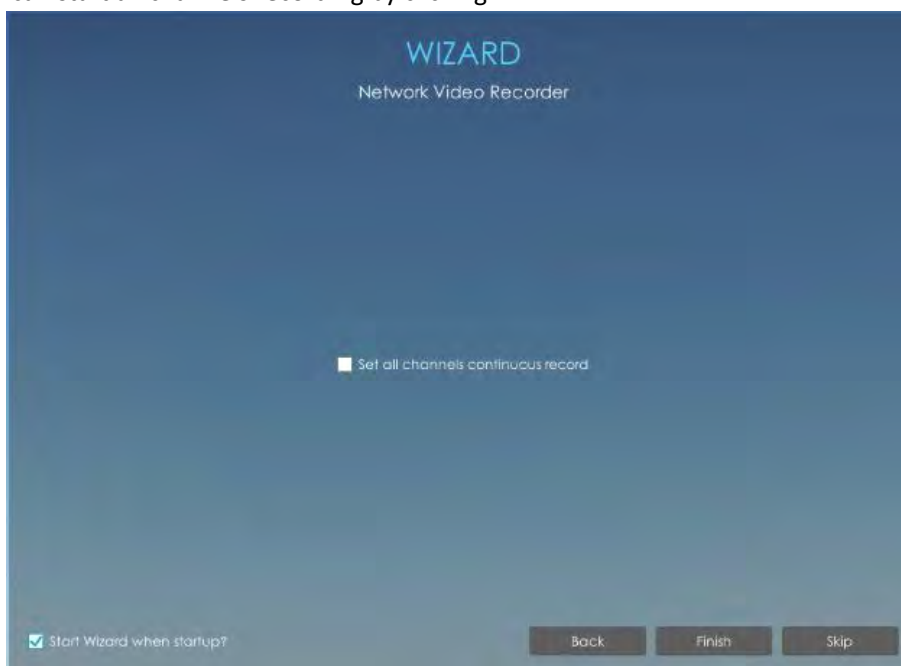
Select Enable to allow P2P Service. Then scan the QR code through M-sight Pro APP to get a remote and real-time view.

**Note:**

Only the NVR firmware version xx.9.0.9 or above supports enable P2P in Wizard directly.

**Step 9. Record**

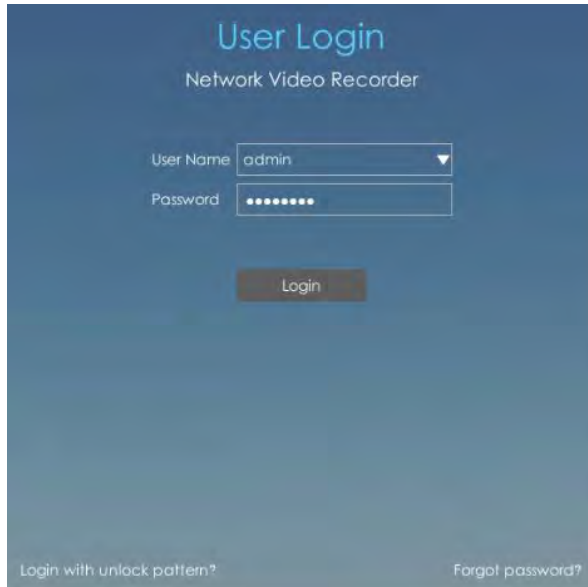
The user can start all channels recording by clicking .



**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 the 'User Login' interface for a Network Video Recorder. The title 'User Login' is at the top, followed by 'Network Video Recorder'. Below this, 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 nine dots. A 'Login' button is centered below the fields. At the bottom left, there is a link 'Login with unlock pattern?' and at the bottom right, a link 'Forgot password?'.

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

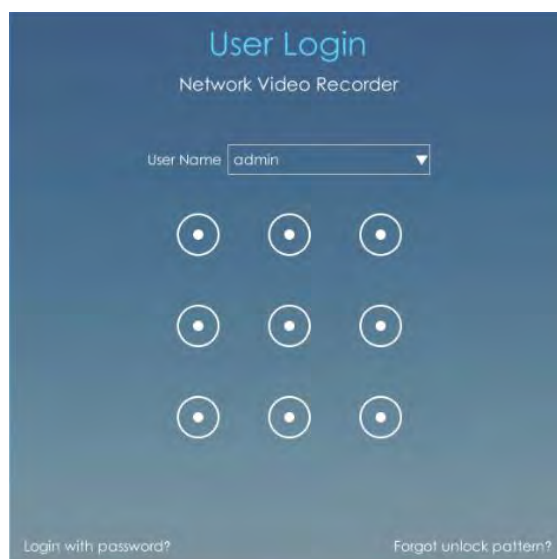


The image shows the 'Reset Password' screen. The title 'Reset Password' is at the top. Below it, the instruction 'Please fill in the answers for authentication.' is displayed. There are three sets of questions and answers. Each set consists of a question box and an answer box. The questions are: 'Question 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 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.



The image shows the 'User Login' interface for a Network Video Recorder, similar to the first image but with a different authentication method. The title 'User Login' is at the top, followed by 'Network Video Recorder'. Below this, there is a 'User Name' dropdown menu showing 'admin'. Instead of a password field, there is a 3x3 grid of nine circular icons for an unlock pattern. At the bottom left, there is a link 'Login with password?' and at the bottom right, a link 'Forgot unlock pattern?'.

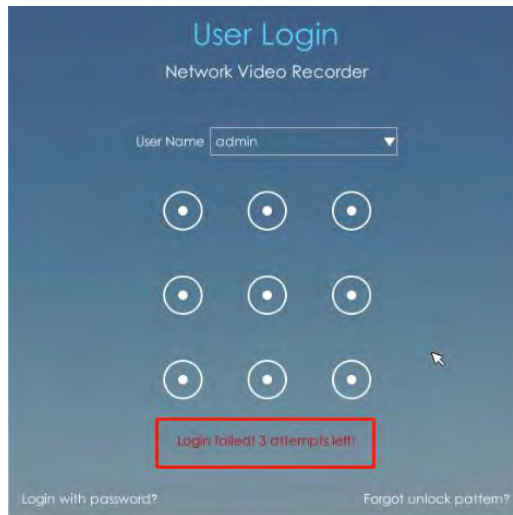
If you forget Unlock Pattern, click [Forgot unlock pattern?](#) to reset Unlock Pattern.



The image shows a 'Reset Unlock Pattern' form. At the top, it says 'Reset Unlock Pattern' in a blue header. Below that, it asks 'Please fill in the password for authentication.' There are two input fields: 'User Name' with 'admin' entered, and 'Password' which is empty. At the bottom, there are two buttons: 'Next' and 'Cancel'.

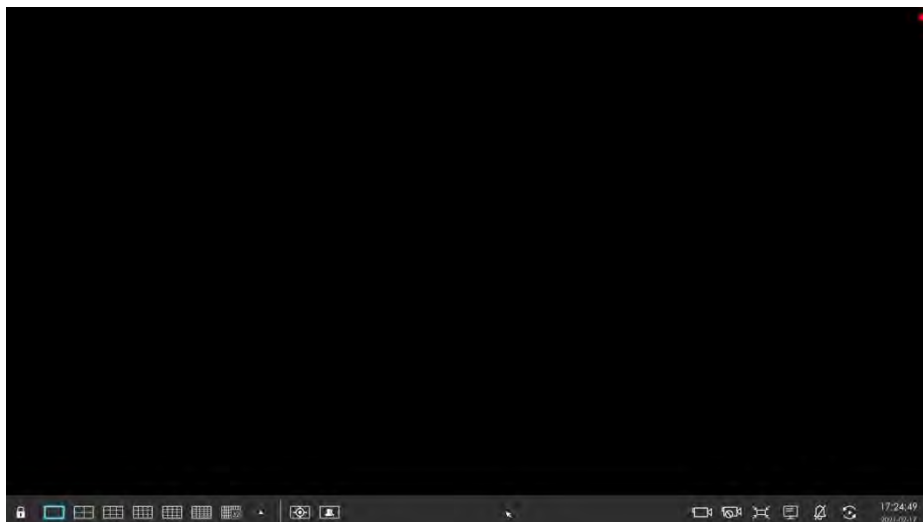
**Note:**

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.



The image shows a 'User Login' form for a 'Network Video Recorder'. It has a 'User Name' dropdown menu with 'admin' selected. Below the dropdown is a 3x3 grid of circular icons for a pattern lock. A red box highlights a message that says 'Login failed! 3 attempts left!'. At the bottom, there are two links: 'Login with password?' and 'Forgot unlock pattern?'.

## 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:**

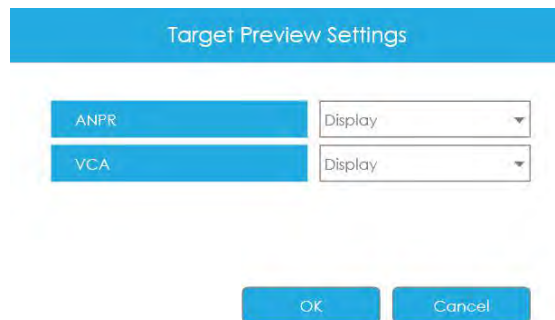
Tool Bar won't be hidden if there is event notification.



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
	12 screen layout		1+11 screens layout
	2+10 screens layout		16 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)
	<p>Display settings (for all displaying channels, including Play Mode, Color, on/off of Stream Info, Channel Name, Borderline, Page Info, Time Info and Event Detection Region.)</p> <p><b>Note:</b></p> <p>① Support displaying Event Detection Region and the detection frame to track the target when the channel is full screen on Live View interface.</p> <p>② Make sure your camera model is MS-CXXX-XXC, and the camera's version should be 4X.7.0.77 or above.</p>		<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>
	Sequence		Time information, which can be set to display consistently or synchronize with the Toolbar in Display Settings.

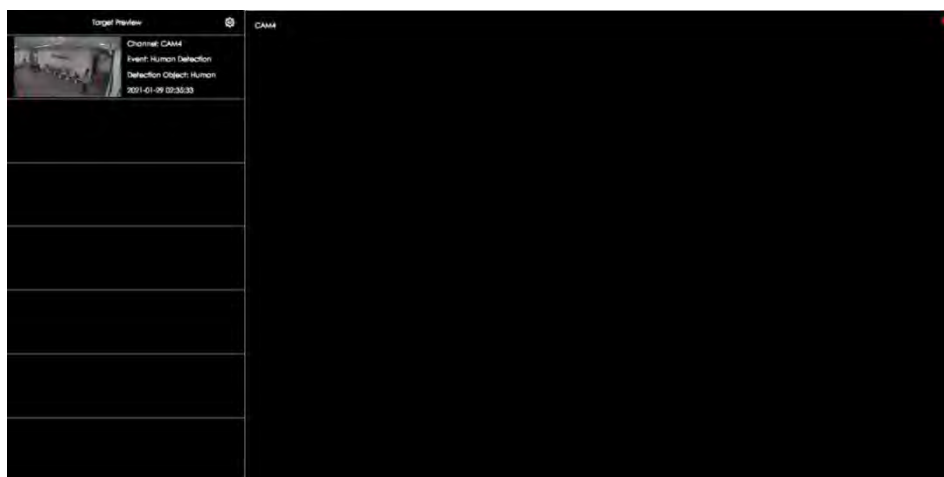
**Target Mode:**

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.

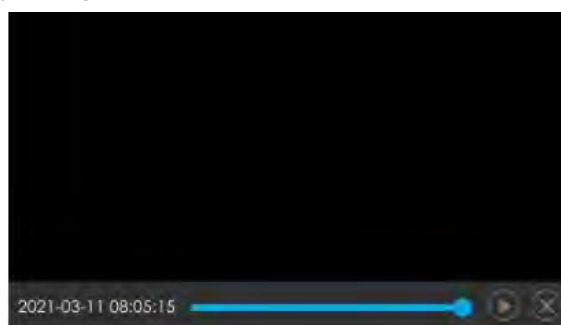
**Note:**

- 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.
- 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.



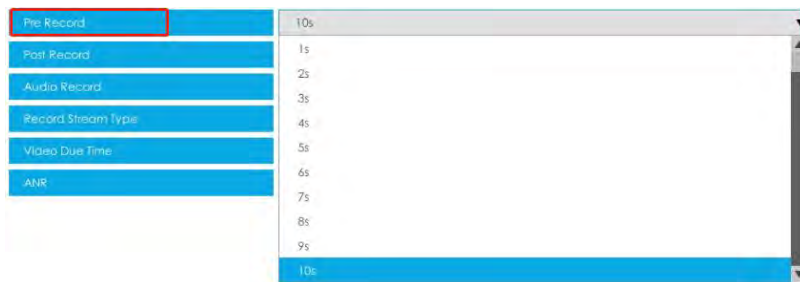
You can click the corresponding record to check the latest X seconds (10s~20s) video.

**Note:**

1.X = 10 + Pre Record Time



You can set Pre Record Time in Storage -> Video Record -> Record Settings interface.

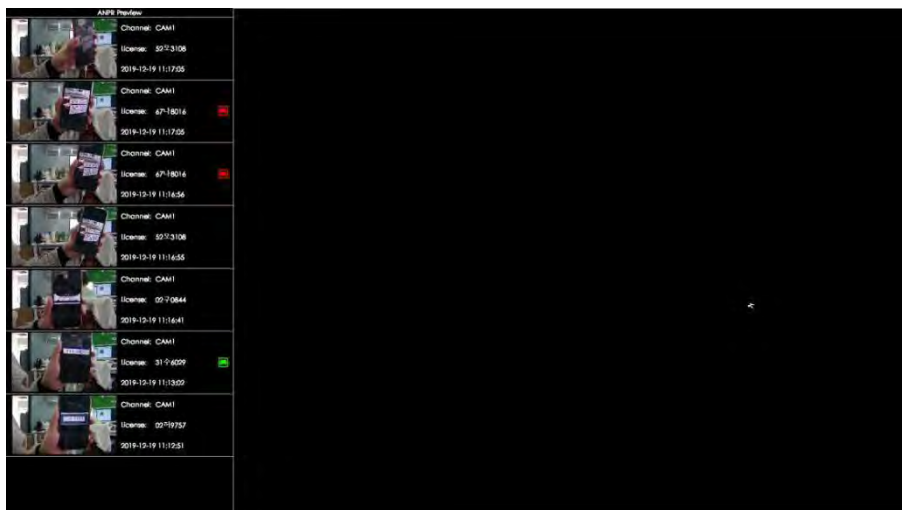




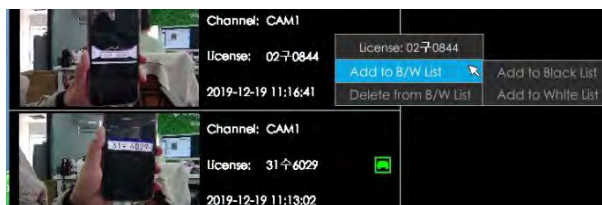
2.Ensure that there is available HDD on NVR and correct record settings is made, so that you can check the record on live view.

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:

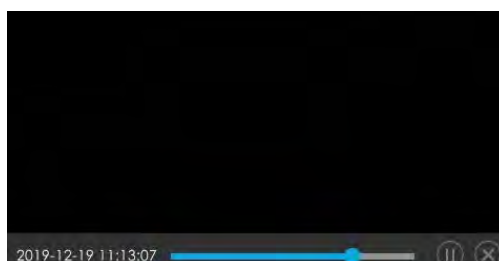
-  ---- License from Black List
-  ---- License form White List



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.



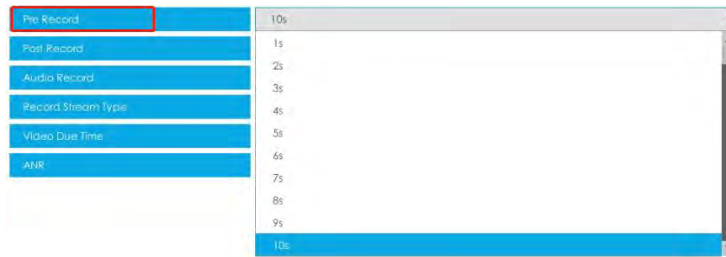
Besides, you can click the license plate information to check the latest X seconds (10s~20s) video.



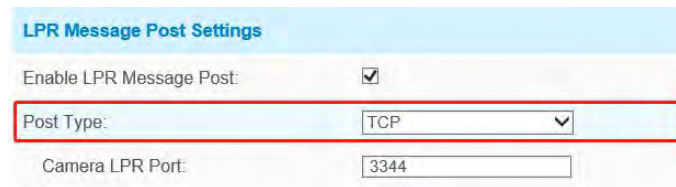
**Note:**

1.  $X = 10 + \text{Pre Record Time}$

You can set Pre Record Time in Storage -> Video Record -> Record Settings interface.



2. Ensure that there is available HDD on NVR and correct record settings is made, so that you can check the record on live view.
3. 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 -> Advanced Settings -> ANPR -> Settings interface.


**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)

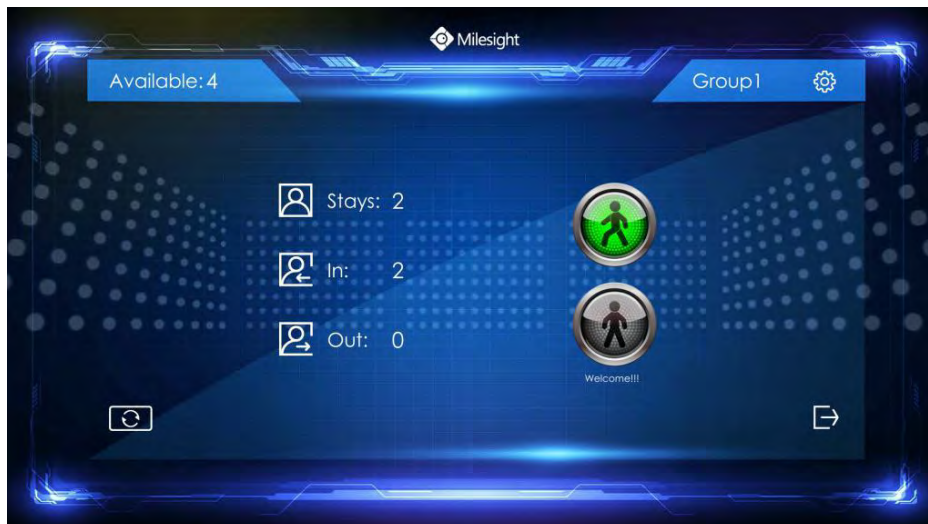
**Stays/In/Out:** Display the number of people staying, entering and leaving in real time. (Stays value = In value - Out value, the minimum number of people staying is 0)


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



**There are two traffic light states:**

**Green Light**  --- 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 -> Analysis Settings -> People Counting interface.



**Red Light**  --- 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 -> Analysis Settings -> People Counting interface.



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

**Exit:** Click to exit the Occupancy Live View interface.

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

Icons	Descriptions
	It indicates video loss
	It indicates motion detection alarm
	It indicates that the current channel is recording.
	It indicates exception alarm
	It indicates VCA alarm

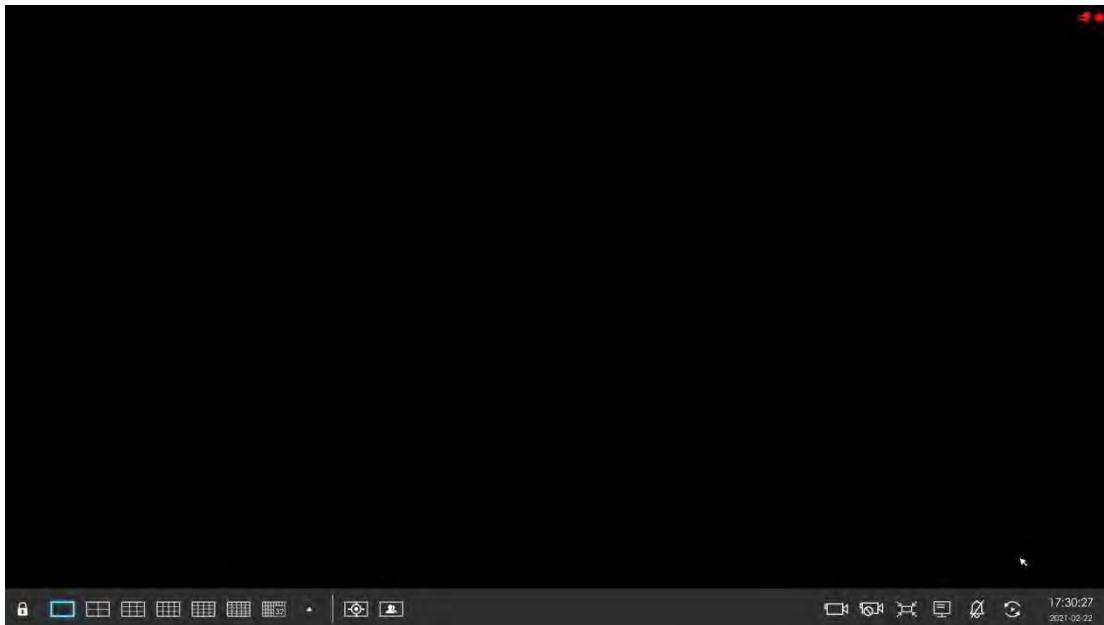
Right click in the Live View and the quick operation menu pops up.



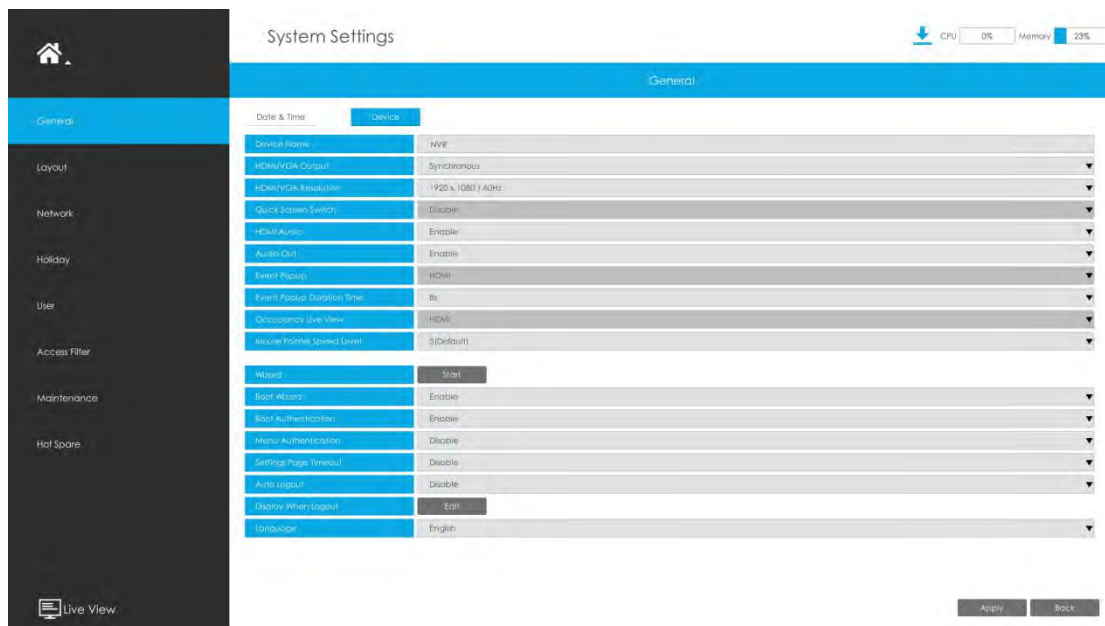
Item	Descriptions
Menu	Display Main Menu
Single Screen	The selected channel will be full screen. You could go back to previous screen layout by double clicking the channel
Sub Screen Ctrl	Switch to sub screen to operate (Only for Pro NVR 7000 Series, PoE NVR 7000 Series and Pro NVR 8000 Series)
Multi 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

**Note:**

1. 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.



2. 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.



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
	Close menu		

**Note:**

You can right-click to exit the instant playback.

**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

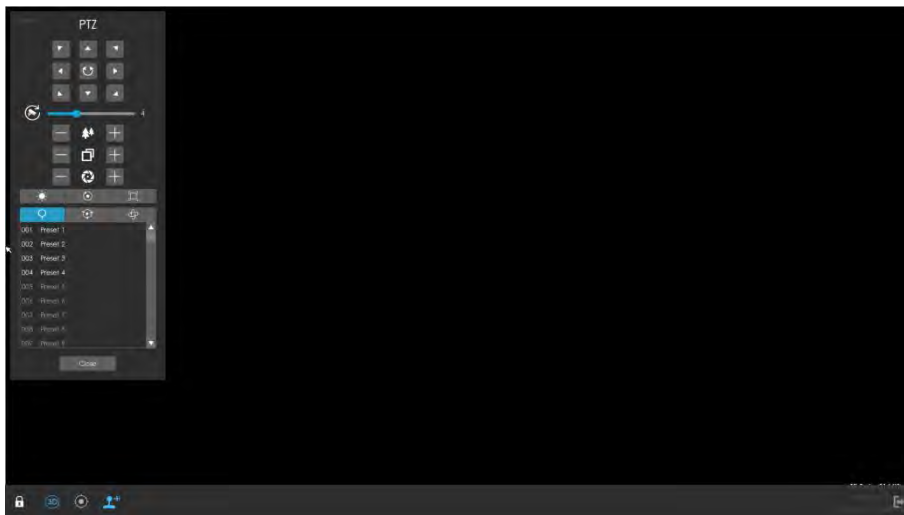
**Fisheye Auto Tracking:** Comprehensive Fisheye Auto Tracking avoids any details missing by performing the digital Pan/Tilt/Zoom to track the moving objects automatically.

**Note:**

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

**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.

Icons	Descriptions	Icons	Descriptions
-------	--------------	-------	--------------



	Lock/Unlock the tool bar		Enable/Disable 3D positioning
	PTZ Manual Tracking		Show/Hide the PTZ control panel

**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.

**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:**

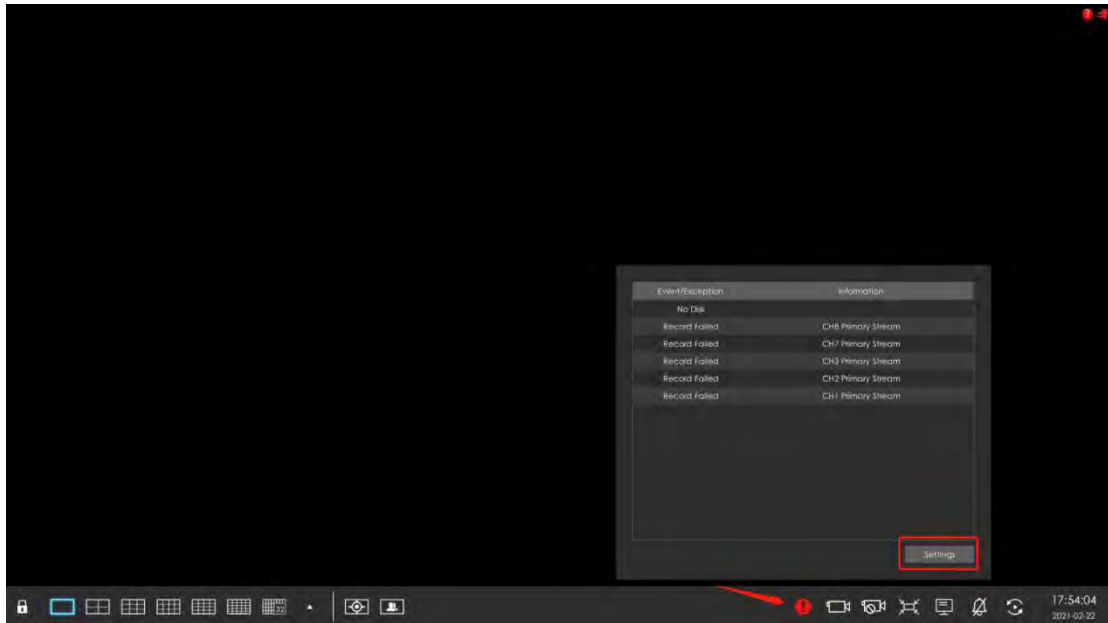
1. Only Milesight NVR 7000 and 8000 series that support Two-way Audio now, other series only support Audio function.
2. The Two-way Audio only supports one channel talking at one time.
3. Two-way Audio and Audio function can not be used together, including Audio of Playback.
4. The audio interface of 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.

Local Privilege	Remote Privilege
<input checked="" type="checkbox"/> All	<input checked="" type="checkbox"/> All
<input type="checkbox"/> Camera Management	<input type="checkbox"/> Camera Management
<input checked="" type="checkbox"/> PTZ Control	<input checked="" type="checkbox"/> PTZ Control
<input checked="" type="checkbox"/> PTZ Settings	<input checked="" type="checkbox"/> PTZ Settings
<input type="checkbox"/> Two-way Audio	<input type="checkbox"/> Two-way Audio
<input type="checkbox"/> Record Settings	<input type="checkbox"/> Record Settings

**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.

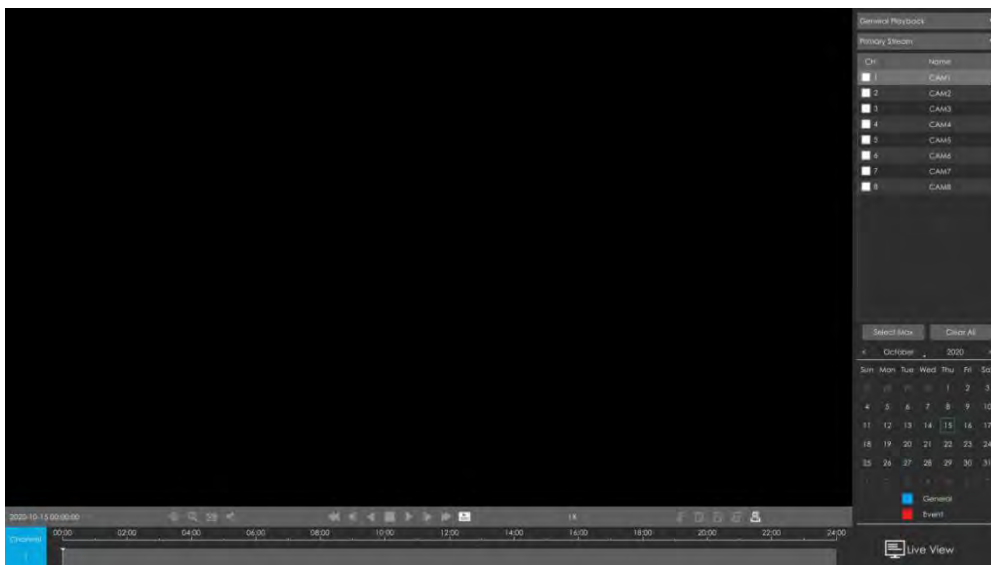
Also, you can select which alarm notification you want to get by click .



## 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.

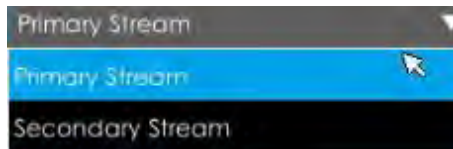
### 3.3.1 General Playback

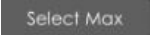


**Step1. Select General Playback as playback type.**

**Step2. Select Stream Type.**

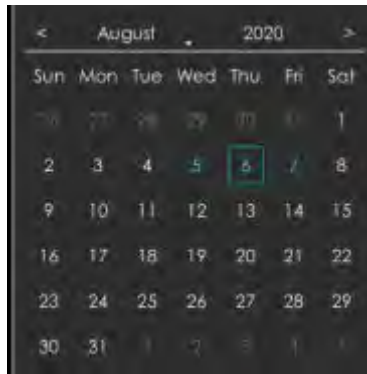
Primary Stream and Secondary Stream are available.

**Step3. Select channel.**

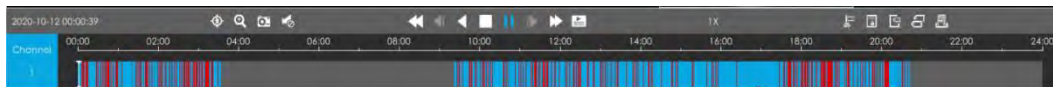
Select channels you want to do playback. User can click  to select maximum channel for playback, 9 channels for Milesight Mini (PoE) NVR Series while 16 channels for other NVR. Layout of playback will be automatically adjusted according to the amount of the selected channels.

**Step4. Select date.**

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



**Video Playback Tool Bar Description**



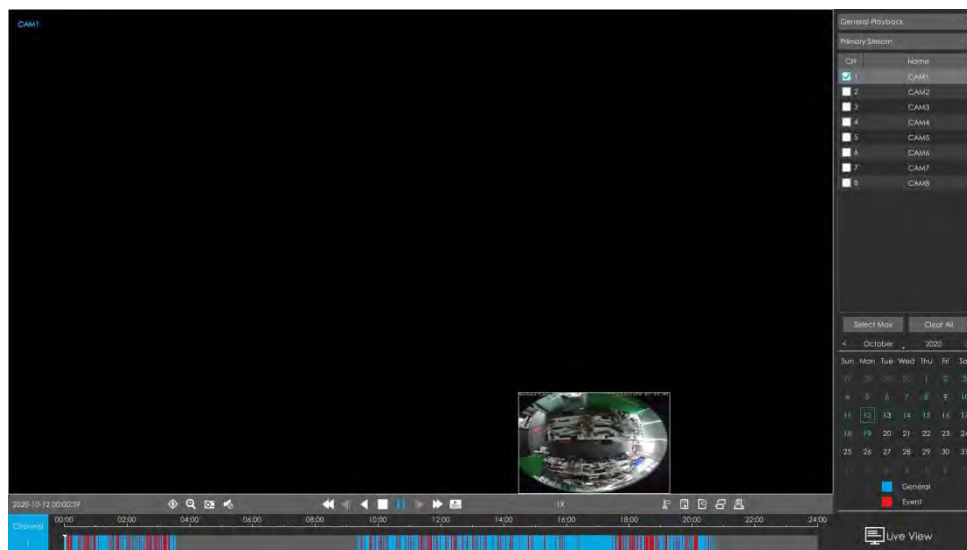
Every channel got their own file bar, and there is only one file bar matching with the selected channel. The tool bar can display multiple types record. It shows that in this record period what kind of event has happened. The symbolic meaning of each color is:

**Blue**—General

**Red** --- Event

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

It is shown a thumbnail of what occurs at that given moment in the recorded video when you hover your mouse over the progress bar. You can Scroll the mouse wheel to get forward or backward frame of the video when you pause the video.



Icons	Descriptions	Icons	Descriptions
	Smart Search		Digital zoom
	Snapshot		Audio on
	Audio off		Speed down

	Speed up		Step reverse
	Step forward		Rewind
	Play		Stop
	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. Milesight 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.

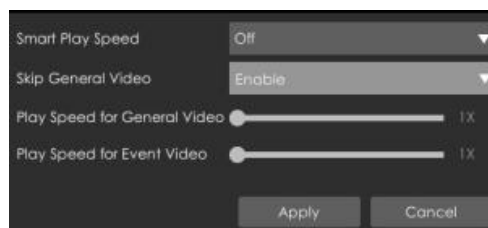
**Tag Video:** Quick Tag and Custom Tag are available for tag operation in Playback interface. Milesight NVRs support the display of tagged icon on the playback bar so that the corresponding files in the playback page can be identified directly. You can backup video via tag in Retrieve interface or do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

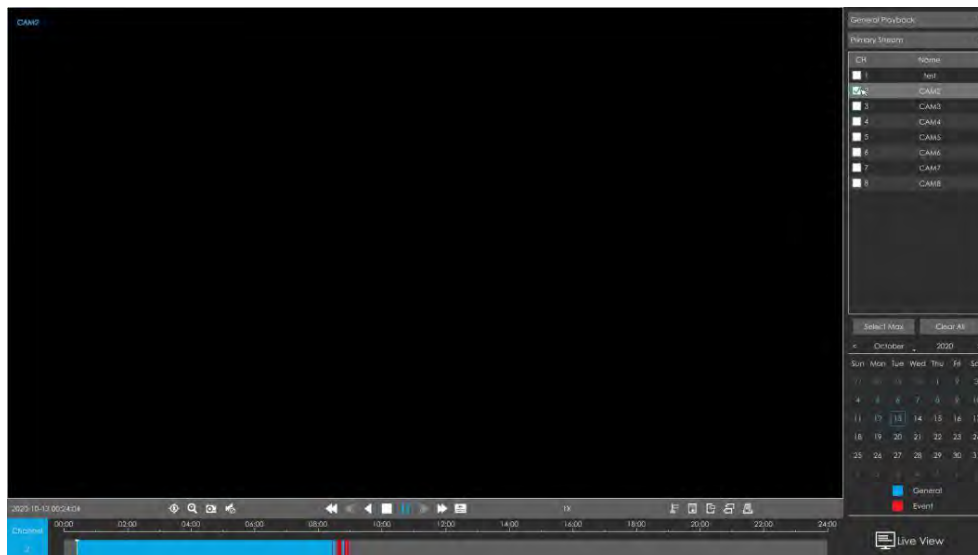



**Note:**

1. Only NVR firmware version xx.9.0.9 or above supports Smart Play Speed.

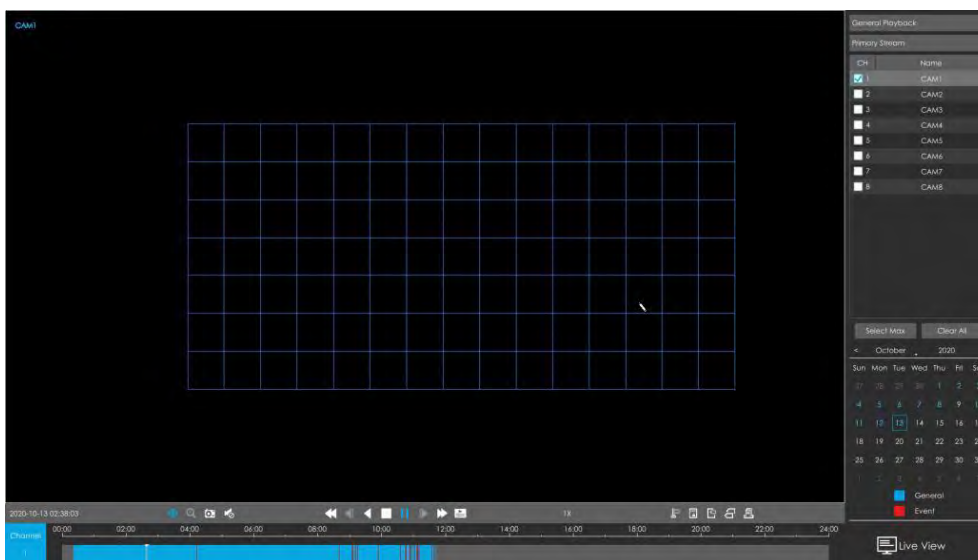
**Smart Search:** NVR can search out all relevant motion events and play all the event recording files of the selected area. Here are the steps of how to use the function.

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



- (2) Click  to enable Smart Search.

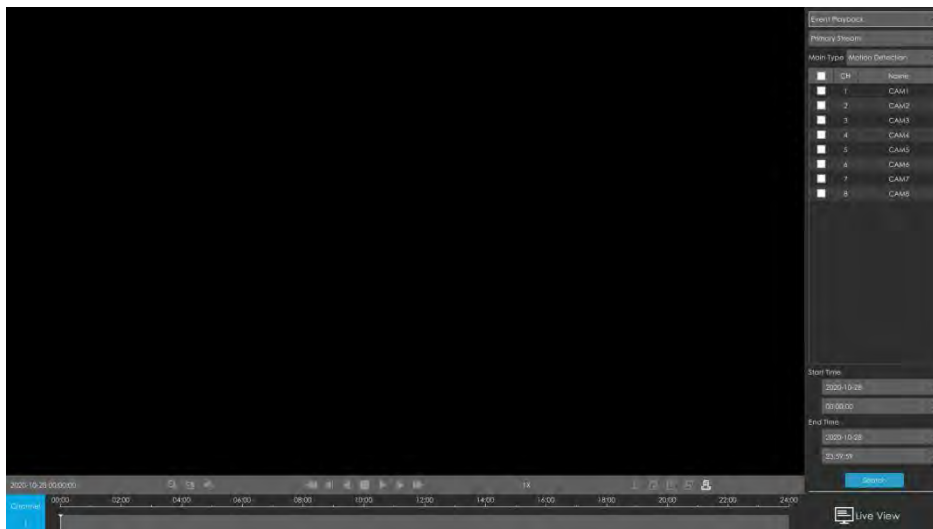
- (3) Draw an area in the frame and NVR would play the video files after searching out all motion events of the area.



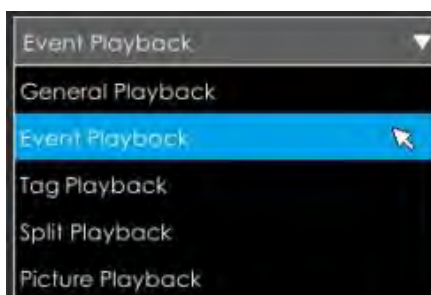
**Note:**

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.

### 3.3.2 Event Playback

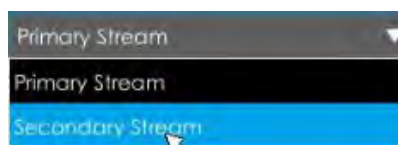


**Step 1. Select Event Playback as playback type.**



**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.



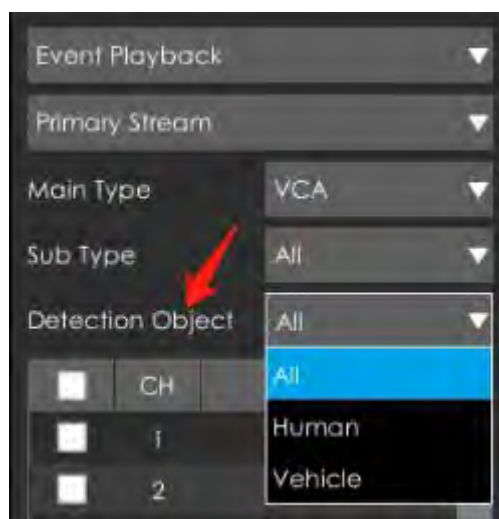


**Step 4. Select Event Type.**

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:

- ① Region Entrance
- ② Region Exiting
- ③ Advanced Motion Detection
- ④ Line Crossing
- ⑤ Loitering



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

**Start Time**

2019-09-17 ▼

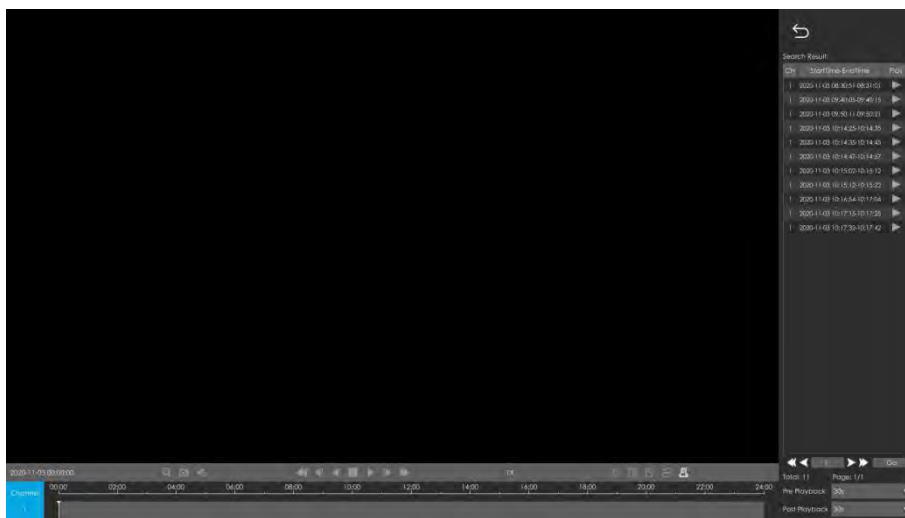
00:00:00 ▲▼

**End Time**

2019-09-17 ▼

23:59:59 ▲▼

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

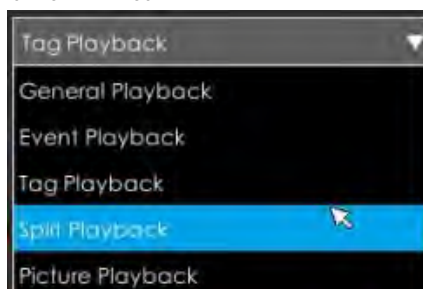


**Video Playback Tool Bar Description** are the same as **General Playback**, except for those icons that are not locked or tagged on the playback bar.

### 3.3.3 Tag Playback

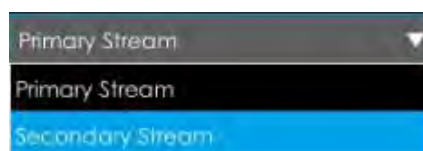


**Step 1. Select Tag Playback as playback type.**



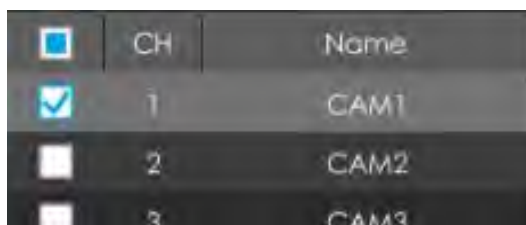
**Step 2. Select Stream Type.**

Primary Stream and Secondary Stream are available.



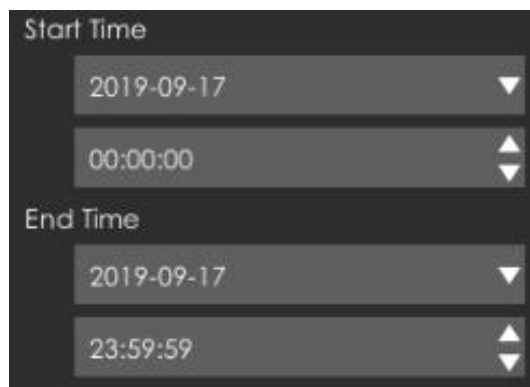
**Step 3. Select channel.**

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



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



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



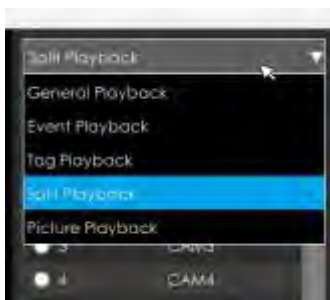
**Video Playback Tool Bar Description are the same as General Playback, except for those icons that are not locked or tagged on the playback bar.**

### 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.



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



**Step 2. Select Stream Type.**

Primary Stream and Secondary Stream are available.

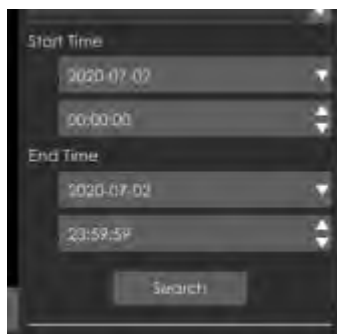
**Step 3. Select channel.**

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

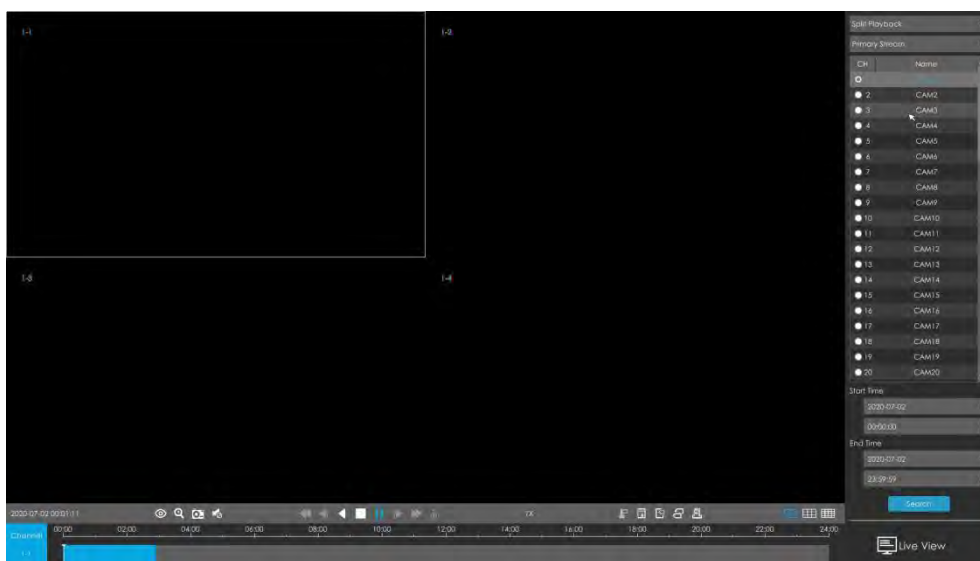
<input type="checkbox"/>	CH	Name
<input checked="" type="checkbox"/>	1	CAM1
<input type="checkbox"/>	2	CAM2
<input type="checkbox"/>	3	CAM3
<input type="checkbox"/>	4	CAM4
<input type="checkbox"/>	5	CAM5
<input type="checkbox"/>	6	CAM6
<input type="checkbox"/>	7	CAM7
<input type="checkbox"/>	8	CAM8
<input type="checkbox"/>	9	CAM9

**Step 4. Set Start Time and End Time.**

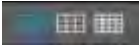
Set Start Time and End Time and click Search button to search playback records of the chosen channel. The time period should be within 24 hours



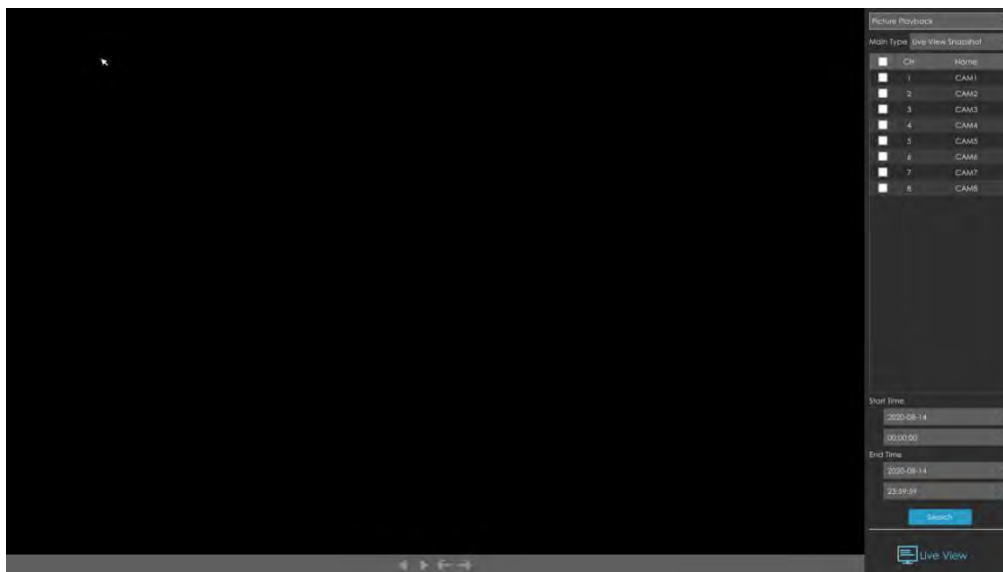
**Step 5:** It would start playing after clicking , displayed in 4 split screens by default.



**Step 6: 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



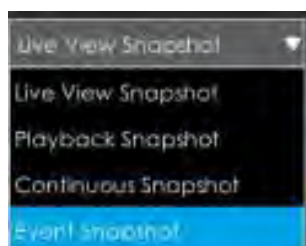
**Step 1. Select Picture Playback as playback type.**



**Step 2. Select channel.**



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

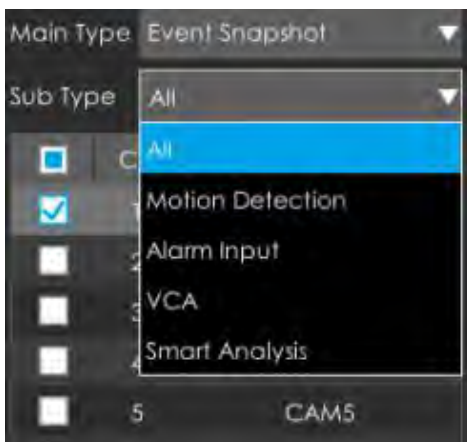


Live View Snapshot and Playback Snapshot refer to the picture file manually captured in Live View and Playback page.

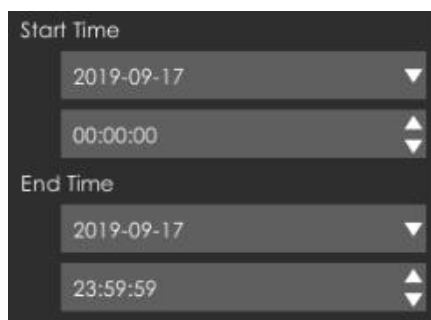


Continuous Snapshot requires you to set continuous snapshot schedule in Storage->Snapshot->Snapshot Schedule interface.

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 .**

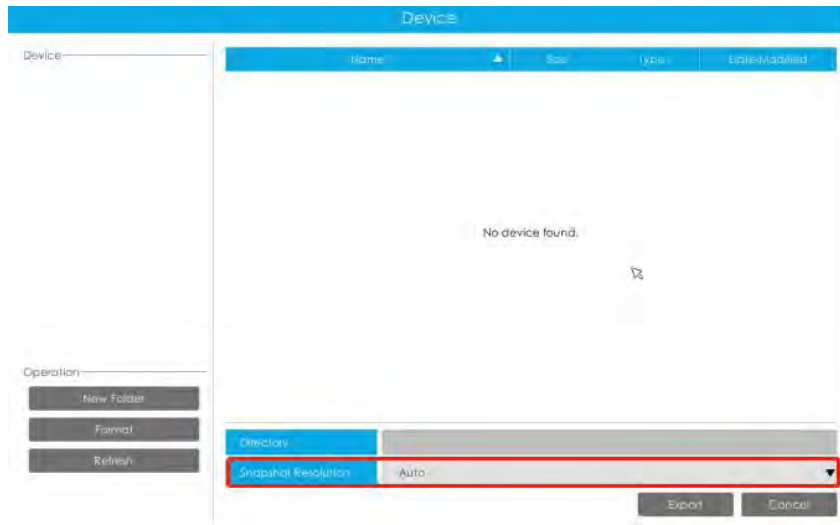
Click to play the selected picture, or click to auto play pictures.


**Note:**

1. You can export picture by clicking or .





2. 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:**

Download file can not exceed 100,000 at a time.

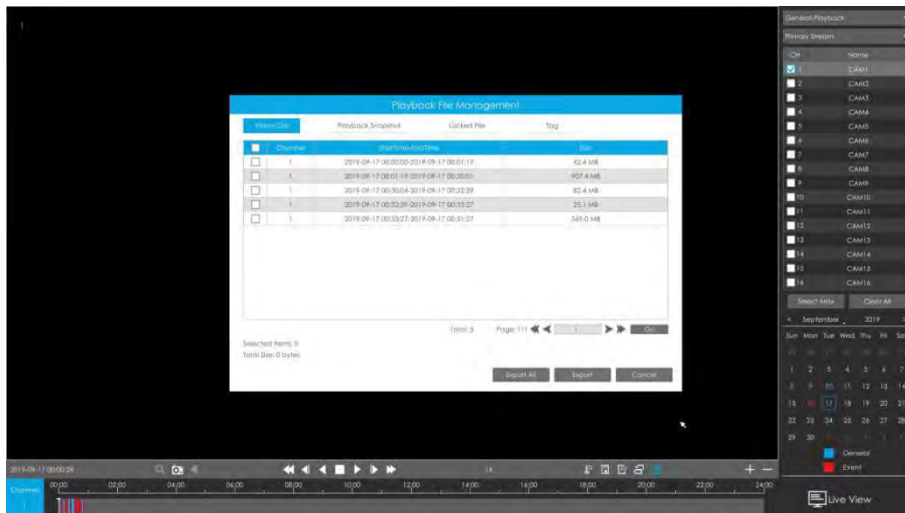
Only one file can be downloaded at a time, and files are downloaded in the order.

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.

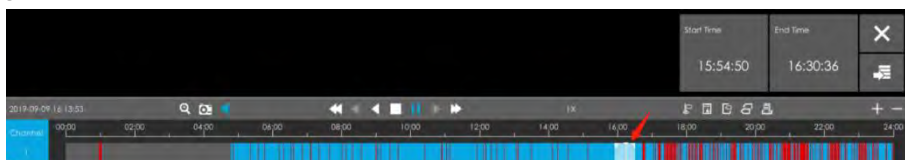
Operation includes clip video, snapshot, lock file and tag. Besides, you can export clipped video, playback snapshot and locked file to USB drives and eSATA.




**Take clip video as example.**

**Step 1. Cut recorded files.**

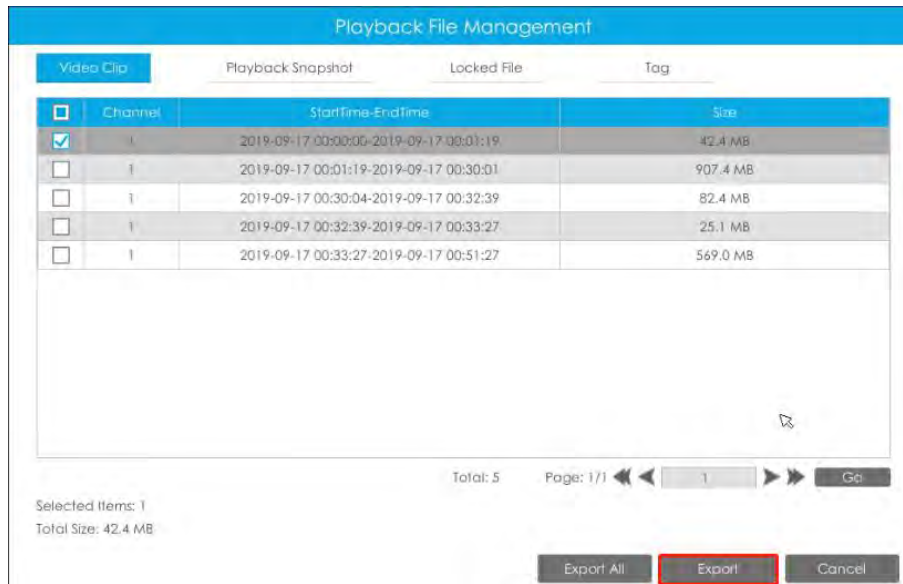
Select the channel and date you want to backup, then select the time at timeline and click , then drag the timeline to select the start time and end time of video.



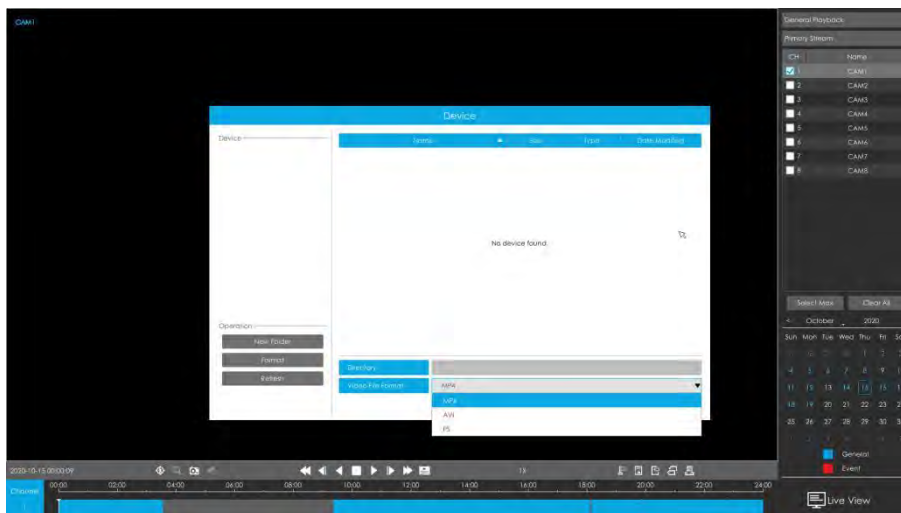
**Step 2. Click  to save the clipped video.**

**Step 3.** Click  to pop up File Management interface. Select the video you clipped and click

 to export video.



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



**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.





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

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
		<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
Time:	From 2020-12-04 03:30:49 To 2021-02-22 18:04:25								
Stream Type:	Primary Stream								
Record Type:	All								
File Type:	All								
Start Time:	:2021-02-22				:00:00:00				
End Time:	:2021-02-22				:23:59:59				

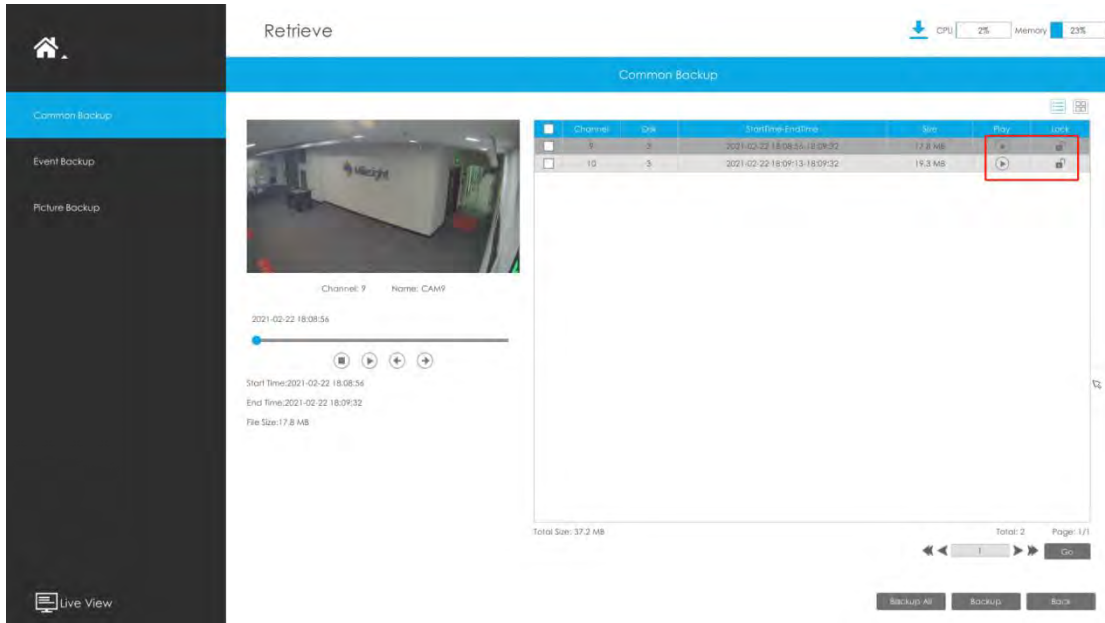
The search result can be chosen as a List or Chart. The default search result presents as a list.

**Step 2: Select the file you want to 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.

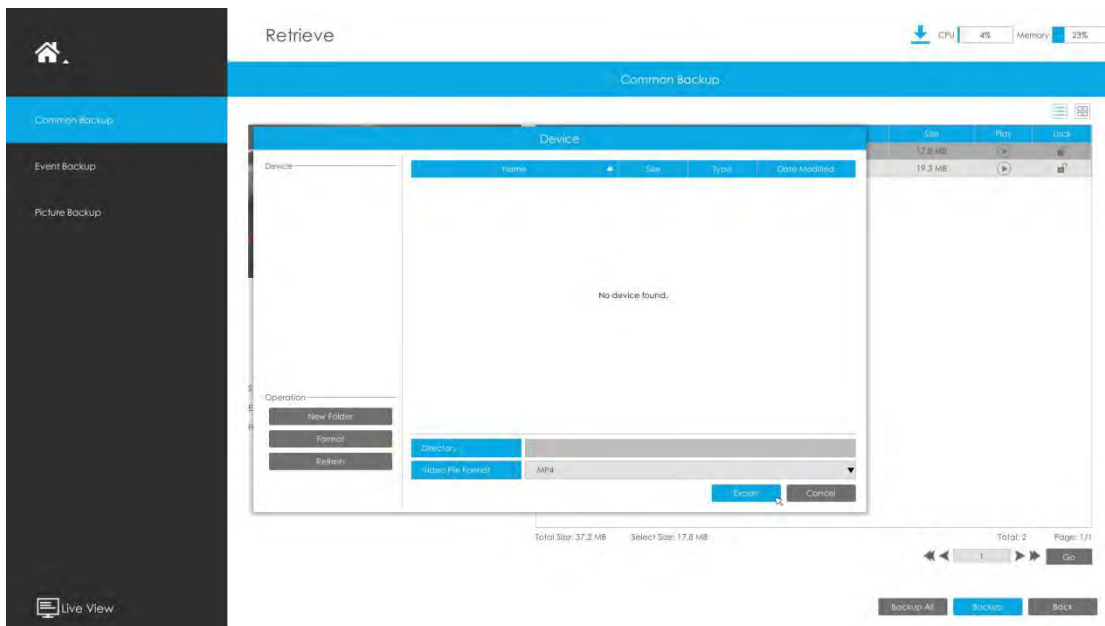




**Step 3: Select the format to be exported, which includes MP4, AVI and PS format and then click**



**to export selected files.**



Then 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.



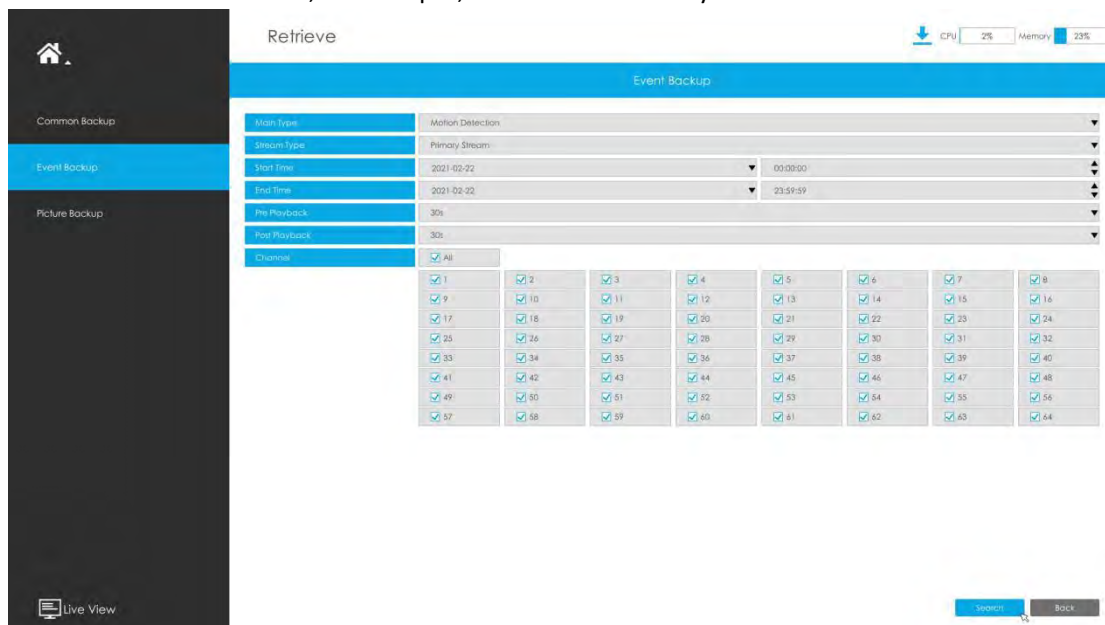
**Note:**

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 backup picture and video according to event type. The event type includes Motion Detection, Alarm Input, VCA and Smart Analysis.



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 backup 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:

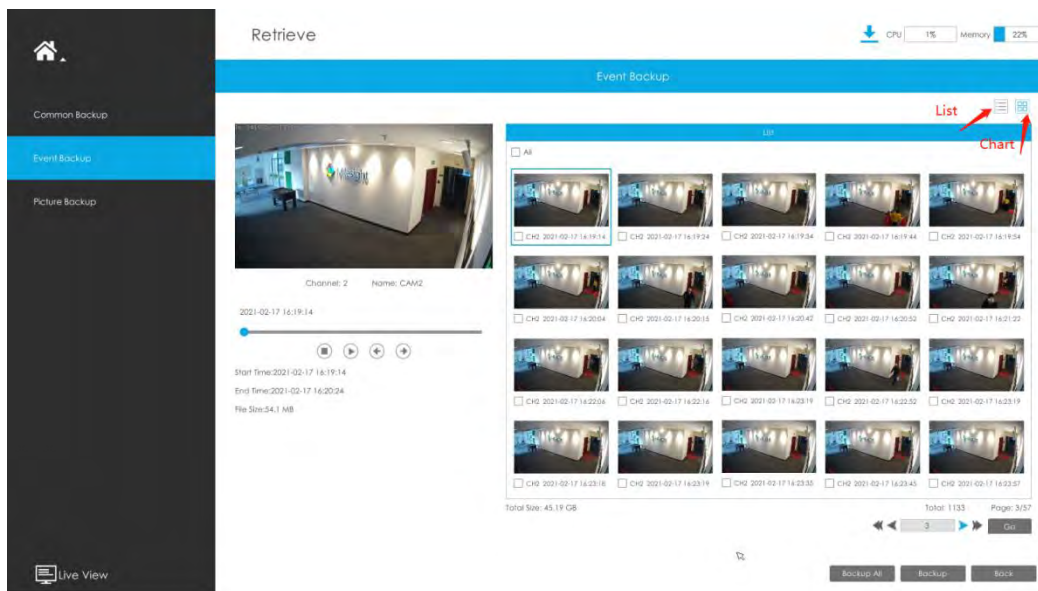
- ① Region Entrance
- ② Region Exiting
- ③ Advanced Motion Detection
- ④ Line Crossing
- ⑤ Loitering






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

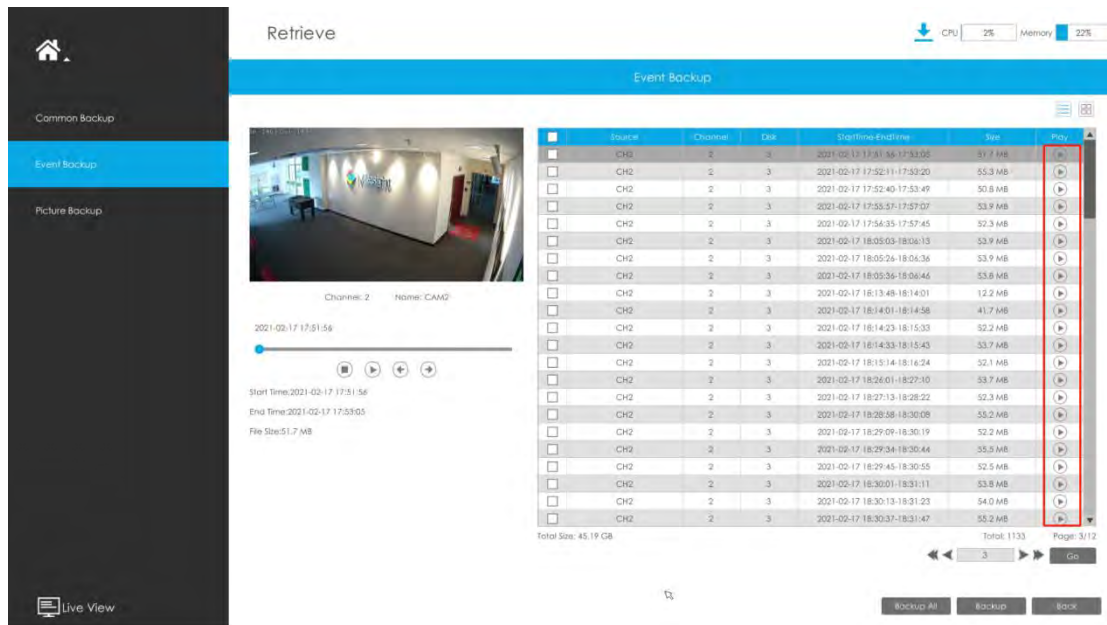


The search result can be chosen as a List or Chart. The default search result presents as a list.



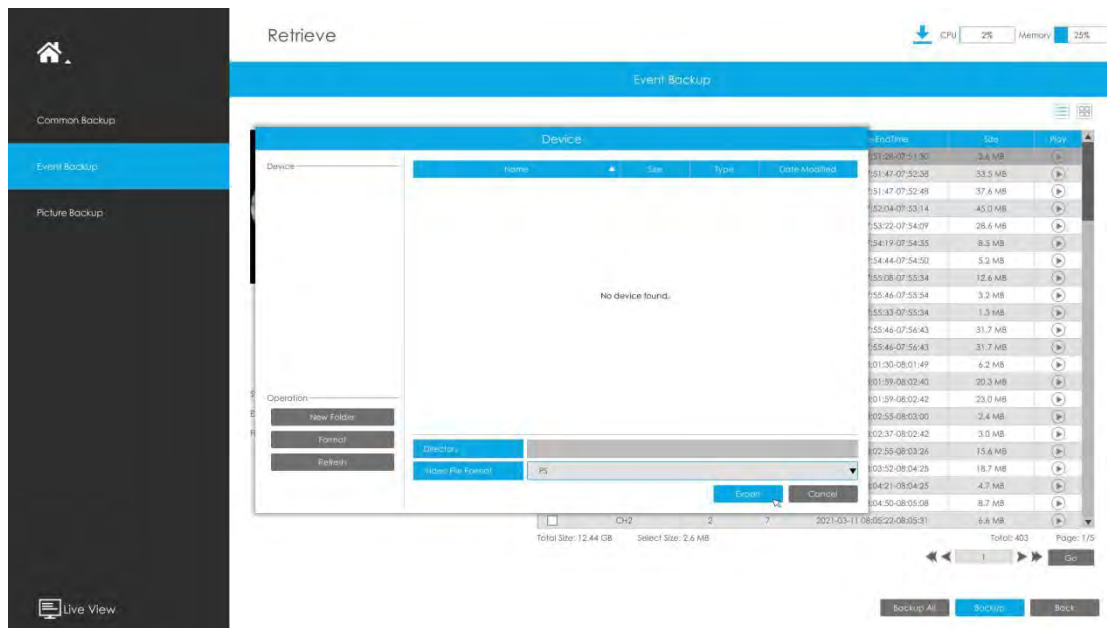
Step 2: Select the file you want to backup and click . Also, you can click  to backup all recorded video.

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** to export selected files.



Then 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.

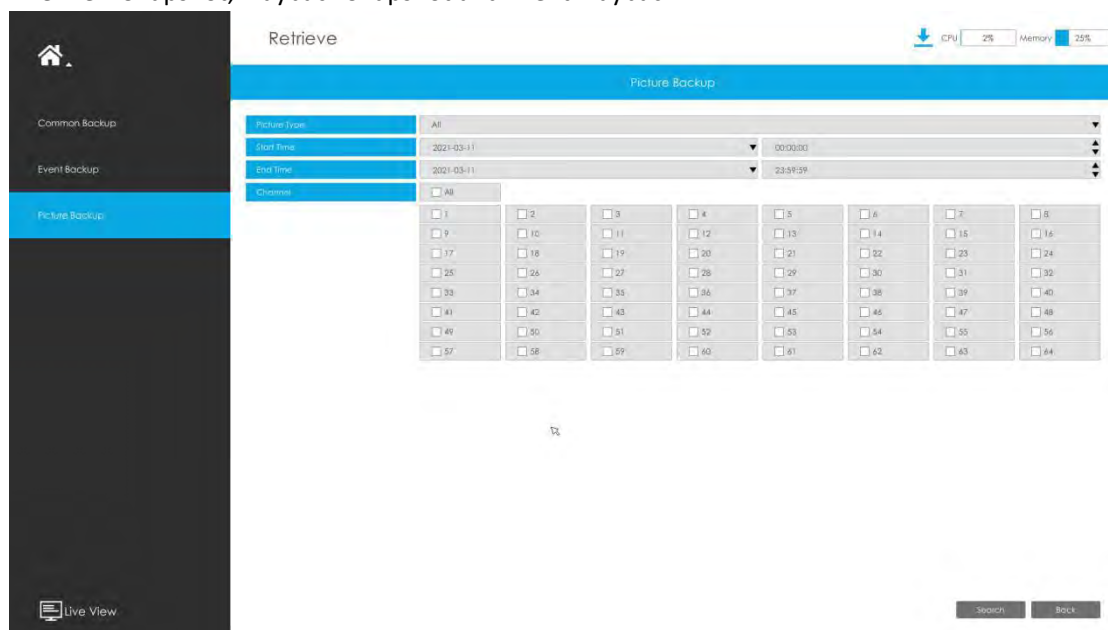


**Note:**

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 backup picture according to picture type. The picture type includes All, Live View Snapshot, Playback Snapshot and Event Playback.

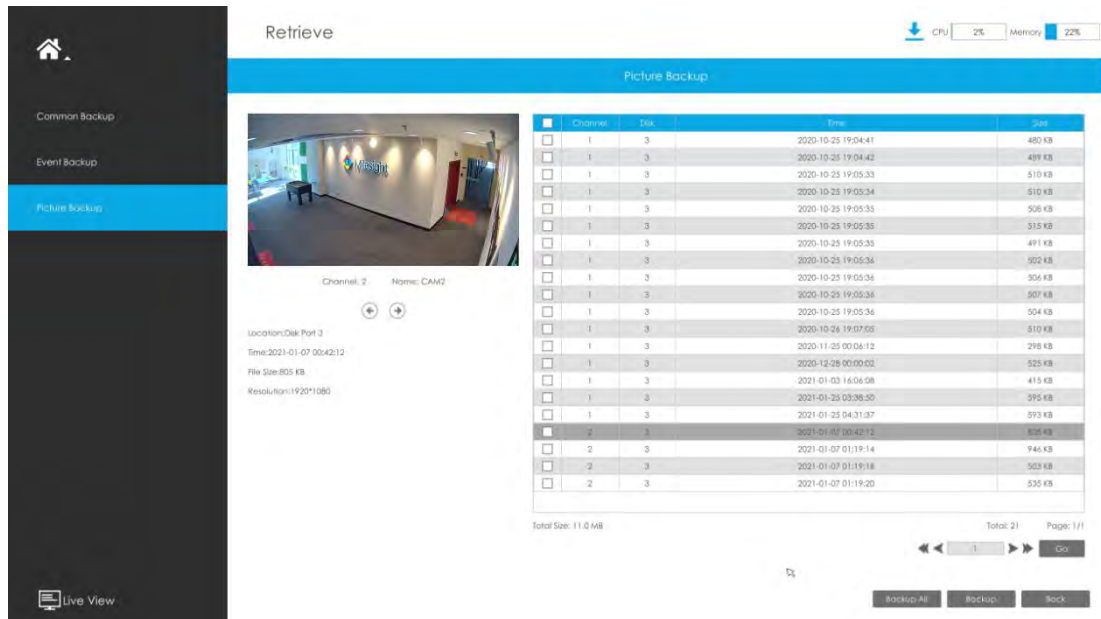


**Step 1: Set the search condition and click  to search snapshot.**

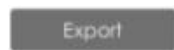


**Step 2: Select the file you want to backup and click  . Also, you can click**

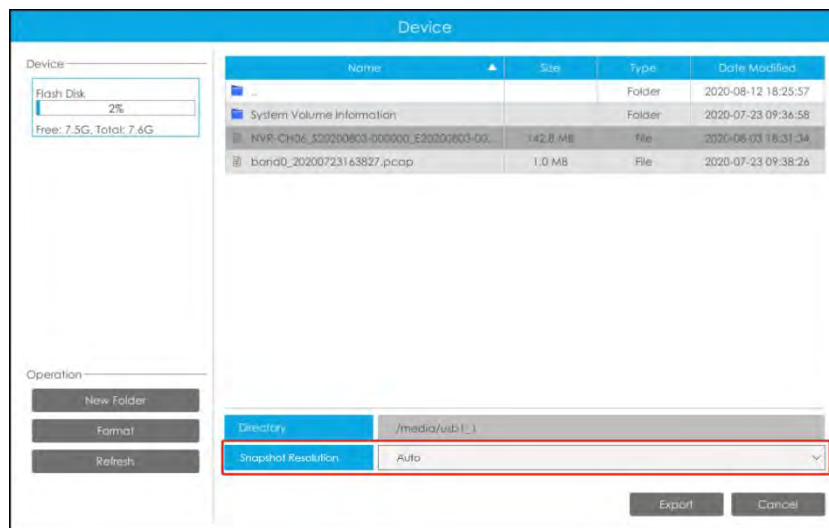
** to backup all recorded videos.**



**Step 3: Select the Snapshot Resolution which includes Auto, 704\*576 and 640\*360, and click**



**to export selected snapshots .**



Then 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, People Counting results and Heat Map results in the page, as well as Settings for ANPR, People Counting and Heat Map.

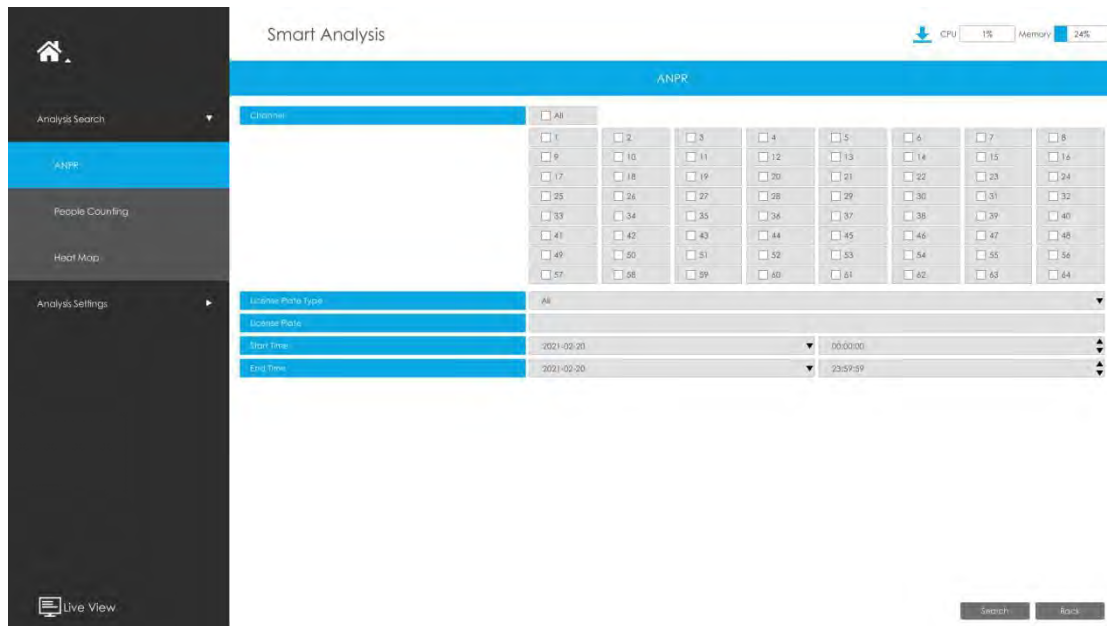


### 3.5.1 Analysis Search

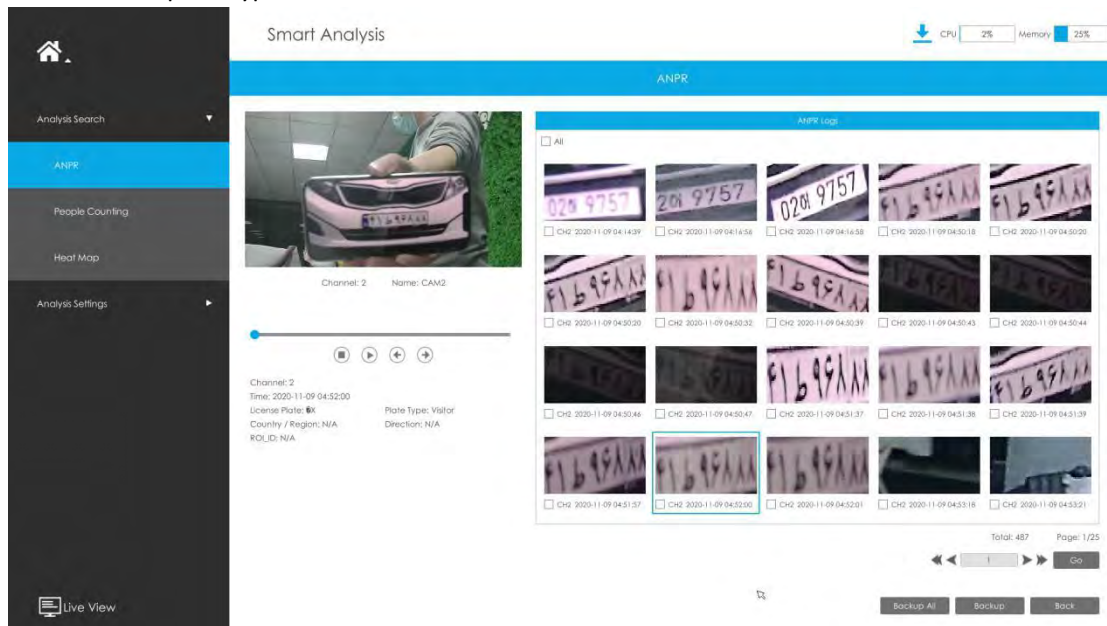
#### 3.5.1.1 ANPR

You can Search and Backup ANPR logs.





Input corresponded information and click search button **Search** 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.



You can click to play the video.



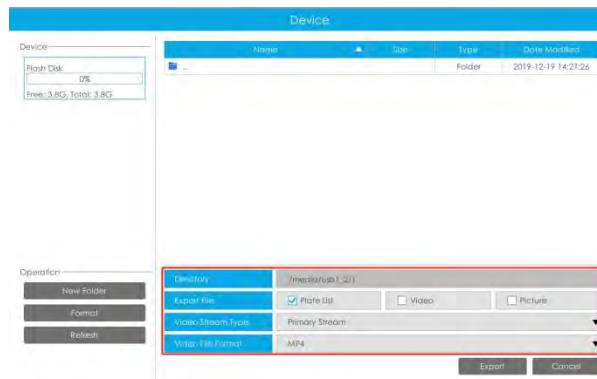
There are two methods to backup ANPR logs.

- ① 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.



② Backup all.

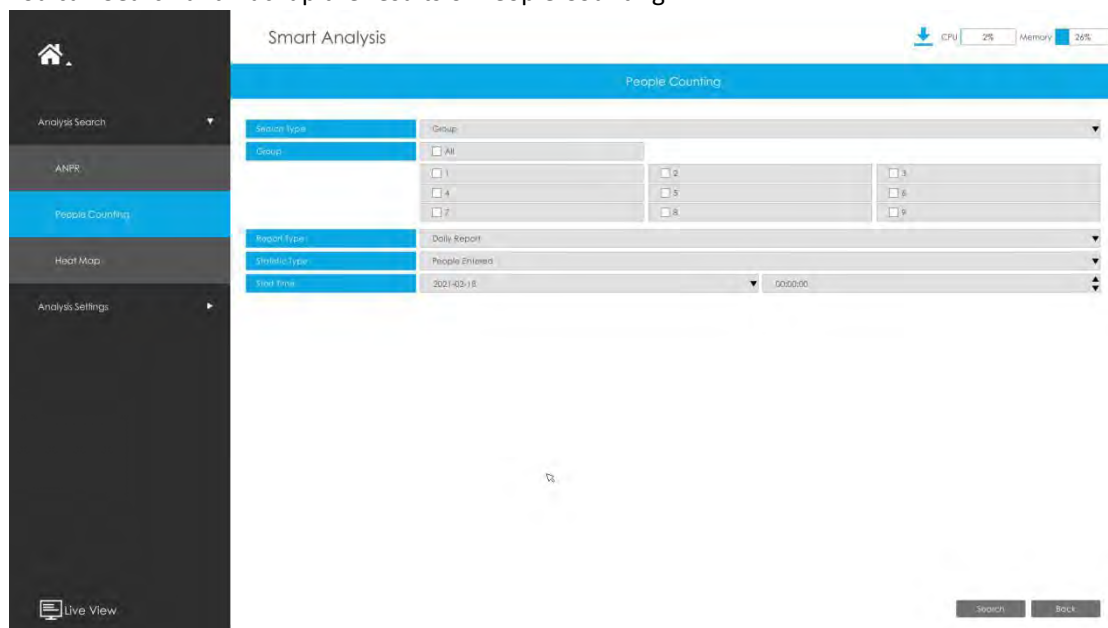
**Step1:** Click backup all  button;

**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 People Counting

You can Search and Backup the results of People Counting.



**Step1:** Entering search conditions.

**Group:** Select the groups first.

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

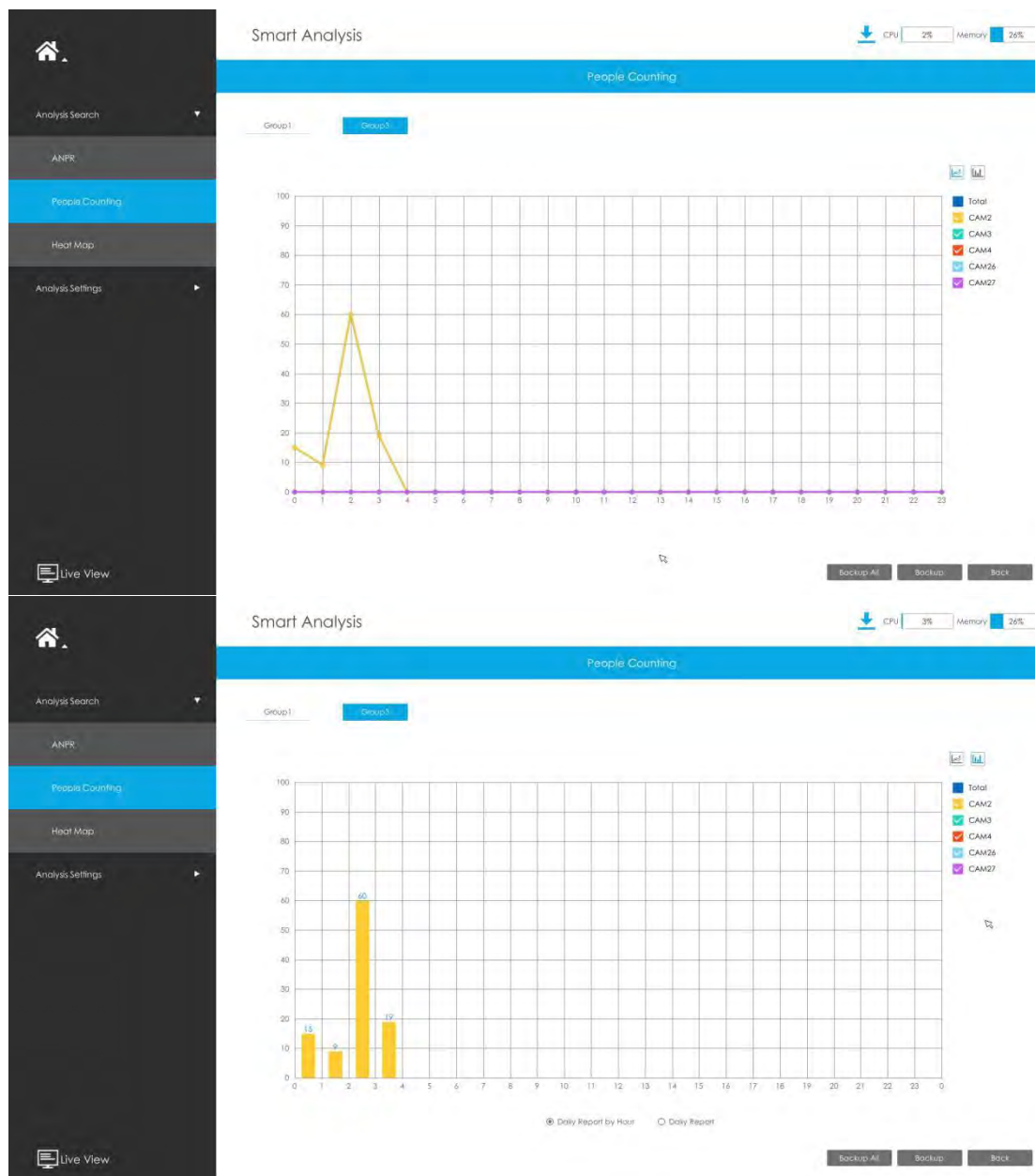
**Statistic Type:** People Entered, People Exited and Sum are available.

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

**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.

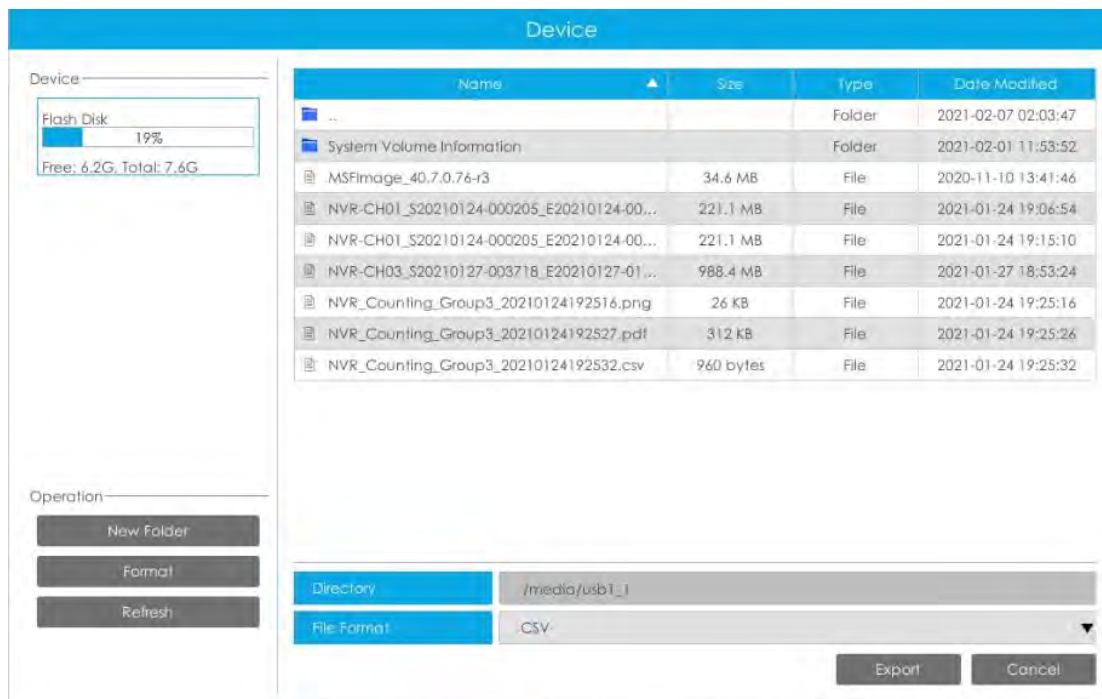


**Step3:** You can backup the results of People Counting in two ways:

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.



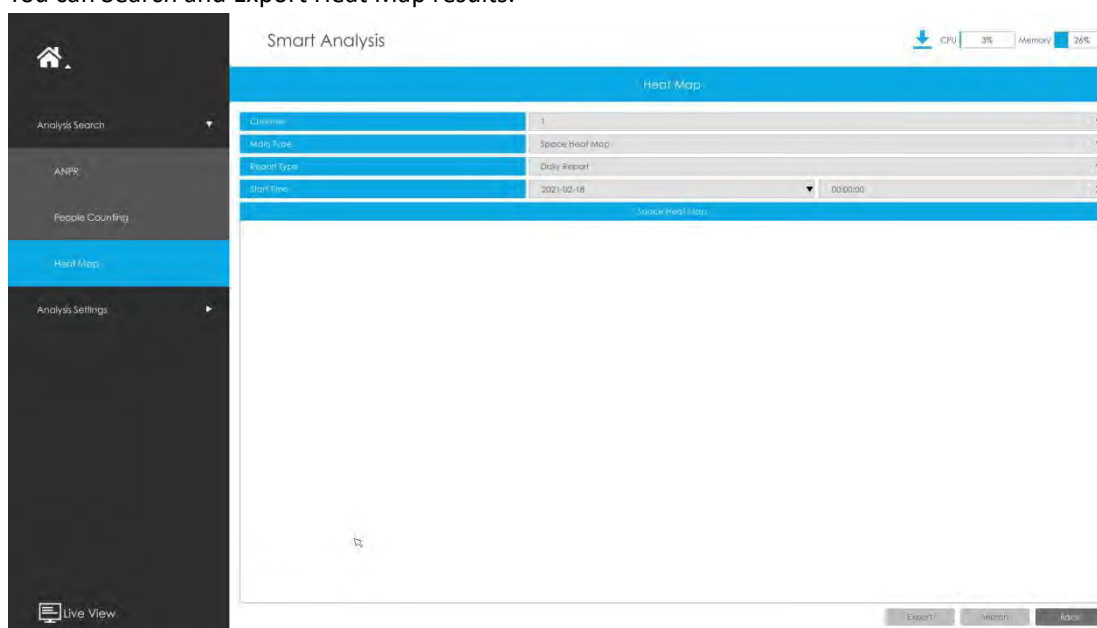
② Backup all.

**Step1:** Click backup all button ;

**Step2:** Select the file format, and then click export button.  
Then you will get corresponding file.

### 3.5.1.3 Heat Map

You can Search and Export Heat Map results.

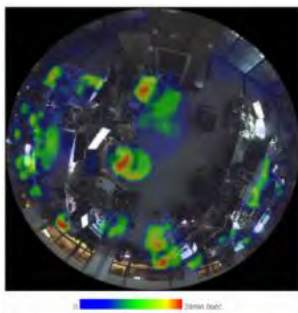


**Step1:** Entering search conditions.

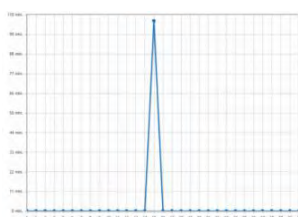
**Channel:** Select the channel first.

**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.



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

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

**Step2:** Click  to obtain the corresponding result and then you can click  to export it.

## 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:**

1. Insert available HDD to NVR.
2. Upgrade your device to corresponded firmware version.  
Camera: V4X.7.0.72-r16 or above.  
NVR: V7X.9.0.7-r7 or above.  
Firmware download link: <http://www.milesight.com/support/download#firmware>
3. Ensure both camera and NVR support LPR/ANPR function. Up to 16 ANPR channels are supported for Milesight NVR.
4. 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 -> LPR -> Settings -> General interface.

**LPR Message Post Settings**

Enable LPR Message Post:

Post Type: TCP

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.

**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.

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

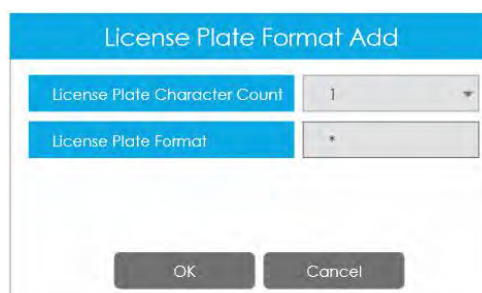
**Confidence Level:** You can set the Confidence Level, and the higher the level, the more accurate the identification is.

**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.



① Click to add a License Plate Format.





- ② Select License Plate Character Count, which is 1-9.
- ③ 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 IPC Version is 4X.7.0.74 or above.
2. You can add 8 rules at most.

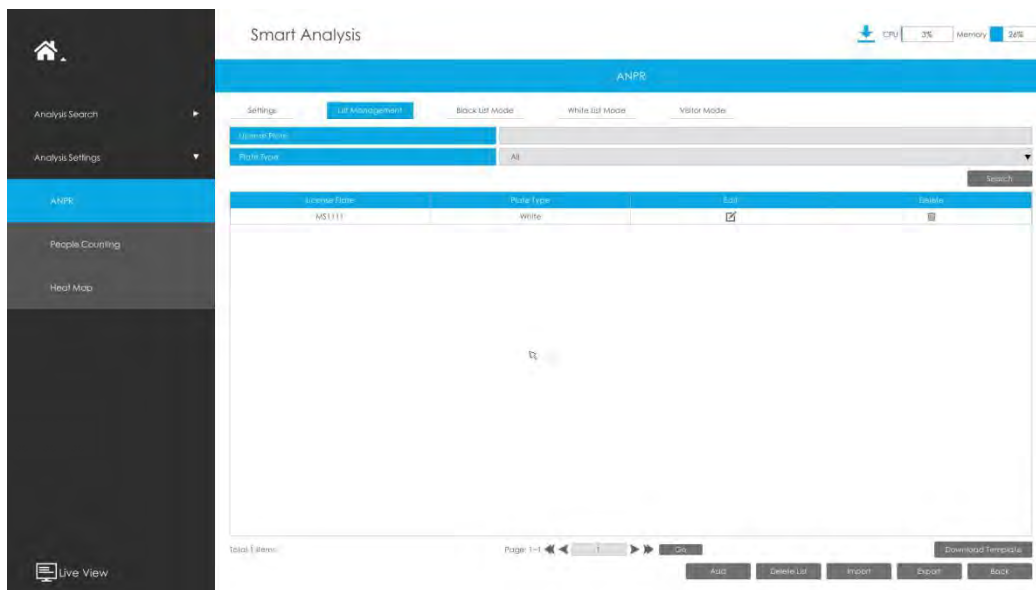
**Features Identification:** The selected features identification will be shown in ANPR logs interface.

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

**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.





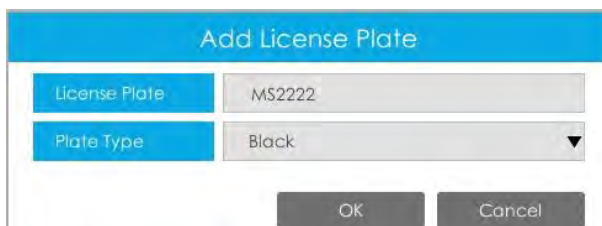
There are two methods to add license plates:

① 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;




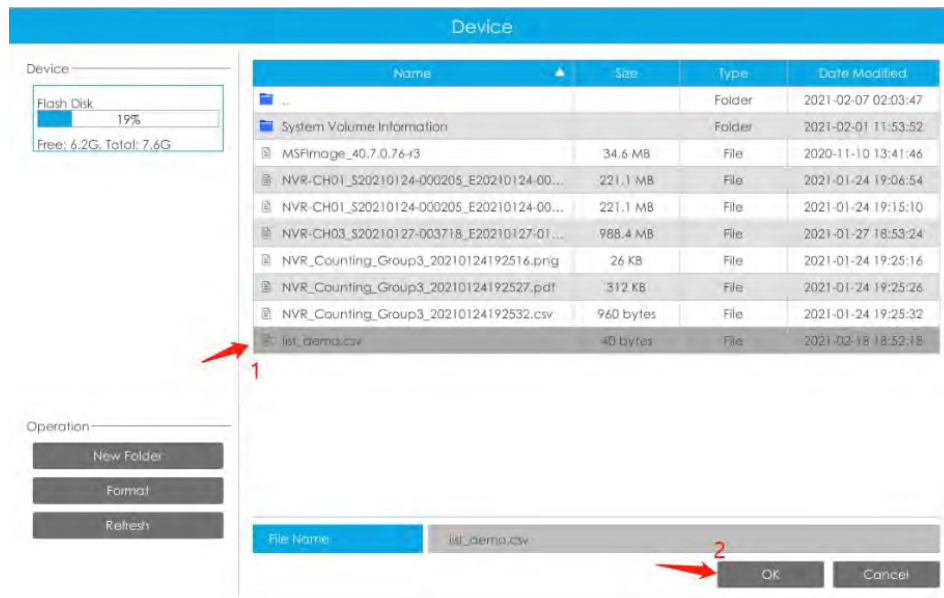
② Batch adding by importing template.

**Step 1:** Click Download Template button  , 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.



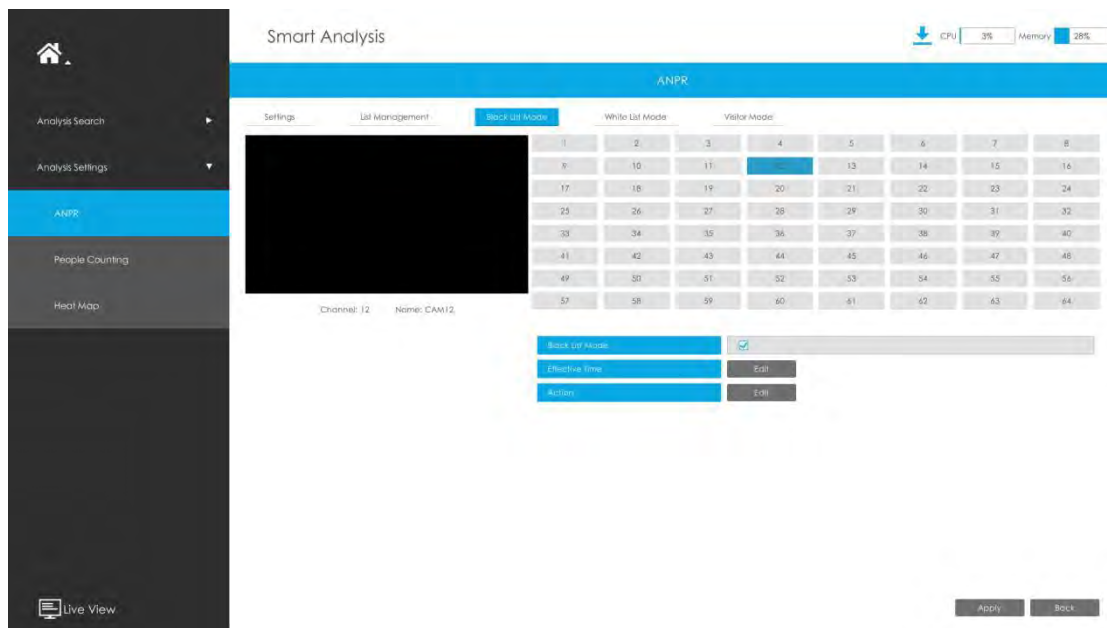
### Black List Mode/White List Mode/Visitor Mode

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.



**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 beep when region entrance is detected.

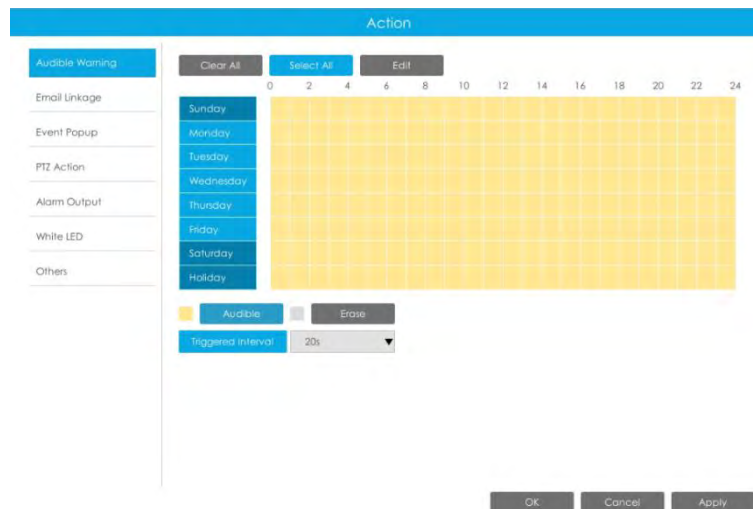
The user can set effective schedule as following two ways:

- 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.

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



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

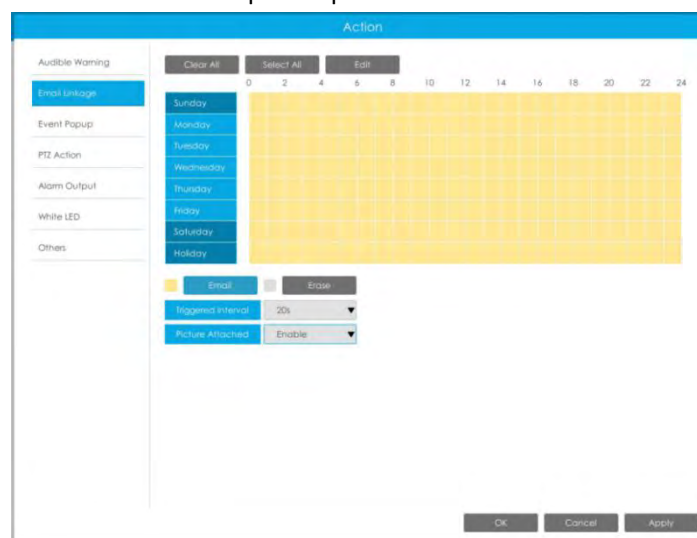
The user can set effective schedule as following two ways:

- 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.

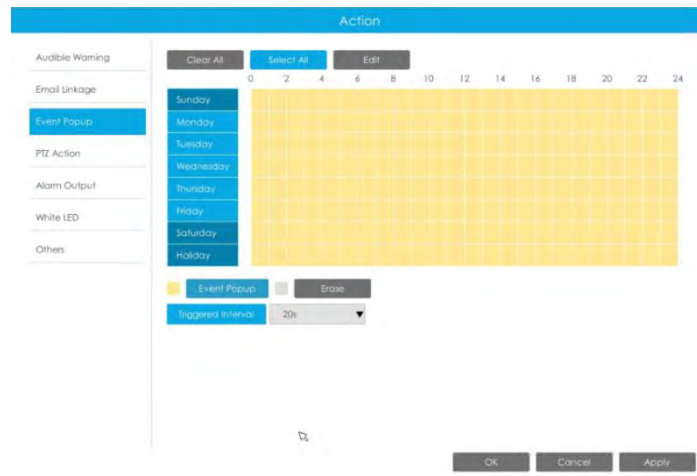


**Event Popup:** Trigger alarm screen popup to full screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Device'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.

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.



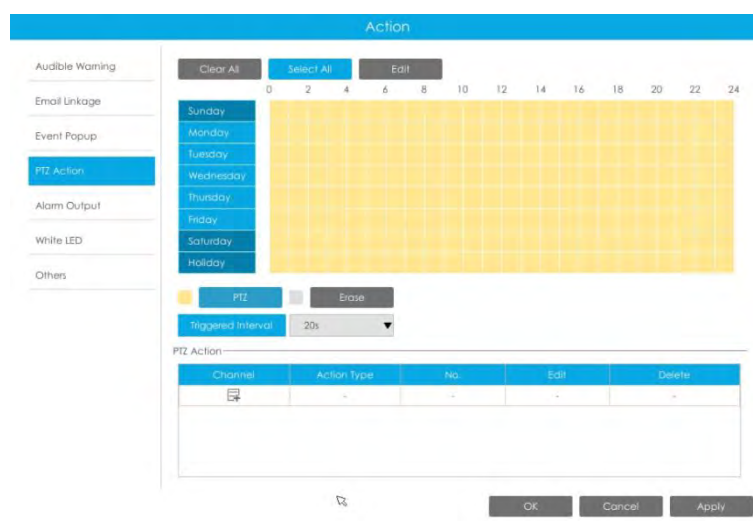
**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.

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 to set or clear all time settings.

② Click **Edit** to edit record effective time manually.

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



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.

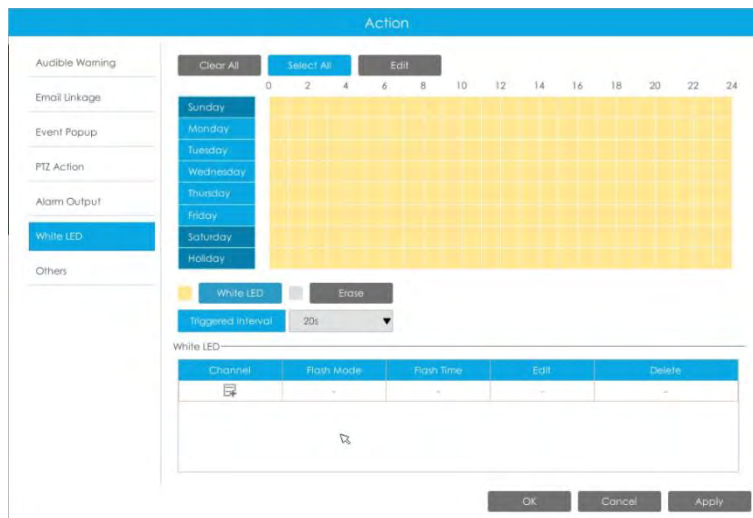
**White LED:** Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

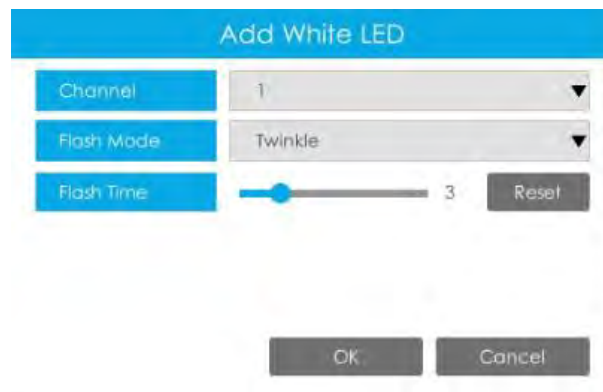
① Select the operation type, White LED and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.

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 .



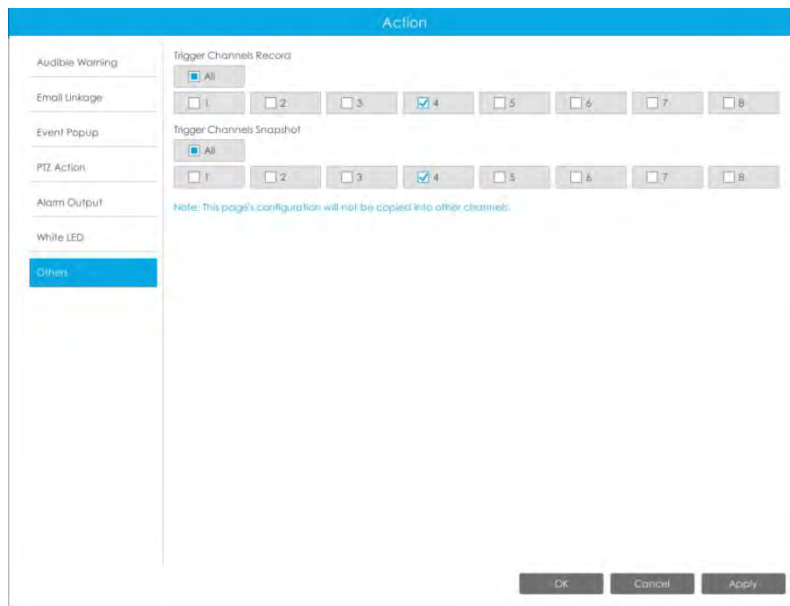
**Channel:** Select the channel which supports this function.

**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.





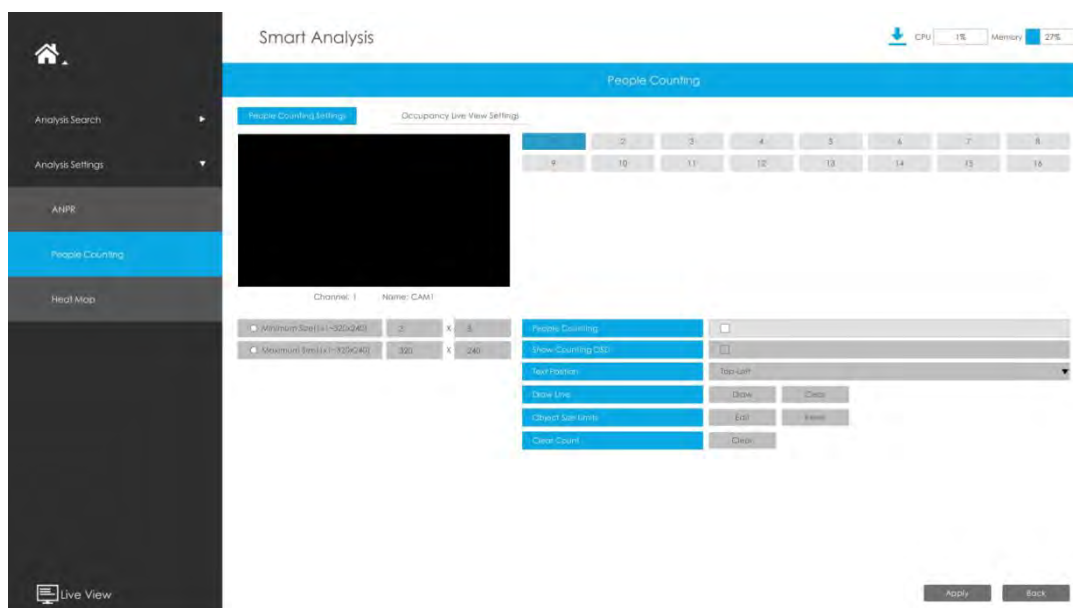
**Note:**

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.)

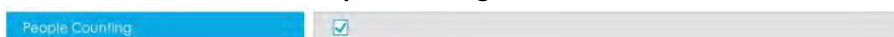
### 3.5.2.2 People Counting

#### People Counting Settings

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




**Step 1. Select channel and enable People Counting.**



**Step 2. Set counting OSD.**



It shows the number of counted people, including in and out number.

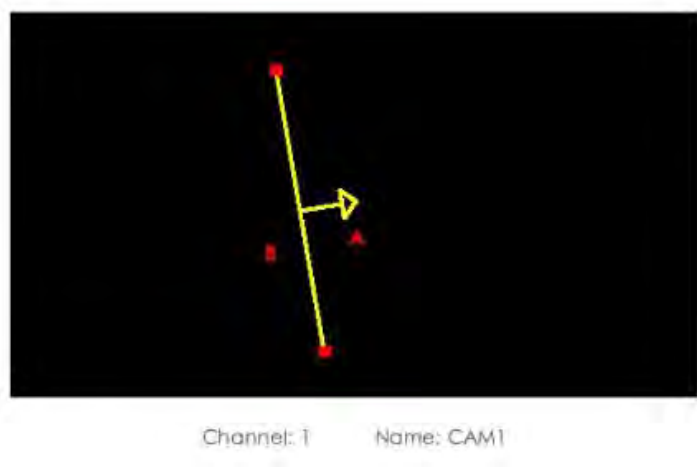
Besides, you can clear count by clicking .

Show Counting OSD	<input checked="" type="checkbox"/>
Text Position	Top-Left
Draw Line	<input type="button" value="Draw"/> <input type="button" value="Clear"/>
Clear Count	<input type="button" value="Clear"/>

**Note:**

1. To enable people counting, human detection should be enabled first.
2. Crossing along the direction of the arrow will be recorded as “In”, opposite “Out”.

**Step 3. Draw detection line.**



**Step 4. Set Minimum Size and Maximum Size.**

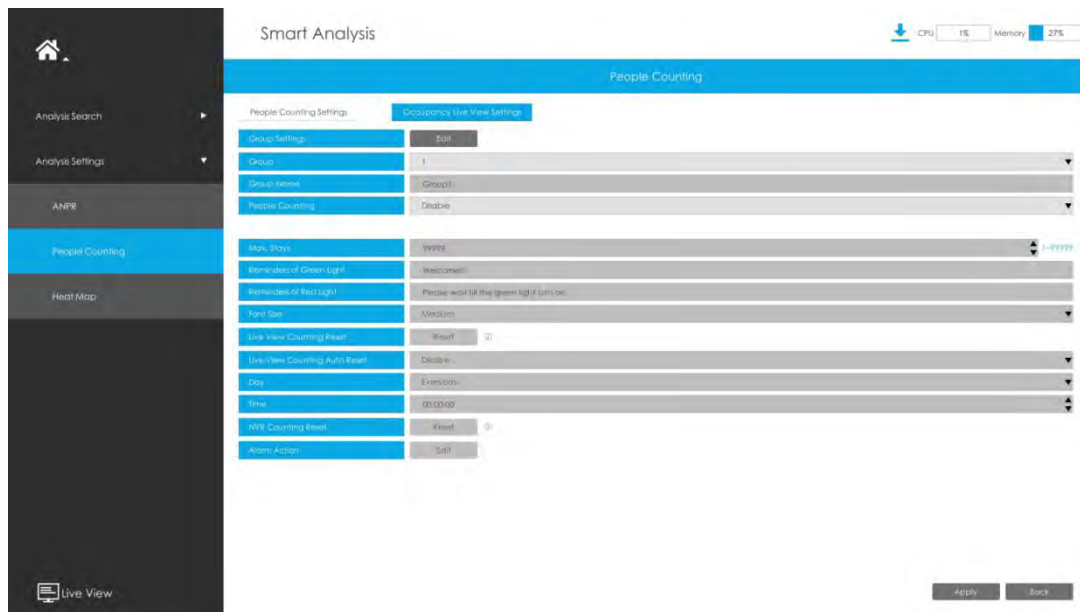
<input type="radio"/> Minimum Size(1x1~320x240)	3	X	3
<input type="radio"/> Maximum Size(1x1~320x240)	320	X	240

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

**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.

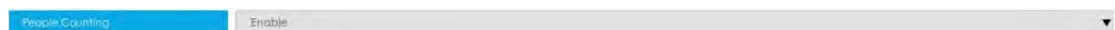


**Step 2. Select a Group from the added Groups.**



**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.**



#### 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 turn 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.

**Audible Warning:** NVR will trigger an audible beep.

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.

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

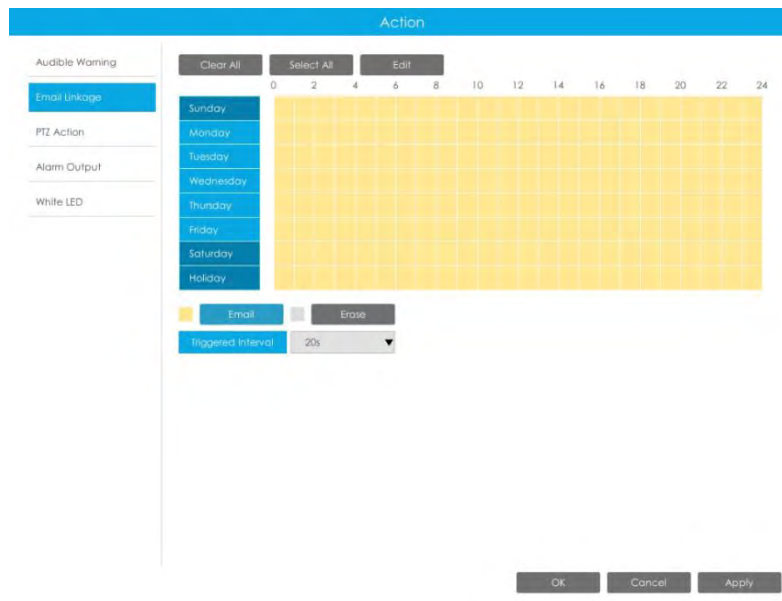
**Email Linkage:** NVR will send an email to the address you set before.

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.



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

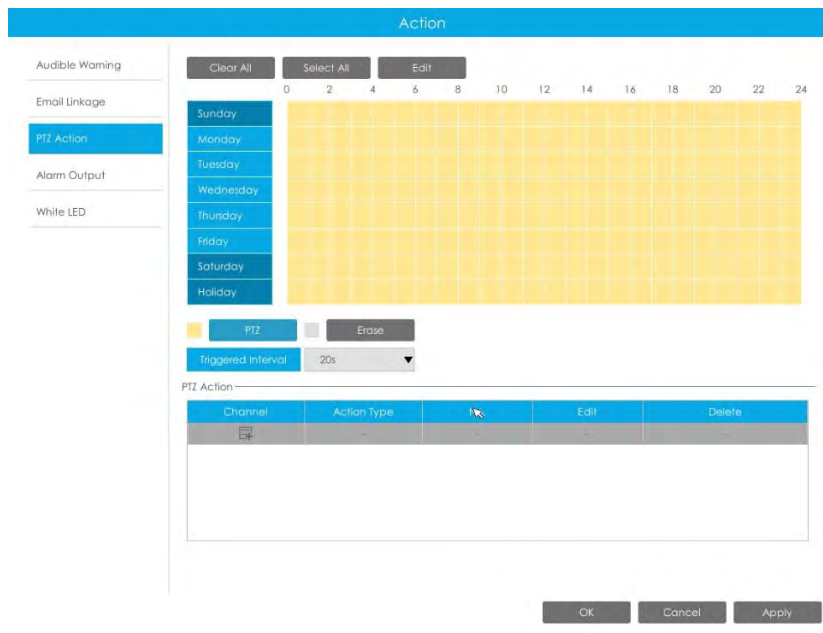
User can set effective schedule as following two ways:

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 to set or clear all time settings.

② Click **Edit** to edit record effective time manually.

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



And you can add PTZ Action by clicking .

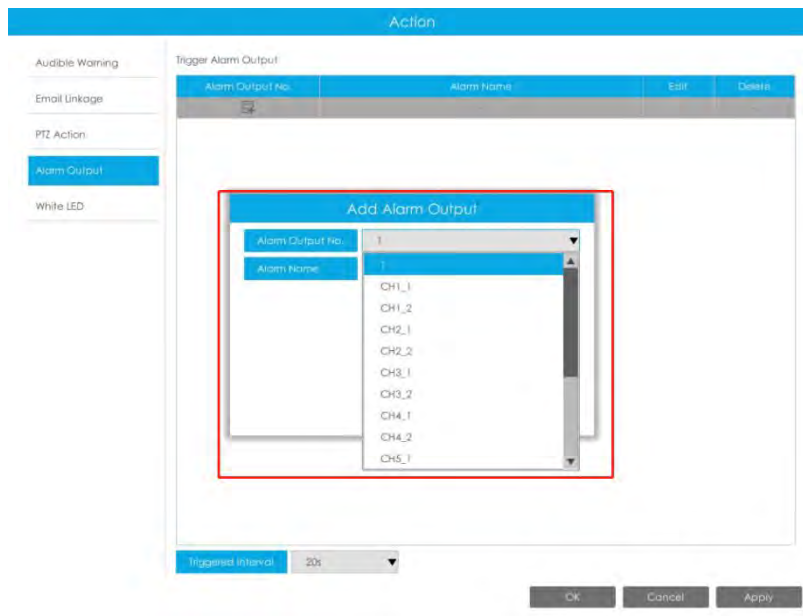
**Channel:** Select the channel which supports this function.

**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.



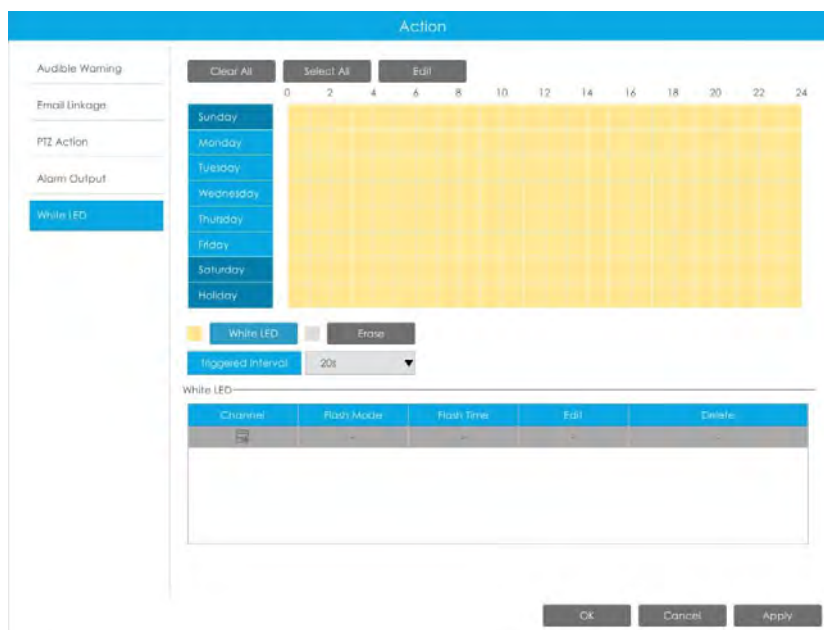
**White LED:** Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

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.

### 3.5.2.3 Heat Map

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

**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.

**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 10 and the dewarping rule is On-board Dewarping.

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

## 3.6 Camera

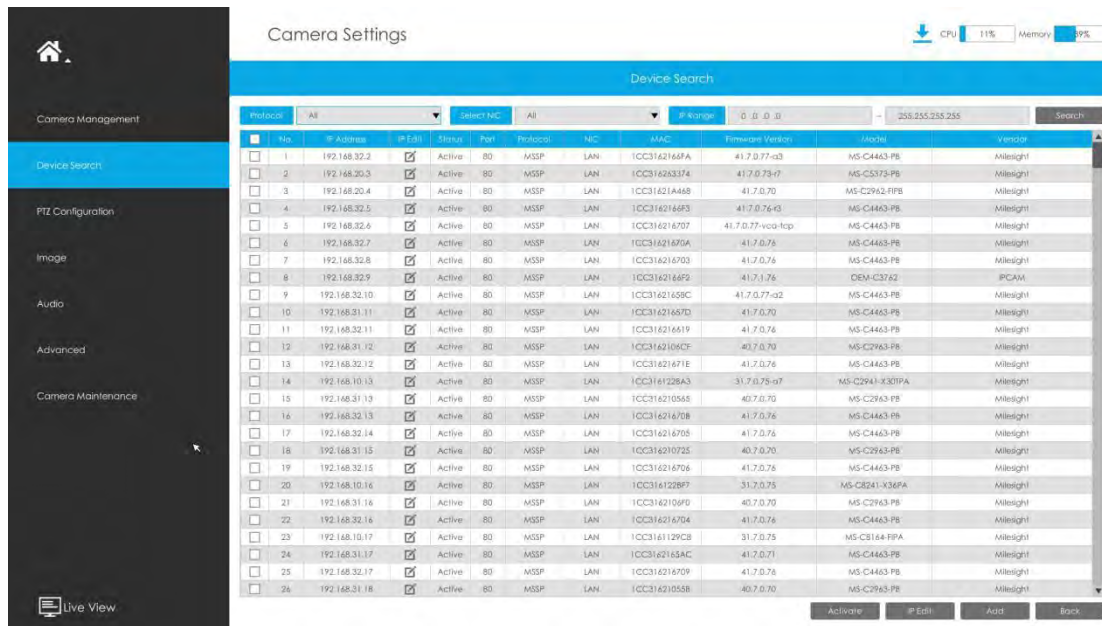
Before configuration, please ensure that the camera is connected to the same network as your NVR and that the network setting for your NVR is properly set.

### 3.6.1 Camera Management

Channel	Channel Name	ON	OFF	Delete	Status	IP Address	Channel ID	Port	Protocol	MAC	Network Speed	Name
1	CAM1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	192.168.1.100	1	8080	ONVIF	00:0C:29:00:00:00	40.0.0.78	MS-C2941-00
2	CAM2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	192.168.14.104	2	8084	ONVIF	1CC31627F804	40.0.0.78	MS-C2941-00
3	CAM3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	192.168.14.104	3	8084	ONVIF	1CC31627F804	40.0.0.78	MS-C2941-00
4	CAM4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	192.168.14.105	4	8085	ONVIF	1CC31627F804	40.0.0.78	MS-C2941-00
5	CAM5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	192.168.17.234	5	8080	ONVIF	1CC31627C73	40.0.0.78	MS-C2941-00

**Step 1. Add camera.**

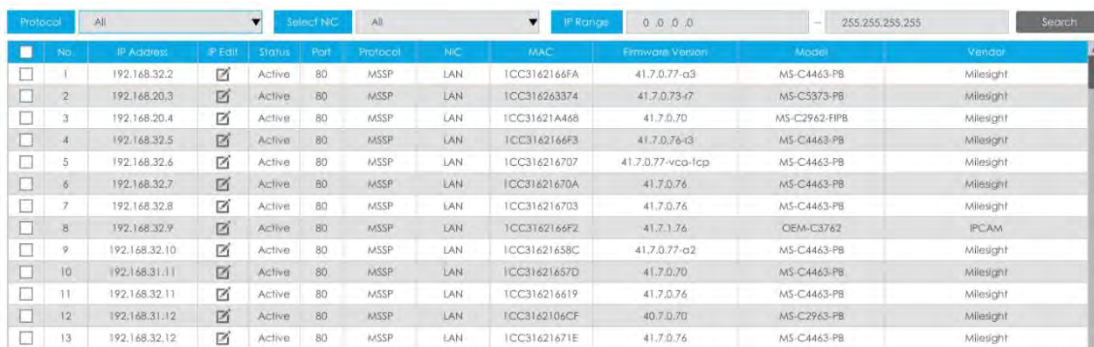
**Method 1. Add camera through Device Search interface. ‘Camera’ → ‘Device Search’.**



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



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



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



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 **OK** to finish batch adding.

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

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'.**

Channel	Channel Name	ONVIF	Device	Status	IP Address	Channel ID	Port	Protocol	MAC	Network Device	Name
1	CAM1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	192.168.14.102	1	8080	ONVIF	1CC316210991	43.7.0.78	MS-C294-108
2	CAM2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	192.168.14.104	2	8084	ONVIF	1CC316238013	43.7.0.78	MS-C294-8
4	CAM4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	192.168.14.105	4	8085	ONVIF	1CC316220D8D	43.7.0.78	MS-C294-98
5	CAM5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	192.168.7.234	5	80	ONVIF	1CC316210273	43.7.0.78	MS-C294-89C

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	<input checked="" type="checkbox"/> 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

Test Add

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

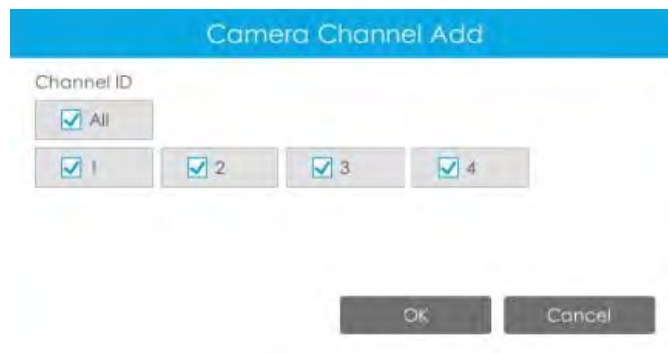
Channel	4
Channel Name	CAM4
Protocol	MSSP
IP Address	192.168.7.223
Port	80
Transport Protocol	UDP
User Name	admin
Password	*****
Time Setting	<input checked="" type="checkbox"/> Sync Time With NVR

Test Add

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 103R, 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.



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-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

**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				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.



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.



**Note:**

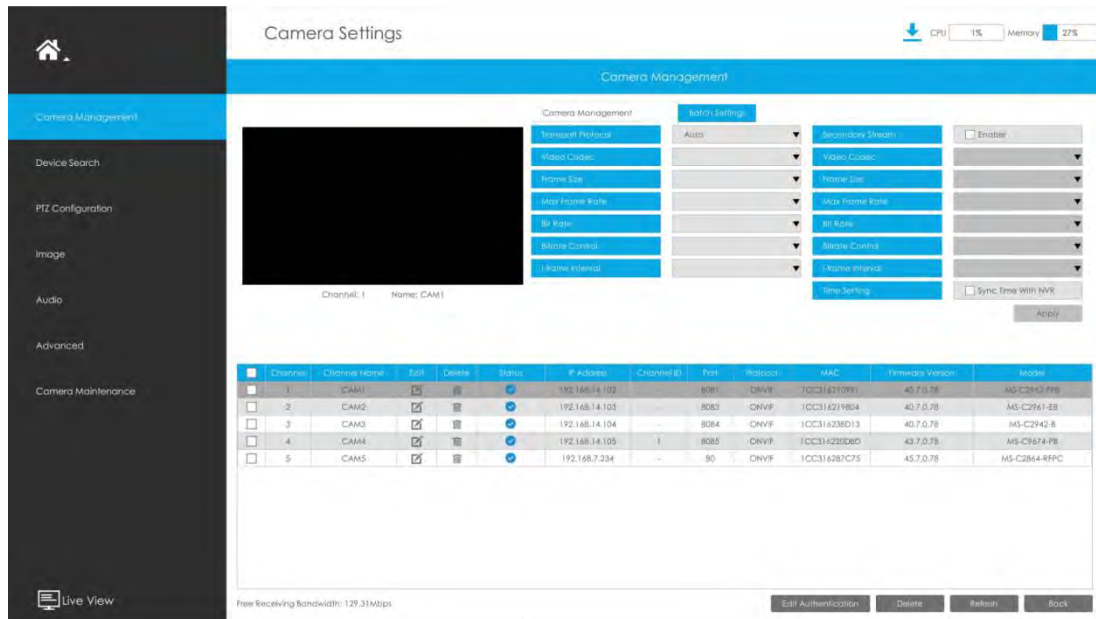
1. Event Record Stream Configuration includes Events like Motion Detection, VCA, Camera Alarm Input and Smart Analysis.
2. For Fisheye camera, you can change its Transfer Mode, Installation Mode, Display Mode and Channel ID through Camera Edit Settings interface.



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.



#### Step 4. Delete camera.

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



#### 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 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.

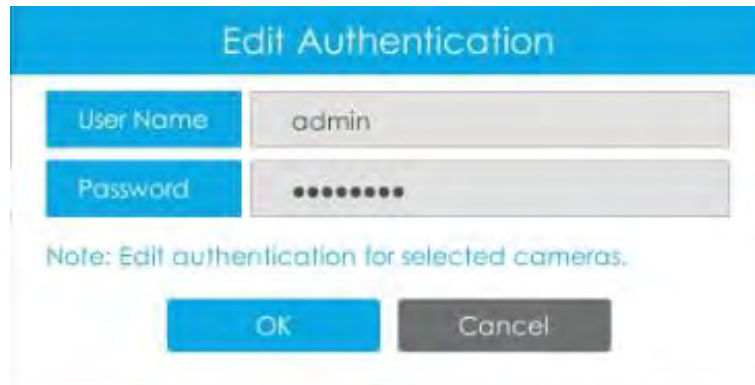
**Note:**

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 Milesight PoE NVR:
  - ① Set camera's IP segment to the same as NVR PoE NIC before plugging to PoE NVR;
  - ② Select PoE for NIC in Device Search interface, click  to search out cameras;
  - ③ Select cameras and click  to add them.



### 3.6.2 Device Search

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

Device Search											
Protocol	All	Select NIC	All	IP Range							
<input type="checkbox"/>	1	192.168.7.100	<input checked="" type="checkbox"/>	Active	80	MSP	LAN	1CC3162000EF	41.7.0.72-a5	MS-C282-FPB	Milesight
<input type="checkbox"/>	2	192.168.7.104	<input checked="" type="checkbox"/>	Active	80	MSP	LAN	1CC316210002	40.7.0.89-v11	MS-C292-FPB	Milesight
<input type="checkbox"/>	3	192.168.7.114	<input checked="" type="checkbox"/>	Active	80	MSP	LAN	1CC316240902	40.7.0.72	MS-C294-FPB	Milesight
<input type="checkbox"/>	4	192.168.7.124	<input checked="" type="checkbox"/>	Active	80	MSP	LAN	1CC316230139	41.7.0.72-a8	MS-C292-FPB	Milesight
<input type="checkbox"/>	5	192.168.7.201	<input checked="" type="checkbox"/>	Active	80	MSP	LAN	1CC31622196F	43.7.0.72-Mi-autoload-a2	MS-C9274-FB	Milesight
<input type="checkbox"/>	6	192.168.7.202	<input checked="" type="checkbox"/>	Active	4000	MSP	LAN	1CC316220108	42.7.0.47-v1	MS-C9274-FB	Milesight
<input type="checkbox"/>	7	192.168.7.212	<input checked="" type="checkbox"/>	Active	80	MSP	LAN	1CC316210110	40.7.0.71-v15	MS-C2972-FPB	Milesight
<input type="checkbox"/>	8	192.168.7.214	<input checked="" type="checkbox"/>	Active	80	MSP	LAN	1CC3162122FD	40.7.0.71-v15	MS-C2972-FPB	Milesight
<input type="checkbox"/>	9	192.168.7.215	<input checked="" type="checkbox"/>	Active	80	MSP	LAN	1CC316212E80	41.7.0.71-v15	MS-C3762-FPB	Milesight
<input type="checkbox"/>	10	192.168.7.216	<input checked="" type="checkbox"/>	Active	80	MSP	LAN	1CC3162303CD	40.7.0.71-v15	MS-C2961-FPB	Milesight
<input type="checkbox"/>	11	192.168.7.223	<input checked="" type="checkbox"/>	Active	80	MSP	LAN	1CC31621C584	41.7.0.72-a10	MS-C4461-EB	Milesight
<input type="checkbox"/>	12	192.168.7.224	<input checked="" type="checkbox"/>	Active	80	MSP	LAN	1CC316201043	43.7.0.72-49K2	MS-C8262-FB/FB	Milesight
<input type="checkbox"/>	13	192.168.7.228	<input checked="" type="checkbox"/>	Active	80	MSP	LAN	1CC316239791	40.7.0.72-a3	MS-C2961-83PB	Milesight
<input type="checkbox"/>	14	192.168.7.240	<input checked="" type="checkbox"/>	Active	80	MSP	LAN	1CC316219C84	40.7.0.72	MS-C2962-FB	Milesight

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

Besides, you can select channels and click  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	1CC316220108
Protocol	MSSP
IP Address	192.168.7 .202
Subnet Mask	255.255.240.0
Gateway	192.168.7 .2
DNS	8 .8 .8
Port	4200
User Name	admin
Password	
<input type="button" value="OK"/> <input type="button" value="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.

**Step 1.** Use the PTZ direction key to rotate the position of preset. Then choose a preset number and click to save a preset position.

Camera Settings

CPU 2% Memory 23%

PTZ Configuration

Configuration PTZ Privacy Mask Auto Tracking Advanced

Channel: 3

Preset No.	Play	Stop	Delete
Preset 1			
Preset 2			
Preset 3			
Preset 4			
Preset 5			
Preset 6			
Preset 7			
Preset 8			

Patrol

Key Point	Preset	Scan Speed	Scan Time	Exit	Delete

Pattern

Pattern 1

Back

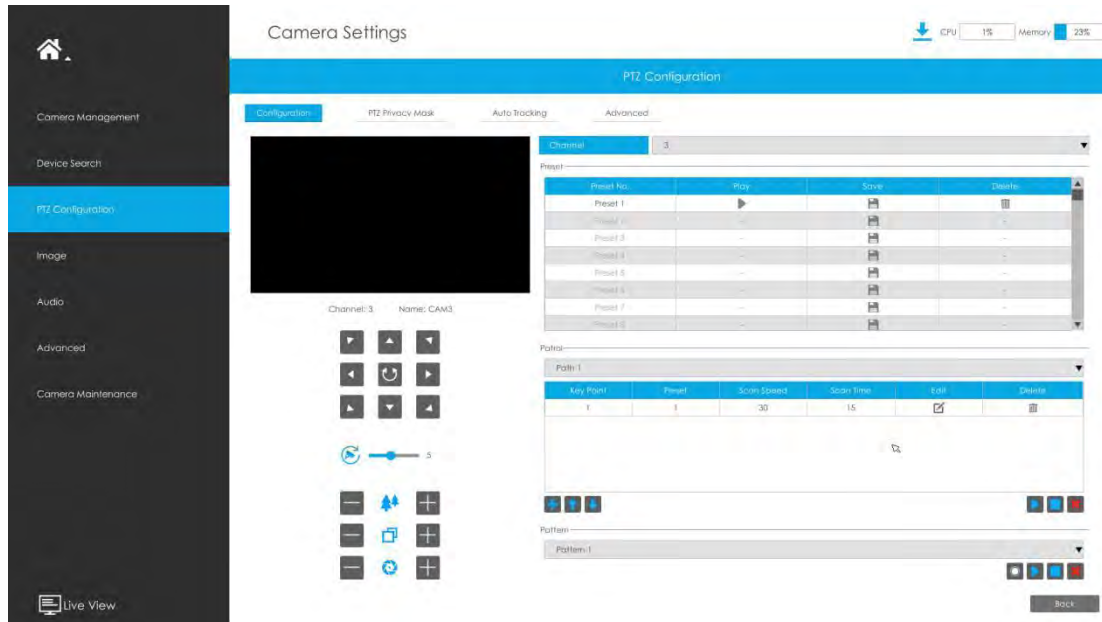
**Step 2.** Choose a preset number and click to delete the preset position.



**Step 3.** Choose a preset number and click to check the preset position.

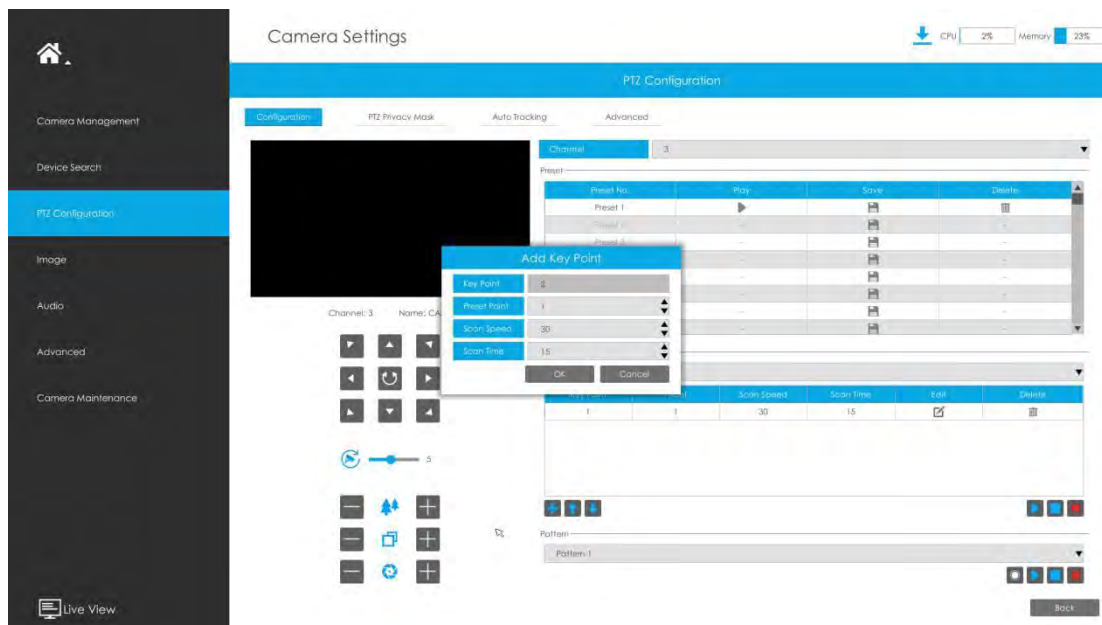
**[Patrol]**

The camera will patrol according to the preset positions. The total time and patrol speed of the path is variable.

**Step 1. Select a path. Up to 8 paths could be set.**



Step 2. Click  to add preset position (up to 48 positions could be added). Set the parameters of preset positions, including preset position number, scan time and scan speed, then click .



Step 3. Click  to delete the preset position.

Step 4. Click  to preview the path patrol. Click  to stop.

**Step5.** Click  to delete all preset positions of the path patrol.

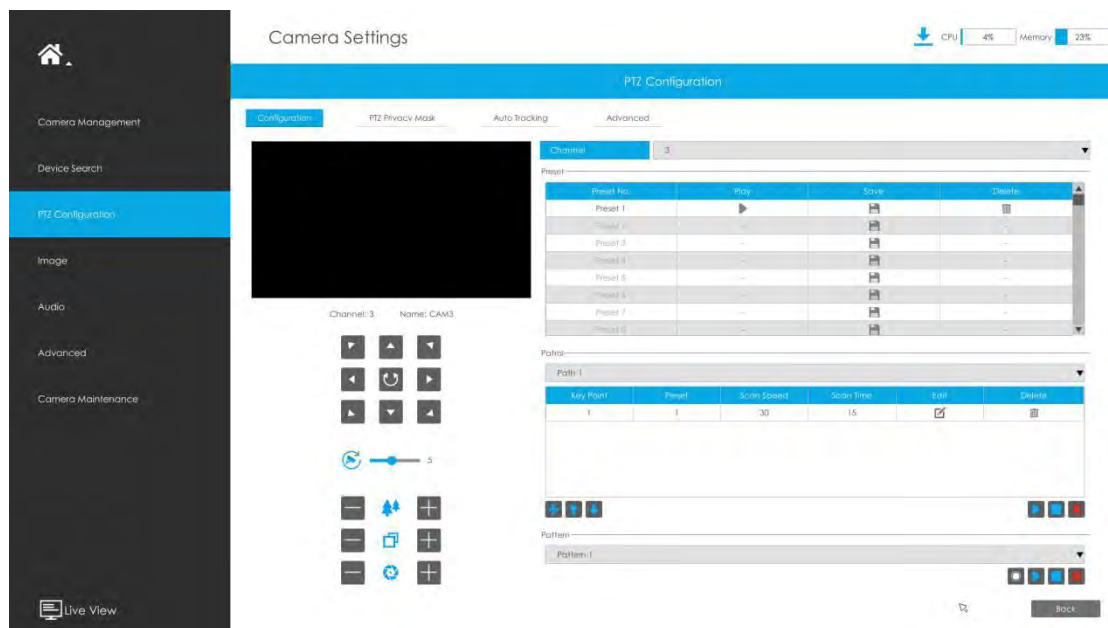
**Note:**

1. The preset positions decide the patrol path, which will run according to numerical order of the preset positions.
2. Scan time is how long the patrol stays on the preset position.
3. Scan speed is the rotate speed of speed dome from one preset position to the next.

**[Pattern]**

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

**Step 1.** Select a pattern and click . Up to 4 patterns could be set.



**Step 2.** Drag the mouse or click 8 direction keys by mouse to rotate PTZ.

**Step 3.** Click  to save the PTZ movement patterns.

**Step 4.** Click  to preview the pattern. Click  to stop.

**[PTZ Operation]**



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

### PTZ Privacy Mask

Milesight 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.

You can add a privacy mask by following steps:

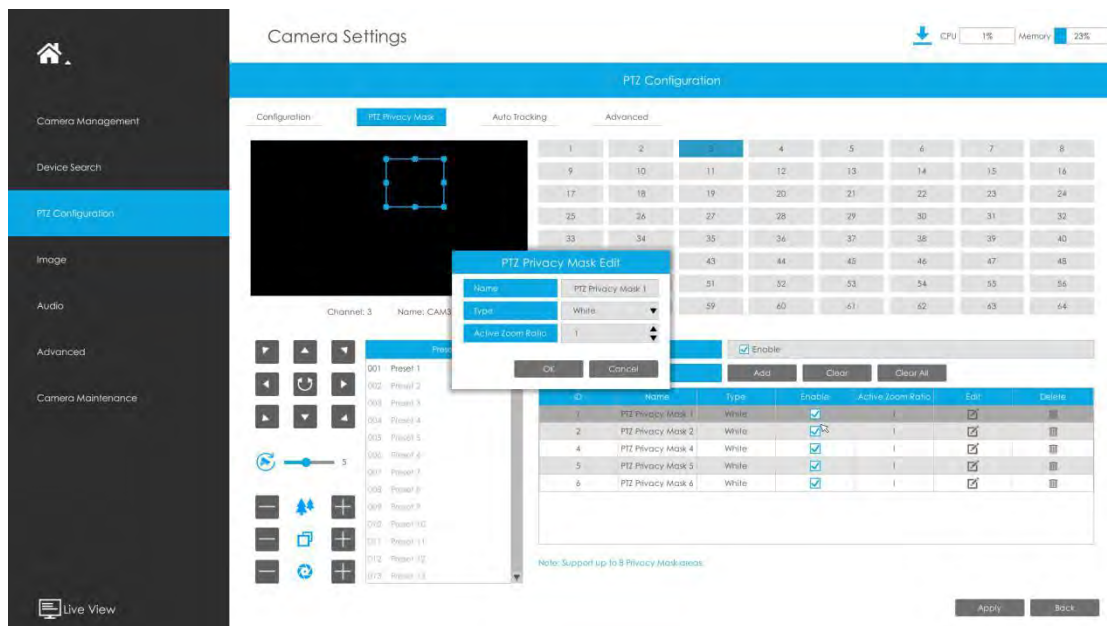
**Step 1. Select channel and enable Privacy Mask.**

**Step 2. Drag the mouse to select the area which needs to be protected on the live view window**

and click to save the selected areas. You can add **8 areas** at most and each zone can be enabled and disabled.

**Step 3. Click to edit PTZ Privacy Mask Name, the Privacy Mask Type and Active Zoom Ratio.**





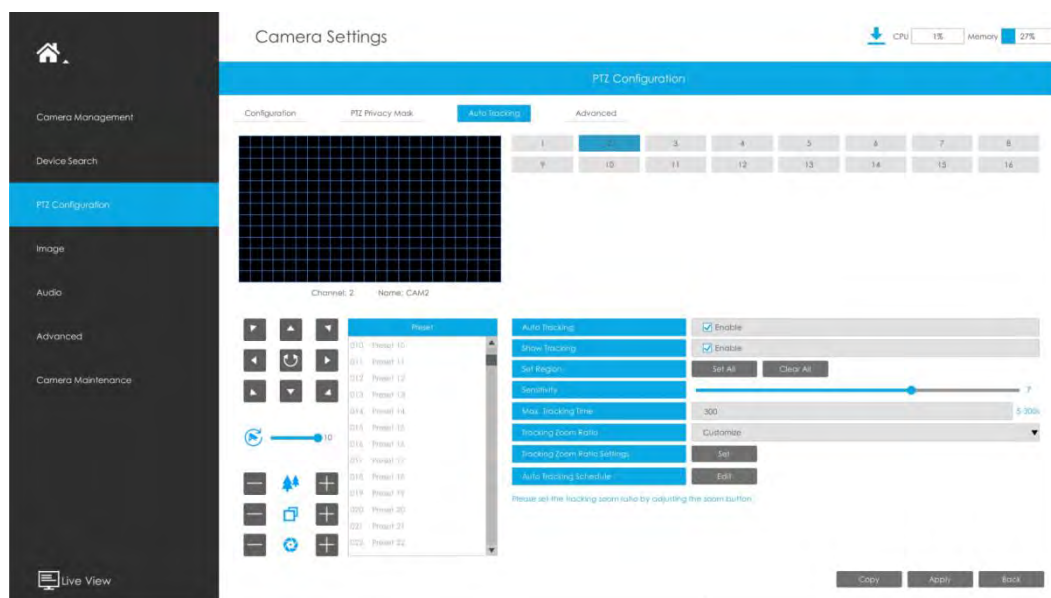
**Step 4.** Select “Apply” to save the settings.

**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.

**Auto tracking**

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



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

**Step2.** Enable “Show Tracking” to show tracking in Auto Tracking function.

**Step3.** Set detection region.

**Step4.** Set detecting sensitivity.


**Step5. Set Max. Tracking Time which must be between 5~300s. The camera will stop tracking when the tracking time is used up.**


**Step6. 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:

① Set zoom ratio by  button.

② Click  to save your configuration.




**Step5. Click  to edit Auto Tracking Schedule which will be synchronized to IP Camera.**

**Step6. Click  to apply configurations.**

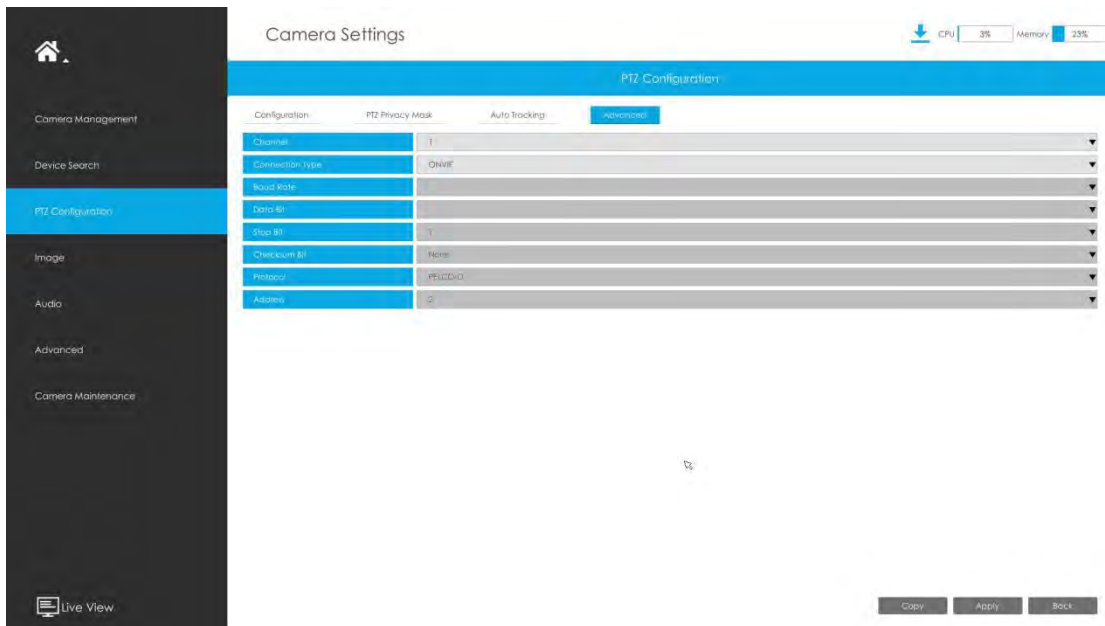
### Note:

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

### Advanced

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

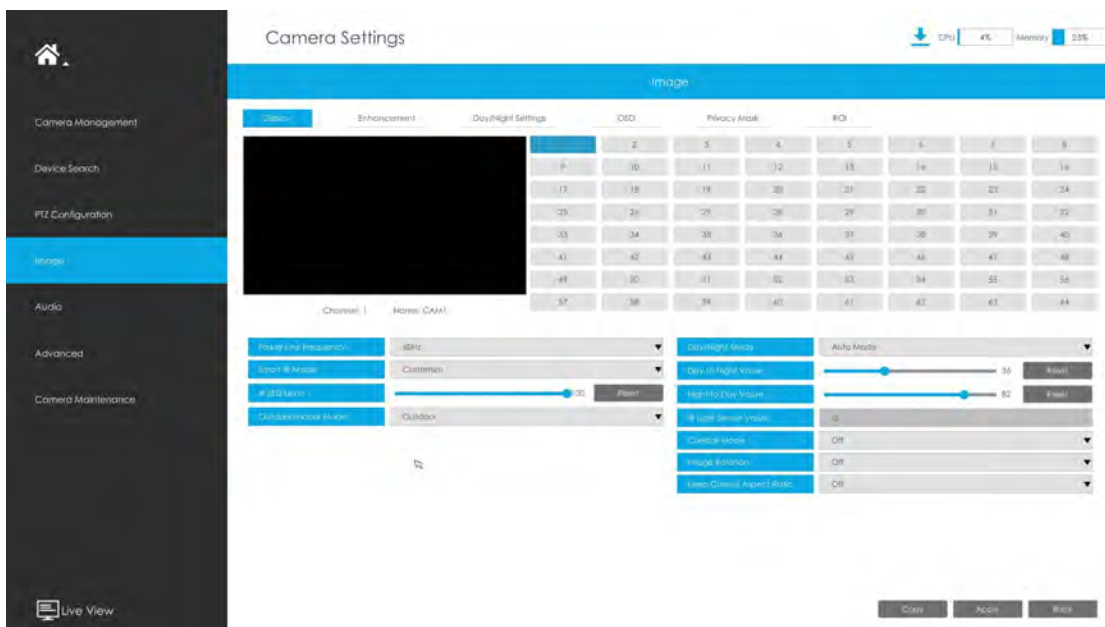




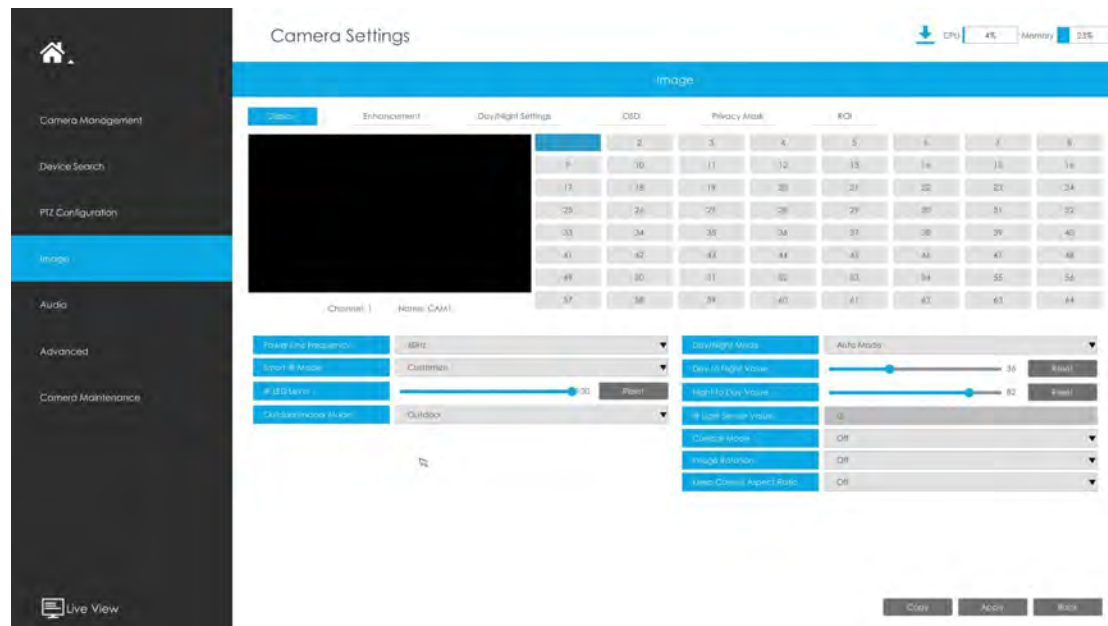
**Note:**

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



**Step 1. Select channel.**

**Step 2. Set the configuration.**

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

**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.

**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.

**White LED Level:** Adjust the White 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/Night Mode:** Set the Day/Night 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.

**Note:**

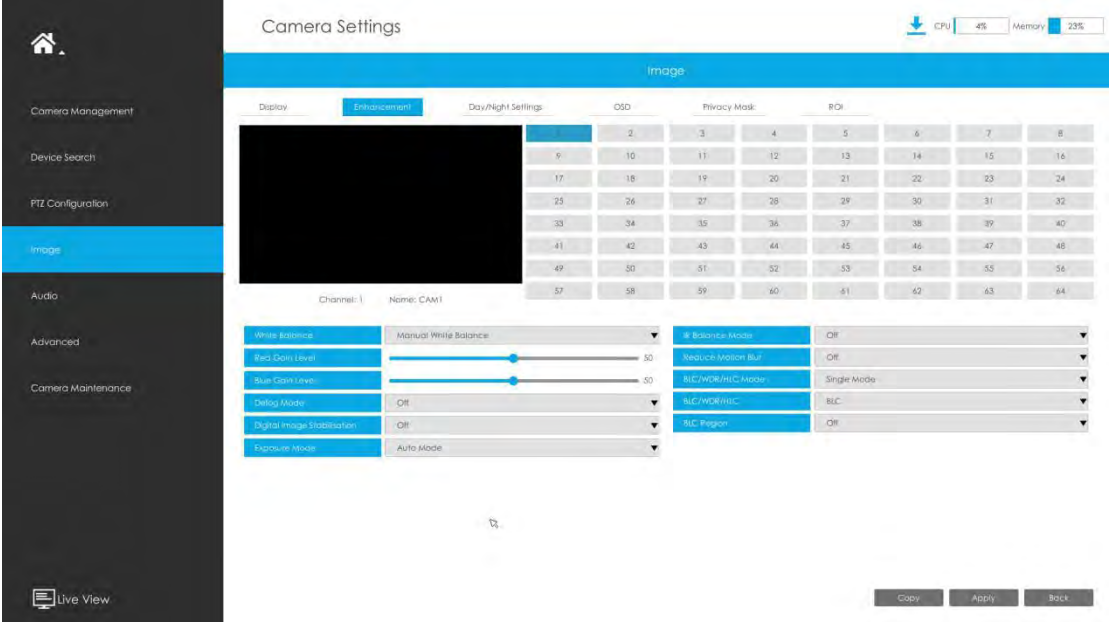
1. Smoked Dome Cover is only supported for Pro Dome and PTZ Dome cameras.
2. Smart IR Mode and IR LED Level are supported for cameras with IR LEDs.
3. White LED Level is only supported for PTZ Bullet cameras.
4. Day to Night Sensitivity and Night to Day Sensitivity under Auto Mode are only available under Auto Mode when camera are 180° Panoramic Bullet and Mini Bullet whose firmware version is 4X.7.0.74 or above.

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

**Step 4. Select**  **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 'Image' enhancement. The 'Enhancement' tab is selected, showing a grid of 64 camera icons. Below the grid, the settings for 'Channel: 1' (Name: CAM1) are visible. The settings include:

- White Balance: Manual White Balance
- Red-Data Level: 50
- Blue Gain Level: 50
- Delay Mode: OFF
- Digital Image Stabilizer: OFF
- Exposure Mode: Auto Mode
- Reduce Motion Blur: OFF
- BLC/WDR/HLC Mode: Single Mode
- BLC/WDR/HLC: BLC
- BLC Region: OFF

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

**Step 1. Select channel.**

**Step 2. 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).

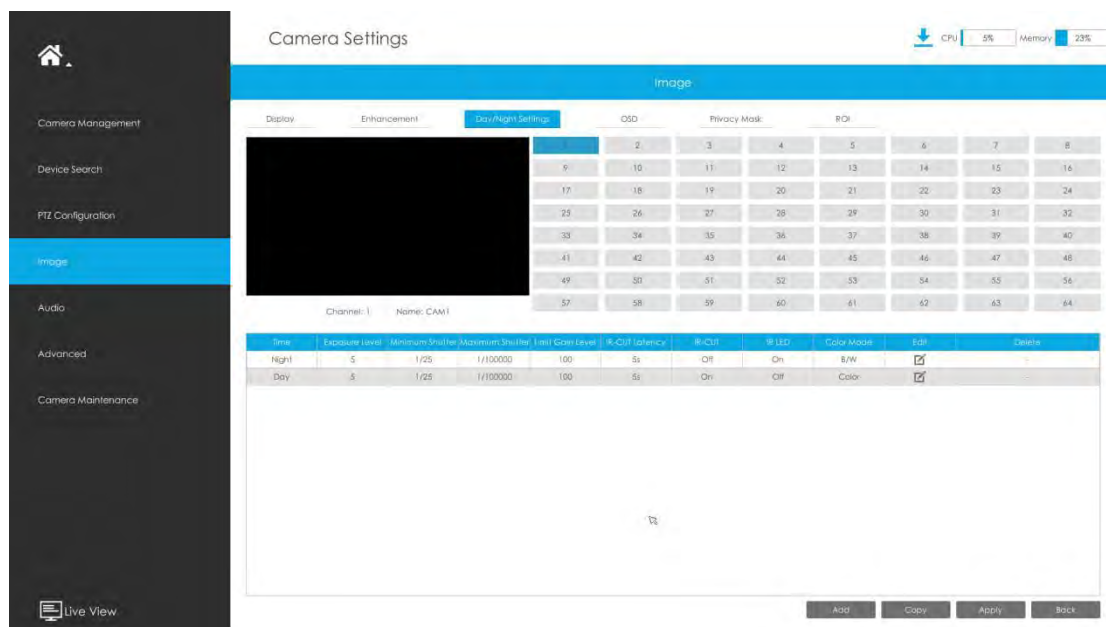
**HLC Level:** Select level for HLC.

**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  on the bottom of the windows.

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

### 3.6.4.3 Day/Night Settings



The screenshot shows the 'Camera Settings' interface with the 'Image' tab selected. The 'Day/Night Settings' sub-tab is active, displaying a grid of 64 numbered buttons (1-64) for channel selection. Below the grid, there is a table for configuring Day and Night settings for Channel 1 (Name: CAM1).

Time	Exposure Level	Minimum Shutter	Maximum Shutter	Limit Gain Level	W-DR (Agency)	W-DR	W-LD	Color Mode	Anti-Flicker	Defog
Night	5	1/25	1/100000	100	5s	Off	On	B/W	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Day	5	1/25	1/100000	100	5s	On	Off	Color	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

At the bottom of the interface, there are buttons for 'Add', 'Copy', 'Apply', and '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.

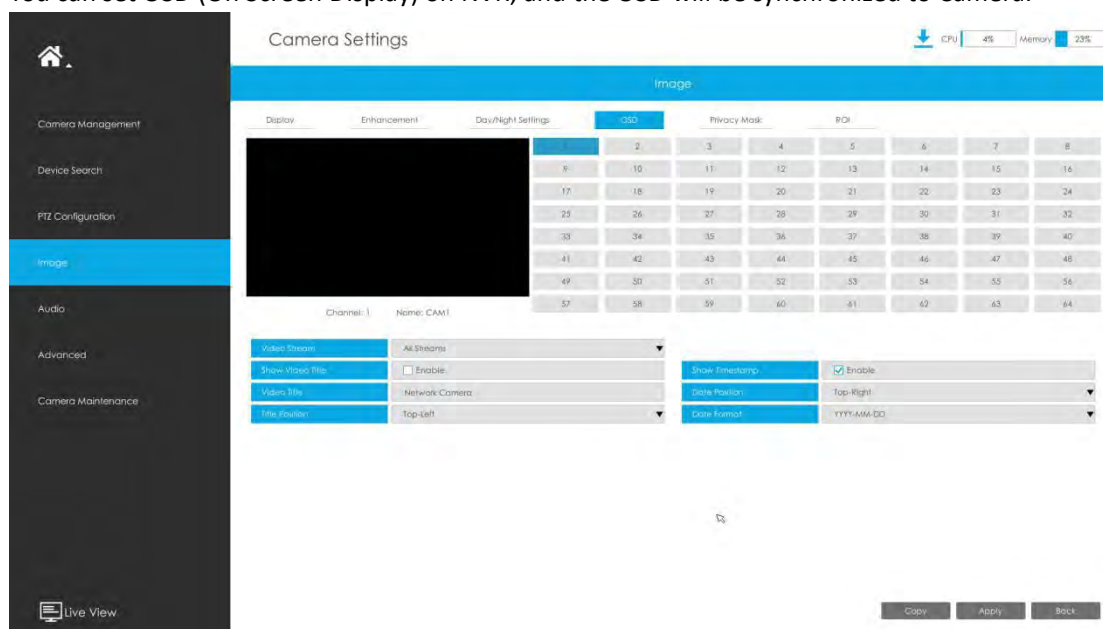
**Edit:** Edit the parameters above.

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

**Step 4.** Select  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.



**Step 1.** Select channel.

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

**Step 3.** Enable video title and timestamp.



**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 4.** Copy the OSD settings to the other channels by clicking the “” button on the bottom of the windows.

**Step 5.** Select “” to save the settings.



### 3.6.4.5 Privacy Mask

Milesight 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 3% Memory 23%

Image

Display Enhancement Day/Night Settings OSD Privacy Mask ROI

Channel: 2 Name: CAM2

ID	Name	Enable	Delete
1	MASK1	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Note: Support up to 8 Privacy Mask areas.

Copy Apply Back

You can add a privacy mask by following steps:

**Step 1. Select channel and enable privacy mask.**

**Step 2. Set the privacy mask type and drag the mouse to select the area which is privacy on the live window. You can add 8 areas at most and each zone can be enabled and disabled.**

**Step 3. Copy the privacy area to the other channels by clicking the “” button on the bottom of the windows.**

**Step 4. Select “” to save the settings.**

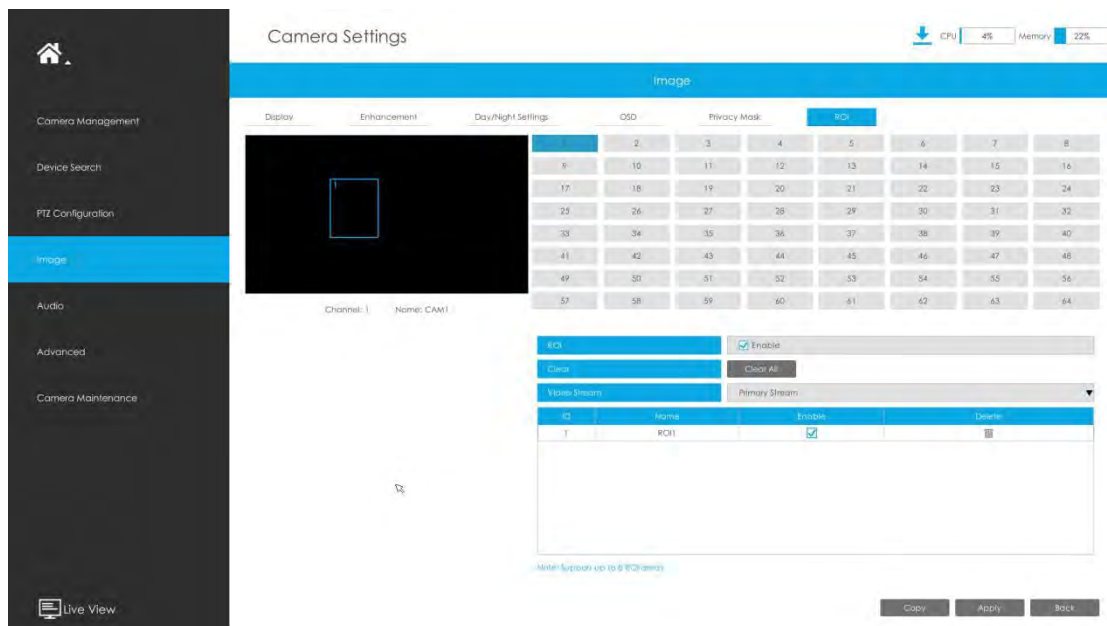
**Note:**

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

### 3.6.4.6 ROI

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





You can add a ROI by following steps:

**Step 1.** Select channel and enable ROI.

**Step 2.** Set the video stream type and drag the mouse to select the area in the preview window.

You can add **8 areas** at most and each zone can be enabled and disabled.

**Step 3.** Copy the ROI area to the other channels by clicking the “**Copy**” button on the bottom of the windows.

**Step 4.** 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



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 displays the 'Camera Settings' interface for 'Advanced' settings. On the left is a sidebar with navigation options: Camera Management, Device Search, PTZ Configuration, Image, Audio, **Advanced**, and Camera Maintenance. The main area is titled 'Camera Settings' and 'Advanced'. Under the 'Watermark' tab, there is a grid of 64 channels (8x8) with a 'Channel' and 'Name' column. Below the grid, there are fields for 'Watermark' (set to 'Enable'), 'Watermark String' (set to 'IP CAMERA'), and '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  on the bottom of the windows.**

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

**Note:**

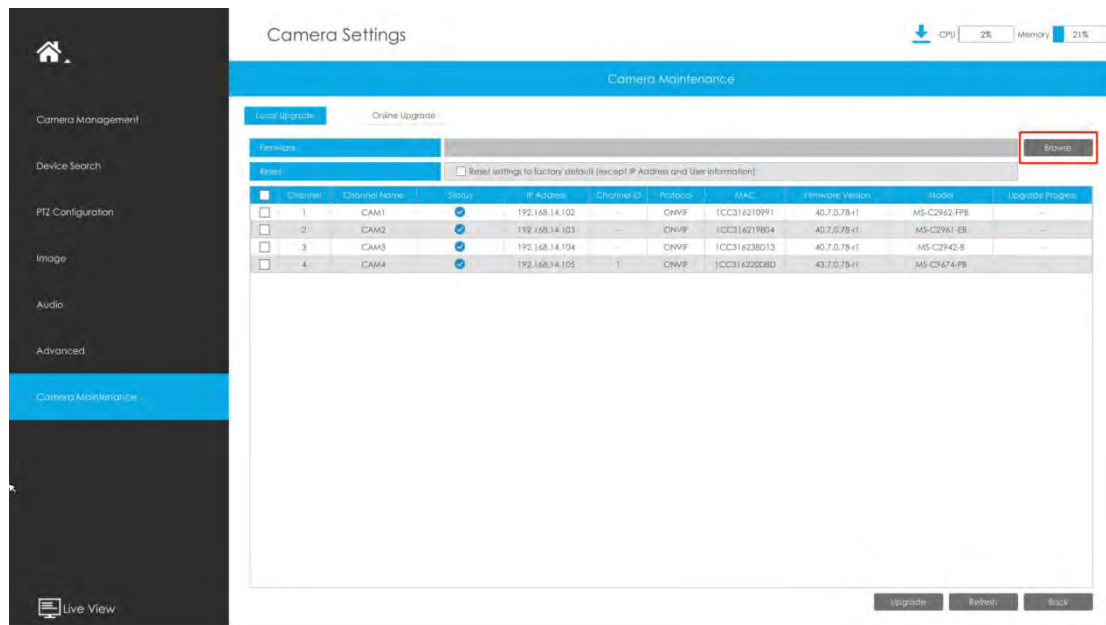
Watermark only appears when exporting by a third party.

## 3.6.7 Camera Maintenance

Milesight NVRs support both Online Upgrade and Local Upgrade of Milesight Cameras.

### Local Upgrade

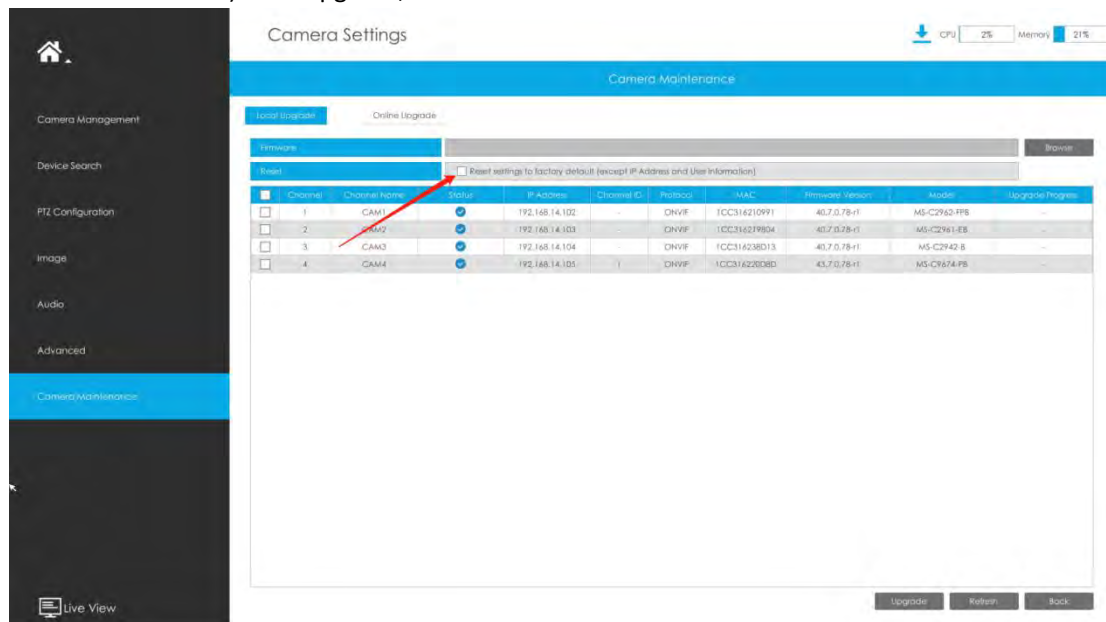
**Step 1.** Click **Browse** and select the corresponding firmware you downloaded in your USB;



The screenshot shows the 'Camera Maintenance' section of the NVR's web interface. The 'Local Upgrade' tab is selected. A 'Browse' button is highlighted with a red box. Below the 'Browse' button is a checkbox for 'Reset settings to factory default (except IP Address and User Information)'. A table lists four camera channels with their respective details.

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	Model	Upgrade Progress
1	CAM1	●	192.168.14.102	--	ONVIF	1CC316210991	40.7.0.78-11	MS-C2962-PS	--
2	CAM2	●	192.168.14.103	--	ONVIF	1CC316219604	40.7.0.78-11	MS-C2961-EB	--
3	CAM3	●	192.168.14.104	--	ONVIF	1CC316238D13	40.7.0.78-11	MS-C2942-B	--
4	CAM4	●	192.168.14.105	1	ONVIF	1CC316220C8D	43.7.0.78-11	MS-C9674-PS	--

**Step2.** Check if you need to reset settings to factory default (except IP Address and User Information) after upgrade;



The screenshot shows the same 'Camera Maintenance' interface as in Step 1. A red arrow points to the checkbox for 'Reset settings to factory default (except IP Address and User Information)'. The table below it is identical to the one in Step 1.

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	Model	Upgrade Progress
1	CAM1	●	192.168.14.102	--	ONVIF	1CC316210991	40.7.0.78-11	MS-C2962-PS	--
2	CAM2	●	192.168.14.103	--	ONVIF	1CC316219604	40.7.0.78-11	MS-C2961-EB	--
3	CAM3	●	192.168.14.104	--	ONVIF	1CC316238D13	40.7.0.78-11	MS-C2942-B	--
4	CAM4	●	192.168.14.105	1	ONVIF	1CC316220C8D	43.7.0.78-11	MS-C9674-PS	--

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

Camera Settings

CPU 2% Memory 21%

Camera Maintenance

Local Upgrade Online Upgrade

Reset

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

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	Model	Upgrade Progress
1	CAM1	●	192.168.14.102	-	ONVIF	1CC316210991	40.7.0.78-r1	MS-C2962-FB	-
2	CAM2	●	192.168.14.103	-	ONVIF	1CC316219804	40.7.0.78-r1	MS-C2961-EB	-
3	CAM3	●	192.168.14.104	-	ONVIF	1CC316238D13	40.7.0.78-r1	MS-C2942-8	-
4	CAM4	●	192.168.14.105	1	ONVIF	1CC316220D8D	43.7.0.78-r1	MS-C9674-FB	-

Upgrade Refresh Back

## 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 2% Memory 22%

Camera Maintenance

Local Upgrade Online Upgrade

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	Model	Latest Version	Upgrade	Upgrade Progress
1	CAM1	●	192.168.14.102	-	ONVIF	1CC316210991	40.7.0.78-r1	MS-C2962-FB	-	⬇️	-
2	CAM2	⚠️	192.168.14.103	-	ONVIF	1CC316219804	40.7.0.78-r1	MS-C2961-EB	-	⬇️	-
3	CAM3	⚠️	192.168.14.104	-	ONVIF	1CC316238D13	40.7.0.78-r1	MS-C2942-8	-	⬇️	-
4	CAM4	●	192.168.14.105	1	ONVIF	1CC316220D8D	43.7.0.78-r1	MS-C9674-FB	-	⬇️	-

Check Upgrade Refresh Back

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

- ① Click the blue icon in corresponding Upgrade column to upgrade camera.

Camera Settings

CPU 25% Memory 22%

Camera Maintenance

Local Upgrade Online Upgrade

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	Model	Latest Version	Upgrade	Upgrade Progress
<input type="checkbox"/>	CAM1		192.168.14.102	-	ONVIF	1CC316210991	40.7.0.78-r1	MS-C292-FFB	-		-
<input type="checkbox"/>	CAM2		192.168.14.103	-	ONVIF	1CC316219804	40.7.0.78-r1	MS-C2961-EB	-		-
<input type="checkbox"/>	CAM3		192.168.14.104	-	ONVIF	-	-	-	-		-
<input type="checkbox"/>	CAM4		192.168.14.105	1	ONVIF	1CC31622008D	43.7.0.78-r1	MS-C9674-PS	-		-

Check Upgrade Refresh Back

② A way to achieve batch upgrade. Just select the cameras you want to upgrade and then click **Upgrade** button.

Camera Settings

CPU 25% Memory 22%

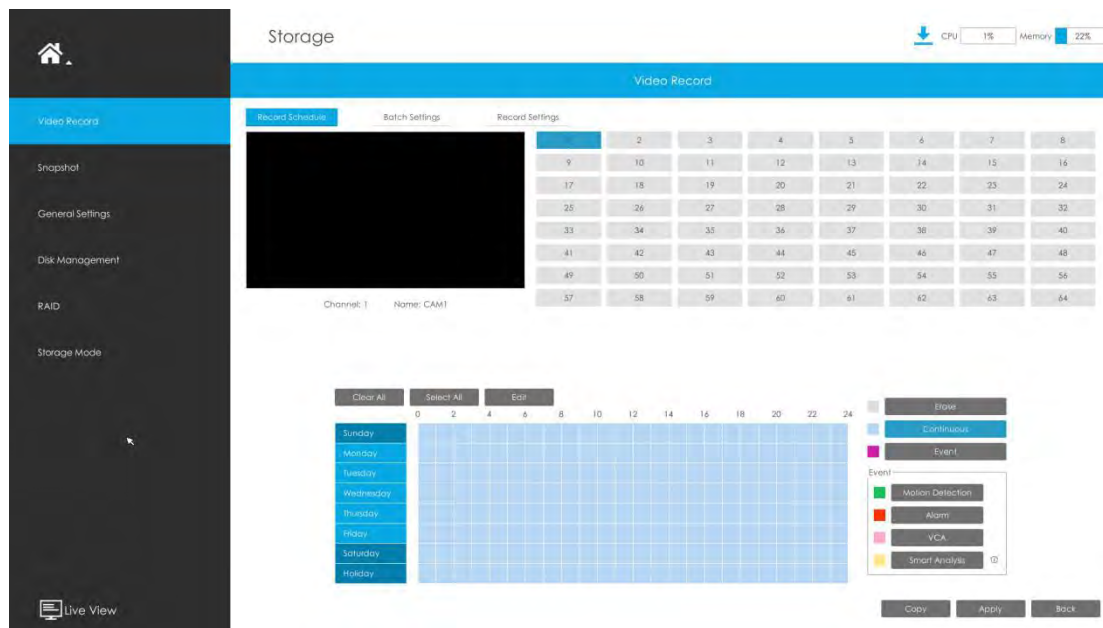
Camera Maintenance

Local Upgrade Online Upgrade

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	Model	Latest Version	Upgrade	Upgrade Progress
<input type="checkbox"/>	CAM1		192.168.14.102	-	ONVIF	1CC316210991	40.7.0.78-r1	MS-C292-FFB	-		-
<input type="checkbox"/>	CAM2		192.168.14.103	-	ONVIF	1CC316219804	40.7.0.78-r1	MS-C2961-EB	-		-
<input type="checkbox"/>	CAM3		192.168.14.104	-	ONVIF	-	-	-	-		-
<input type="checkbox"/>	CAM4		192.168.14.105	1	ONVIF	1CC31622008D	43.7.0.78-r1	MS-C9674-PS	-		-

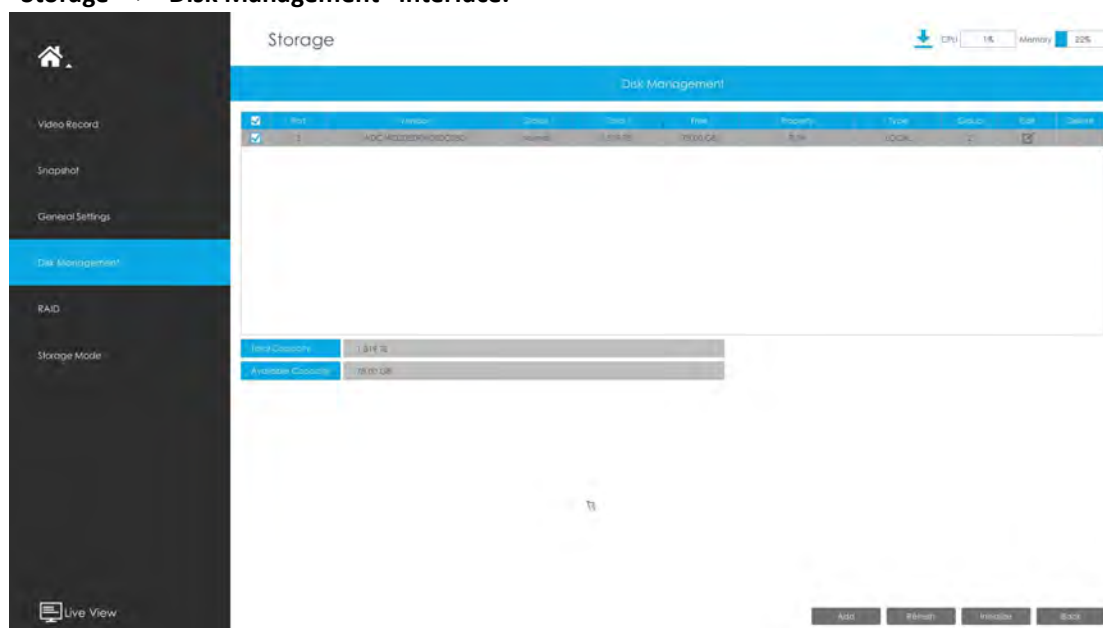
Check Upgrade Refresh Back

### 3.7 Storage



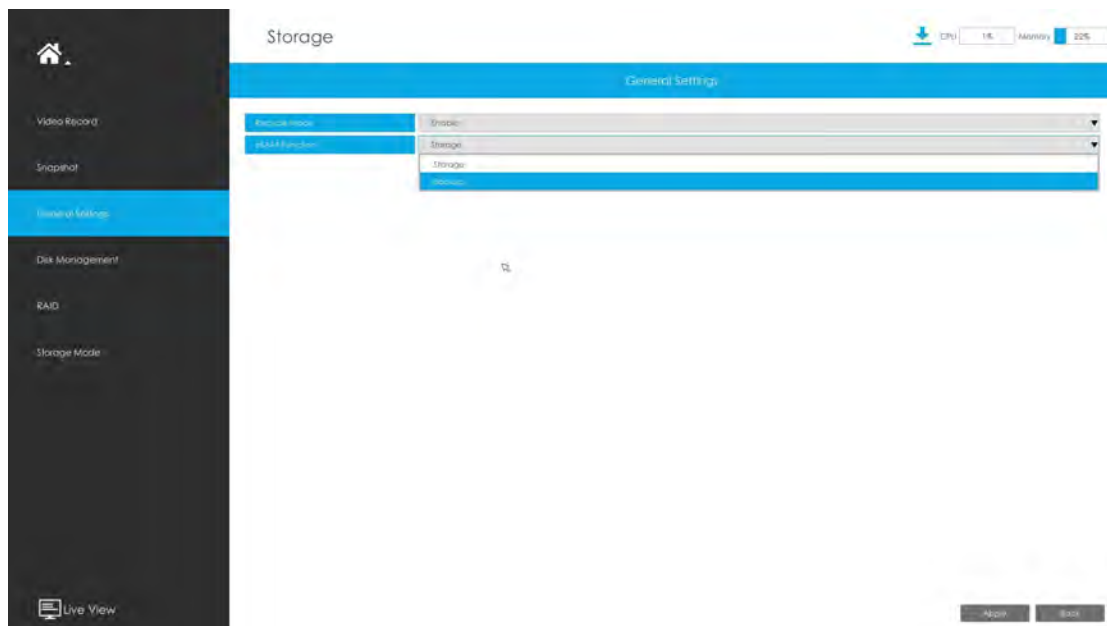
#### Preparation for Record

**Step 1. Ensure your NVR has been installed and the HDD has been initialized, please check it on "Storage" -> "Disk Management" interface.**



**Step 2. Ensure that the HDD has sufficient storage space.**

Enable [Recycle Mode] in the case of insufficient capacity of storage device on Storage -> 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.

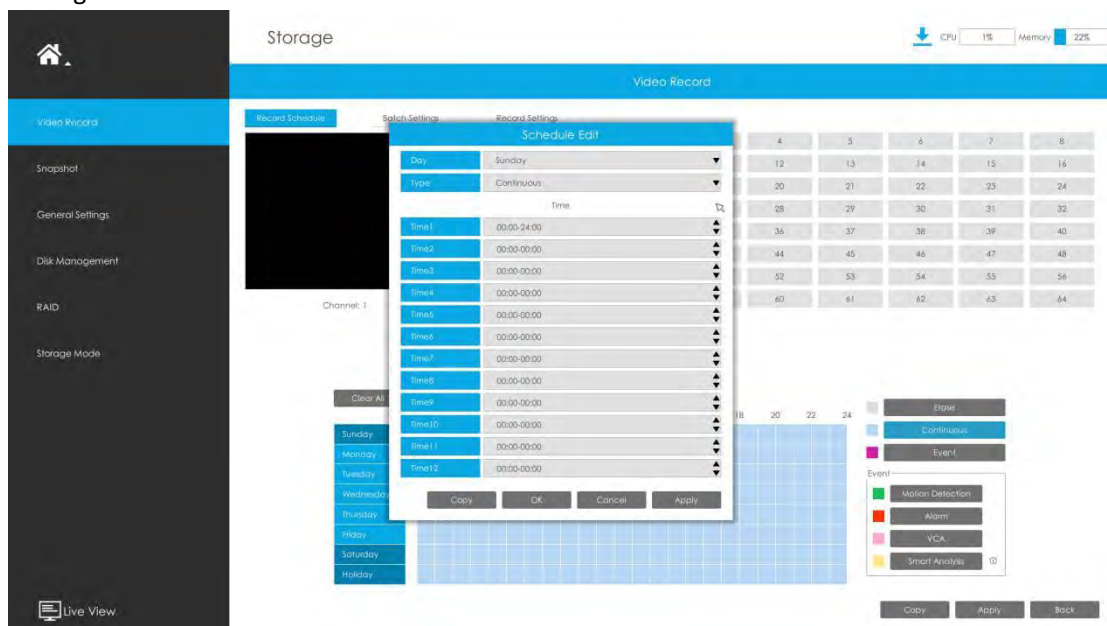
### 3.7.1 Video Record

#### Record Schedule

**Step 1. Select channel.**

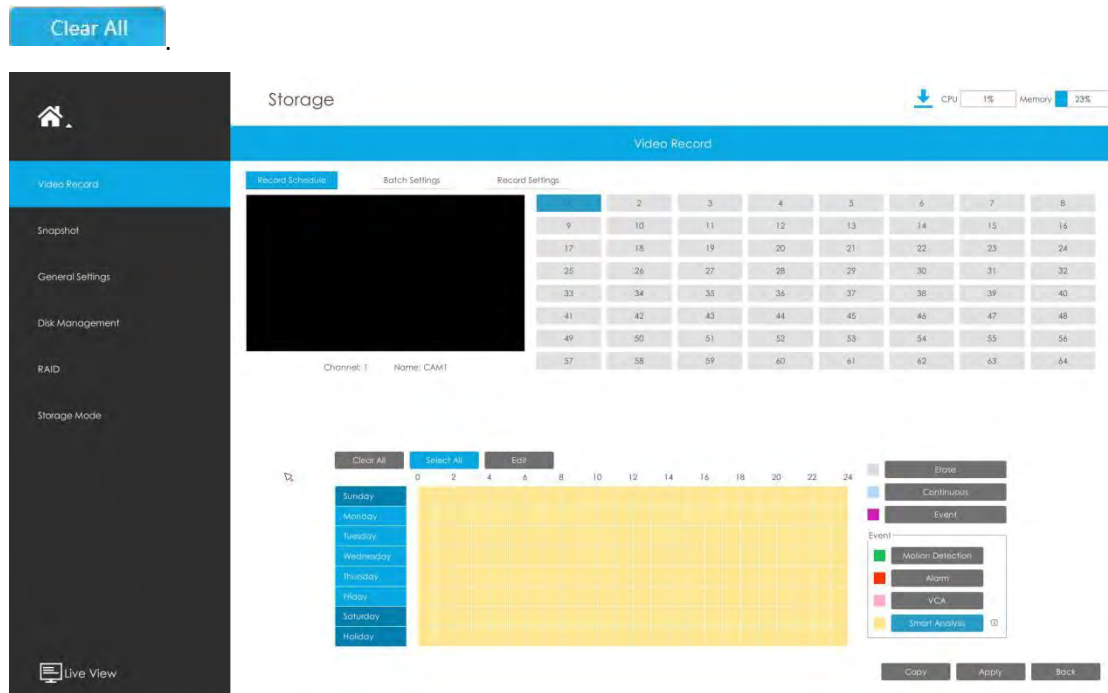
**Step 2. Set record schedule.**

**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



**Step 3.** Click **Copy** to copy the same record configuration to other channels.

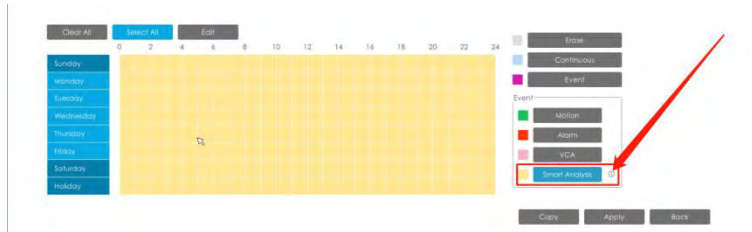


**Note:**

Here are steps for setting ANPR record correctly so that NVR will record when license plate is detected.

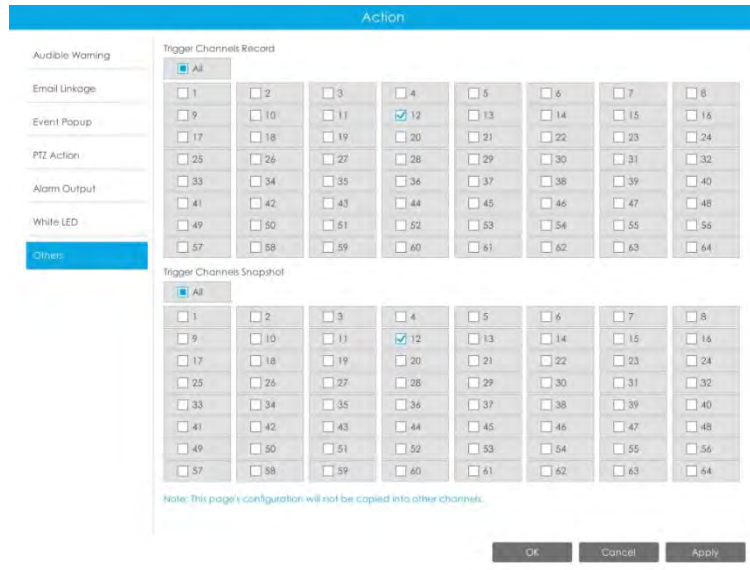
**Step 1:** Set Smart Analysis as Record Type in Storage -> Video Record -> Record Schedule interface; The exclamation mark next to Smart Analysis is used to indicate that Smart Analysis includes ANPR.





**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).

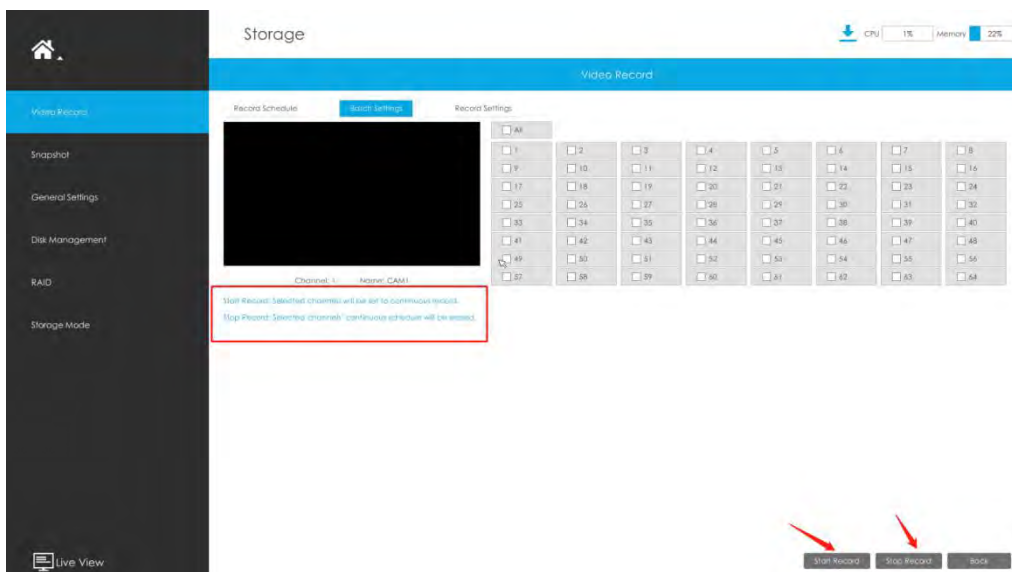


### Batch Settings


**Step 1.** Click **Batch Settings** to enter Batch Settings interface.

**Step 2.** Select channels and click **Start Record** to start always record.

**Step 3.** Select channels and click **Stop Record** to stop record.



## Record Settings

Make general configuration for selected channels. Click  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. Note that only NVR model ends with letter H support pre record.

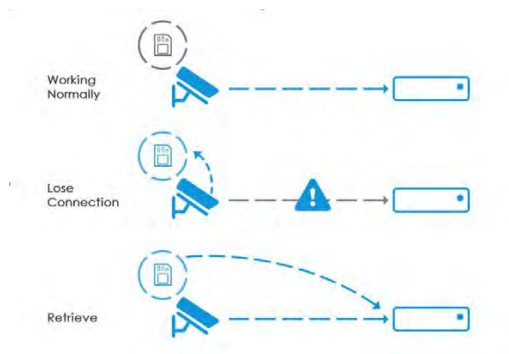
**Post Record:** Event post-record duration time. It will keep recording after the event is over.

**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 only](#). 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.

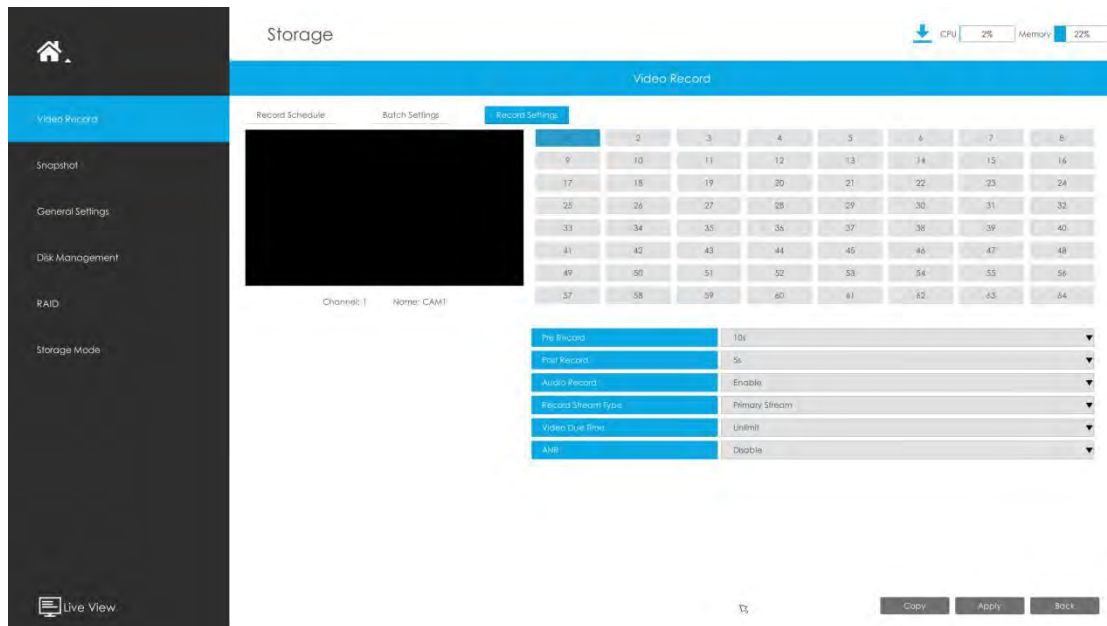
**ANR (Automatic Network Replenishment) :** Can automatically replenish the recording gap due to internet interruptions. As the picture shows below, NVR stores videos when the network connection between NVR and cameras is normal. When the connection lost, the camera would start continuous recording and 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.



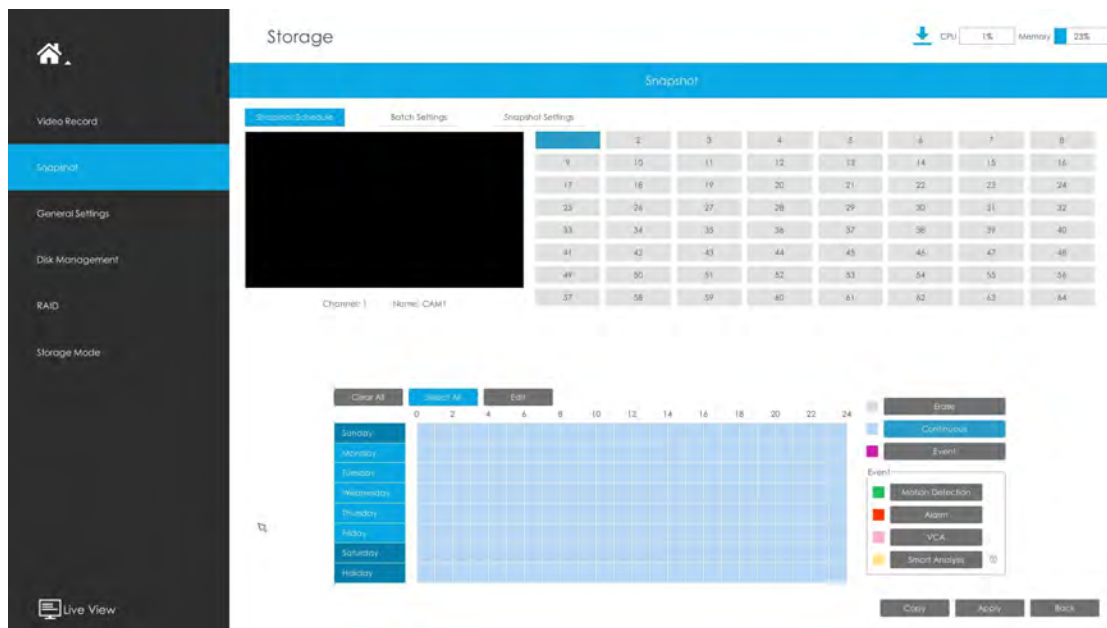
Here are some notes for using ANR below:

**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 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.




### 3.7.2 Snapshot

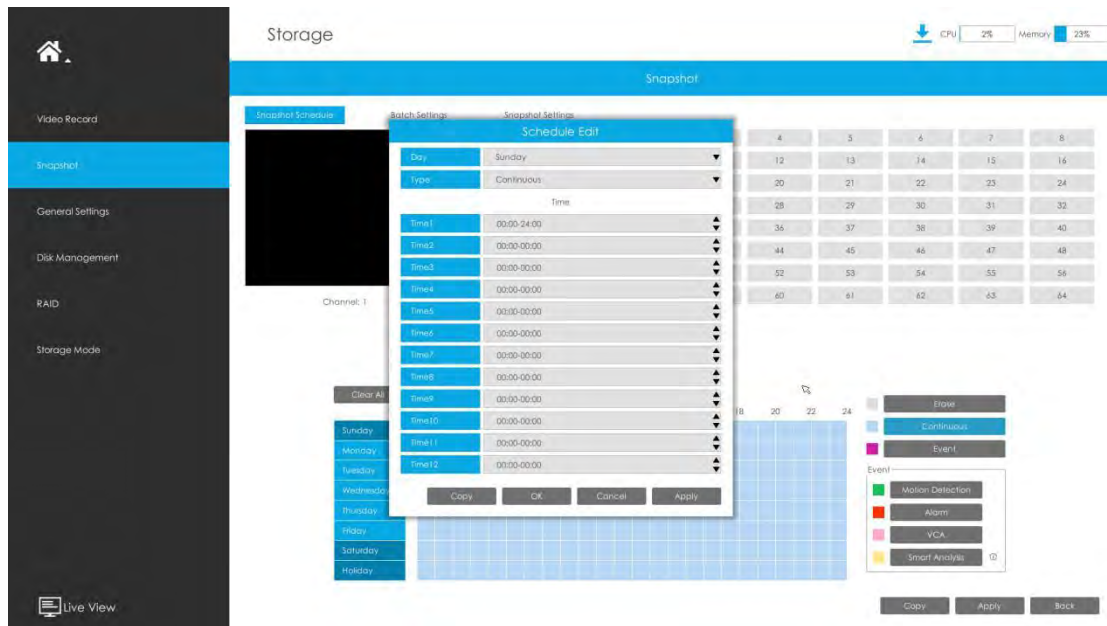


#### Snapshot Schedule

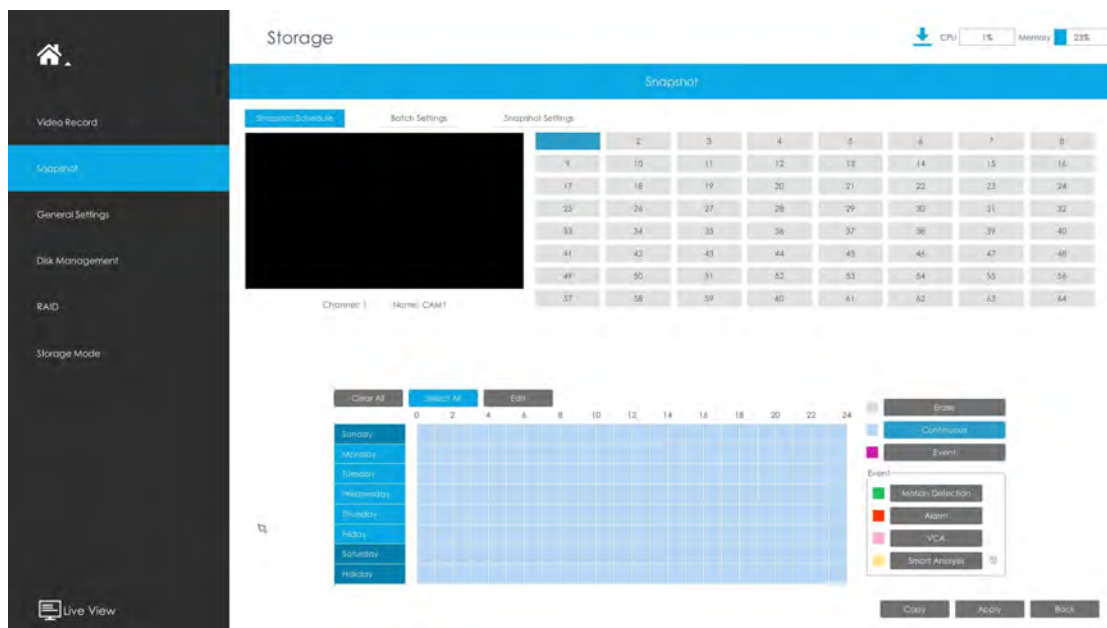
**Step 1.** Select channel.

**Step 2.** Set snapshot schedule.

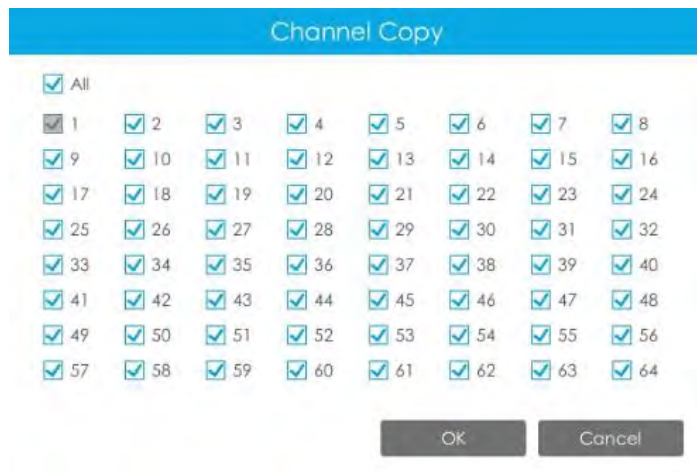
**Method 1:** Click  to edit schedule. Select Day and Time to finish editing.



**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.

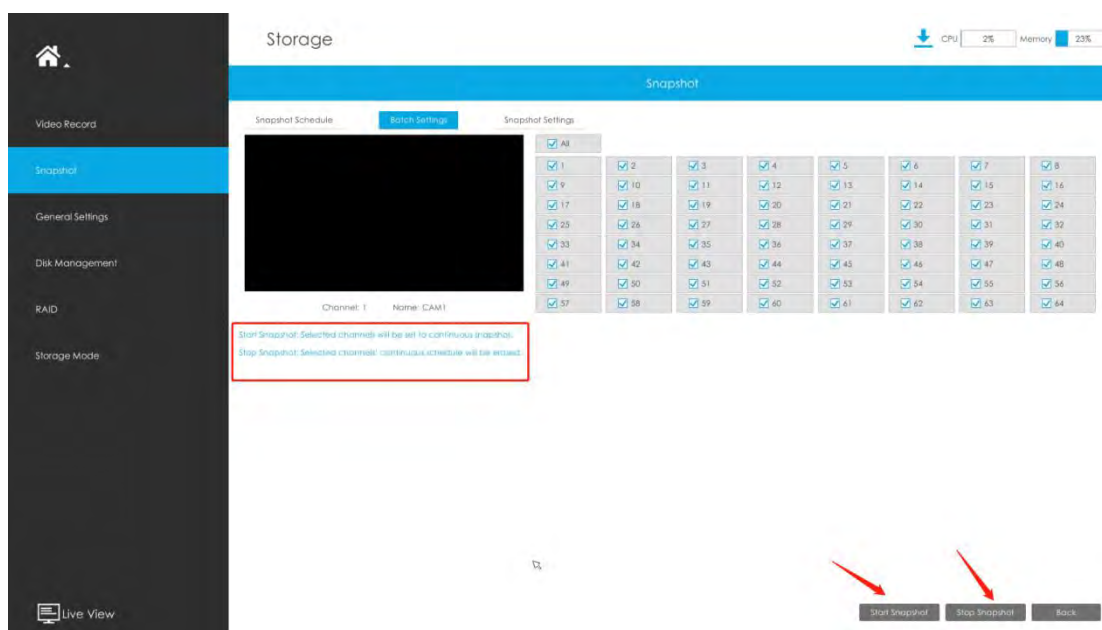


### Batch Settings

Step 1. Click **Batch Settings** to enter Batch Settings interface.

Step 2. Select channels and click **Start Snapshot** to start always record.

Step 3. Select channels and click **Stop Snapshot** to stop record.



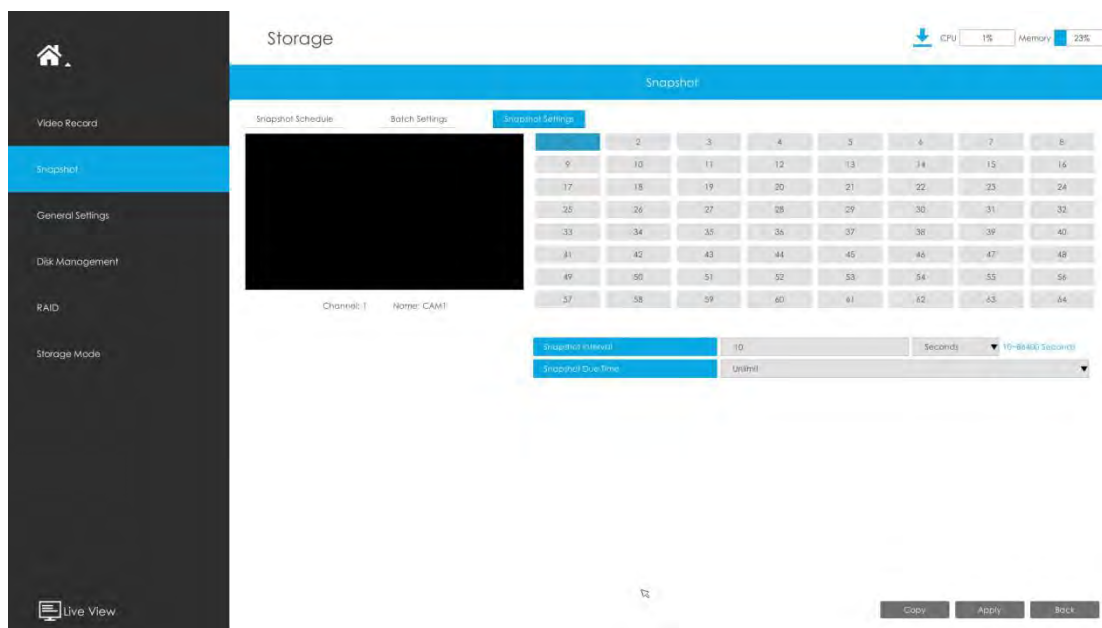
### Snapshot Settings

Make general configuration for selected channels. Click **Copy** to copy the same configuration to other channels.

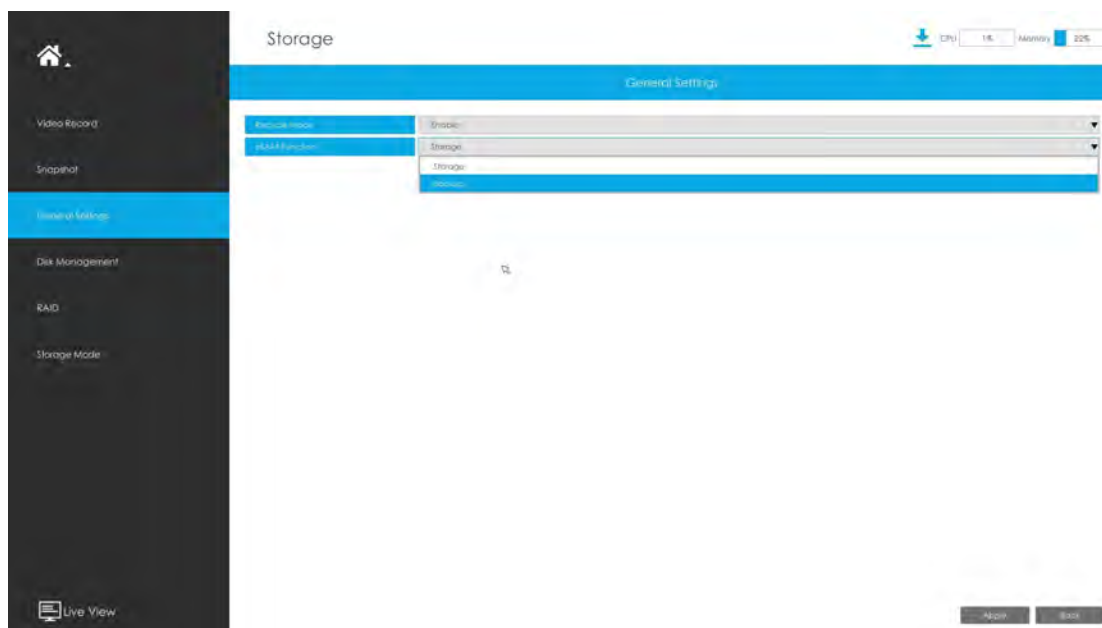
**Channel:** Select the channel which will be set.

**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 General Settings



**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.

### 3.7.4 Disk Management



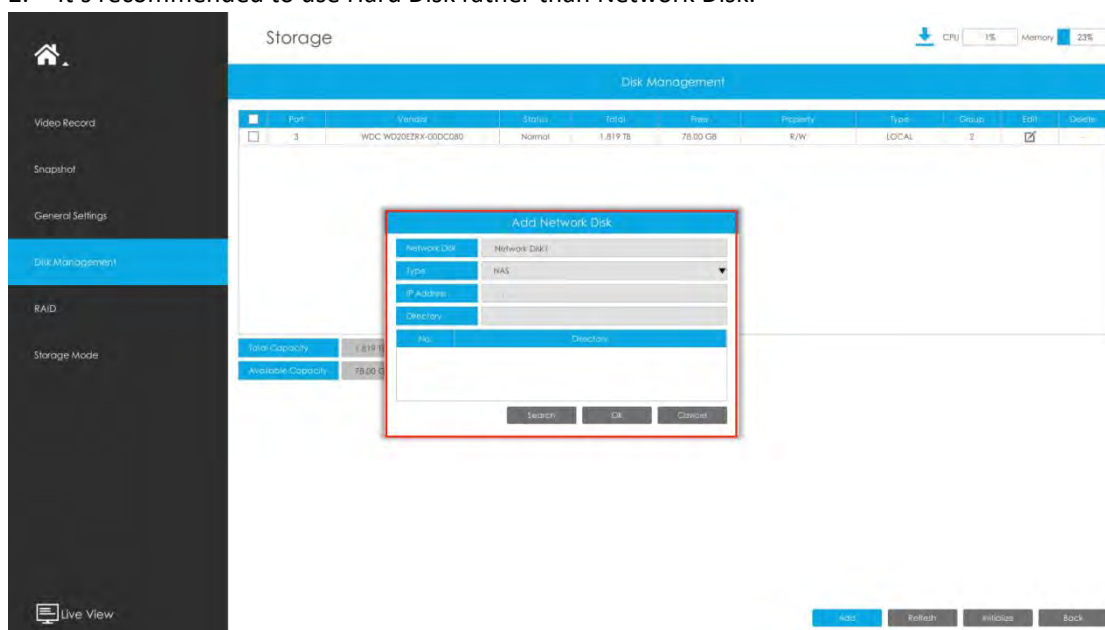



### Network Disk

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.

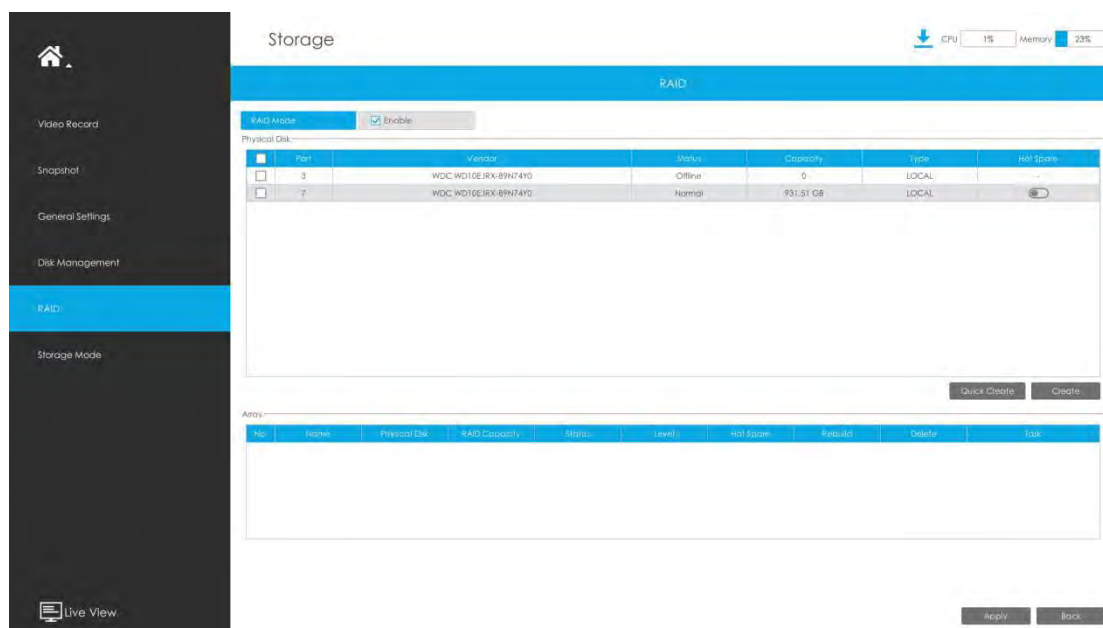


Select a storage device and click **Initialize** to initialize it, edit the Property by clicking . After that the storage device will be ready.

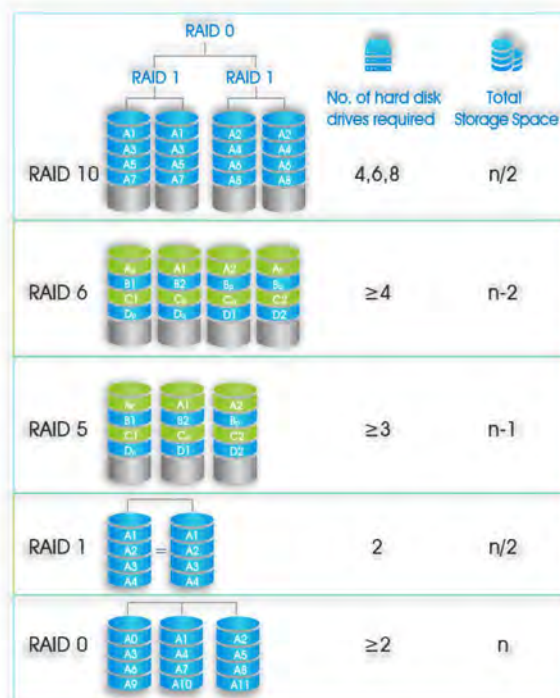


**HDD Type:** RAID means RAID, NAS means network attached storage while LOCAL means normal disk mode.

### 3.7.5 RAID

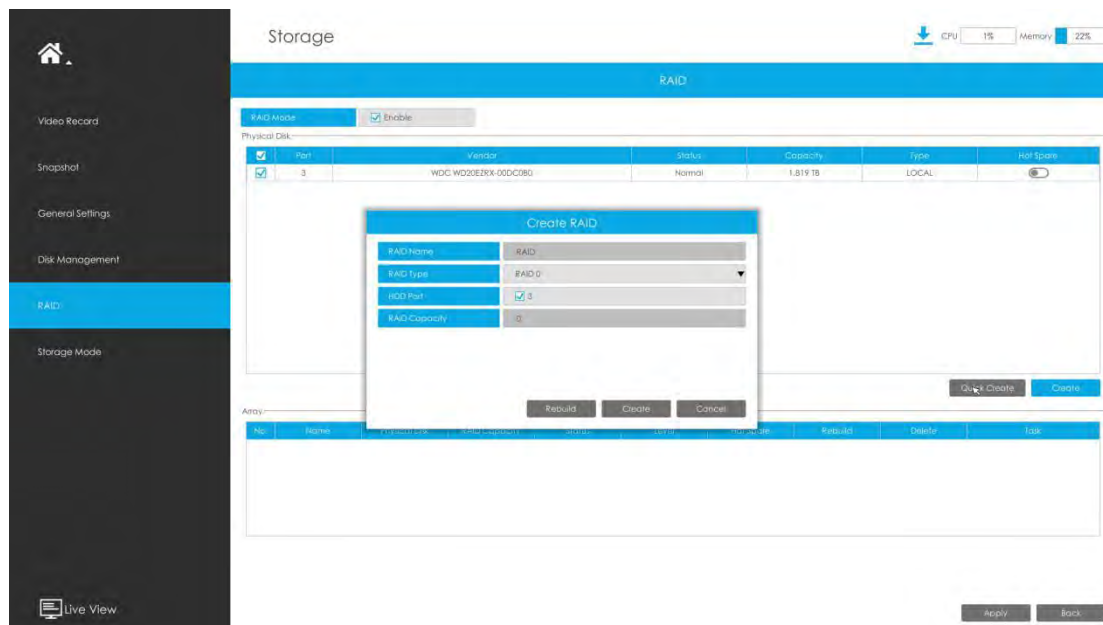


RAID (Redundant Array of Independent Disks) is a storage technology that combines multiple disk drive components into a logical unit. A RAID setup stores data over multiple hard disk drives to provide enough redundancy so that data can be recovered if one disk fails.



**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.**



**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.

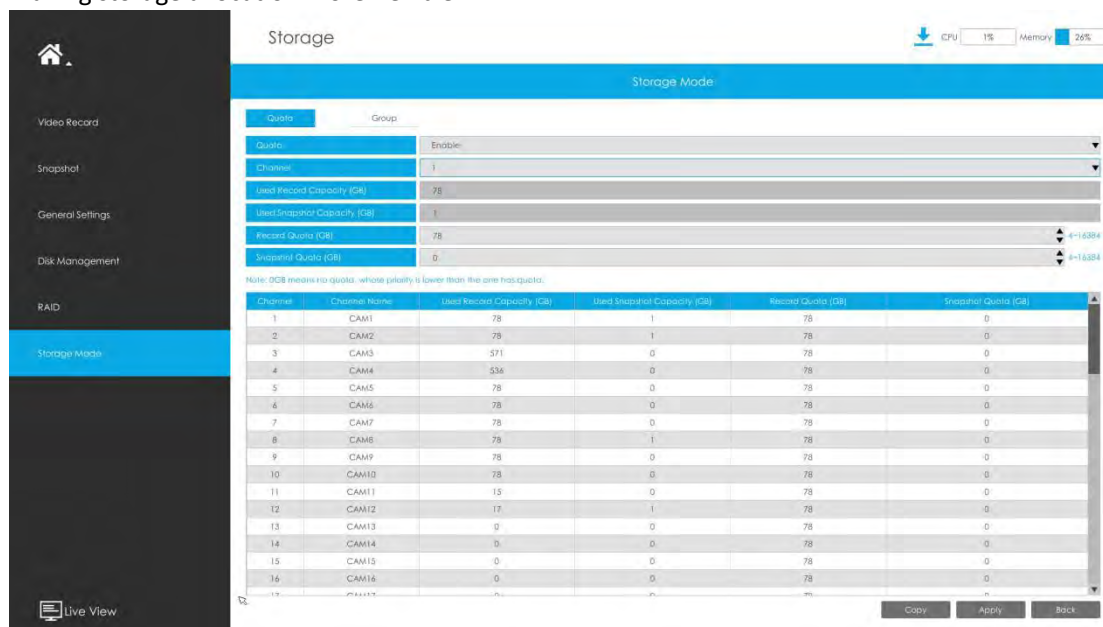
**Note:**

1. RAID only available for 4K H.265 NVR 7000/8000 Series and 4K H.265 PoE NVR 7000 Series.
2. RAID capacity can not larger than 16TB.
3. Quick Create only for RAID5.

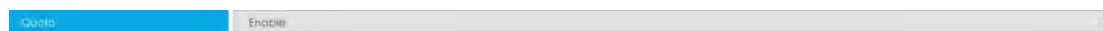
### 3.7.6 Storage Mode

#### Quota

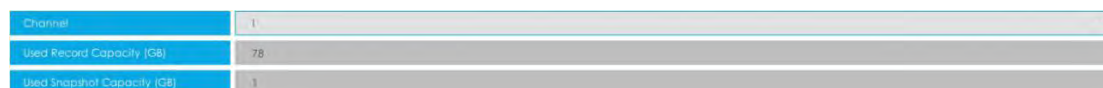
You can configure the storage capacity of each channel, including snapshots and recording, making storage allocation more flexible.



**Step 1. Enable Quota.**






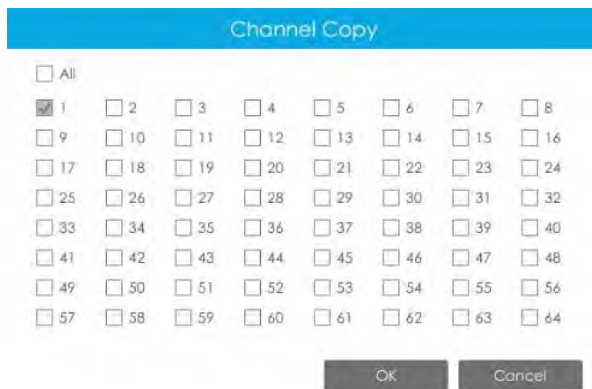
**Step 2. Select the channel in which you want to enable Quota. Then the used record capacity and the used snapshot capacity of the corresponding channel are automatically displayed.**



**Step 3. Set Quota for record and snapshot separately. And the Quota range from 4 to 16384 GB. The default value is 0 GB.**



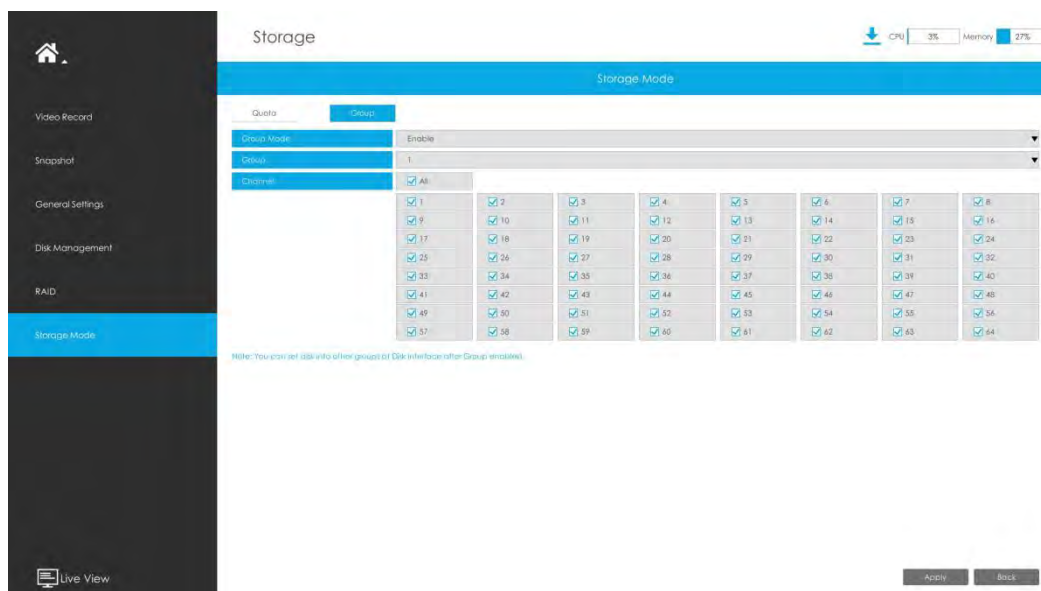
**Step 4. Click ** to take effect the configuration of the current interface.  
 Click  to pop up the Channel Copy interface, then the Quota configuration of the selected channel can be copied to the channel you want, and click  to take effect the configuration.



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.



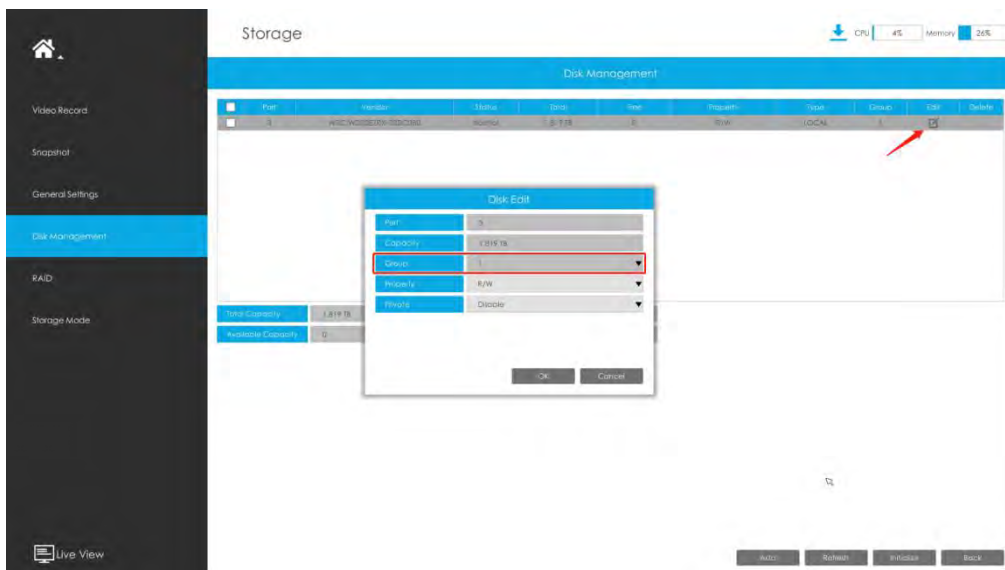
#### Step 1. Enable Group.



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.**



### 3.7.7 Auto Backup

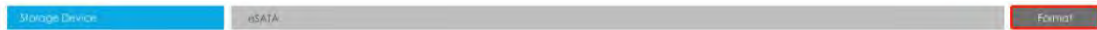


**Step 1. Enable Auto Backup.**






**Step 2.** Click  to format the eSATA disk.



**Step 3.** Set Backup Start Time.




**Step 4.** Check the checkbox to select Backup Channel. You can also click  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  to save the settings, and the latest 24 hours' video will be automatically backed up to eSATA.

**Note:**

① You can check Auto Backup status in the Backup Status bar, and the corresponding status is as follows.

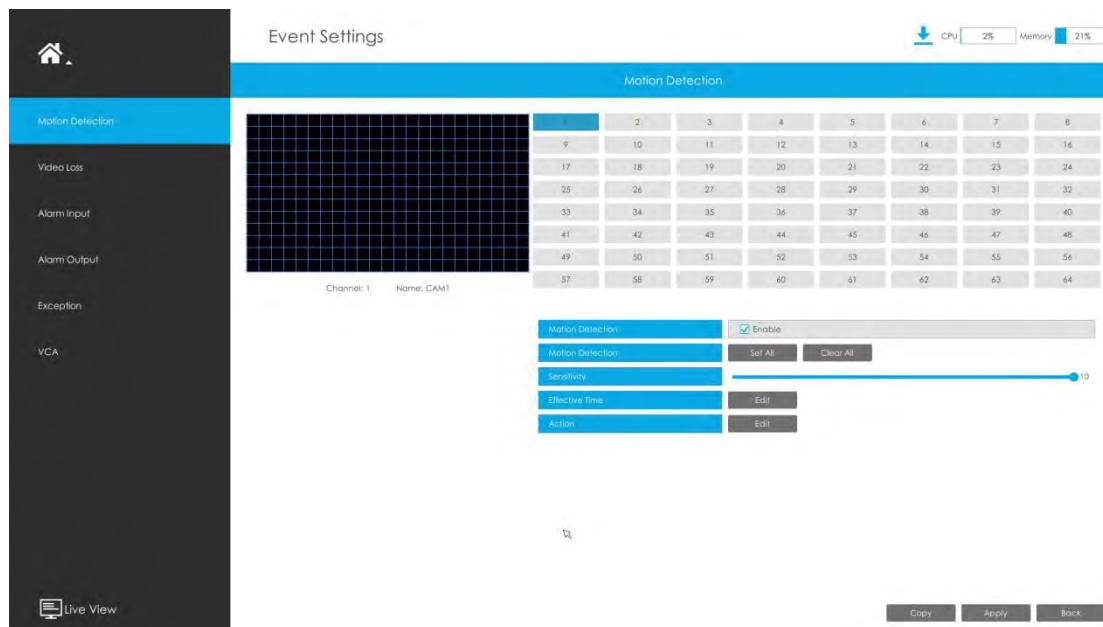
- No Storage Device
- Unsupported Storage Device Format
- Standby
- Working (xx%)

② If there are already successfully backed up videos, the time when the backup ends will be displayed in Last Successful Backup bar.

③ Only NVR 8000 Series supports Auto Backup function.

## 3.8 Event

### 3.8.1 Motion Detection



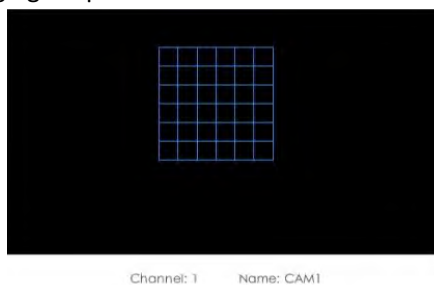
**Step 1. Enable Motion Detection.**

Select channel , Sensitivity and click  to enable Motion Detection.



**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.

**Step 3. Set Effective Time of motion detection by clicking** .



It will be more convenient by clicking  or  to set or clear all time settings.




**Step 4. Set Action for motion detection alarm by clicking** .

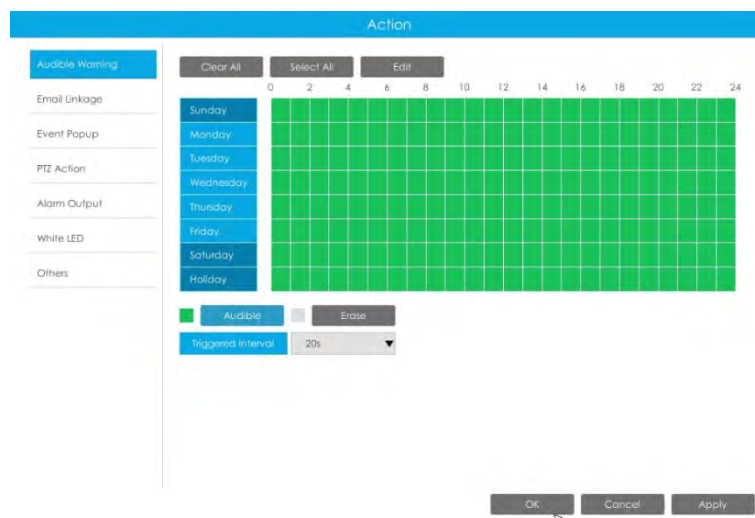
**Audible Warning:** NVR will trigger an audible beep when motion is detected.

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  or  to set or clear all time settings.

② Click  to edit record effective time manually.

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



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

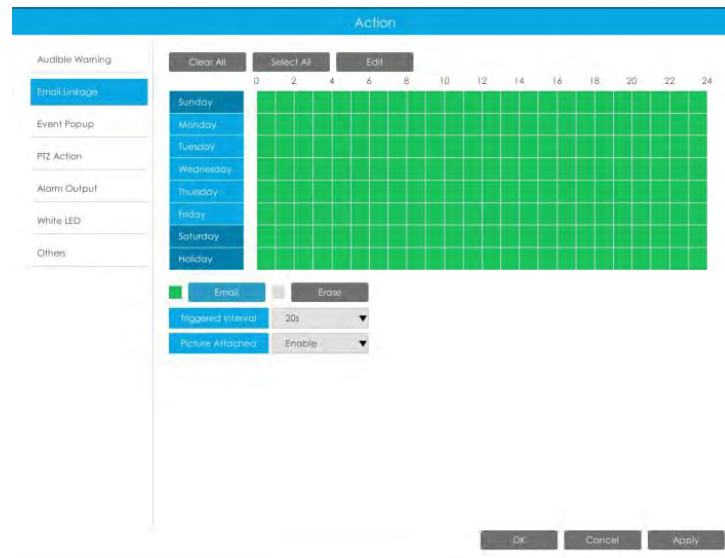
The user can set effective schedule as following two ways:

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.

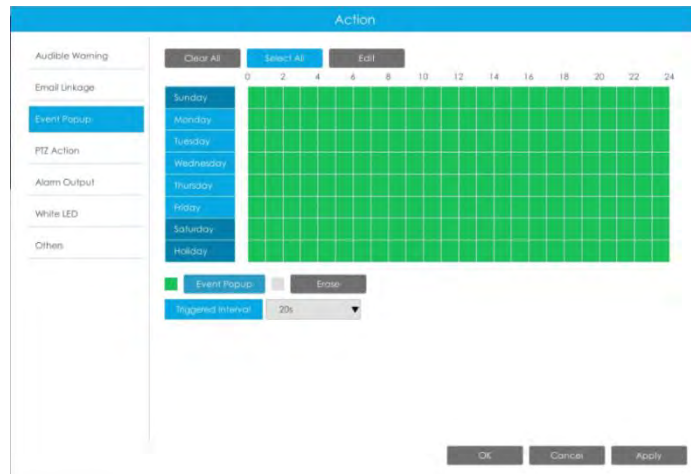


**Event Popup:** Trigger alarm screen popup to full screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.

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.



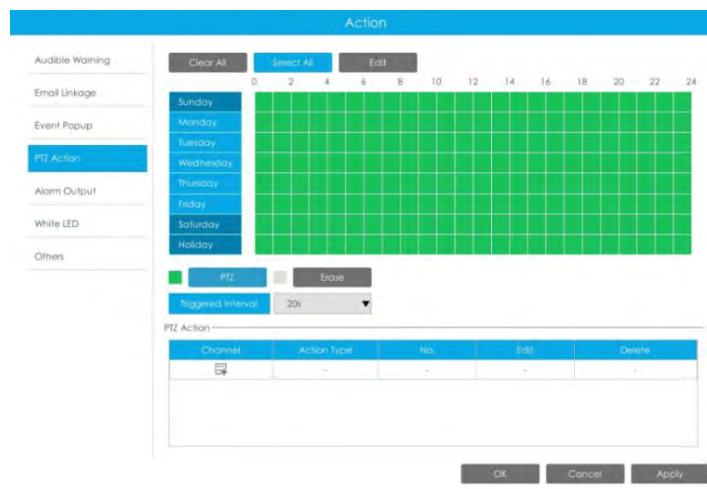
**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.

The 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 to set or clear all time settings.

② Click **Edit** to edit record effective time manually.

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



And you can add PTZ Action by clicking .



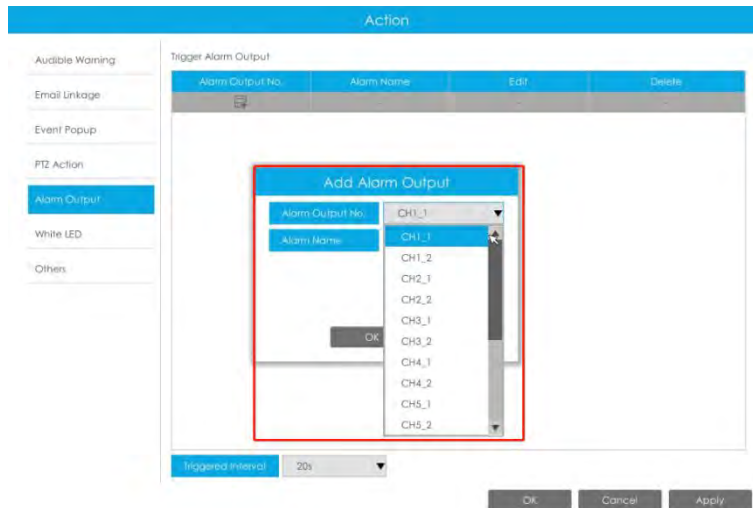
**Channel:** Select the channel which supports this function.

**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.



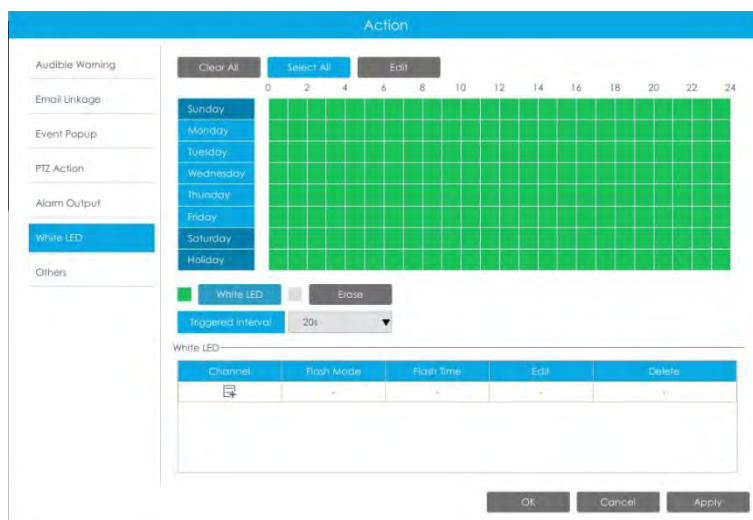
**White LED:** Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

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.

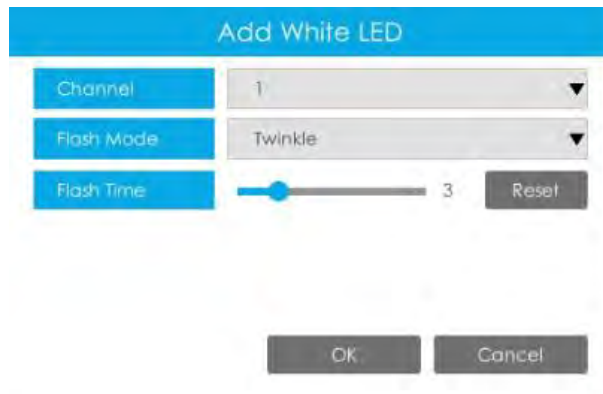
② Click **Edit** to edit effective time manually.

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



And you can add White LED by clicking .



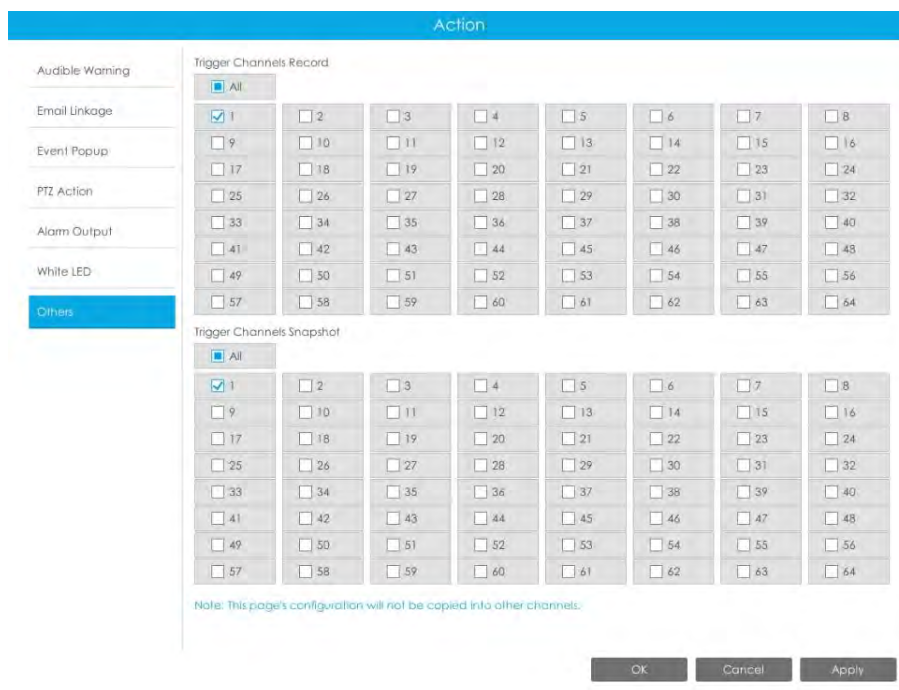


**Channel:** Select the channel which supports this function.

**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.

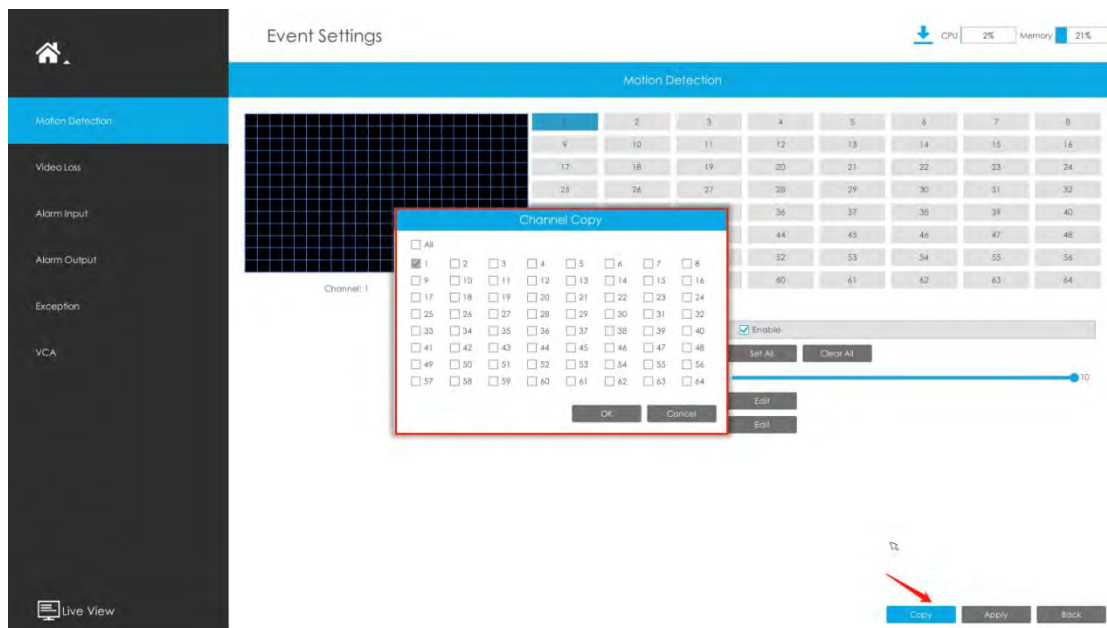
**Others:** Trigger channels to record and snapshot when alarm is triggered.



**Note:**

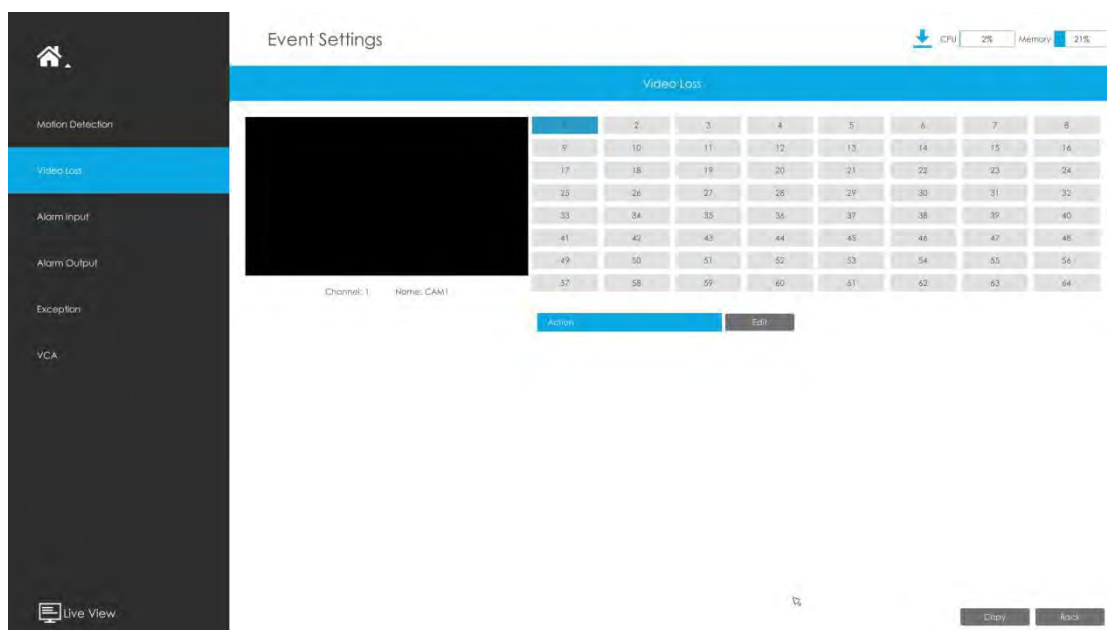
Make sure you have set correct schedule for record and snapshot before setting the Event Action.


Step 5. Click and to copy the same configuration to other channels.



### 3.8.2 Video Loss



**Step 1. Select a channel.**



**Step 2. Set Action for video loss by clicking**  .

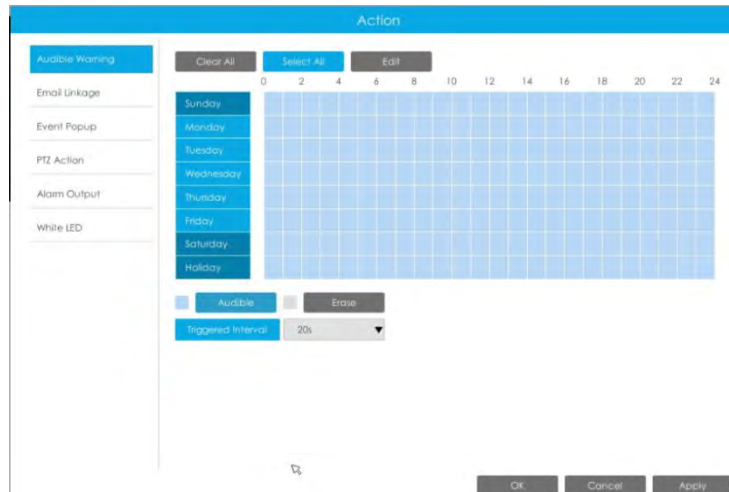
**Audible Warning:** NVR will trigger an audible beep when motion is detected.

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  or  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.



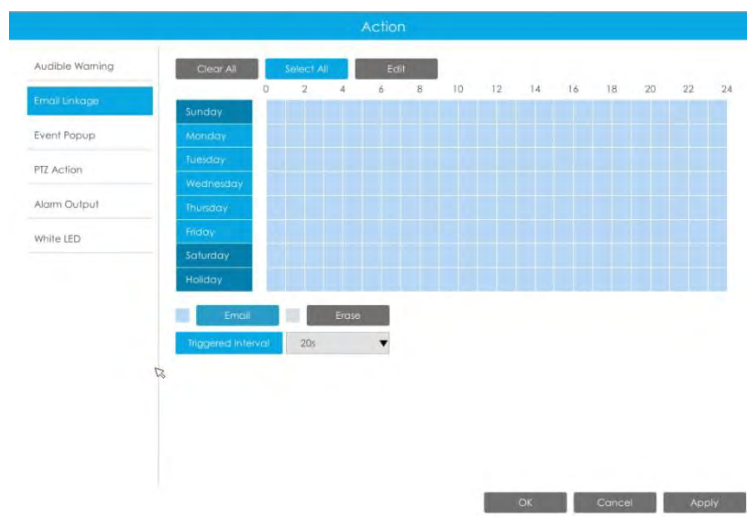
**Email Linkage:** NVR will send an email to the address you set before.

User can set effective schedule as following two ways:

- ① Select the operation type: Email or Erase. Then drag a rectangle 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.

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

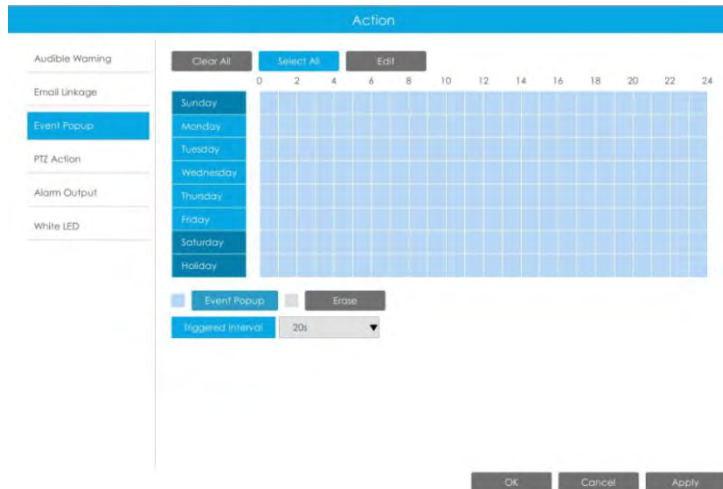


**Event Popup:** Trigger alarm screen popup to full screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.

- 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.



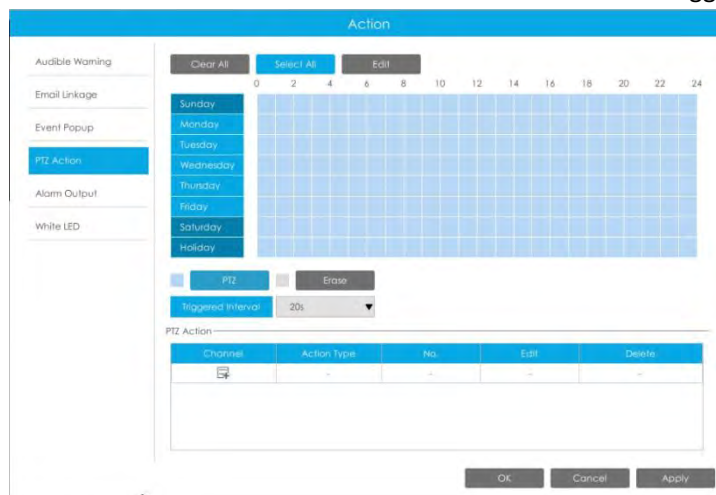
**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.

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 to set or clear all time settings.

② Click **Edit** to edit record effective time manually.

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



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.

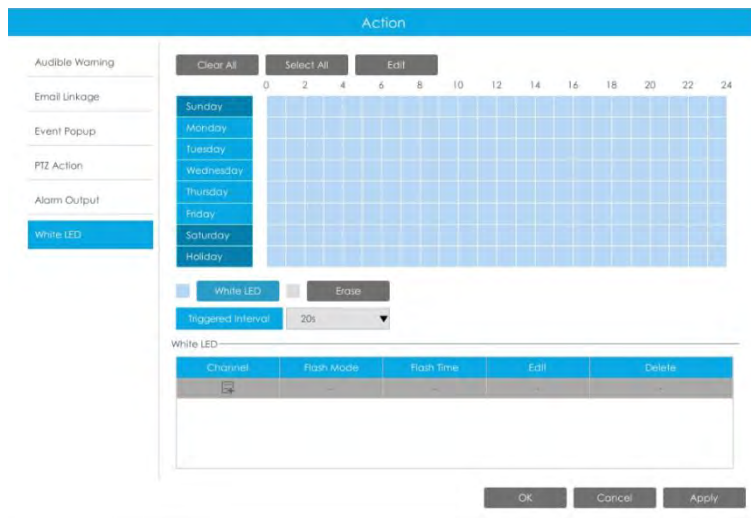
**White LED:** Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

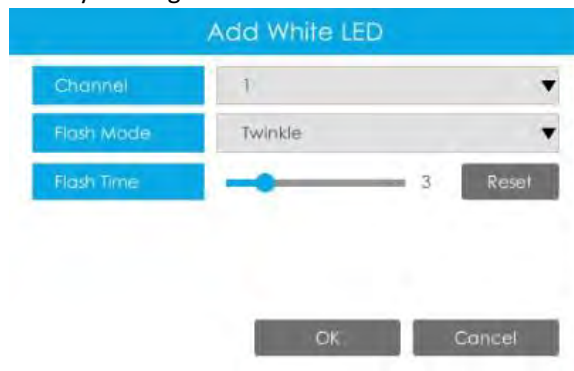
① Select the operation type, White LED and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.

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 .



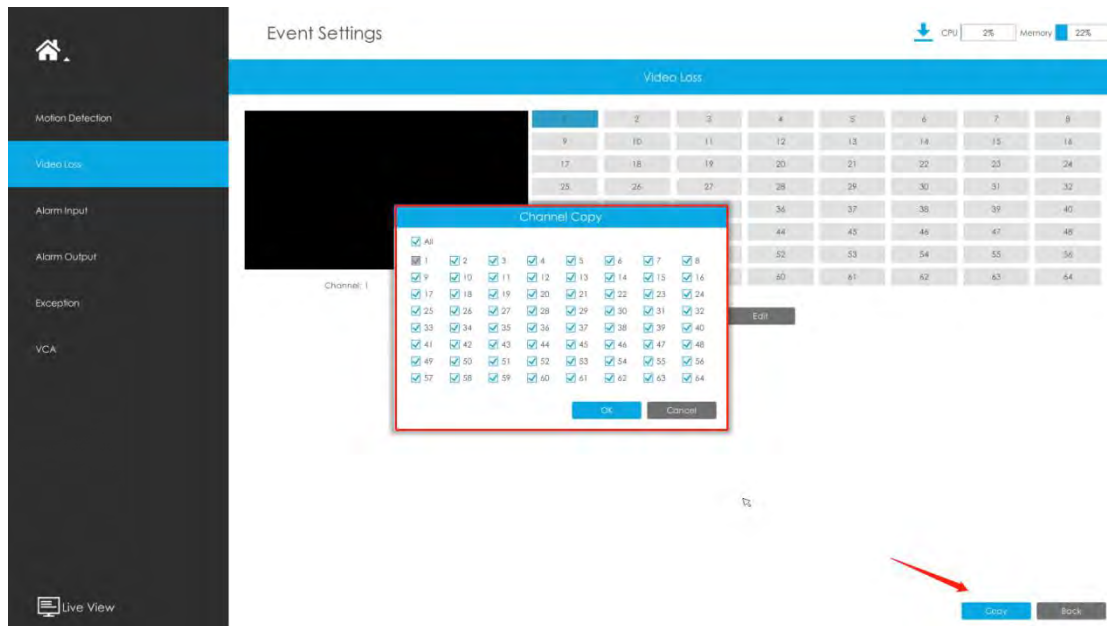
**Channel:** Select the channel which supports this function.

**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.

**Step 3.** Click  and  to copy the same configuration to other channels.





### 3.8.3 Alarm Input

#### 3.8.3.1 NVR Alarm Input

NVR Alarm Input function is supported by MS-N5008-UC, MS-N5008-UT, MS-N5016-UT, MS-N7016-UH, MS-N7032-UH, MS-N8032-UH, MS-N8064-UH, MS-N5008-UPC, MS-N5008-UPT, MS-N5016-UPT, MS-N7016-UPH and MS-N7032-UPH.


**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.

**Step 2. Set effective time for alarm input by clicking corresponding** 

**Step 3. Set action for alarm input by clicking corresponding** 

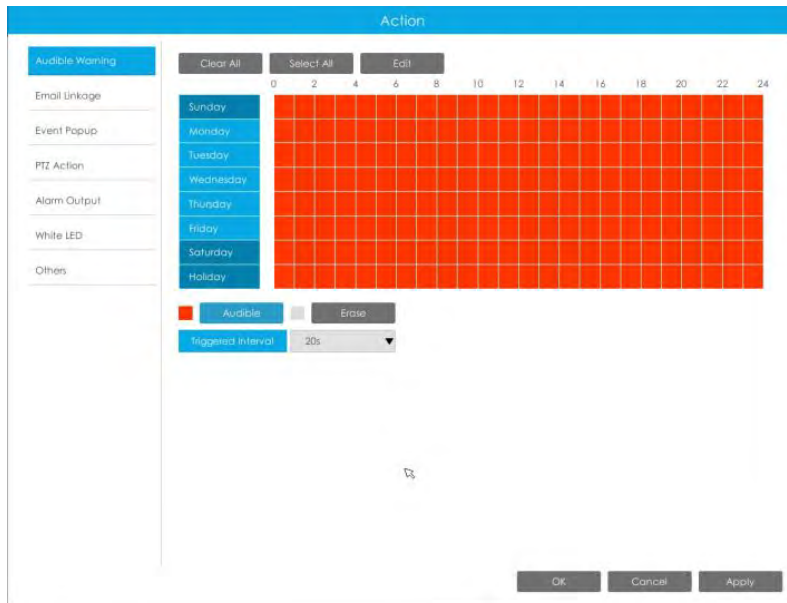
**Audible Warning:** NVR will trigger an audible beep when alarm is triggered.

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  or  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.



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

User can set effective schedule as following two ways:

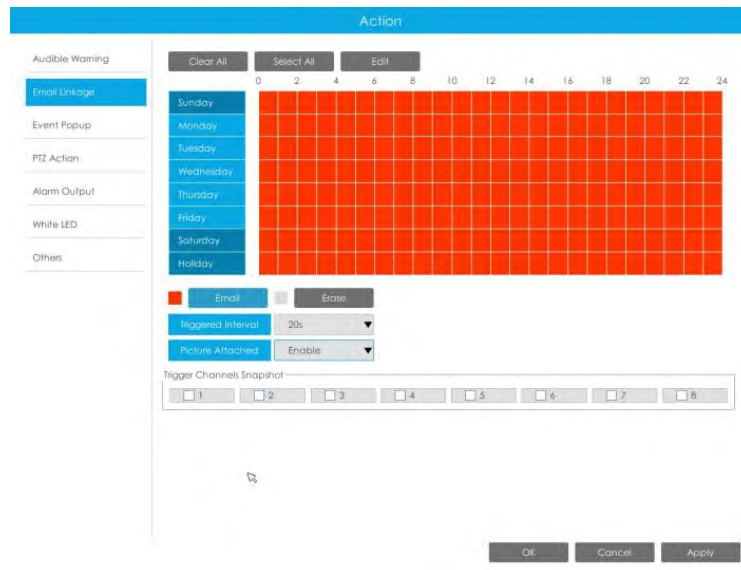
- ① Select the operation type: Email or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.

- ② Click **Edit** to edit effective time manually.

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

**Trigger Channels Snapshot:** The snapshot of selected channels will be sent when alarm is 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.

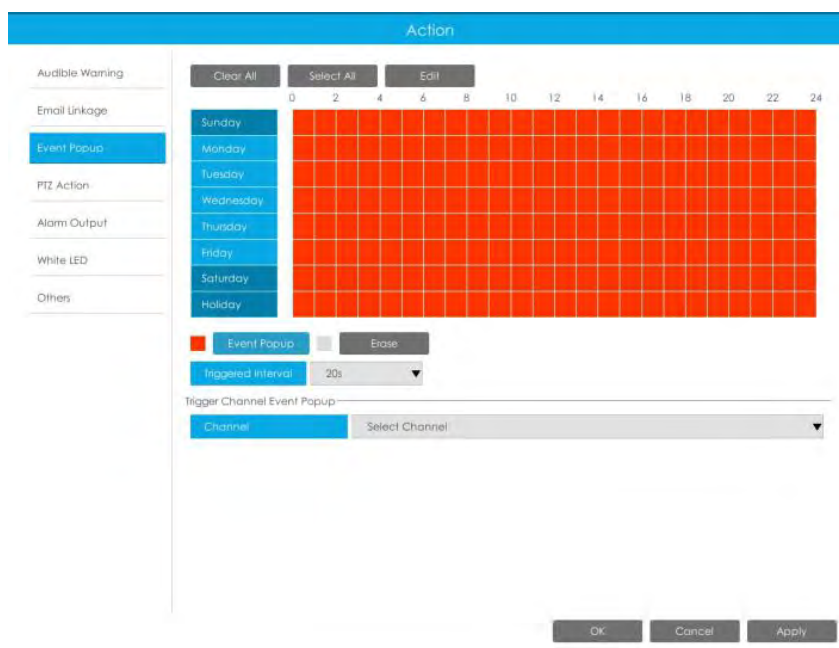


**Event Popup:** Trigger alarm screen popup to full screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.

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 to set

or clear all time settings.

② Click **Edit** to edit record effective time manually.

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

The screenshot shows the 'Action' configuration page. On the left is a sidebar with options: Audible Warning, Email Linkage, Event Popup, **PTZ Action**, Alarm Output, White LED, and Others. The main area has a header 'Action' and buttons for 'Clear All', 'Select All', and 'Edit'. Below is a calendar grid for days of the week (Sunday to Holiday) and hours (0 to 24). A red grid highlights the active time range. Below the calendar are controls for 'PTZ' (checked) and 'Erase', and a 'Triggered interval' dropdown set to '20s'. At the bottom is a table for 'PTZ Action' with columns: Channel, Action Type, No., Edit, and Delete. The table is currently empty. At the very bottom are 'OK', 'Cancel', and 'Apply' buttons.

And you can add PTZ Action by clicking  .

The screenshot shows the 'Add PTZ Action' dialog box. It has a blue header with the text 'Add PTZ Action'. Below the header are three dropdown menus: 'Channel' (set to 1), 'Action Type' (set to Preset), and 'No.' (set to 1). At the bottom of the dialog are two buttons: 'OK' and 'Cancel'.

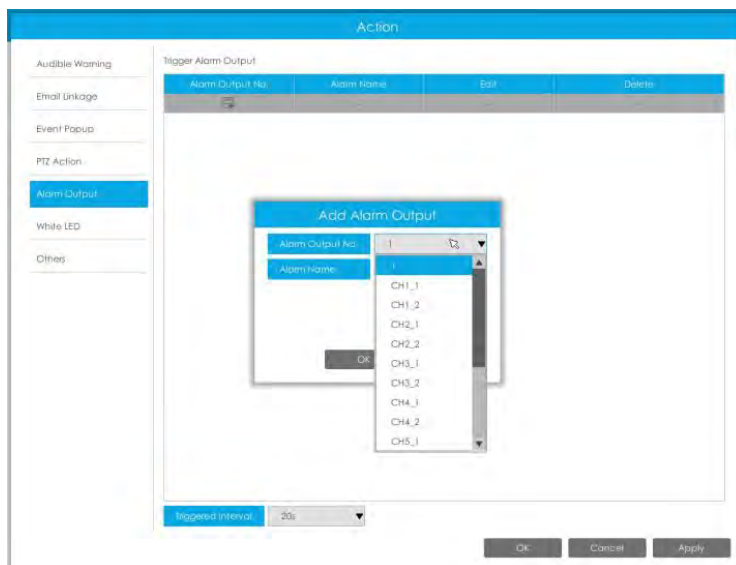
**Channel:** Select the channel which supports this function.

**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.



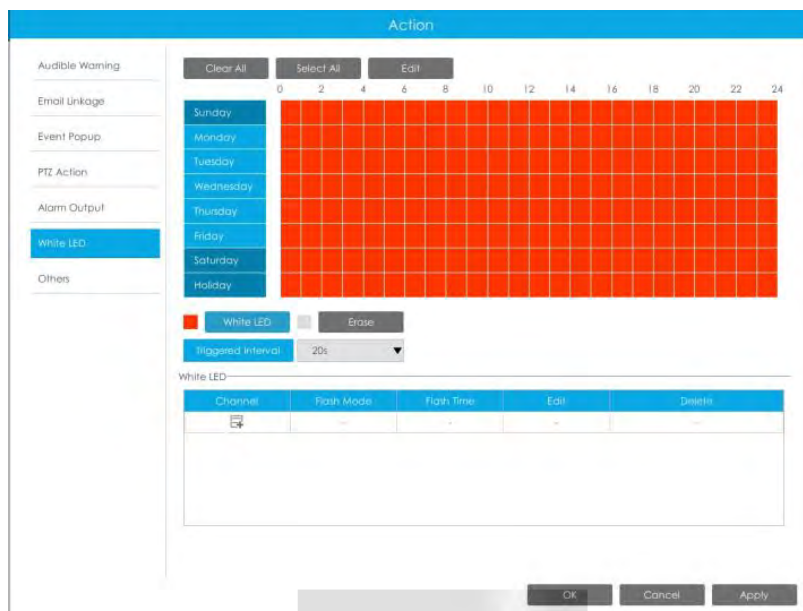
**White LED:** Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:


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 .



**Add White LED**

Channel: 1

Flash Mode: Twinkle

Flash Time: 3 [Reset]

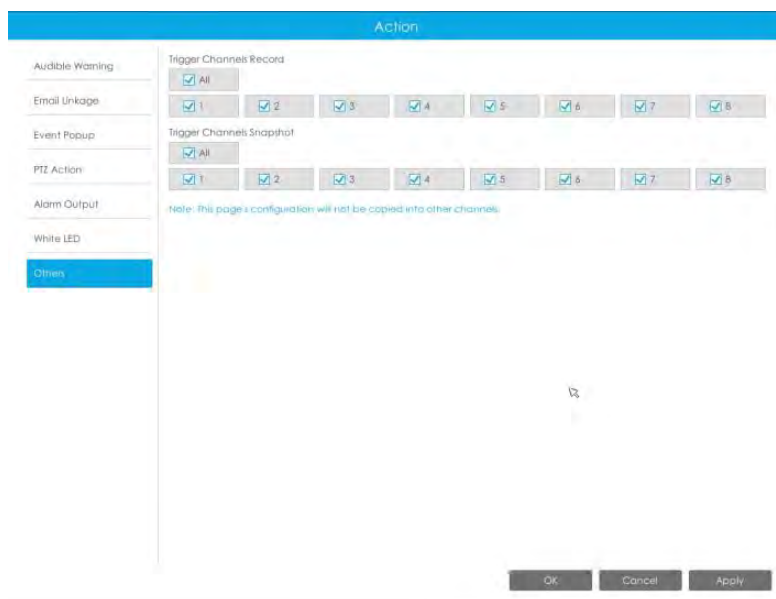
[OK] [Cancel]

**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 and snapshot when alarm is triggered.



**Action**

Audible Warning

Email Linkage

Event Popup

PTZ Action

Alarm Output

White LED

Others

Trigger Channels Record

All

1  2  3  4  5  6  7  8

Trigger Channels Snapshot

All

1  2  3  4  5  6  7  8

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

[OK] [Cancel] [Apply]

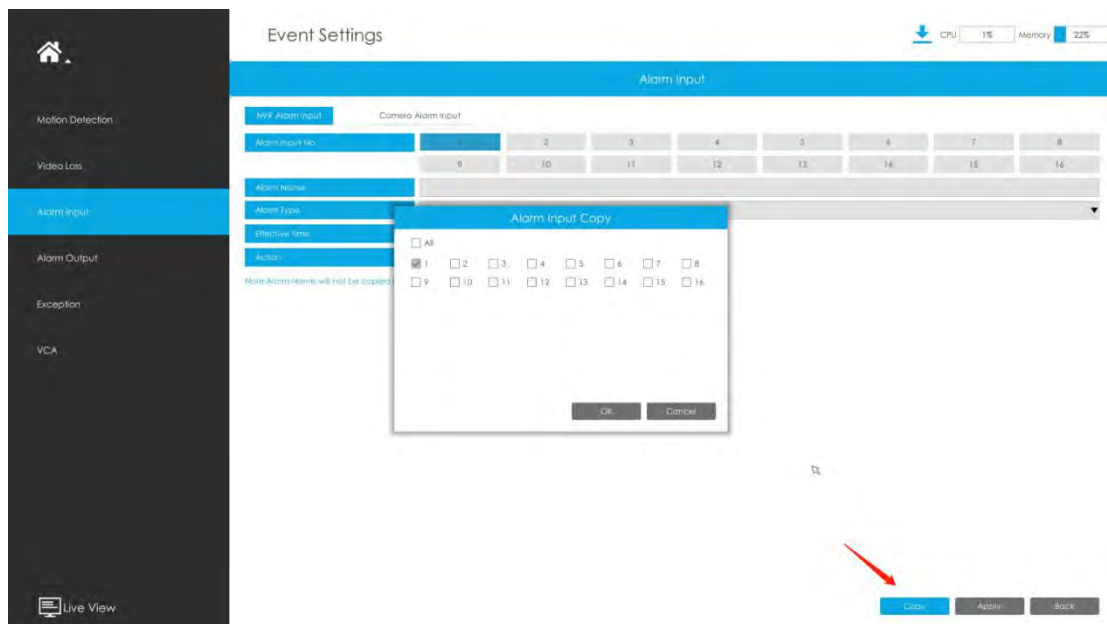
**Note:**

Make sure you have set correct schedule for record and snapshot before setting the Event Action.

**Step 4: Copy alarm input settings to other input interface by clicking**

Copy

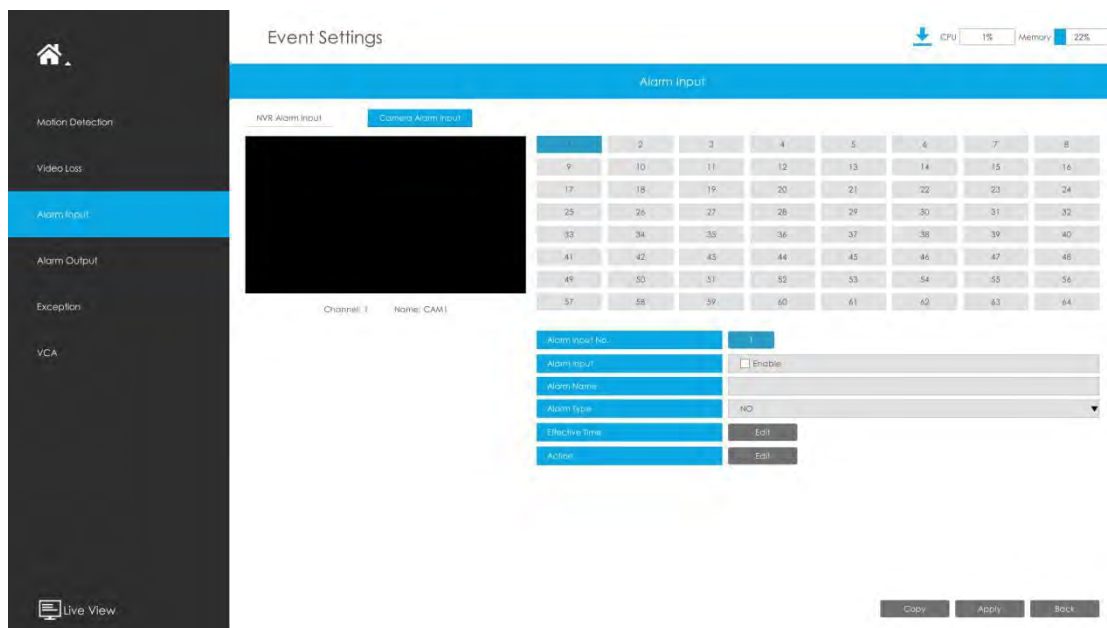




### 3.8.3.2 Camera Alarm Input

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**




**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**  .

**Step 3. Set action for alarm input by clicking corresponding**  .

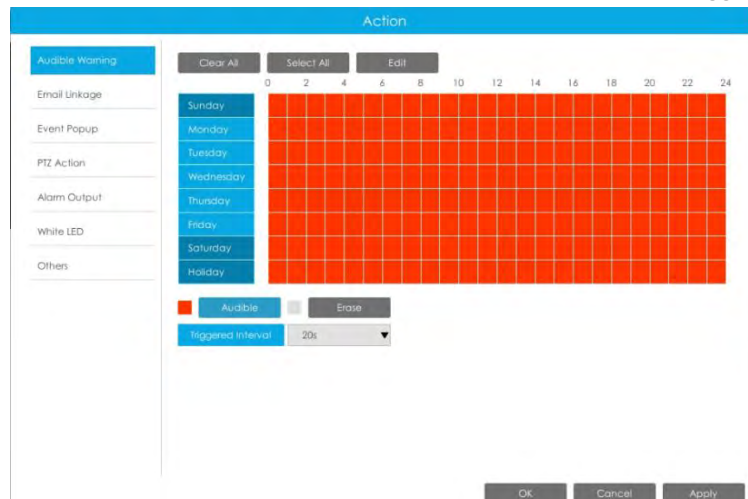
**Audible Warning:** NVR will trigger an audible beep when camera alarm is triggered.

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 effective time manually.

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



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

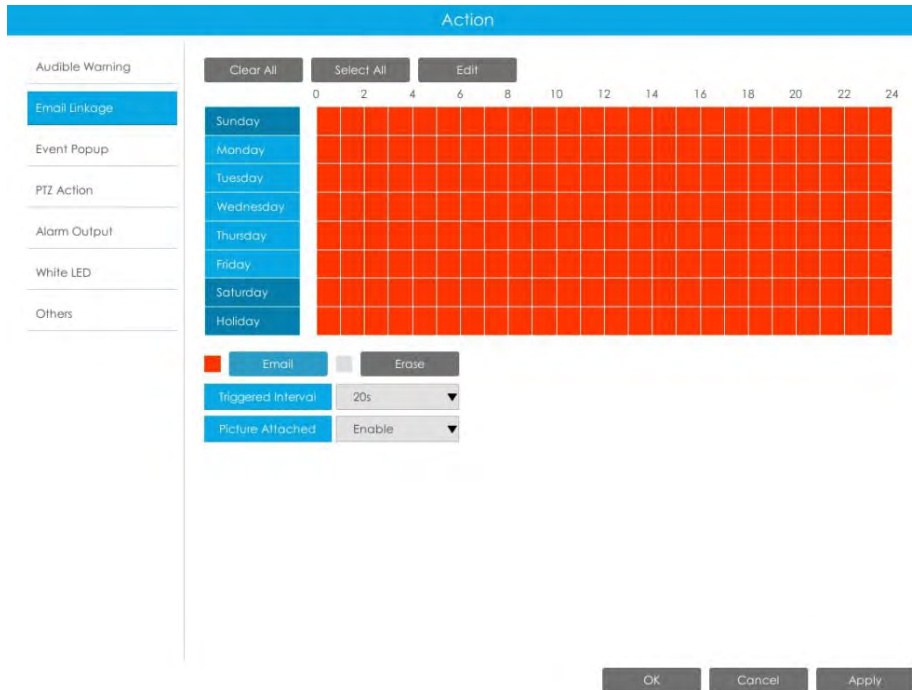
User can set effective schedule as following two ways:

① Select the operation type: Email 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.

**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.

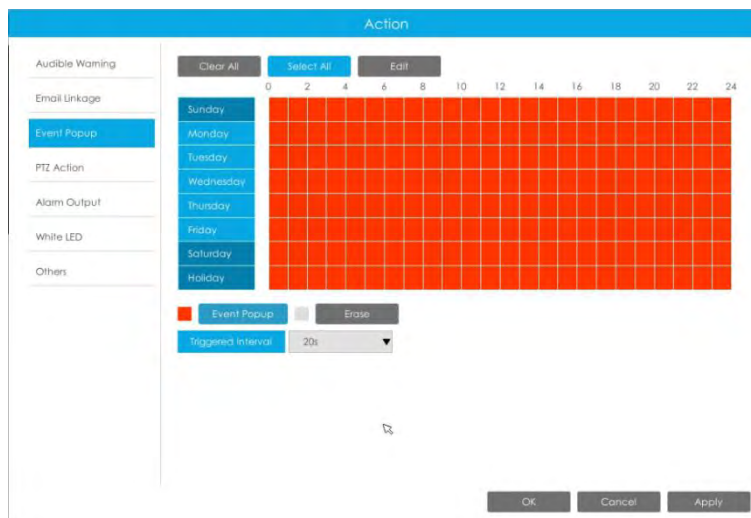


**Event Popup:** Trigger alarm screen popup to full-screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.

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 to set

or clear all time settings.

② Click **Edit** to edit record effective time manually.

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

The screenshot shows the 'Action' configuration page. On the left, a sidebar lists various actions: Audible Warning, Email Linkage, Event Popup, **PTZ Action**, Alarm Output, White LED, and Others. The main area is titled 'Action' and contains a calendar grid for PTZ actions. The calendar has columns for days (Sunday to Holiday) and hours (0 to 24). A red grid indicates the active time range. Below the calendar, there are controls for 'PTZ' (checked) and 'Erase', and a 'Triggered Interval' dropdown set to '20s'. At the bottom, there is a table for 'PTZ Action' with columns: Channel, Action Type, No., Edit, and Delete. The table currently has one row with a plus icon in the Channel column. At the bottom right, there are 'OK', 'Cancel', and 'Apply' buttons.

And you can add PTZ Action by clicking  .

The screenshot shows the 'Add PTZ Action' dialog box. It has a blue header with the title 'Add PTZ Action'. Below the header are three dropdown menus: 'Channel' (set to 1), 'Action Type' (set to Preset), and 'No.' (set to 1). At the bottom, there are 'OK' and 'Cancel' buttons.

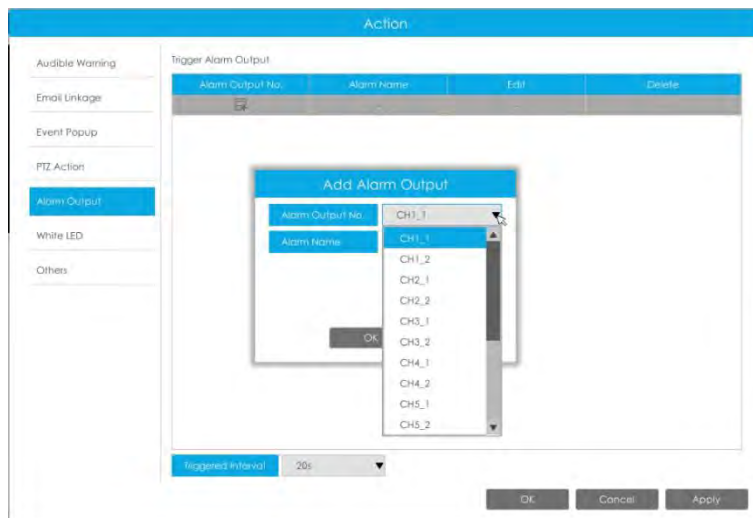
**Channel:** Select the channel which supports this function.

**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.



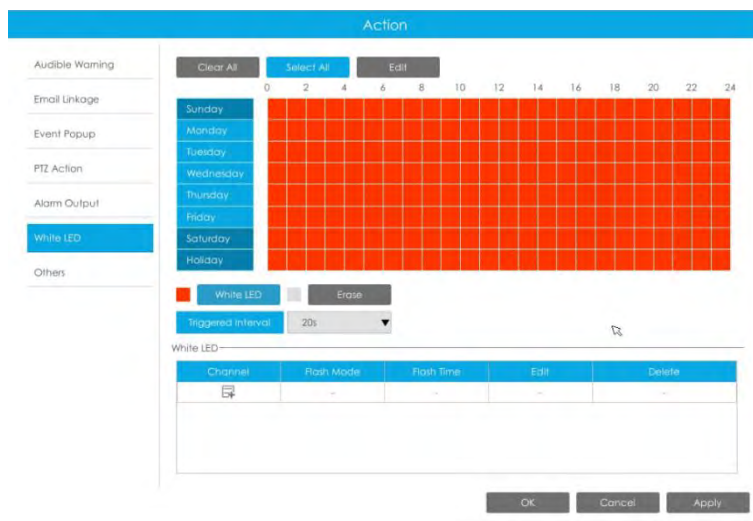
**White LED:** Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

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.

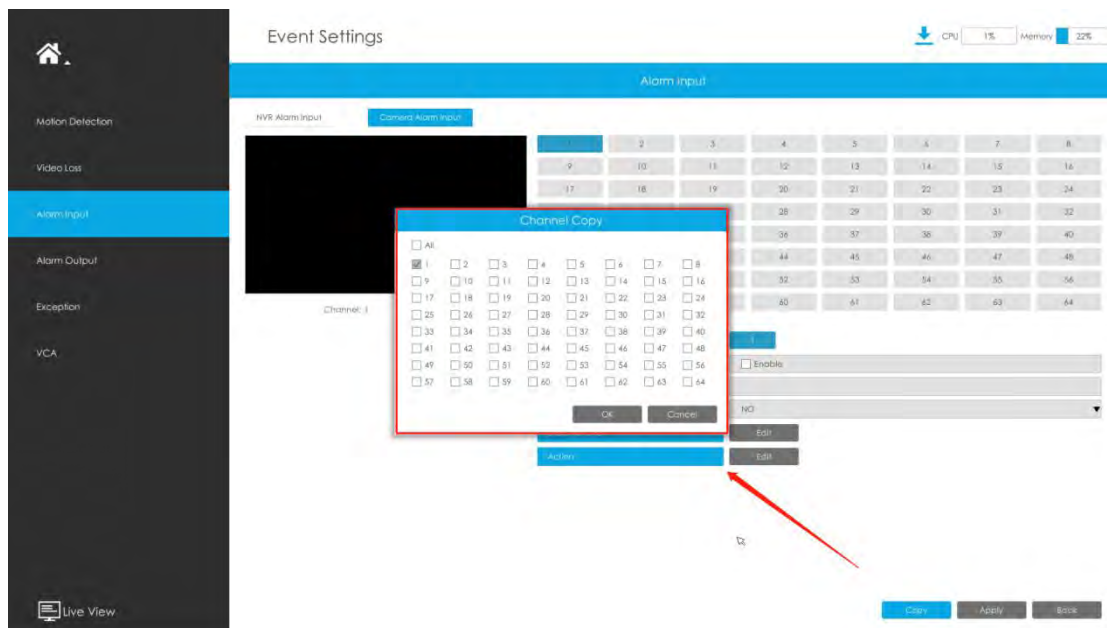
**Others:** Trigger selected channels to record and snapshot when alarm is triggered.

**Note:**

Make sure you have set correct schedule for record and snapshot before setting the Event Action.

**Step 3: Copy alarm input settings to other input interface by clicking** 

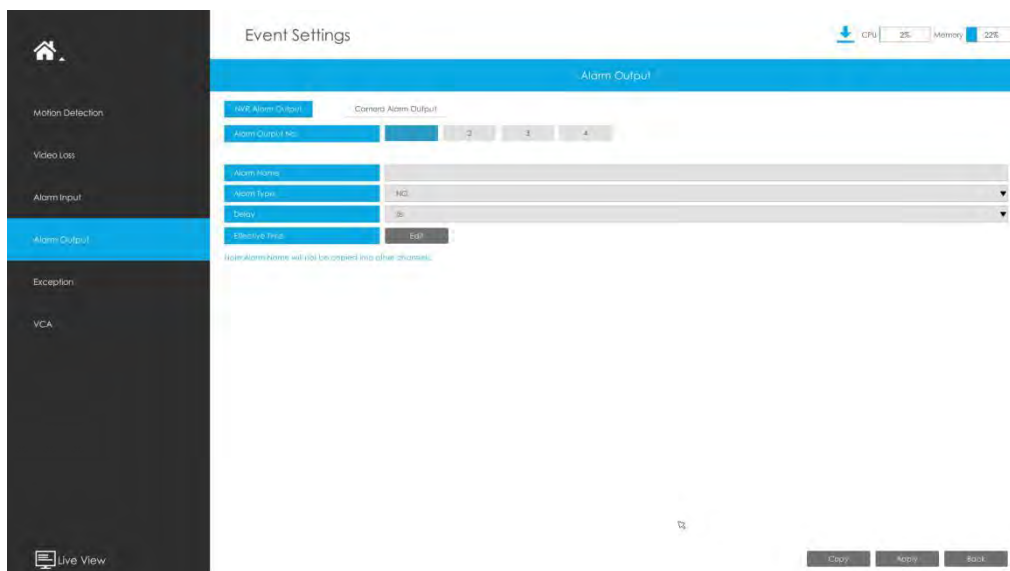




### 3.8.4 Alarm Output

#### 3.8.4.1 NVR Alarm Output

Alarm Output function is supported by MS-N5008-UC, MS-N5008-UT, MS-N5016-UT, MS-N7016-UH, MS-N7032-UH, MS-N8032-UH, MS-N8064-UH, MS-N5008-UPC, MS-N5008-UPT, MS-N5016-UPT, MS-N7016-UPH and MS-N7032-UPH.



**Step 1. Set Alarm output channel, Alarm Name, Alarm Type and Record Channels.**

**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** .

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  or  to set or clear all time settings.

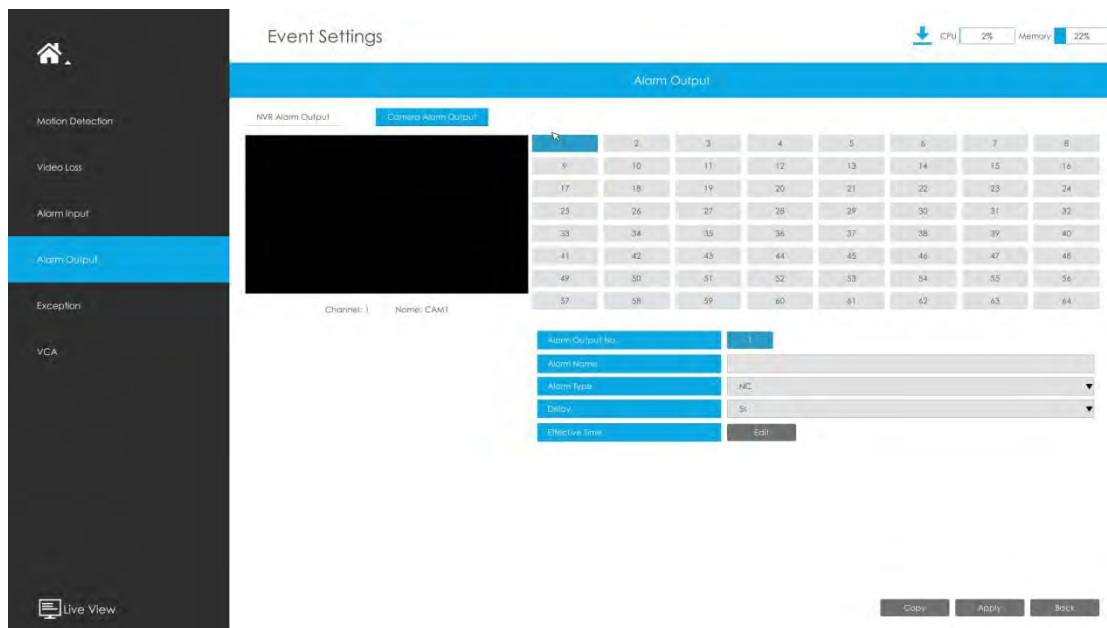
② Click  to edit record effective time manually.

**Step 3: Copy alarm output settings to other output interface by clicking** .

### 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.**



**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 .**

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  or  to set or clear all time settings.

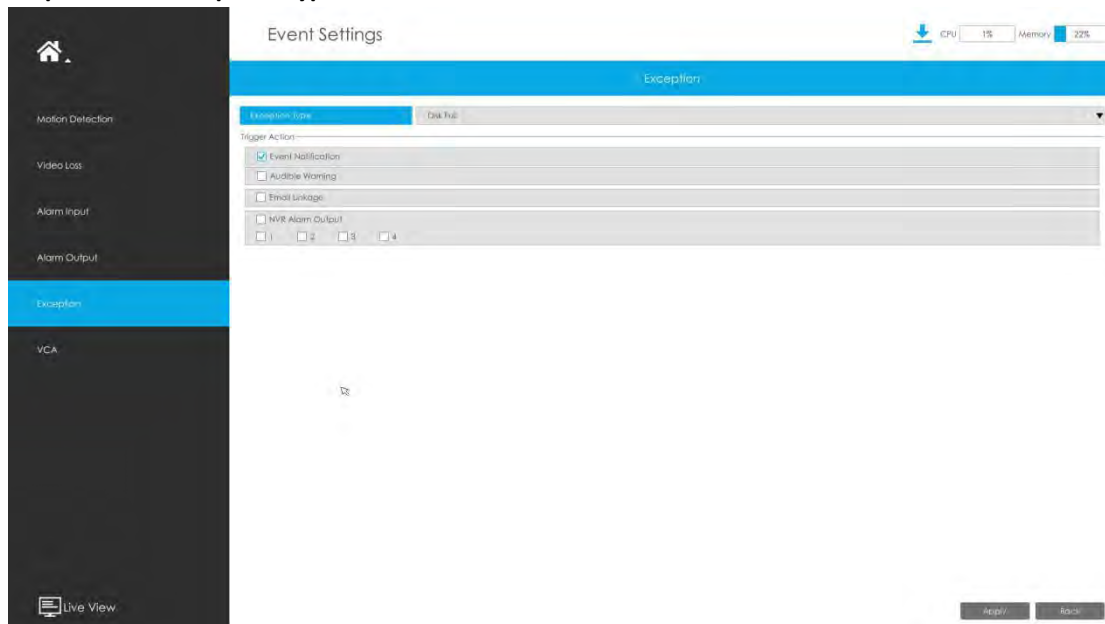
② Click  to edit record effective time manually.



**Step 3: Copy alarm output settings to other output interface by clicking .**

## 3.8.5 Exception

### Step1. Select Exception Type.



**Network Disconnected:** Loss of network.

**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 beep.

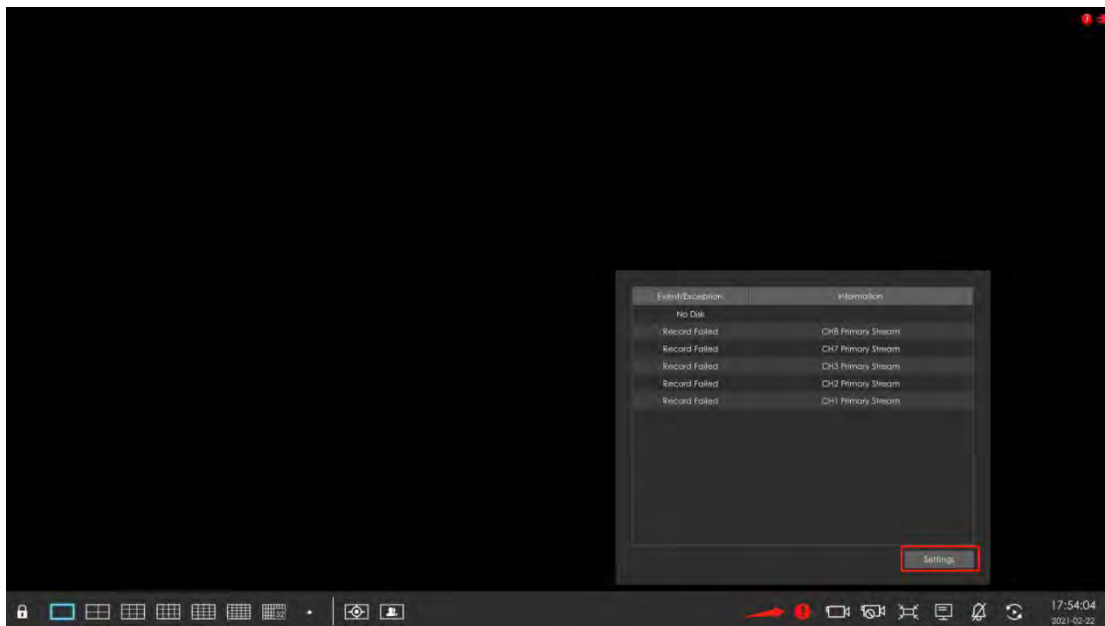
**Email Linkage:** An alarm Email will be sent if an alarm is triggered.

**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.



The prompt icon will automatically blink in the bottom bar when corresponding event is triggered. And it can be unlocked manually.

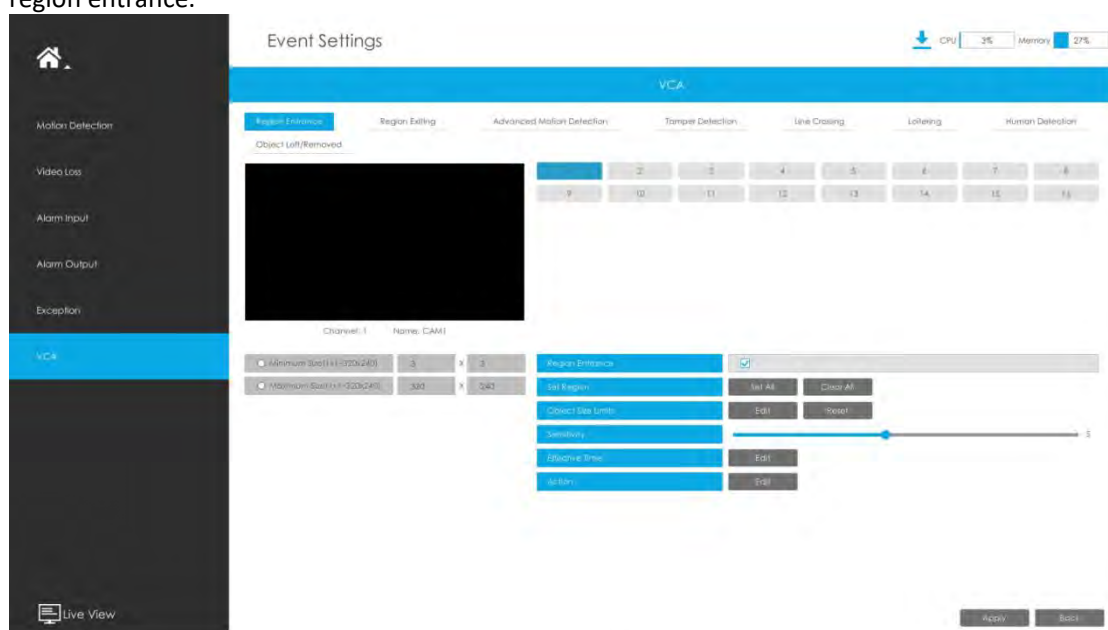


### 3.8.6 VCA

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 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.

#### 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.



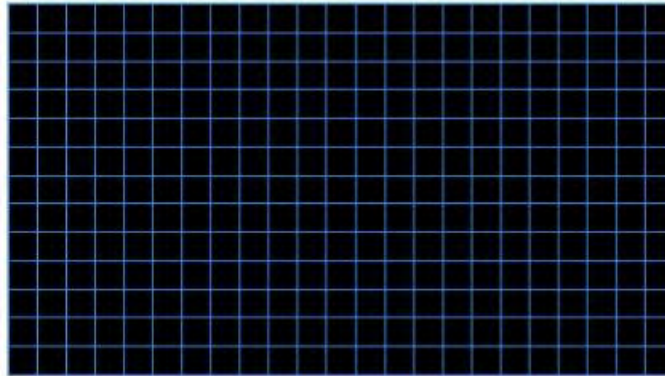
**Step 1. Select channel and enable Region Entrance.**

Region Entrance

**Step 2. Set entrance detection region.**

You can select an area by dragging the mouse to set the trigger area, and this area will be synchronized to camera. Also, you can set or clear all set region by directly clicking

Set All

or 

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 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 4. 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 5. Set Effective Time of region entrance by clicking** .

NVR receives the alarm when effective time has been set. It will be more convenient by clicking



 or  to set or clear all time settings.




**Step 6. Set Action for region entrance alarm by clicking** .

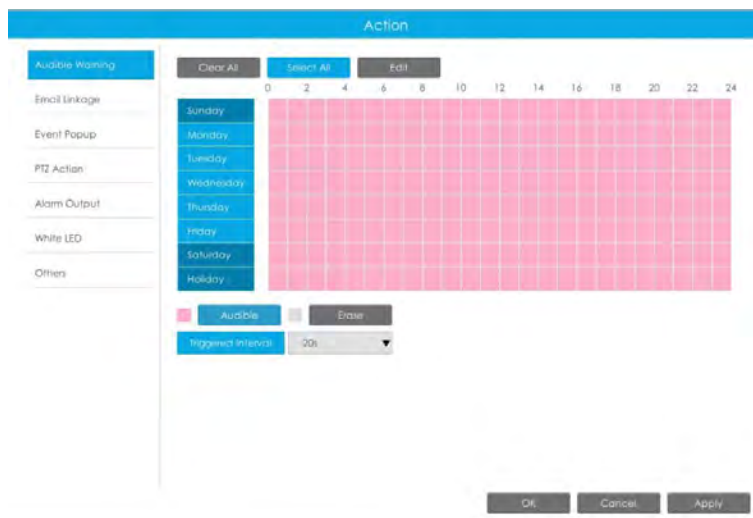
**Audible Warning:** NVR will trigger an audible beep when region entrance is detected.

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  or  to set or clear all time settings.

② Click  to edit record effective time manually.

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



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

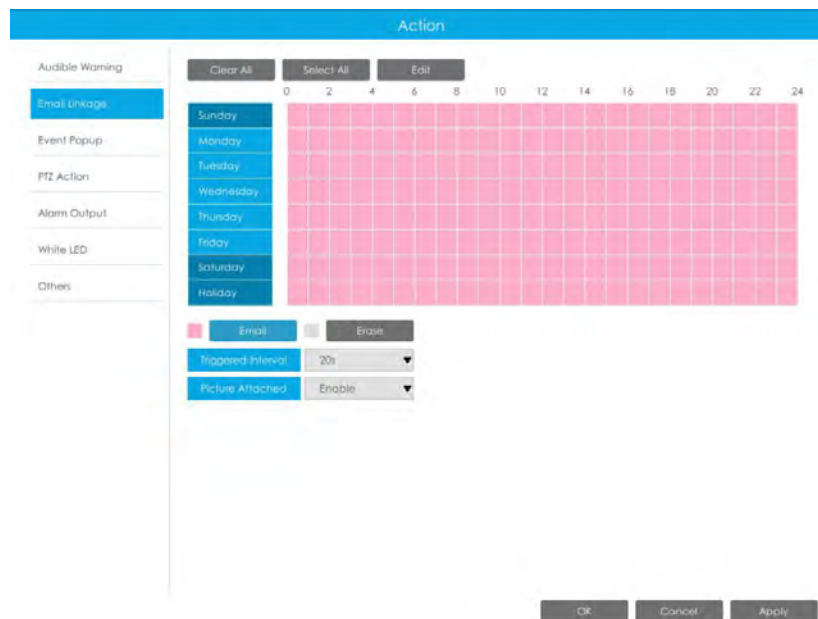
The user can set effective schedule as following two ways:

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.

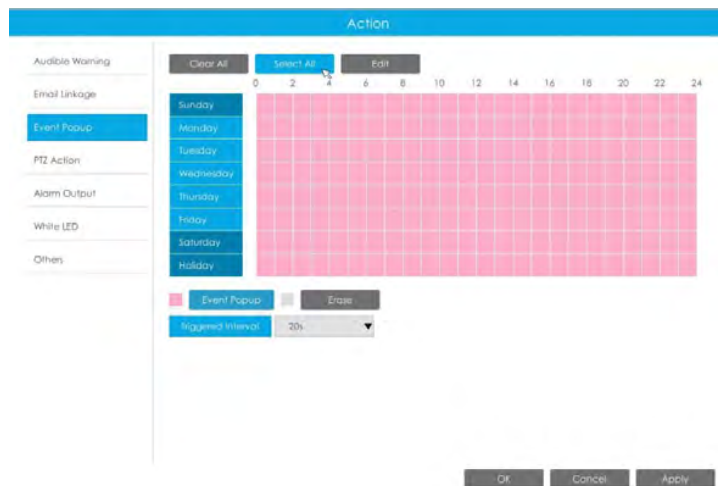


**Event Popup:** Trigger alarm screen popup to full screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.

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.



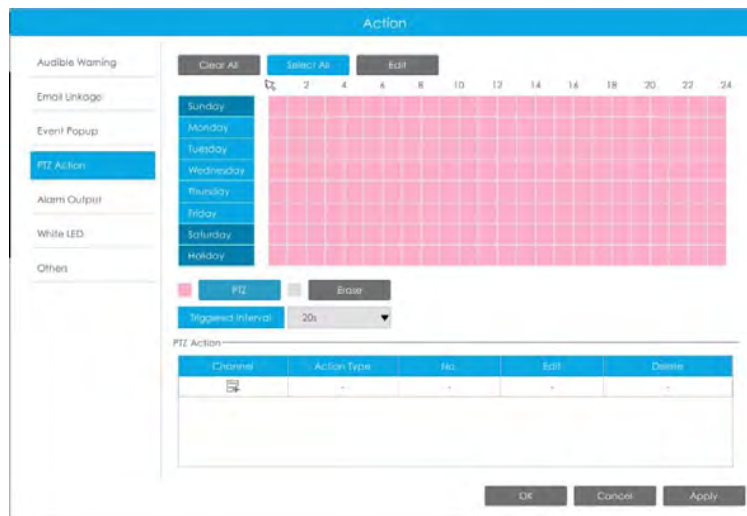
**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.


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 to set or clear all time settings.

② Click **Edit** to edit record effective time manually.

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



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.

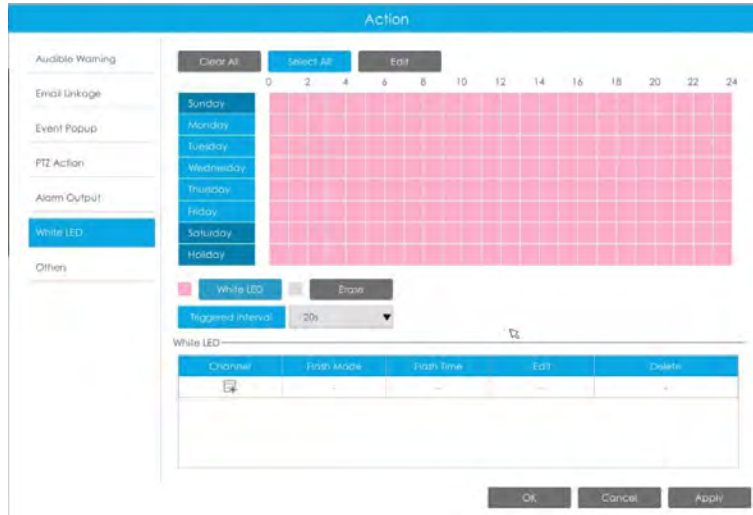
**Triggered Interval:** The effective interval between two actions when event triggered.

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

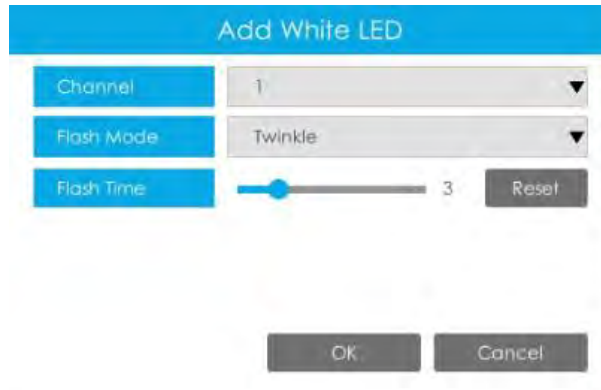
The user can set effective schedule as following two ways:

- 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 .

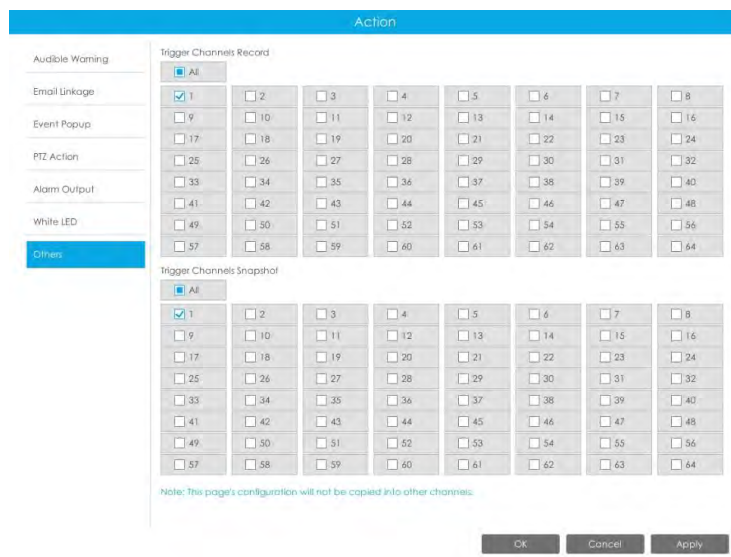


**Channel:** Select the channel which supports this function.

**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 and snapshot when alarm is triggered.



**Note:**

Make sure you have set correct schedule for record and snapshot before setting the Event Action.

**Step 7. Set Minimum Size and Maximum Size.**

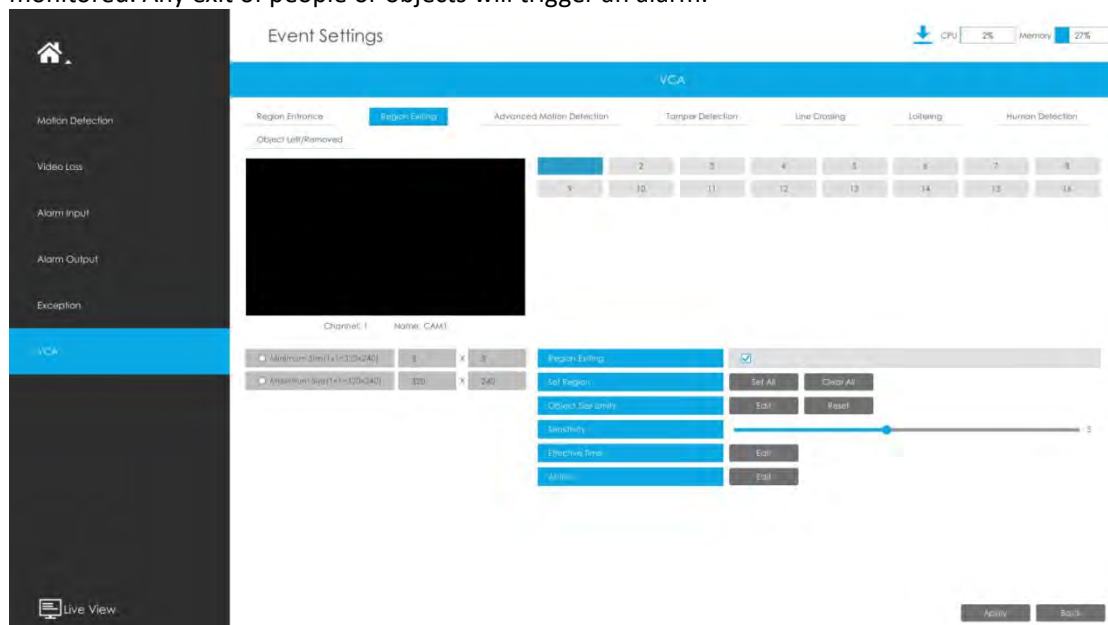
<input type="radio"/> Minimum Size(1x1~320x240)	3	X	3
<input type="radio"/> Maximum Size(1x1~320x240)	320	X	240

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

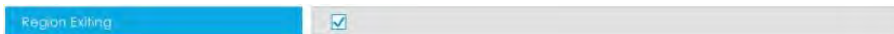
**Maximum Size:** The Max. Size means the opposite, only if the object size is smaller than the frame you drew on the screen, the settings for Region Entrance will take effect.

**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.



**Step 1. Select channel and enable Region Exiting.**

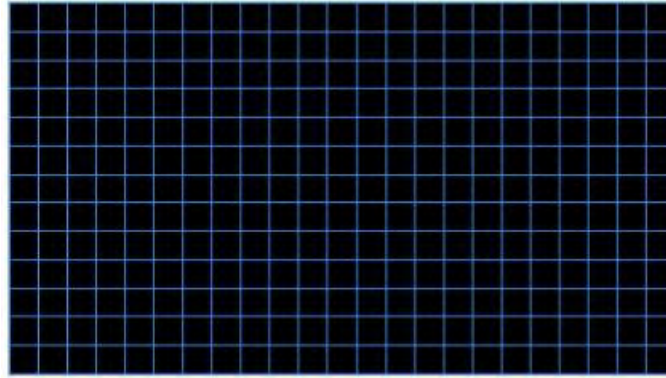


**Step 2. Set exit detection region.**

You can select an area by dragging the mouse to set the trigger area, and this area will be synchronized to camera. Also, you can set or clear all set region by directly clicking **Set All**

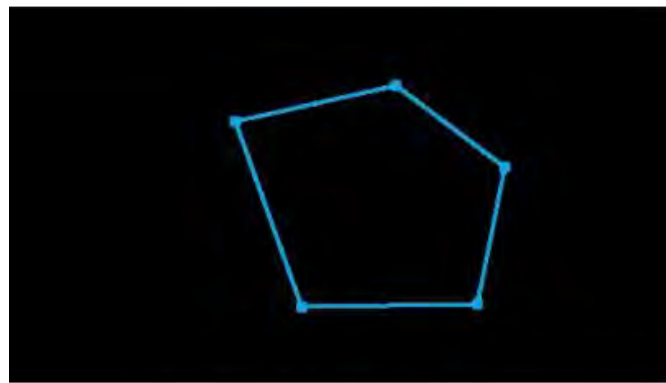
or **Clear All**.





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

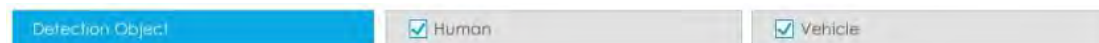
### Step 3. Set Sensitivity.

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.



### Step 4. 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.



### 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-CXXX-XXC, which supports the human/vehicle detection object.

### Step 5. Set Effective Time of region exiting by clicking Edit.

NVR receives the alarm when effective time has been set. It will be more convenient by clicking





to set or clear all time settings.



**Step 6. Set Action for region exiting alarm by clicking .**

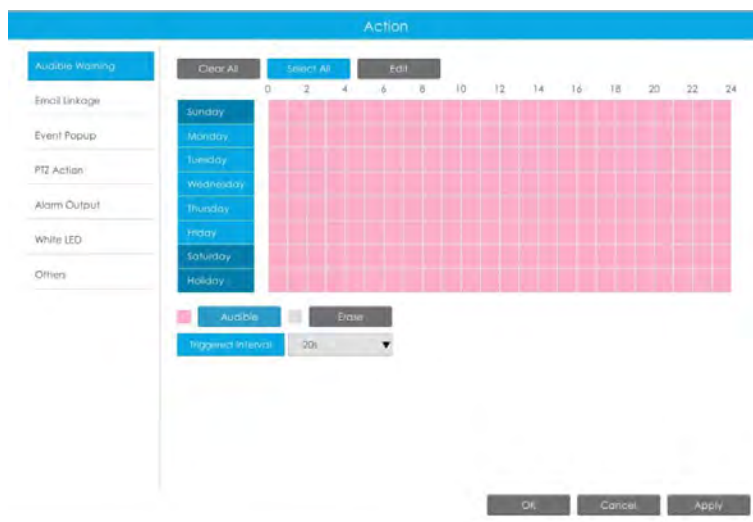
**Audible Warning:** NVR will trigger an audible beep when region entrance is detected.

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  or  to set or clear all time settings.



② Click  to edit record effective time manually.


**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  or  to set or clear all time settings.

② Click  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'->'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.

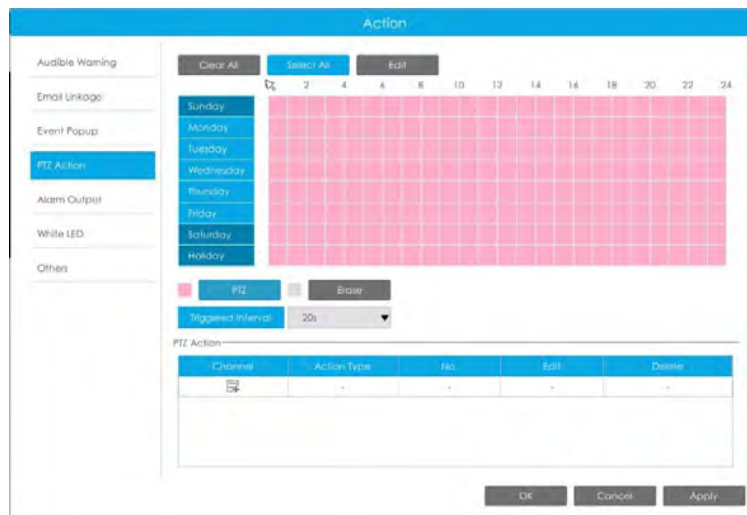
**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.


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 to set or clear all time settings.

② Click **Edit** to edit record effective time manually.

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



And you can add PTZ Action by clicking .



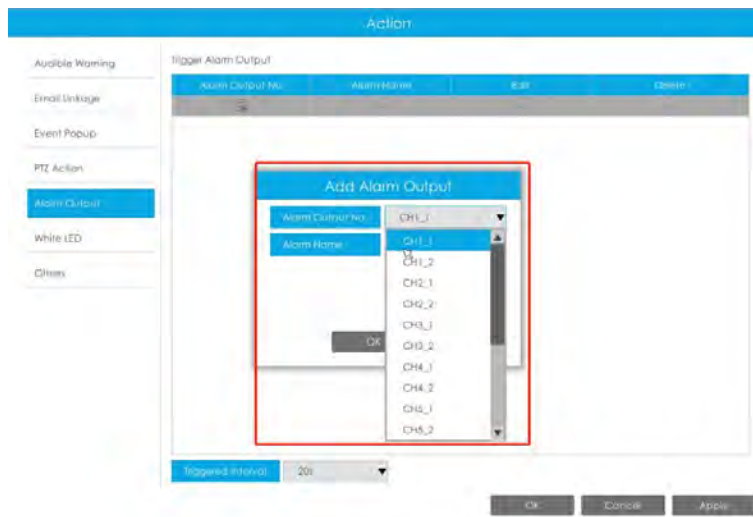
**Channel:** Select the channel which supports this function.

**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.



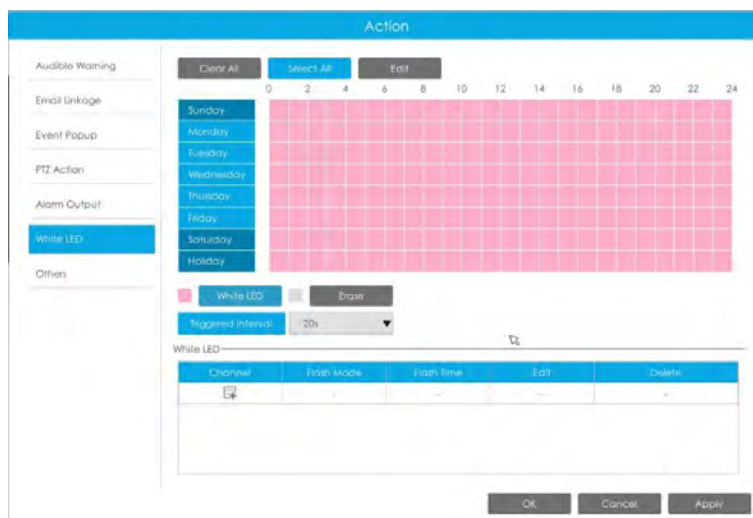
**White LED:** Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

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 .

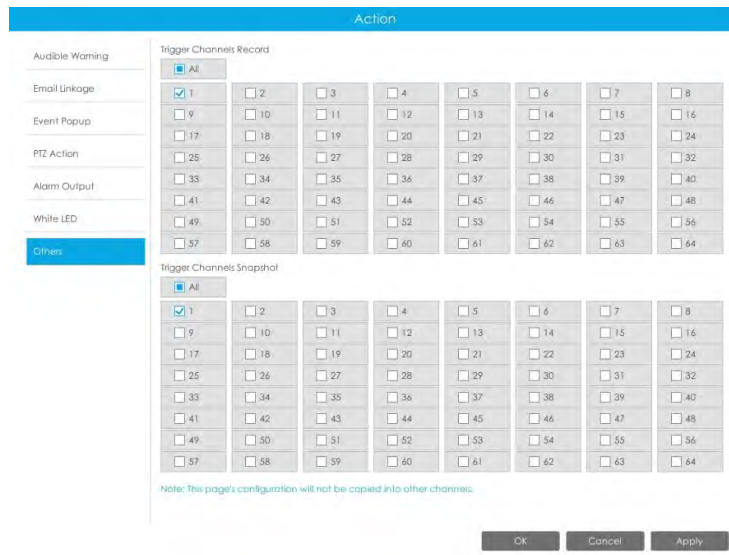


**Channel:** Select the channel which supports this function.

**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.

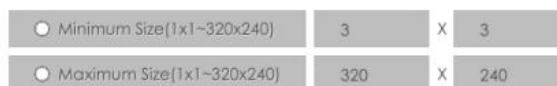
**Others:** Trigger selected channels to record and snapshot when alarm is triggered.



**Note:**

Make sure you have set correct schedule for record and snapshot before setting the Event Action.

**Step 7. Set Minimum Size and Maximum Size.**



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

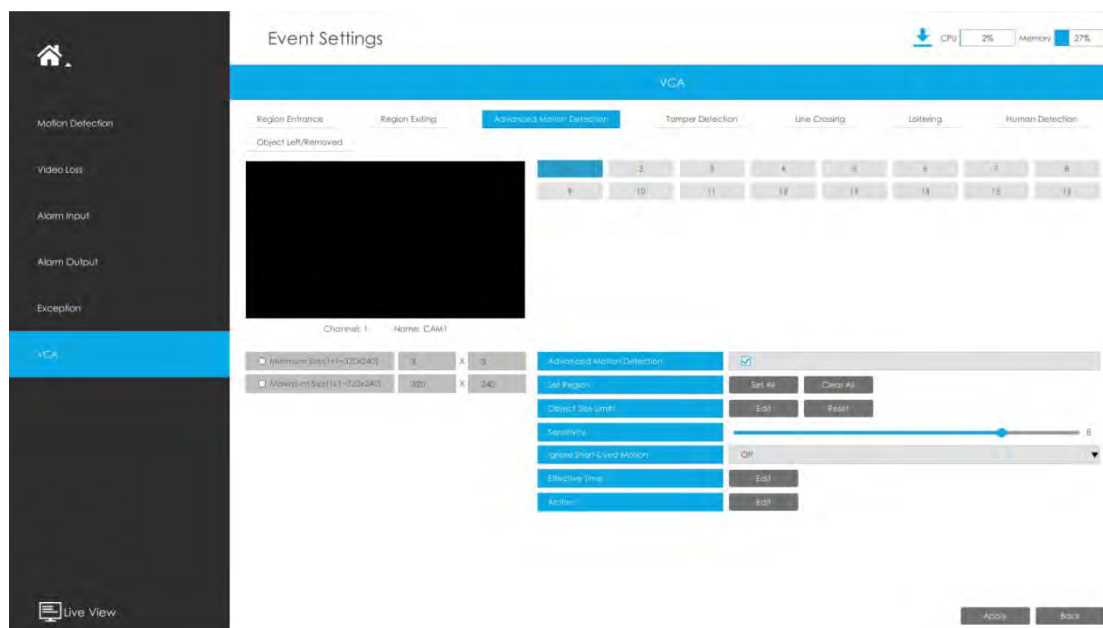
**Advanced Motion Detection**

Different from traditional motion detection, Milesight 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.

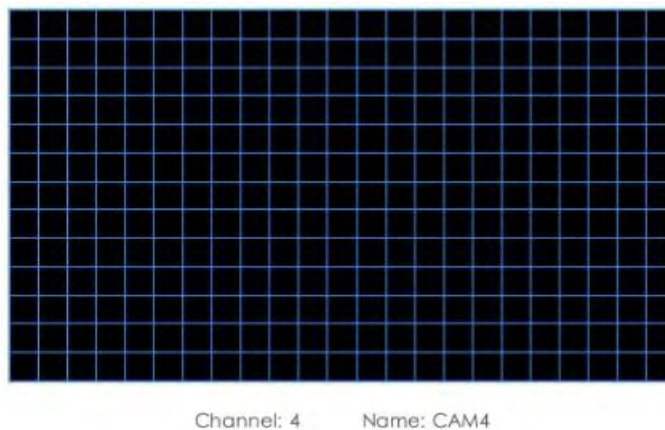
**Step 1. Select channel and enable Advanced Motion Detection.**



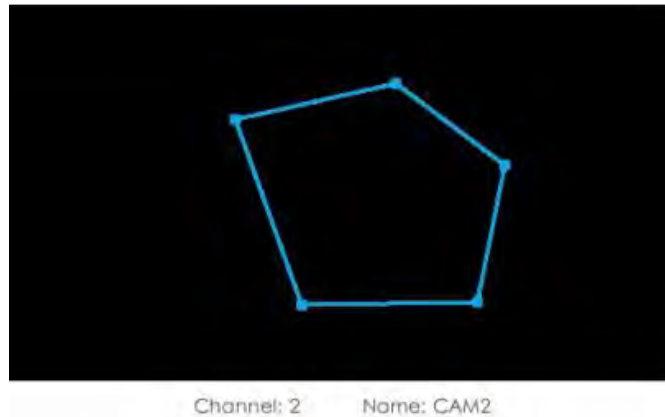
**Step 2. Set advanced motion detection region.**

You can select an area by dragging the mouse to set the trigger area, and this area will be synchronized to camera. Also, 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.



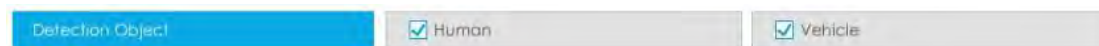
### Step 3. Set Sensitivity.

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.



### Step 4. 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.

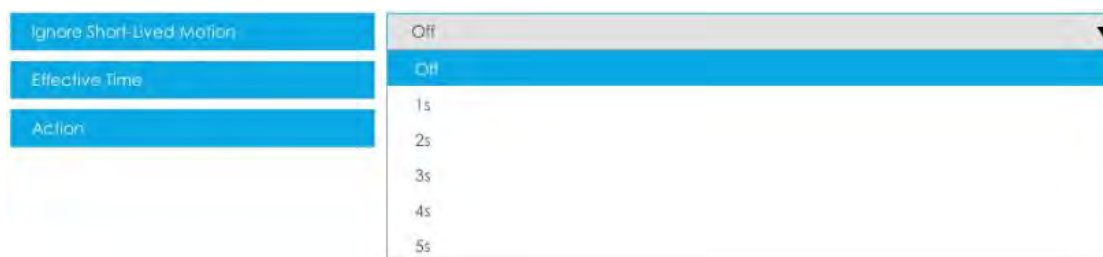


### Note:

- 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-CXXX-XXC, which supports the human/vehicle detection object.

### Step 5. 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.



### Note:

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

### Step 6. Set Effective Time of advance motion detection by clicking Edit.

NVR receives the alarm when effective time has been set. It will be more convenient by clicking





**Step 7. Set Action for advanced motion detection alarm by clicking** **Edit**.

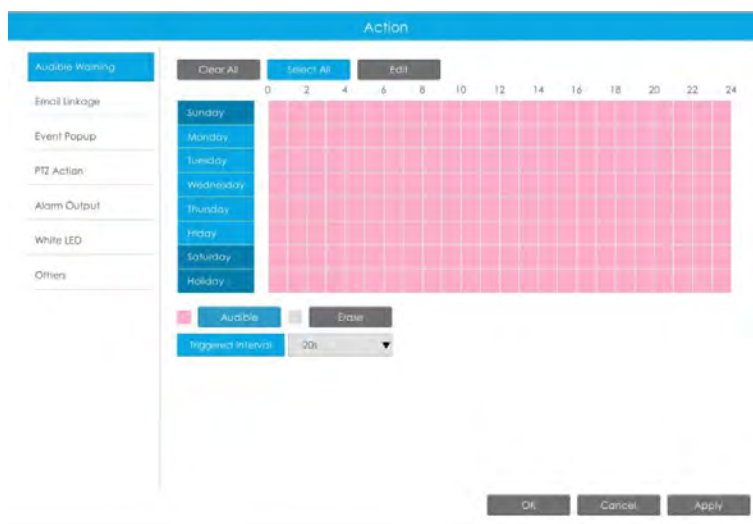
**Audible Warning:** NVR will trigger an audible beep when region entrance is detected.

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.

**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'->'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.

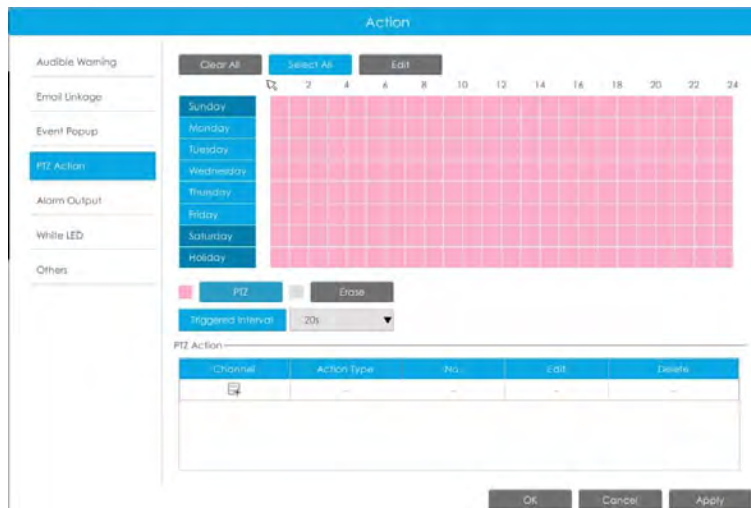
**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.

User can set effective schedule as following two ways:

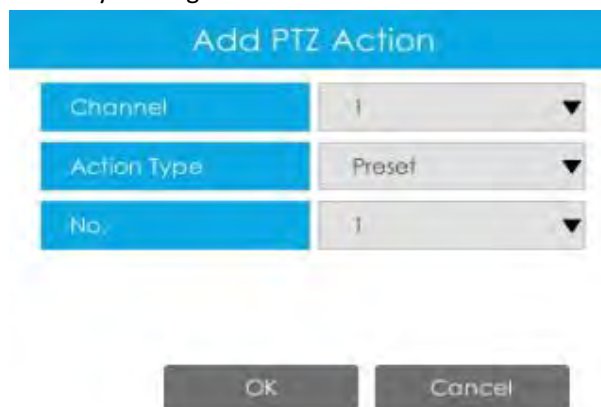
① Select the operation type: PTZ or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear to set or clear all time settings.

② Click **Edit** to edit record effective time manually.

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



And you can add PTZ Action by clicking .



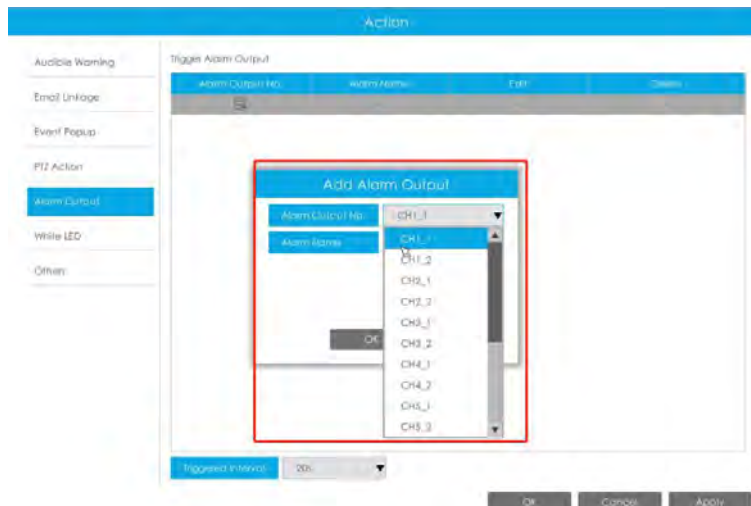
**Channel:** Select the channel which supports this function.

**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.



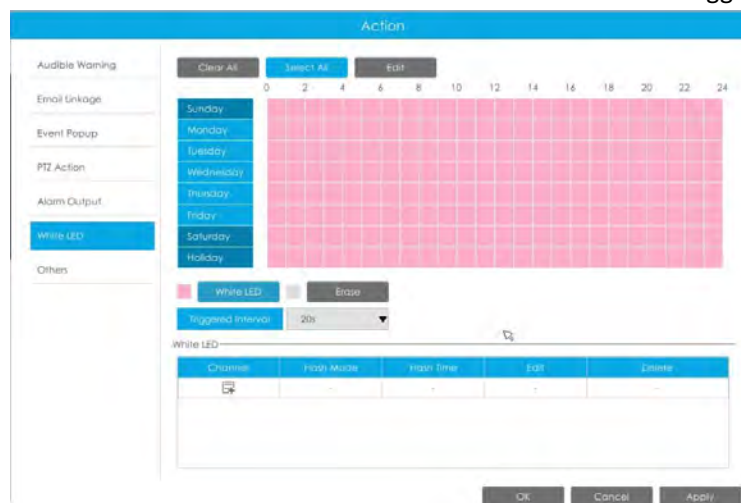
**White LED:** Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

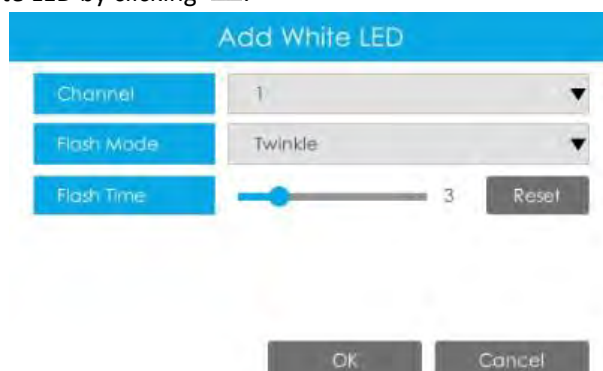
① Select the operation type, White LED and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.

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 and snapshot when alarm is triggered.

**Note:**

Make sure you have set correct schedule for record and snapshot before setting the Event Action.

**Step 8. Set Minimum Size and Maximum Size.**

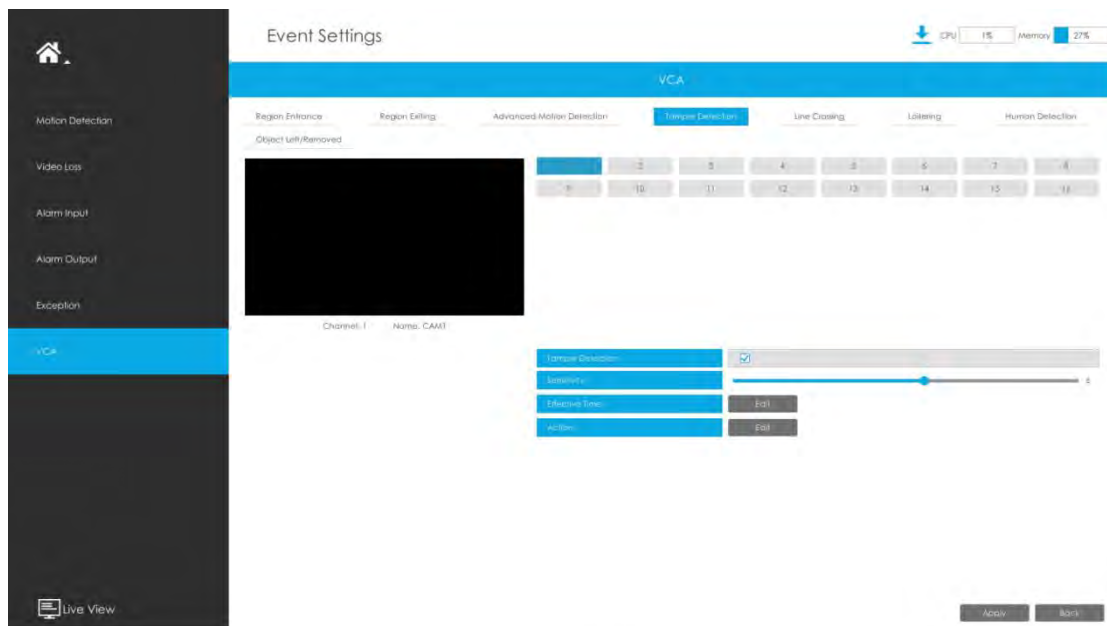
**Minimum Size:** The Min. Size means that only if the object size is bigger than the frame, the settings for Advanced Motion Detection will take effect.

**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 Advanced Motion Detection will take effect.

**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.

**Step 1. Select channel and enable Tamper Detection.**



**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.



**Step 3. Set Effective Time of tamper 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 tamper detection alarm by clicking Edit.**

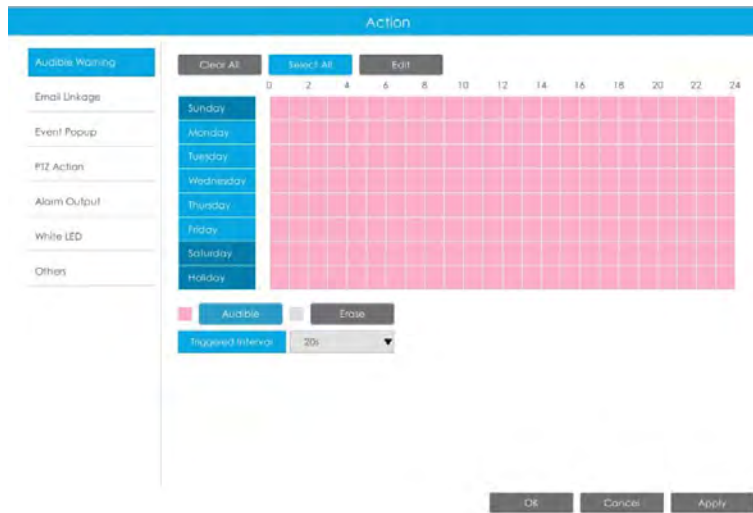
**Audible Warning:** NVR will trigger an audible beep when region entrance is detected.

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.

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



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

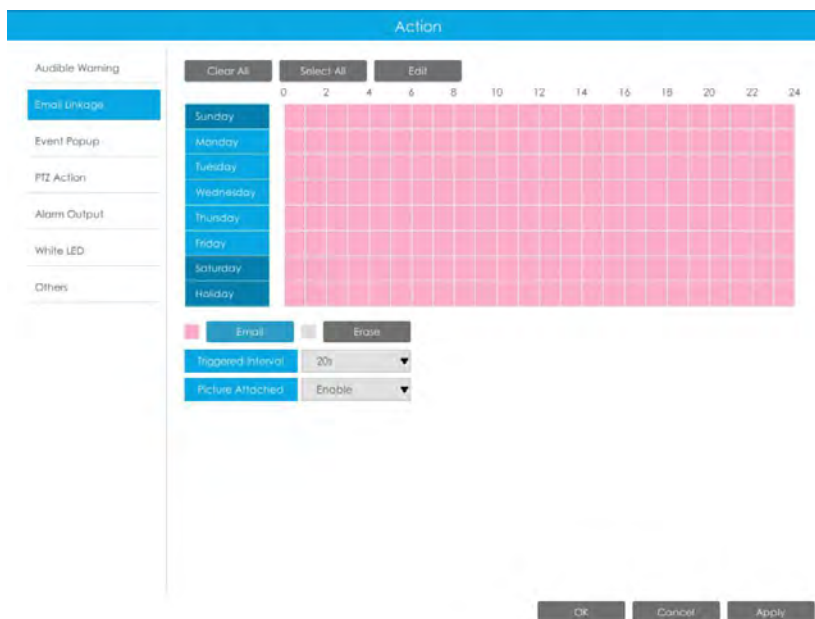
The user can set effective schedule as following two ways:

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.

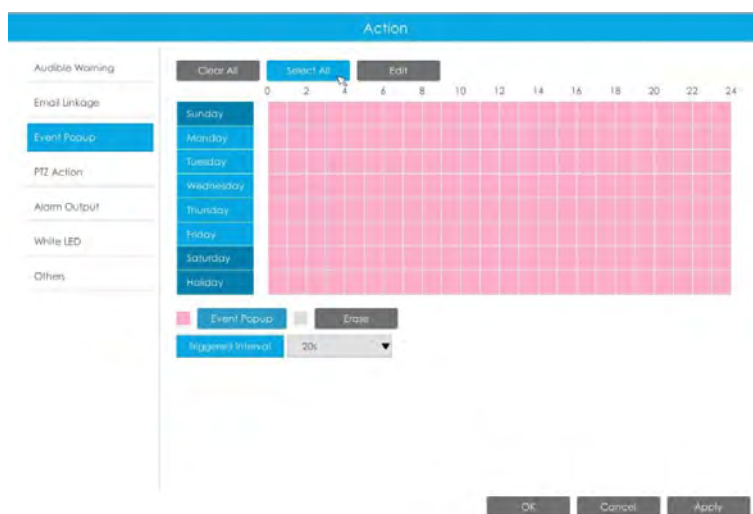


**Event Popup:** Trigger alarm screen popup to full screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.

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.

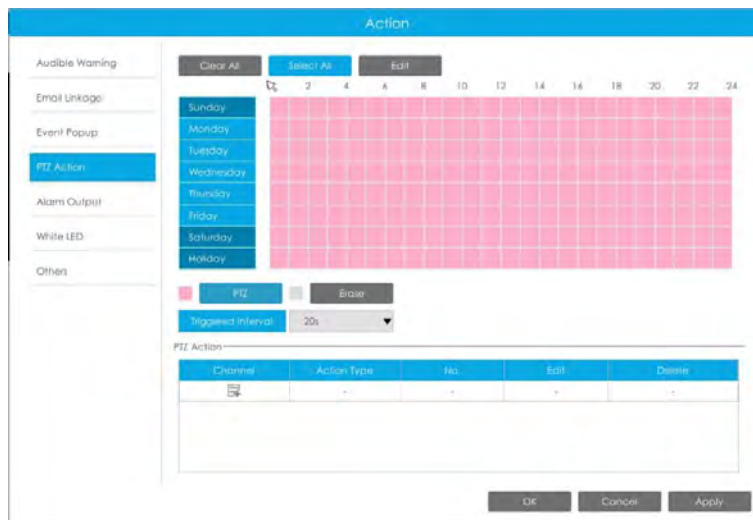



**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**. User can set effective schedule as following two ways:

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 to set or clear all time settings.

② Click **Edit** to edit record effective time manually.

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



And you can add PTZ Action by clicking  .



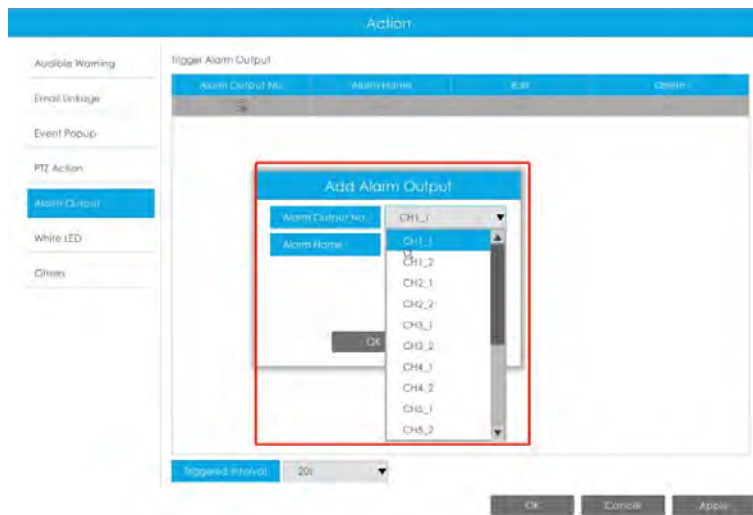
**Channel:** Select the channel which supports this function.

**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.



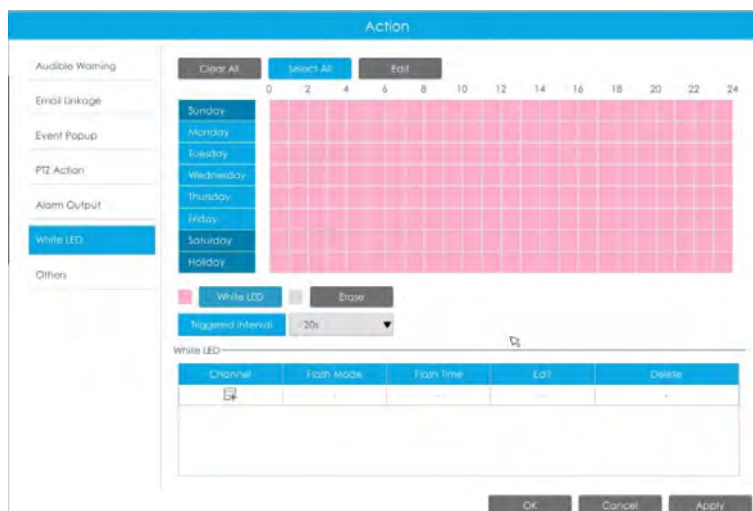
**White LED:** Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

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.

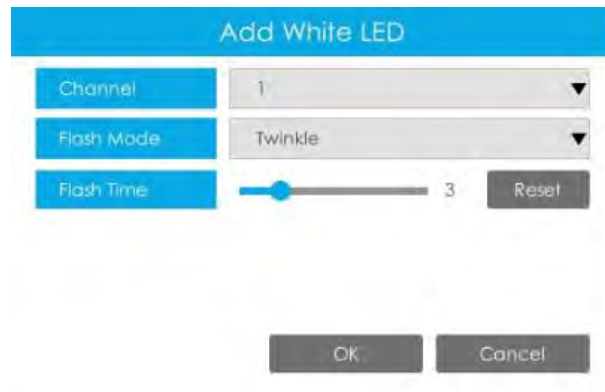
② Click **Edit** to edit effective time manually.

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



And you can add White LED by clicking .



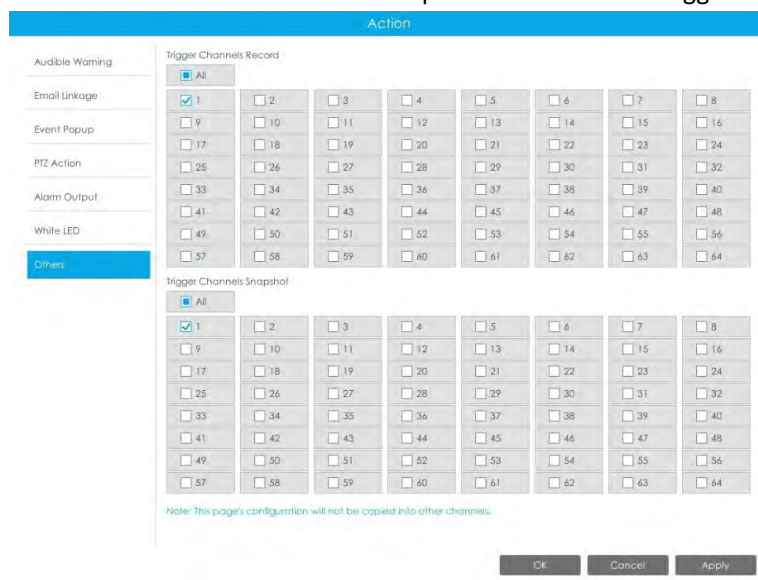


**Channel:** Select the channel which supports this function.

**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 and snapshot when alarm is triggered.



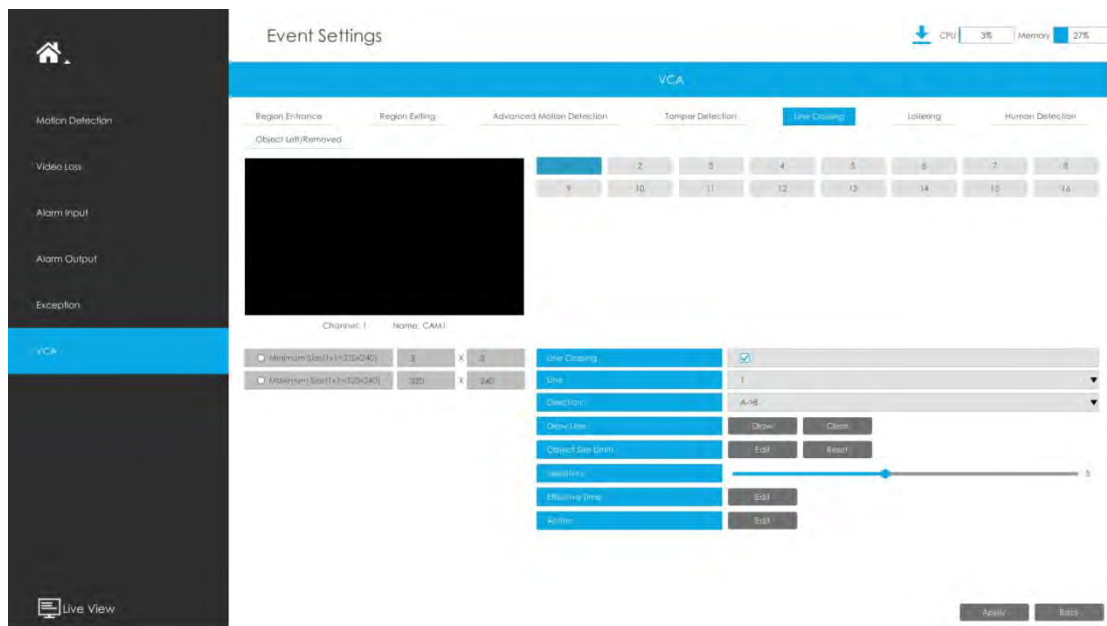
**Note:**

Make sure you have set correct schedule for record and snapshot before setting the Event Action.

**Line Crossing**

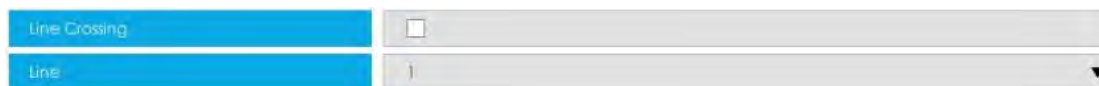
Line Crossing detection is designed to work in most indoor and outdoor environment. An event will be triggered every time when the camera detects objects crossing a defined virtual line.

Settings steps are shown as follows:



**Step1. Select channel and enable Line Crossing.**

**Step 2. Choose detection line number.**

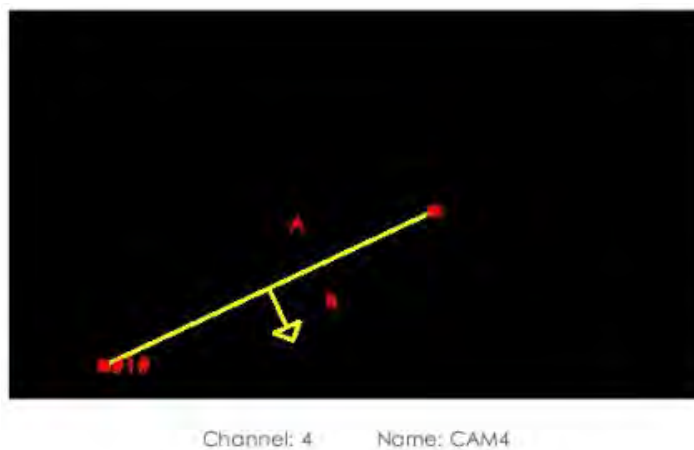


**Step 3. Define its direction.**

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.



**Step 4. Draw detection lines.**



**Note:**

Each Line Crossing configuration works separately and do not affect each other.

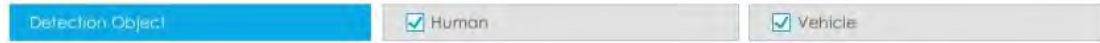
**Step 5. Set Sensitivity.**

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.



### Step 6. 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.



#### 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-CXXX-XXC, which supports the human/vehicle detection object.

### Step 7. Set Effective Time of line crossing by clicking .

NVR receives the alarm when effective time has been set. It will be more convenient by clicking




 or  to set or clear all time settings.



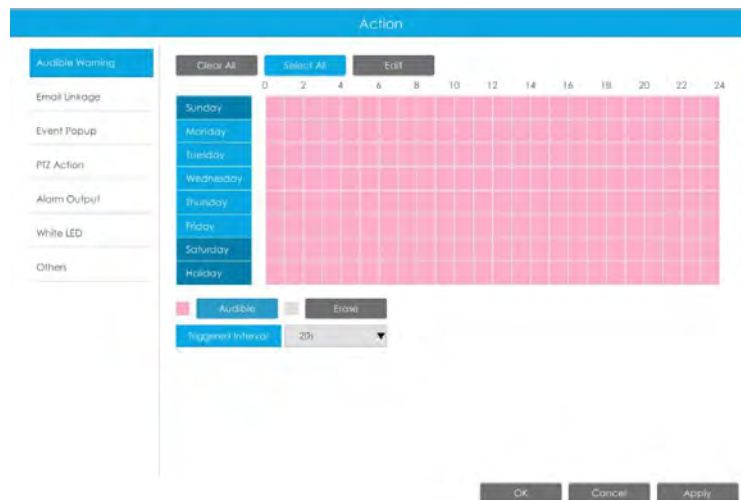
### Step 8. Set Action for line crossing alarm by clicking .

**Audible Warning:** NVR will trigger an audible beep when region entrance 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  or  to set or clear all time settings.
- ② Click  to edit record effective time manually.

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



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

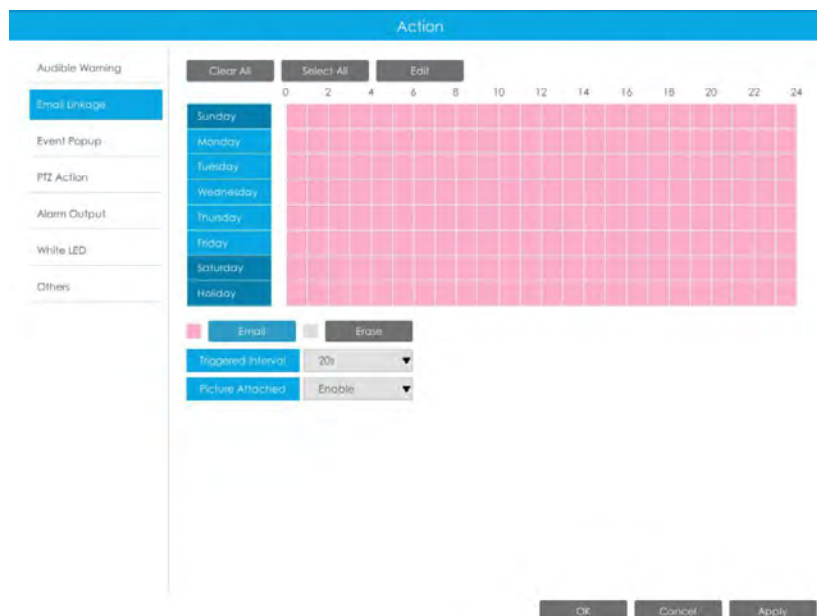
The user can set effective schedule as following two ways:

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.



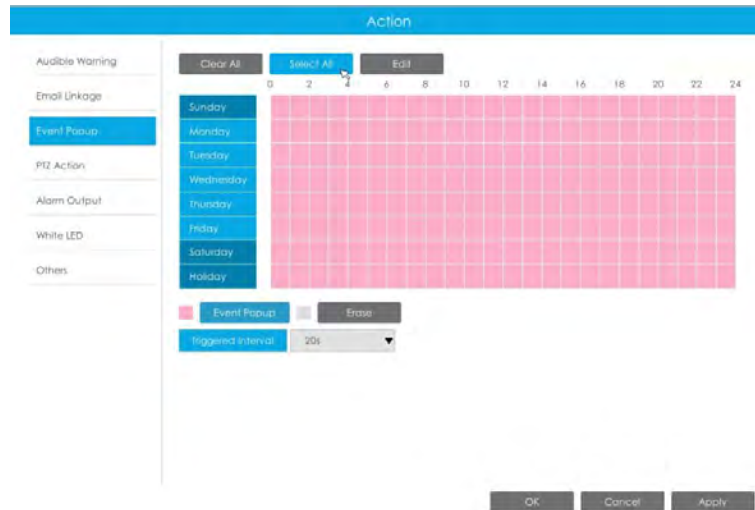
**Event Popup:** Trigger alarm screen popup to full screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.

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.



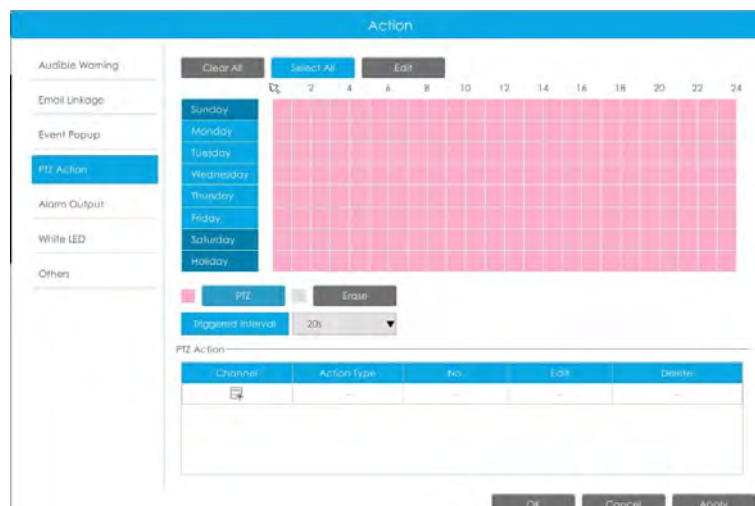
**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.

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 to set or clear all time settings.

② Click **Edit** to edit record effective time manually.

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



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.

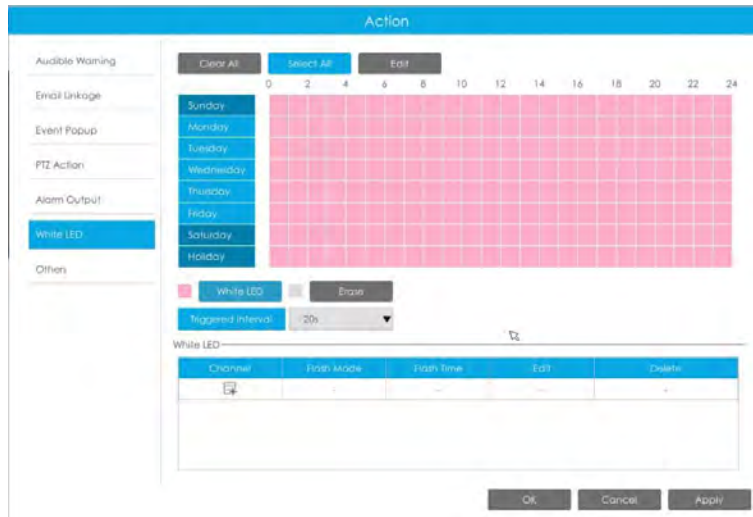
The user can set effective schedule as following two ways:

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.

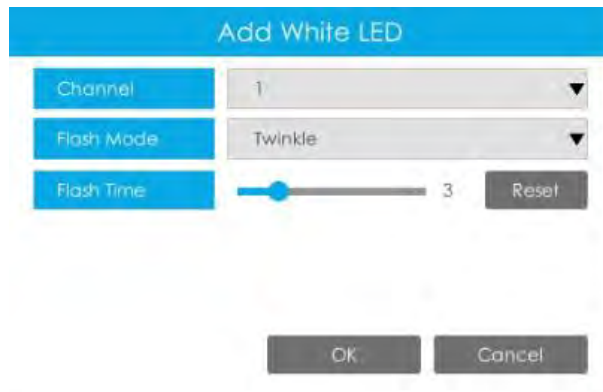
② Click **Edit** to edit effective time manually.

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





And you can add White LED by clicking .

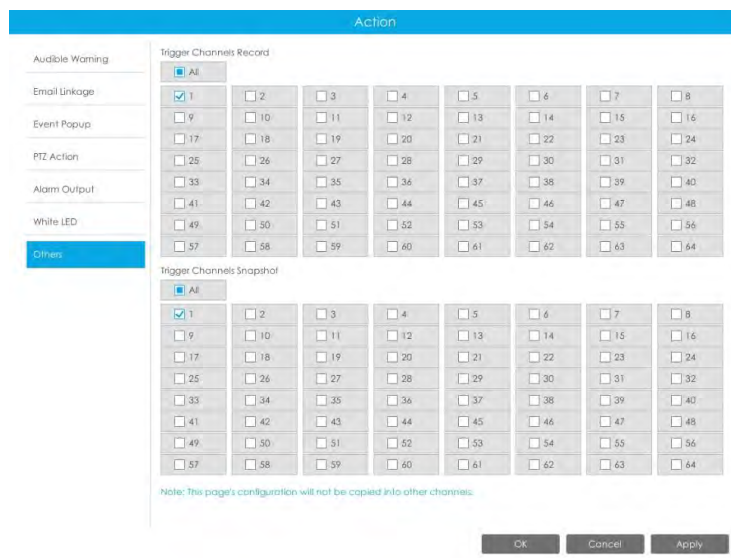


**Channel:** Select the channel which supports this function.

**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 and snapshot when alarm is triggered.



**Note:**

Make sure you have set correct schedule for record and snapshot before setting the Event Action.

**Step 9. Set Minimum Size and Maximum Size.**

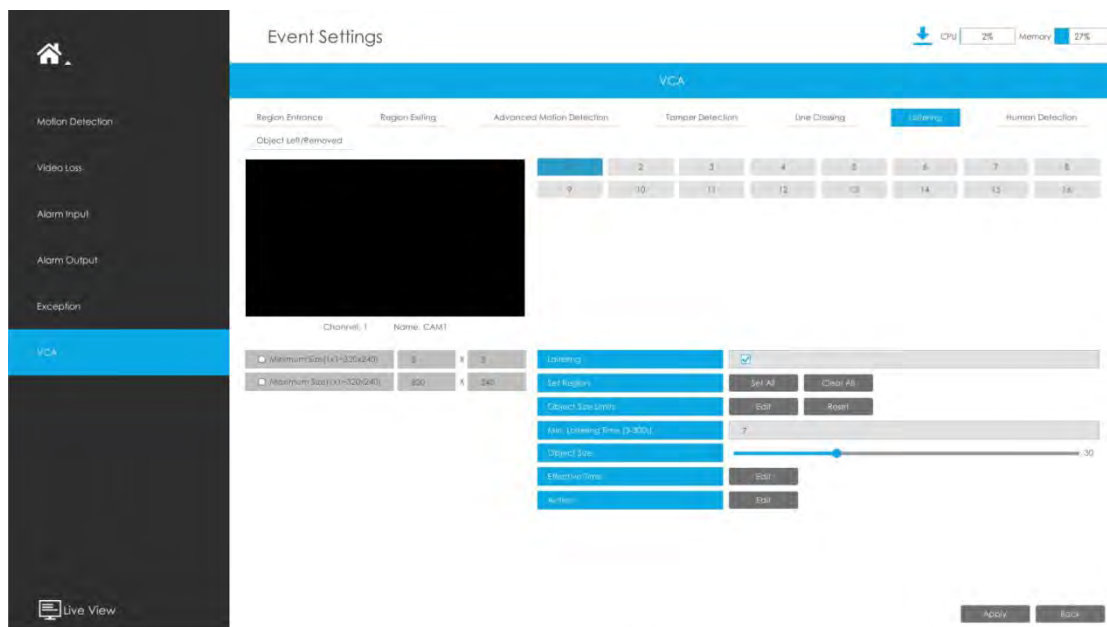
<input type="radio"/> Minimum Size(1x1~320x240)	3	X	3
<input type="radio"/> Maximum Size(1x1~320x240)	320	X	240

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

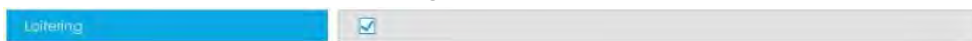
**Maximum Size:** The Max. Size means the opposite, only if the object size is smaller than the frame you drew on the screen, the settings for Line Crossing will take effect.

**Loitering**

When objects are loitering in a defined area for a specific period of time, it would trigger an alarm.



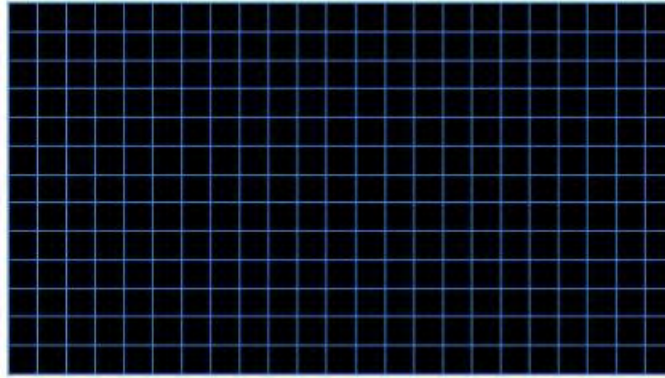
**Step 1. Select channel and enable Loitering.**



**Step 2. Set Loitering detected region.**

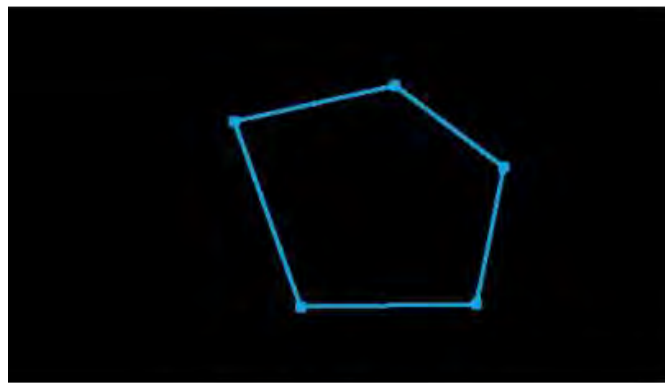
You can select an area by dragging the mouse to set the trigger area, and this area will be synchronized to camera. Also, you can set or clear all set region by directly clicking **Set All**

and **Clear All**.



Channel: 4    Name: CAM4

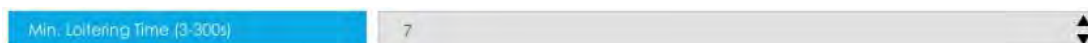
For cameras with the firmware version higher than 4X.7.0.78, it supports drawing polygon detection region for VCA function.



Channel: 2    Name: CAM2

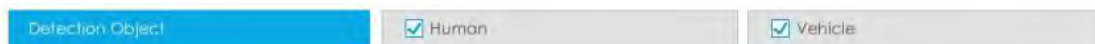
### Step 3. Set Min. Loitering Time.

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.



### Step 4. 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.



### 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 5. Set Object Size.

Milesight loitering allows to set "Object Size". Only the object bigger than the set size will trigger the alarm.



**Step 6. Set Effective Time of loitering 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**

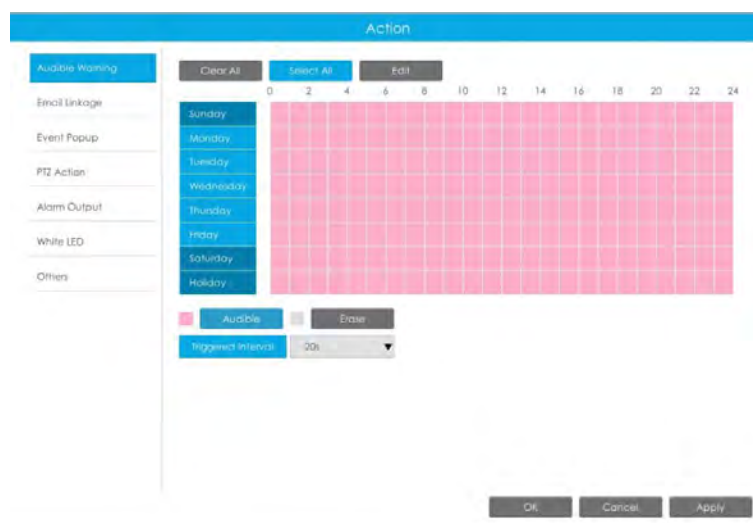
**Audible Warning:** NVR will trigger an audible beep when region entrance is detected.

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.

**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:

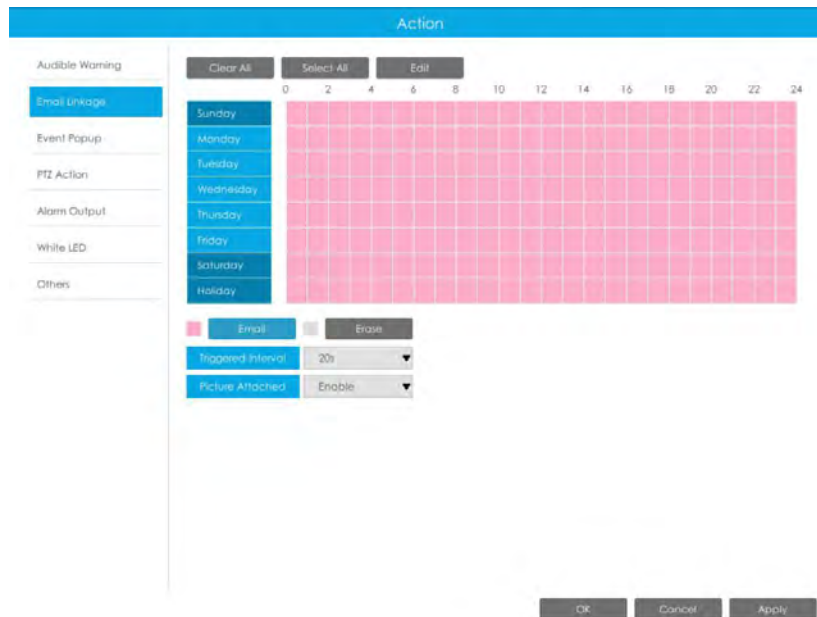
① Select the operation type, Email and Erase. Then drag a square on the time table for time

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.

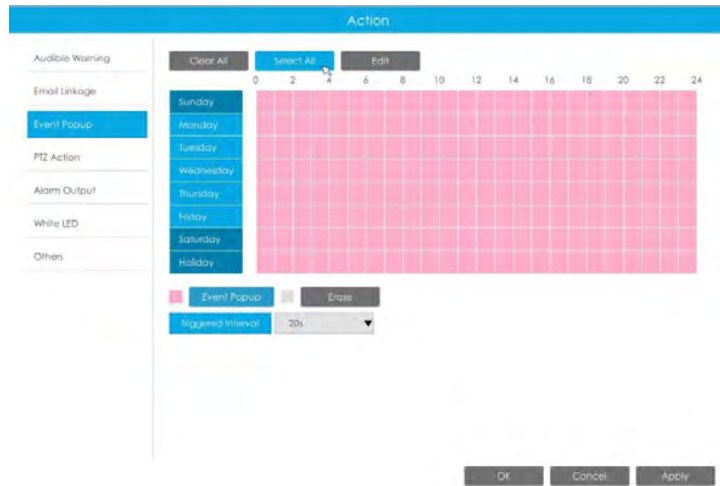


**Event Popup:** Trigger alarm screen popup to full screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.

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.



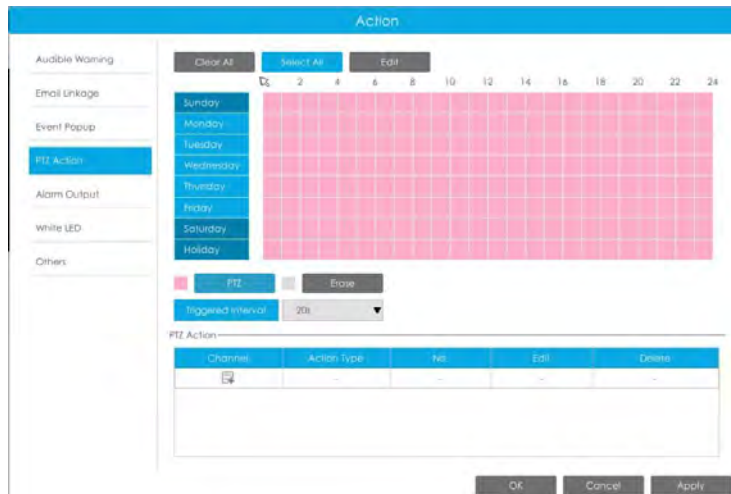
**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.

User can set effective schedule as following two ways:

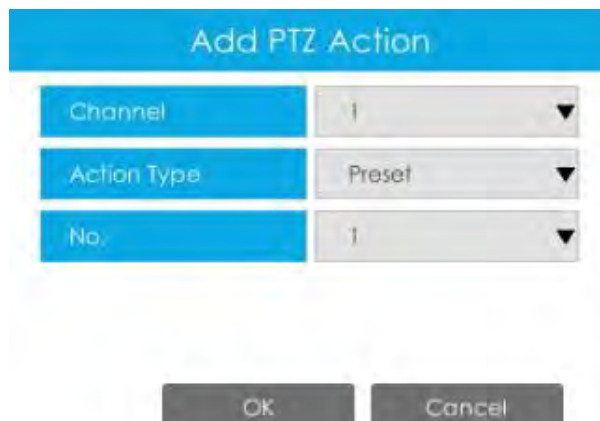
① Select the operation type: PTZ or Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear to set or clear all time settings.

② Click **Edit** to edit record effective time manually.

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



And you can add PTZ Action by clicking .





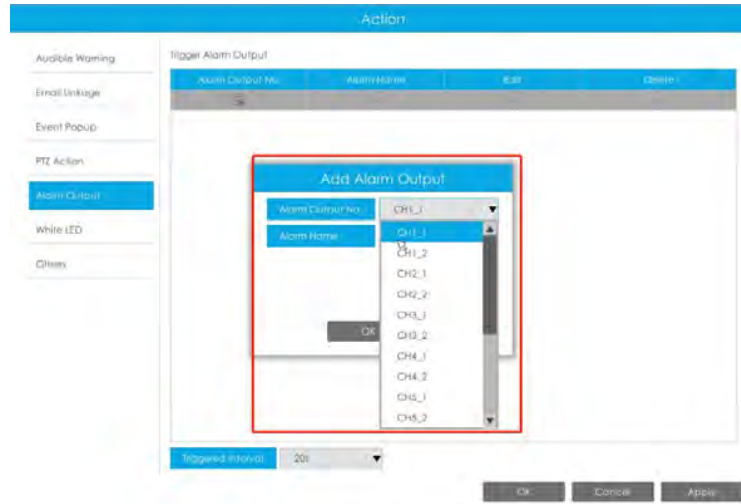
**Channel:** Select the channel which supports this function.

**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.



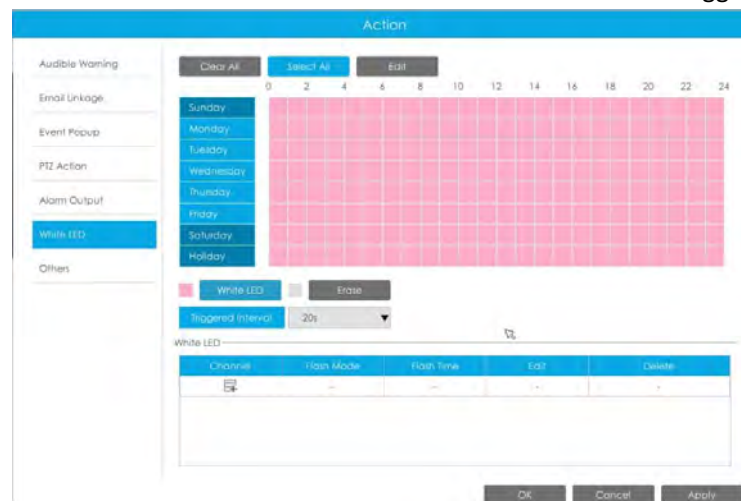
**White LED:** Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

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 and snapshot when alarm is triggered.

**Note:**

Make sure you have set correct schedule for record and snapshot before setting the Event Action.

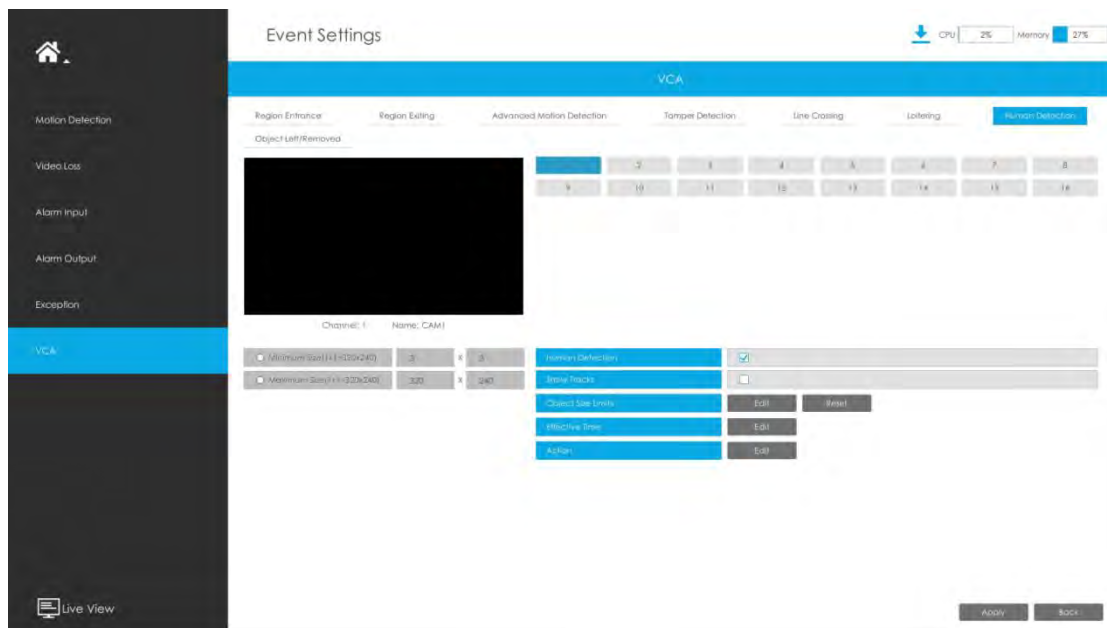
**Step 8. Set Minimum Size and Maximum Size.**

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

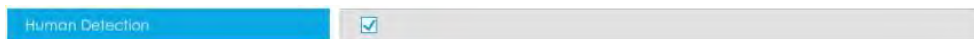
**Maximum Size:** The Max. Size means the opposite, only if the object size is smaller than the frame you drew on the screen, the settings for Loitering will take effect.

**Human Detection**

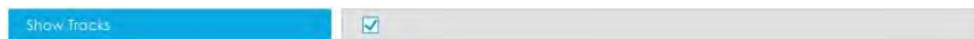
Human detection is used for figuring out whether an object is a human or not.



**Step 1. Select channel and enable Human Detection.**



**Step 2. Enable Show Tracks or not.**



**Step 3. Set Effective Time of human detection by clicking .**

NVR receives the alarm when effective time has been set. It will be more convenient by clicking



 or  to set or clear all time settings.




**Step 4. Set Action for human detection alarm by clicking .**

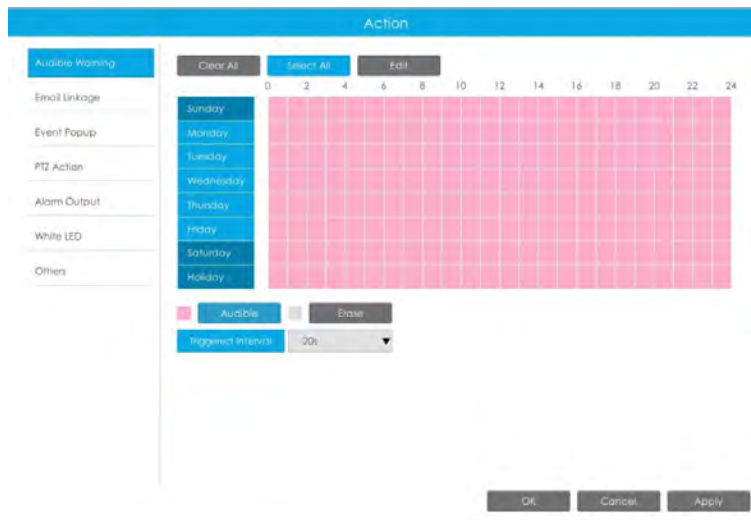
**Audible Warning:** NVR will trigger an audible beep when region entrance is detected.

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  or  to set or clear all time settings.

② Click  to edit record effective time manually.

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



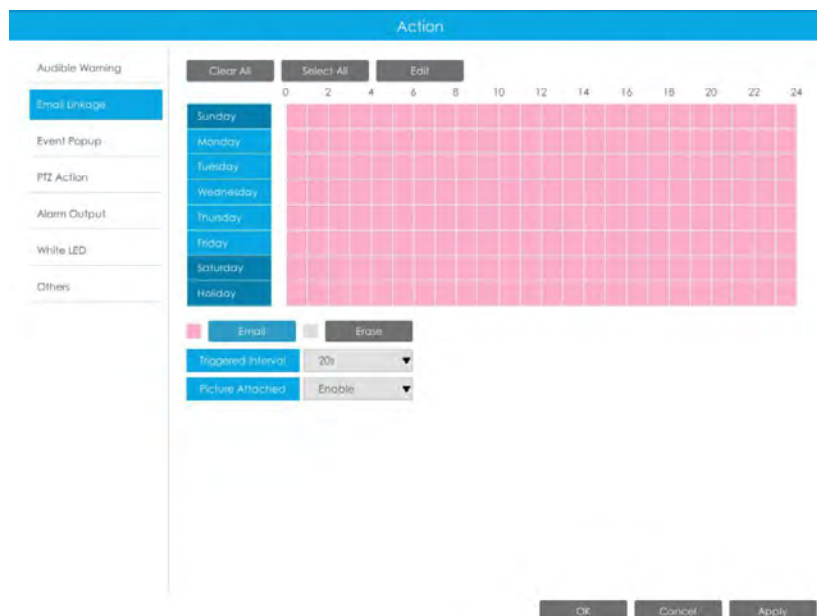
**Email Linkage:** NVR will send an email to the address you set before.

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.



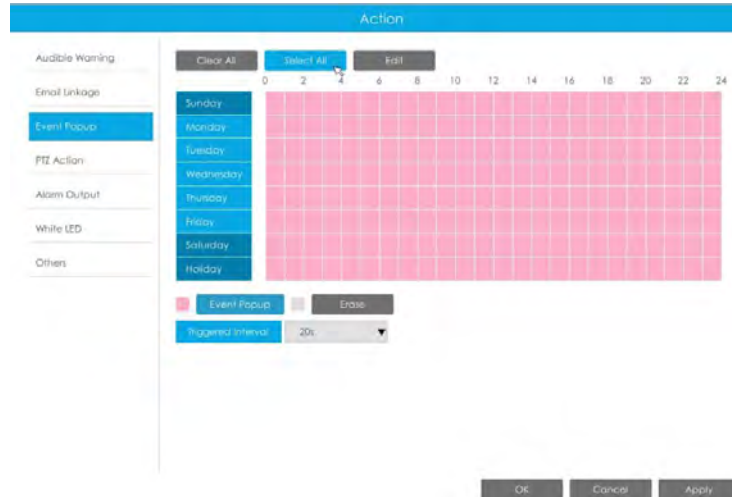
**Event Popup:** Trigger alarm screen popup to full screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Event Popup Duration

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.



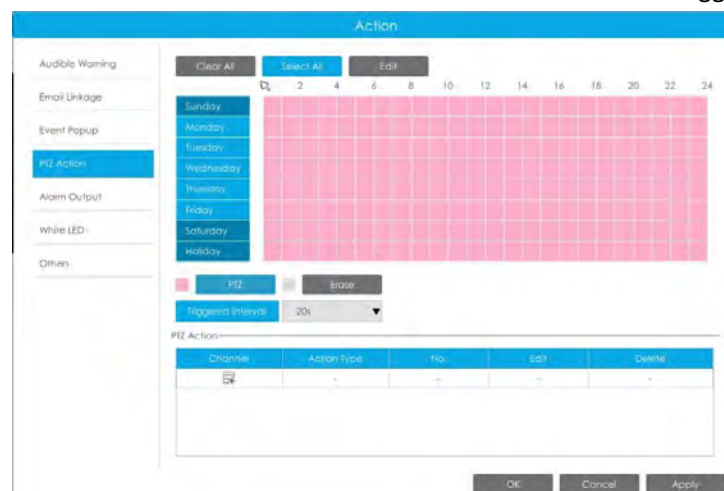
**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.

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 to set or clear all time settings.

② Click **Edit** to edit record effective time manually.

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



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.

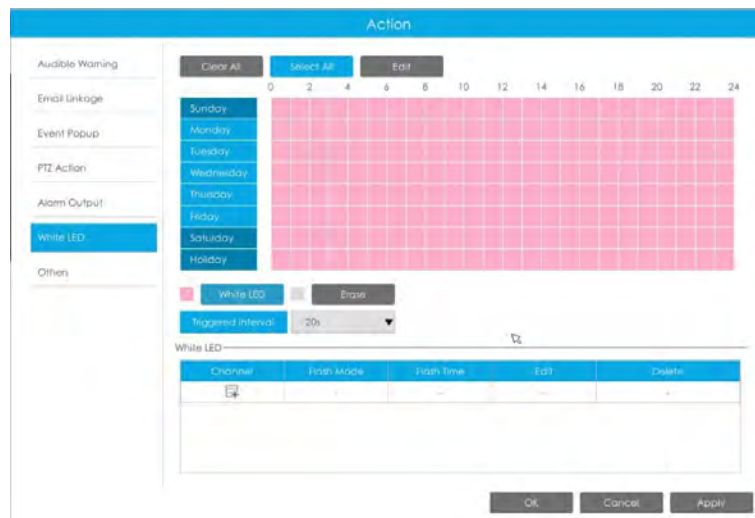
**White LED:** Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

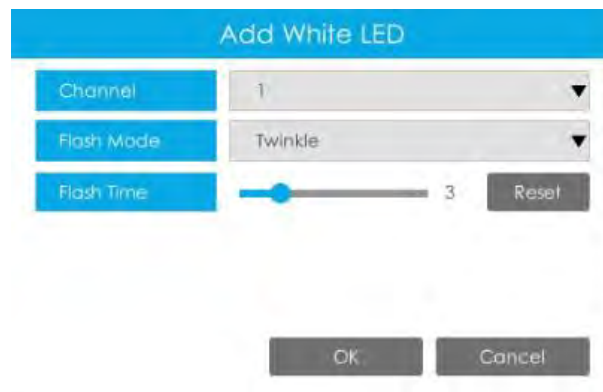
- ① Select the operation type, White LED and Erase. Then drag a square on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.
- ② Click **Edit** to edit effective time manually.

**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 and snapshot when alarm is triggered.

Action

Audible Warning

Email Linkage

Event Popup

PTZ Action

Alarm Output

White LED

Others

Trigger Channels Record

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

Trigger Channels Snapshot

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

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

### Step 5. Set Minimum Size and Maximum Size.

Minimum Size(1x1~320x240)    3    X    3

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 Human Detection 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 Human Detection will take effect.

**Note:**

- ① Make sure you have set correct schedule for record and snapshot before setting the Event Action.
- ② Human Detection tab is no longer displayed separately for all AI cameras.

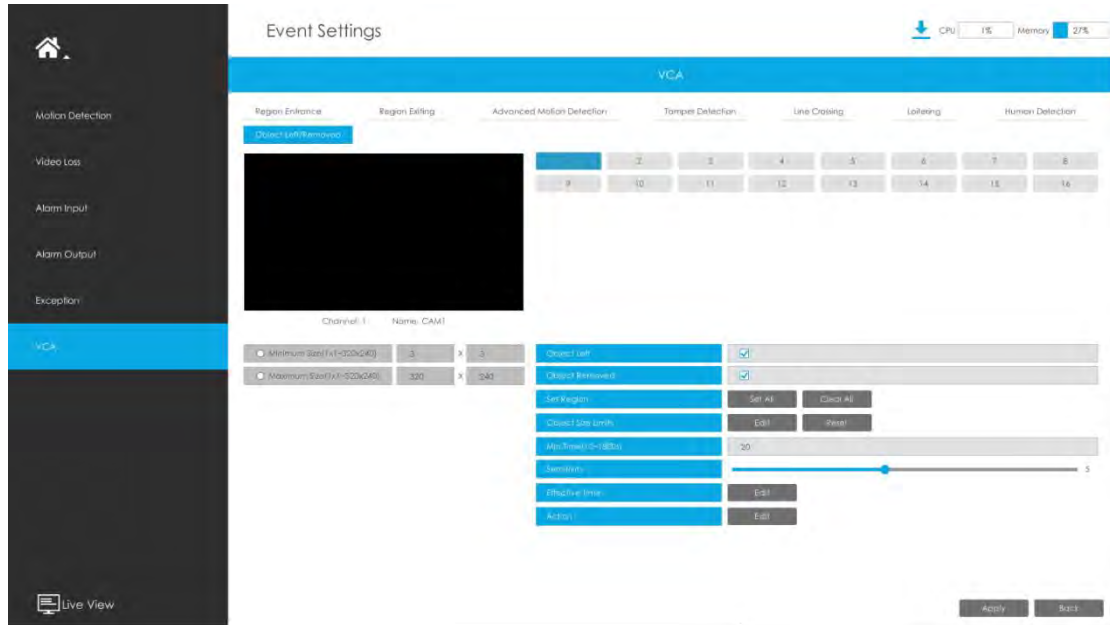
### Object Left/Removed

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.

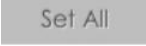
**Note:**

You need to upgrade the NVR to V7x.9.0.4-r2 or above to support this function.

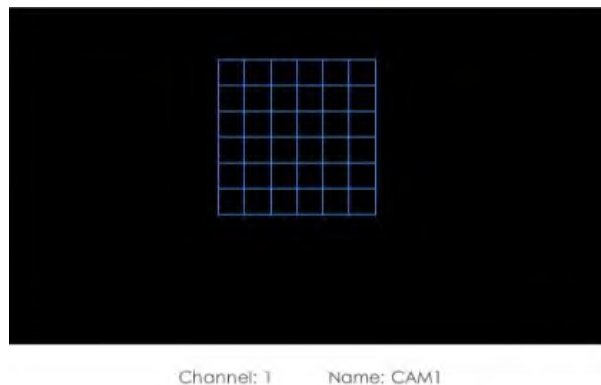
**Step 1. Select channel and enable Object Left or Object Removed(Or you can enable both features at the same time).**



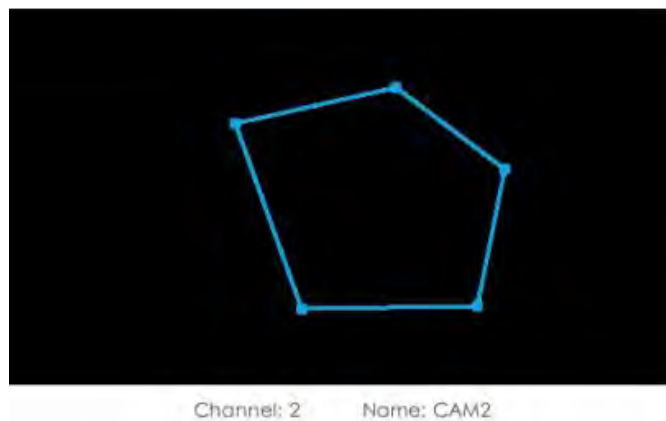
**Step 2. Set detection region.**

You can select an area by dragging the mouse to set the trigger area, and this area will be synchronized to camera. Also, you can set or clear all set region by directly clicking 

and .

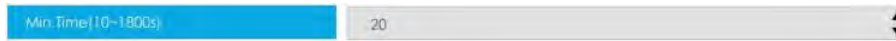


For cameras with the firmware version higher than 4X.7.0.78, it supports drawing polygon detection region for VCA function.



**Step 3. 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.

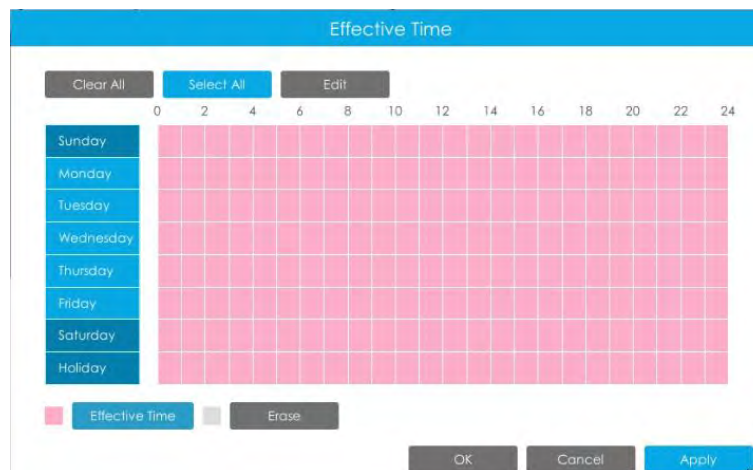
**Step 4. Set Sensitivity.**

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.

**Step 5. Set Effective Time of object left/removed by clicking** 



NVR receives the alarm when effective time has been set. It will be more convenient by clicking

 or  to set or clear all time settings.

**Step 6. Set Action for object left/removed alarm by clicking** 

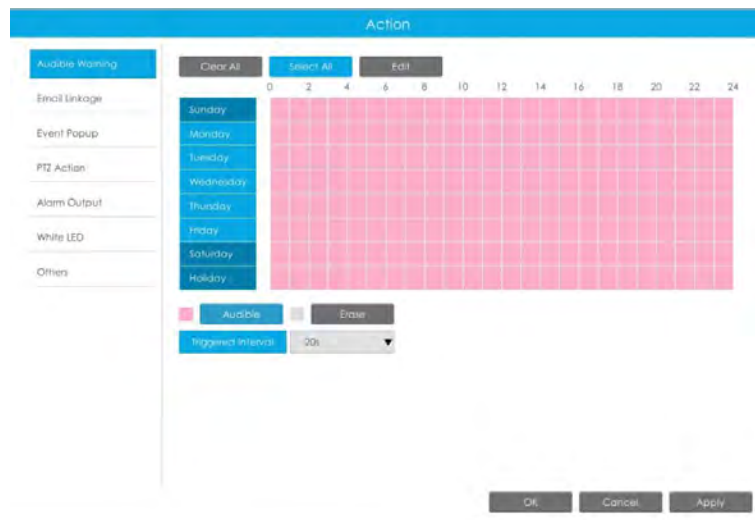
**Audible Warning:** NVR will trigger an audible beep when region entrance is detected.

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  or  to set or clear all time settings.

② Click  to edit record effective time manually.

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



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

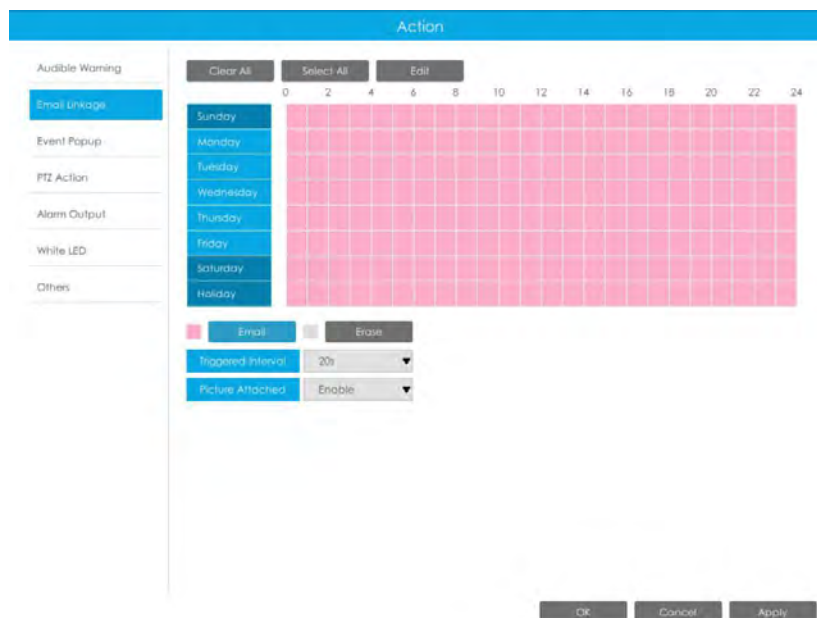
The user can set effective schedule as following two ways:

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.

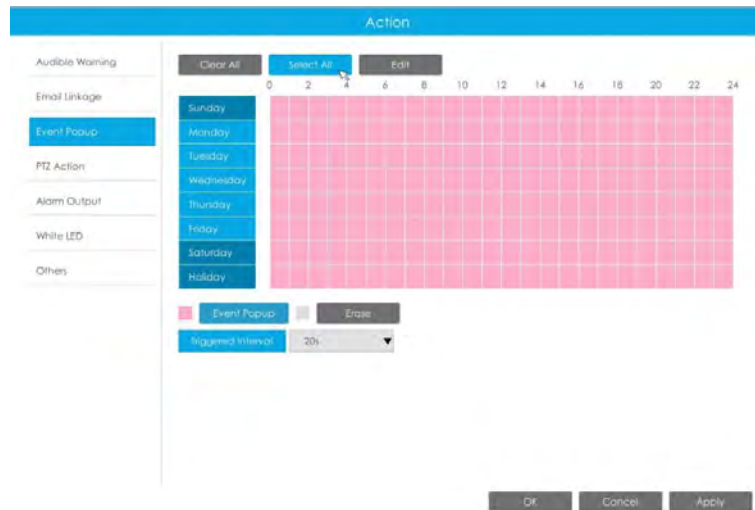


**Event Popup:** Trigger alarm screen popup to full screen when alarm is triggered. And you can set display duration time of all triggered channel in 'Settings'->'General'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.

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.



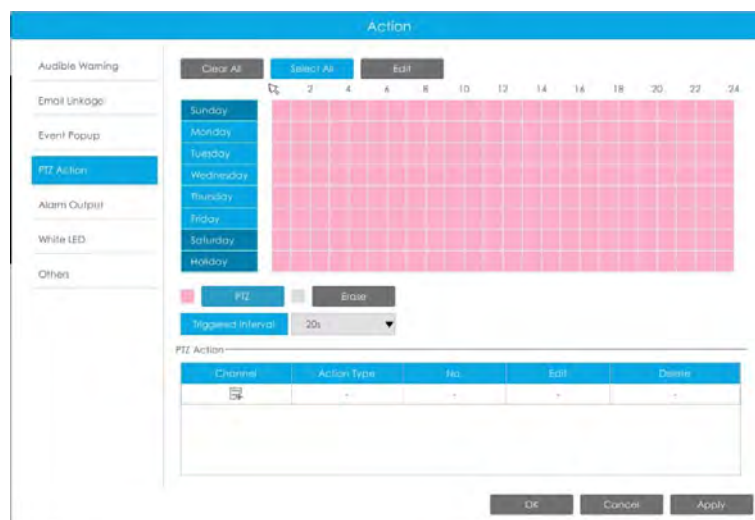
**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.

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 to set or clear all time settings.

② Click **Edit** to edit record effective time manually.

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



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.

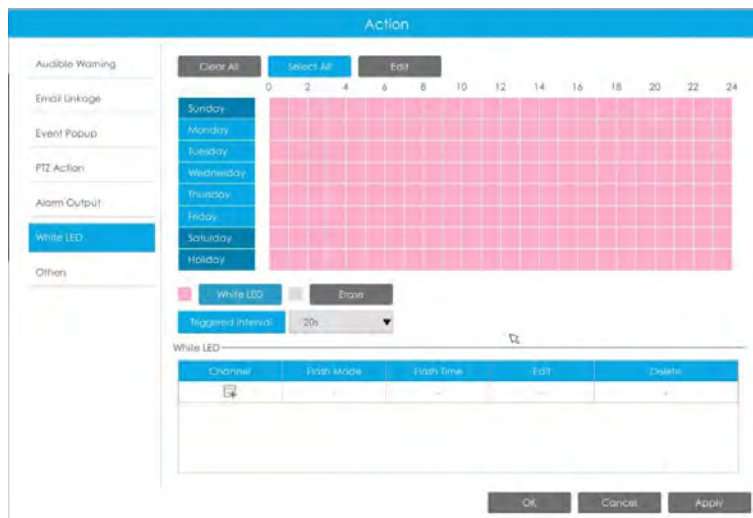
**Triggered Interval:** The effective interval between two actions when event triggered.

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

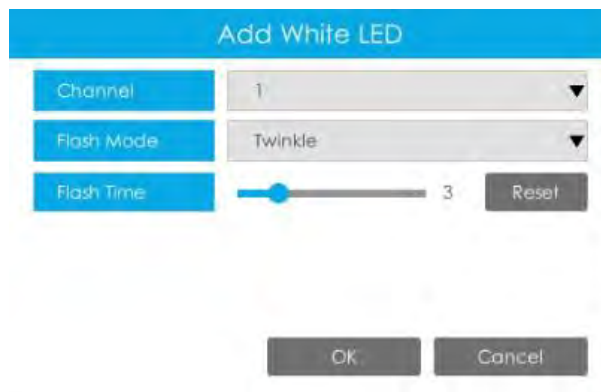
The user can set effective schedule as following two ways:

- 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 and snapshot when alarm is triggered.

Action

Audible Warning

Email Linkage

Event Popup

PTZ Action

Alarm Output

White LED

Others

Trigger Channels Record

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

Trigger Channels Snapshot

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

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

**Note:**

Make sure you have set correct schedule for record and snapshot before setting the Event Action.

**Step 7. 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 Object Left/Removed 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 Object Left/Removed will take effect.

**Settings**

Milesight VCA provides the primary setting for the whole VCA functions.

**Note:**

For cameras with the firmware version higher than 4X.7.0.78 and the NVRs with firmware version higher than 7X.9.0.12, Settings tab is no longer displayed separately.

The screenshot displays the 'Event Settings' page for VCA. The interface includes a sidebar with navigation options: Motion Detection, Video Loss, Alarm Input, Alarm Output, Exception, and VCA. The main content area is titled 'Event Settings' and 'VCA'. It features a grid of event settings for various functions: Region Entrance, Region Exiting, Advanced Motion Detection, Tamper Detection, Line Crossing, Loitering, and Human Detection. A table shows detection object size settings for each event, with columns for Min. Size and Max. Size. A table below lists event settings with columns for Event, Min. Size, Max. Size, Edit, and Reset. The interface also includes a 'Process FPS' dropdown set to 10fps, a 'Camera Installation' dropdown set to Angle View, and a 'Detection Object Size Settings' table.

**Process FPS:** Five different periods are available(5, 10, 15, 20, 25 fps) for processing fps.

**Camera Installation:** Select camera installation view, including **Angle View, Horizontal View and Overhead View.**

**Detection Object Size Settings:** Edit the frame size you draw to trigger events. You can set Min. Size and Max. Size for different events separately.

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

**Maximum Size:** The Max. Size means the opposite, the frame you draw on the screen stands for that only if the object size is smaller than the frame, the settings for other VCA functions will take effect.

**Note:**

Upgrade your device to corresponded firmware version.

Camera: V4X.7.0.74 or above.

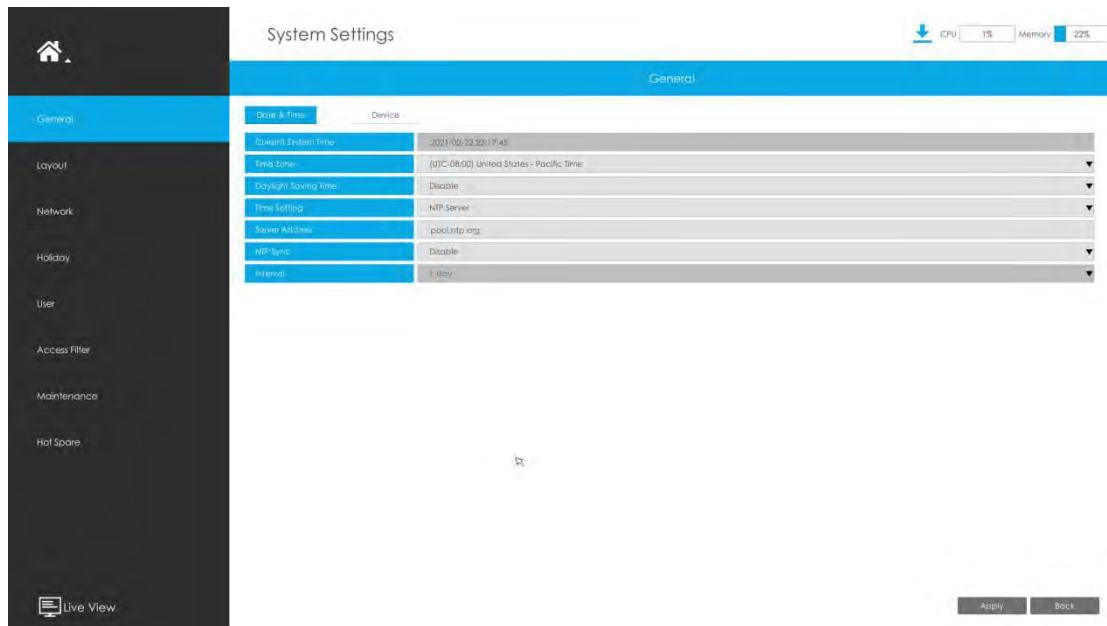
NVR: V7X.9.0.9 or above.

## 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.



**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.

**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.

**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.

**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.

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.

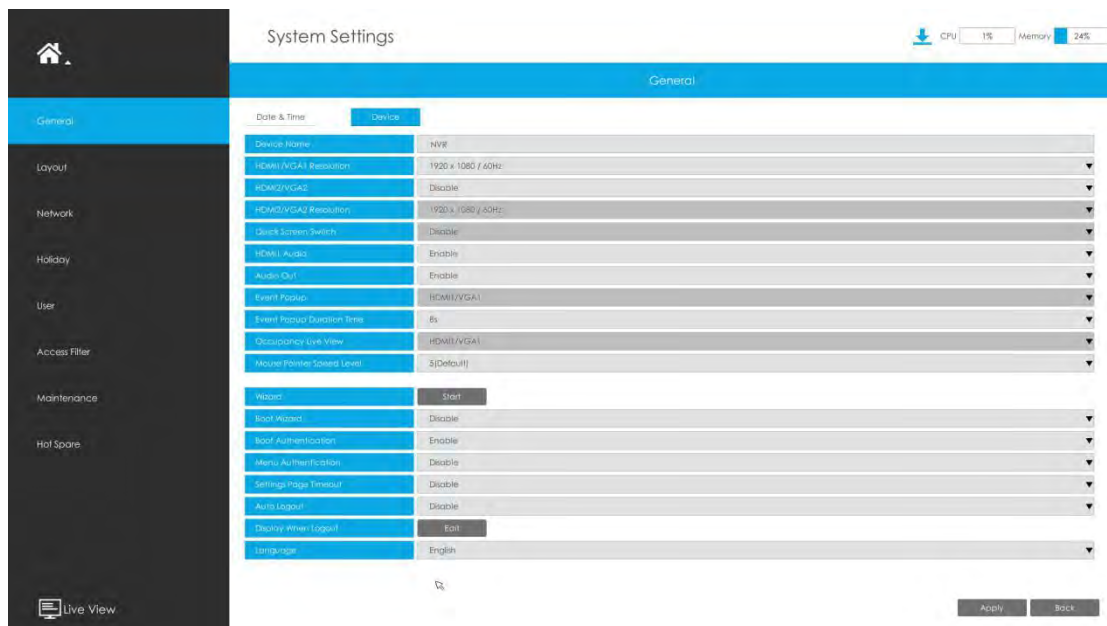
**Boot Authentication:** Enable it to authenticate the user after rebooting.

**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.

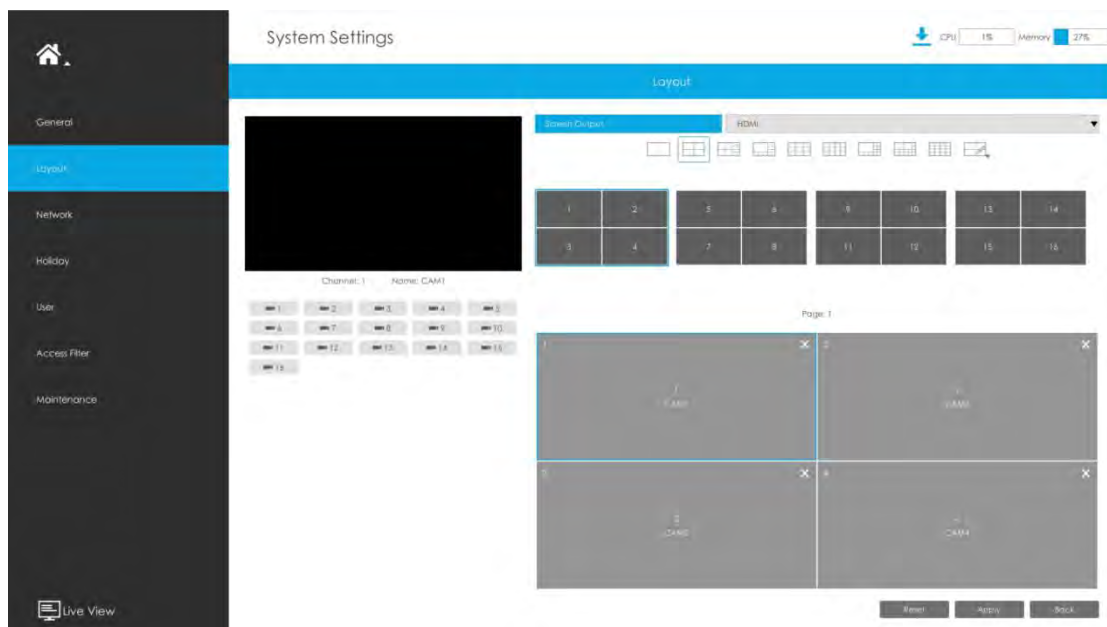
**Display When Logout:** Set display mode of the live view interface when users log out. There are three options: Regular Mode, Occupancy Mode and Target Mode.



**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 , which can be controlled by double-click the mouse wheel after enabling Quick Screen Switch function.

### 3.9.2 Layout



**Step 1. Select Screen Output.**

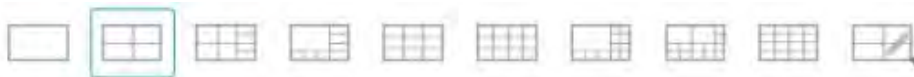
You can configure layout for different Screen Output separately to meet the needs of monitoring different scenarios through different Screen Output.

**Note:**

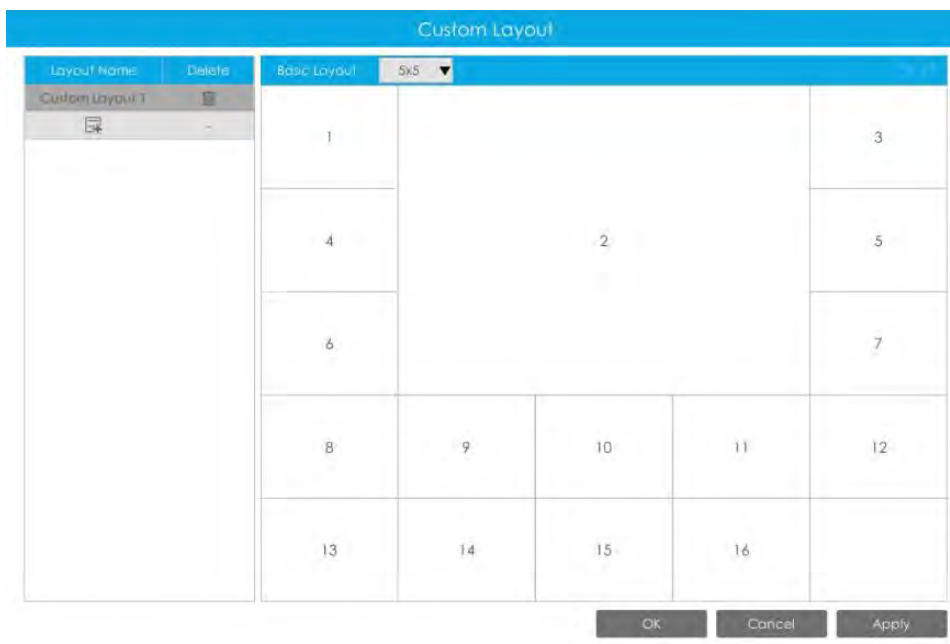
Only NVR 7000 Series and NVR 8000 Series support this function.



**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 button and then click 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 to save the settings or click 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.

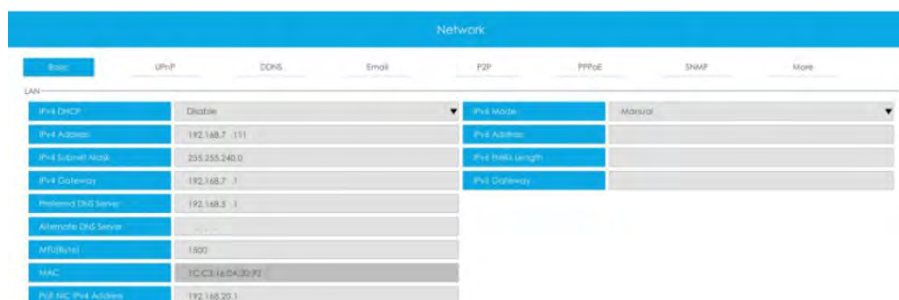
#### IPv6

Manual/ Router Advertisement/ DHCPv6 are available.

#### DNS Server

Preferred DNS Server: DNS server IP address.

Alternate DNS Server: DNS server alternate address.

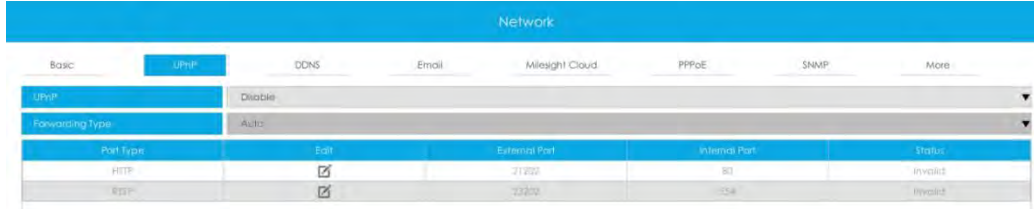


#### Note:

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**.



### 3.9.3.3 DDNS

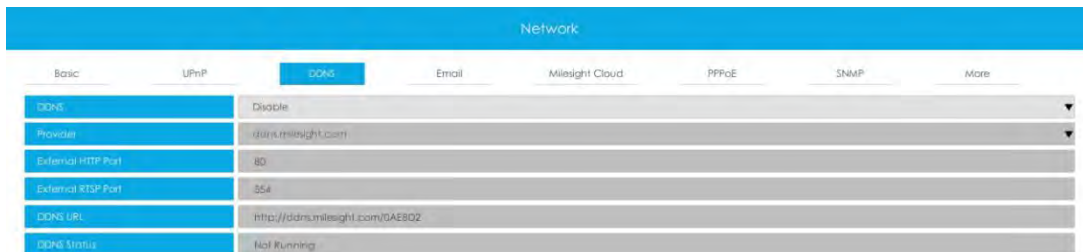
Using DDNS to solve the dynamic IP address problem.

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.

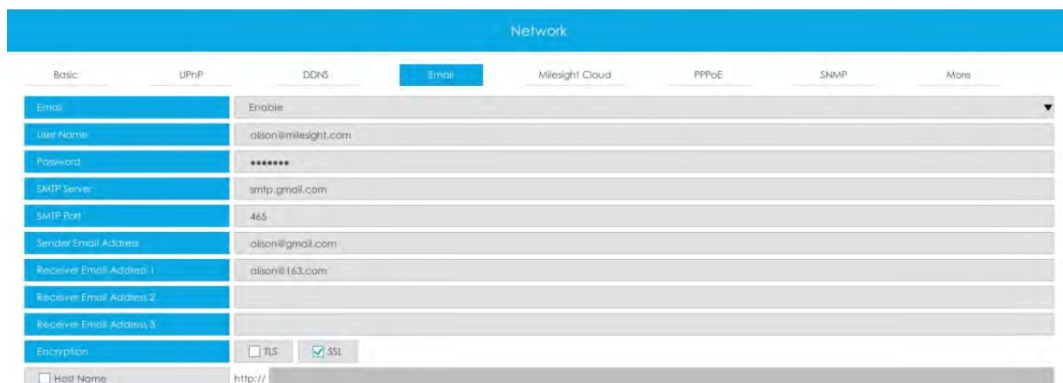
**Note:**

“Host Name” must begin with letters, and it can only contain number, letters, and hyphen.



### 3.9.3.4 Email

A screenshot will be sent to the receivers when alarm is triggered.



**Enable Email selection and then begin configuration.**

**User name:** 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.

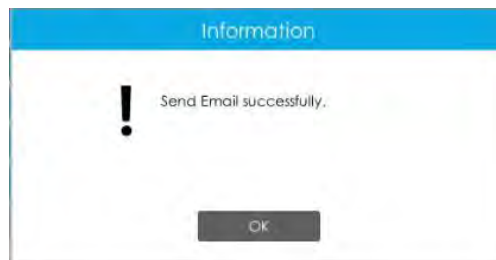
**Sender Email Address:** It must be same as [User name].

**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  to check if the Mail function is workable.

**Note:**

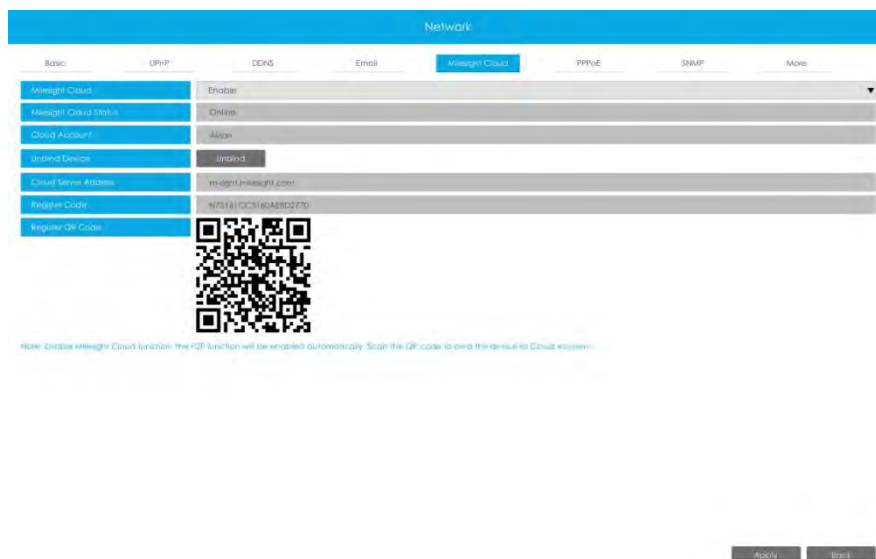
If your NVR has a port forwarding IP for Host Name, please input the complete address that contains the port.

### 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.



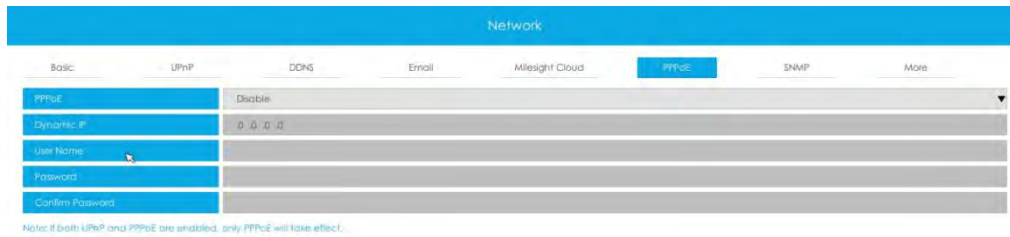
If you enable Milesight Cloud function, the P2P function will be enabled automatically.

**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.



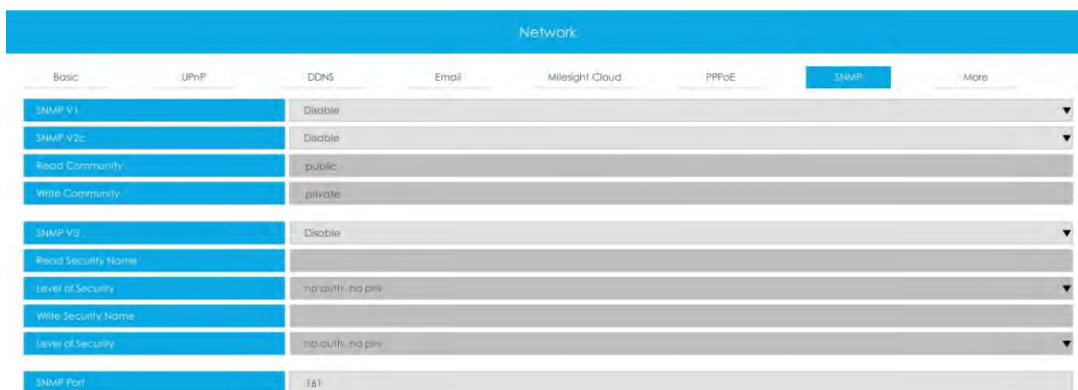
**Note:**

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.



**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 More



#### 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 Milesight 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".

① IP: The IP address of NVR;

② RTSP port: The default RTSP port is 554;



③ 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.

### 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 M-Sight Pro. 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 for 'Camera Event'. The 'NVR Event' tab is selected. The 'Channel' is set to '1'. The 'Push Event Type' section has a dropdown menu set to 'All'. Below this, there are two columns of checkboxes for various event types, all of which are checked. The first column includes: Motion Detection, Region Entrance, Advanced Motion Detection, Line Crossing, Human Detection, and Alarm Input. The second column includes: Video Loss, Region Exiting, Tamper Detection, Loitering, Object Left/Removed, ANPR, Black List, White List, and Visitor List. At the bottom, there are three buttons: 'Copy', 'OK', and 'Cancel'.

Select Push Event Type which will be pushed to APP M-sight Pro. 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



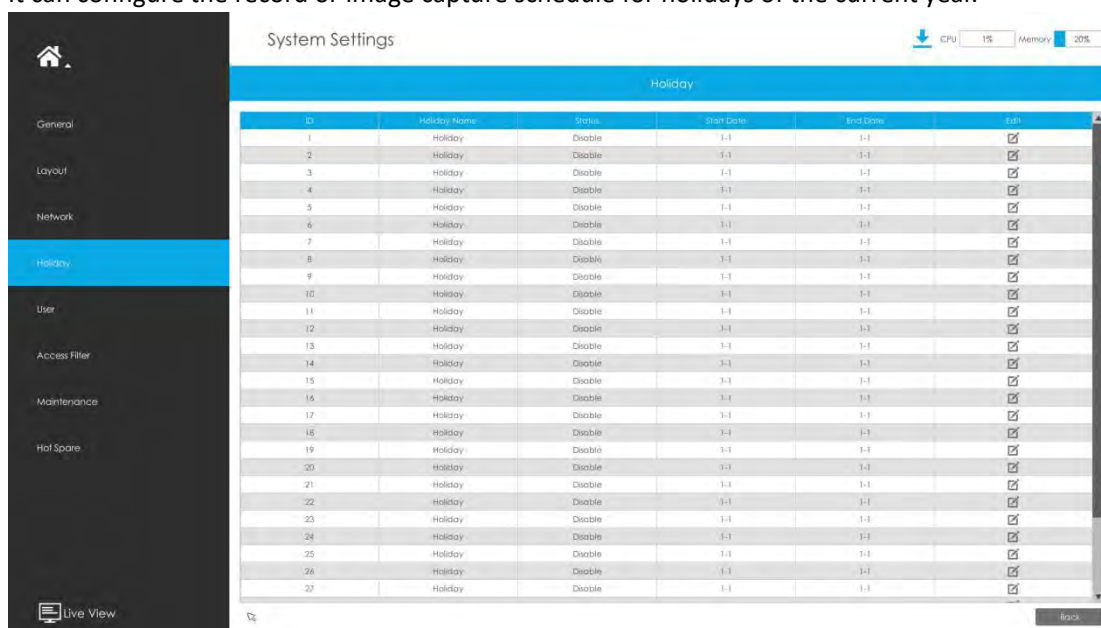
Select channels which you want to push the Alarm Input Event of NVR.

**Note:**

There would not have NVR Event interface if your NVR doesn't have alarm input interface.

### 3.9.4 Holiday

It can configure the record or image capture schedule for holidays of the current year.



Click  to edit holiday information, including Holiday Name, Holiday Enable, Style, Start Date and End Date. Then click  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

## 3.9.5 User

- General
- Layout
- Network
- Holiday
- User
- Access Filter
- Maintenance

System Settings

CPU 5%
Memory 14%

**User**

User
Security Question

ID	User Name	User Level	Edit Login	Edit Password	Delete
1	admin	Admin		<input checked="" type="checkbox"/>	
2	li	Operator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	gan	Operator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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, then input user information and click OK to add a new user.

Admin Password

User Name

Password

Confirm

User Level

Unlock Pattern

Set Unlock Pattern

Edit

OK

Cancel

**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 click  to set Unlock Pattern after enabling Unlock Pattern.

Set Unlock Pattern

Please connect at least 4 dots.

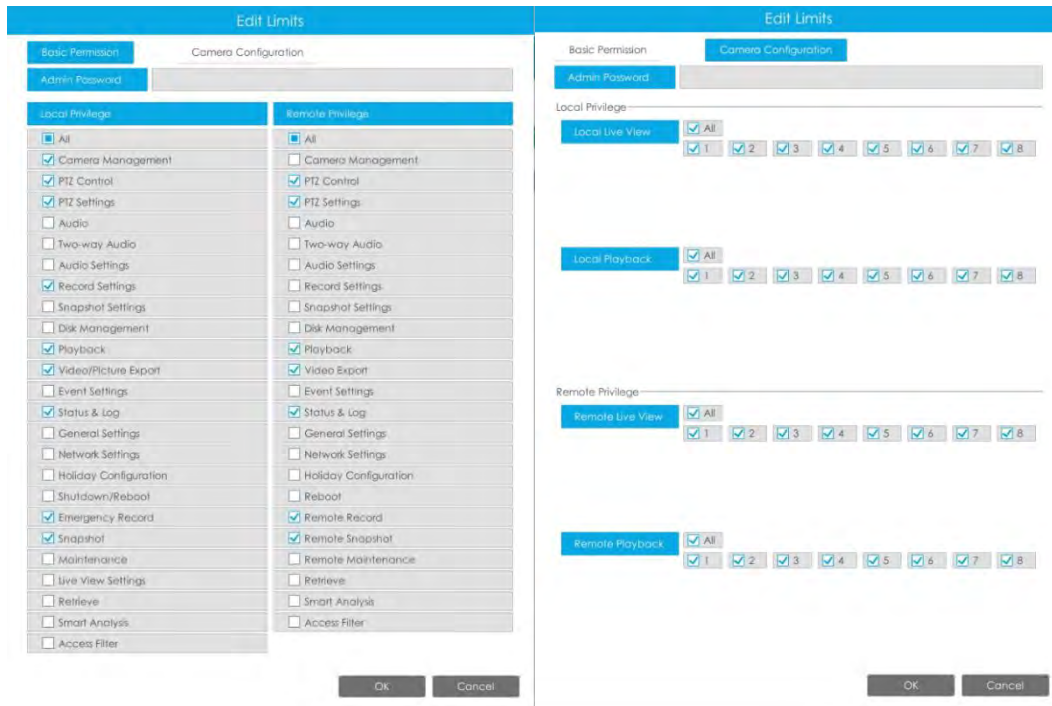
OK

Cancel

**Edit user limits**

Select a user, when the background color changes into dark gray, click  to edit user privileges.

- ① Local Privilege means that the privilege to the monitor connected with NVR.
- ② Remote Privilege means that the privilege to web settings.



### 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 to set Unlock Pattern after enabling Unlock Pattern.

Sync new password to current connected PoE channels is available for PoE NVR Series.



### Delete user

Select a user and click to delete a user.

### Modify Security Question

Input Admin Password, select security question and answer. Click to save.

**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.

## 3.9.6 Access Filter

Enable Access Filter to restrict or open the access to device address added via IP or MAC.

### Step 1. Enable Access Filter.

### 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.

### 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 first screenshot shows the 'Add Address' dialog with 'Address Type' set to 'IP Address' and 'IP Address Rule' set to 'Single'. The 'IP Address' field contains four dots. The second screenshot shows the same dialog but with 'IP Address Rule' set to 'Range', and the 'IP Address' field contains two sets of four dots separated by a hyphen.

**Method 2:** Add the address via MAC.

The 'Add Address' dialog box has 'Address Type' set to 'MAC Address'. The 'MAC Address' field contains five pairs of dots. 'OK' and 'Cancel' buttons are at the bottom right.

**Step 4.** Then click  to make Access Filter effective.

You can click  in the Access Filter interface to edit the corresponding address again.

The 'Edit Address' dialog box has 'Address Type' set to 'IP Address', 'IP Address Rule' set to 'Single', and the 'IP Address' field containing '192.168.111.1'. 'OK' and 'Cancel' buttons are at the bottom right.

**Note:**

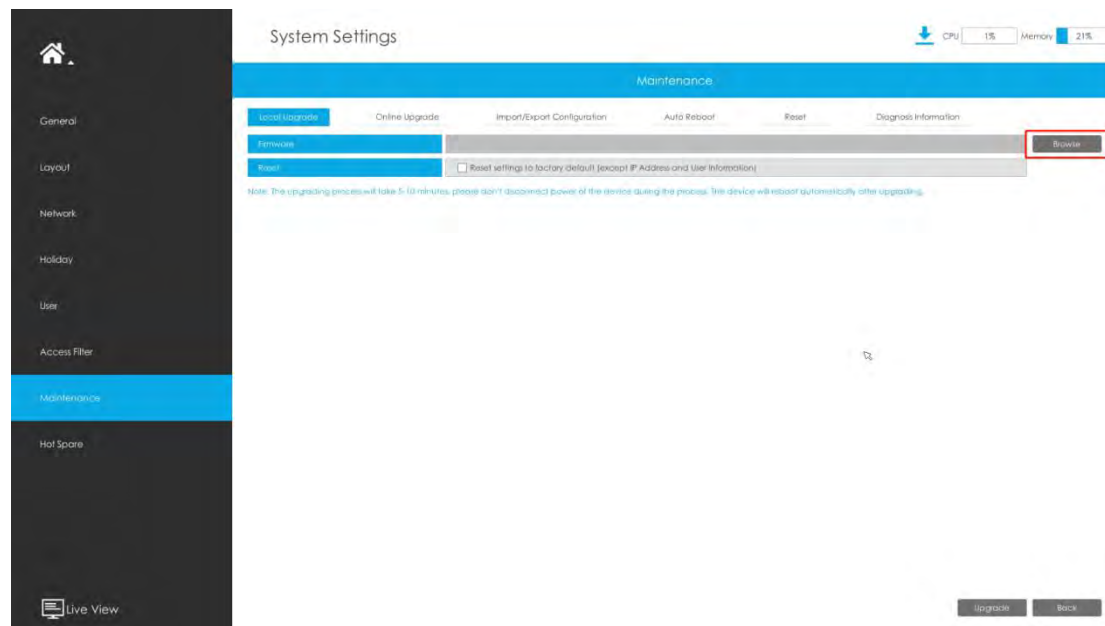
- ① If Access Filter is enabled and Filter type is Allow, but no address is added to the table, then no address is allowed to Access the NVR.
- ② If Access Filter is enabled and Filter type is Deny, but no address is added to the table, then all

addresses are allowed to Access the NVR.

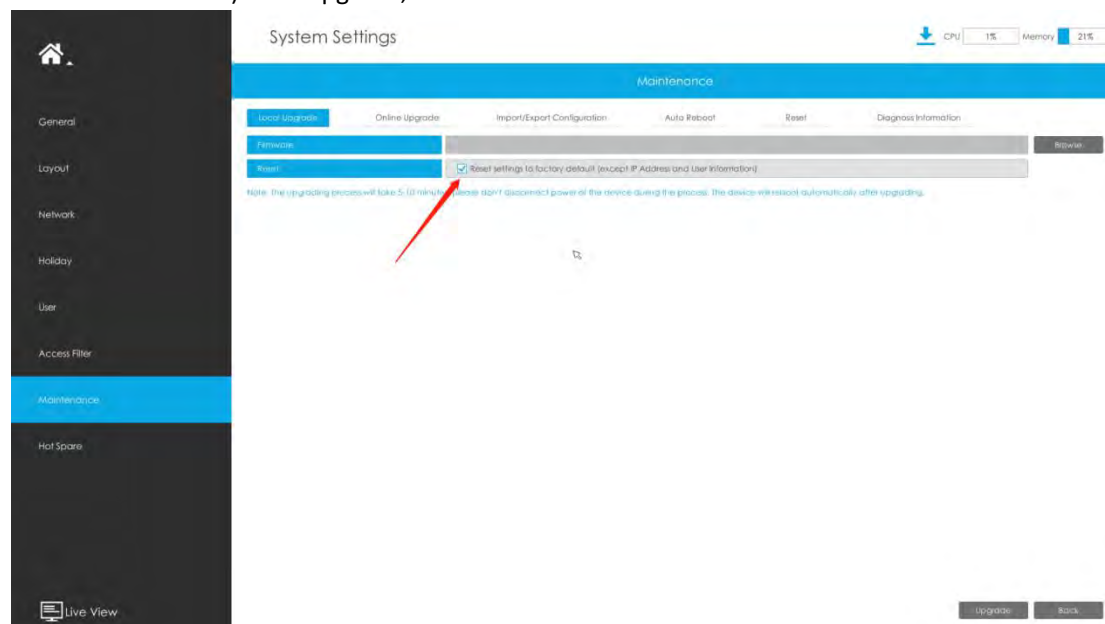
## 3.9.7 Maintenance

### Local Upgrade

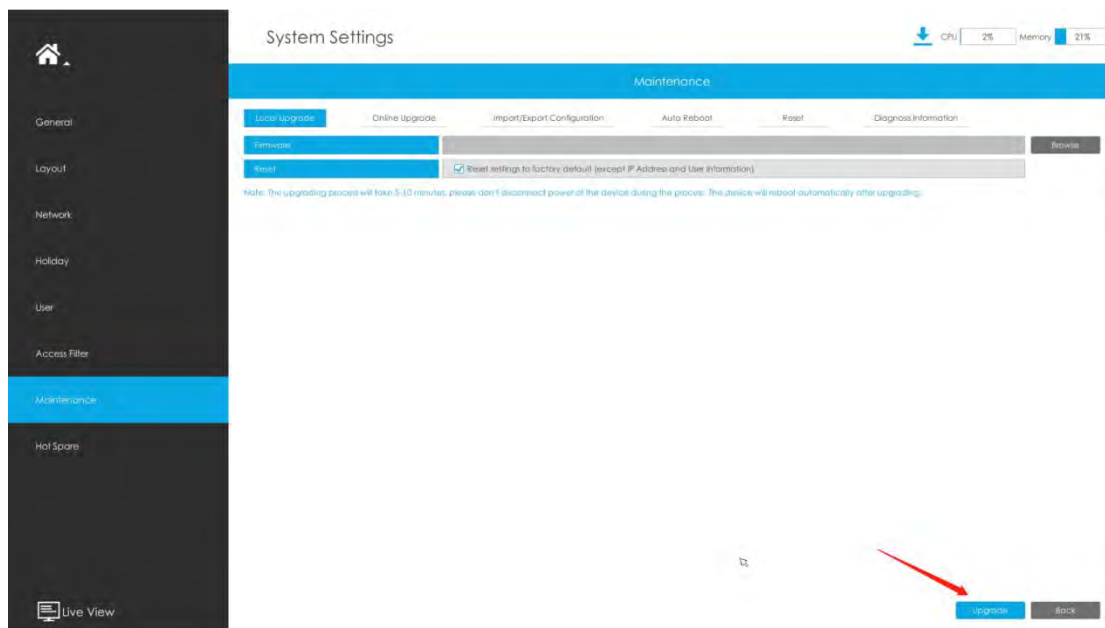
**Step 1.** Click **Browse** and select the corresponding firmware you downloaded in your USB;



**Step 2.** 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.

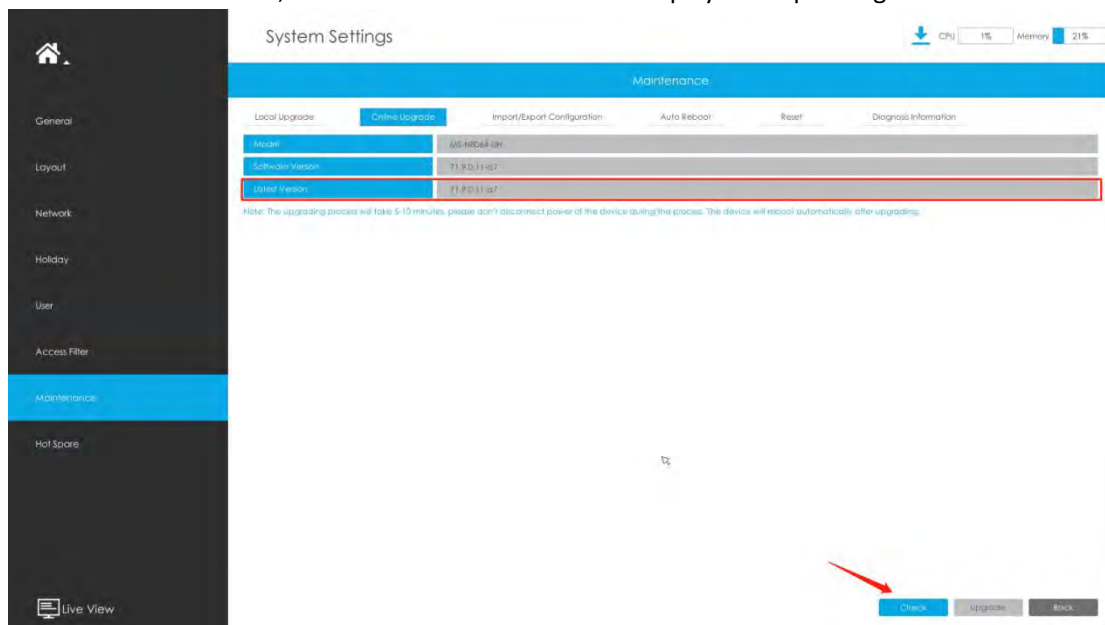
**Note:**

The system will auto reboot after confirming upgrade.

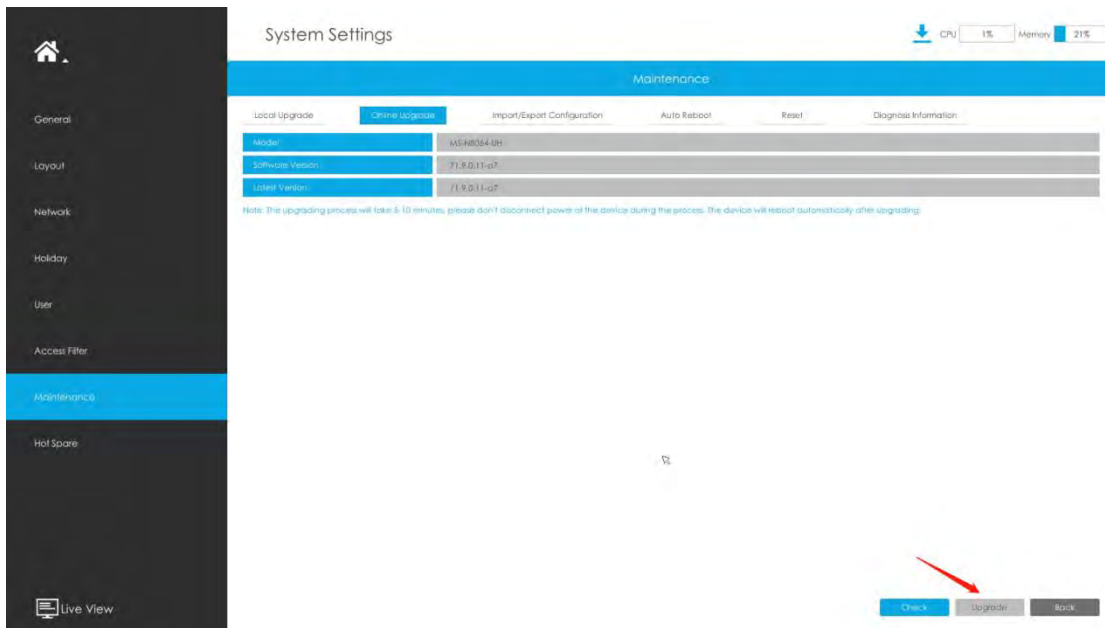
**Online Upgrade**

**Step 1.** Click **Check** to confirm whether there is a new version;

If there is a new version, the Latest Version column will display corresponding information.



**Step 2.** Click **Upgrade** to confirm the upgrade.



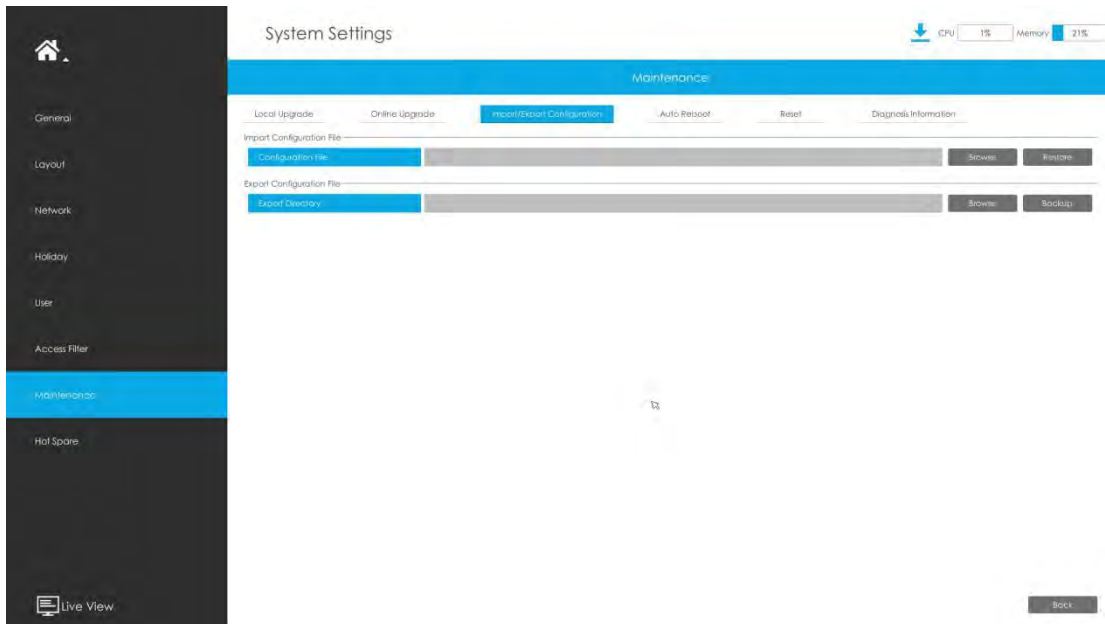
**Note:**

The system will auto reboot after confirming upgrade.

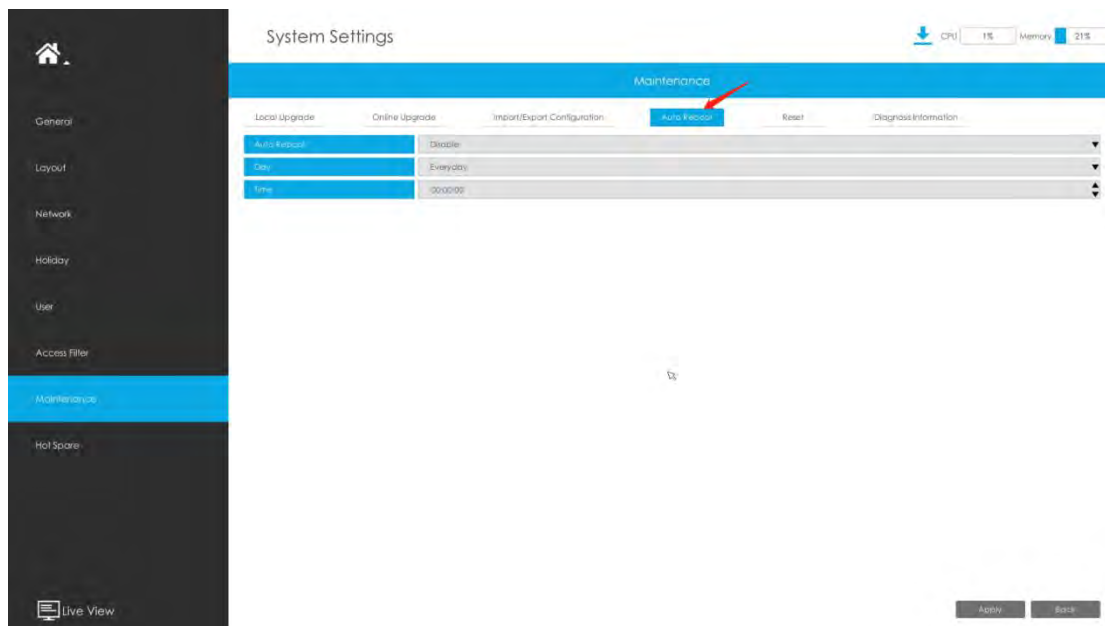
**Import/Export Configuration**

**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**



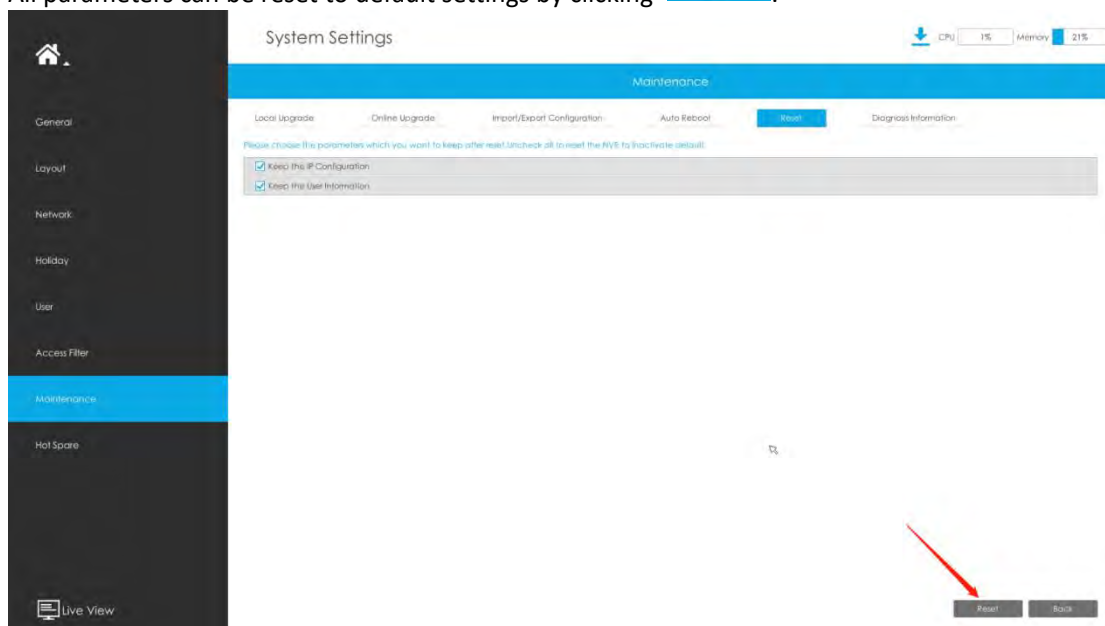
You can set day and time for reboot, and **the NVR will reboot automatically at the time you set.**

**Day:** Everyday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday and Sunday.


**Time:** Adjustable range from 00:00:00 to 23:59:59.

### Reset

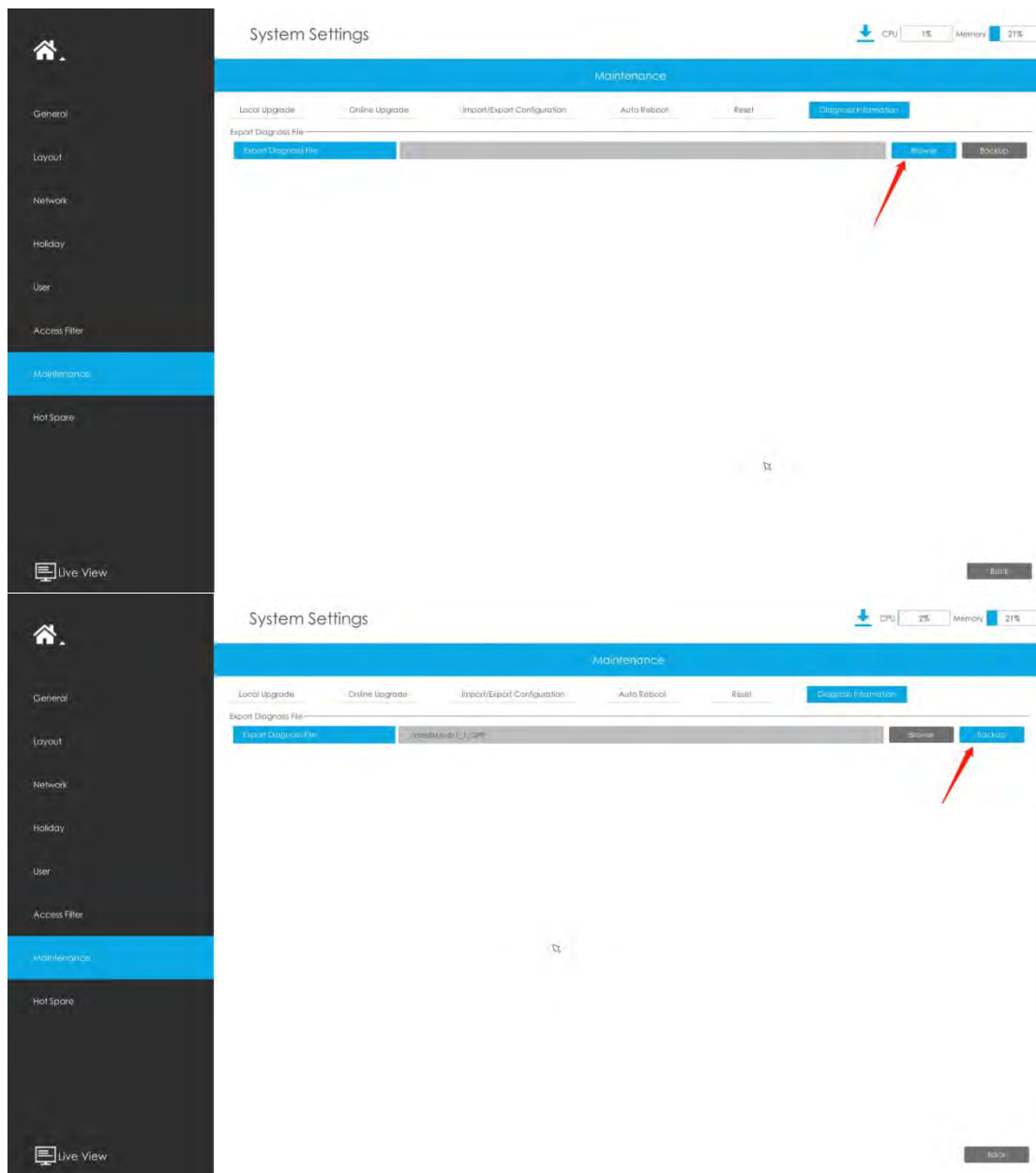
All parameters can be reset to default settings by clicking .



### Diagnosis Information

Click  to select the path to save the diagnosis file on the USB device. And then click

 to export the diagnosis file.



### 3.9.8 Hot Spare

Configured as the architecture of **N pcs Master NVRs and 1 hot spare Slave NVR**, Milesight 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

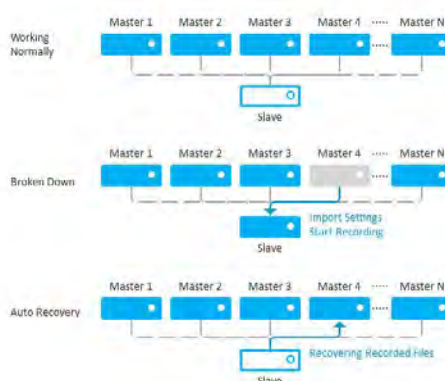
Master Status

No.	IP Address	MAC Address	Model	Connection Status	Working Status	Delete
1	192.168.40.44	ICC3160A7EF4	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.

- ① 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.
- ② 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 include Model, MAC Address, Hardware Version, Software Version, and Uptime.

Device Information	
Model	M5-N200S-1P1
MAC Address	1:CC:3:1A:0A:43:02
Hardware Version	V1.0
Software Version	V2.0.0.19-08
Uptime	19:02:13 (up 879)

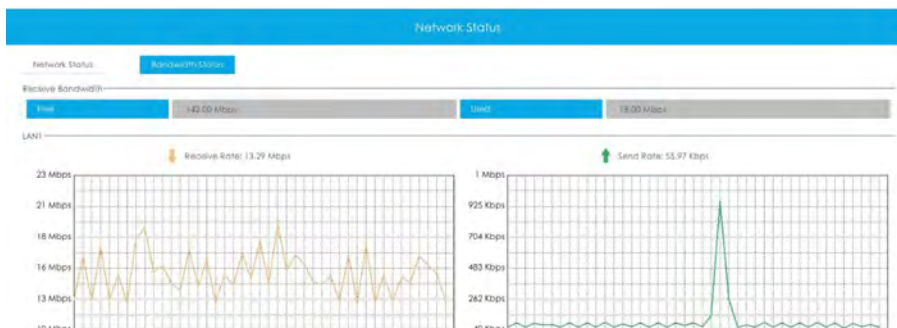
#### 3.10.2 Network Status

Network Status includes three main parts: Network Status and Bandwidth Status.

##### Network Status

Network Status			
Network Status		Bandwidth Status	
LAN1			
Connection	IPV4 IPv6	Mode	100 Mbps Full
IPv4 DHCP	Disable	IPv4 Mode	Manual
IPv4 Address	192.168.1.111	IPv4 Address	
IPv4 Subnet Mask	255.255.240.0	IPv4 Prefix Length	
IPv4 Gateway	192.168.1.1	IPv6 Gateway	
Preferred IPv6 Address	FE80::1	Multicast	Enable
Alternate IPv6 Address		MAC	1:CC:3:1A:0A:30:92

##### Bandwidth Status



### 3.10.3 Camera Status

Camera Status includes Channel, Name, IP Address, Record, Frame Rate, Bit Rate, Frame Size and Status.

Camera Status							
Channel Status		PoE Port Status					
Channel	Name	IP Address	Record	Frame Rate	Bit Rate	Frame Size	Status
1	CAM1	192.168.14.102	On	25 fps	4.13 Mbps	1920x1080	Connected
2	CAM2	192.168.14.103	Off	25 fps	4.13 Mbps	1920x1080	Connected
3	CAM3	192.168.14.105	Off	25 fps	3.90 Mbps	2560x1440	Connected
4	CAM4	192.168.7.161	Off	0 fps	0 bps	0x0	Disconnected
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				
Channel 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:  
 1. The rated power consumption of all PoE ports is 120.00W.  
 2. 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						
ID	Vendor	Model	Size	Free	Property	HDD Type	Group	
0	WDC WD2008EV1 08A231	Normal	232.89 GB	217.00 GB	R/W	LOCAL	0	

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						
ID	Attribute Name	Value	Unit	Threshold	Now Value	Status
01	Raw_Read_Error_Rate	200	200	51	2	OK
03	Spin_Up_Time	142	131	21	1864	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	37264	OK
0A	Spin_Retry_Count	100	100	0	0	OK

Part	2
Test Progress	
Test Type	FAST
Temperature/Ct	35
Uptime	37264
Self-evaluation	PASSED
All self-evaluate	In good condition
SMART 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.

Event Status					
Channel	Name	IP Address	Video Loss	Motion	I/O
1	CAM1	192.168.7.94			
2	CAM2	192.168.7.189			
3	CAM3	192.168.7.223			
4	CAM4	-			
5	CAM5	-			
6	CAM6	-			
7	CAM7	-			
8	CAM8	-			

#### Alarm

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.

**VCA**

It shows the VCA status. will turn into when alarm is triggered.

**People Counting**

It shows every camera's current In/Out number of people counting.

**Event Status**

Channel	Name	IP Address	In Count	Out Count
1	CAM1	192.168.7.100	1077	1061
2	CAM2	192.168.14.102	0	0
3	CAM3	192.168.7.104	0	0
4	CAM4	192.168.10.108	0	0
5	CAM5	192.168.14.105	0	0
6	CAM6	192.168.9.211	--	--
7	CAM7	192.168.8.223	--	--
8	CAM8	192.168.14.103	--	--
9	CAM9	192.168.14.105	--	--
10	CAM10	192.168.14.105	--	--
11	CAM11	192.168.14.105	0	0
12	CAM12	192.168.7.119	--	--
13	CAM13	--	--	--
14	CAM14	--	--	--
15	CAM15	--	--	--
16	CAM16	--	--	--
17	CAM17	--	--	--
18	CAM18	--	--	--
19	CAM19	--	--	--
20	CAM20	--	--	--
21	CAM21	--	--	--
22	CAM22	--	--	--
23	CAM23	--	--	--
24	CAM24	--	--	--
25	CAM25	--	--	--

### 3.10.6 Group Status

Check Group Status. The status of the all created Groups can be sorted by Group or Channel.

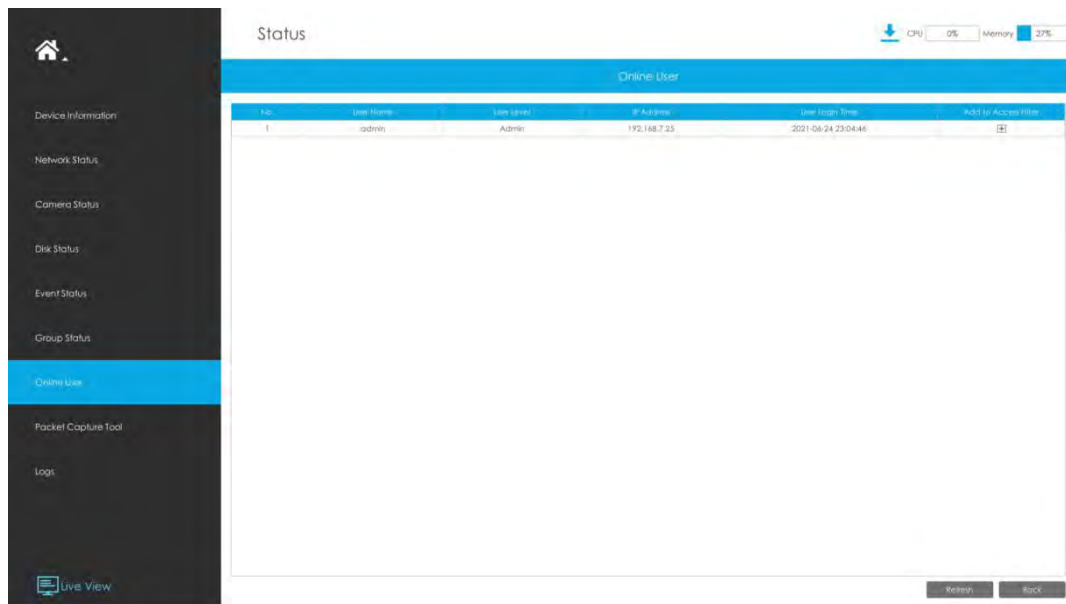
**Group Status**

Group	Channel
1	112
2	5
3	--
4	--
5	--
6	--
7	--
8	--
9	--
10	--
11	--
12	--
13	--
14	--
15	--
16	--

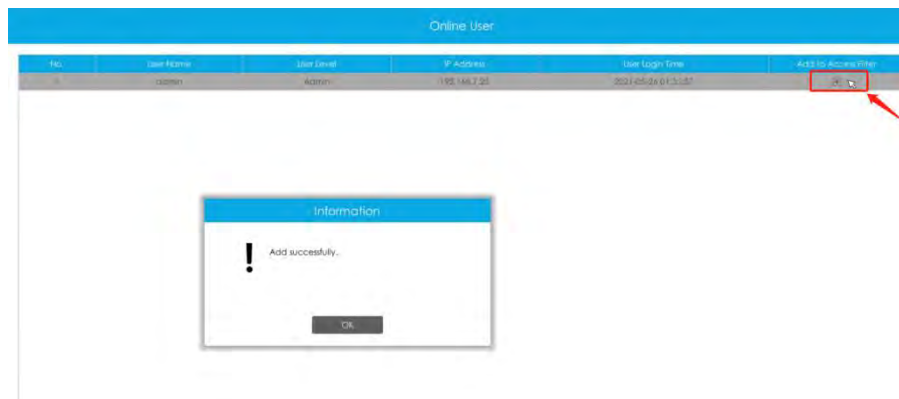
### 3.10.7 Online Users

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 IP address can be added to Access Filter interface from Online User interface directly.



### 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.




**Note:**

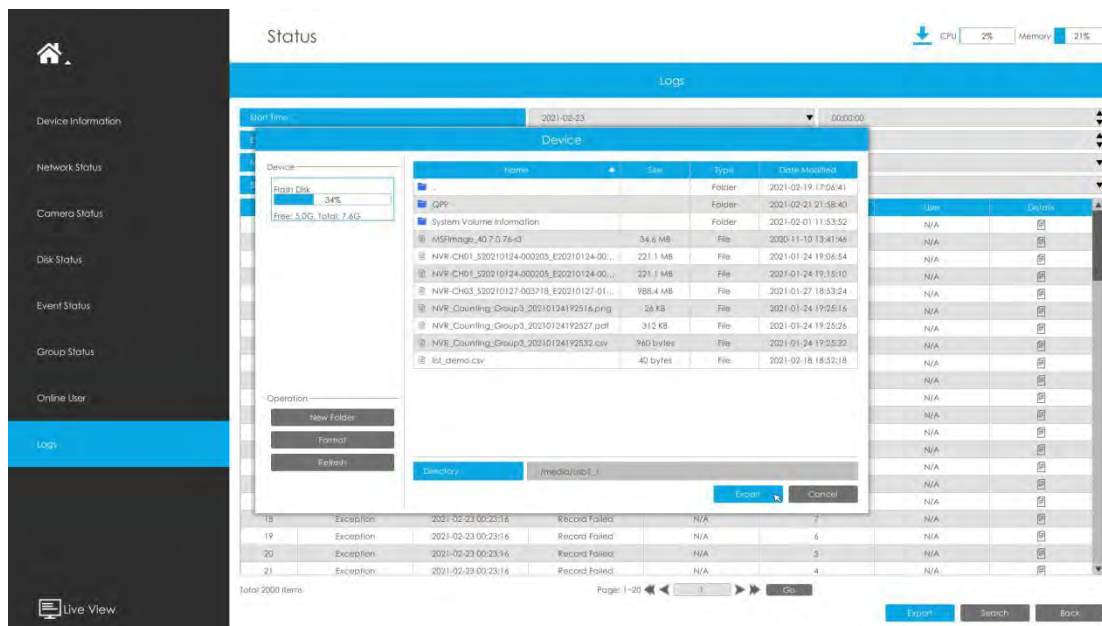
It is recommended to capture packets not more than 3 minutes on the local monitor side.

### 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  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.

- ① Region Entrance
- ② Region Exiting
- ③ Advanced Motion Detection
- ④ Line Crossing
- ⑤ Loitering



## 3.11 Logout



**Logout:** Exit the current login account.

**Reboot:** Restart the NVR.

**Shutdown:** Close the NVR.

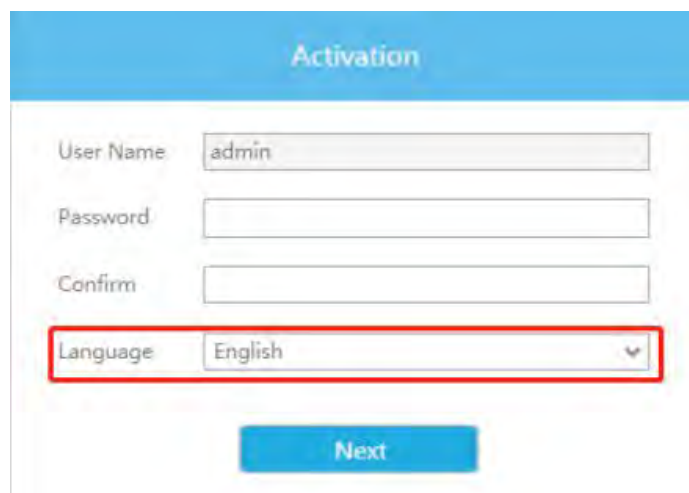
## 4.WEB Settings

### 4.1 Account Setting

**Note:**

Only the NVR firmware version xx.9.0.3 or above supports account activation.

**Step1. Set password to active admin account.**



The screenshot shows the 'Activation' interface. It has a blue header with the title 'Activation'. Below the header, there are four input fields: 'User Name' (containing 'admin'), 'Password', 'Confirm', and 'Language' (a dropdown menu showing 'English'). A red rectangle highlights the 'Language' field. At the bottom center, there is a blue button labeled 'Next'.

**Note:**

1. Password must be 8 to 32 characters long.
2. Password must contain at least one number and one letter.
3. You can also choose the system language on the activation interface.

**Step2. Set security questions which are used for resetting password to finish account setting.**

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.

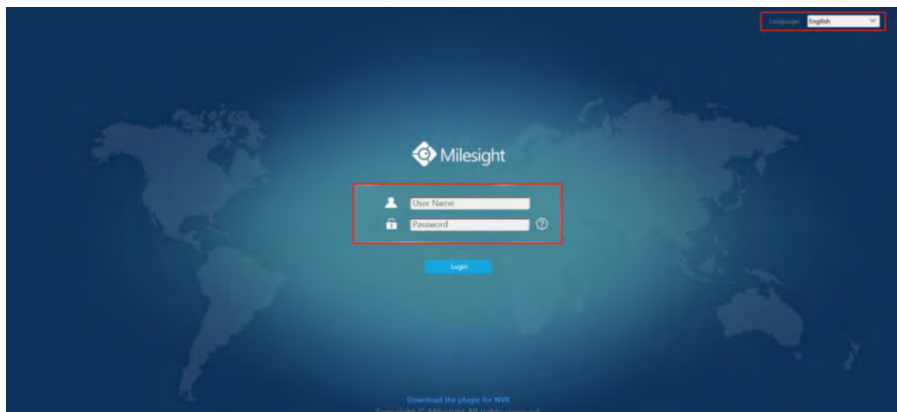


The screenshot shows the 'Security Question Setting' interface. It has a blue header with the title 'Security Question Setting'. Below the header, there are three rows of questions and answers. Each row consists of a question dropdown menu (all showing 'What's your father's name?'), an answer input field, and a small grey square icon. At the bottom, there are two blue buttons: 'Skip' and 'Finish'.

## 4.2 Login

Select Language on the top-right of interface.

Input the user name, password and click Login to login NVR web page.



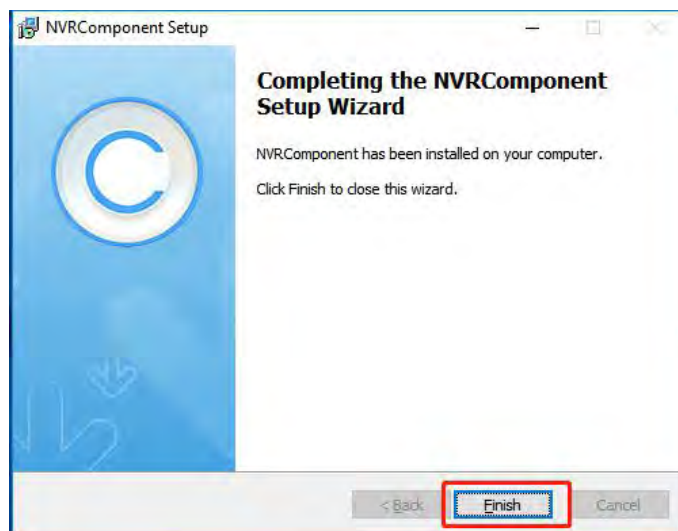
**Note:**

The account will be locked if the password is entered incorrectly for four times.

The browser will prompt to install the plugin when first logging in the device. Please click

“[Download the plugin for NVR](#)” to download the plugin for NVR.

Follow the prompts to install the plugin. When it's finished, it will pop out a window as shown below. Please click “Finish” and refresh the browser, then you will see the video.



**Note:**

During installing the plugin, please keep the browsers close.

If the firmware version of NVR is V7x.9.0.4 and above, you can preview the video on the browser without plugin in Plugin-Free mode.


1. For Windows system, Plugin-Free mode is supported in Chrome/Firefox/Microsoft Edge browser.
2. For MAC system, Plugin-Free mode is supported in Chrome/Firefox/Safari browser.



Only H.264 video codec are supported on Plugin-Free Mode for NVR. For better user experience, we recommend that you set the "profile" option to "main" on camera as shown below.

**Note:**

1. Plugin-Free mode is only supported when Chrome version is above V45, Firefox version is above V52, Microsoft Edge version is above V11 and Safari version is above V11.
2. When you use plugin-free mode, it will display "Plugin-Free" mode in "Settings" - "Local Configuration" interface.

If you forget the password, click  to reset password (Only the NVR firmware version xx.9.0.3 or above supports this.).

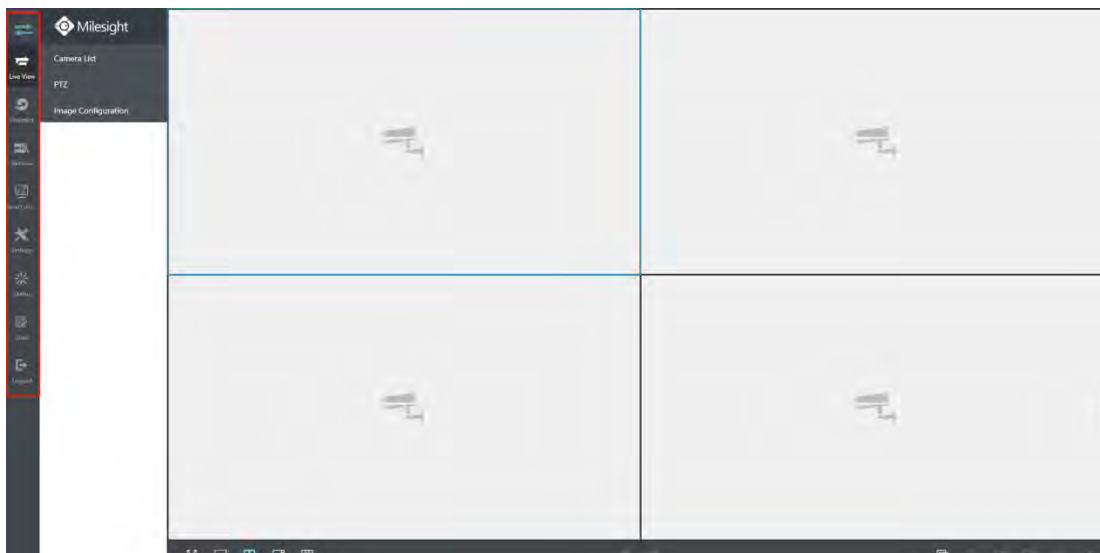
**Note:**

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”.

- If the NVR firmware version is xx.9.0.3 or above, please set the password before login.

### 4.3 Menu



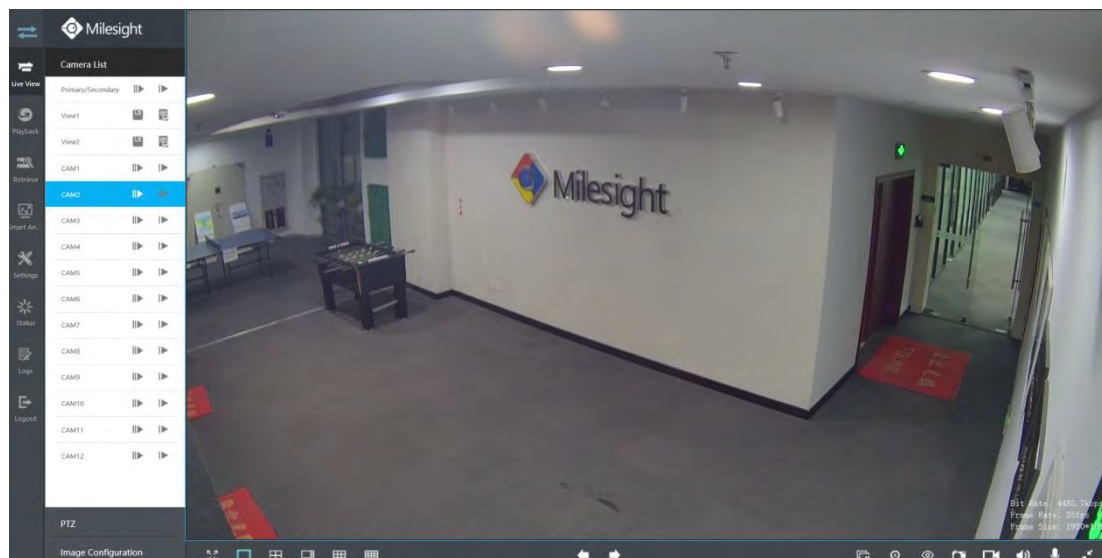
Icons	Descriptions
	Hide or show secondary menu
	Live view
	Play back the video
	Back Up Files
	Smart Analysis
	Make settings for Camera, Record, Event and System
	Check Device Information, Network Status, Camera Status, Disk Status and Event Status
	Check all operation logs
	Log out NVR

## 4.4 Live View

### 4.4.1 Camera List

List and play added cameras on Camera List page.

Select one window one camera to play. Or click to get all cameras' live video.



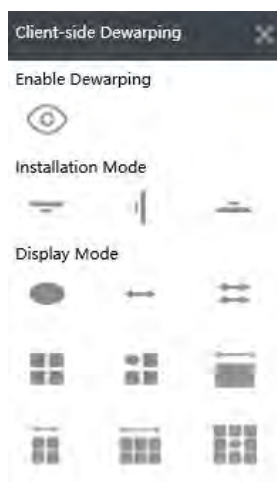
Icons' descriptions of Live View

Icons	Descriptions	Icons	Descriptions
	Play Primary Stream		Play Secondary Stream
	Save View		Play default view
	Full screen		1 screen mode
	4 screens mode		8 screens mode
	9 screens mode		16 screens mode
	Previous page		Next page
	Stop all live view		Start all live view
	Digital zoom		Fisheye Client-side Dewarping

	Snapshot		Record
	Audio on		Audio off
	Two-way Audio		Original Image
	Resize Image		

### Fisheye Client-side Dewarping

Click to enable Client-side Dewarping on the panel that pops up when the selected channel plays successfully. Users can dewarp the original Fisheye view into various modes in the live view interface on demand, including Installation Mode and Display Mode. There are 3 options for Installation Mode: Ceiling, Wall and Flat. And there are 9 options for Display Mode: 1O, 1P, 2P, 4R, 1O3R, 1P1R, 1P4R, 1P6R, and 1O8R.

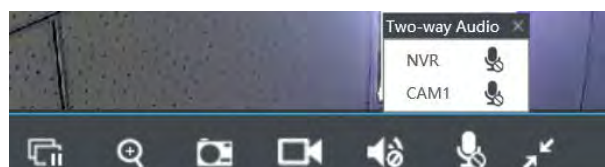


**Note:**

Make sure your NVR model is MS-NXXXX-U(P)H.

### Two-way Audio

Click to enable Two-way Audio. You can select to talk with camera or NVR.






**Note:**

1. For NVR that does not support the Audio I/O interface, it only supports to talk with camera through Web page.
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, but

if you are using Two-way Audio on one web page, you can use Audio on another page.

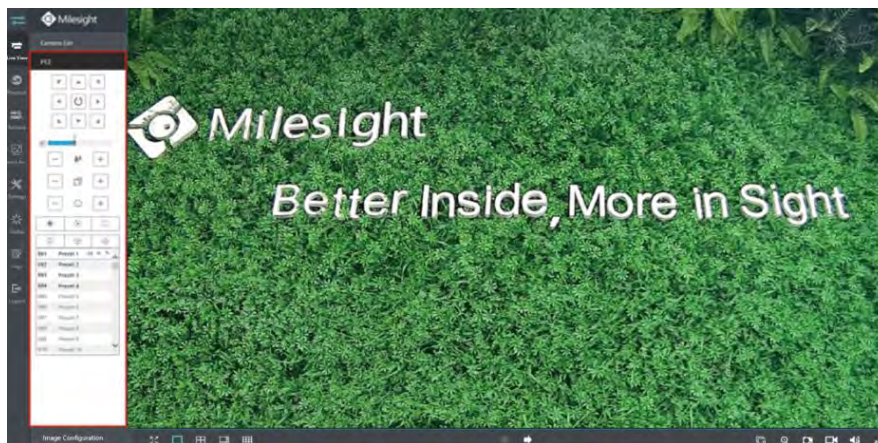
4. The audio interface of NVR can only be used alone. When other devices are talking to NVR, it would indicate that the device is busy if you enable Audio or Two-way Audio of other channels at the same time.

And there are multiple icons on each channel displayed in live view, indicating video loss and alarm status of the channel.

Icons	Descriptions
	It indicates video loss
	It indicates motion detection alarm
	It indicates VCA alarm

### 4.4.2 PTZ

For PTZ cameras, you can operate PTZ, Preset, Patrol, Pattern, Lighting for 30s, Lens Initialization and Auxiliary Focus on PTZ page directly.



**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 Fisheye Auto Tracking.
2. Fisheye channels also support the PTZ operation, which allows users to adjust the on-board monitoring angle of Fisheye view.

### 4.4.3 Image Configuration

Adjust image Brightness, Contrast, Saturation, Sharpness and Noise Reduction Level on Image

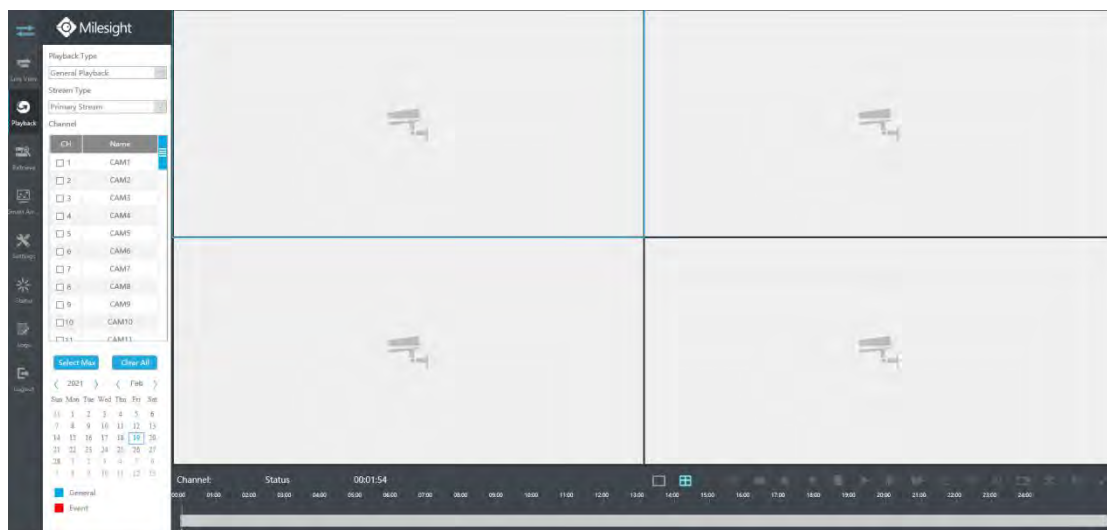


Configuration page.



## 4.5 Playback

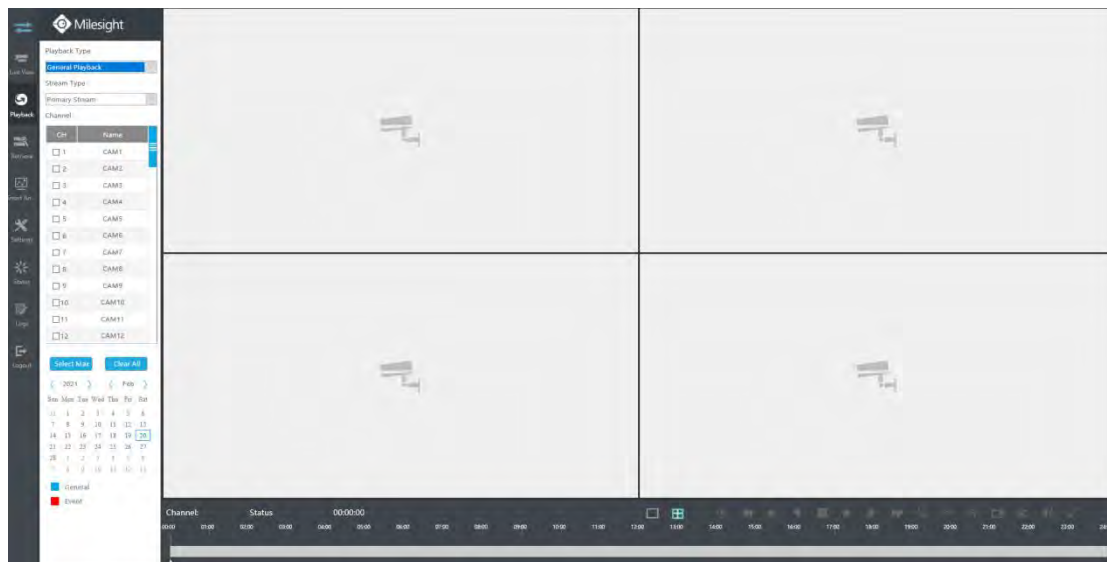
To play and backup the recorded files.



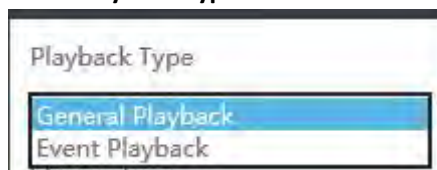


## 4.5.1 How to playback

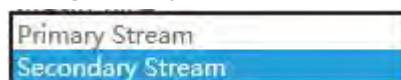
### 4.5.1.1 General Playback



**Step 1. Select General Playback as Playback Type.**



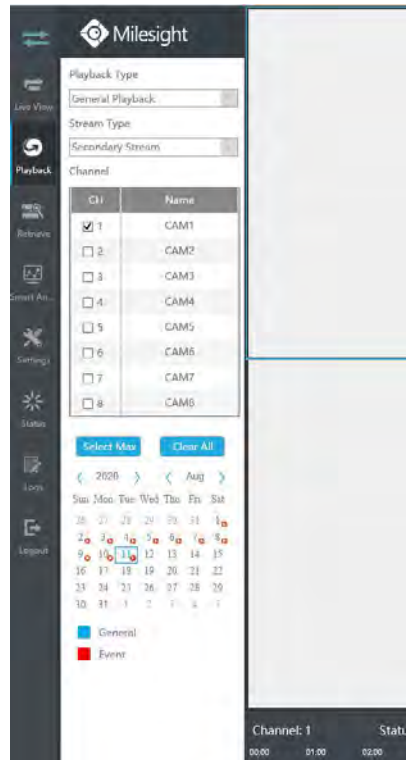
**Step 2. Select Stream Type, including Primary Stream and Secondary Stream.**



**Step 3. Select channel you want to do playback.**

**Note:**

The playback stream you selected will be remembered when you reenter the web playback page.

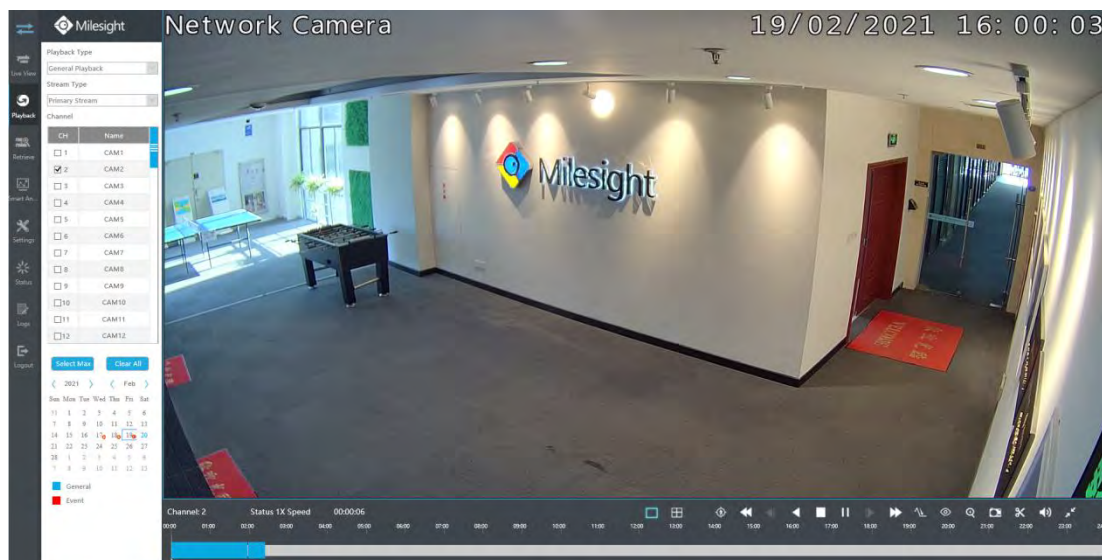


**Step 4. Select Date.**

**Step 5. Click  to play.**

**Note:**

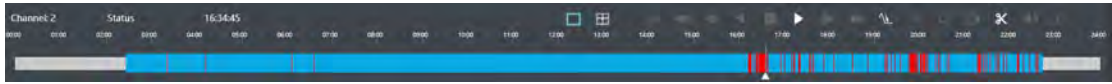
Only the day with a red mark means that there are recorded files.



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 that in this record period what kind of event has happened. The symbolic meaning of each color is:

**Blue**—General

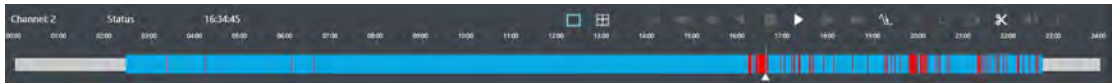
**Red** --- Event



**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.

**Video Playback Tool Bar Description**



The tool bar can display multi-event recording. It shows that in this record period what kind of event has happened. The symbolic meaning of each color is shown below:

**Blue**—Timing


**Red** --- Event

And take this bar below as an example, it means that there is continuously recording in this period.

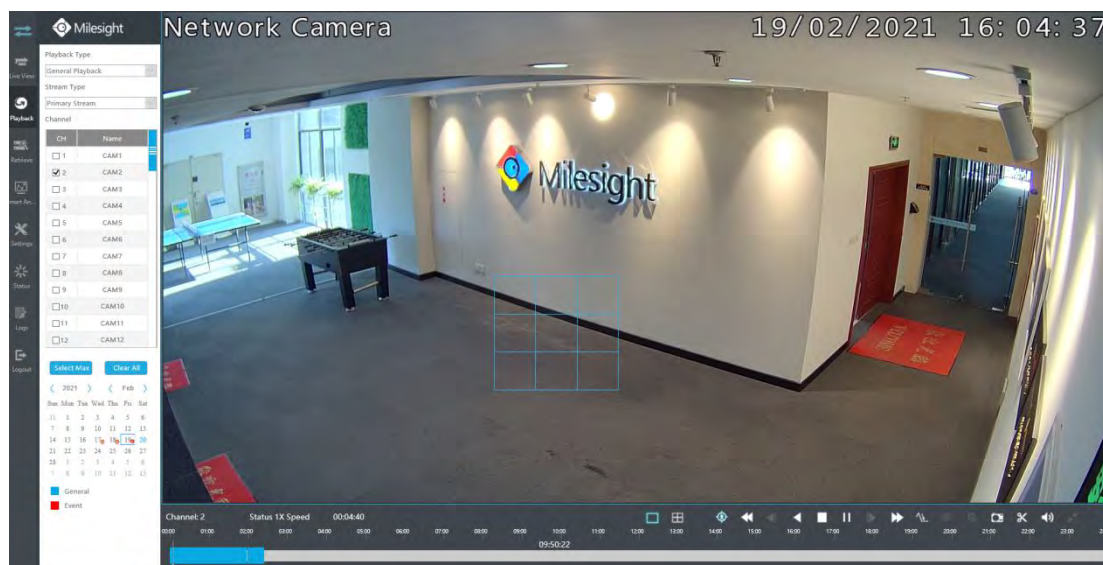
Icons	Descriptions	Icons	Descriptions
	1 screen mode		4 screens mode
	Smart Search		Speed Down
	Step Reverse		Rewind
	Stop		Play
	Pause		Step Forward
	Speed Up		Transcoding
	Client-side Dewarping		Digital Zoom
	Snapshot		Backup
	Audio On		Audio Off
	Original Image		Resize Image

**Smart Search:** NVR can search out all relevant motion events and play all the event recording files of the certain 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.



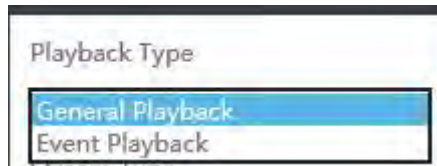
**Note:**

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.

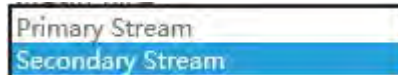
### 4.5.1.2 Event Playback



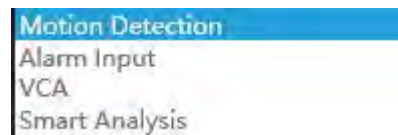
**Step 1. Select Event Playback as Playback Type.**



**Step 2. Select Stream Type, including Primary Stream and Secondary Stream.**



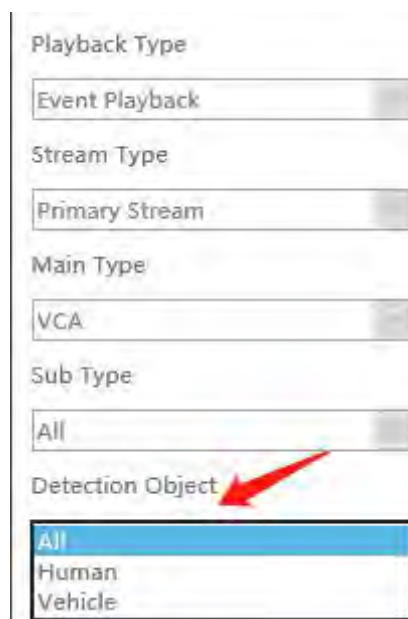
**Step 3. Select Event Type**



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:

- ① Region Entrance
- ② Region Exiting
- ③ Advanced Motion Detection
- ④ Line Crossing
- ⑤ Loitering



**Step 4. Select channel you want to do playback.**

**Step 5. Set Start Time and End time.**




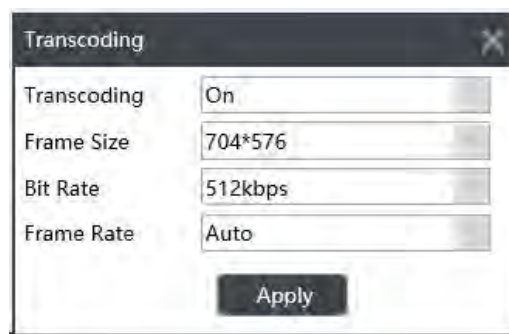
**Step 6.** Click  to search files.

**Step 7.** Click  to play.

## 4.5.2 Transcoding

With transcoding function, remote playback will have a better performance no matter what network environment is.

**Step 1.** After successfully search out or play video, select the channel you want to transcoding and click  to expand transcoding panel.



**Step 2. Set Transcoding parameters.**

Set Transcoding, Frame Size, Bitrate and Frame Rate according to the network situation. The worse network situation, the lower transcoding parameter.


**Step 3.** Click  to make transcoding take effect.

## 4.5.3 Video Files Backup

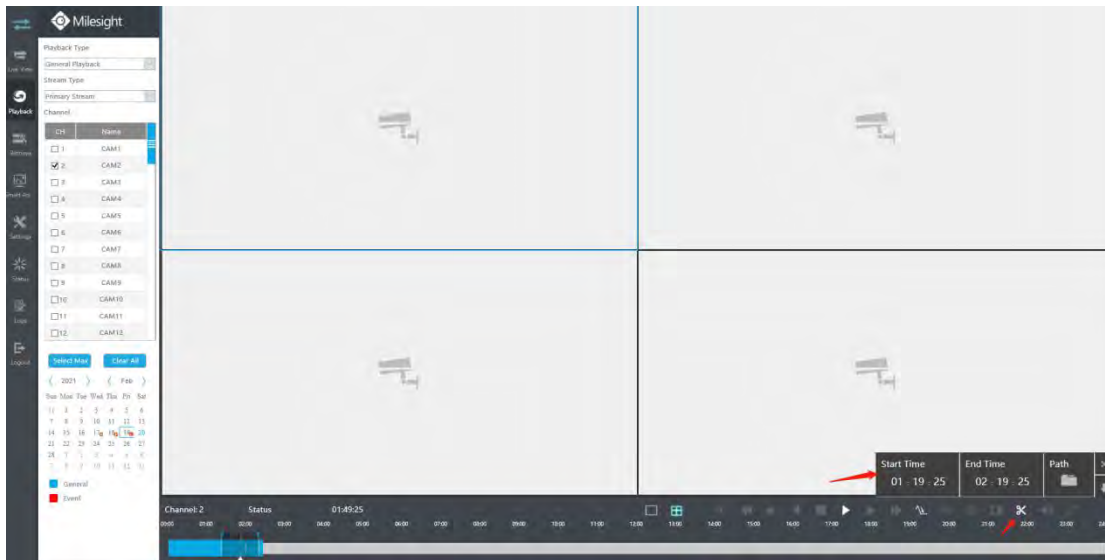
Recorded files can be cut and backed up from WEB.

**Step 1.** In playback interface, select camera, stream type, the date and time to search record video.

**Step 2. Select Recorded files for Backup.**

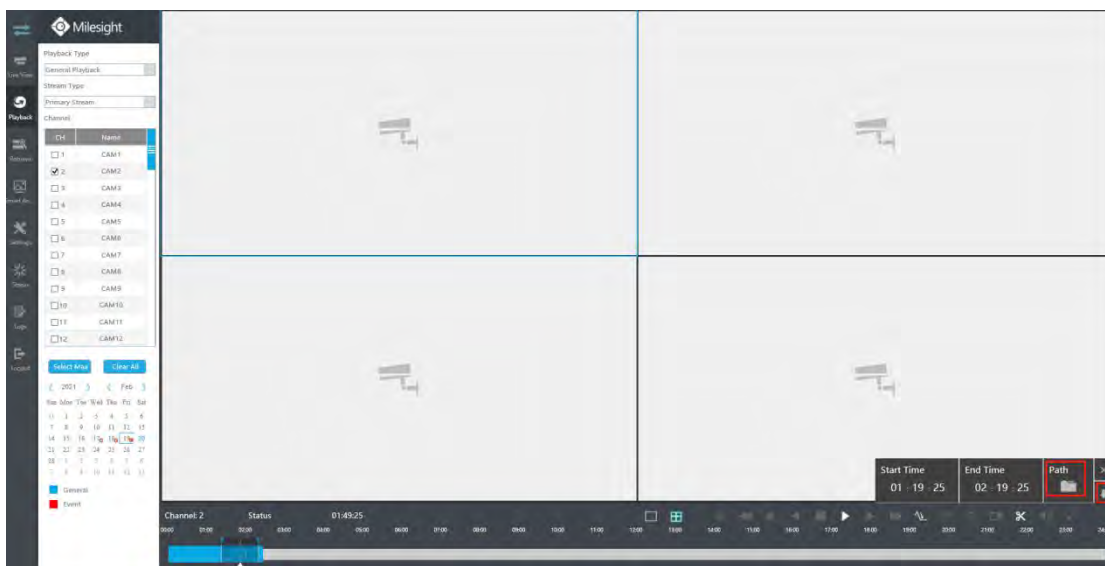
Click , then select start time and end time by dragging the vertical line on the time bar.





**Step 3. Backup the recorded files.**


Click to select file path, then click to back up recorded files.



## 4.5.4 Picture Files Backup

**Step 1. Browse a playback picture path in Local Configuration interface.**



**Step 2.** Click  to save the picture during video playback. Then the backup picture can be found in the files path you set before.

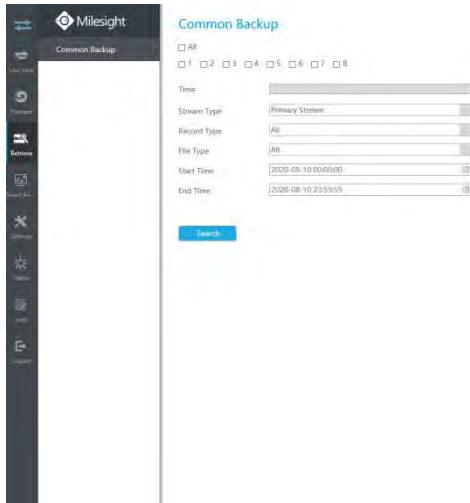
**Note:**

It is recommended to run browser as administrator before getting playback snapshot.

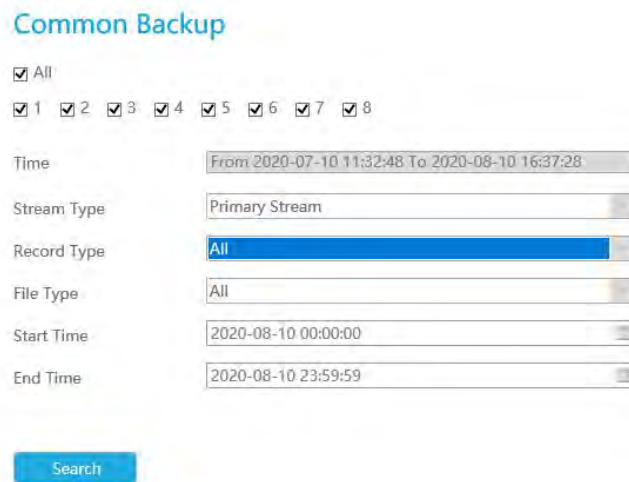


## 4.6 Retrieve

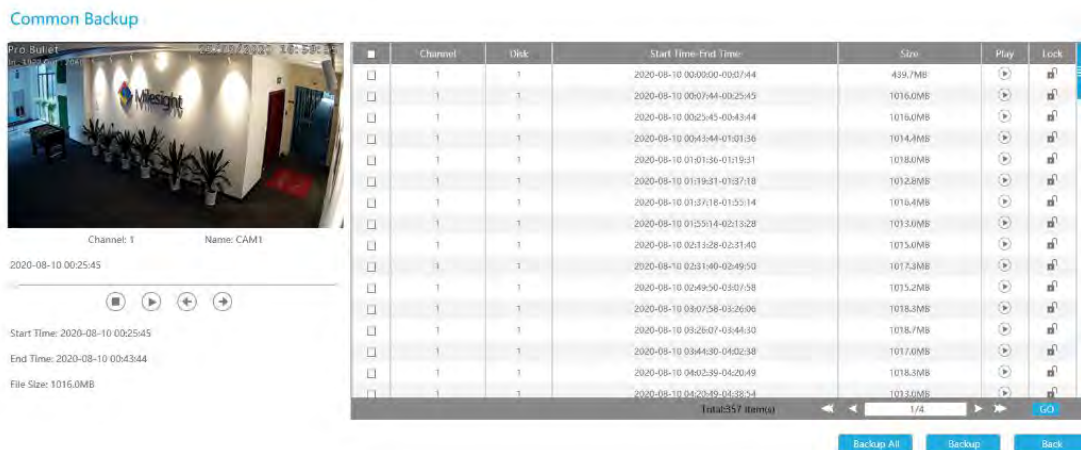
Support to the search of record file according to different stream type, record type and file type you set.




**Step1:** Set the search condition and click  to search video.





The search result can be shown as a list.

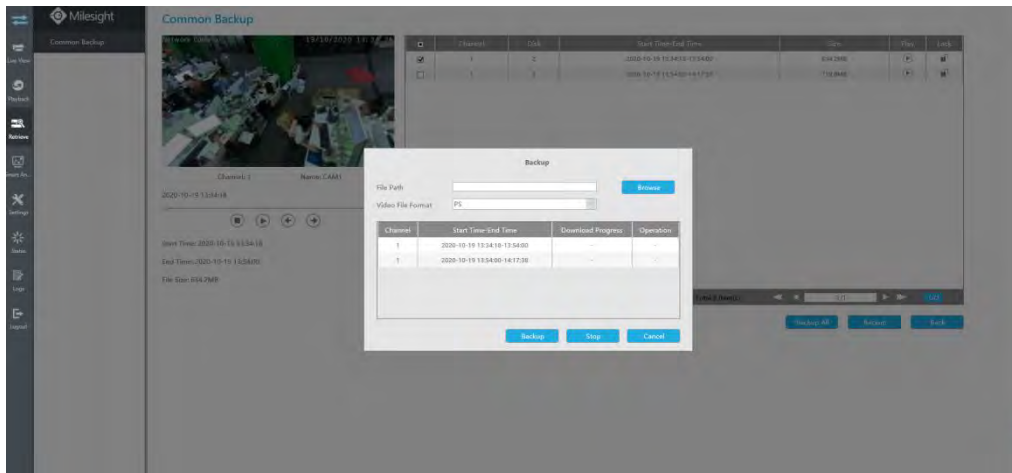


**Step2:** Select the file you want to backup and click . Also, you can click

**Backup All** 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 in won't be overwritten.

**Step3: Select File Path and the format to be exported, which includes MP4, AVI and PS format and then click **Backup** to export selected files.**



## 4.7 Smart Analysis

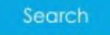
You can get ANPR logs, People Counting results and Heat Map results in the page, as well as Settings for ANPR, People Counting and Heat Map.

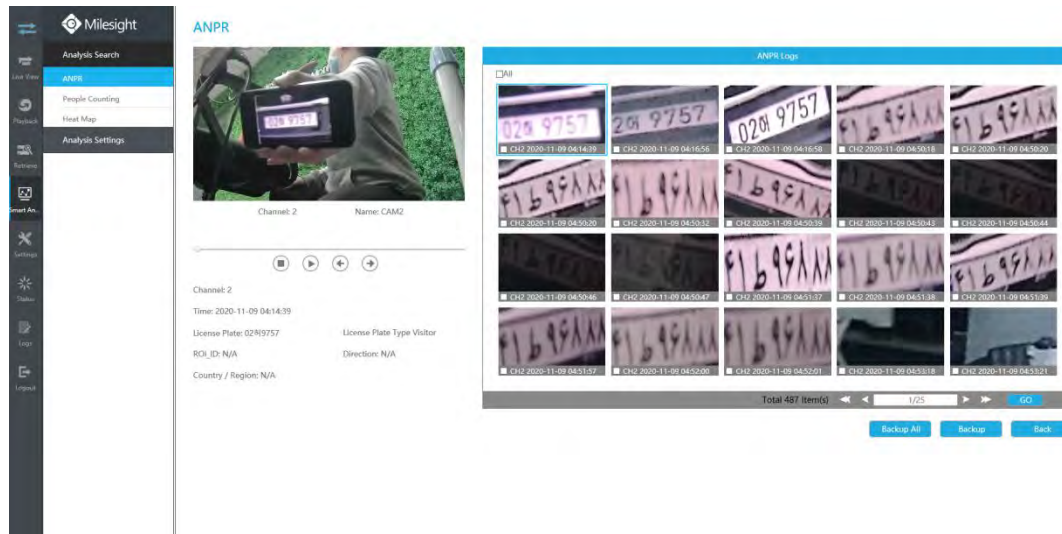


## 4.7.1 Analysis Search

### 4.7.1.1 ANPR

You can Search and Backup ANPR logs.

Input corresponding 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.




You can click  to play the video.

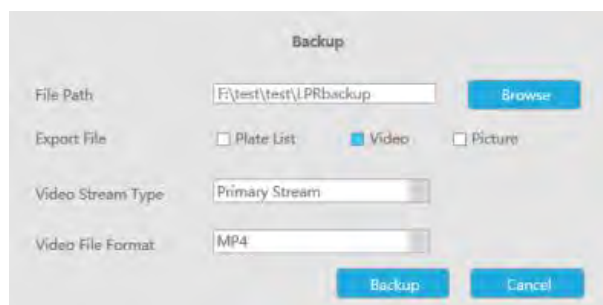


There are two methods to backup ANPR logs.

- ① Backup license plates you want.

**Step 1:** Tick license plates you want to backup and click  ;

**Step 2:** Select the export file type, video stream type and video file format, and then click



② Backup all.

**Step 1:** Click backup all  button;

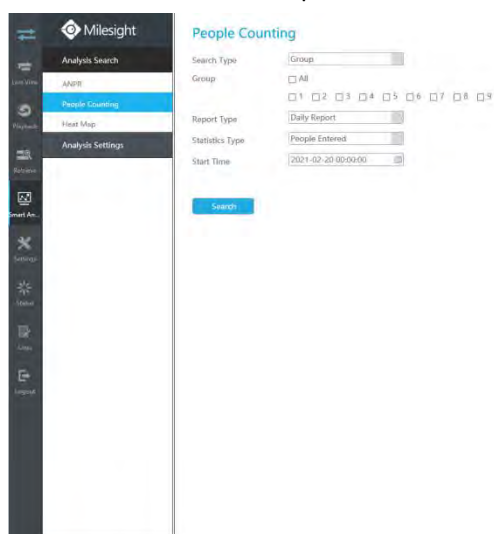
**Step 2:** Select the export file type, video stream type and video file format, then click export button.

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

 Picture	12/19/2019 6:49 AM	File folder
 Plate List	12/19/2019 6:48 AM	File folder
 Video	12/19/2019 6:49 AM	File folder

### 4.7.1.2 People Counting

You can Search and Backup the results of People Counting.




**Step 1:** Entering search conditions.

**Group:** Select the groups first.

**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.

**Step 2:** 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.







**Step 3:** You can backup the results of People Counting in two ways:

① Backup the group you want.

**Step 1:** Choose the group you want to backup and click backup button  ;

**Step 2:** Select the file format, and then click backup button  .

② Backup all.

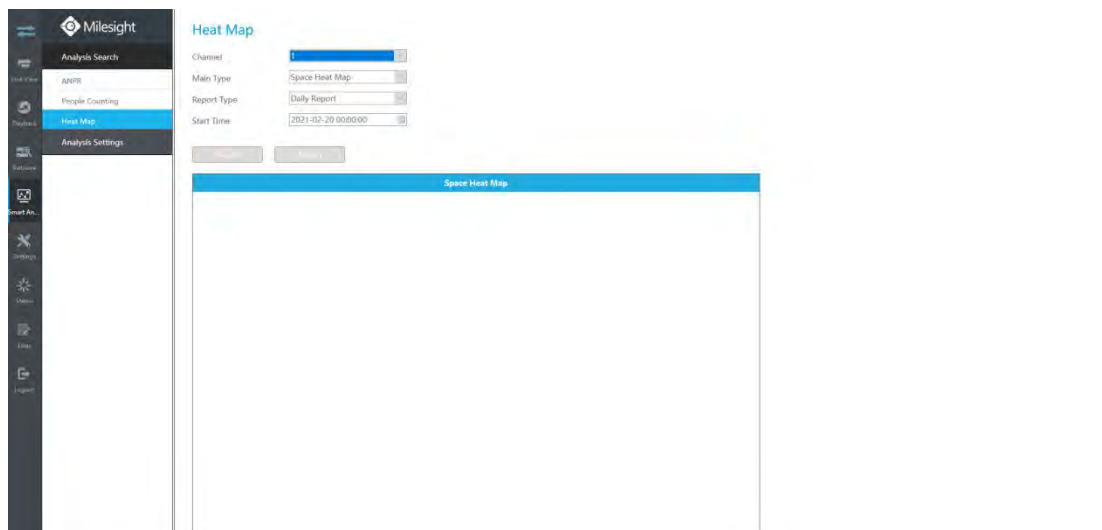
**Step 1:** Click backup all button  ;

**Step 2:** Select the file format, and then click backup button.

Then you will get corresponding file.

### 4.7.1.3 Heat Map

You can Search and Export Heat Map results.

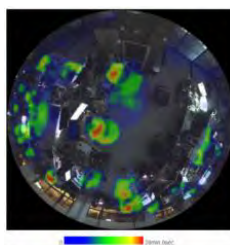


**Step 1:** Entering search conditions.

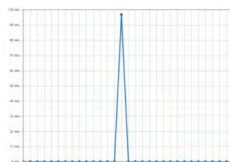
**Channel:** Select the channel first.

**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.



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

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

**Step 2:** Click  to obtain the corresponding result and then you can click  to export it.

## 4.7.2 Analysis Settings

### 4.7.2.1 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:**

1. Insert available HDD to NVR.
2. Upgrade your device to corresponded firmware version.  
Camera: V4X.7.0.72-r16 or above.  
NVR: V7X.9.0.7-r7 or above.  
Firmware download link: <http://www.milesight.com/support/download#firmware>
3. Ensure both camera and NVR support LPR/ANPR function. Up to 16 ANPR channels are supported for Milesight NVR.
4. 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 -> LPR -> Settings -> General interface.

**LPR Message Post Settings**

Enable LPR Message Post:

Post Type: TCP

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.

**ANPR**

Settings | List Management | Black List Mode | White List Mode | Visitor List Mode

Channel Event

Channel:

ANPR:

Image Settings

LPR Night Mode:

Region Settings

Note: Please draw the screen for settings!

ID	Name	Edit	Delete
1	803		

Event Settings

License:

License Status:

Processing Resolution:

Effective Time:

Detection Settings:

Note: Please config the Action in Black List / White List or Visitor Mode.

**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.

**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 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.

ID	License Plate Character Count	License Plate Format	Enable	Edit	Delete
0	All	*	<input type="checkbox"/>	-	-
1	7	AAA1111	<input checked="" type="checkbox"/>		

- ① Click  to add a License Plate Format.

- ② Select License Plate Character Count, which is 1-9.  
 ③ 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.

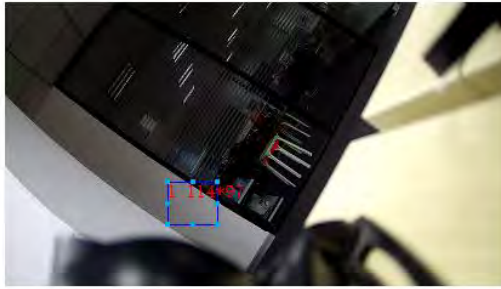
**Note:**

1. Make sure your IPC 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.

## Region Settings

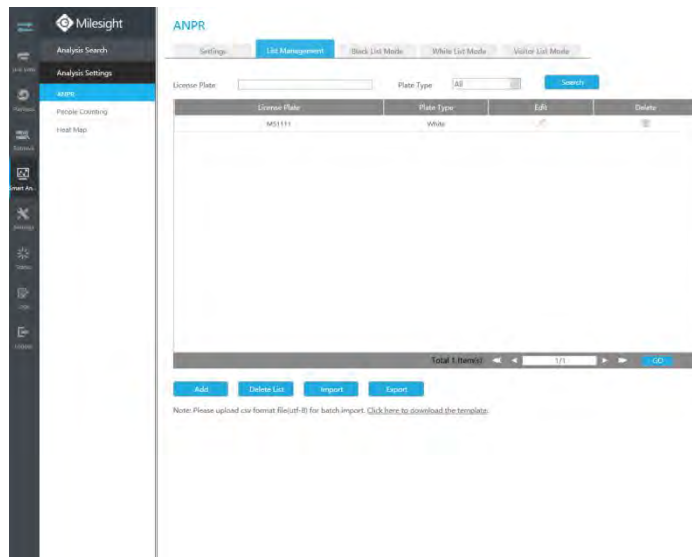


Note: Please draw the screen for settings!

ID	Name	Edit	Delete
1	ROI_1		

## 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.



There are two methods to add license plates:

① 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;

**Add License Plate**

License Plate

Plate Type



② Batch adding by importing template.



**Step 1:** Click [Click here to download the template.](#) 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  to add all license plates into list.

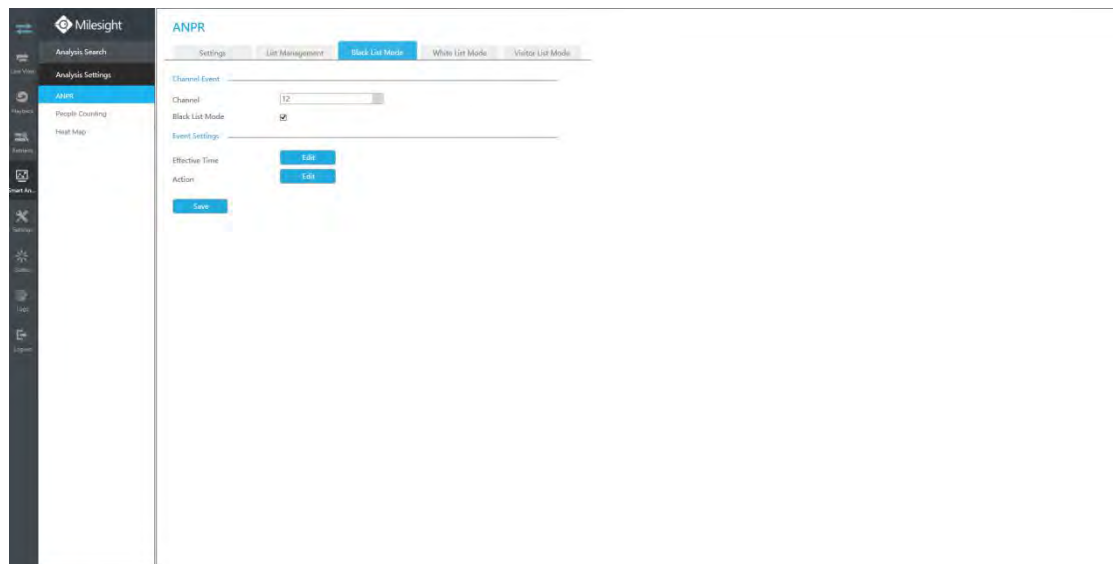
### Black List Mode/White List Mode/Visitor Mode

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.




**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, PTZ Action, Alarm Output, White LED and Trigger Channels Record.

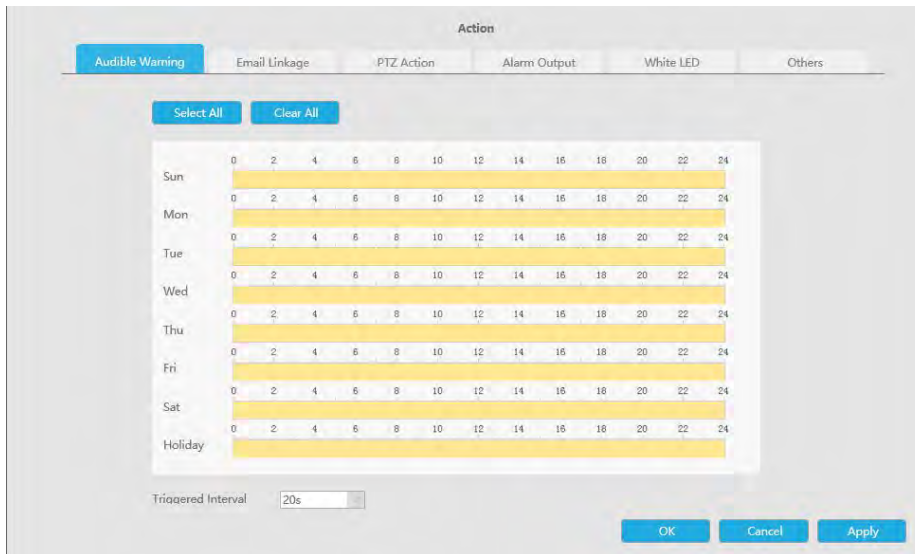
**Audible Warning:** NVR will trigger an audible beep when region entrance is detected.

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. You can click  to copy the corresponding time Settings to any other time you want.


② It will be more convenient by clicking  or  to set or clear all time settings.

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



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

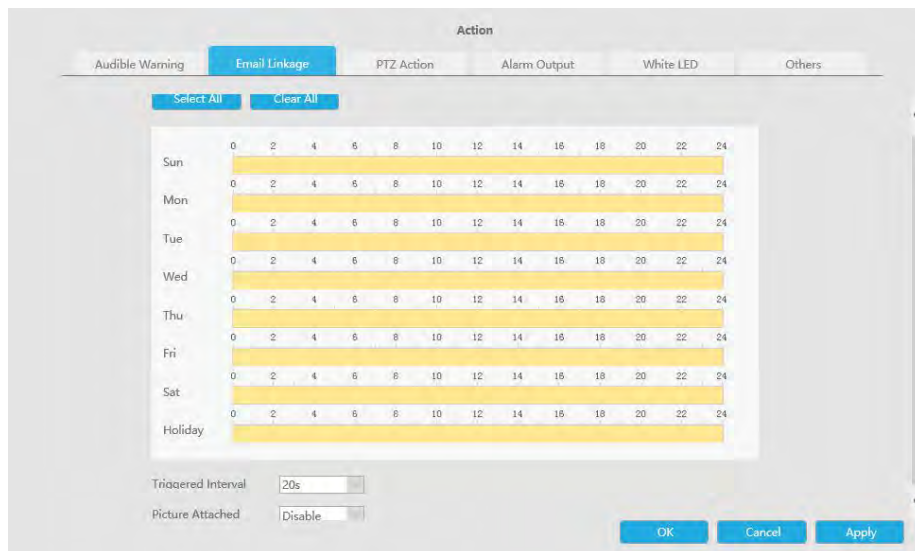
The user can set effective schedule as following two ways:

① Select the operation type: Audible or Erase. Then drag a square on the time table for time setting. You can click  to copy the corresponding time Settings to any other time you want.

② It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.


**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.



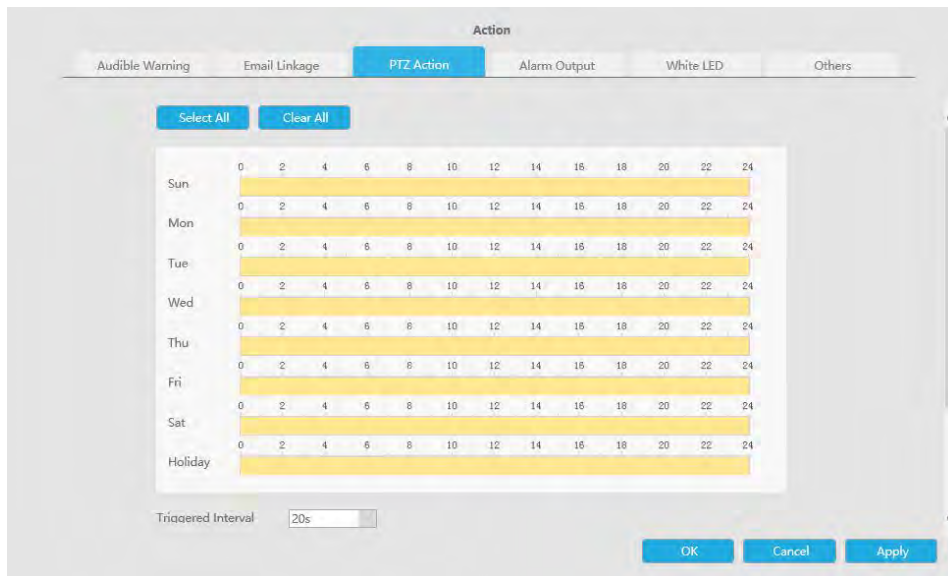
**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**.

User can set effective schedule as following two ways:

① Select the operation type: Audible or Erase. Then drag a square on the time table for time setting. You can click  to copy the corresponding time Settings to any other time you want.

② It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.

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



And you can add PTZ Action by clicking **Add**.



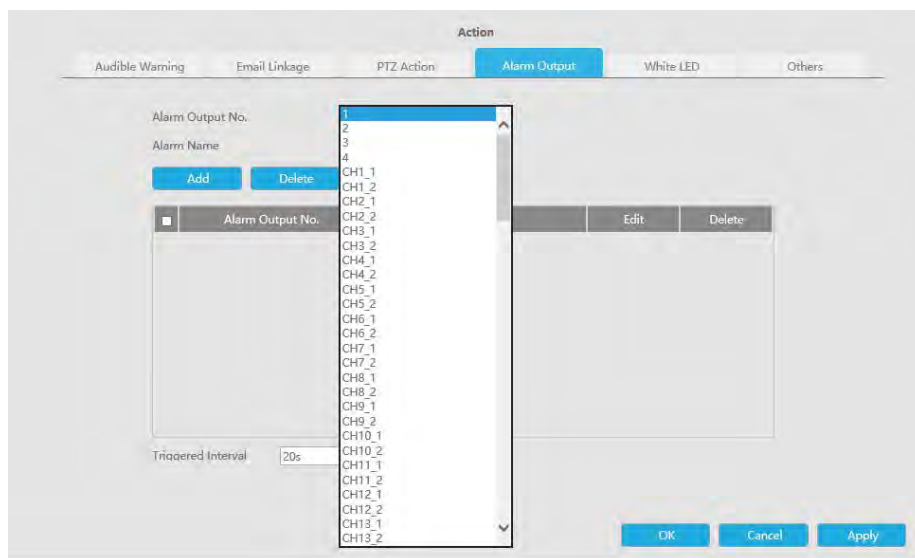
**Channel:** Select the channel which supports this function.

**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.



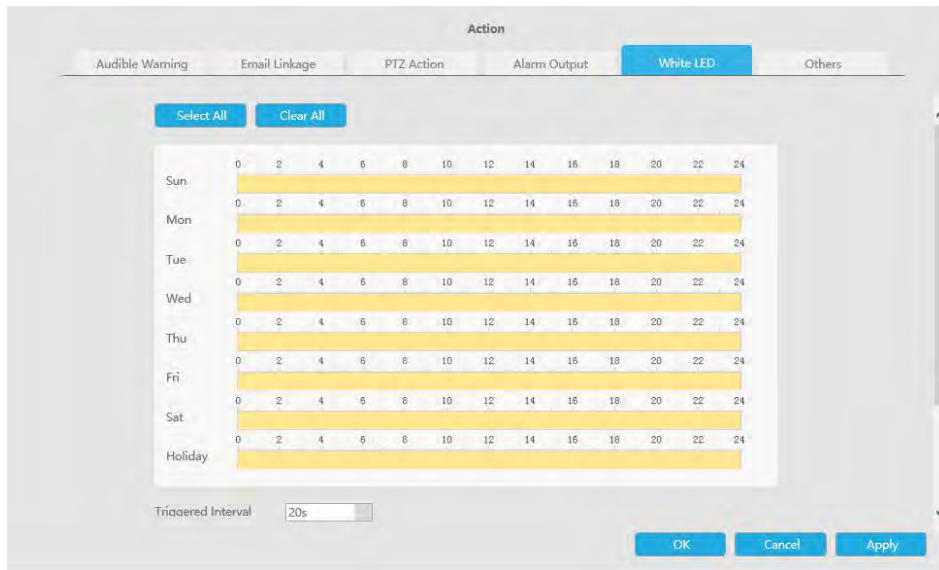
**White LED:** Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

① Select the operation type: Audible or Erase. Then drag a square on the time table for time setting. You can click  to copy the corresponding time Settings to any other time you want.

② It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.

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



And you can add White LED by clicking **Add**.

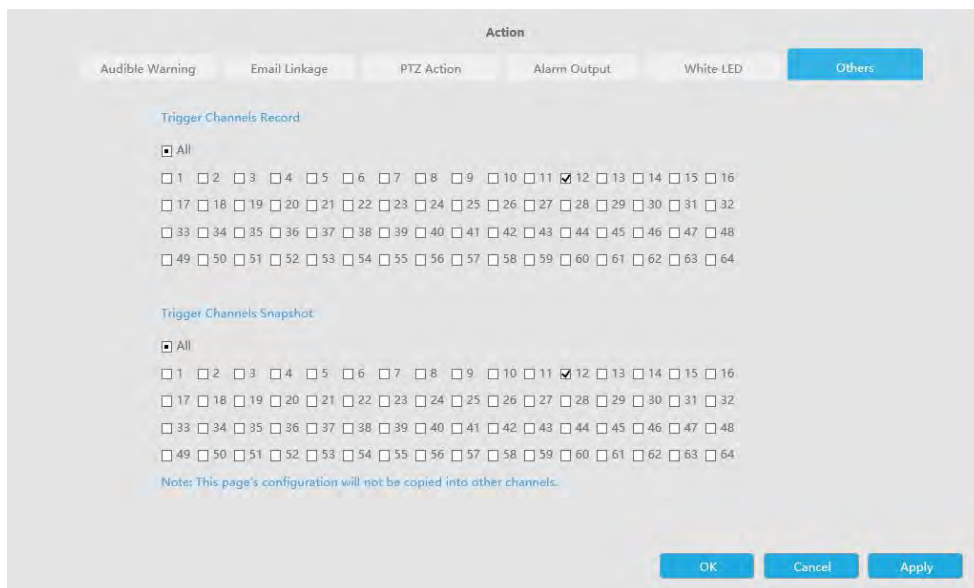


**Channel:** Select the channel which supports this function.

**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.



**Note:**

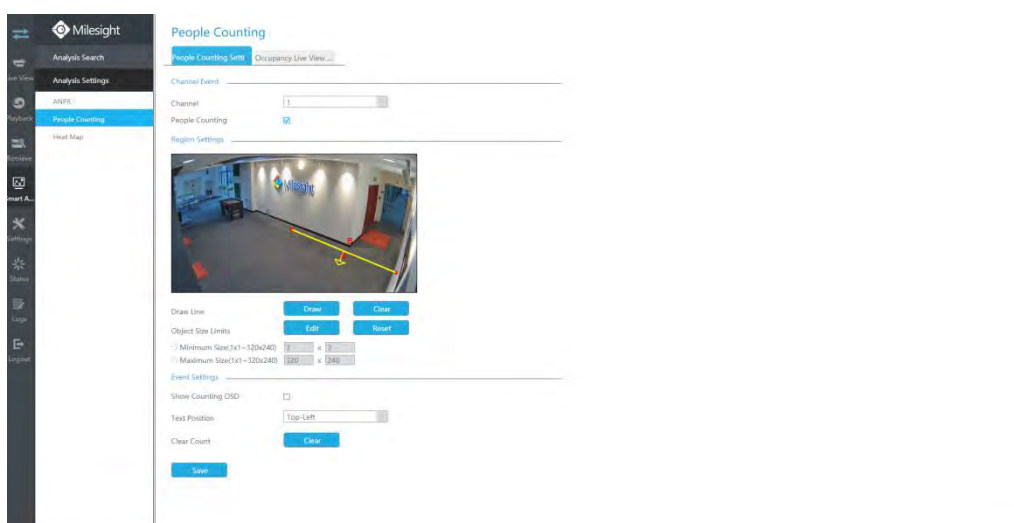
3. The list is exclusive for NVR, working with all LPR cameras you add. It won't synchronize with the list on camera side.
4. Do not forget to enable these modes, set effective time and record action for corresponded mode, ensuring that you can get real-time video when license plate is detected (Effective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

## 4.7.2.2 People Counting

### People Counting

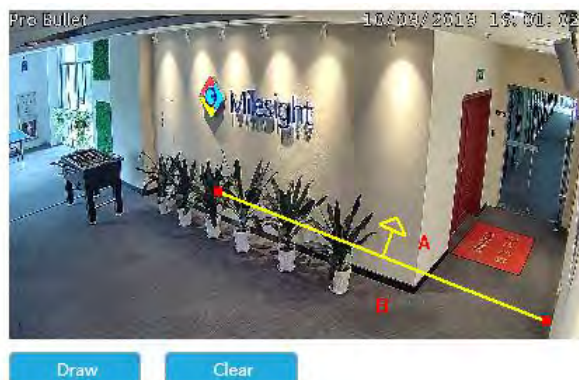
People counting is able to count that how many people enter or exit during the setting period.

**Step 1. Select channel.**



**Step 2. Enable People Counting.**

People Counting

**Step 3. Draw detection line.****Step 4. Set Minimum Size and Maximum Size.**

Minimum Size(1x1~320x240)  x   
 Maximum Size(1x1~320x240)  x

**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 5. Set counting OSD.**

It shows the number of counted people, including in and out number.

Besides, you can clear count by clicking

Clear

Show Counting OSD



Text Position

Top-Left

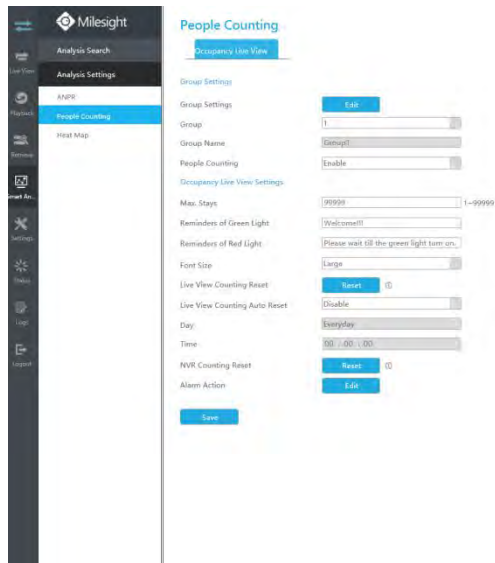
**Note:**

1. To enable people counting, human detection should be enabled first.
2. Crossing along the direction of the arrow will be recorded as "In", opposite "Out".

**Occupancy Live View Settings**

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







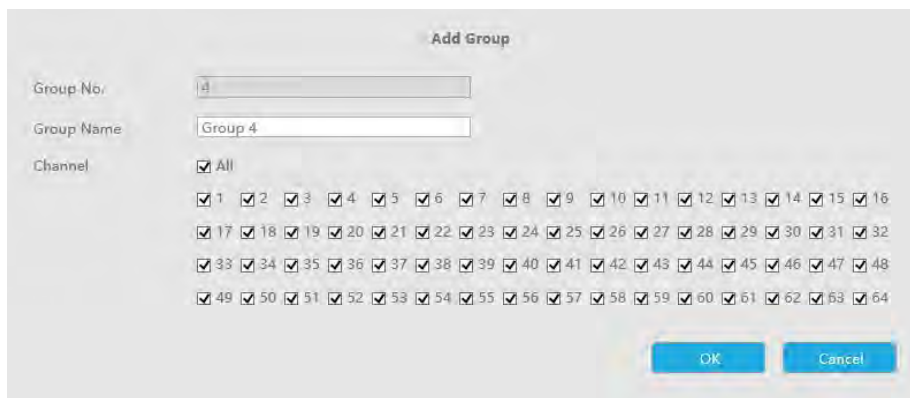
**Note:**

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.



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



**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.**



**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 turn 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

Day

Time

**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.

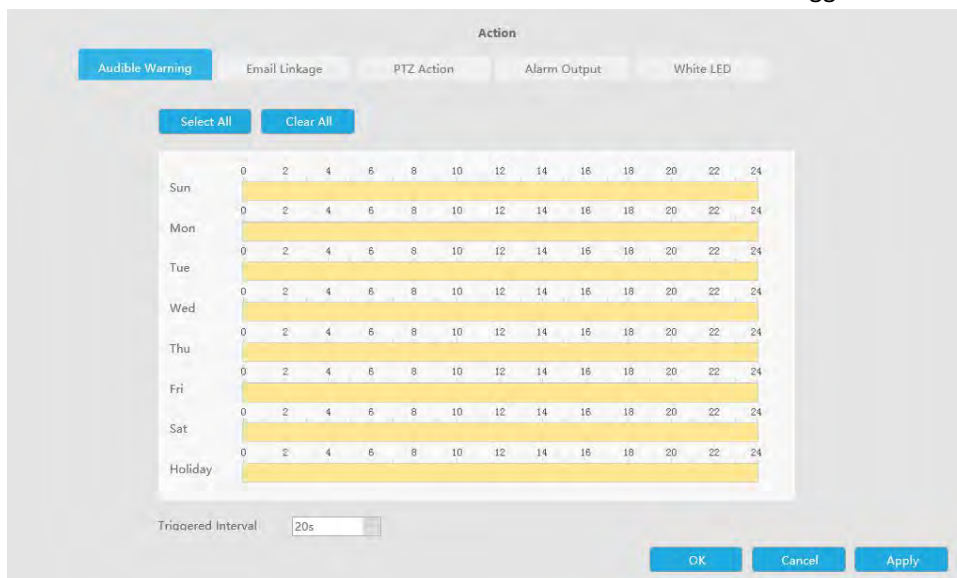
**Audible Warning:** NVR will trigger an audible beep.

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. You can click to copy the corresponding time Settings to any other time you want.

② It will be more convenient by clicking  or  to set or clear all time settings.

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



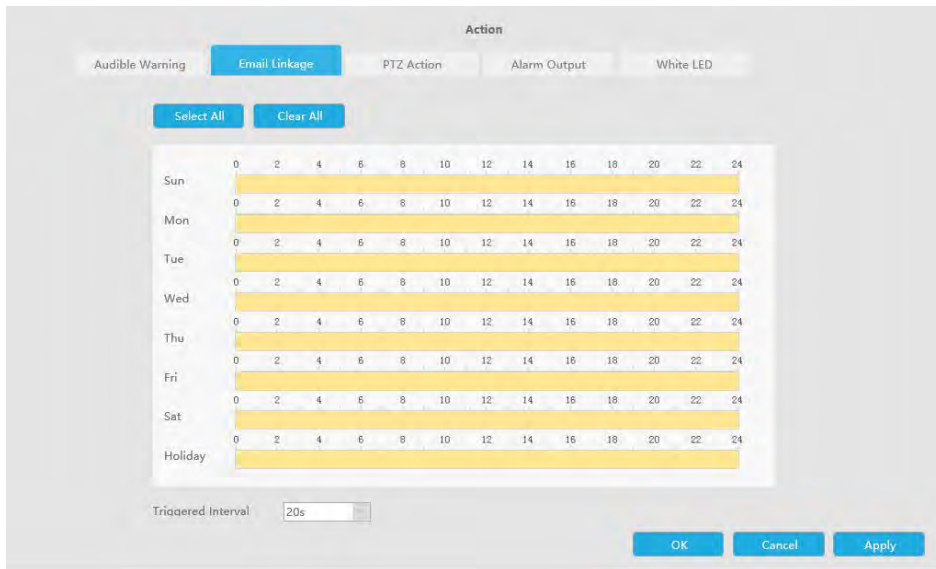
**Email Linkage:** NVR will send an email to the address you set before.

The user can set effective schedule as following two ways:

① Select the operation type: Audible or Erase. Then drag a square on the time table for time setting. You can click to copy the corresponding time Settings to any other time you want.

② It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.

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

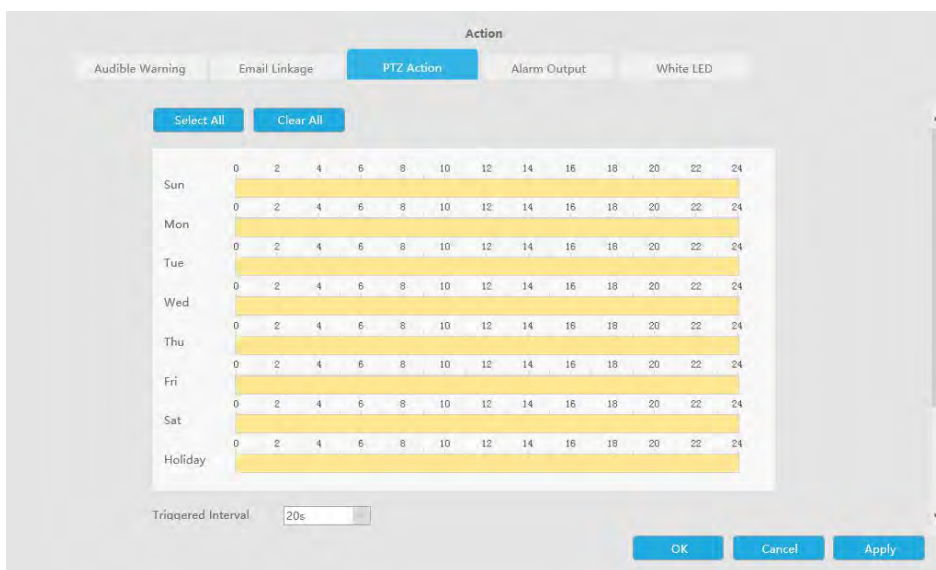



**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**. User can set effective schedule as following two ways:

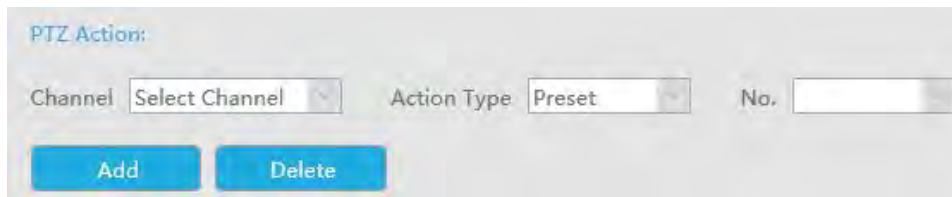
① Select the operation type: Audible or Erase. Then drag a square on the time table for time setting. You can click to copy the corresponding time Settings to any other time you want.

② It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.

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



And you can add PTZ Action by clicking .



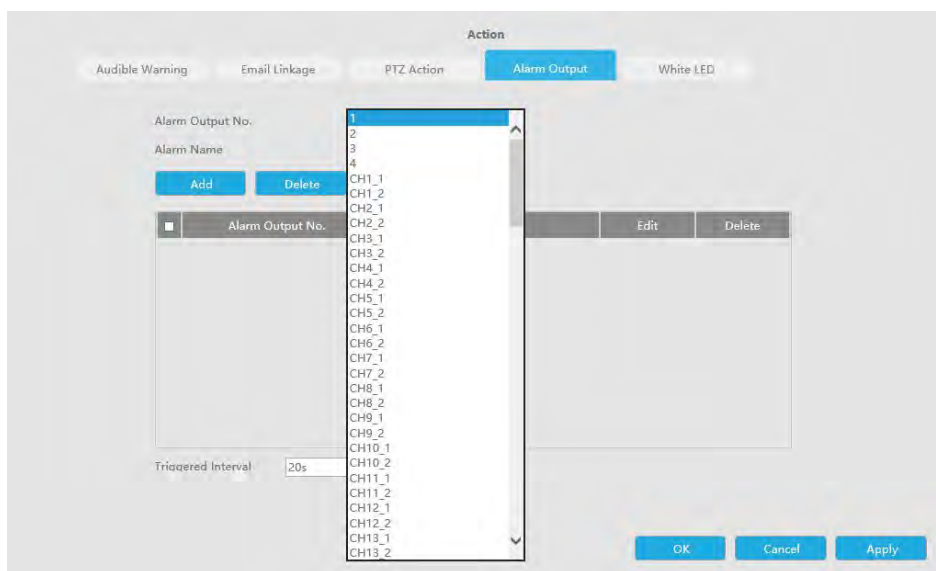
**Channel:** Select the channel which supports this function.

**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.



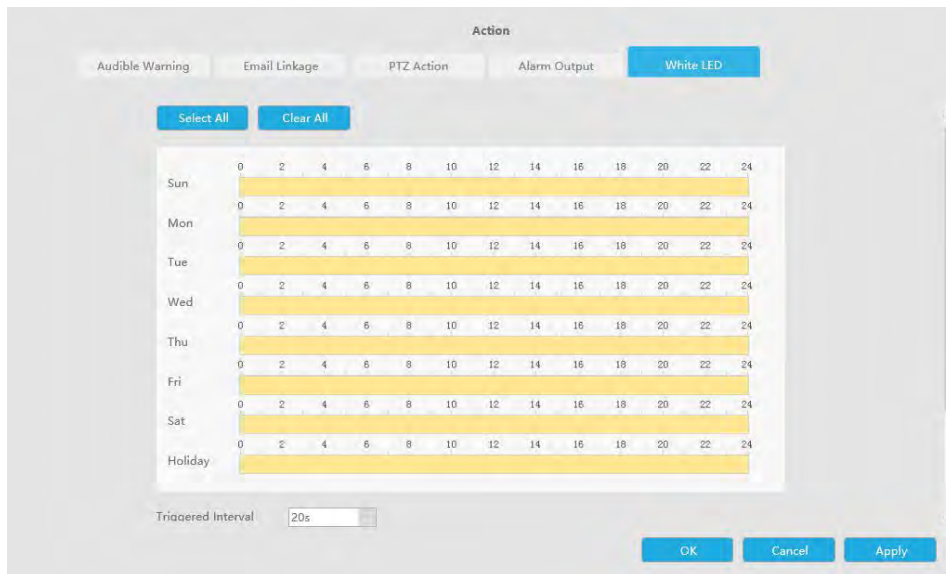
**White LED:** Trigger White LED flashing when alarm is triggered.

The user can set effective schedule as following two ways:

① Select the operation type: Audible or Erase. Then drag a square on the time table for time setting. You can click  to copy the corresponding time Settings to any other time you want.

② It will be more convenient by clicking  or  to set or clear all time settings.

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



And you can add White LED by clicking Add.



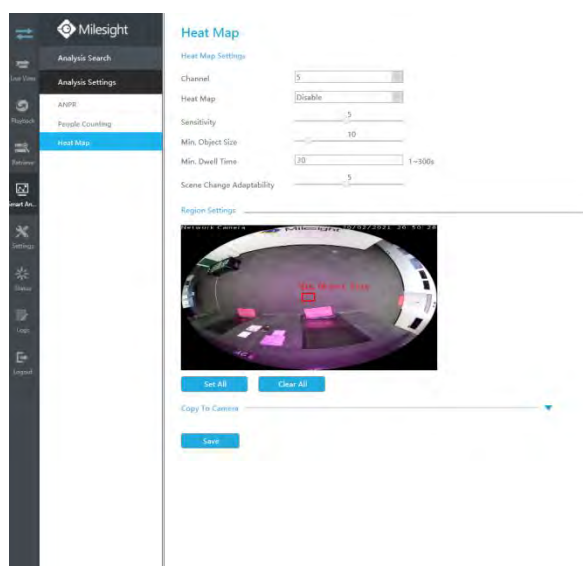
**Channel:** Select the channel which supports this function.

**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.

### 4.7.2.3 Heat Map

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



**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.

**Region Settings:** 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.

**Note:**

4. Ensure that your camera's version is 4X.7.0.74 or above.

5. Please configure Heat Map schedule on camera side.

6. The Heat Map function only works on the following cameras:

Fisheye: Ensure that the dewarping mode is 10 and the dewarping rule is On-board Dewarping.

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

## 4.8 Settings

### 4.8.1 Local Configuration

Local Configuration includes Record File Path, Preview Picture Path, Playback Preview Path, Language, Connection Type, Play Mode and Primary Stream When Fullscreen option.

The screenshot shows the 'Local Configuration' interface with the following settings:

Field	Value	Action
Record File Path	C:\Users\Alison\WebView\RecordFile	Browse
Preview Picture Path	C:\Users\Alison\WebView\LiveCaptureFile	Browse
Playback Picture Path	C:\Users\Alison\WebView\PBCaptureFile	Browse
Language	English	
Connection Type	HTTP	
Play Mode	Least Delay	
Auto Logout	30 minutes	
Primary Stream When Fullscreen	<input type="checkbox"/>	

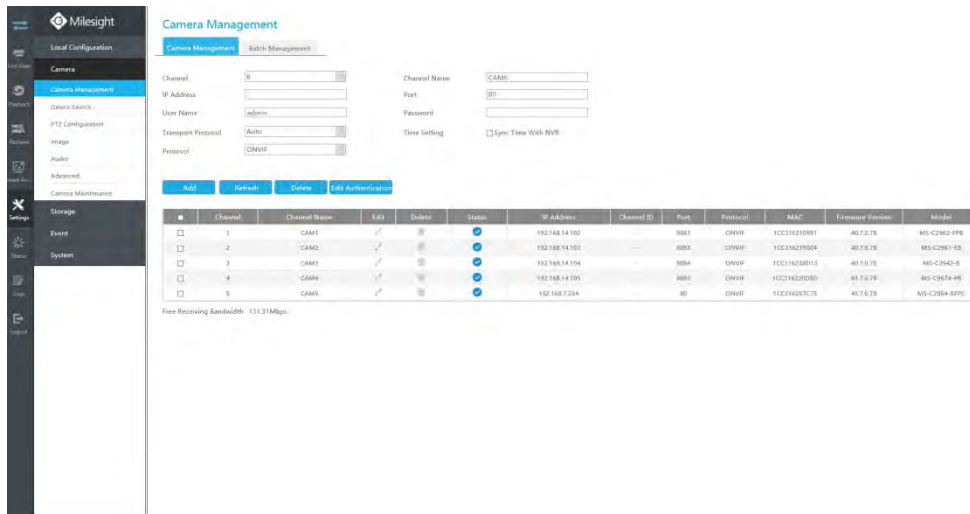
A 'Save' button is located at the bottom left of the configuration area.

### 4.8.2 Camera

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



### 4.8.2.1 Camera Management

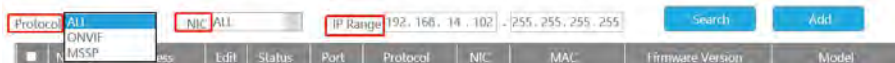


**Step1. Add Camera.**

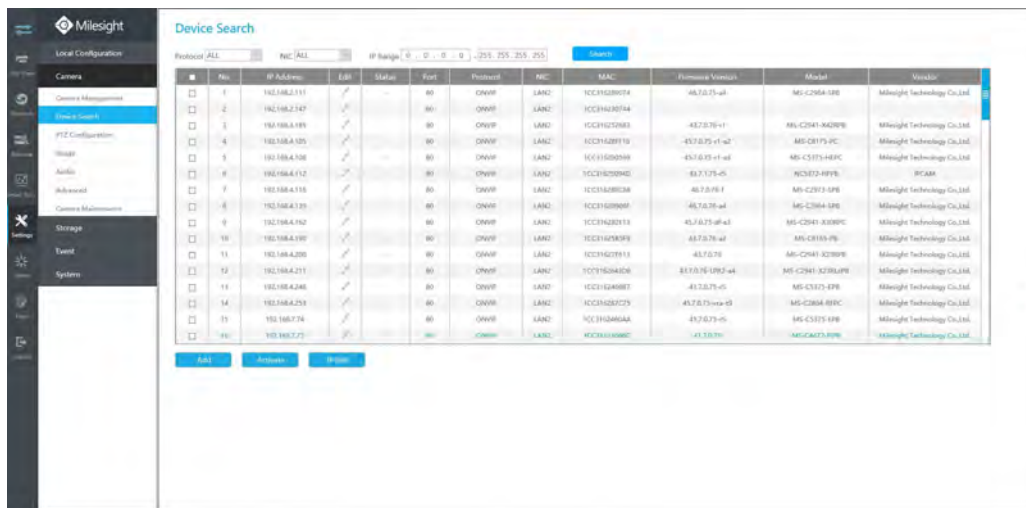
**Method1. Add IP Channel in Device Search interface. 'Settings' → 'Camera' → 'Device Search'.**

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



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




2. Click **Search** to search cameras at the same network segment with NVR.



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

3. Or you can check  to **batch adding** the network cameras if they are of the same password, and you can choose TCP, UDP or Auto transport protocol for it. Click  to finish batch adding.

**Method2. Add camera through camera management interface. 'Settings' → 'Camera' → 'Camera Management'.**

Select channel id, input complete information, then click  button.

There are three protocols available for camera connection:

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

The screenshot shows the 'Camera Management' interface with the 'Camera Management' tab selected. The 'Protocol' dropdown menu is highlighted with a red box and set to 'ONVIF'. Other fields include Channel (5), IP Address, User Name (admin), Transport Protocol (UDP), Channel Name (CAM5), Port (80), Password, and Time Setting (Sync Time With NVR).

- **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 second stream is “rtsp://IP:port/sub”. The length of RTSP can be up to 128 bits.

The screenshot shows the 'Camera Management' interface with the 'Camera Management' tab selected. The 'Protocol' dropdown menu is highlighted with a red box and set to 'RTSP'. The 'Primary' field contains 'rtsp://192.168.7.222:554/main' and the 'Secondary' field contains 'rtsp://192.168.7.222:554/sub'. Other fields include Channel (5), User Name (admin), Transport Protocol (UDP), Channel Name (CAM5), Password (masked), and Time Setting (Sync Time With NVR).

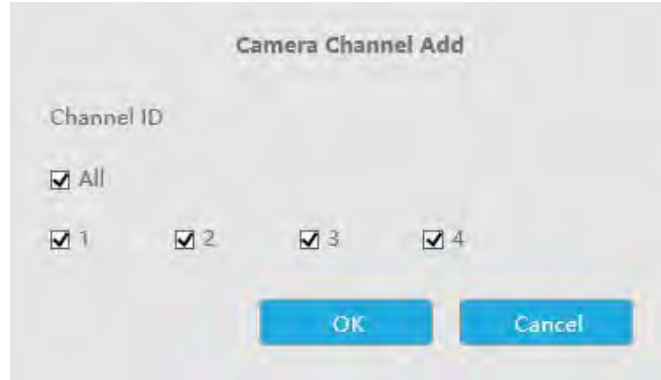
- **MSSP:** You can add Milesight cameras which are in the same LAN with this protocol.

The screenshot shows the 'Camera Management' interface with the 'Camera Management' tab selected. The 'Protocol' dropdown menu is highlighted with a red box and set to 'MSSP'. The 'IP Address' field contains '192.168.7.222'. Other fields include Channel (5), User Name (admin), Transport Protocol (UDP), Channel Name (CAM5), Port (80), Password (masked), and Time Setting (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 fisheye cameras in Multi-Stream Mode, NCR would distinguish all of its channels as independent channels for adding, thus you can select the ID to add as your demand.





2. Only Fisheye camera has Channel ID, which depends on its Display Mode. For Example, if a Fisheye camera's Display Mode is 103R, there would be 4 Channels to be added with the original view gets Channel ID as 1 and the first region view gets Channel ID as 2 and so on.

#	Channel	Channel Name	Edit	Delete	Status	IP Address	Channel ID	Port	Protocol	MAC	Firmware Version	Model
1	CAM1	✓	✖	🟢	192.168.14.102	--	8081	ONVIF	1CC316219891	40.7.0.76	MS-C262-FFB	
2	CAM2	✓	✖	🟢	192.168.14.103	--	8081	ONVIF	1CC316219804	40.7.0.76	MS-C261-EB	
3	CAM3	✓	✖	🟢	192.168.14.104	1	8084	ONVIF	1CC316238013	40.7.0.76	MS-C262-E	
4	CAM4	✓	✖	🟢	192.168.14.105	1	8085	ONVIF	1CC316220080	43.7.0.76	MS-C263-8B	
5	CAM5	✓	✖	🟢	192.168.7.234	--	80	ONVIF	1CC31630175	43.7.0.76	MS-C264-WFC	

**Step2. Check the connection status.**

After adding the IP channels, click  on Camera Management interface, then


 appears under Status.

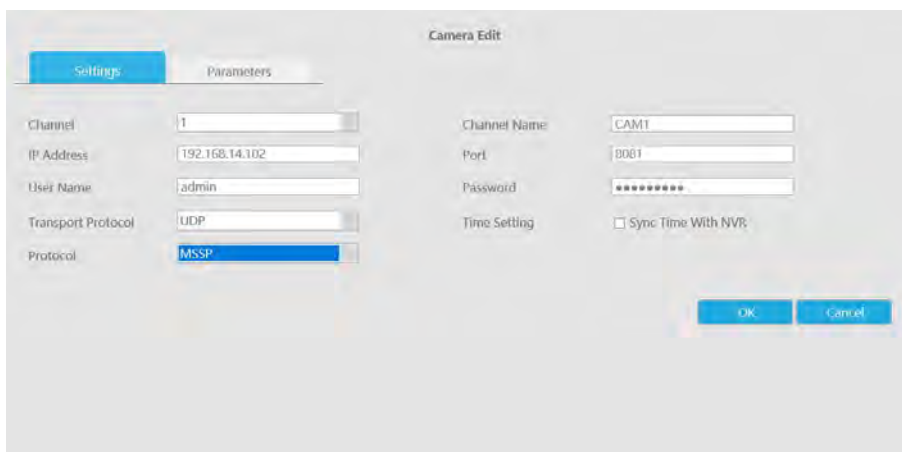
If it shows the  icon, users can move the mouse to the corresponding icon in the status bar to check the reason for the disconnection.


#	Channel	Channel Name	Edit	Delete	Status	IP Address	Channel ID	Port	Protocol	MAC	Firmware Version	Model
1	CAM1	✓	✖	🟢	192.168.14.102	--	8081	ONVIF	1CC316219891	40.7.0.76	MS-C262-FFB	
2	CAM2	✓	✖	🟢	192.168.14.103	--	8081	ONVIF	1CC316219804	40.7.0.76	MS-C261-EB	
3	CAM3	✓	✖	🟡	192.168.14.104	1	8084	ONVIF	1CC316238013	40.7.0.76	MS-C262-E	
4	CAM4	✓	✖	🟢	192.168.14.105	1	8085	ONVIF	1CC316220080	43.7.0.76	MS-C263-8B	
5	CAM5	✓	✖	🟢	192.168.7.234	--	80	ONVIF	1CC31630175	43.7.0.76	MS-C264-WFC	

**Step3. Configure IP Channel.**

**Configure one camera**

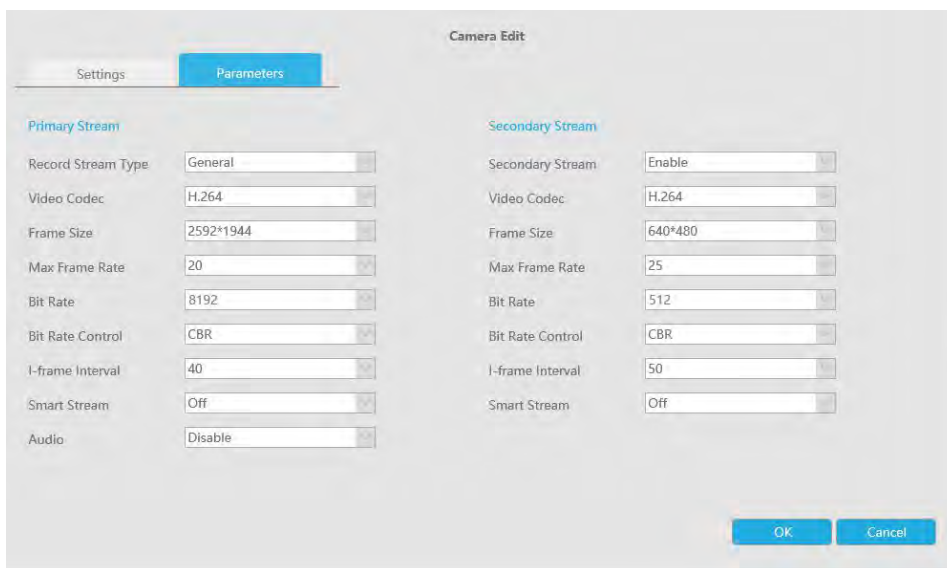
After successfully adding the channel, click  to re-edit the channel info.




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  to save after your configuration.

**Note:**

- 1.Event Record Stream Configuration includes Events like Motion Detection, VCA, Camera Alarm Input and Smart Analysis.
- 2.Make sure your IPC' s firmware version is 4X7.0.75 or above.



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



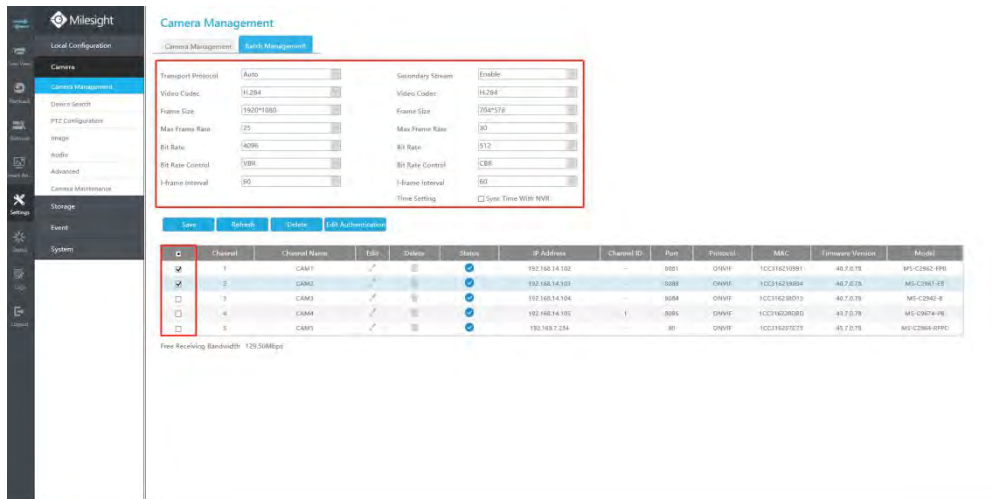
to delete.

Channel	Channel Name	URL	Delete	Stop	IP Address	Channel ID	Port	Protocol	MAC	Firmware Version	Model
<input type="checkbox"/>	1	CAM1			192.168.14.102		8081	ONVR	1CC316210991	40.7.0.78	MS-C262-499
<input type="checkbox"/>	2	CAM2			192.168.14.118		8083	ONVR	1CC316218064	40.7.0.78	MS-C261-128
<input type="checkbox"/>	3	CAM3			192.168.14.118		8084	ONVR	1CC316238043	40.7.0.78	MS-C261-8
<input type="checkbox"/>	4	CAM4			192.168.14.118	1	8085	ONVR	1CC316220080	40.7.0.78	MS-C2614-8
<input type="checkbox"/>	5	CAM5			192.168.7.208		80	ONVR	1CC316281CF3	40.7.0.78	MS-C2614-8PC

**Batch configuring camera**



Click , select multiple channels and set cameras parameters.




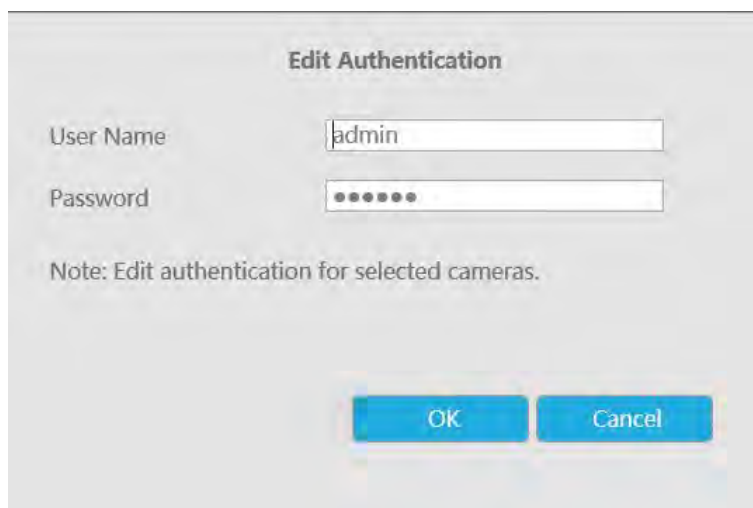
**Note:**

The user name and password entered here are the default user name and password. The management port is 80 and the default Transport protocol is UDP.

**Step5. 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  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. In 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



that are in Multi-Stream Mode, it would add all its channels by default.

2. The steps for adding the **third party PoE cameras** plugged into Milesight PoE NVR:

- ① Set camera's IP segment to the same as NVR PoE NIC before plugging into PoE NVR;
- ② Select PoE for NIC in Device Search interface, click  to search out cameras;
- ③ Select cameras and click  to add them.

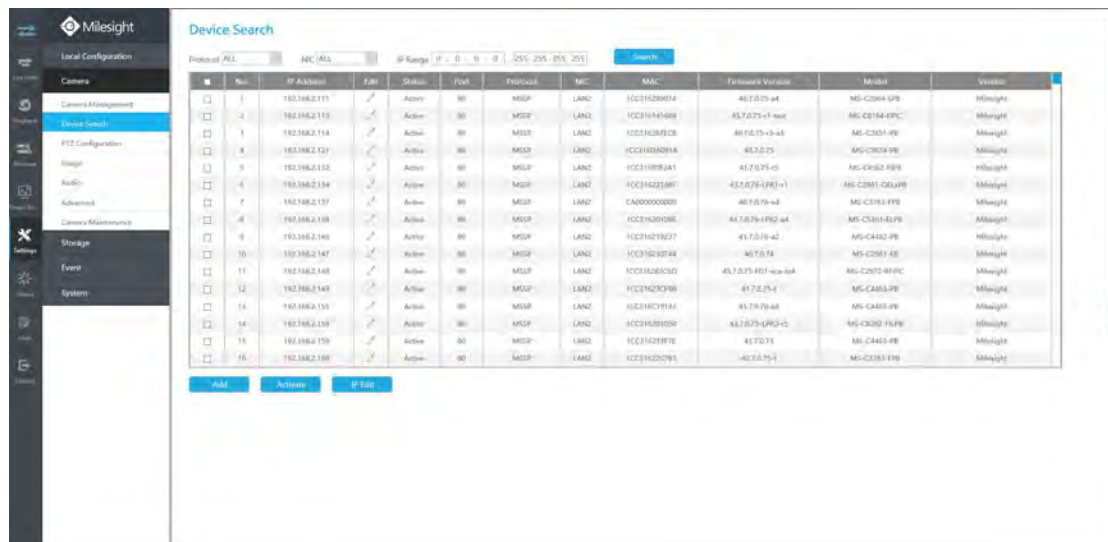
4. You can **access to cameras website** directly by clicking , which can save much steps to configure cameras with complete settings which were unavailable.




**Note:**

1. Please enable Channel Access in Network->More first;
2. Please select HTTP as transport protocol for PoE-connected cameras;
3. Please upgrade the NVR firmware version to xx.8.0.6 or above.

### 4.8.2.2 Device Search



Select Protocol and NIC, set the IP range, then click  to quickly search the IP

devices that support selected protocol and NIC at the same LAN with NVR.

Protocol  NIC  IP Range  -

If the camera status shows Inactive, please select camera and click  to active it first before adding to NVR.

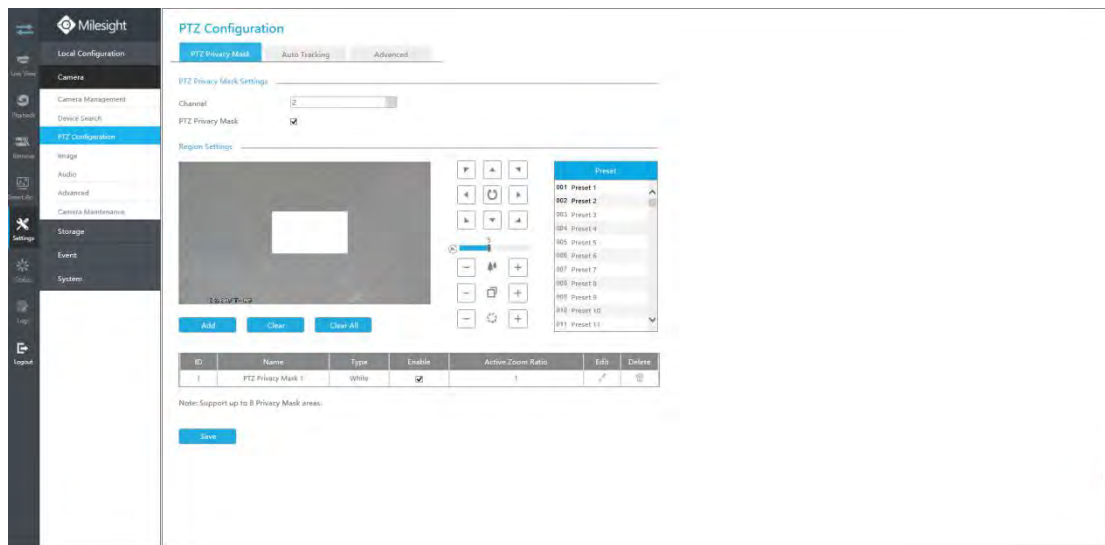
Besides, you can select channels and click  to **batch editing** their IP information.

IP Edit	
MAC	<input type="text" value="TCC31621EC5A"/>
IP Address	<input type="text" value="192.168.7.222"/>
Subnet Mask	<input type="text" value="255.255.240.0"/>
Gateway	<input type="text" value="192.168.7.1"/>
DNS	<input type="text" value="8.8.8.8"/>
Port	<input type="text" value="80"/>
User Name	<input type="text" value="admin"/>
Password	<input type="text"/>
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

### 4.8.2.3 PTZ Configuration


#### PTZ Privacy Mask

Milesight 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.

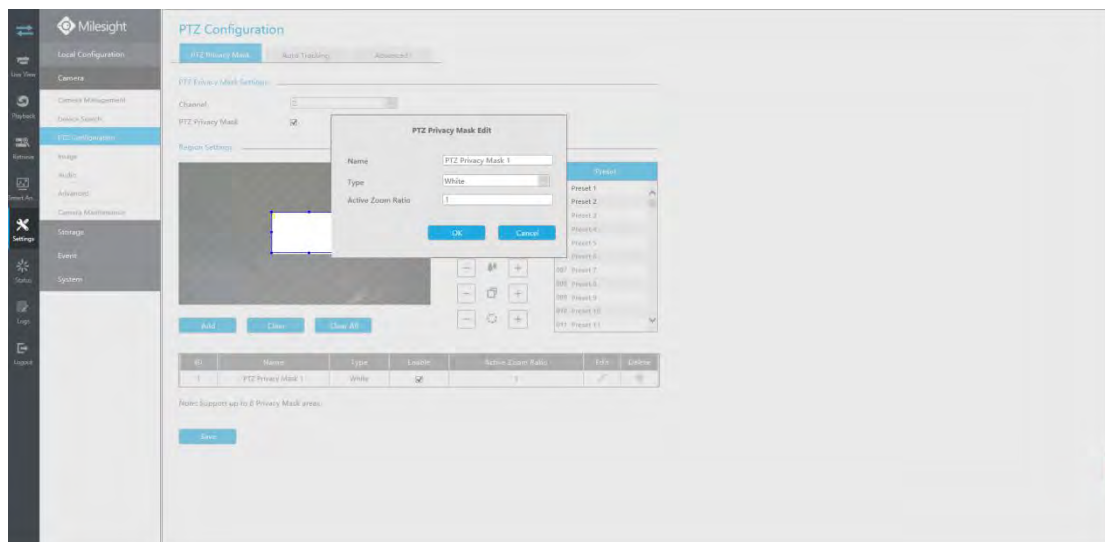


You can add a privacy mask by following steps:

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

**Step2. Drag the mouse to select the area which needs to be protected on the live view window and click  to save the selected areas. You can add **8 areas** at most and each zone can be enabled and disabled.**

**Step3. Click  to edit PTZ Privacy Mask Name, the Privacy Mask Type and Active Zoom Ratio.**



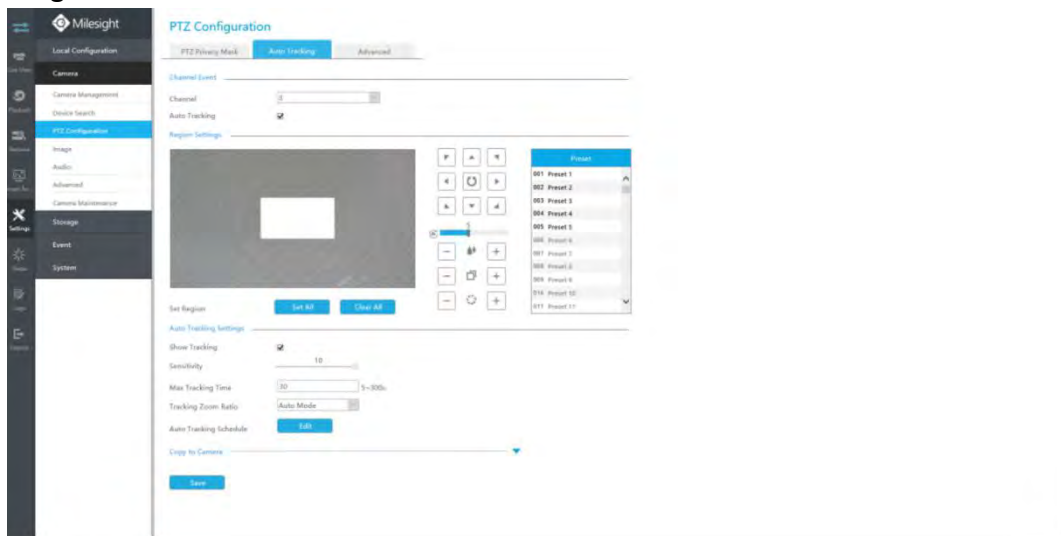
**Step4. Select  to save the settings.**

**Note:**

3. Ensure that your camera's version is 4X.7.0.73 or above.
4. 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.

## Auto tracking

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



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

**Step2. Enable “Show Tracking” to show tracking in Auto Tracking function.**

**Step3. Set detection region.**

**Step4. Set detecting sensitivity.**


**Step5. Set Max. Tracking Time which must be between 5~300s. The camera will stop tracking when the tracking time is used up.**

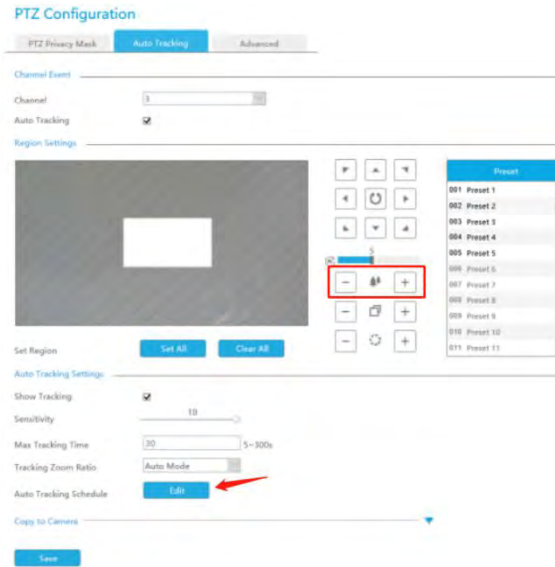
**Step6. Select Tracking Zoom Ratio, which includes Auto Mode and Customize.**

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

● How to set Customize Tracking Zoom Ratio:

① Set zoom ratio by    button.

② Click  to save your configuration.



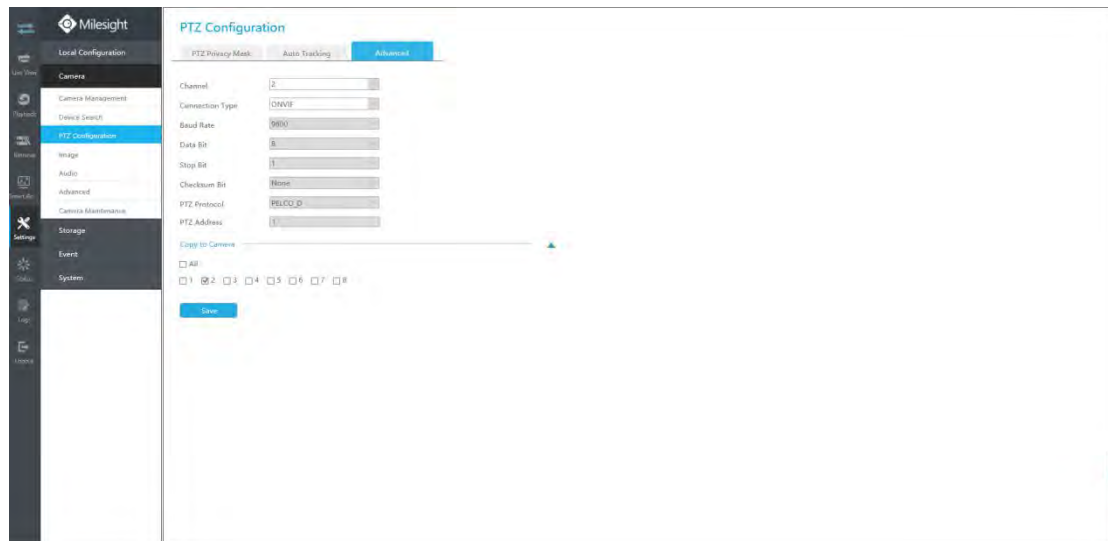
**Step5.** Click **Edit** to edit Auto Tracking Schedule which will be synchronized to IP Camera.

**Note:**

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

**Advanced**

Choose a channel and set the PTZ parameters. Besides, you can select [Copy to Camera] to copy the same configuration to other channels.

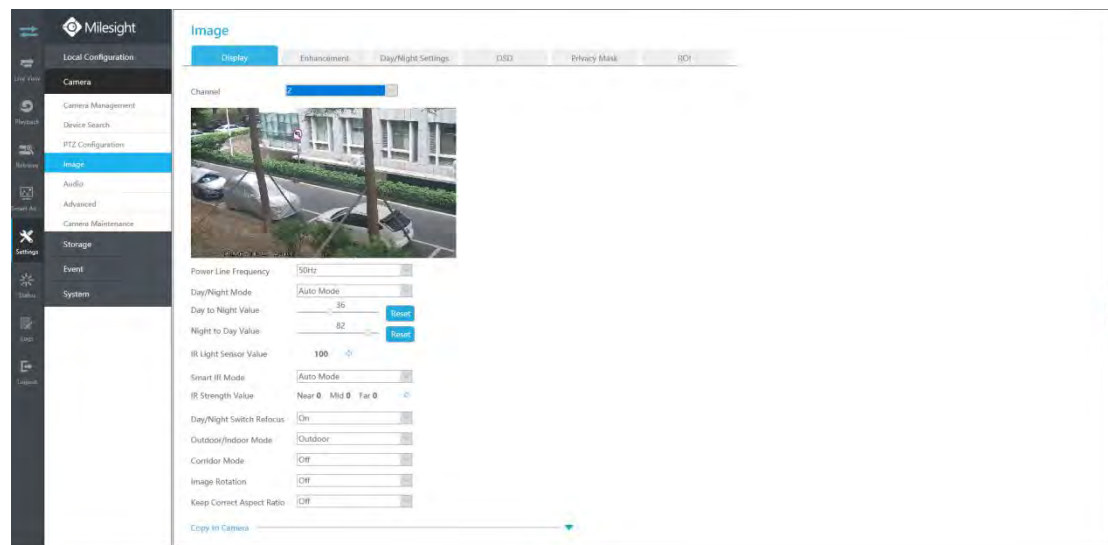


**Note:**

3. 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.
4. The PTZ protocol and address of IP channel must be consistent with those of the PTZ decoder.

## 4.8.2.4 Image

### Display



**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.

**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.

**IR LED Level:** Adjust the IR LED level from 1 to 100.

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

**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.

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

**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.

**Corridor Mode:** Set corridor mode.

**Image Rotation:** Set image rotation.

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



**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.

**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 are only available under Auto Mode when camera are Panoramic Bullet and Mini Bullet whose firmware version is 4X.7.0.74 or above.

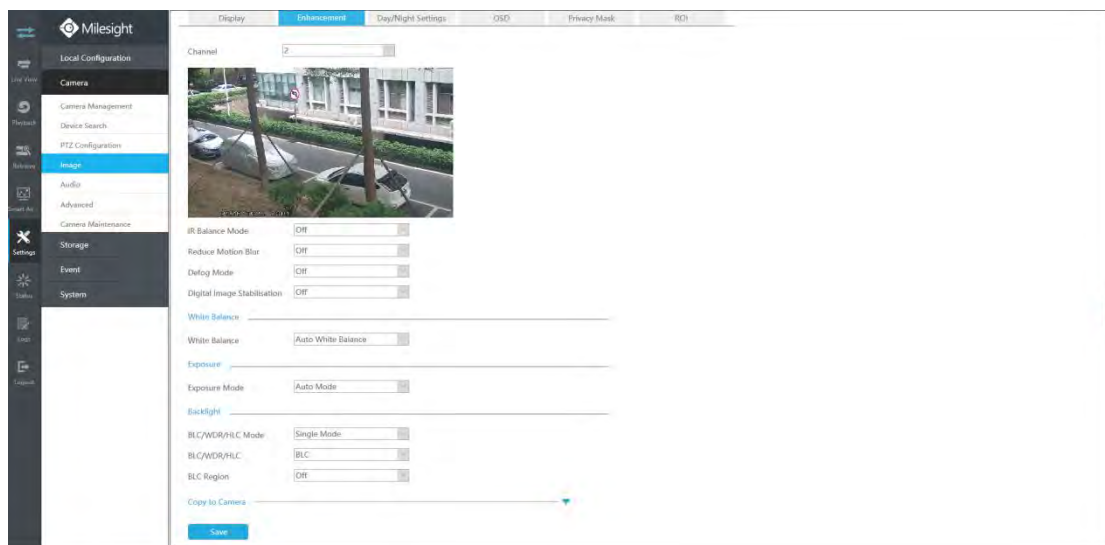
**Step3.** You can click [Copy to Camera] to copy the same configuration to other channels.



**Step4.** Click save to save the settings.

**Enhancement**

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



**Step1.** Select channel.

**Step2.** Set the configuration.

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

**Reduce Motion Blur:** Enable this function to reduce the motion blur of objects effectively. You can adjust the deblur level from 1 to 100.

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

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

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

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

**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.

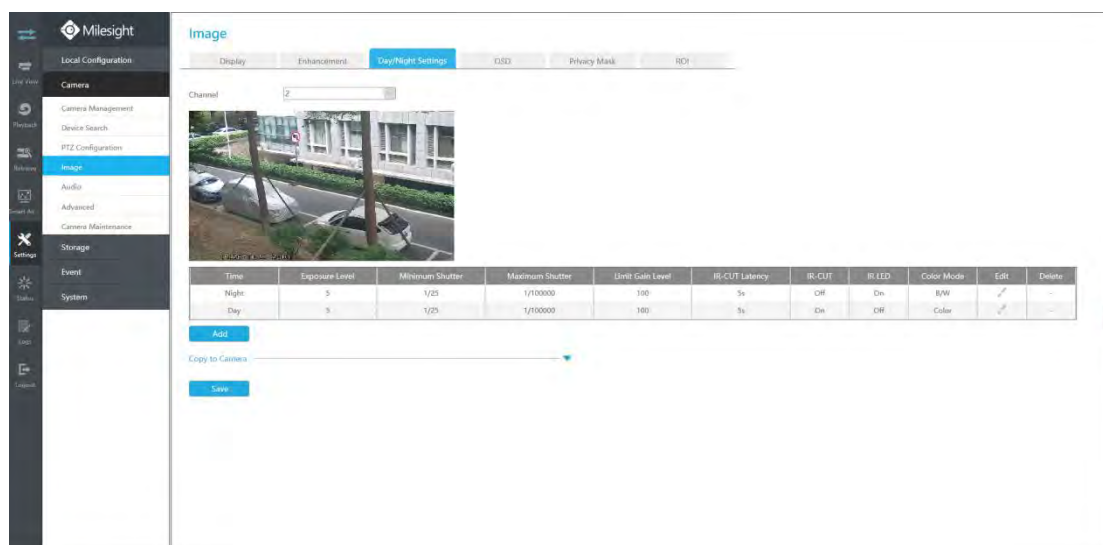
**Anti-flicker Level:** Reduce flickers that appear on screen in some lighting conditions and there are 10 levels of anti-flicker adjustments.

**Step3.** You can click [Copy to Camera] to copy the same configuration to other channels.



**Step4.** Click save to save the settings.

### Day/Night Settings



**Step1.** Select channel.

**Step2.** 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.

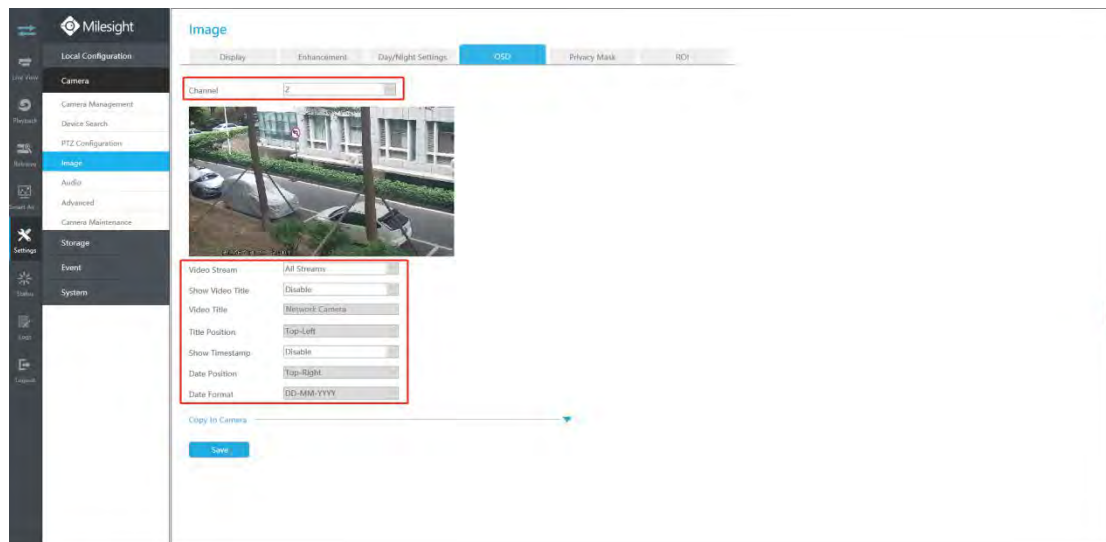
**Step3.** You can click [Copy to Camera] to copy the same configuration to other channels.



**Step4. Click save to save the settings.**

### OSD

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



Select channel and finish the info and save.

**[Video Stream]:** Select stream. All Streams, Primary Stream and Secondary Stream are available.

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

**[Video Title]:** Set the video title for the channel.

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

**[Show Timestamp]:** Enable or disable timestamp.

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

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

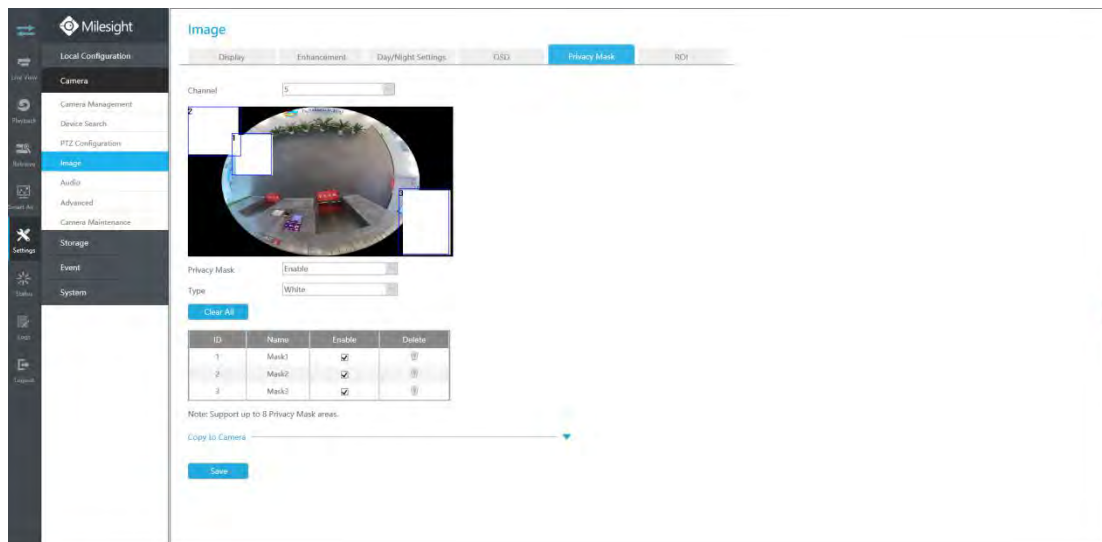
**Step3. You can click [Copy to Camera] to copy the same configuration to other channels.**



**Step4. Click save to save the settings.**

### Privacy Mask

Milesight NVR support to set privacy masks. It is used to cover some privacy area which is not proper to appear on monitor.



You can add a privacy mask by following steps:

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

**Step2. Set the privacy mask type and drag the mouse to select the area which is privacy on the live window. You can add 8 areas at most and each zone can be enabled and disabled.**

**Step3. You can click [Copy to Camera] to copy the same configuration to other channels.**



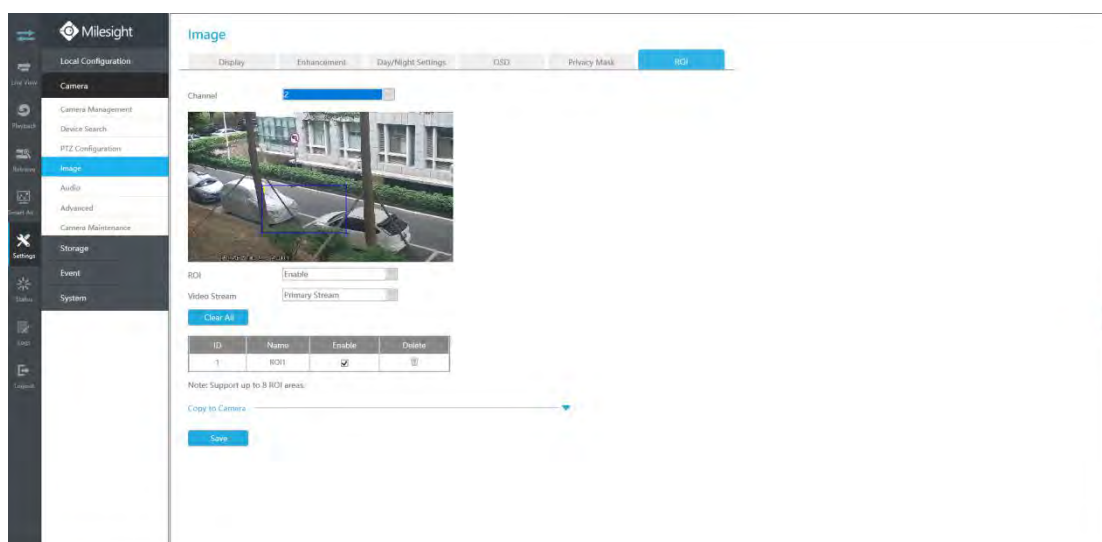
**Step4. Click save to save the settings.**

**Note:**

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

**ROI**

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



You can add a ROI by following steps:

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

**Step2. Set the video stream type and drag the mouse to select the area in the preview window.**

You can add **8 areas** at most and each zone can be enabled and disabled.

**Step3. You can click [Copy to Camera] to copy the same configuration to other channels.**

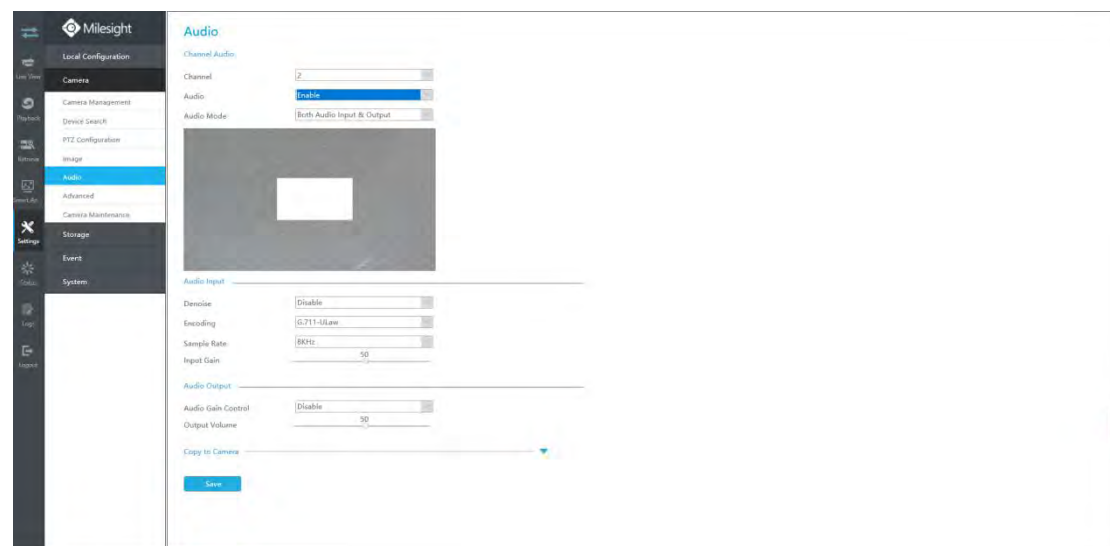


**Step4. Click save to save the settings.**

**Note:**

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

## 4.8.2.5 Audio



This audio function allows to configure 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.


## 4.8.2.6 Advanced

### 4.8.2.6.1 Watermark

Advanced

Watermark

Channel



Watermark

Watermark String

Copy To Camera

Save

You can add a watermark by following steps:

**Step1. Select channel.**

**Step2. Click the checkbox to enable Watermark.**

**Step3. Enter Watermark String.**

**Step4. Copy the image settings to other channels.**

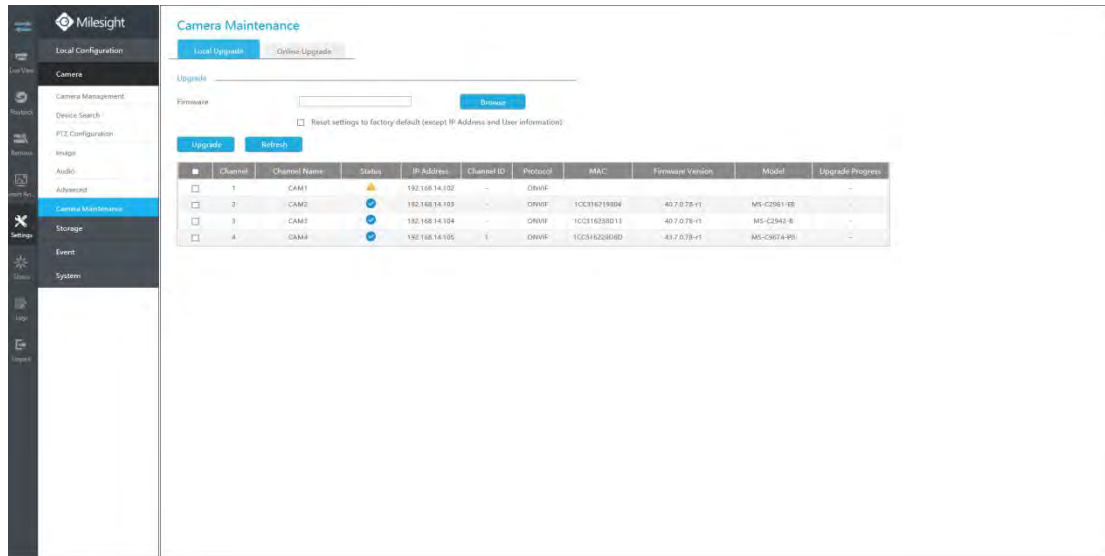
**Step5. Select  to save the settings.**

**Note:**

Watermark only appears when exporting by a third party.

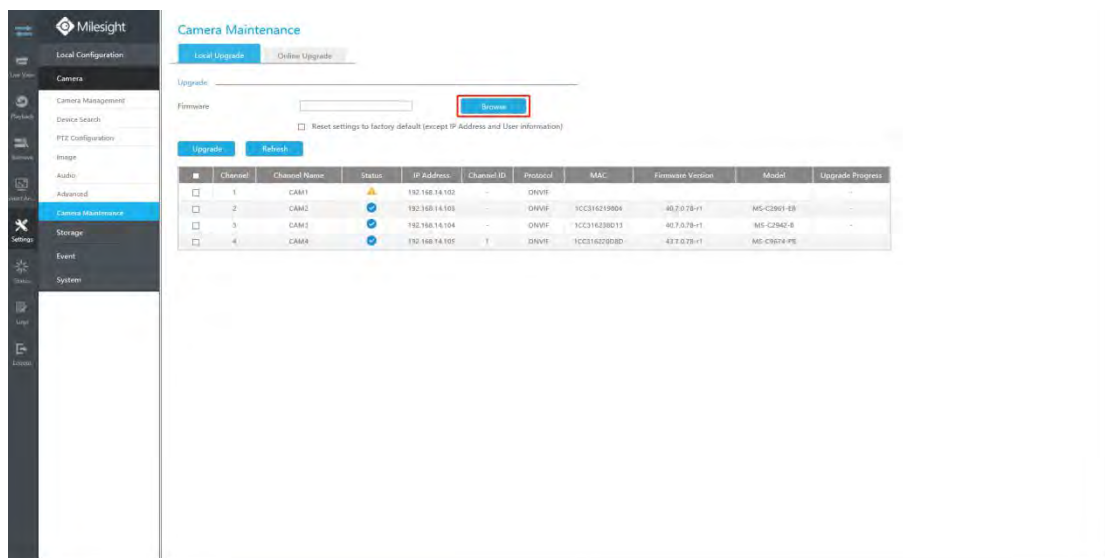


## 4.8.2.7 Camera Maintenance



### Local Upgrade

**Step1.** Click **Browse** to select the corresponding firmware.



**Step2.** Check if you need to reset settings to factory default (except IP Address and User Information) after upgrade.

The screenshot shows the 'Camera Maintenance' page in the Milesight web interface. The left sidebar contains navigation options like 'Local Configuration', 'Camera', 'Camera Management', 'Device Search', 'PTZ Configuration', 'Image', 'Audio', 'Advanced', 'Camera Maintenance', 'Storage', 'Event', and 'System'. The main content area has tabs for 'Local Upgrade' and 'Online Upgrade'. Under 'Local Upgrade', there is a 'Firmware' input field and a 'Browse' button. Below that, a checkbox is checked, with a red arrow pointing to it and the text 'Reset settings to factory default (except IP Address and User information)'. There are 'Upgrade' and 'Refresh' buttons. A table lists camera channels with columns for Channel, Channel Name, Status, IP Address, Channel ID, Protocol, MAC, Firmware Version, Model, and Upgrade Progress.

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	Model	Upgrade Progress
1	CAM1	🔴	192.168.14.102	-	ONVIF	-	-	-	-
2	CAM2	🟢	192.168.14.103	-	ONVIF	1CC316219804	43.7.0.78-11	MS-C2861-08	-
3	CAM3	🟢	192.168.14.104	-	ONVIF	1CC316238D13	43.7.0.78-11	MS-C2842-6	-
4	CAM4	🟢	192.168.14.105	1	ONVIF	1CC3162208D2	43.7.0.78-11	MS-C8674-09	-

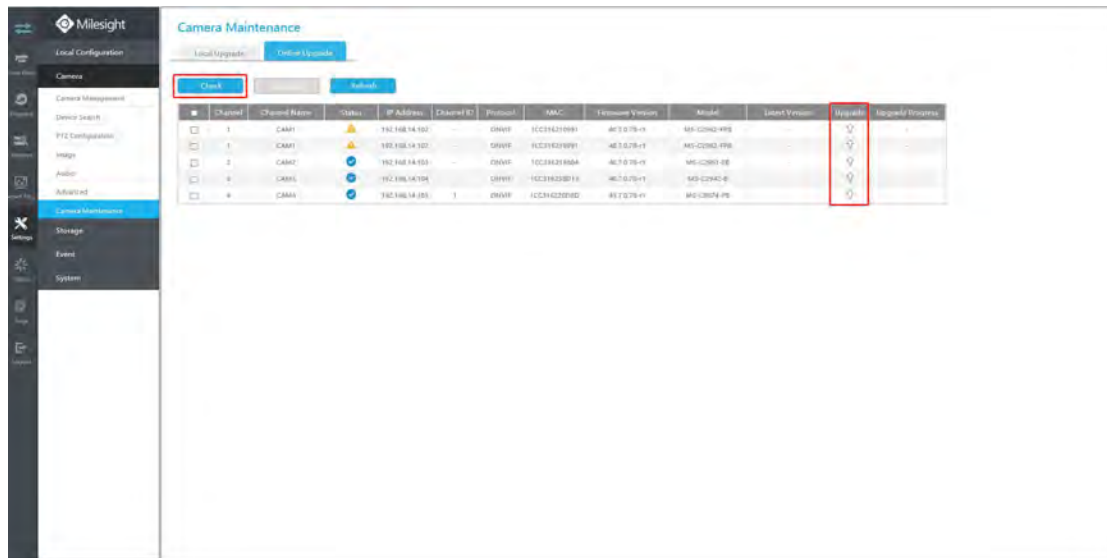
**Step3.** Choose the corresponding channel you want to upgrade and click [Upgrade](#) to upgrade the camera.

This screenshot is similar to the previous one, but the 'Upgrade' button for channel 2 is highlighted with a red box. The 'Reset settings to factory default' checkbox is now unchecked.

Channel	Channel Name	Status	IP Address	Channel ID	Protocol	MAC	Firmware Version	Model	Upgrade Progress
1	CAM1	🔴	192.168.14.102	-	ONVIF	-	-	-	-
2	CAM2	🟢	192.168.14.103	-	ONVIF	1CC316219804	43.7.0.78-11	MS-C2861-08	-
3	CAM3	🟢	192.168.14.104	-	ONVIF	1CC316238D13	43.7.0.78-11	MS-C2842-6	-
4	CAM4	🟢	192.168.14.105	1	ONVIF	1CC3162208D2	43.7.0.78-11	MS-C8674-09	-

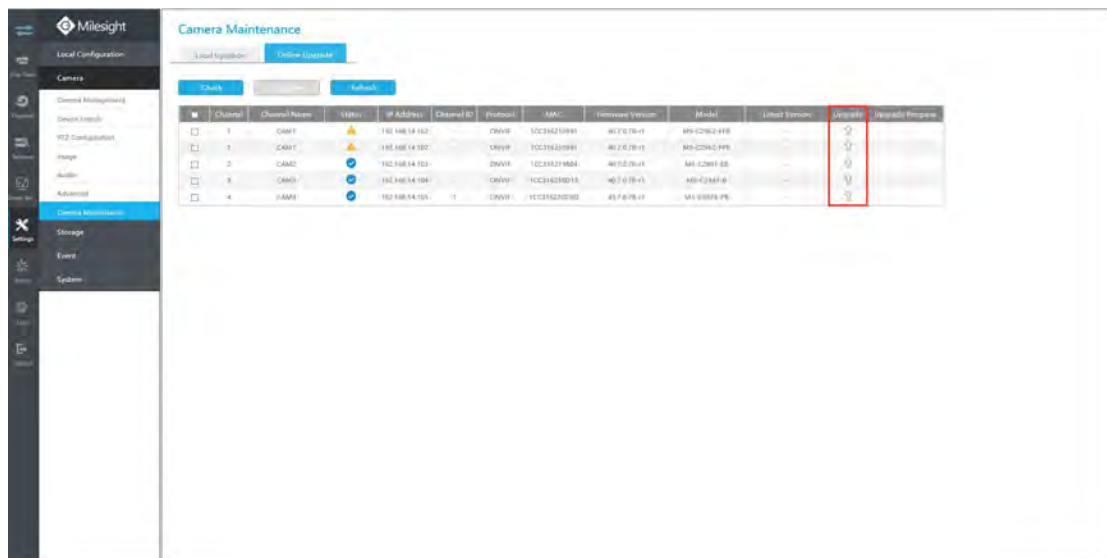
### Online Upgrade

**Step1.** 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.

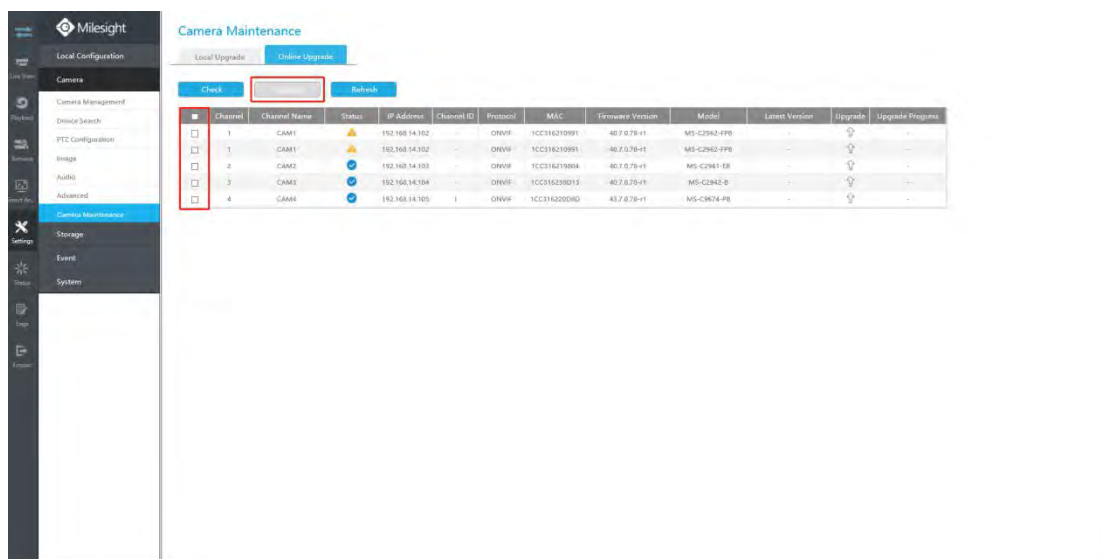


**Step2.** There are two ways to confirm the upgrade.

① Click the blue icon in corresponding Upgrade column to upgrade camera.



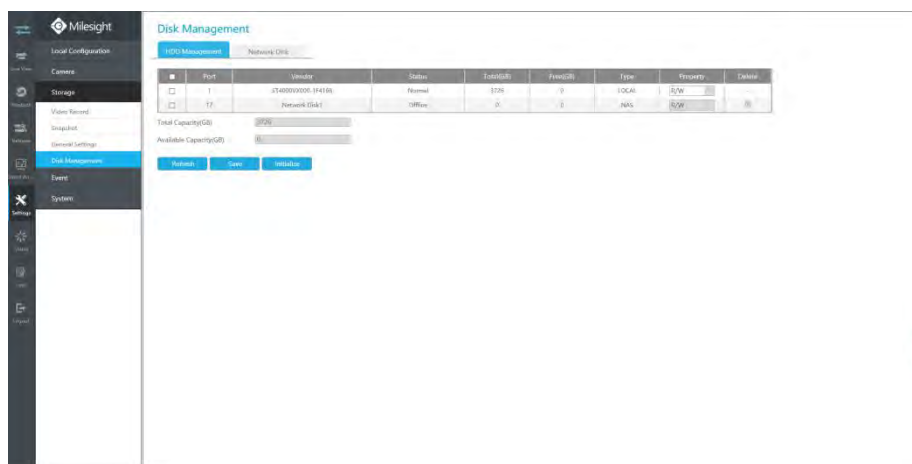
② A way to achieve batch upgrade. Just select the cameras you want to upgrade and then click **Upgrade** button.



## 4.8.3 Storage

### Preparation for Configuration

Step1. Ensure that your NVR has installed and initialized the HDD or Network Disk.



### 4.8.3.1 Video Record

#### Record Schedule

Step1. Select Record Schedule.

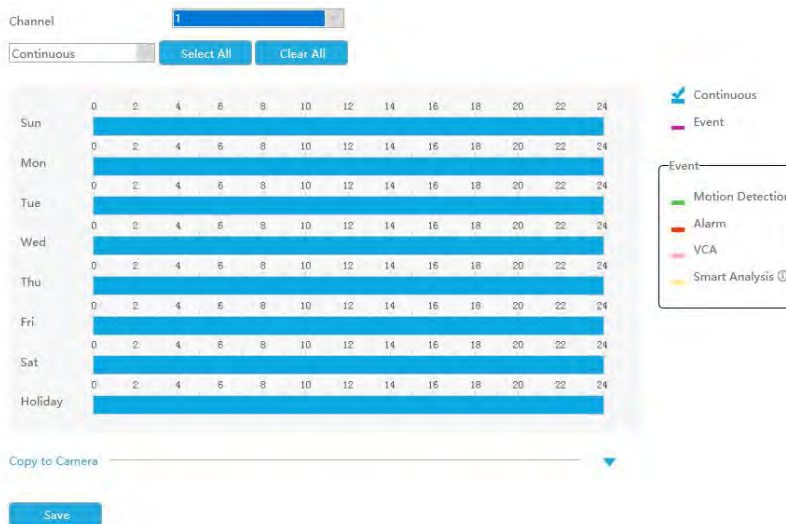
Step2. Select the desired channel.



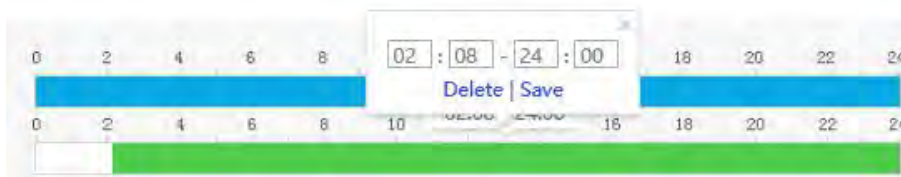
**Step3. Set record schedule.**


Select record type including Continuous, Event (including Motion Detection, Alarm, VCA and Smart Analysis), then set the time you want to record. It is convenient for you to set or clear all

schedule by clicking **Select All** or **Clear All**.



Also, you can click the time bar and redit the record time



Click  to copy time setting to other days.



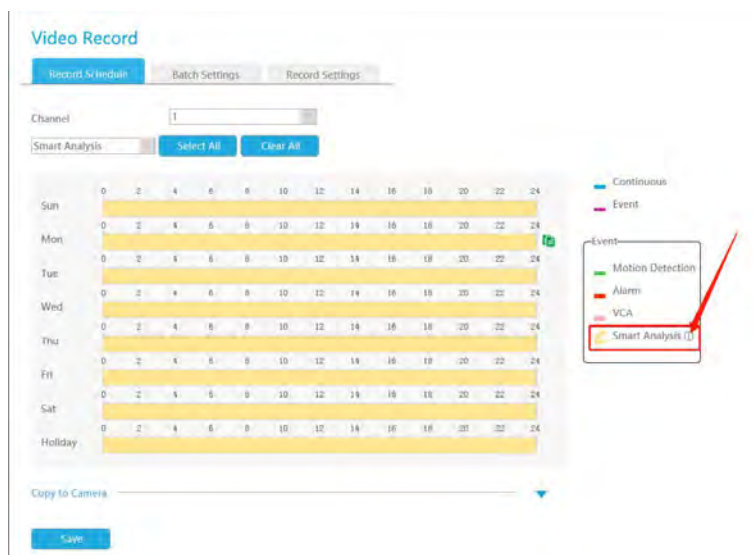
Click [Copy to Camera] to copy the same configuration to other channels.



**Note:**

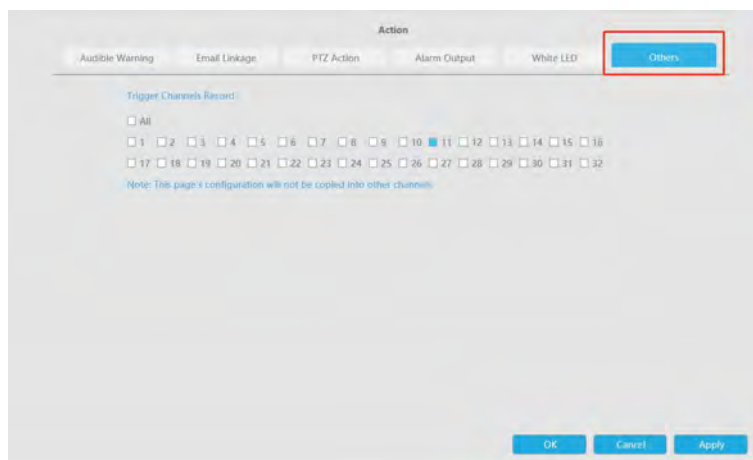
Here are steps for setting ANPR record correctly so that NVR will record when license plate is detected.

**Step1:** 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.



**Step2:** Ensure Black List Mode or White List Mode or Visitor Mode is enabled as your demand.

**Step3:** 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).



**Batch Settings**

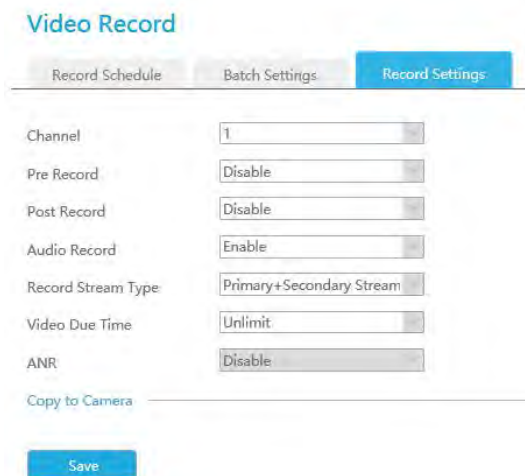
Record and Stop are available for user to set for selected channels.





## Record Settings

Make record settings for selected 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.

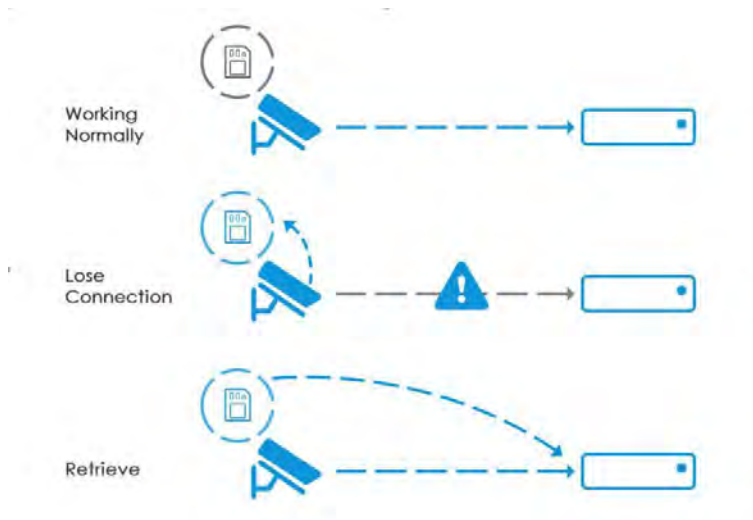
**Post Record:** Event post-record duration time. It will keep recording after the event is over.

**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 only.** 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.

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



## 4.8.3.2 Snapshot

### Snapshot Schedule

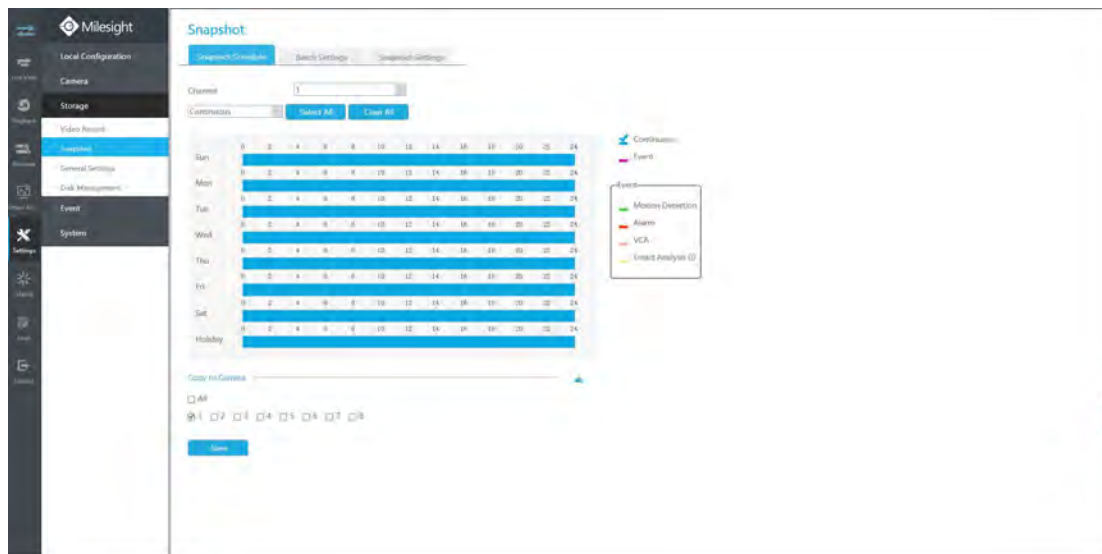
**Step1. Select Record Schedule.**

**Step2. Select the desired channel.**

**Step3. Set record schedule.**

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. Set the time you want to snapshot. It is convenient for you to set or clear all schedule by clicking

or .



Also, you can click the time bar and reedit the record time

Click to copy time setting to other days.

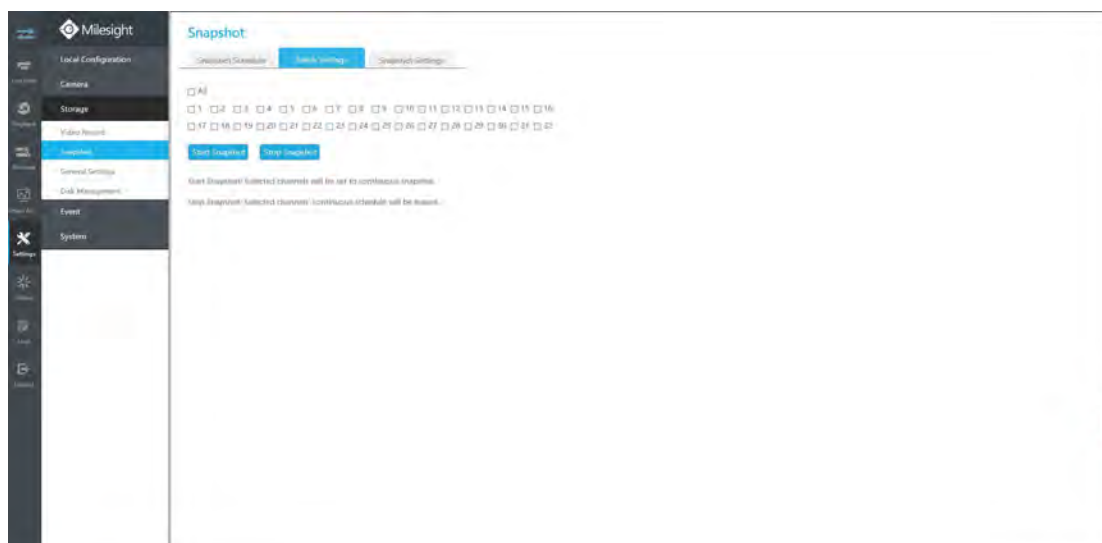
Click [Copy to Camera] to copy the same configuration to other channels.

### Batch Settings

Snapshot and Stop are available for user to set for selected channels.

Start Snapshot: Selected channels will be set to continuous snapshot.

Stop Snapshot Selected channels' continuous schedule will be erased.



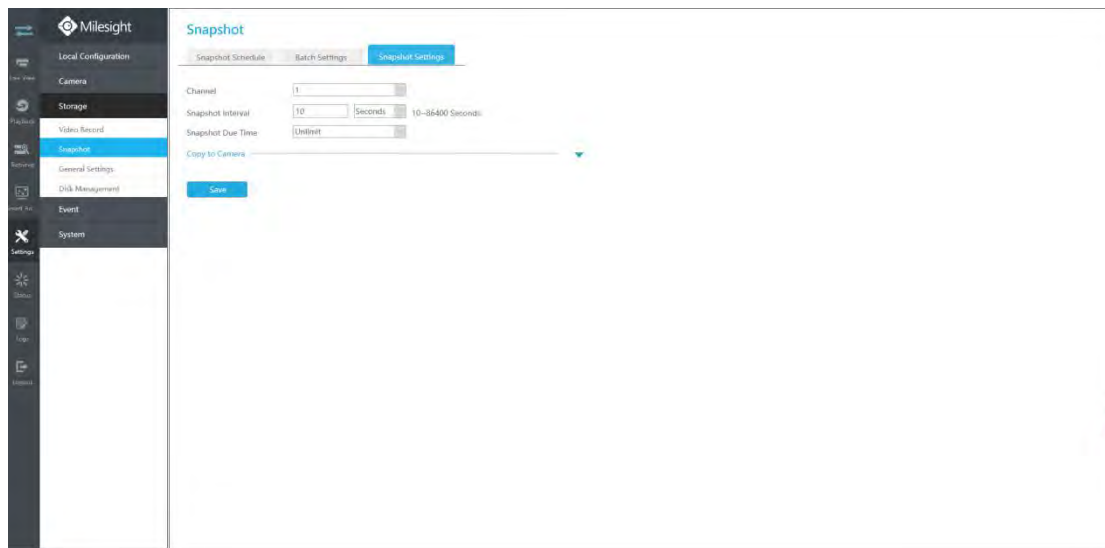
### Snapshot Settings

Make general configuration for selected channels. Click [Copy to Camera] to copy the same configuration to other channels.

**Channel:** Select the channel which will be set.

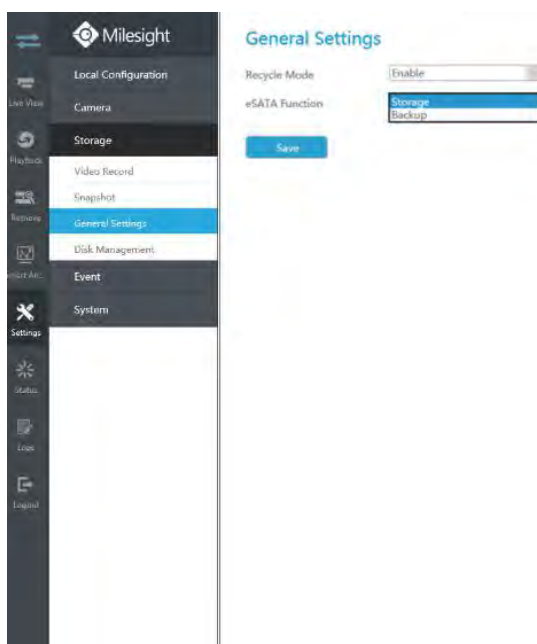
**Snapshot Interval:** Set the snapshot Interval, 3~86400 seconds are available.

**Snapshot Due Time:** Set the due time of snapshot files, 1~120days or unlimit are available.

**Note:**

Some models support continuous snapshot function.

### 4.8.3.3 General Settings



**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.

### 4.8.3.4 Disk Management

You can check Disk status and add Network Disk here.

## HDD 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.

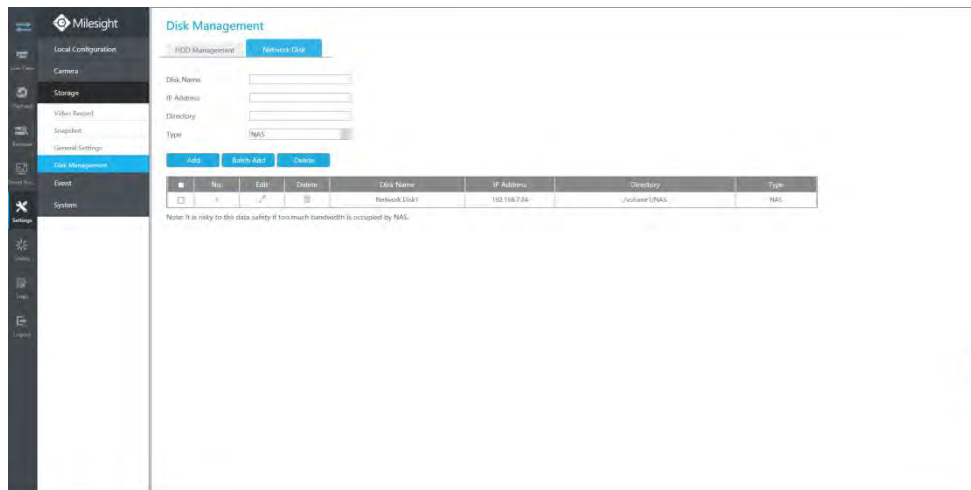


## Network Disk

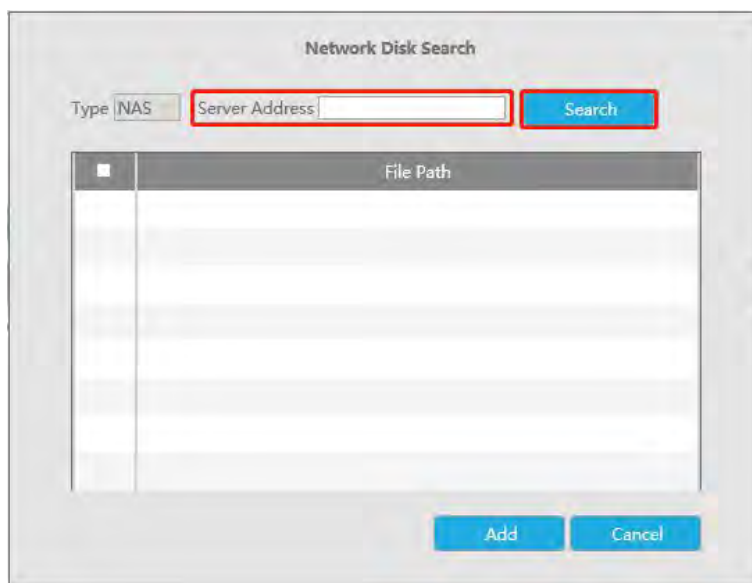
NAS (Network-Attached Storage) should be available within the network and properly configured to store the recorded files and snapshots.

**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.



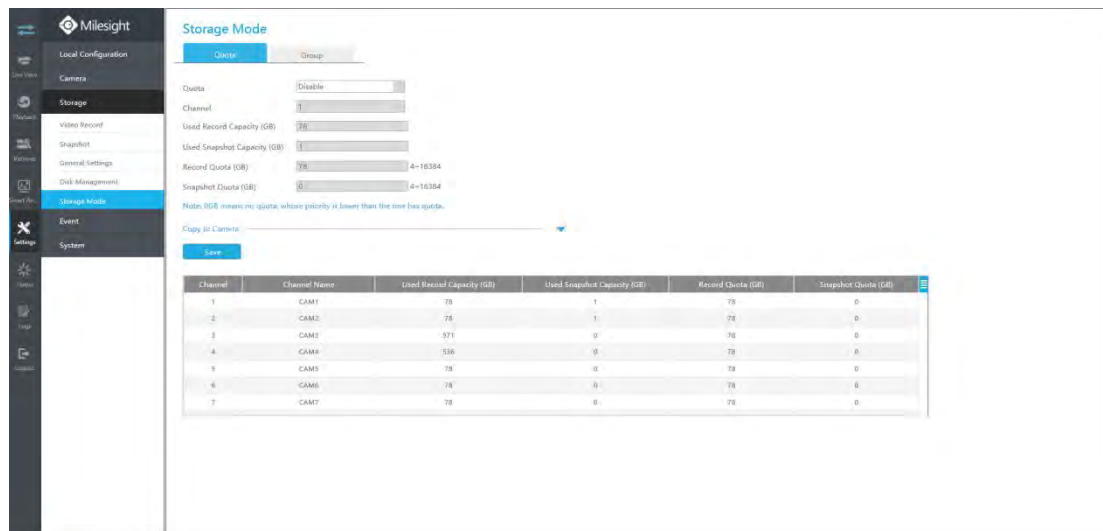
You can add it manually or search local NAS by clicking



## 4.8.3.5 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 on 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)

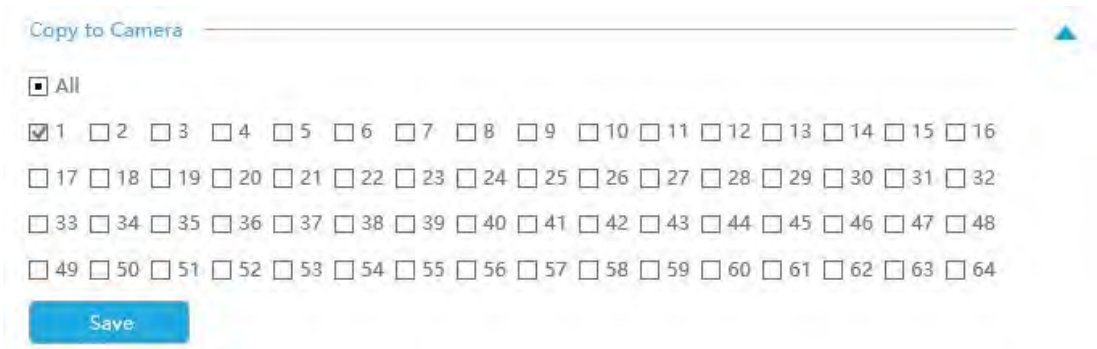
0

4~16384

**Step 4. Click**  **to take effect the configuration of the current interface.**

Click  to expand "Copy to Camera", then the Quota configuration of the selected channel can be copied to the channel you want, and click  to take effect the configuration.

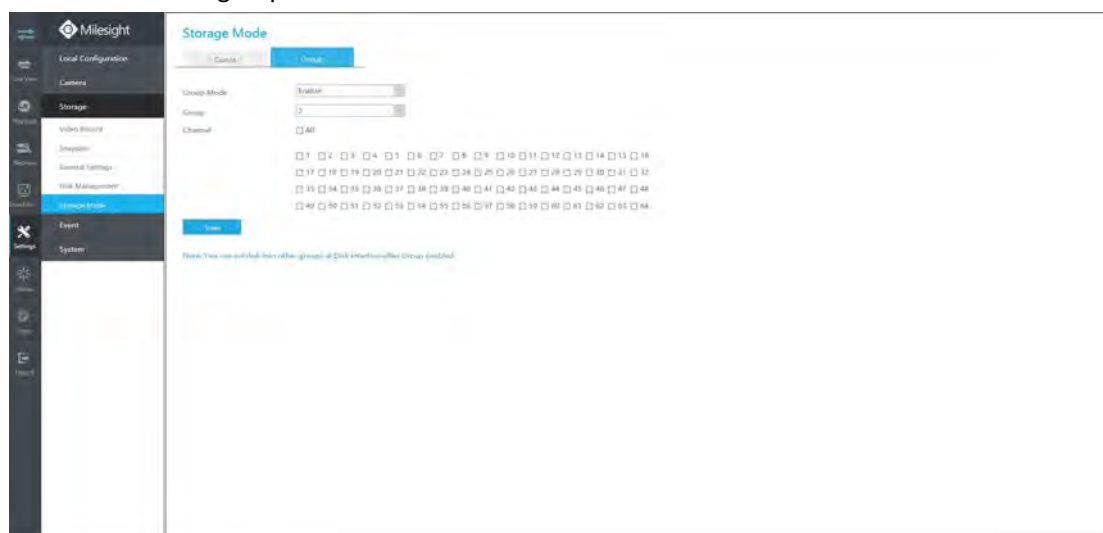




The Quota status of each channel will be displayed in a table at the bottom of the Storage Mode -> Quota interface.

### Group

You can divide disks into different groups, which is able to storage different channels' recorded files into different groups.



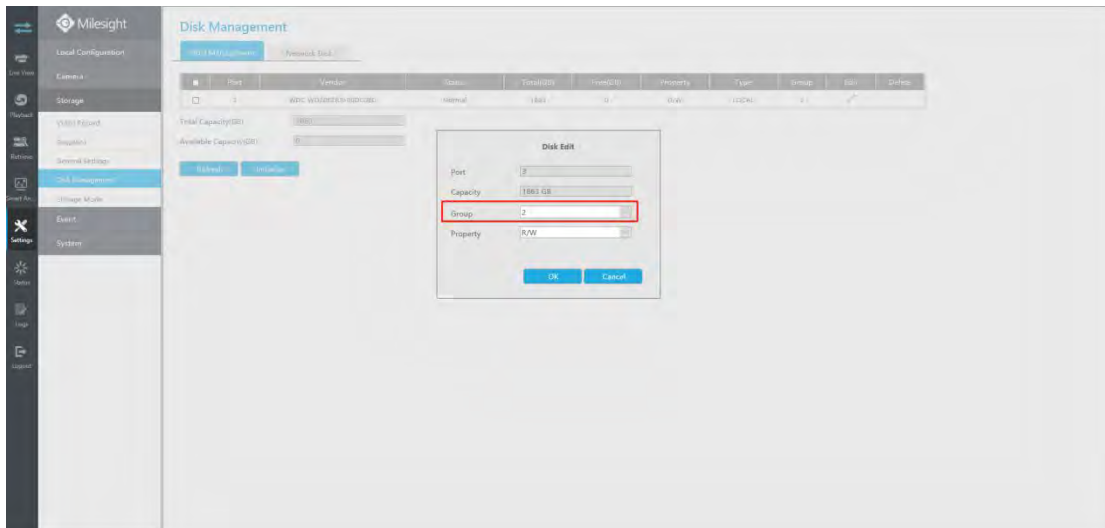
#### Step 1. Enable Group.



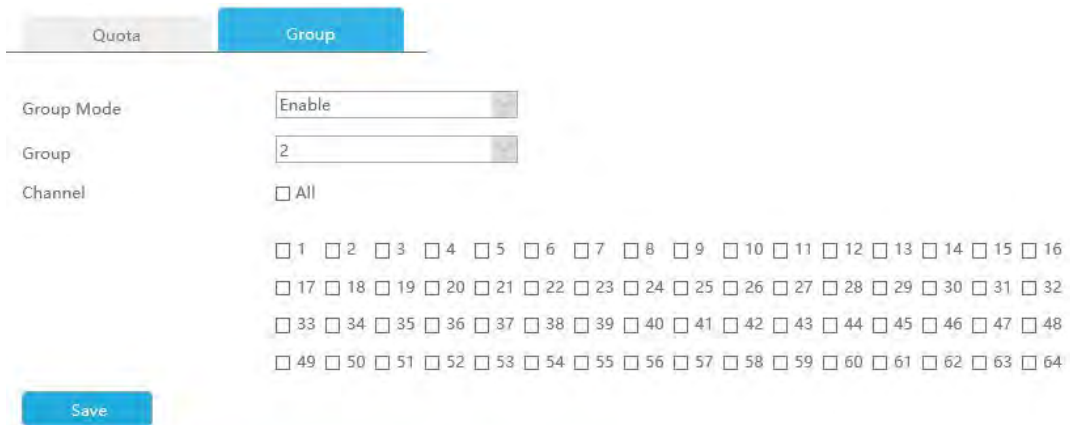
Step 2. Switch to Disk Management interface. Click  and set the group number of every disk.

**Note:**

You can add 16 Storage groups at most.

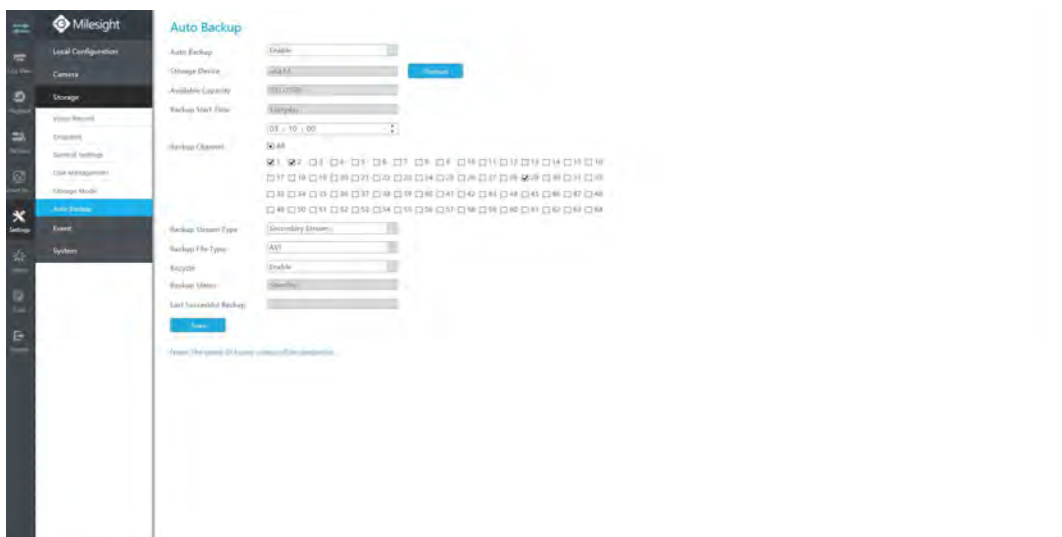


**Step 3. Select group and channels which you want to record into this group.**



Note: You can set disk into other groups at Disk interface after Group enabled.

### 4.8.3.6 Auto Backup



**Step 1.** Enable Auto Backup.




**Step 2.** Click  to format the eSATA disk.



**Step 3.** Set Backup Start Time.




**Step 4.** Check the checkbox to select Backup Channel. You can also click  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  to save the settings, the latest 24 hours' video will be automatically backed up to eSATA.

**Note:**

① You can check Auto Backup status in the Backup Status bar, the corresponding status is as follows.

- No Storage Device
- Unsupported Storage Device Format
- Standby
- Working (xx%)

② If there are already successfully backed up videos, the time when the backup ends will be displayed in Last Successful Backup bar.

③ Only NVR 8000 Series supports Auto Backup function.

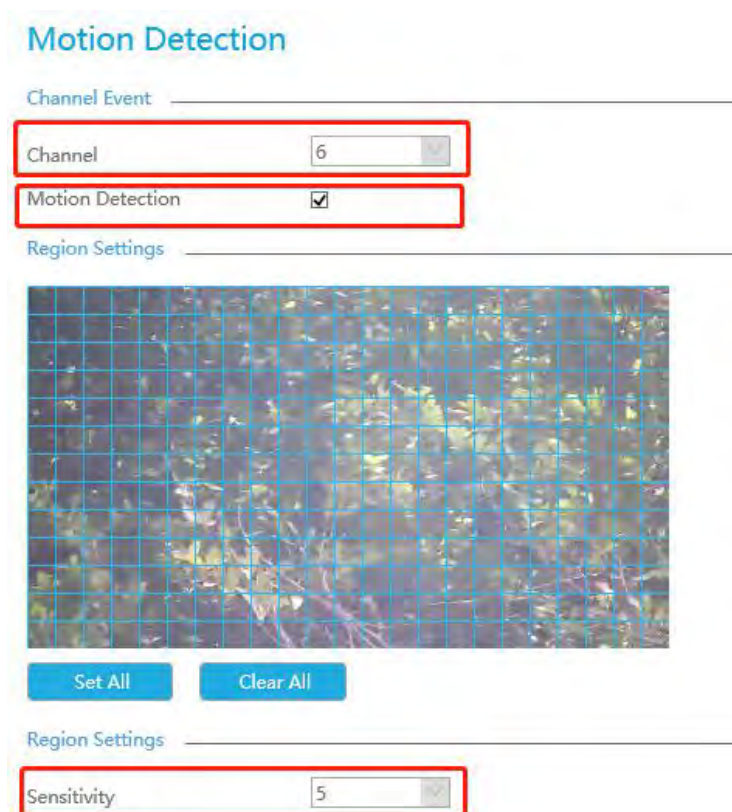
## 4.8.4 Event

### 4.8.4.1 Motion Detection



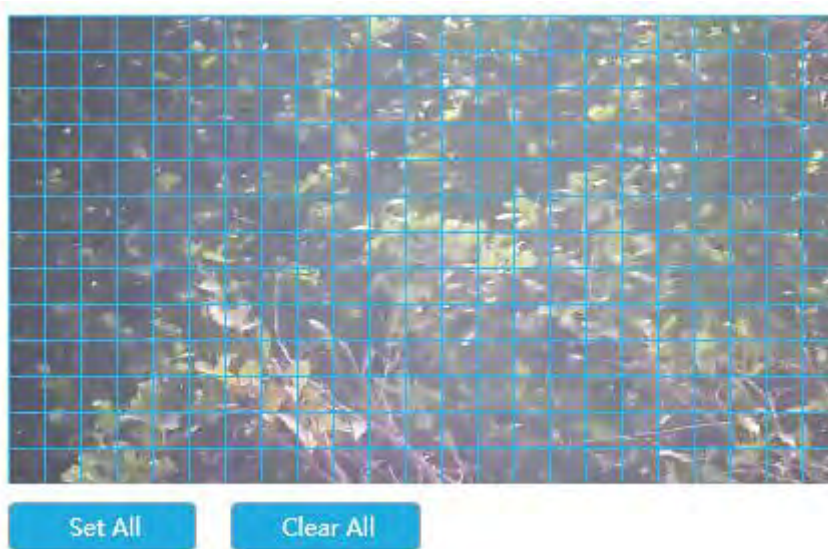
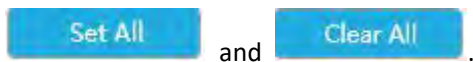
#### Step 1. Enable Motion Detection.

Select channel , Sensitivity and click  to enable Motion Detection.



**Step2: Set the area for triggering motion detection.**

You can select an area by dragging the mouse to set the trigger area, and this area will be synchronized to camera. Also, you can set or clear all set region by directly clicking

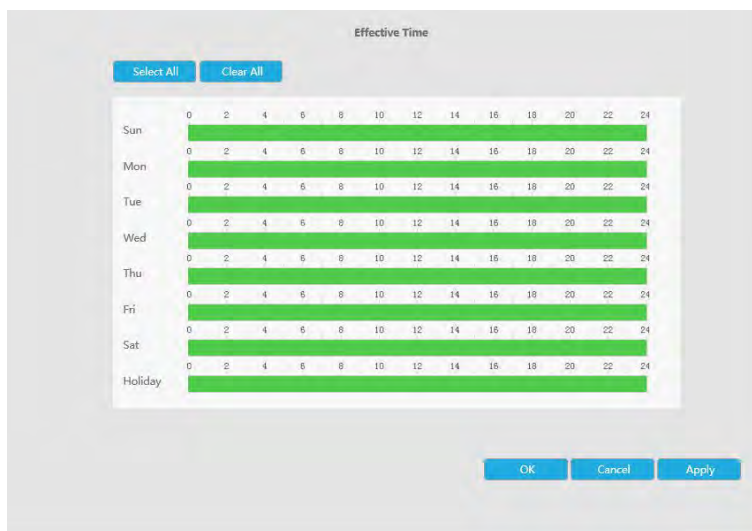


**Step 3. Set Effective Time of motion detection by clicking**

NVR receives the alarm when effective time has been set. It will be more convenient by clicking



to set or clear all time settings.



**Step 4. Set Action for motion detection alarm by clicking**

**Audible Warning:** NVR will trigger an audible beep when motion is detected.


Drag a line on the time table for time setting. It will be more convenient by clicking



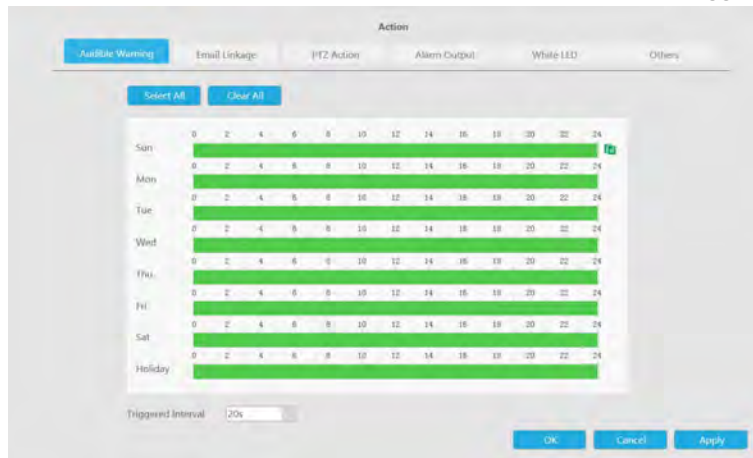
to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.



Click  to copy time setting to other day.

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



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

Drag a line on the time table for time setting. It will be more convenient by clicking


Select All

or

Clear All

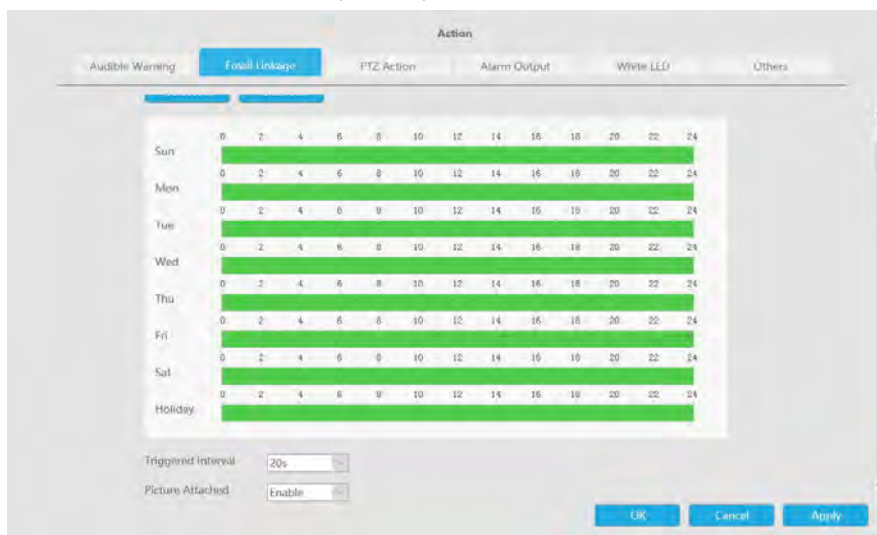
to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click  to copy time setting to other day.

**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.



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

Drag a line on the time table for time setting. It will be more convenient by clicking

Select All

or

Clear All

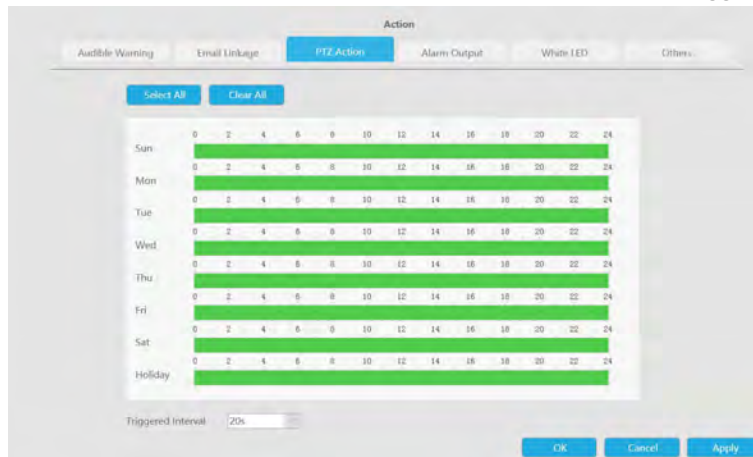
to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

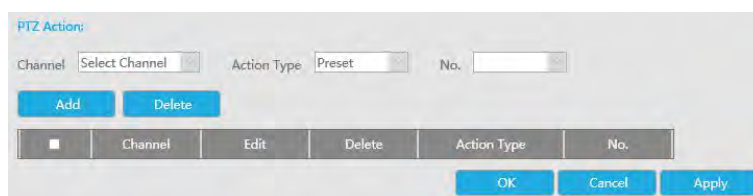
Click  to copy time setting to other day.



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



And you can add PTZ Action.



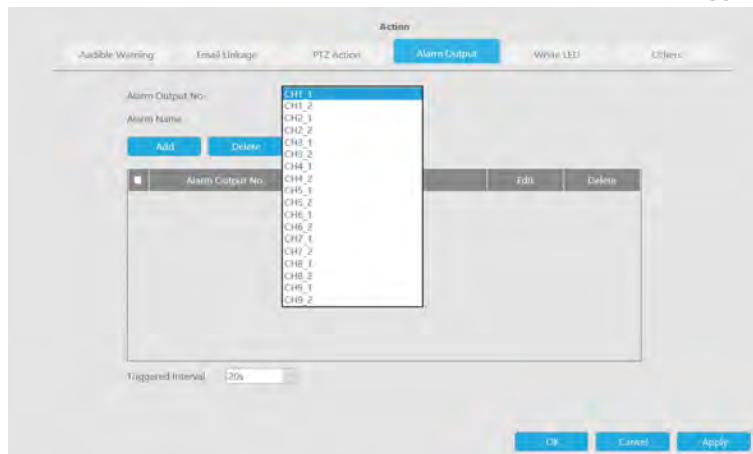
**Channel:** Select the channel which supports this function.

**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.

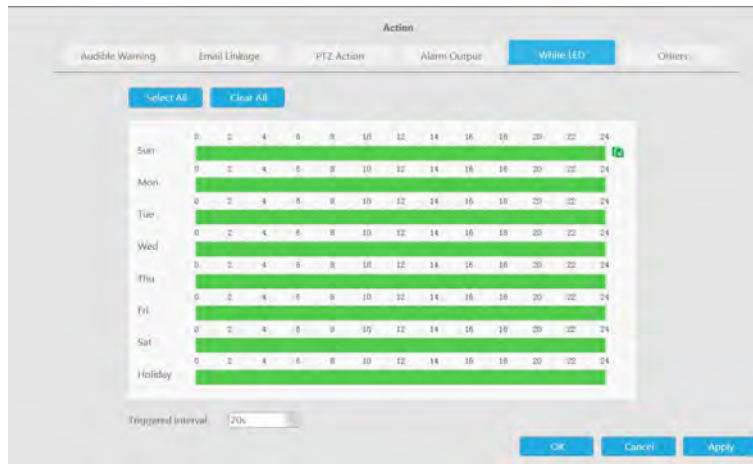
Drag a line on the time table for time setting. It will be more convenient by clicking



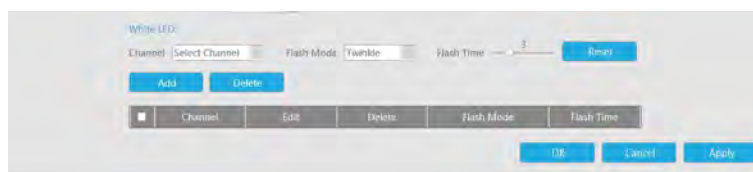
Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add White LED.

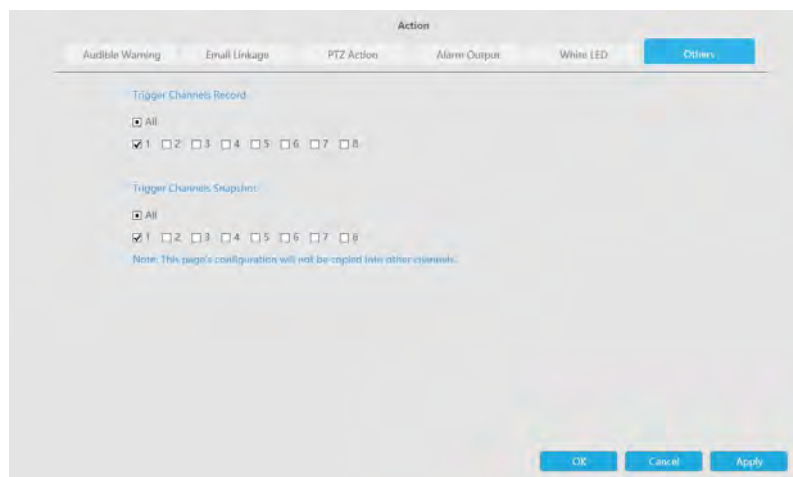


**Channel:** Select the channel which supports this function.

**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.

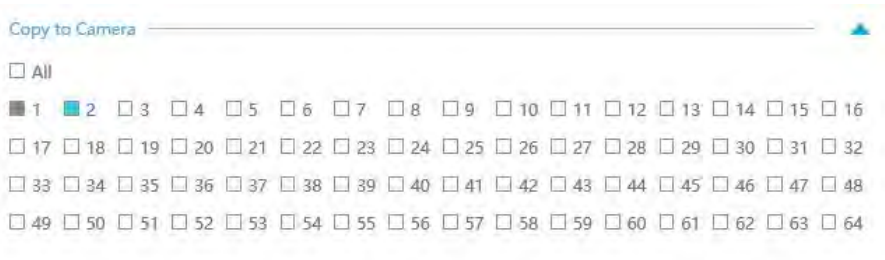
**Others:** Trigger selected channels to record and snapshot when alarm is triggered.



**Note:**

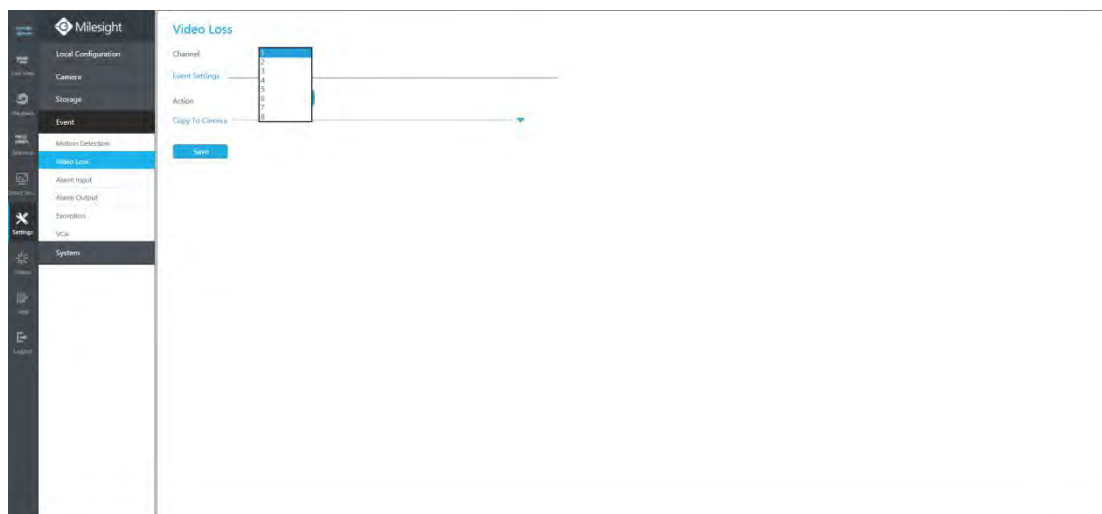
Make sure you have set correct schedule for record and snapshot before setting the Event Action.

**Step 5.** Click [Copy to Camera] and to copy the same configuration to other channels.



## 4.8.4.2 Video Loss

### Step1. Select a channel




### Step2. Set Action for video loss.

**Audible Warning:** NVR will trigger an audible beep when alarm is triggered.

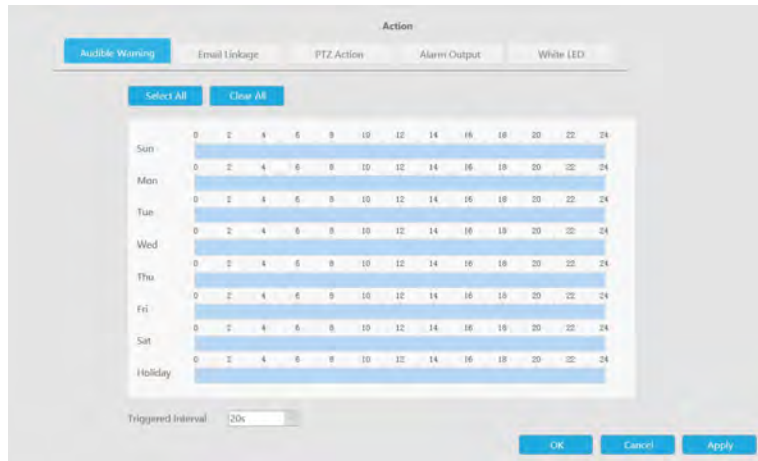
Drag a line on the time table for time setting. It will be more convenient by clicking

or  to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click  to copy time setting to other day.

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



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

Drag a line on the time table for time setting. It will be more convenient by clicking


Select All

or

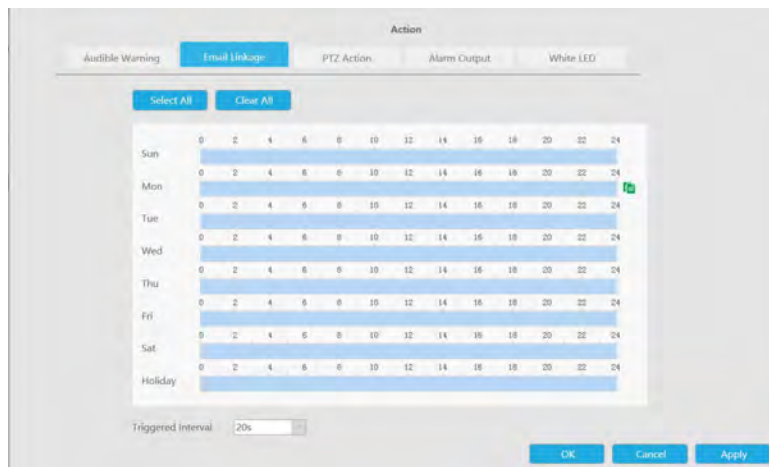
Clear All

to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click  to copy time setting to other day.

**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**.

Drag a line on the time table for time setting. It will be more convenient by clicking


Select All

or

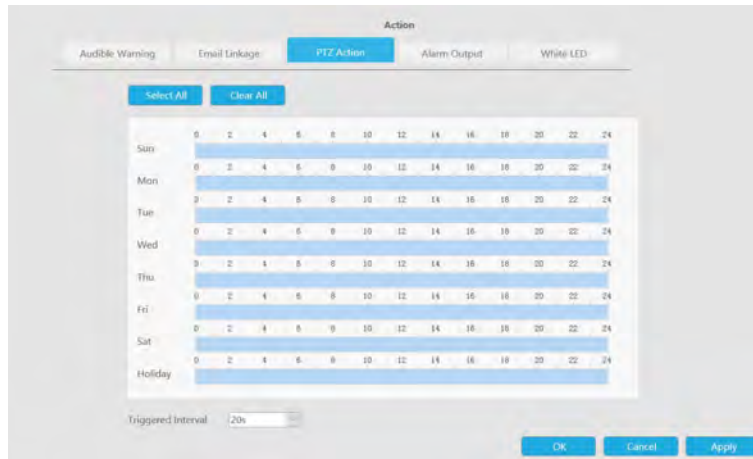
Clear All

to set or clear all time settings.

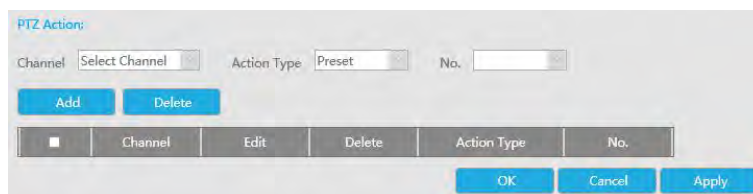
Moreover, you can click time bar to edit the time accurately.

Click  to copy time setting to other day.

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



And you can add PTZ Action.



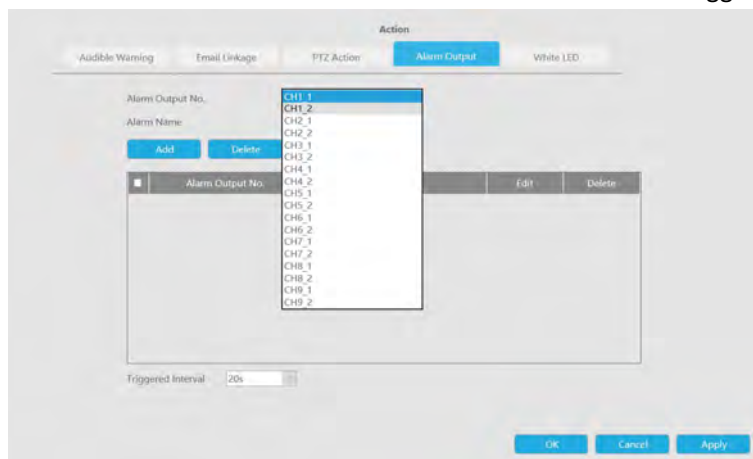
**Channel:** Select the channel which supports this function.

**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.

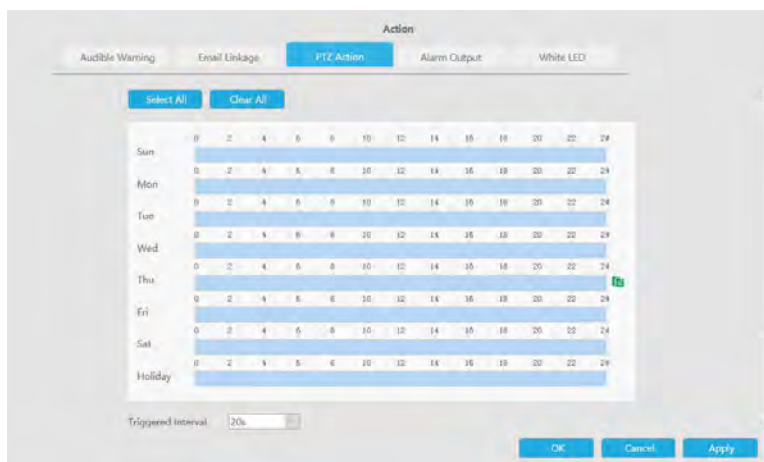
Drag a line on the time table for time setting. It will be more convenient by clicking



Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add White LED.

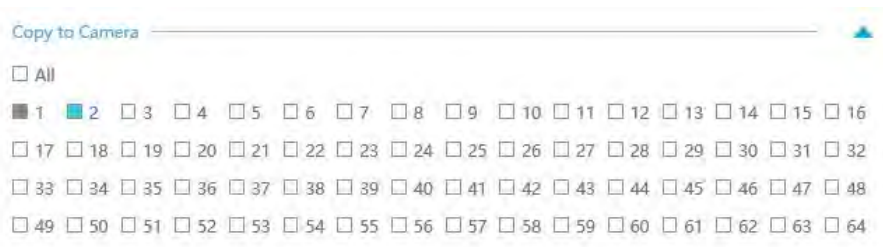


**Channel:** Select the channel which supports this function.

**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.

**Step 3.** Click [Copy to Camera] and to copy the same configuration to other channels.



### 4.8.4.3 Alarm Input

#### 4.8.4.3.1 NVR Alarm Input

Alarm Input function is supported by MS-N5008-UC, MS-N5008-UT, MS-N5016-UT, MS-N7016-UH, MS-N7032-UH, MS-N8032-UH, MS-N8064-UH, MS-N5008-UPC, MS-N5008-UPT, MS-N5016-UPT, MS-N7016-UPH and MS-N7032-UPH.

**Step1. Set Alarm input Number, Alarm Name and Alarm Type.**



## Alarm Input Settings

NVR Alarm Input     Camera Alarm Input

Alarm Input No.

Alarm Name  (cannot copy)

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.

**Step 2. Set effective time for alarm input.**


**Step3. Set action for alarm input.**

**Audible Warning:** NVR will trigger an audible beep when alarm is triggered.

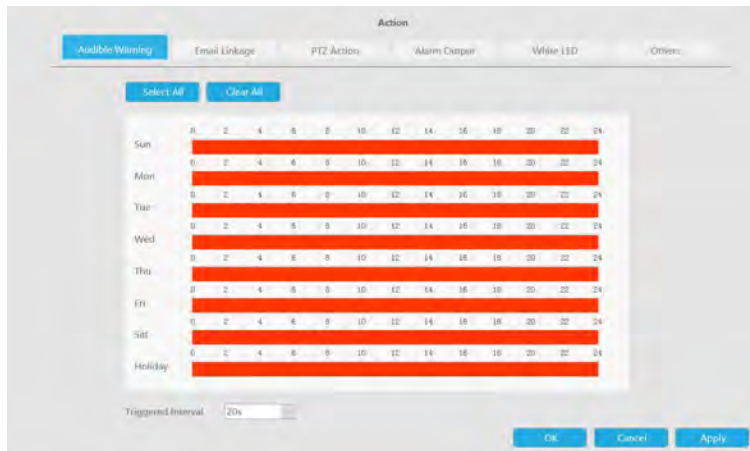
Drag a line on the time table for time setting. It will be more convenient by clicking

or  to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click  to copy time setting to other day.

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



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

Drag a line on the time table for time setting. It will be more convenient by clicking

or  to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

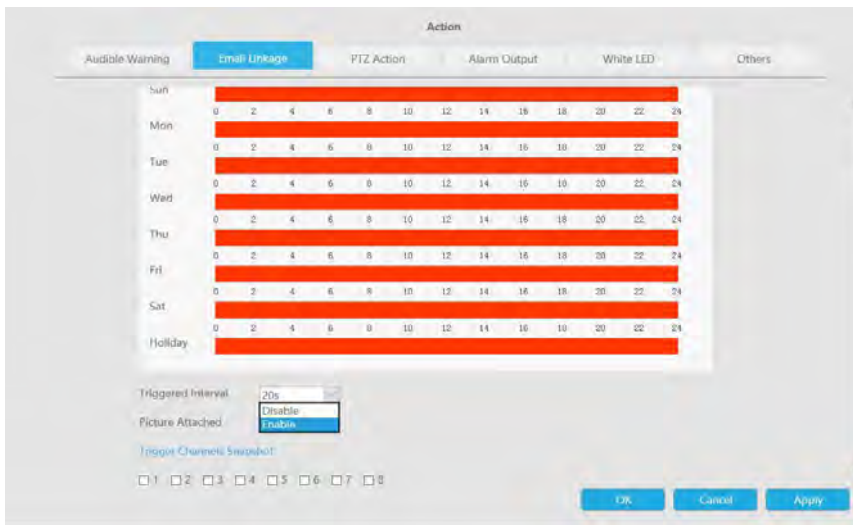
Click  to copy time setting to other day.

**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 capture attached.

**Trigger Channels Snapshot:** The snapshot of selected channels will be sent when alarm is

triggered.



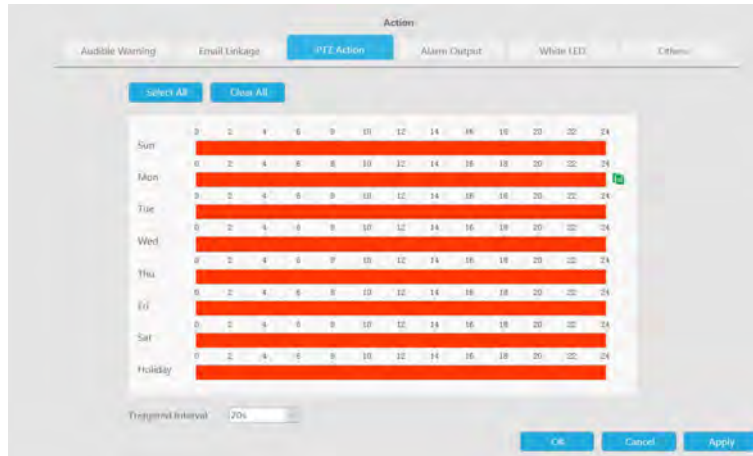
**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**. Drag a line on the time table for time setting. It will be more convenient by clicking



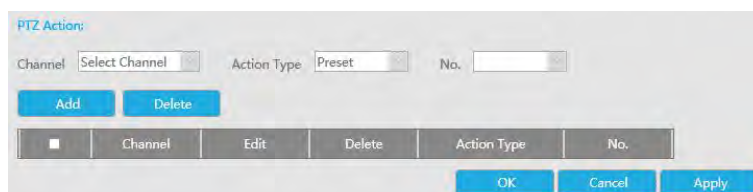
Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add PTZ Action.



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

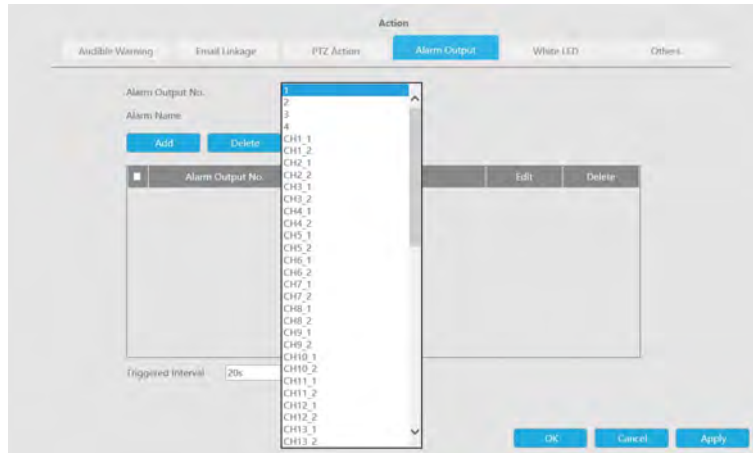
**Action Type:** Preset and Patrol are available.

**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 first listed, that is, 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.

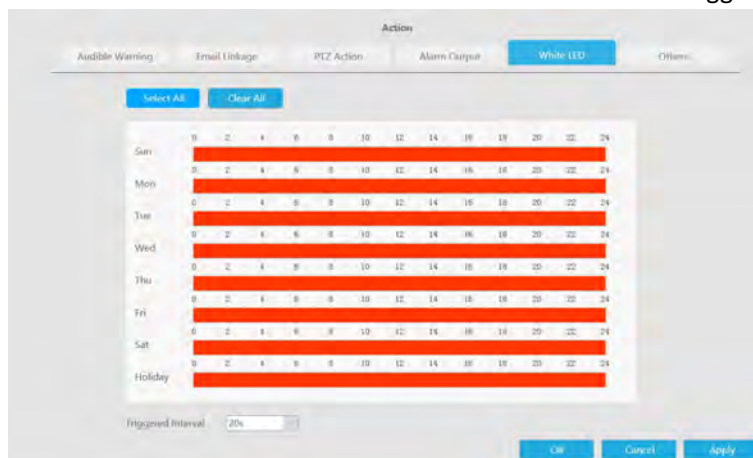
Drag a line on the time table for time setting. It will be more convenient by clicking



Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add White LED.



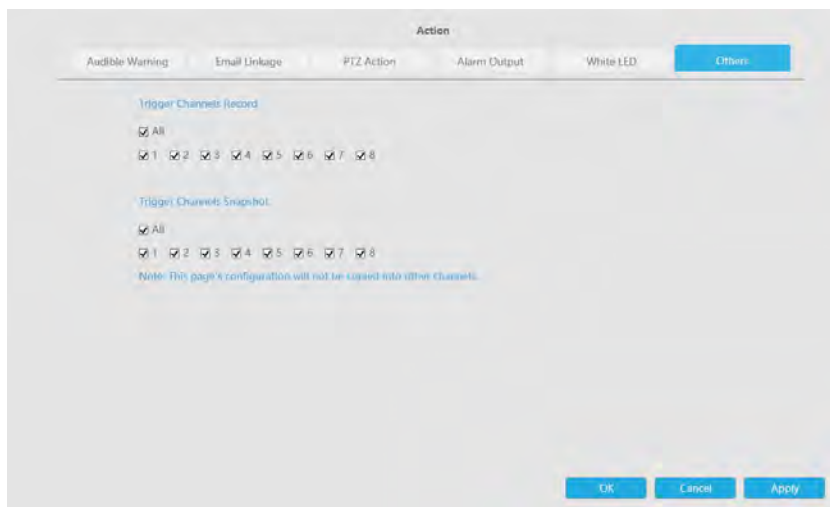
**Channel:** Select the channel which supports this function.


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

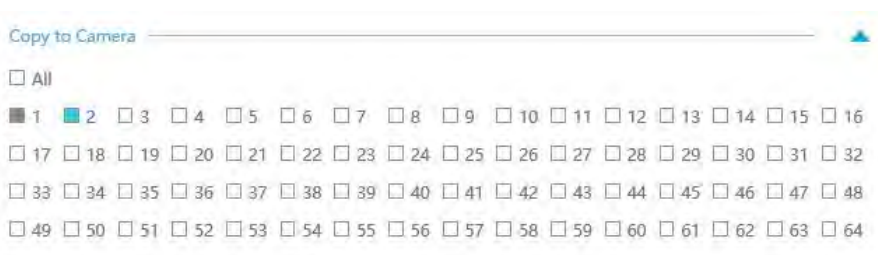
**Flash Time:** Set the time for White LED flashing. When the Flash Mode is Twinkle, the range of Flash Time is 1~10 and the default value is 3. When the Flash Mode is Always, the range of Flash Time is 1~60 and the default value is 5.

**Others:** Start recording and snapshot when alarm is triggered.

Trigger selected channels to record and snapshot when alarm is triggered. Don't forget to set correct schedule for recording and snapshot.



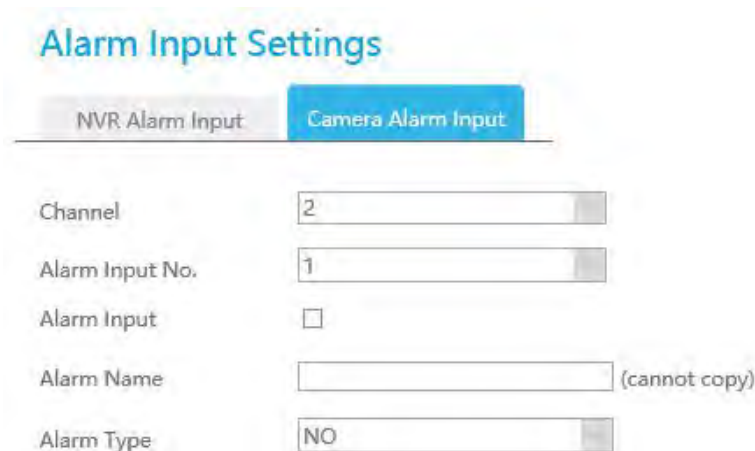
**Step 4. Click [Copy to Alarm] and  to copy the same configuration to other alarm channels.**



### 4.8.4.3.2 Camera Alarm Input

Milesight NVRs support the upgrade of Milesight Cameras.

**Step1. 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.

### Step2. Set action for Alarm Input.

**Audible Warning:** NVR will trigger an audible beep when motion is detected.

Drag a line on the time table for time setting. It will be more convenient by clicking


Select All

or

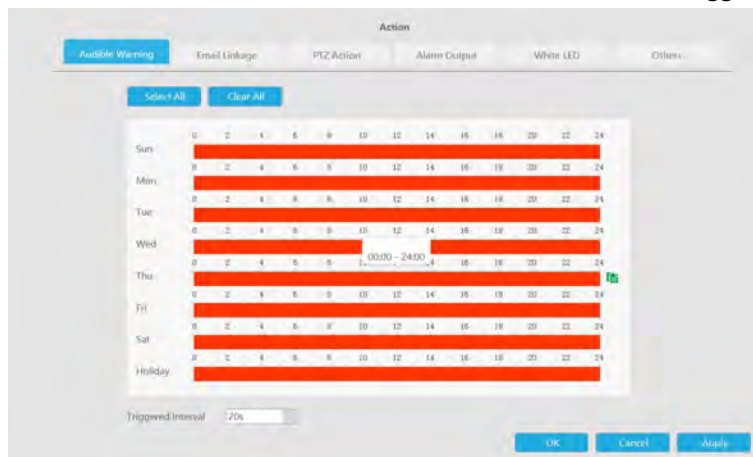
Clear All

to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click  to copy time setting to other day.

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



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

Drag a line 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.

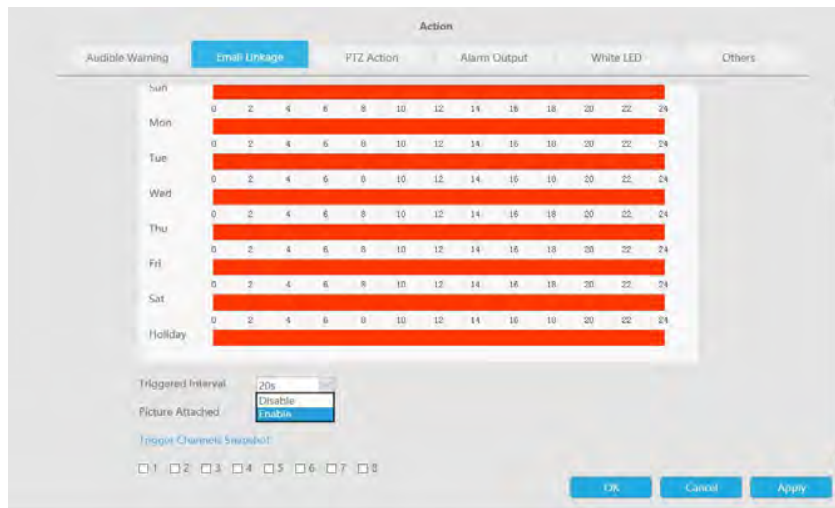
Moreover, you can click time bar to edit the time accurately.

Click  to copy time setting to other day.

**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.



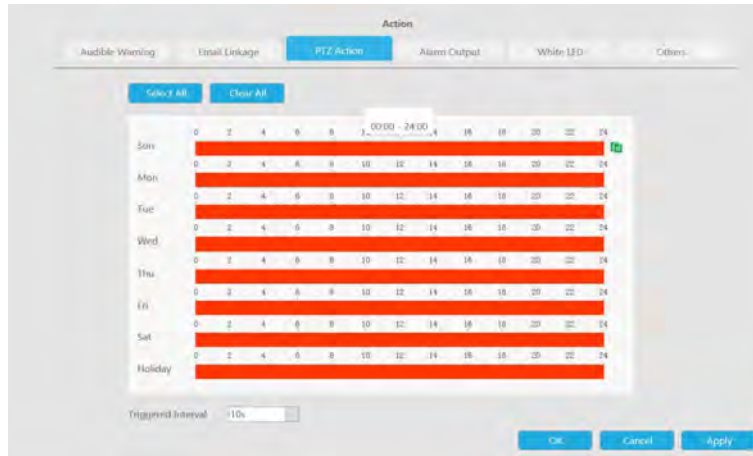


**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**. Drag a line on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.

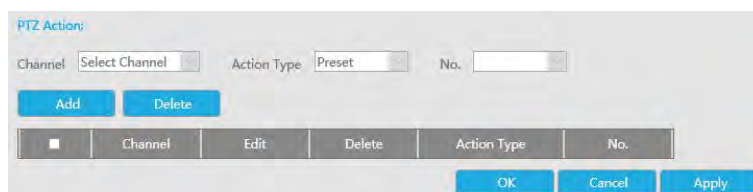
Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add PTZ Action.



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

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

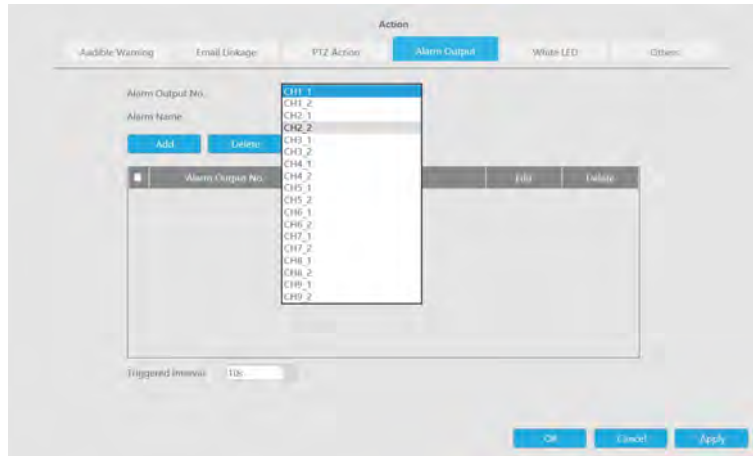
**No.:** Select the number of Preset or Patrol.

**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.

Drag a line on the time table for time setting. It will be more convenient by clicking

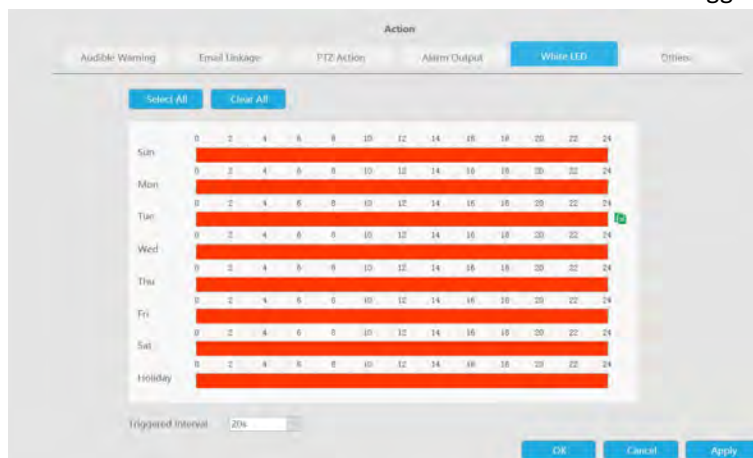


to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add White LED.

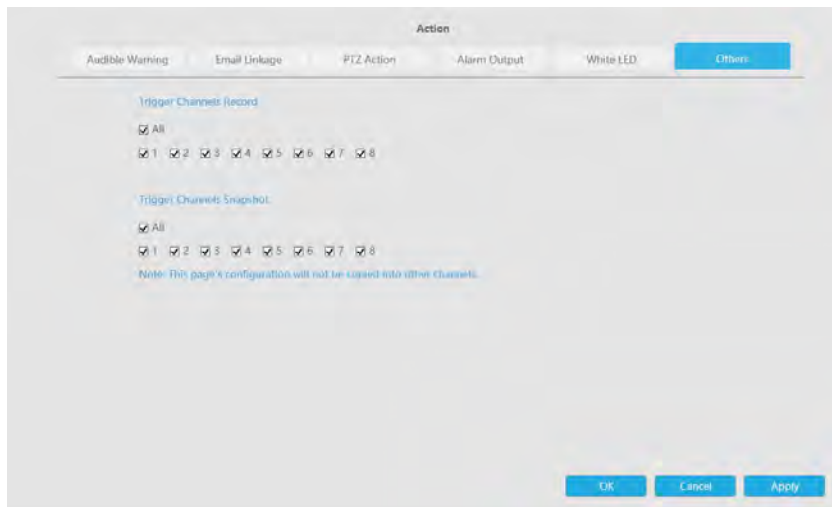


**Channel:** Select the channel which supports this function.

**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 to channels record and snapshot when alarm is triggered.



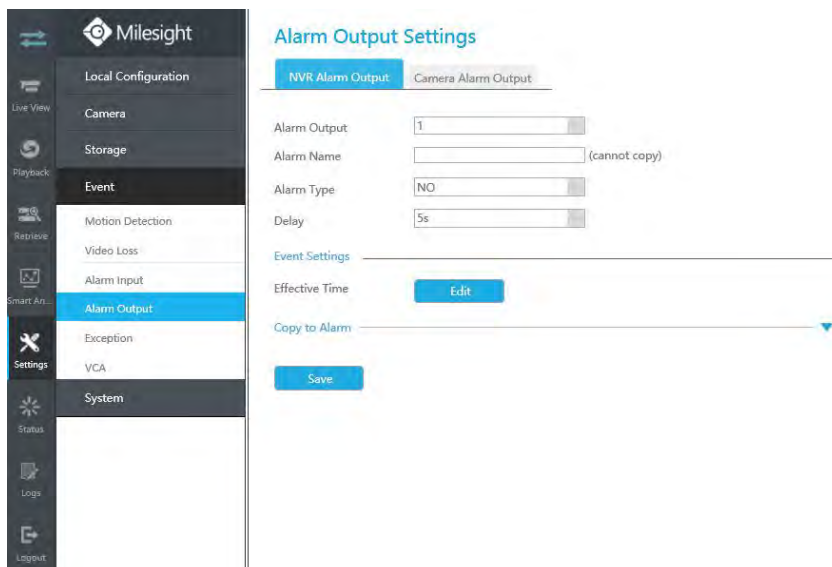
**Step 3.** Click [Copy to Camera] and to copy the same configuration to other channels.



## 4.8.4.4 Alarm Output

### 4.8.4.4.1 NVR Alarm Output

Alarm Output function is supported by MS-N5008-UC, MS-N5008-UT, MS-N5016-UT, MS-N7016-UH, MS-N7032-UH, MS-N8032-UH, MS-N8064-UH, MS-N5008-UPC, MS-N5008-UPT, MS-N5016-UPT, MS-N7016-UPH and MS-N7032-UPH.



**Step 1. Set Alarm output channel, Alarm Type, Delay and Alarm Name.**

### Alarm Output Settings

NVR Alarm Output
Camera Alarm Output

Alarm Output:

Alarm Name:  (cannot copy)

Alarm Type:

Delay:

**Alarm Output:** The channel which will output the alarm signal.

**Alarm Type:** Select alarm type: NO or NC.

**Delay:** Set the output time for alarm. If the output alarm lasts too long, you can select the Manually Clear to stop it.

**Alarm Name:** Set a name for the alarm.

**Step 2: Set effective time.**

Select All
Clear All

	0	2	4	6	8	10	12	14	16	18	20	22	24
Sun													
Mon													
Tue													
Wed													
Thu													
Fri													
Sat													
Holiday													

**Step3.** Click [Copy to Alarm] and ■ to copy the same configuration to other alarm channels.

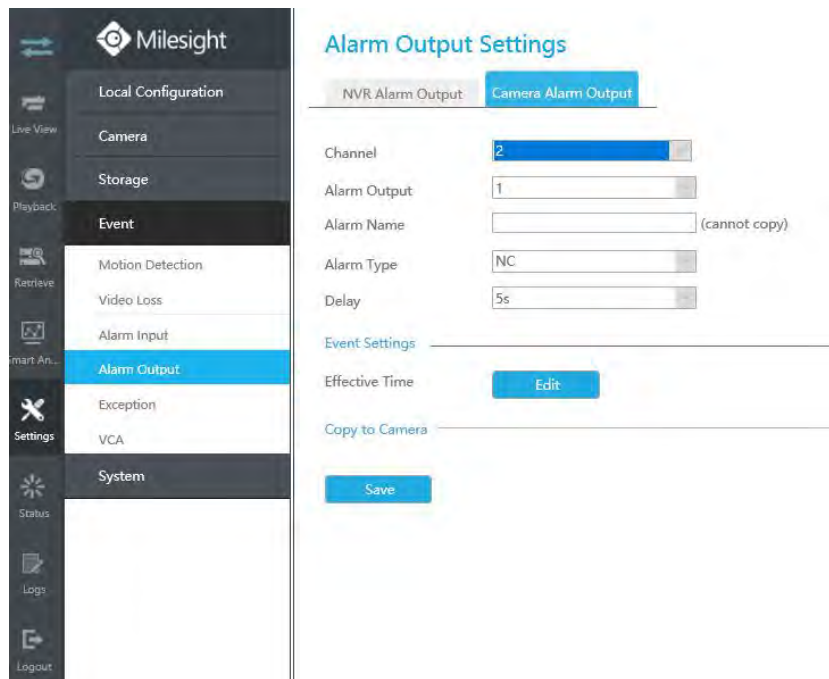
Copy to Alarm ▲

Select All

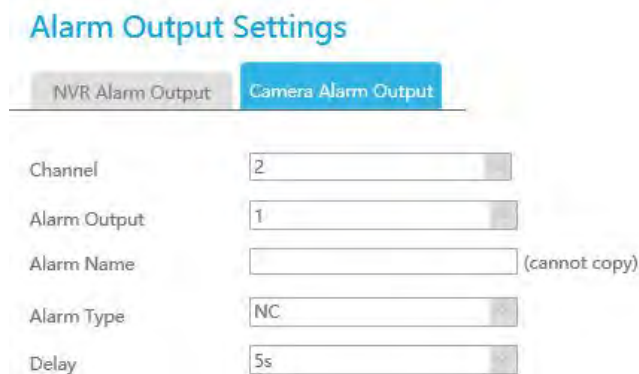
1
  2
  3
  4

#### 4.8.4.4.2 Camera Alarm Output

Milesight NVRs support the upgrade of Milesight Cameras.



**Step 1. Set Alarm Output Channel, Alarm Type, Delay and Alarm Name.**



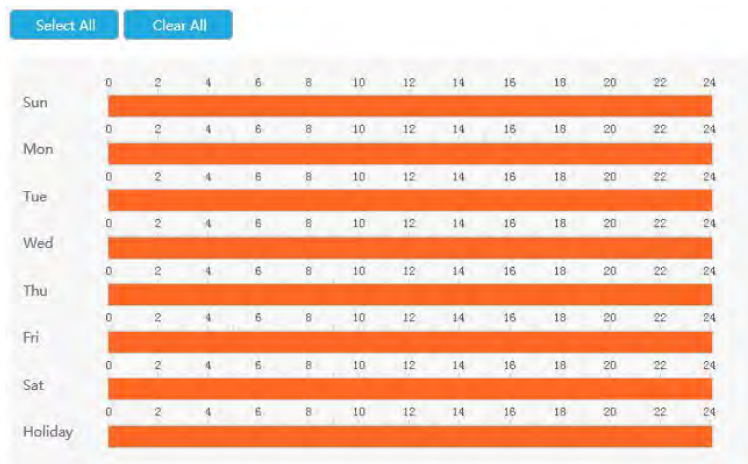
**Alarm Output:** The alarm output number of the corresponding channel which has input signal.

**Alarm Type:** Select Alarm Type: NO or NC.

**Delay:** Set the output time for alarm. If the output alarm lasts too long, you can select the Manually Clear to stop it.

**Alarm Name:** Set a name for the alarm.

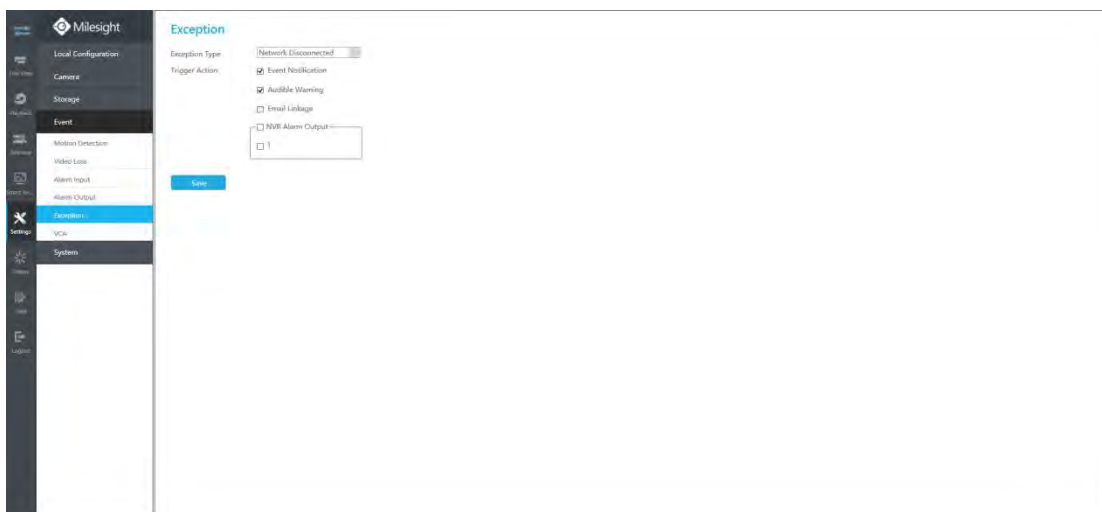
**Step 2: Set effective time.**



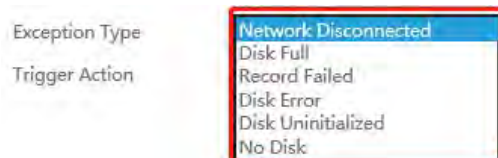
**Step3.** Click [Copy to Alarm] and to copy the same configuration to other alarm channels.



### 4.8.4.5 Exception



**Step1.** Select Exception Type.



**Network Disconnected:** Loss of network.

**Disk Full:** HDD 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:** HDD is uninitialized.

**No Disk:** There is no Disk.

### Exception

Exception Type

Trigger Action

Network Disconnected
Disk Full
Record Failed
Disk Error
Disk Uninitialized
No Disk

**Step 2. 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 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 can set interval when sending alarm Emails).

**NVR Alarm Output:** NVR will trigger the corresponding Alarm Output.

Event Notification

Audible Warning

Email Linkage

Trigger Interval

NVR Alarm Output

1

#### 4.8.4.6 VCA

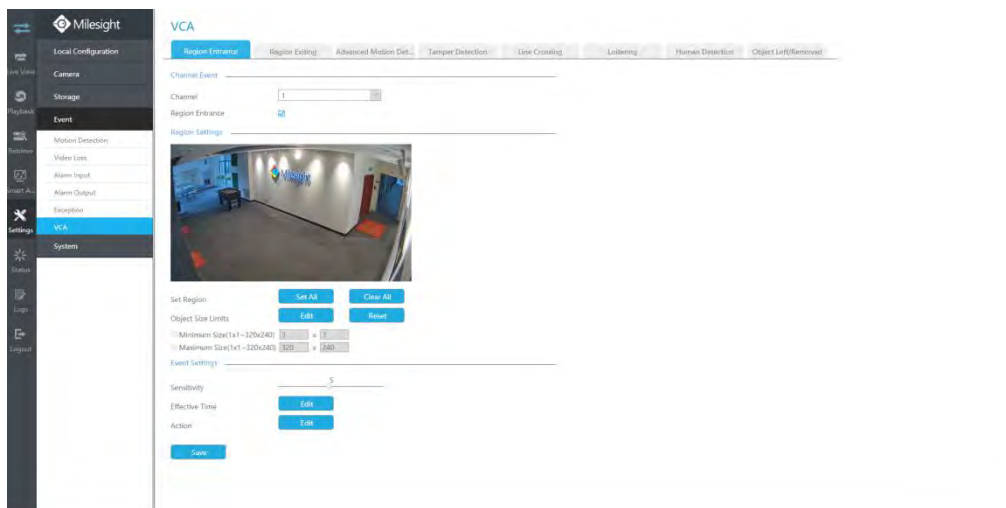
It uses Milesight Video Content Analysis technology which is applied in a wide range of domains including entertainment, health-care, retail, automotive, transport, home automation, safety and security. Milesight VCA provides advanced, accurate smart video analysis for Milesight network cameras. It enhances 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.

#### 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.

**Step 1. Select channel.**



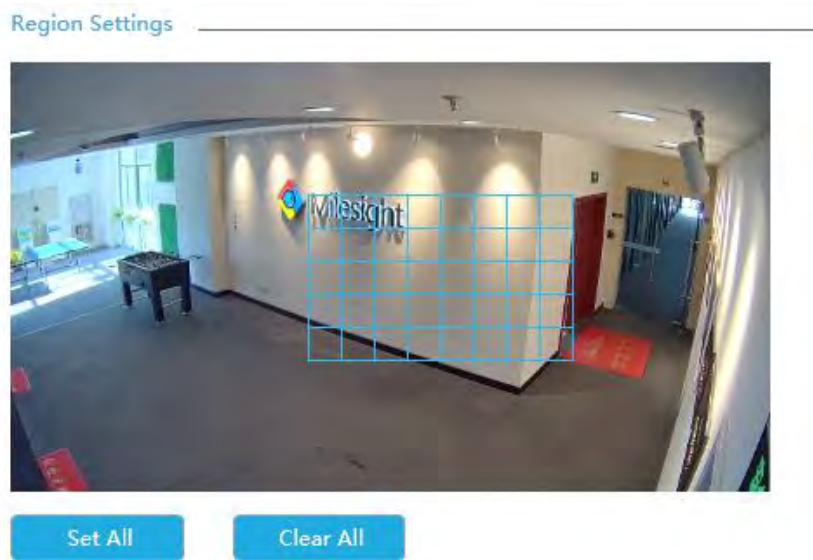


**Step 2. Enable Region Entrance.**

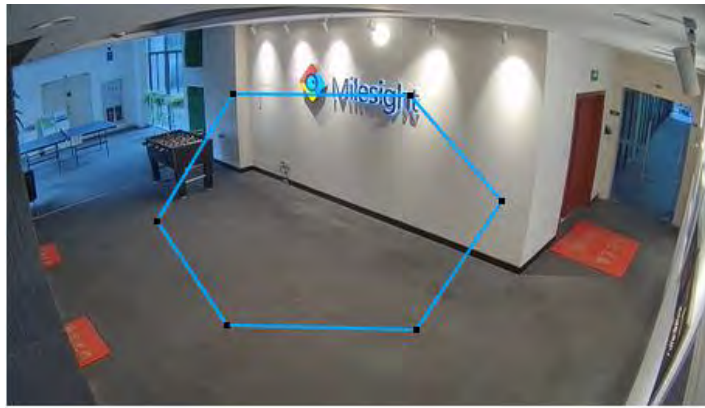


**Step 3. Set entrance detection region.**

You can select an area by dragging the mouse to set the trigger area, and this area will be synchronized to camera. Also, you can set or clear all set region by directly clicking



For cameras with the firmware version higher than 4X.7.0.78, it supports drawing polygon detection region for VCA function.



**Step 4. Set Sensitivity to trigger event.**



**Step 5. 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.

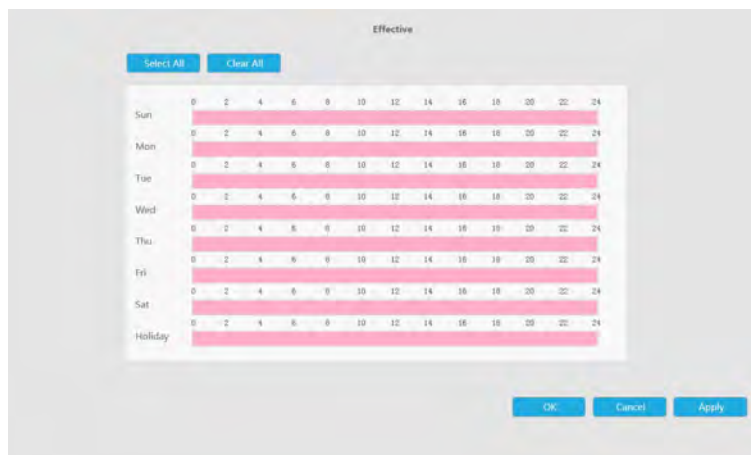


**Note:**

- 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 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



**Step 7. Set Action for region entrance alarm by clicking [Edit](#).**

**Audible Warning:** NVR will trigger an audible beep when motion is detected.

Drag a line on the time table for time setting. It will be more convenient by clicking

Select All

or

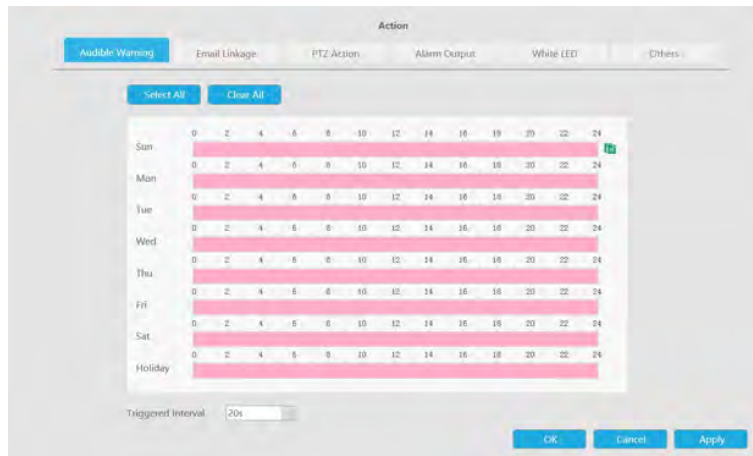
Clear All

to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click  to copy time setting to other day.

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



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

Drag a line on the time table for time setting. It will be more convenient by clicking

Select All

or

Clear All

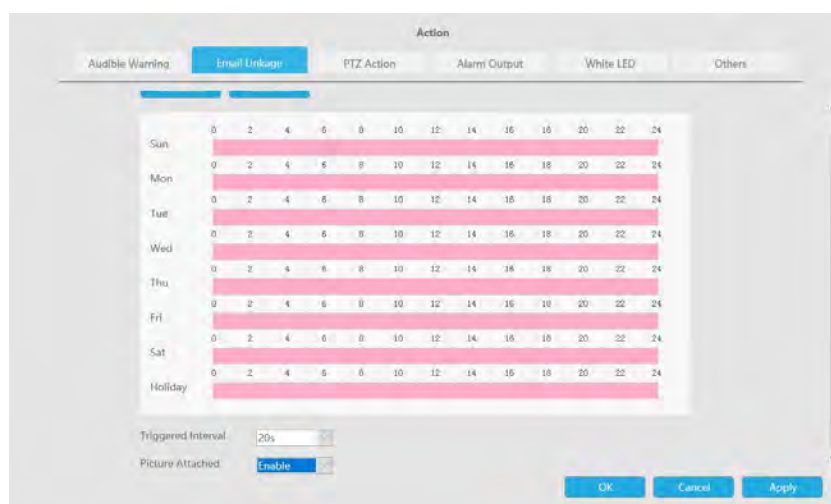
to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click  to copy time setting to other day.

**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.



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

Drag a line on the time table for time setting. It will be more convenient by clicking

Select All

or

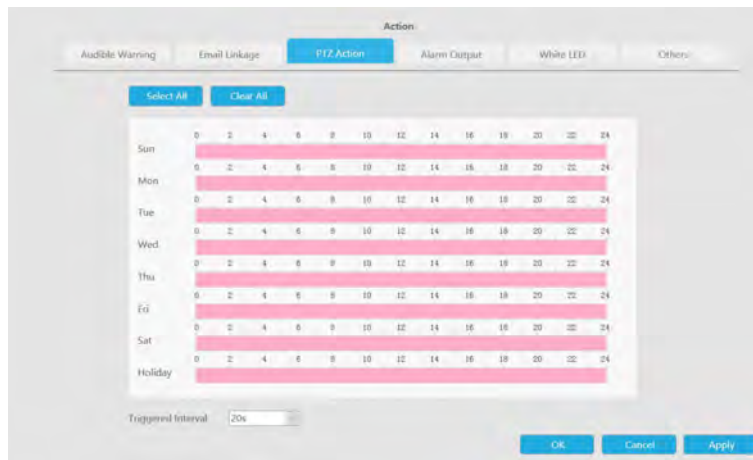
Clear All

to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add PTZ Action.



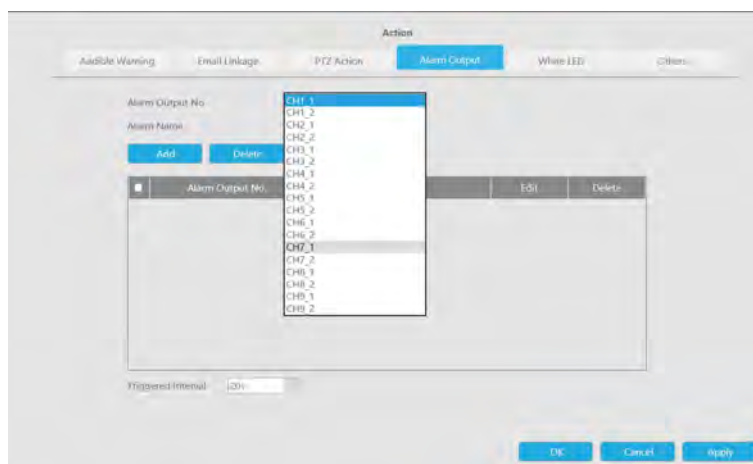
**Channel:** Select the channel which supports this function.

**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.

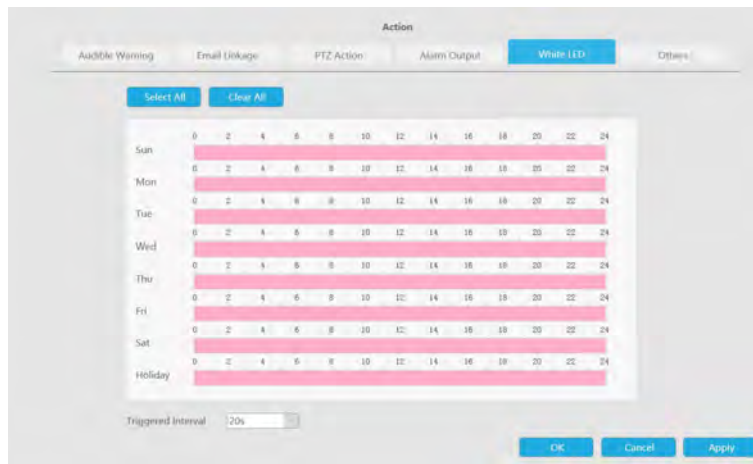
Drag a line on the time table for time setting. It will be more convenient by clicking

or to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add White LED.

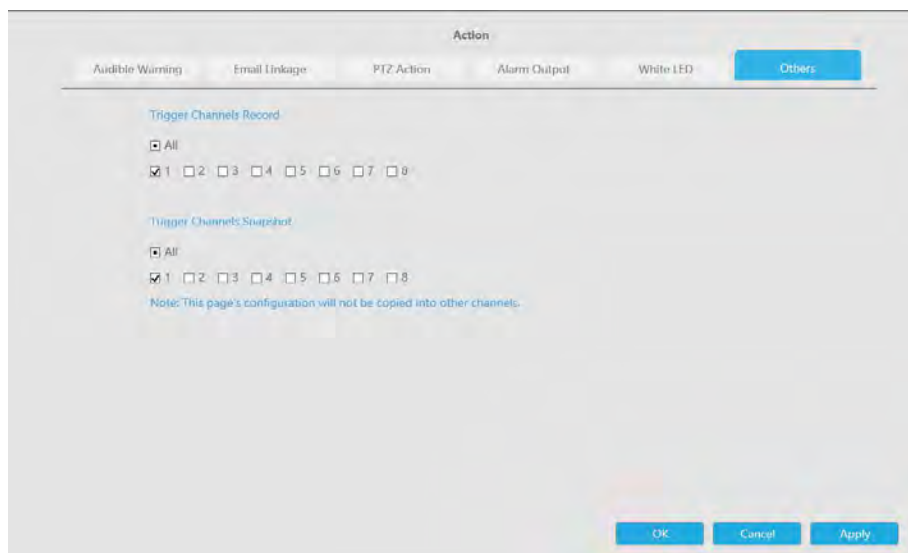


**Channel:** Select the channel which supports this function.

**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.



**Step 7. Set Minimum Size and Maximum Size.**

Minimum Size(1x1~320x240)  x   
 Maximum Size(1x1~320x240)  x



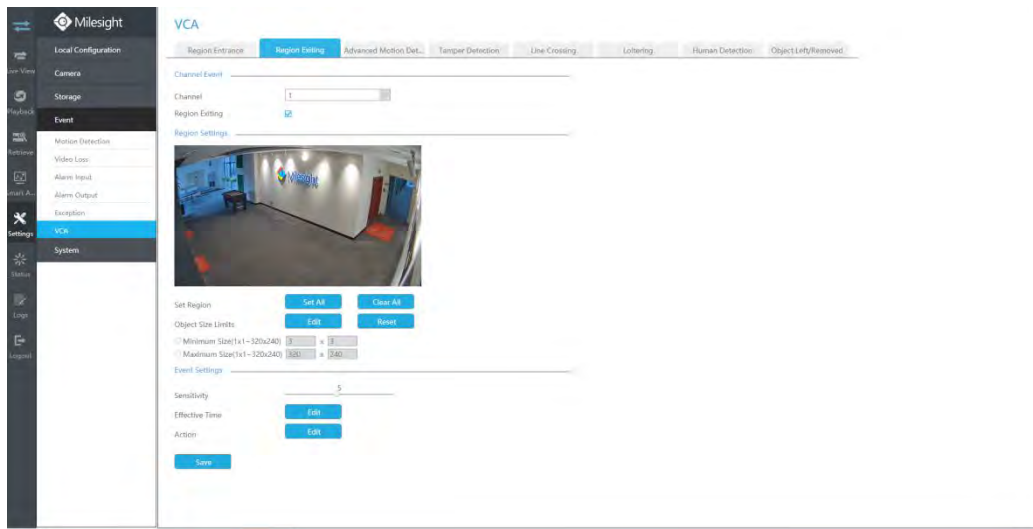
**Minimum Size:** The Min. Size means that only if the object size is bigger than the frame, the settings for Region Entrance will take effect.

**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.

## 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.

### Step 1. Select channel.



### Step 2. Enable Region Exiting.

Region Exiting



### Step 3. Set exit detection region.

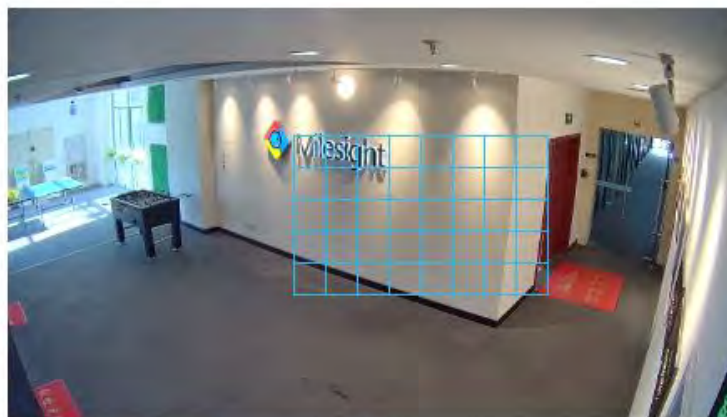
You can select an area by dragging the mouse to set the trigger area, and this area will be synchronized to camera. Also, you can set or clear all set region by directly clicking

Set All

and

Clear All

Region Settings

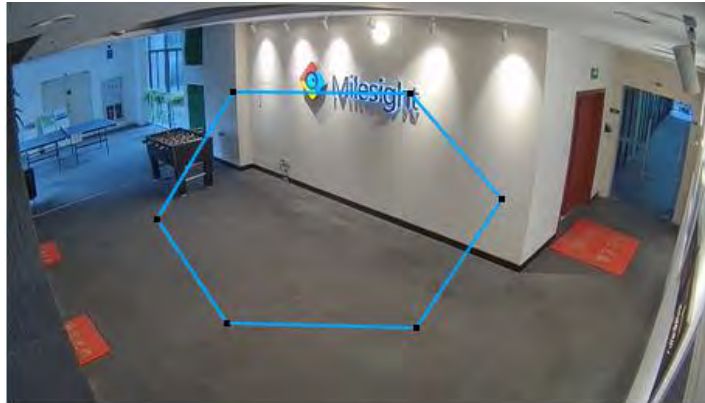


Set All

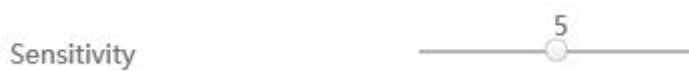
Clear All



For cameras with the firmware version higher than 4X.7.0.78, it supports drawing polygon detection region for VCA function.



**Step 4. Set Sensitivity to trigger event.**



**Step 5. 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.

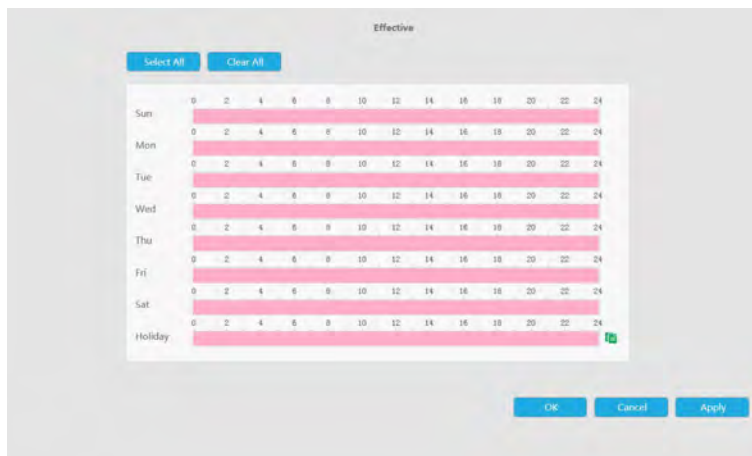


**Note:**

- 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-CXXX-XXC, which supports the human/vehicle detection object.

**Step 6. Set Effective Time of region exiting 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 exiting alarm by clicking [Edit](#).**

**Audible Warning:** NVR will trigger an audible beep when motion is detected.

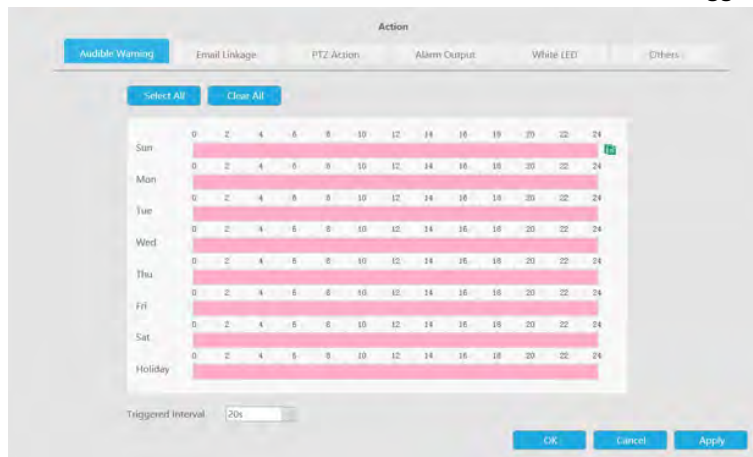
Drag a line on the time table for time setting. It will be more convenient by clicking

**Select All** or **Clear All** to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



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

Drag a line on the time table for time setting. It will be more convenient by clicking

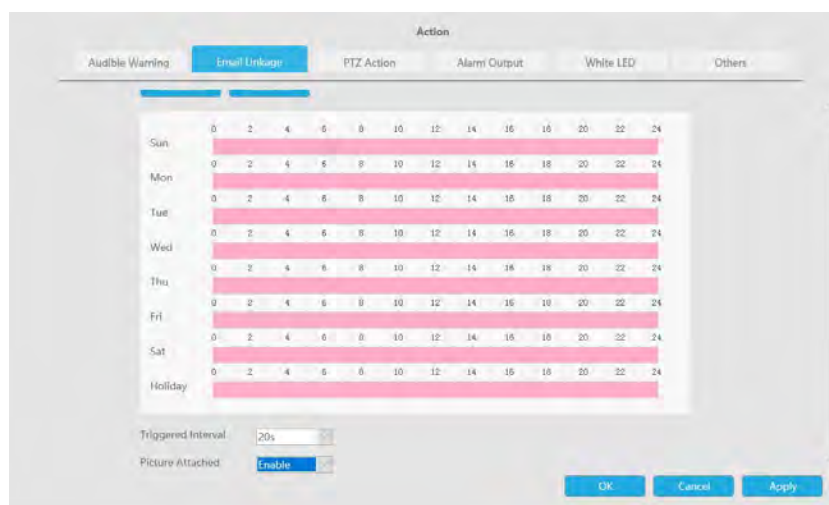
**Select All** or **Clear All** to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

**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.



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

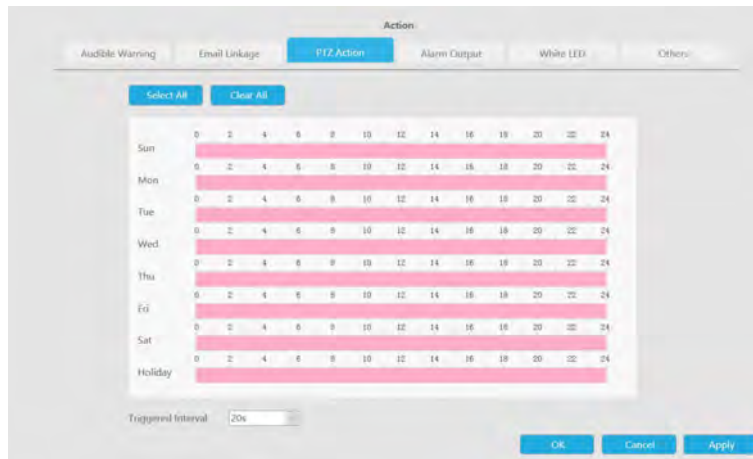
Drag a line on the time table for time setting. It will be more convenient by clicking



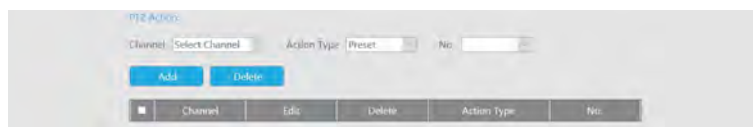
Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add PTZ Action.



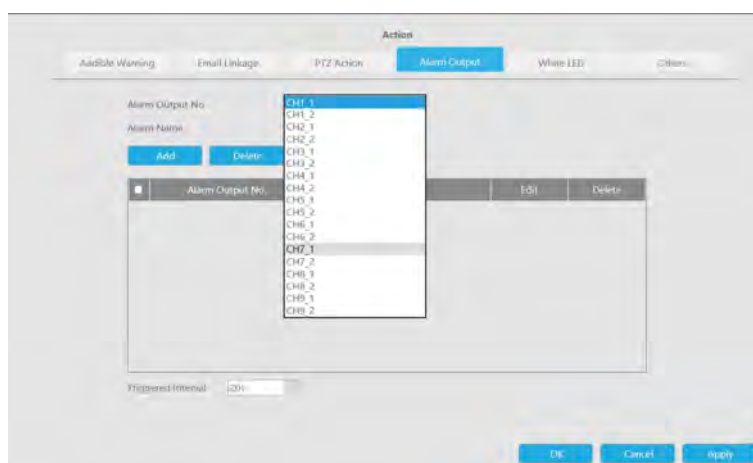
**Channel:** Select the channel which supports this function.

**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.

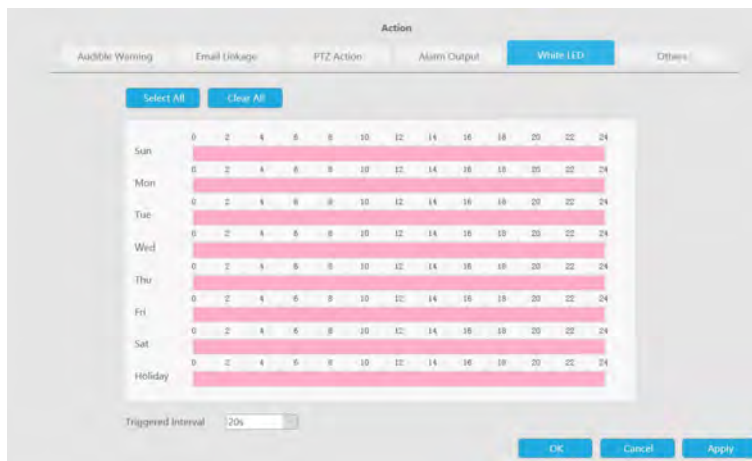
Drag a line on the time table for time setting. It will be more convenient by clicking

**Select All** or **Clear All** to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add White LED.

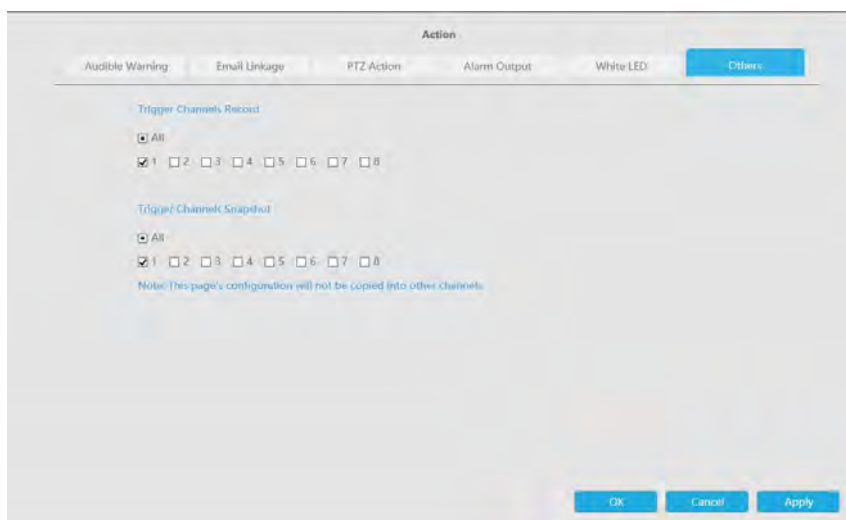


**Channel:** Select the channel which supports this function.

**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 and snapshot when alarm is triggered.



**Step 8. Set Minimum Size and Maximum Size.**

Minimum Size(1x1~320x240)  x   
 Maximum Size(1x1~320x240)  x

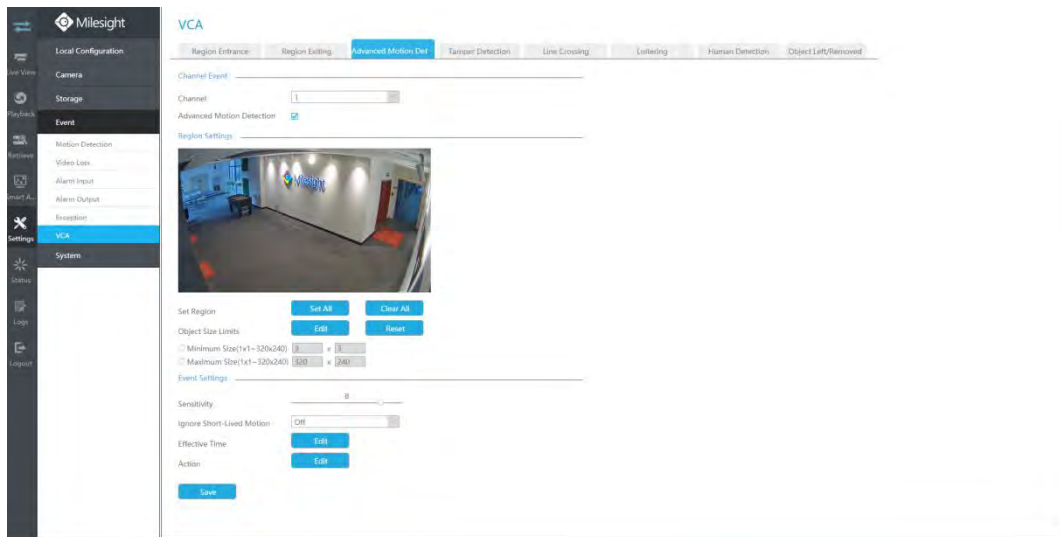
**Minimum Size:** The Min. Size means that only if the object size is bigger than the frame, the settings for Region Exiting will take effect.

**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 Exiting will take effect.

### Advanced Motion Detection

Different from traditional motion detection, Milesight 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.

#### Step 1. Select channel.

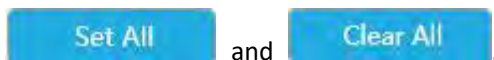


#### Step 2. Enable Advanced Motion Detection.

Advanced Motion Detection

#### Step 3. Set advanced motion detection region.

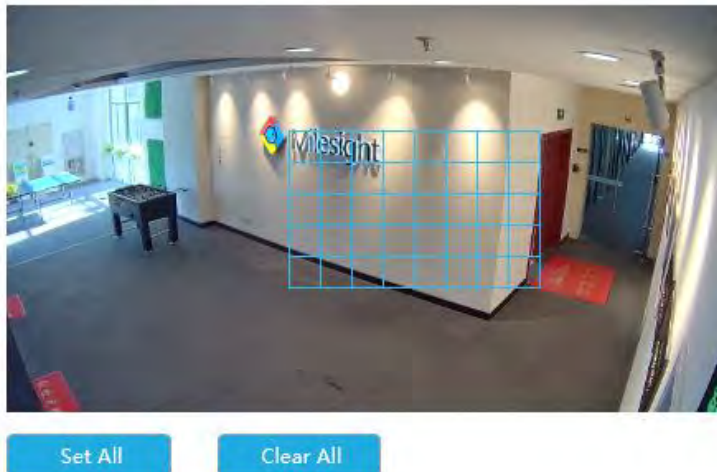
You can select an area by dragging the mouse to set the trigger area, and this area will be synchronized to camera. Also, you can set or clear all set region by directly clicking



and



## Region Settings



For cameras with the firmware version higher than 4X.7.0.78, it supports drawing polygon detection region for VCA function.

**Step 4. 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.

**Step 5. 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.

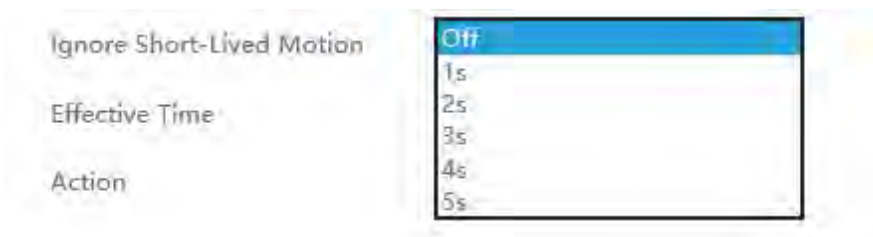
**Note:**

- 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-CXXX-XXC, which supports the human/vehicle detection object.

**Step 6. Set Ignore Short-Lived Motion.**



The motion within the set time is ignored and won't trigger the alarm, making the detection more accurate and efficient.



**Note:**

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

**Step 7. Set Effective Time of advance motion detection by clicking**

**Edit**

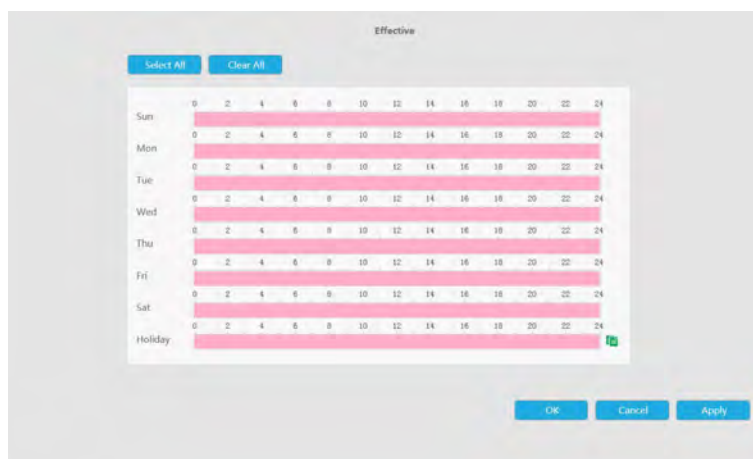
NVR receives the alarm when effective time has been set. It will be more convenient by clicking

**Select All**

or

**Clear All**

to set or clear all time settings.



**Step 7. Set Action for advanced motion detection alarm by clicking**

**Edit**

**Audible Warning:** NVR will trigger an audible beep when motion is detected.

Drag a line on the time table for time setting. It will be more convenient by clicking


**Select All**

or

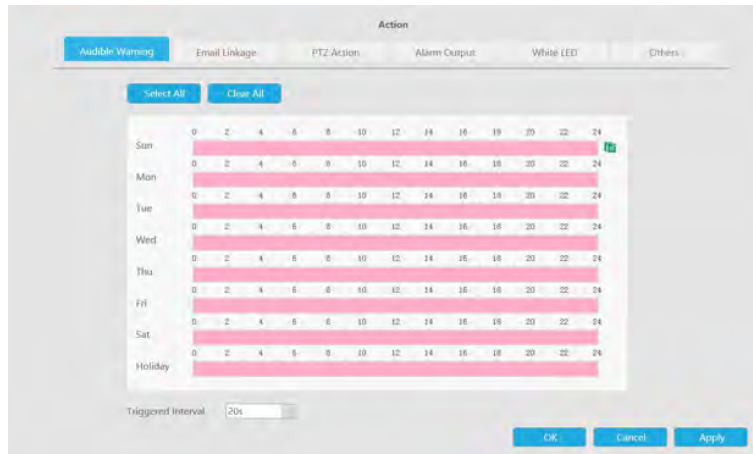
**Clear All**

to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click  to copy time setting to other day.

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



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

Drag a line on the time table for time setting. It will be more convenient by clicking

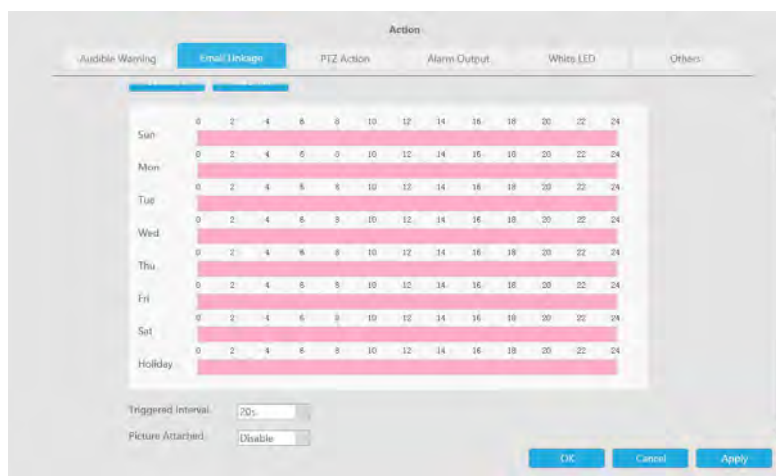
**Select All** or **Clear All** to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

**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.



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

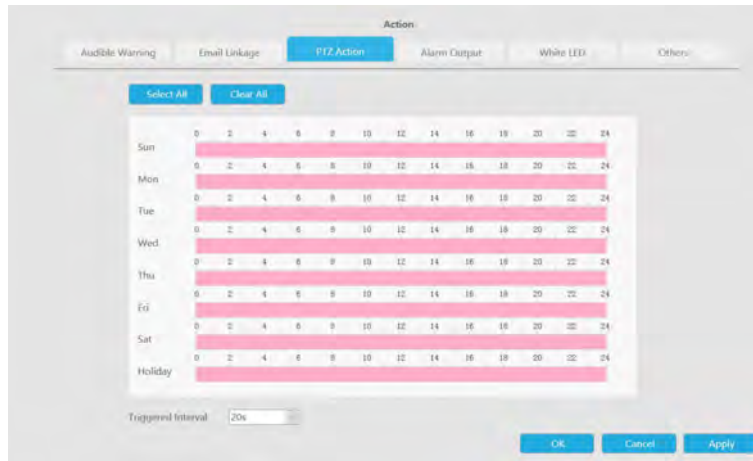
Drag a line on the time table for time setting. It will be more convenient by clicking

**Select All** or **Clear All** to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add PTZ Action.



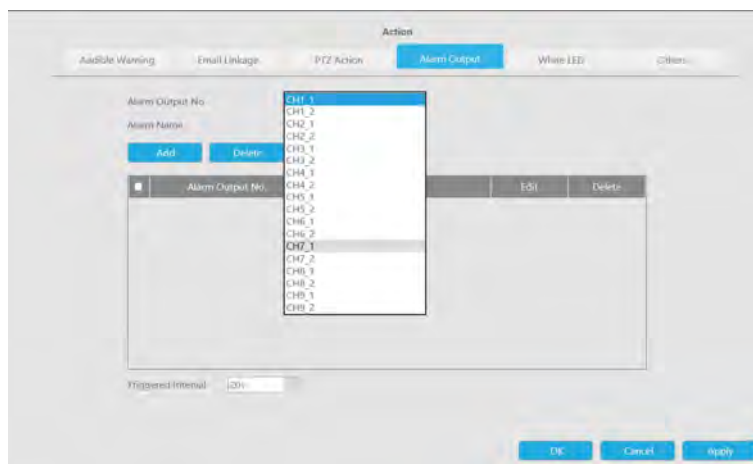
**Channel:** Select the channel which supports this function.

**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.

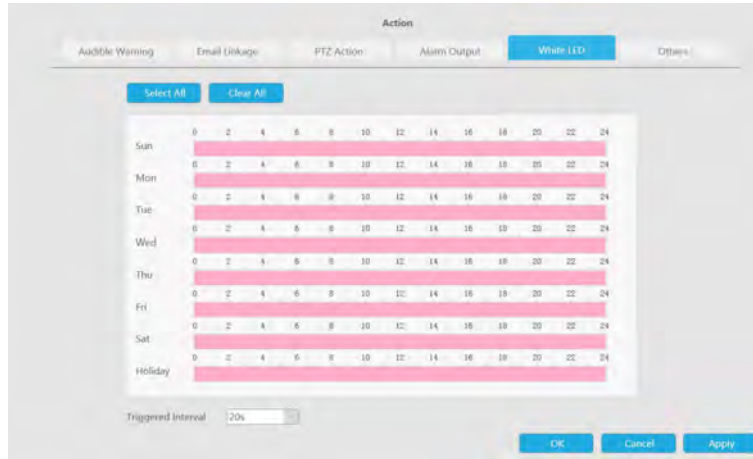
Drag a line on the time table for time setting. It will be more convenient by clicking

or to set or clear all time settings.

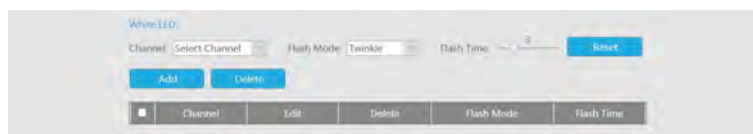
Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add White LED.

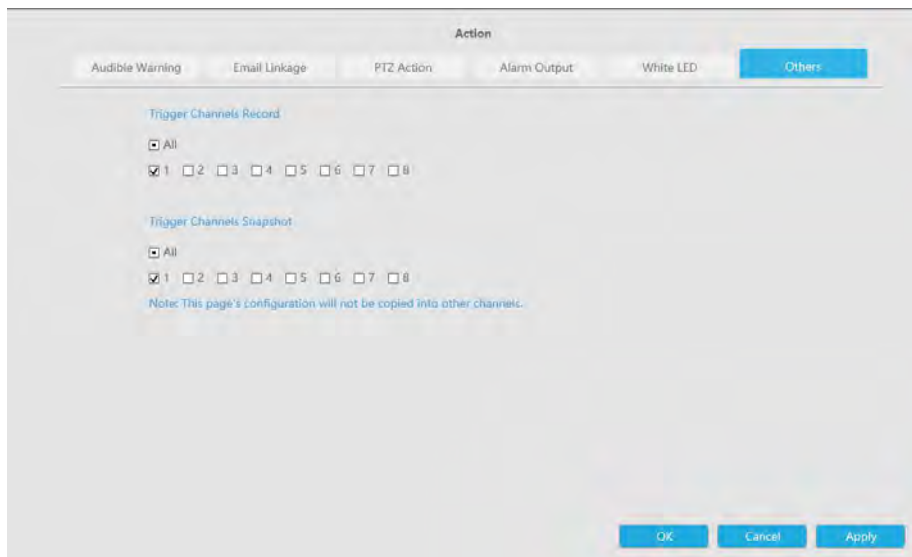


**Channel:** Select the channel which supports this function.

**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 and snapshot when alarm is triggered.



**Step 8. Set Minimum Size and Maximum Size.**

Minimum Size(1x1~320x240)  x   
 Maximum Size(1x1~320x240)  x

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

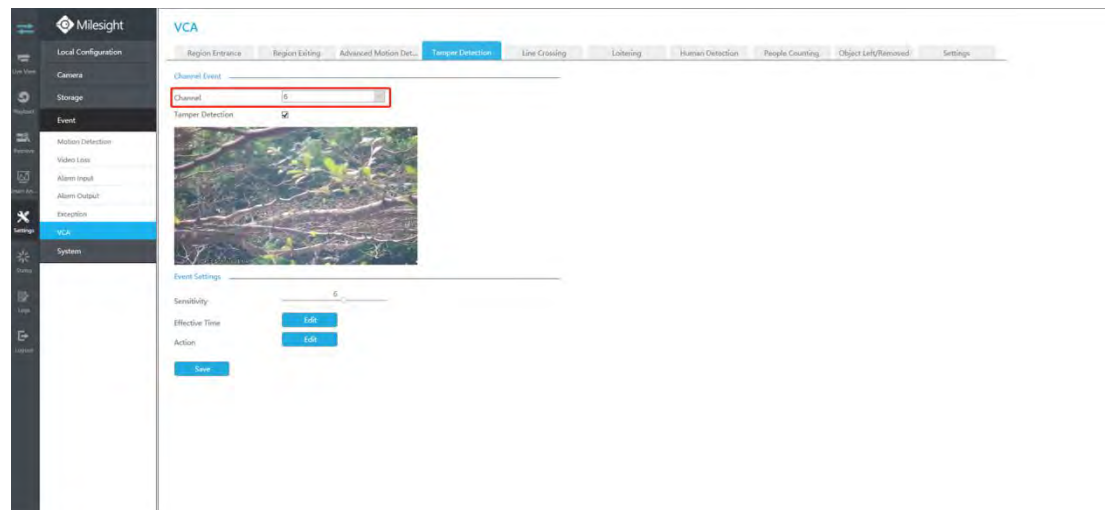
**Maximum Size:** The Max. Size means the opposite, only if the object size is smaller than the

frame you drew on the screen, the settings for Advanced Motion Detection will take effect.

## 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.

### Step 1. Select channel.



### Step 2. Enable Tamper Detection.

Tamper Detection

### Step 3. 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 4. Set Effective Time of tamper detection by clicking

Edit

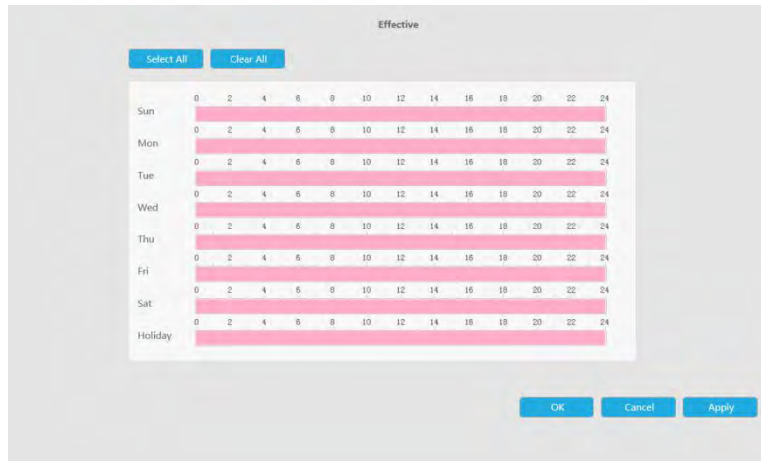
NVR receives the alarm when effective time has been set. It will be more convenient by clicking

Select All

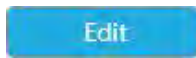
or

Clear All

to set or clear all time settings.



**Step 5. Set Action for tamper detection alarm by clicking**



**Audible Warning:** NVR will trigger an audible beep when motion is detected.

Drag a line on the time table for time setting. It will be more convenient by clicking



or

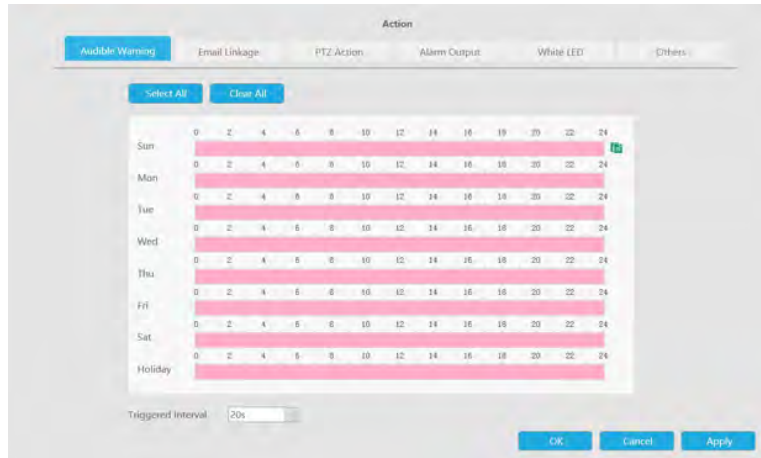


to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



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

Drag a line on the time table for time setting. It will be more convenient by clicking



or



to set or clear all time settings.

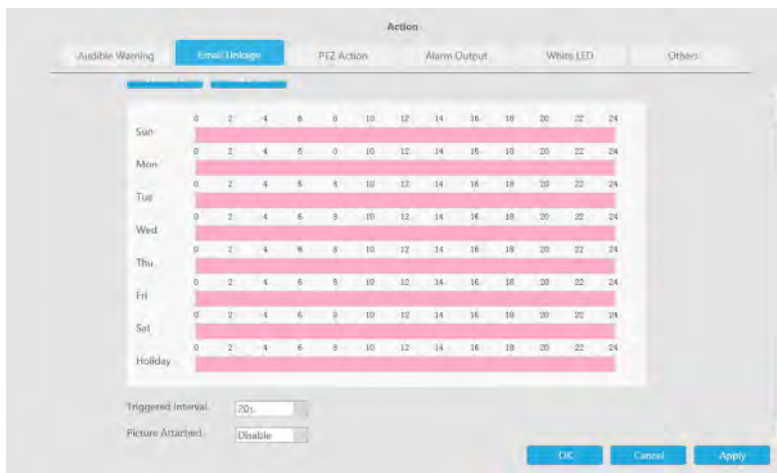
Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

**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.



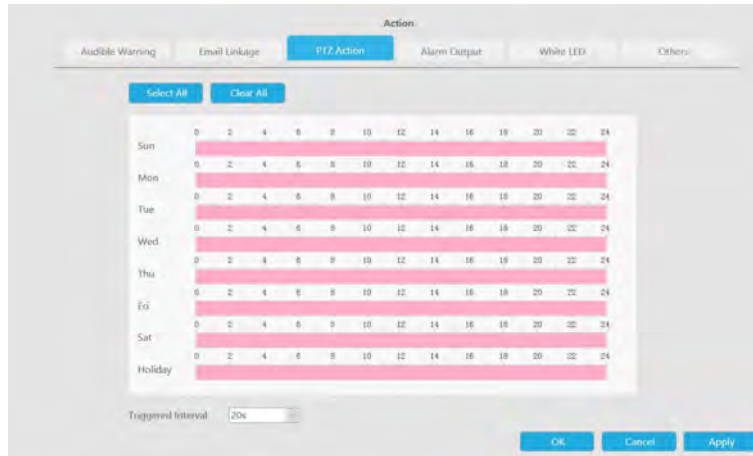


**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**. Drag a line on the time table for time setting. It will be more convenient by clicking **Select All** or **Clear All** to set or clear all time settings.

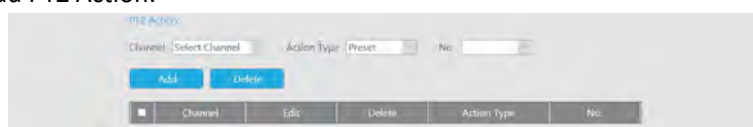
Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add PTZ Action.



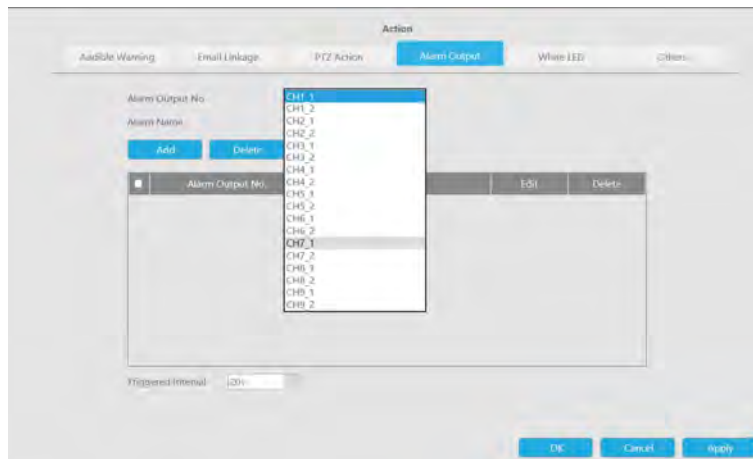
**Channel:** Select the channel which supports this function.

**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.

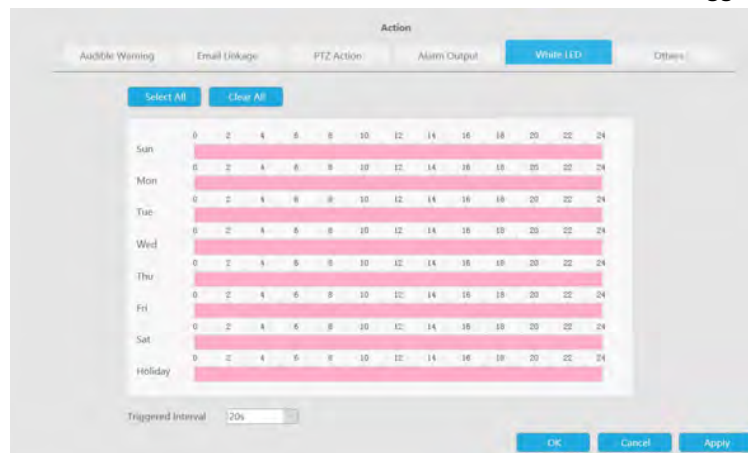
Drag a line on the time table for time setting. It will be more convenient by clicking



Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add White LED.

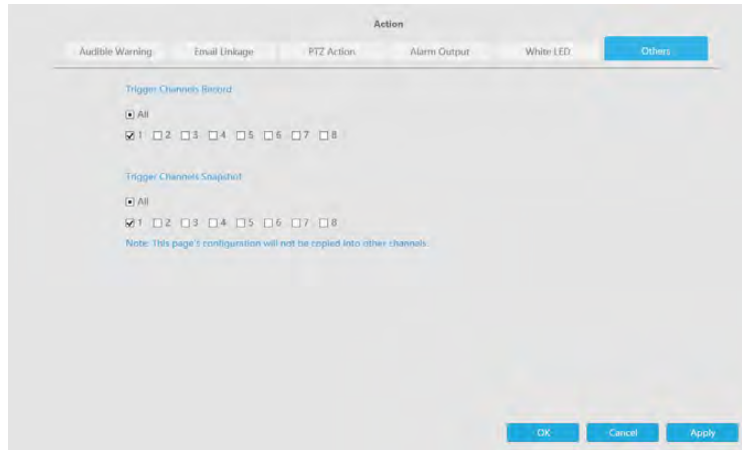


**Channel:** Select the channel which supports this function.

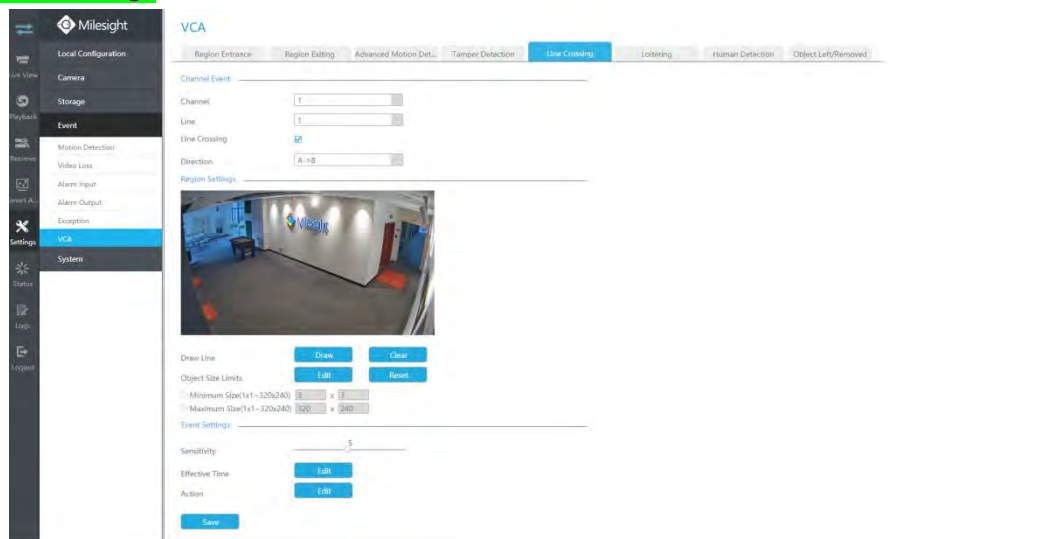
**Flash Mode:** Twinkle and Always are available.

**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 and snapshot when alarm is triggered.



## 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:

**Step 1: Select channel and choose detection line number.**

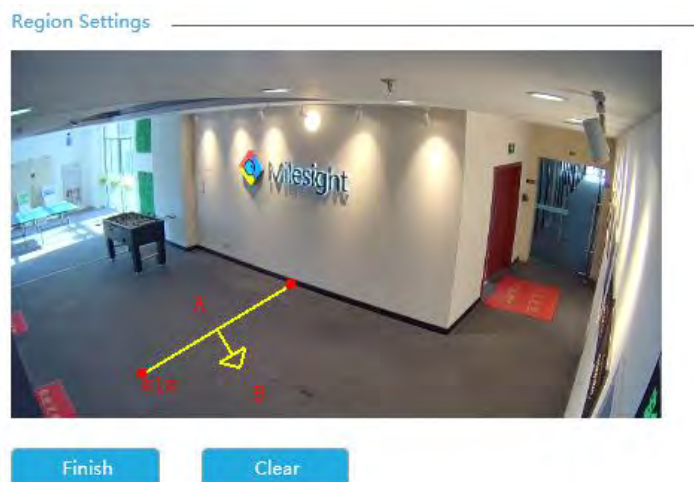
**Step 2. Enable Line Crossing.**

Channel	<input type="text" value="4"/>
Line	<input type="text" value="1"/>
Line Crossing	<input checked="" type="checkbox"/>

**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	<input type="text" value="A-&gt;B"/>
-----------	--------------------------------------

**Step 4. Draw detection lines.****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.

**Step 6. 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.

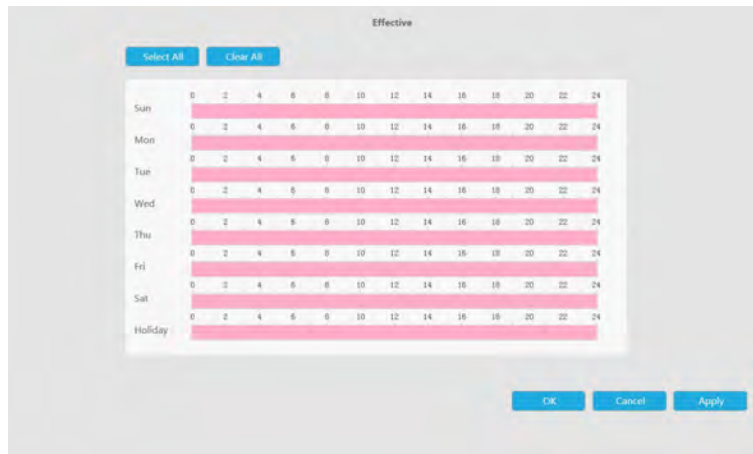
**Note:**

- 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-CXXX-XXC, which supports the human/vehicle detection object.

**Step 7. Set Effective Time of line crossing by clicking**  .

NVR receives the alarm when effective time has been set. It will be more convenient by clicking

 or  to set or clear all time settings.




**Step 7. Set Action for line crossing alarm by clicking  .**

**Audible Warning:** NVR will trigger an audible beep when motion is detected.

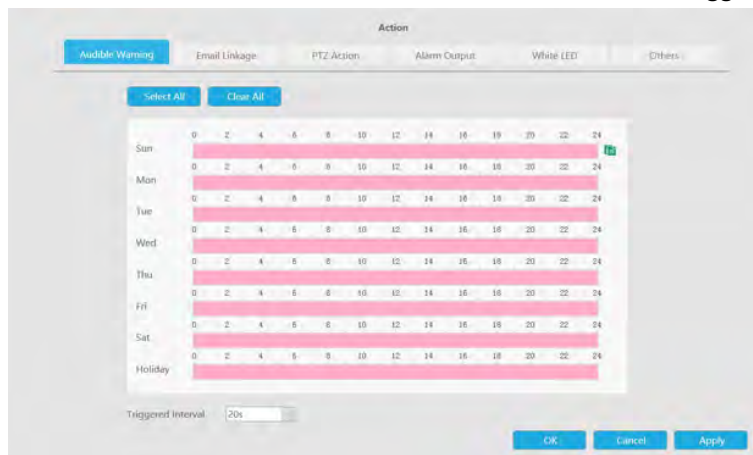
Drag a line on the time table for time setting. It will be more convenient by clicking

 or  to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click  to copy time setting to other day.

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



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

Drag a line on the time table for time setting. It will be more convenient by clicking

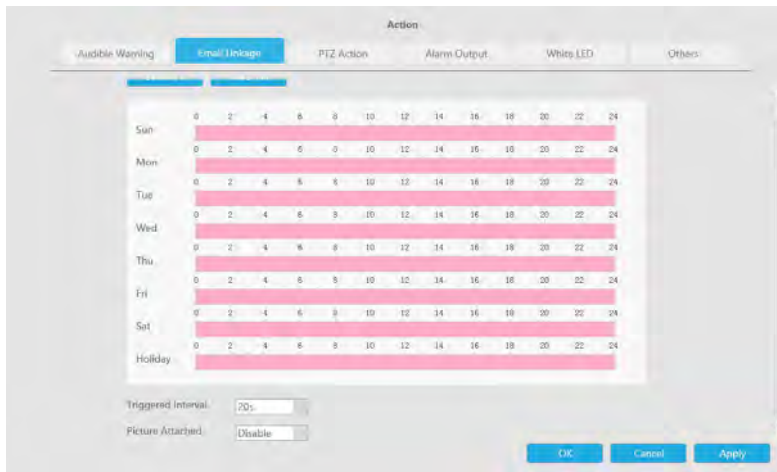
 or  to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click  to copy time setting to other day.

**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.



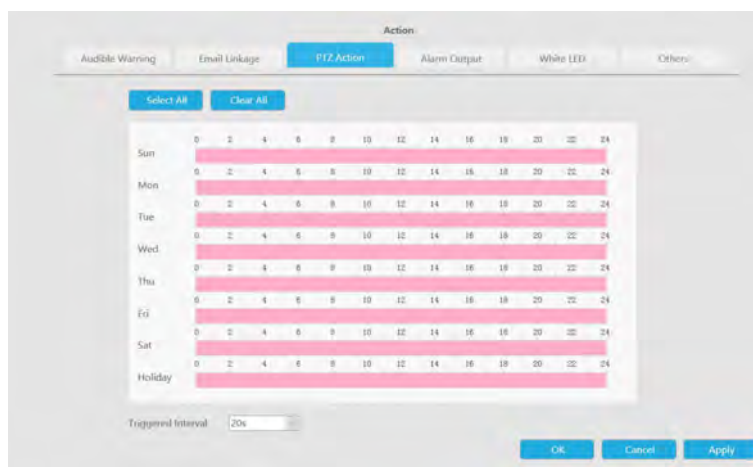
**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**. Drag a line on the time table for time setting. It will be more convenient by clicking

**Select All** or **Clear All** to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add PTZ Action.



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

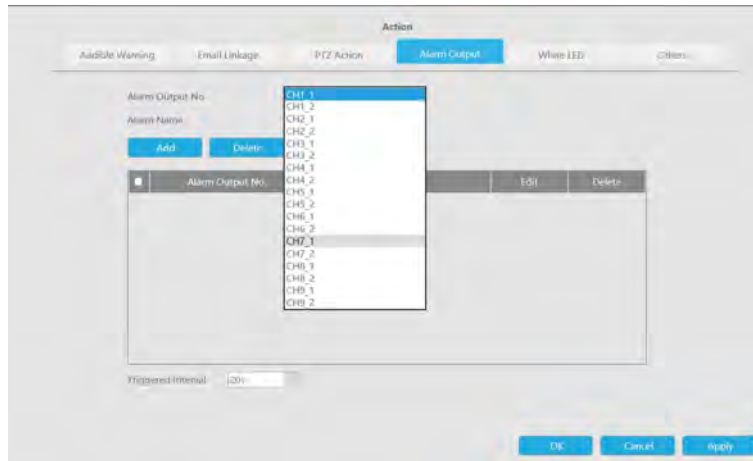
**Action Type:** Preset and Patrol are available.

**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.

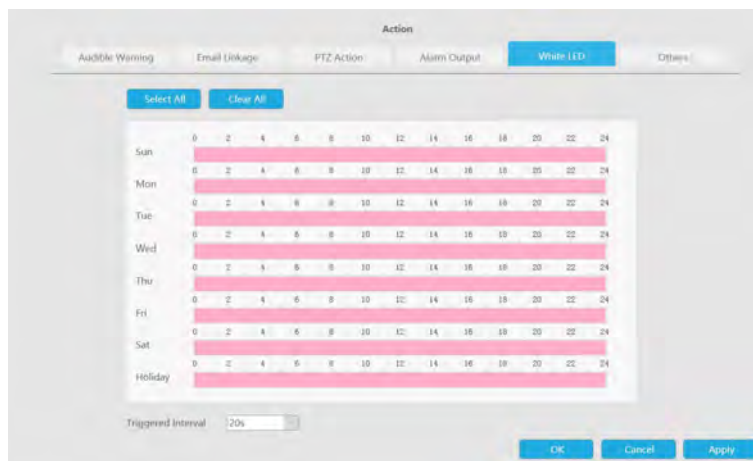
Drag a line on the time table for time setting. It will be more convenient by clicking



Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add White LED.

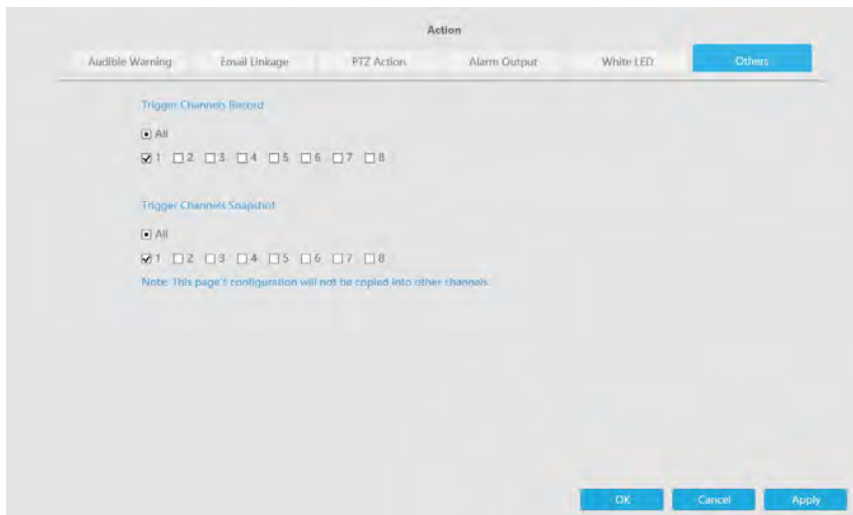


**Channel:** Select the channel which supports this function.

**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 and snapshot when alarm is triggered.



**Step 8. Set Minimum Size and Maximum Size.**

Minimum Size(1x1~320x240)  x   
 Maximum Size(1x1~320x240)  x

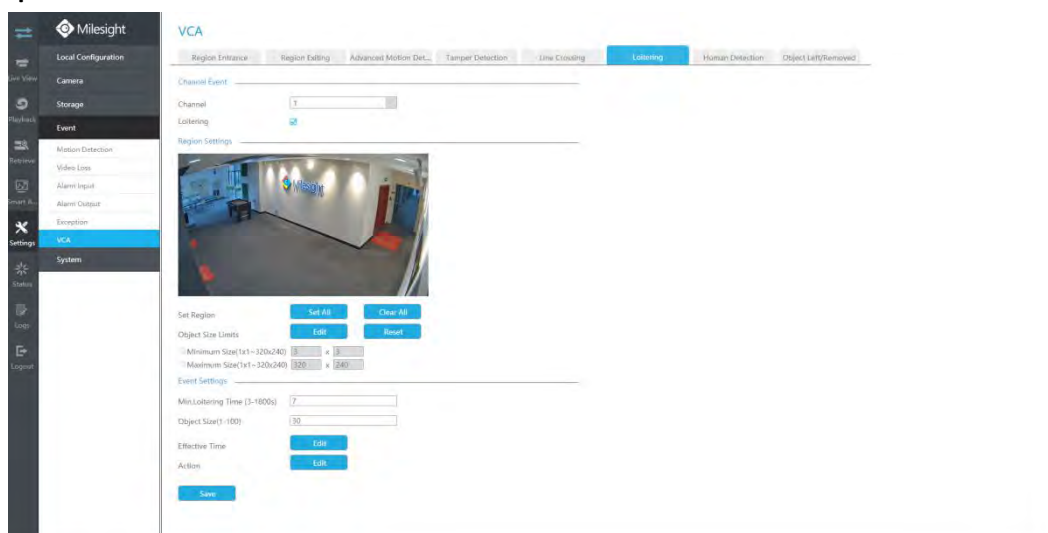
**Minimum Size:** The Min. Size means that only if the object size is bigger than the frame, the settings for Line Crossing will take effect.

**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 Line Crossing will take effect.

**Loitering**

When objects are loitering in a defined area for a specific period of time, it would trigger an alarm.

**Step 1. Select channel.**



**Step 2. Enable Loitering.**

Loitering

**Step 3. Set Loitering detected region.**

You can select an area by dragging the mouse to set the trigger area, and this area will be

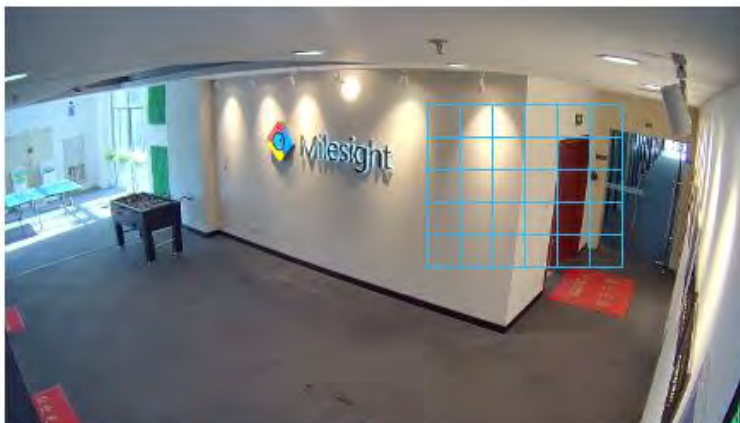
synchronized to camera. Also, you can set or clear all set region by directly clicking

Set All

and

Clear All

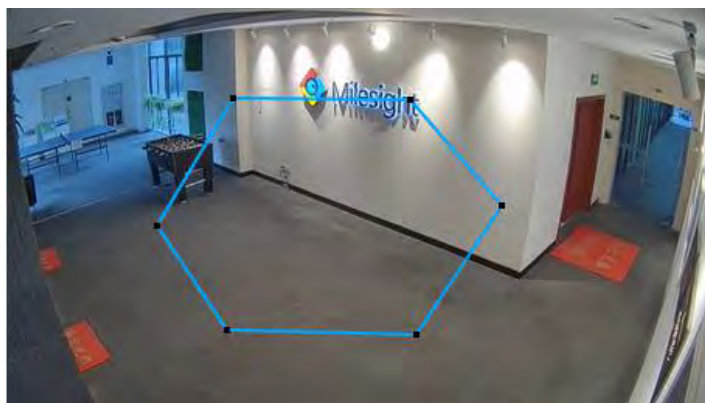
Region Settings



Set All

Clear All

For cameras with the firmware version higher than 4X.7.0.78, it supports drawing polygon detection region for VCA function.



#### 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 (3-1800s)

7

#### Step 5. 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 Object Size.**

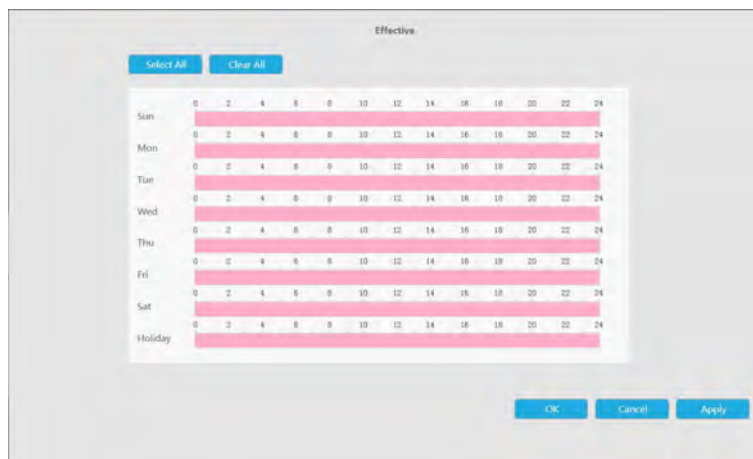
Also Milesight loitering allows to set "Object Size". Only the object bigger than the set size will trigger the alarm.

Object Size(1-100)

**Step 7. Set Effective Time of loitering by clicking**

NVR receives the alarm when effective time has been set. It will be more convenient by clicking

or  to set or clear all time settings.



**Step 8. Set Action for loitering alarm by clicking**

**Audible Warning:** NVR will trigger an audible beep when motion is detected.

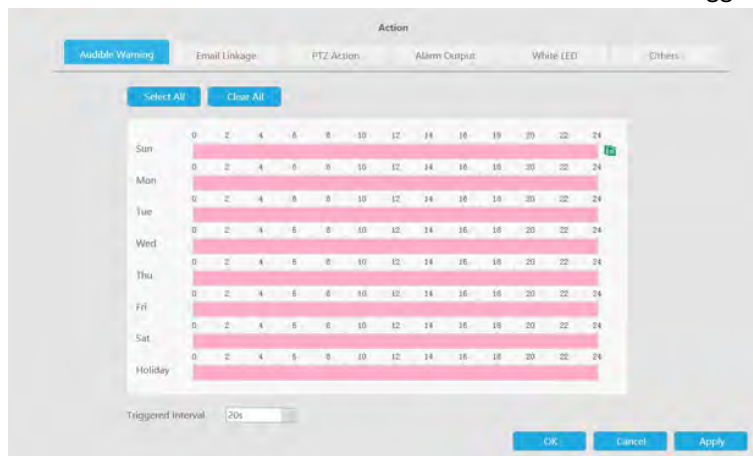
Drag a line on the time table for time setting. It will be more convenient by clicking

or  to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



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

Drag a line on the time table for time setting. It will be more convenient by clicking

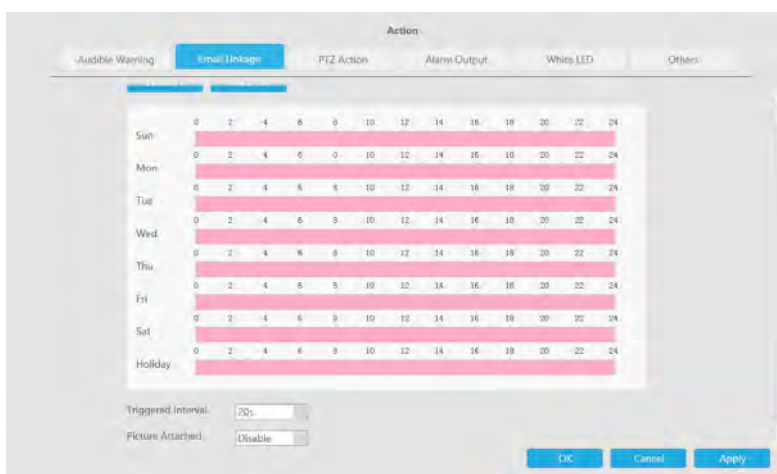


Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

**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.



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

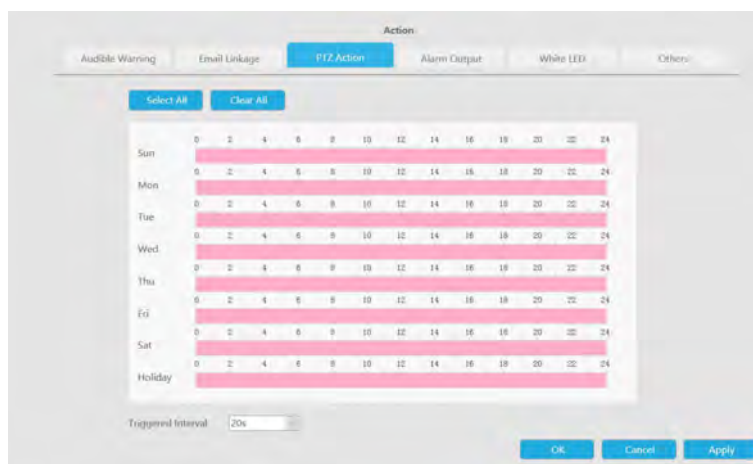
Drag a line on the time table for time setting. It will be more convenient by clicking



Moreover, you can click time bar to edit the time accurately.

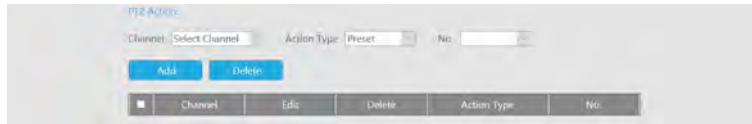
Click to copy time setting to other day.

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



And you can add PTZ Action.





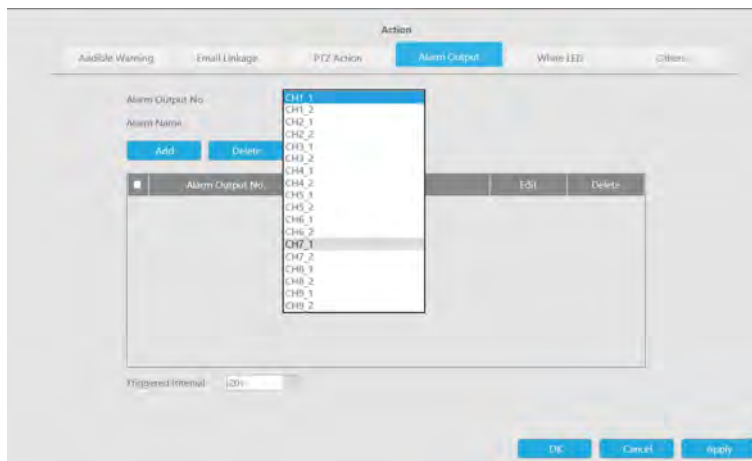
**Channel:** Select the channel which supports this function.

**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.

Drag a line on the time table for time setting. It will be more convenient by clicking

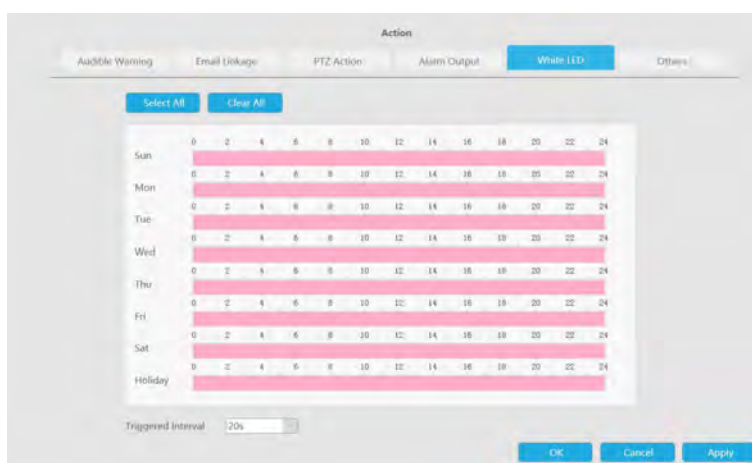


to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add White LED.



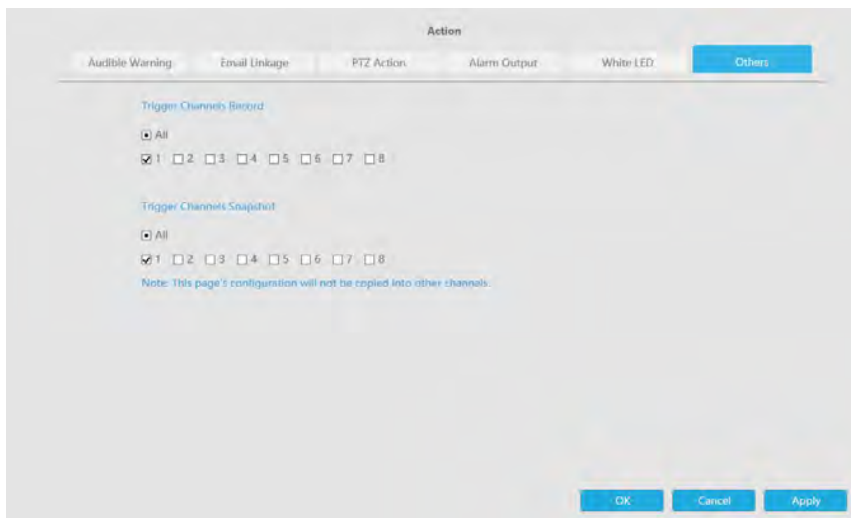


**Channel:** Select the channel which supports this function.

**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 and snapshot when alarm is triggered.



**Step 9. Set Minimum Size and Maximum Size.**

Minimum Size(1x1~320x240)  x   
 Maximum Size(1x1~320x240)  x

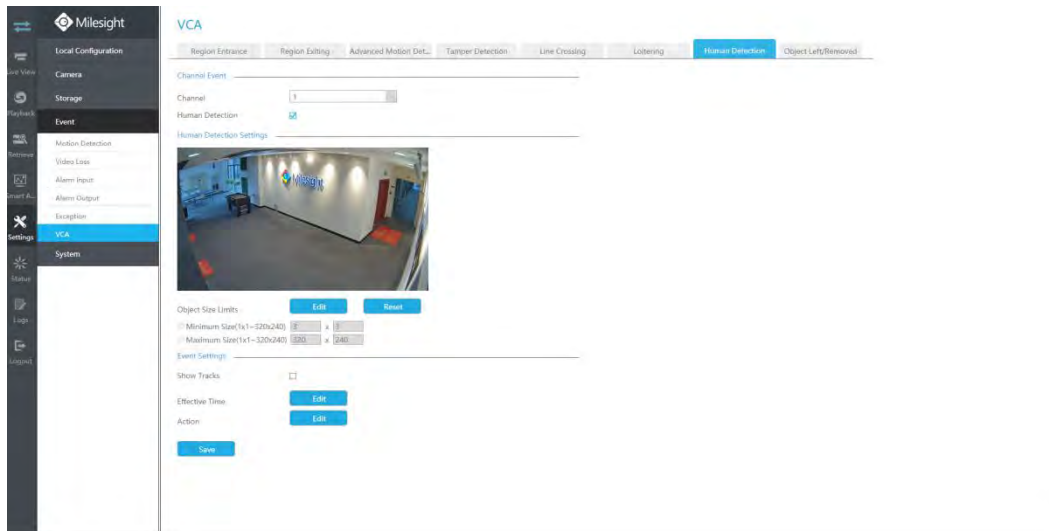
**Minimum Size:** The Min. Size means that only if the object size is bigger than the frame, the settings for Loitering will take effect.

**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 Loitering will take effect.

**Human Detection**

Human detection is used for figuring out whether an object is a human or not.

**Step 1. Select channel.**



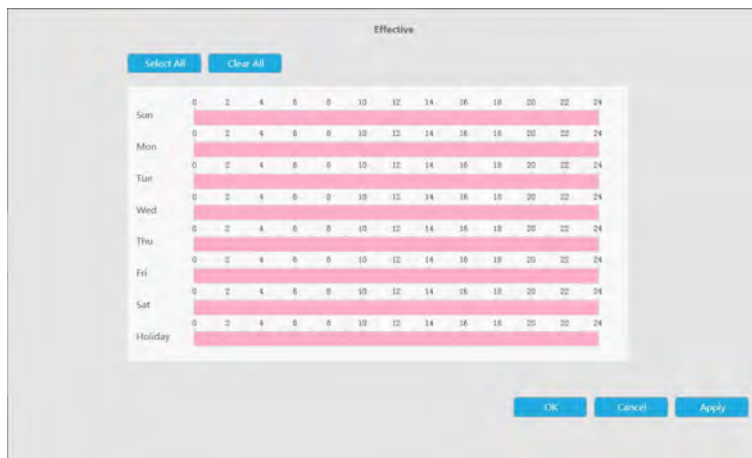
**Step 2. Enable Human Detection.**



**Step 3. Set Effective Time of human detection by clicking**  .

NVR receives the alarm when effective time has been set. It will be more convenient by clicking

 or  to set or clear all time settings.




**Step 4. Set Action for human detection alarm by clicking**  .

**Audible Warning:** NVR will trigger an audible beep when motion is detected.

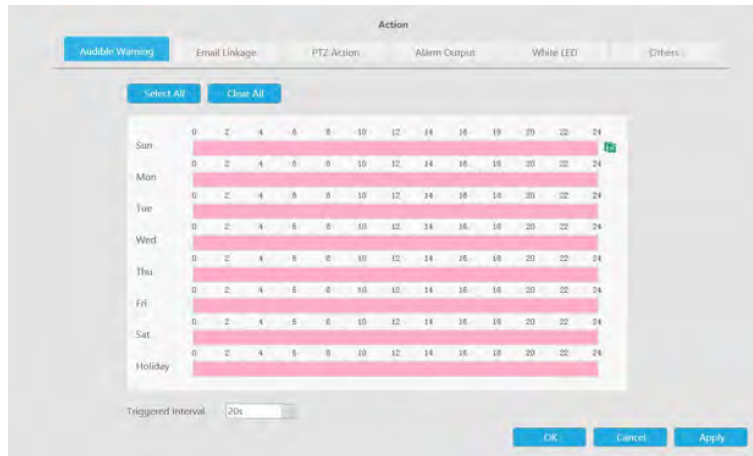
Drag a line on the time table for time setting. It will be more convenient by clicking

 or  to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click  to copy time setting to other day.

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



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

Drag a line on the time table for time setting. It will be more convenient by clicking

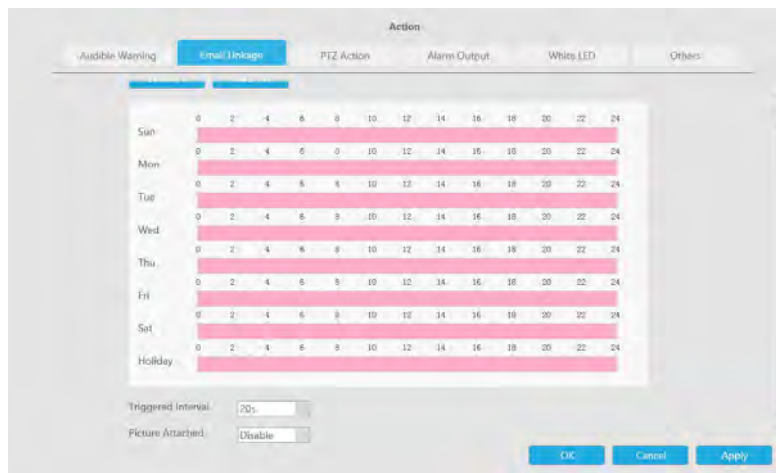
**Select All** or **Clear All** to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

**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.



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

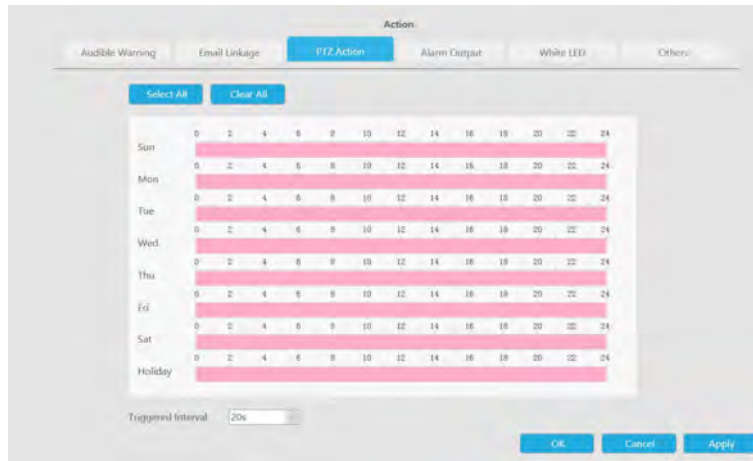
Drag a line on the time table for time setting. It will be more convenient by clicking

**Select All** or **Clear All** to set or clear all time settings.

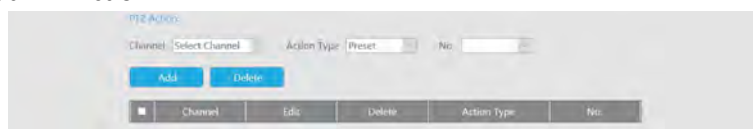
Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add PTZ Action.



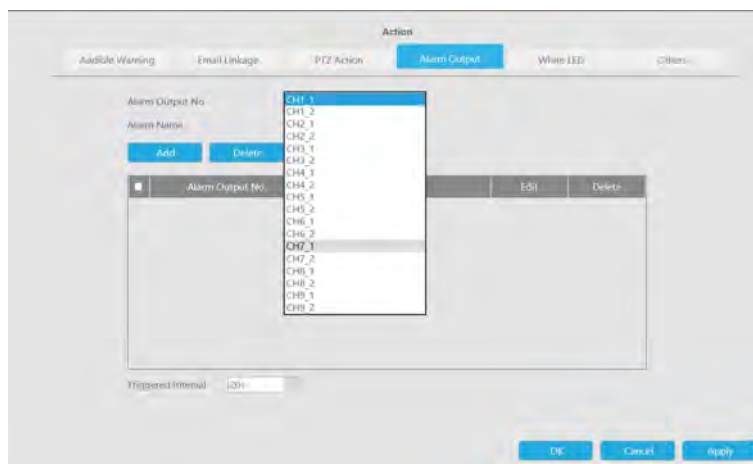
**Channel:** Select the channel which supports this function.

**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.

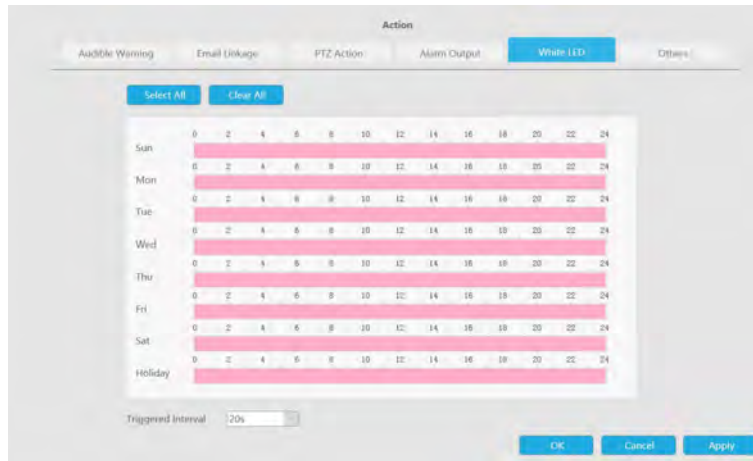
Drag a line on the time table for time setting. It will be more convenient by clicking

**Select All** or **Clear All** to set or clear all time settings.

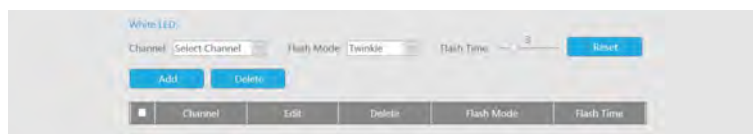
Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add White LED.

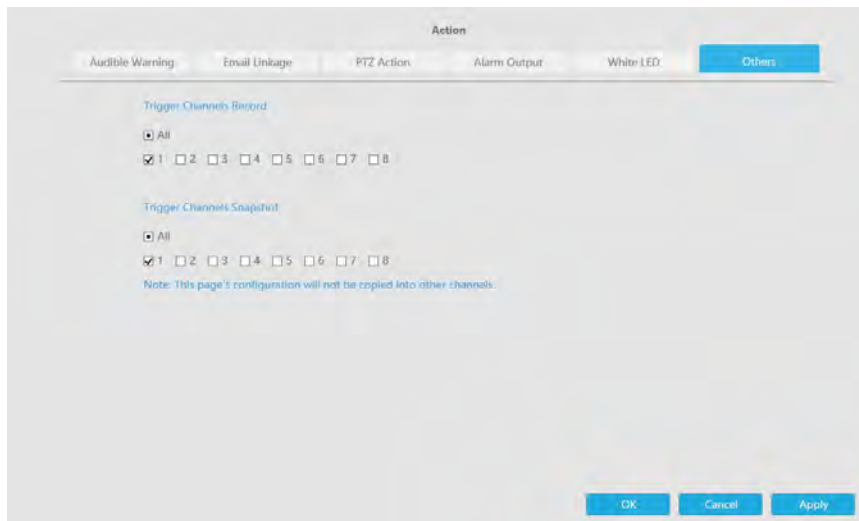


**Channel:** Select the channel which supports this function.

**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 and snapshot when alarm is triggered.



**Step 5. Set Minimum Size and Maximum Size.**

Minimum Size(1x1~320x240)  x   
 Maximum Size(1x1~320x240)  x

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

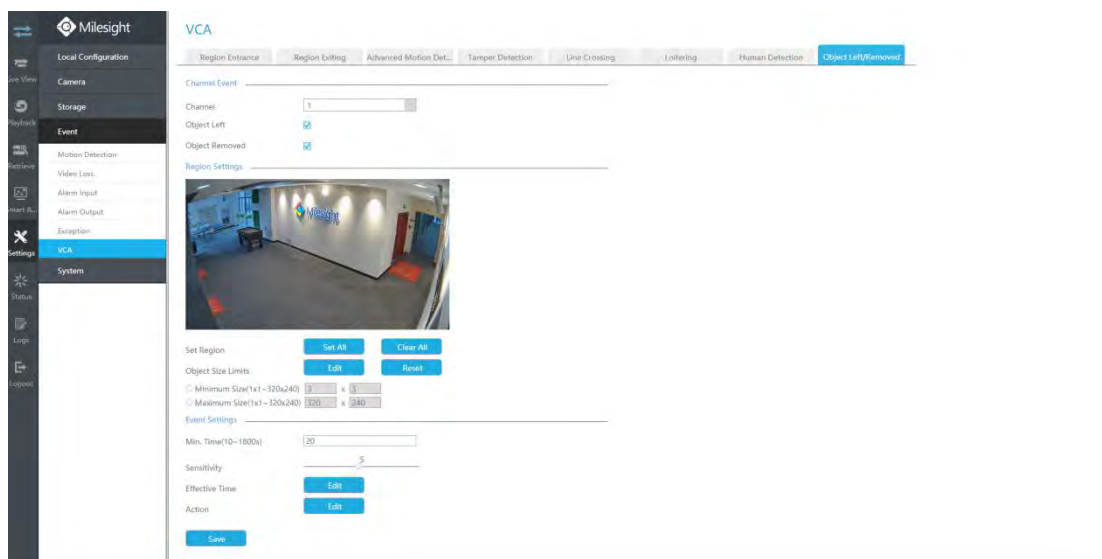
## Object Left/Removed

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.

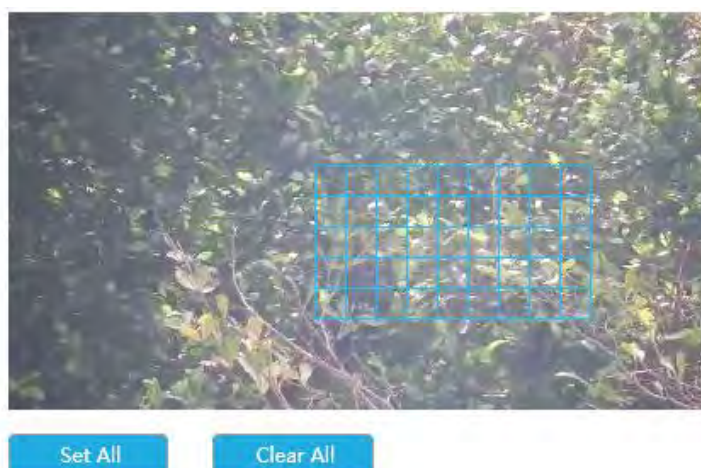
**Step 1. Select channel and enable Object Left or Object Removed(Or you can enable both features at the same time).**



### Step 2. Set detection region.

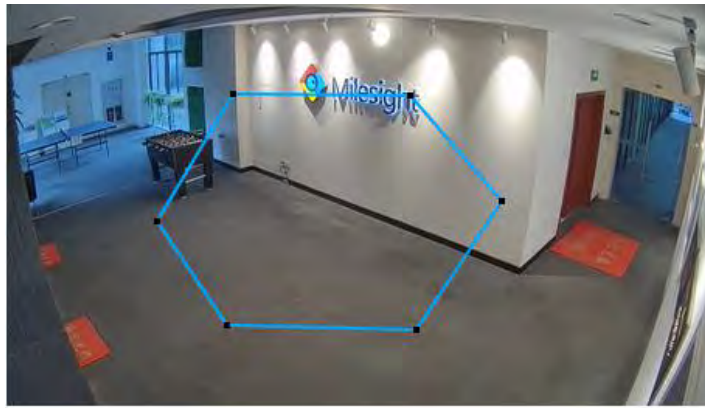
You can select an area by dragging the mouse to set the trigger area, and this area will be synchronized to camera. Also, you can set or clear all set region by directly clicking **Set All**

and **Clear All**.



For cameras with the firmware version higher than 4X.7.0.78, it supports drawing polygon detection region for VCA function.





**Step 3. 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.

Min. Time(10~1800s)

**Step 4. 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

Effective Time

Action

**Step 5. Set Effective Time of object left/removed by clicking**

NVR receives the alarm when effective time has been set. It will be more convenient by clicking

or  to set or clear all time settings.

Effective

Sun	0	2	4	6	8	10	12	14	16	18	20	22	24
Mon	0	2	4	6	8	10	12	14	16	18	20	22	24
Tue	0	2	4	6	8	10	12	14	16	18	20	22	24
Wed	0	2	4	6	8	10	12	14	16	18	20	22	24
Thu	0	2	4	6	8	10	12	14	16	18	20	22	24
Fri	0	2	4	6	8	10	12	14	16	18	20	22	24
Sat	0	2	4	6	8	10	12	14	16	18	20	22	24
Holiday	0	2	4	6	8	10	12	14	16	18	20	22	24

**Step 6. Set Action for object left/removed alarm by clicking**

**Audible Warning:** NVR will trigger an audible beep when motion is detected.

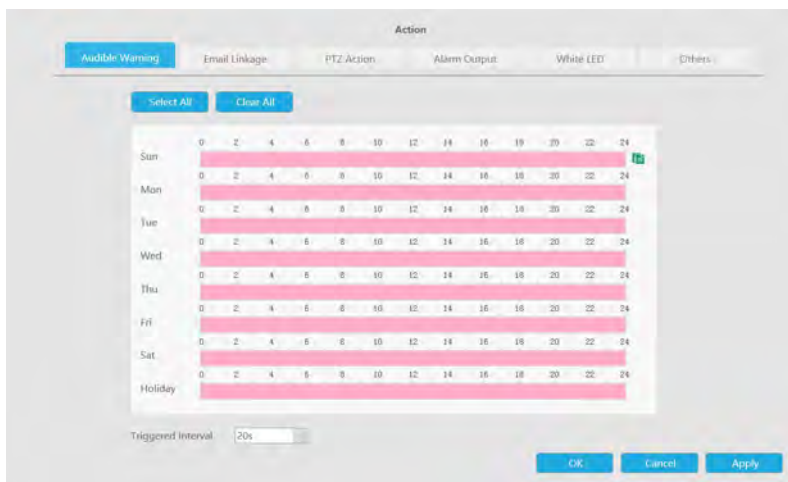
Drag a line on the time table for time setting. It will be more convenient by clicking

**Select All** or **Clear All** to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



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

Drag a line on the time table for time setting. It will be more convenient by clicking

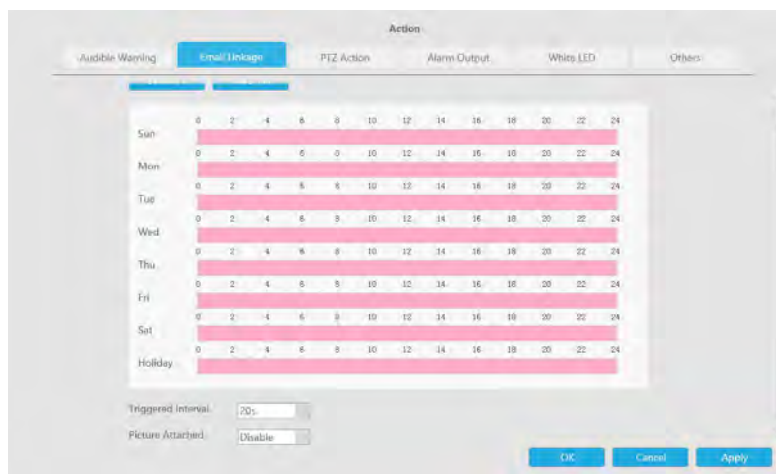
**Select All** or **Clear All** to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

**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.



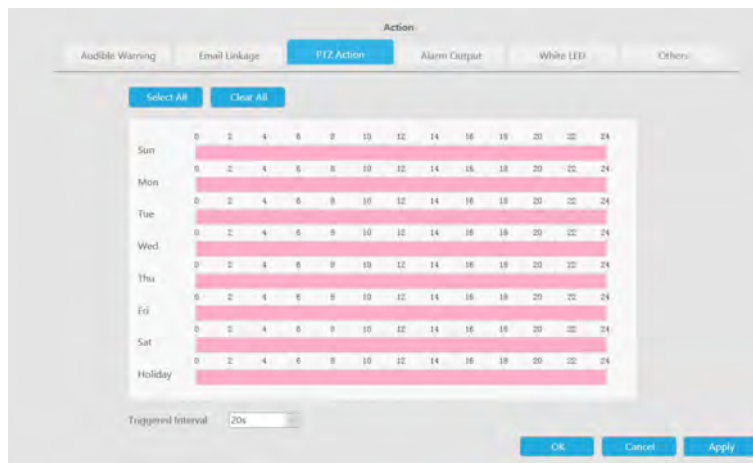
**PTZ Action:** Trigger PTZ action when alarm is triggered. PTZ action includes **Preset and Patrol**. Drag a line on the time table for time setting. It will be more convenient by clicking

**Select All** or **Clear All** to set or clear all time settings.

Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add PTZ Action.



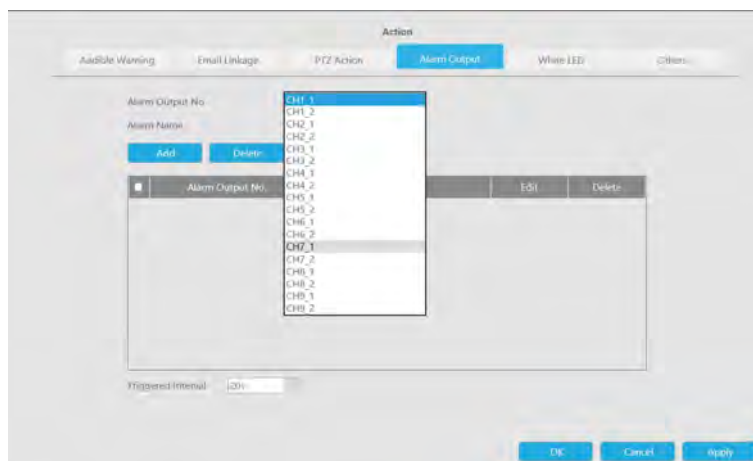
**Channel:** Select the channel which supports this function.

**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.

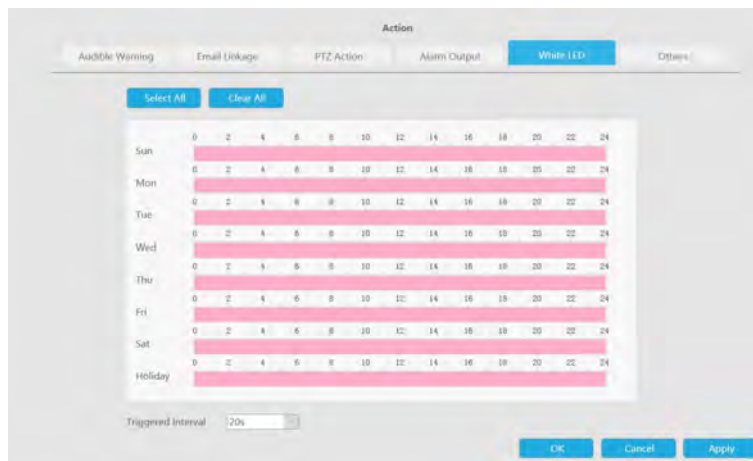
Drag a line on the time table for time setting. It will be more convenient by clicking



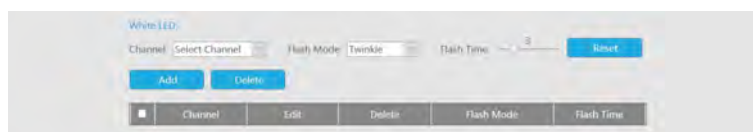
Moreover, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



And you can add White LED.

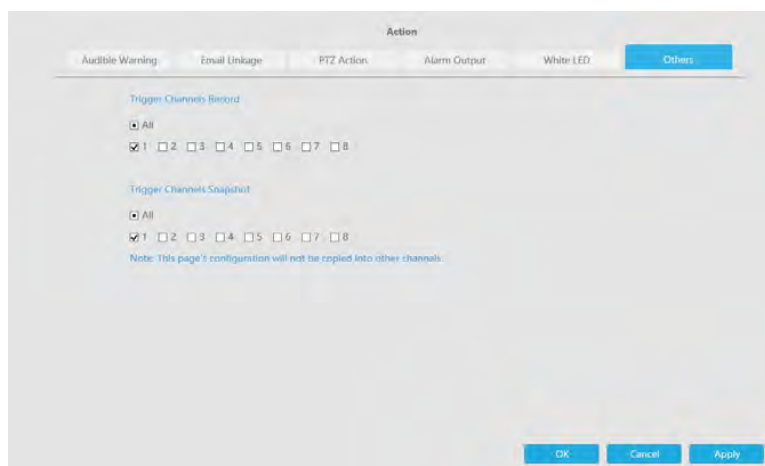


**Channel:** Select the channel which supports this function.

**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 and snapshot when alarm is triggered.



**Step 7. Set Minimum Size and Maximum Size.**

Minimum Size(1x1~320x240)  x   
Maximum Size(1x1~320x240)  x

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

## Settings

Milesight VCA provides the primary setting for the whole VCA functions.

**Process FPS:** Five different periods are available(5, 10, 15, 20, 25 fps) for process fps.

**Camera Installation:** Select camera installation view, including **Angle View, Horizontal View and Overhead View**

**Detection Object Size Settings:** Edit the frame size you draw to trigger events. You can set Min. Size and Max. Size for different events.

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

**Maximum Size:** The Max. Size means the opposite, the frame you draw on the screen stands for that only if the object size is smaller than the frame, the settings for other VCA functions will take effect.

### Note:

For cameras with the firmware version higher than 4X.7.0.78 and NVRs with the firmware version higher than 7X.9.0.12, Settings tab is no longer displayed separately.

## 4.8.5 System

### 4.8.5.1 General Settings

To setup the general parameters of NVR, including modify the Device Name, Boot Wizard, set system time manually and auto logout, etc.

#### Date & Time

It is for setting up the Time parameters of NVR, including Time Zone, Daylight Saving Time, Server Address, NTP Sync, the interval for synchronizing with NTP server, Sync with computer time, etc.

### General Settings

**Date & Time** | Device

Current System Time

Date: 10/09/2019  
Time: 01:11:55

Set The System Time

Time Zone: (UTC-08:00) United States - Pacific T  
Daylight Saving Time: Auto

NTP Server

Server Address: pool.ntp.org  
NTP Sync: Enable  
Interval: 1 day

Manual

Time: 10/09/2019 01:11:52

Sync with computer time

Date: 10/09/2019  
Time: 16:11:55

Save

### Device

It is for setting up the general parameters of NVR, including Device Name, HDMI Audio, HDMI Compatible Mode, etc.

### General Settings

Date & Time | **Device**

Device Name: NVR

HDMI Audio: Enable

Audio Out: Enable

Boot Wizard: Enable

HDMI Compatible Mode: Enable

Stream Information: Disable

HDMI/VGA Resolution: 1920 x 1080 / 60Hz

Save

**Audio Out:** This option will be hidden if NVR does not have Audio Out function.

**Boot Wizard:** Enable it to pop up boot wizard after rebooting.

**Stream Information:** Enable it to see bit rate, frame rate and frame size in both live view and playback interface.





**Note:**

1. For some models, the stream information will reveal synchronously while transcoding is enabled.
2. Channels that play H.265 in plugin-free mode will not display the stream information.

## 4.8.5.2 Network

### 4.8.5.2.1 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.

**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.

### 4.8.5.2.2 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 | P2P | PPTP | SNMP | HTTPS | More

UPnP:  Enable

Forwarding Type:

Port Type	Local	External Port	Internal Port	Status
...	...	...	...	...
...	...	...	...	...

### 4.8.5.2.3 DDNS

Using DDNS to solve the dynamic IP address problem.

Check DDNS check-box to enable it, then select a DDNS Server, 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 | P2P | PPTP | SNMP | HTTPS | More

Enable DDNS:  Enable

Provider:

External HTTP Port:

External RTSP Port:

DDNS URL:

### 4.8.5.2.4 Email

Email will send receivers a screenshot when the alarm is triggered.

Network

Basic | UPnP | DDNS | **Email** | P2P | PPTP | SNMP | HTTPS | More

Email:  Enable

User Name:

Password:

SMTP Server:

SMTP Port:

Encryption:  TLS  SSL

Host Name:   Enable

Sender Email Address:

Receiver Email Address 1:

Receiver Email Address 2:

Receiver Email Address 3:

**Enable Email selection and then begin configuration.**

**User name:** The E-mail address you choose to send emails. Please input **full email address** into it.

**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.

**Encryption:** Security Protocol of email sending, including TLS and SSL.

**Host Name:** It will be attached in the email.

**Sender Email Address:** It must be same with [User name].

**Receiver Email Address:** E-mail Address for the receivers.

Select  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.

#### 4.8.5.2.5 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.



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.

#### 4.8.5.2.6 PPPoE

PPPoE combines PPP protocol with Ethernet, by which Ethernet hosts can connect to a remote access concentrator via a simple bridging device.

**Note:**

If both UPnP and PPPoE are enabled, only PPPoE will take effect.

**4.8.5.2.7 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.

**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

### 4.8.5.2.8 HTTPS

Set in the interface to make sure getting access to NVR successfully via HTTPS, which is able to guarantee communication data security. The reliable and stable technology can secure the user information security and device safety.



There are three certificate installation types:

#### Create a Private Certificate

Click "Create" to create the following dialog box. And then enter Country, Common Name, Period of Validity and other information. And then click "OK" to generate a private certificate.

#### Direct Installation

Click "Browse" to select a signed certificate locally and click "Install" to install it.

#### Create a Certificate Request

Firstly, click "Create" button. And then enter Country, Common Name and other information to

create the certificate request;

Download the certificate request and submit it to the trusted certificate authority for signature;

After receiving the signed valid certificate, import the certificate to the device.

HTTPS: Enable

Installation Type: Create a Certificate Request

Create a Certificate Request: Create Request Content

Download the Certificate Request: Download

Delete the Certificate Request: Delete

Installed Certificate: C=CN, H/IP=cn Clear

Attributes:
   
Awarded to: C=CN, H/IP=cn
   
Issuer: C=CN, H/IP=cn
   
Period of Validity: Jun 6 16:21:28 2018 ~ Jan 14 16:21:28 2019

After creating and installing the certificate successfully, you can check the certificate information and clear the information on the following interface. And you can access the NVR by inputting <https://ip:port> via the web browser.

Installed Certificate: C=CN, H/IP=cn Clear

Attributes:
   
Awarded to: C=CN, H/IP=cn
   
Issuer: C=CN, H/IP=cn
   
Period of Validity: Jun 6 16:21:28 2018 ~ Jan 14 16:21:28 2019

**Note:**

The default HTTPS port is 443, you can modify it on the “More” interface.

#### 4.8.5.2.9 More

Network

Basic: [X] | [X] | [X] | [X] | [X] | [X] | [X] | [X] | [X] | More

Channel Access: Enable

Enable SSH: Enable

SSH Port: 22

VNC Port: 50

HTTPS Port: 443

RTPS Port: 554

Push Message: Enable

Push Stream Type: Auto

Push Message Settings: Edit

Save

#### Channel Access

With this option enabled, you can access PoE-connected cameras website directly in Camera



Management.

### Enable 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 Milesight 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".
  - ① IP: The IP address of NVR;
  - ② RTSP port: The default RTSP port is 554;
  - ③ 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.

### Push Message Enable

With this option enabled, you can receive the alarm message on the mobile application.

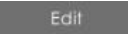
### Push Video Stream

Select which video stream will be pushed to APP M-Sight Pro. Auto, Primary Stream and Secondary Stream are available.

#### Note:

Only NVR model ends with letter T support.

### Push Event Type

Click  to select which alarm type will be pushed to APP M-sight Pro. 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

and Human Detection.

## Push Message Settings

### ① Camera Event

The screenshot shows the 'Push Message Settings' dialog box with the 'Camera Event' tab selected. The 'Channel' dropdown is set to '1'. Under 'Push Event Type', the following options are checked: All, Motion Detection, Video Loss, Region Entrance, Region Exiting, Advanced Motion Detection, Tamper Detection, Line Crossing, Loitering, Human Detection, Object Left/Removed, Alarm Input (with sub-options 1 and 2 checked), and ANPR (with sub-options Black List, White List, and Visitor List checked). Buttons for 'Copy', 'OK', and 'Cancel' are at the bottom right.

Select Push Event Type which will be pushed to APP M-sight Pro. 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' dialog box with the 'NVR Event' tab selected. Under 'Alarm Input', the following options are checked: All, 1, 2, 3, and 4. Buttons for 'OK', 'Cancel', and 'Apply' are at the bottom right.

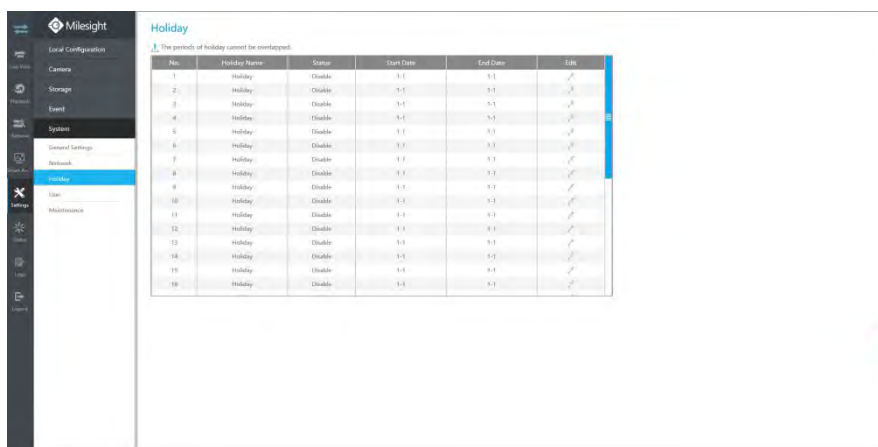
Select channels which you want to push the Alarm Input Event of NVR.


#### Note:

There would not have NVR Event interface if your NVR doesn't have alarm input interface.

### 4.8.5.3 Holiday

It can configure the record or image capture schedule for holidays of the current year.



Click  to open holiday configuration page to modify holiday name, check the 'Enable Holiday' check-box, and then select [Type] to setup Start/End date. There are By0 Month, By Week, and By Date in [Type] mode. Then click [OK] to save the configuration and return to holiday page.

**Edit Holiday**

Holiday Name:

Enable Holiday:

Type:

Start Date:

End Date:

### 4.8.5.4 User




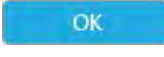
**Note:**

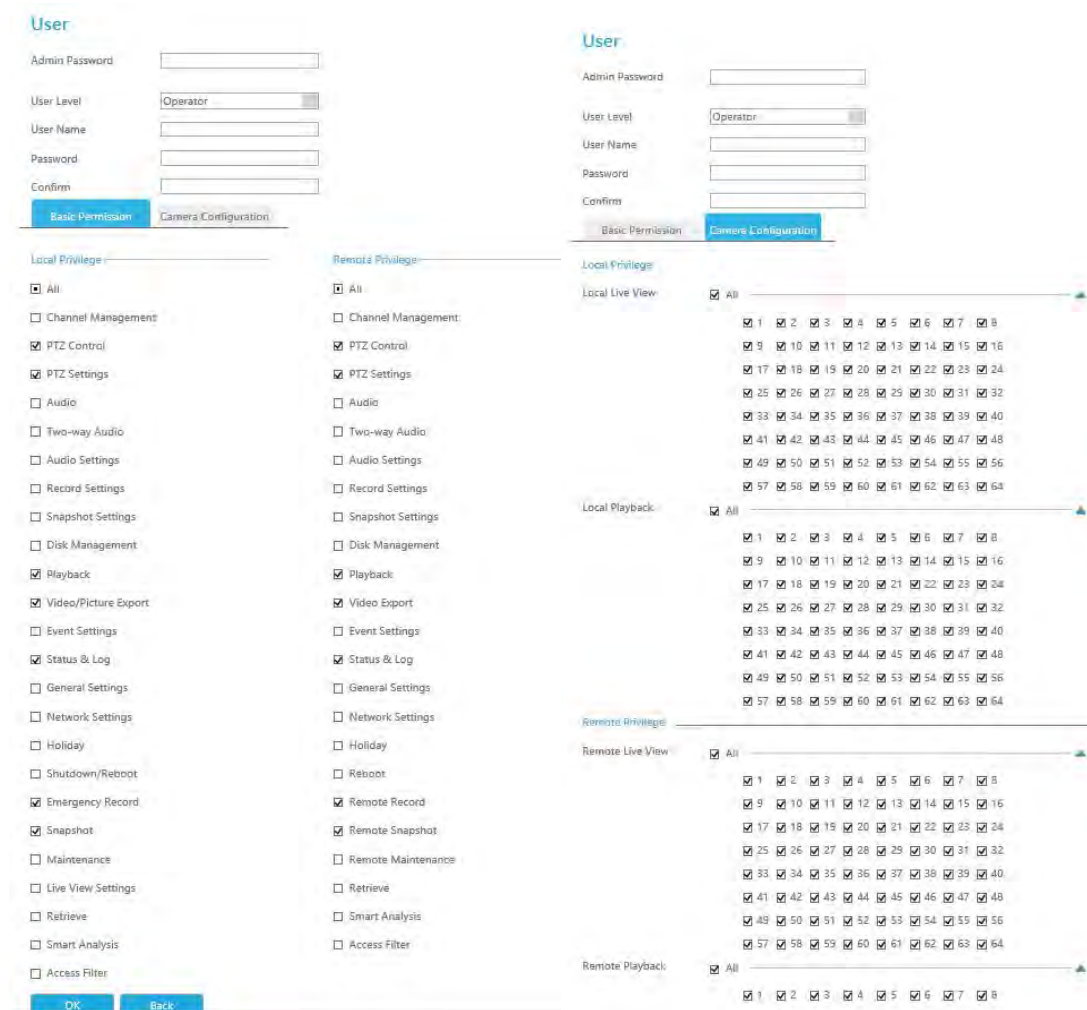
1. If the NVR firmware version is below xx.7.0.6, the default user name is "admin" and the

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 admin password before login.

### Add a new user


Click  to enter the user add interface, input information for the new user, select user level and set user privileges, then click  to save settings.



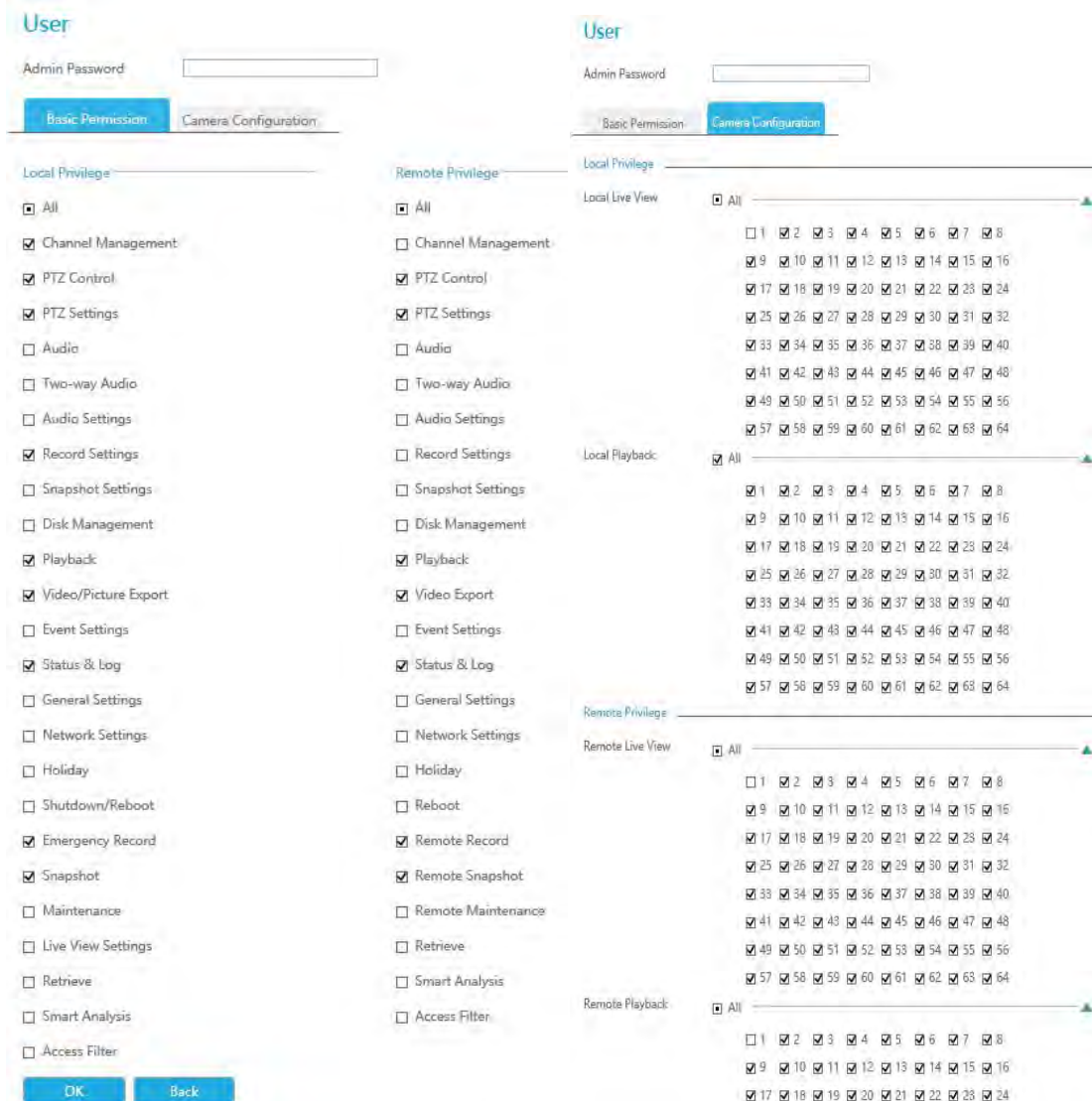
**Note:**

User name can only contain letters and number. There are two user levels with different authority: Operator and Viewer.

### Edit user limits

Click a user, when the background color changes into blue, click  to edit user privileges.

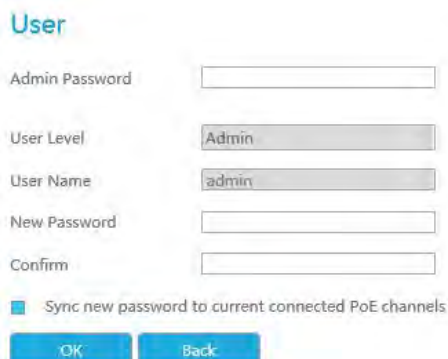
- ① Local Privilege means the privilege to the monitor connected with NVR.
- ② Remote Privilege means the privilege to web settings.



**Edit user password**

Click **Edit Password** to modify password.

Sync new password to current connected PoE channels is available for PoE NVR Series.

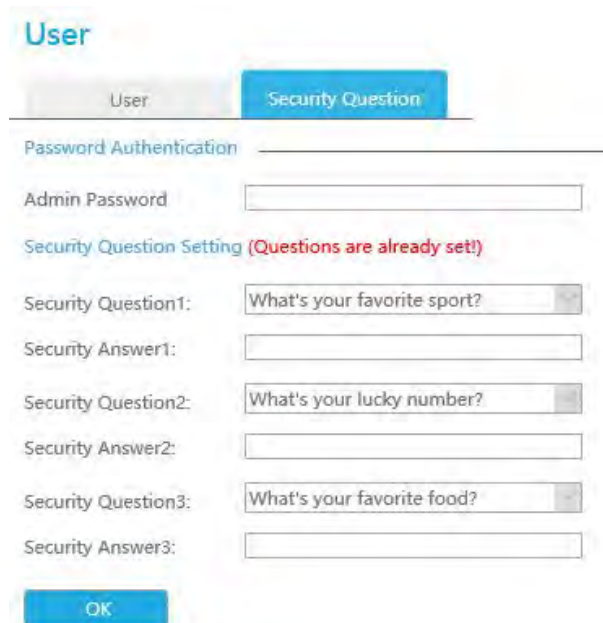


**Delete user**

Select a user and click **Delete** to delete a user.

## Modify Security Question

Input Admin Password, select security question and answer. Click  to save.



User

User Security Question

Password Authentication

Admin Password

Security Question Setting (Questions are already set!)

Security Question1:

Security Answer1:

Security Question2:

Security Answer2:

Security Question3:

Security Answer3:

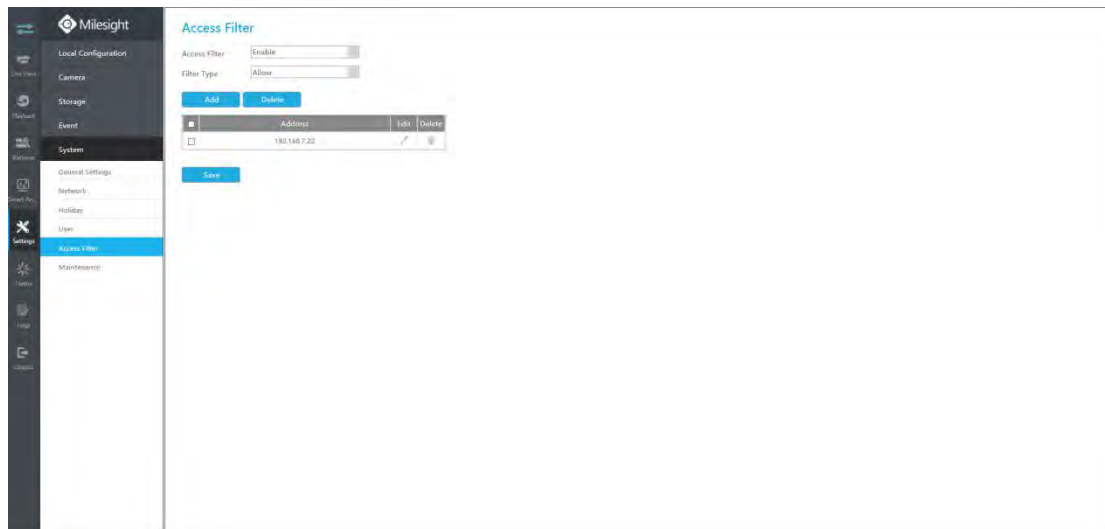
OK

### Note:

1. This option is available for the NVR firmware version xx.9.0.3 or above only.
2. Security question is used for resetting admin password if you forget current one.

## 4.8.5.5 Access Filter

Enable Access Filter to restrict or open the access to device address added via IP or MAC.



Milesight

Local Configuration

Camera

Storage

Event

System

General Settings

Network

Holiday

User

Access Filter

Maintenance

Access Filter

Access Filter: Enable

Filter Type: Allow

Add Delete

Address	Edit	Delete
192.168.7.22		

Save

### Step 1. Enable Access Filter.

Access Filter

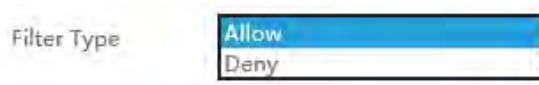


**Step 2. Select Filter Type.**

There are two options: Deny and Allow.

Deny: Only restrict the access to the added device address.

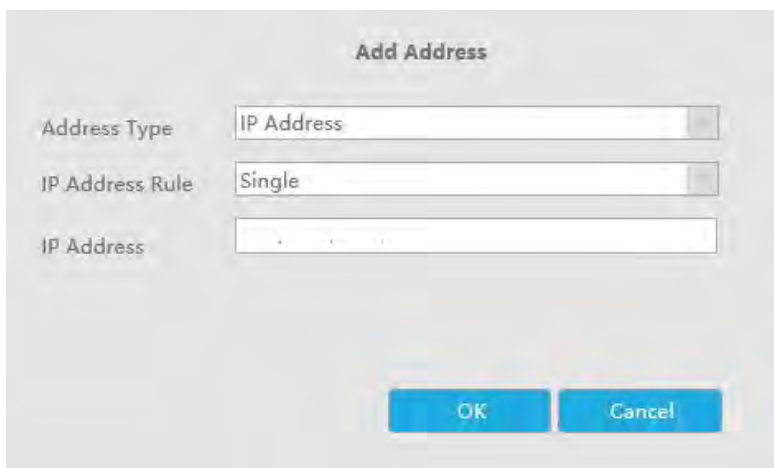
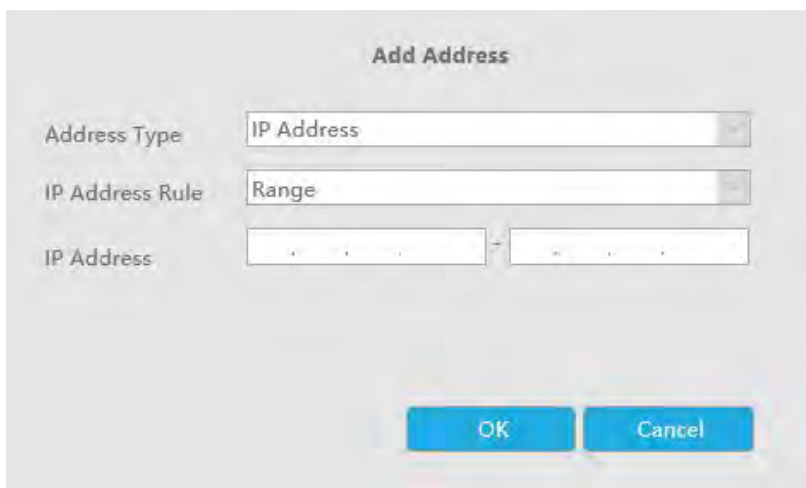
Allow: Only open the access to the added device address.

**Step 3. Add Address.**

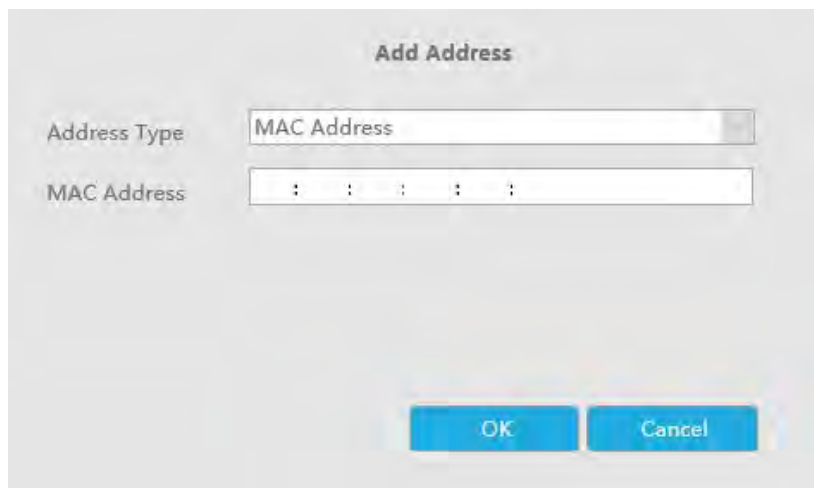
Click **Add** to add device address. You can add the address via IP or MAC.

**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.

A screenshot of the 'Add Address' dialog box. The 'Address Type' is set to 'IP Address'. The 'IP Address Rule' is set to 'Single'. The 'IP Address' field is empty. There are 'OK' and 'Cancel' buttons at the bottom.A screenshot of the 'Add Address' dialog box. The 'Address Type' is set to 'IP Address'. The 'IP Address Rule' is set to 'Range'. The 'IP Address' field is split into two boxes separated by a hyphen, both of which are empty. There are 'OK' and 'Cancel' buttons at the bottom.

**Method 2:** Add the address via MAC.



**Add Address**

Address Type: MAC Address

MAC Address: : : : :

OK Cancel

**Step 4.** Then click  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

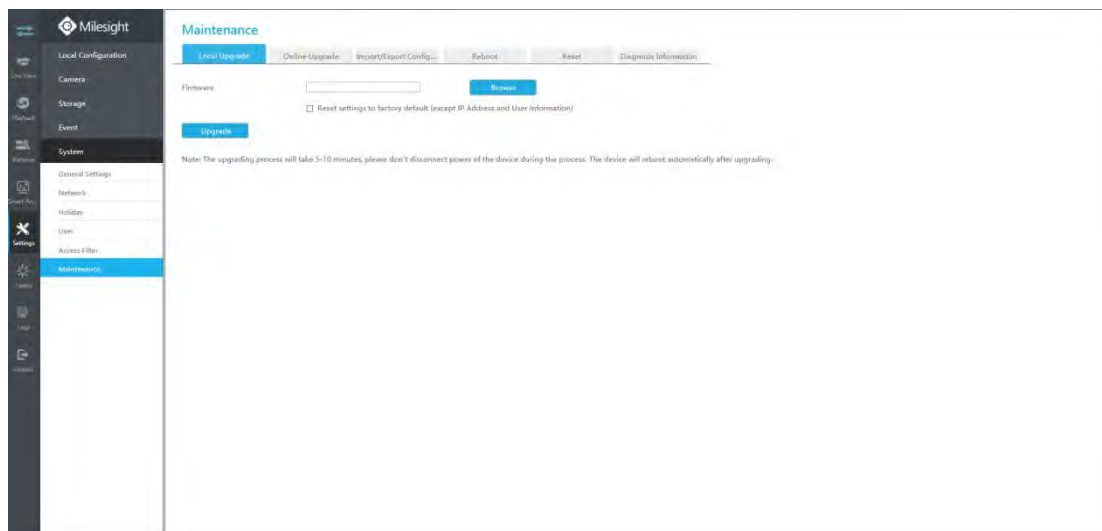
IP Address: 192.168.7.22

OK Cancel



**Note:**

- ① 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.
- ② 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.

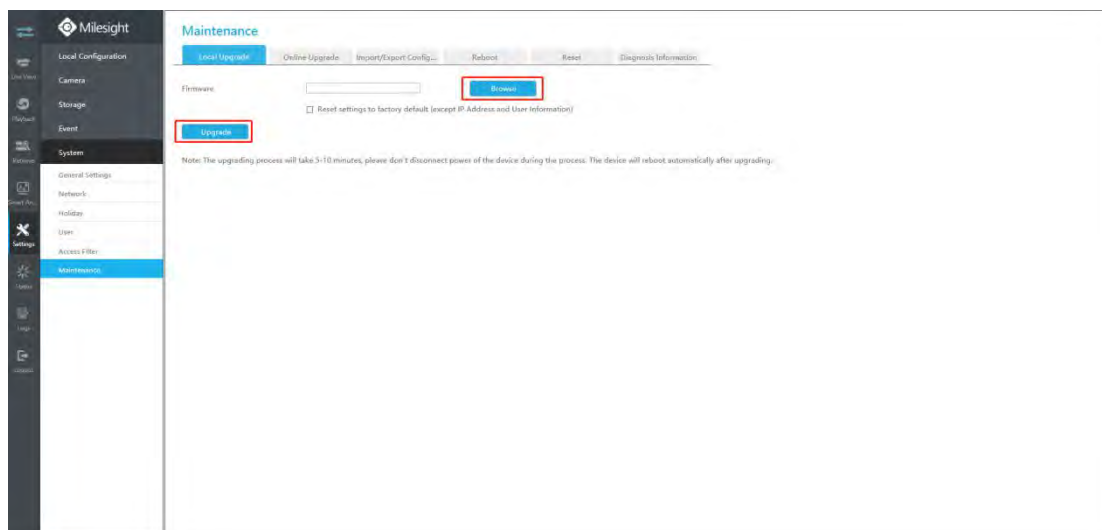
## 4.8.5.6 Maintenance



### Local Upgrade

**Step1.** Click  to select the firmware file, and you can check  to reset configuration to factory defaults;

**Step2.** Click  to confirm the upgrade.



### Note:

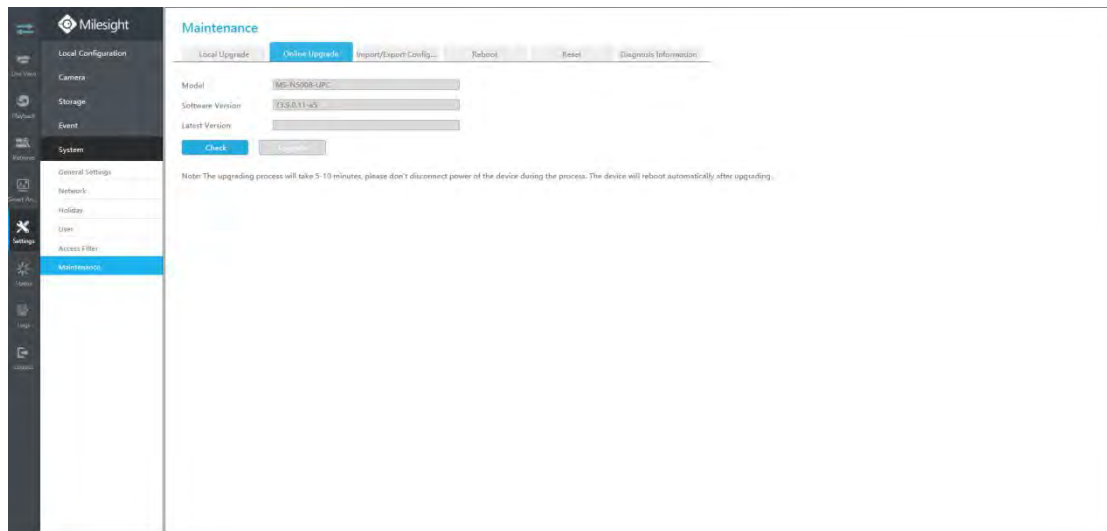
It will take 5 to 10 minutes to upgrade, please do not disconnect the device power during the process. The device will reboot automatically after upgrading.

### Online Upgrade

**Step1.** Click  to confirm whether there is a new version;

If there is a new version, the Latest Version column will display corresponding information.



**Step2.** Click  to confirm the upgrade.

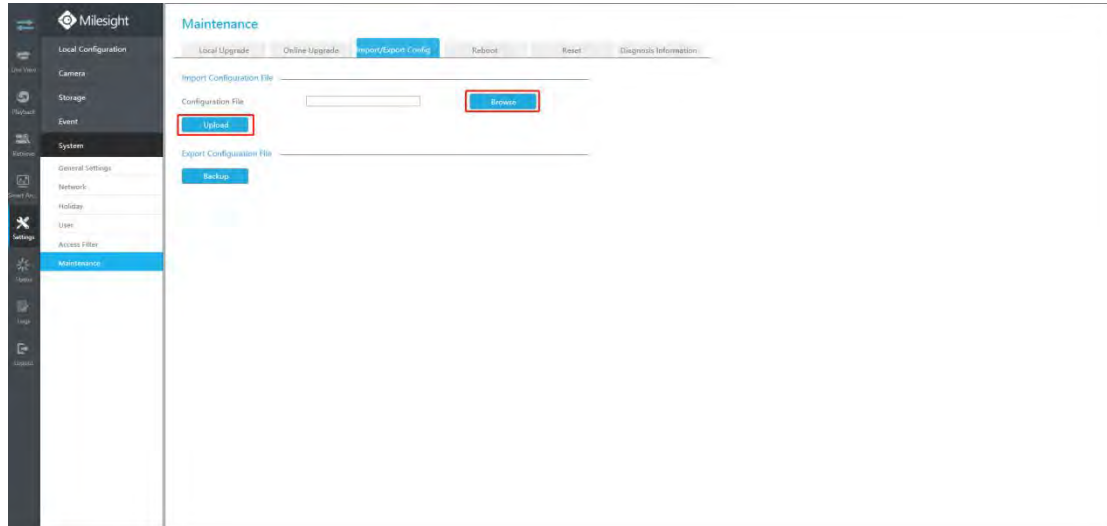


**Note:**

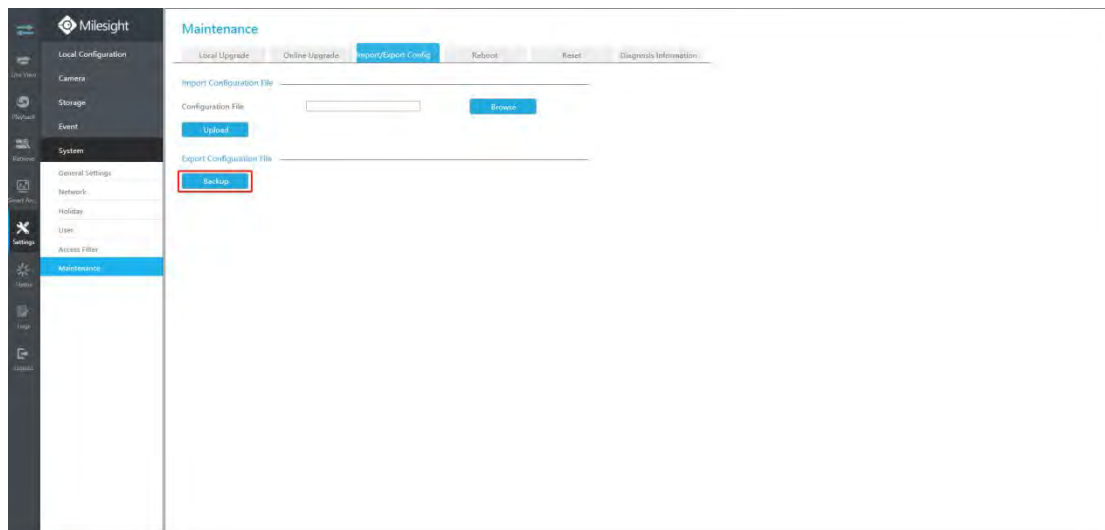
It will take 5 to 10 minutes to upgrade, please do not disconnect the device power during the process. The device will reboot automatically after upgrading.

**Import/Export Configuration**

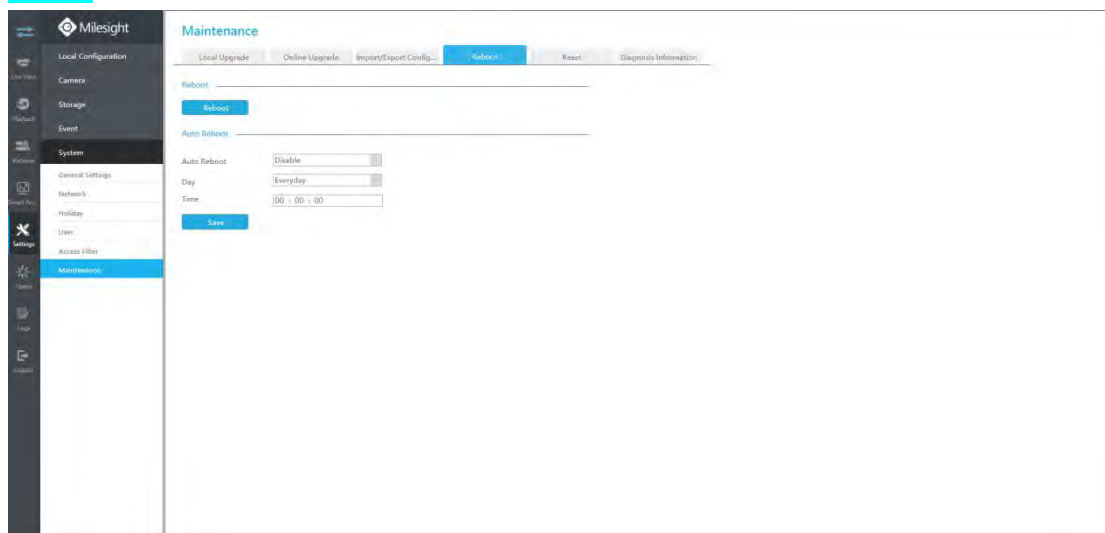
**Import Configuration File:** Click  to select one file and click  to import the NVR configuration.



**Export Configuration File:** Click  to backup current NVR settings.



## Reboot



## Reboot

Click  to reboot the NVR.

## 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.

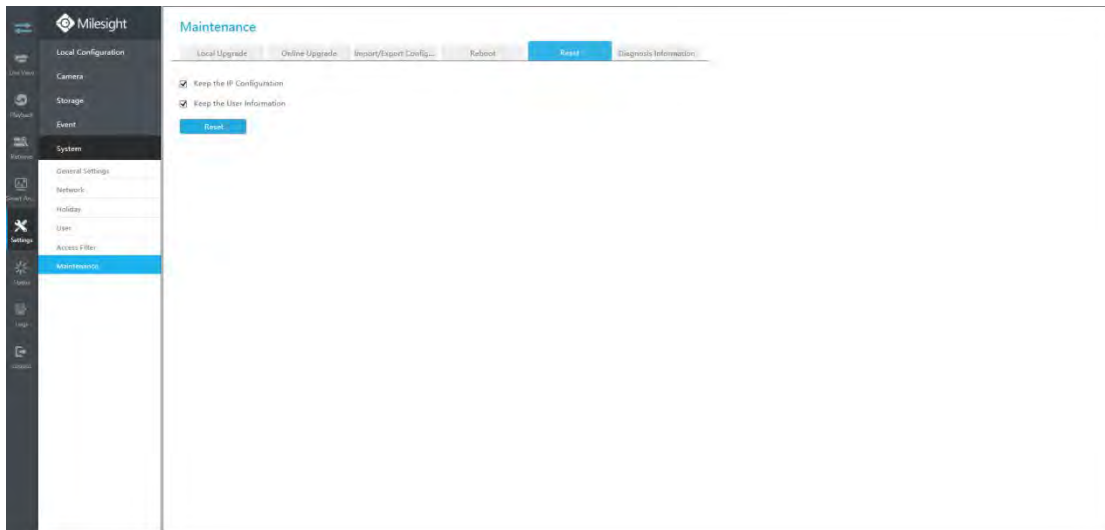
### Note:

1. Some models support this function.
2. Auto Reboot can be enabled in User -> Edit Limit -> Remote Privilege.
3. The record will display in the log when Auto Reboot takes effect.
4. If a user without Auto Reboot permission logs in, the function will be hidden.


## Reset

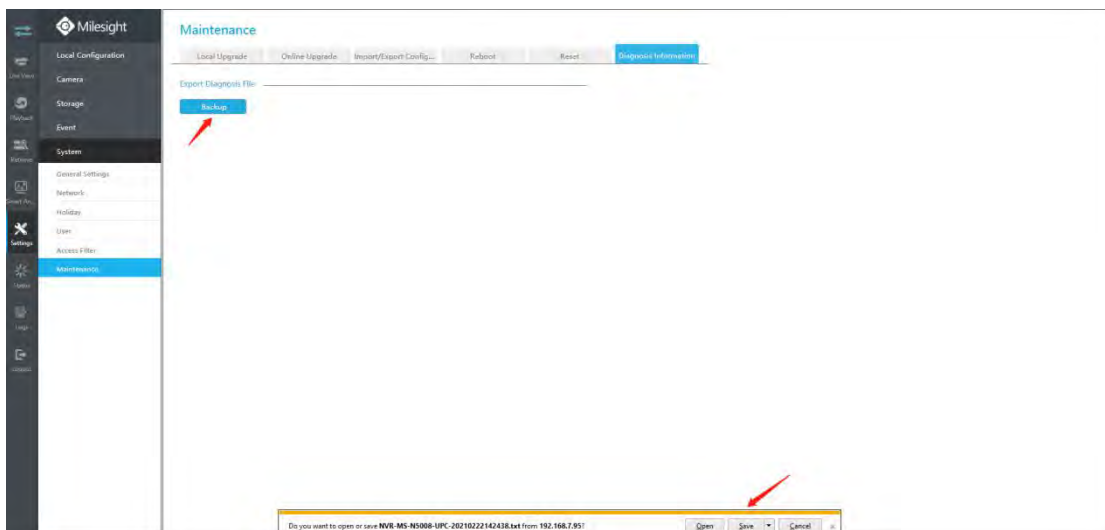
Click  to reset the NVR to factory defaults.

Keeping the IP parameters and Keeping the User information are available.



### Diagnosis Information

Click  and select the path to save the diagnosis file to export the diagnosis file.



## 4.9 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 interfaces accordingly.



## 4.9.1 Device Information

### 4.9.1.1 Device Information

Device information includes Model, MAC Address, Hardware Version, Software Version and Uptime.

Device Information	
Device Information	About
Model	MS-N5008-UPT
MAC Address	1C:C3:16:0A:43:03
Hardware Version	V1.0
Software Version	72.9.0.9-a4-unit4
Uptime	16:11:04 up 7 days, 1:13

### 4.9.1.2 About

Device Information

About

Open Source Software Licenses

View Licenses

Click [View Licenses](#) to jump to the web link that shows the Open Source Software Licenses.

```
Open Source Software Licenses

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```

## 4.9.2 Network Status

Network Status includes three main parts: Receive Bandwidth, LAN.

### Network Status

Receive Bandwidth			
Free	145Mbps	Used	15Mbps

LAN			
Connection	Link is up - 100Mbps Duplex		
IPv4 DHCP	Disable	IPv6 Mode	Manual
IPv4 Address	192.168.7.111	IPv6 Address	
IPv4 Netmask	255.255.240.0	IPv6 Prefix Length	
IPv4 Gateway	192.168.7.1	IPv6 Gateway	
Preferred DNS Server	8.8.8.8	Alternate DNS Server	
MAC	1C:C3:16:0A:30:92	MTU	1500
Receive Rate	17.45Mbps	Send Rate	429.66Kbps

## 4.9.3 Camera Status

Camera status includes Channel, Name, IPv4 Address, Record, Frame Rate, Bit rate, Resolution and Status.

### Camera Status

Channel	Name	IP Address	Record	Frame Rate	Bit Rate	Resolution	Status
1	CAM1	192.168.14.102	Off	0fps	0Kbps	0x0	
2	CAM2	192.168.14.103	Off	26fps	4018Kbps	1920x1080	
3	CAM3	192.168.14.104	Off	20fps	3424Kbps	1920x1080	
4	CAM4	192.168.14.105	Off	21fps	8419Kbps	2560x2560	
5	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-

## 4.9.4 Disk Status

Disk status includes Port, Vendor, status, Total(GB), Free(GB), Type, In Use and Recycle Mode. You also can check the Total Capacity (GB) and Free Capacity.

**Disk Status**

Host	Vendor	Status	Total(GB)	Free(GB)	Type	Property
2	WDC WD2500BBYV-0BA2B11	Normal	232	0	LOCAL	R/W

Total Capacity(GB):

Available Capacity(GB):

[Refresh](#)

## 4.9.5 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.

**Online User**

[Refresh](#)

No.	User Name	User Level	IP Address	User Login Time	Add to Access Filter
1	admin	Admin	192.168.7.25	2021-06-24 00:23:09	

The IP address can be added to Access Filter interface from Online User interface directly.

**Online User**

[Refresh](#)

No.	User Name	User Level	IP Address	User Login Time	Add to Access Filter
1	admin	Admin	192.168.7.25	2021-06-24 00:23:09	

Message from webpage  
 Add successfully.  
[OK](#)

## 4.9.6 Event Status

### Camera Event

Camera Event shows camera event, including Video Loss, Motion and I/O. turns into

when alarm is triggered.

**Event Status**

Camera Event | Alarm | VCA | People Counting

Channel	Name	IPv4 Address	Video Loss	Motion
1	CAM1	192.168.7.131		
2	CAM2	192.168.14.105		
3	CAM3	192.168.14.103		
4	CAM4			
5	CAM5	192.168.14.102		
6	CAM6	192.168.7.241		
7	CAM7			
8	CAM8			
9	CAM9			
10	CAM10			

**Alarm**

Alarm shows the Alarm Input and Alarm Output status. turns into when alarm is triggered.

**Event Status**

Camera Event | Alarm | VCA | People Counting

**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	

**Alarm Output List**

No.	Alarm Name	Alarm Type	Dwell Time	Status
1		NO	5s	
2		NO	5s	
3		NO	5s	
4		NO	5s	
CH1_1		NO	5s	
CH1_2		--	--	
CH2_1		NC	5s	
CH2_2		--	--	

**VCA**

It shows the VCA status. turns into when alarm is triggered.

**Event Status**

Camera Event | Alarm | VCA | People Counting

Channel	Name	IPv4 Address	Region Entering	Region Exiting	Advanced Motion Detection	Tamper Detection	Line Crossing	Loitering	Human Detection	Object Left/Oversew
1	CAM1									
2	CAM2									
3	CAM3									
4	CAM4									
5	CAM5									
6	CAM6									
7	CAM7									
8	CAM8									
9	CAM9									
10	CAM10									
11	CAM11									
12	CAM12									
13	CAM13									
14	CAM14									
15	CAM15									
16	CAM16									

## People Counting

It shows every camera's current In/Out number of people counting.

Event Status

Camera Event Alarm VCA **People Counting**

Channel	Name	IPv4 Address	In	Out
1	CAM1	--	--	--
2	CAM2	--	--	--
3	CAM3	--	--	--
4	CAM4	--	--	--
5	CAM5	--	--	--
6	CAM6	--	--	--
7	CAM7	--	--	--
8	CAM8	--	--	--
9	CAM9	--	--	--
10	CAM10	--	--	--
11	CAM11	--	--	--
12	CAM12	--	--	--
13	CAM13	--	--	--
14	CAM14	--	--	--
15	CAM15	--	--	--
16	CAM16	--	--	--

## 4.9.7 Group Status

Check Group Status. The status of the all created Groups can be sorted by Group or Channel.

Milesight

Status

- Device Information
- Network Status
- Camera Status
- Disk Status
- Event Status
- Group Status**
- Packet Capture Tool

Group Status

Sort by Group Sort by Channel

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

## 4.9.8 Packet Capture Tool

Input IP and Port, then click [Start] to start capture and click [End] to stop. Click [Download] to backup the captured packet locally.

## Packet Capture Tool

IP:

Port:

NIC:

## 4.10 Logs

In Log interface, you can check, search and export logs. By selecting the Main Type, Sub Type, Channel, Start Time and End Time which can narrow down the scale of logs, you can search for logs that you need and then export them locally.

No.	Main Type	Time	Sub Type	Parameter	Channel	Port	Remote Host IP	Details
1	Event	2021-06-24 02:23:24	Stop Motion Detection	N/A	1	N/A	N/A	
2	Event	2021-06-24 02:23:14	Start Motion Detection	N/A	1	N/A	N/A	
3	Event	2021-06-24 02:23:00	Stop Motion Detection	N/A	1	N/A	N/A	
4	Event	2021-06-24 02:24:50	Start Motion Detection	N/A	1	N/A	N/A	
5	Event	2021-06-24 02:24:40	Stop Motion Detection	N/A	1	N/A	N/A	
6	Event	2021-06-24 02:24:30	Start Motion Detection	N/A	1	N/A	N/A	
7	Event	2021-06-24 02:24:30	Stop Motion Detection	N/A	1	N/A	N/A	
8	Event	2021-06-24 02:24:20	Start Motion Detection	N/A	1	N/A	N/A	
9	Event	2021-06-24 02:24:20	Stop Motion Detection	N/A	1	N/A	N/A	
10	Event	2021-06-24 02:24:10	Stop Region Distance Alarm	N/A	1	N/A	N/A	
11	Event	2021-06-24 02:24:10	Start Motion Detection	N/A	1	N/A	N/A	
12	Event	2021-06-24 02:24:10	Stop Motion Detection	N/A	1	N/A	N/A	
13	Event	2021-06-24 02:24:00	Start Region Distance Alarm	N/A	1	N/A	N/A	
14	Event	2021-06-24 02:24:00	Start Motion Detection	N/A	1	N/A	N/A	
15	Information	2021-06-24 02:23:52	Start Record	N/A	2	N/A	N/A	
16	Event	2021-06-24 02:23:41	Stop Motion Detection	N/A	1	N/A	N/A	
17	Event	2021-06-24 02:23:31	Start Motion Detection	N/A	1	N/A	N/A	
18	Event	2021-06-24 02:23:19	Stop Motion Detection	N/A	1	N/A	N/A	
19	Event	2021-06-24 02:23:06	Start Motion Detection	N/A	1	N/A	N/A	
20	Event	2021-06-24 02:22:57	Stop Motion Detection	N/A	1	N/A	N/A	
21	Event	2021-06-24 02:22:47	Start Motion Detection	N/A	1	N/A	N/A	
22	Event	2021-06-24 02:22:36	Stop Motion Detection	N/A	1	N/A	N/A	
23	Event	2021-06-24 02:22:25	Start Motion Detection	N/A	1	N/A	N/A	
24	Event	2021-06-24 02:22:15	Stop Motion Detection	N/A	1	N/A	N/A	
25	Event	2021-06-24 02:22:05	Start Motion Detection	N/A	1	N/A	N/A	
26	Event	2021-06-24 02:22:00	Stop Motion Detection	N/A	1	N/A	N/A	
27	Event	2021-06-24 02:21:51	Stop People Crossing Alarm	N/A	1	N/A	N/A	
28	Event	2021-06-24 02:21:30	Start Motion Detection	N/A	1	N/A	N/A	
29	Event	2021-06-24 02:21:30	Stop Motion Detection	N/A	1	N/A	N/A	
30	Event	2021-06-24 02:21:49	Start People Crossing Alarm	N/A	1	N/A	N/A	
31	Event	2021-06-24 02:21:40	Start Motion Detection	N/A	1	N/A	N/A	

In particular, for the following types of events, the Information about detection object that triggers the event is displayed in the Log Information.

- ① Region Entrance
- ② Region Exiting
- ③ Advanced Motion Detection
- ④ Line Crossing
- ⑤ Loitering




**Details**

Time	2021-02-22 02:05:45
Type	Event - Start Advanced Motion Detection
Local User	N/A
Remote Host IP	N/A
Parameter	N/A
Channel	4

Log Information:

Channel:4  
Stream Type: Primary Stream  
**Detection Object:Human**

## 4.11 Logout

Click  to exit the current account.



## 5. Services

Milesight Technology Co., Ltd 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 USA

TEL: +1-800-561-0485

Add: 220 NE 51st ST, Oakland Park, Florida 33334, USA

### MILESIGHT KOREA

TEL: +82-2-839-3335

Add: 9F/925, 25-32, Anyang SK V1 Center, LS-ro 116beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do, Korea

### MILESIGHT CHINA

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