



Network Video Recorder User Manual





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.





Warnings: Please follow these safeguards to prevent injury or death.

Cautions: Please follow these safeguards to prevent potential injury or material damage.



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.



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.



Content

1. Product Introduction	7
1.1 Introduction	7
1.2 Product Key Functions	7
2. Hardware	10
2.1 Panel Buttons	10
2.2 Using a USB Mouse	12
2.3 Hard Disk Installation	13
2.3.1 MS-N7000 series Hard Disk Installation	13
2.3.2 MS-N8000 series Hard Disk Installation	14
3. Local Operation	16
3.1 Wizard Setting	16
3.2 Live View	20
3.2.1 Live View	20
3.2.2 Layout	24
3.3 Playback	25
3.3.1 General Playback	25
3.3.2 Event Playback	28
3.3.3 Tag Playback	30
3.3.4 File Management	31
3.3.5 Picture Playback	33
3.4 Retrieve	35
3.4.1 Common Backup	35
3.4.2 Event Backup	36
3.4.3 Picture Backup	38
3.5 Camera Settings	38
3.5.1 Camera Management	39
3.5.2 Device Search	44
3.5.3 PTZ Configuration	45
3.5.4 Privacy Mask	48
3.5.5 OSD configuration	49
3.5.6 Image Enhancement	50
3.6 Storage	51
3.6.1 Record Schedule	52
3.6.2 Record Settings	54
3.6.3 Disk	55
3.6.4 RAID	56
3.6.5 Group	58
3.7 Event	59
3.7.1 Motion Detection	59
3.7.2 Video Loss	62
3.7.3 Alarm Input	64
3.7.4 Alarm Output	67

3.7.5 Exception	68
3.7.6 Smart Event	69
3.8 Settings	96
3.8.1 General	96
3.8.2 Network	97
3.8.3 Holiday	101
3.8.4 User	102
3.8.5 Maintenance	105
3.8.6 Auto Reboot	106
3.8.7 Hot Spare	106
3.9 Status	108
3.9.1 Device Information	108
3.9.2 Network Status	108
3.9.3 Camera Status	109
3.9.4 Disk Status	109
3.9.5 Event Status	110
3.9.6 Group Status	112
3.9.7 Logs	113
3.10 Logout	114
4.WEB Settings	115
4.1 Account Setting	115
4.2 Login	116
4.3 Menu	118
4.4 Live View	119
4.4.1 Camera List	119
4.4.2 PTZ	120
4.4.3 Image Configuration	121
4.5 Playback	121
4.5.1 How to playback	122
4.5.2 Transcoding	123
4.5.3 Video Files Backup	123
4.5.4 Picture Files Backup	124
4.6 Settings	125
4.6.1 Local Configuration	125
4.6.2 Camera	126
4.6.3 Storage	135
4.6.4 Event	140
4.6.5 System	172
4.7 Status	185
4.7.1 Device Information	186
4.7.2 Network Status	186
4.7.3 Camera Status	186
4.7.4 Disk Status	187
4.7.5 Event Status	187

Milesight Technology Co.,Ltd.

Milesight





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 PAL/NTSC adaptive video input.
- Support multiple screen displaying in live view.
- Support 1/4/8/9/12/14/16/32 screen live view, channel sequence is adjustable.
- Support quick menu and tool bar in live view.
- Support batch IP editing, setting camera's video parameters and record schedule.
- Support live view group switch, 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 central zoom in by clicking the mouse at arbitrary area.
- Support 3D positioning control for the PTZ Camera Series and Fisheye Camera Series.
- Support to set privacy mask of camera.
- Support OSD title and date configuration.
- Support instant playback.
- Support to set view to Original or Resize.

HDD Management

- Support hard disk and NAS storage.
- Support S.M.A.R.T technology.
- Support RAID and Group management.
- 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 Transcoding for remote playback.
- Support recording with Primary Stream, Secondary Stream and Primary + Secondary Stream.
- Support General Playback, Event Playback, Tag 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 smart event 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.

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 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 smart event 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 and on/off relay out.

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 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.

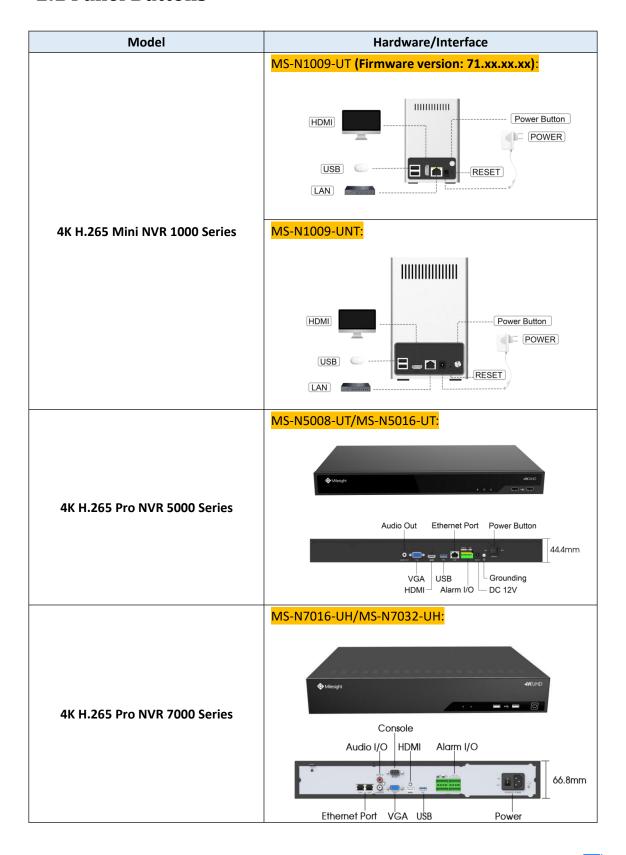
Other Functions

- 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.

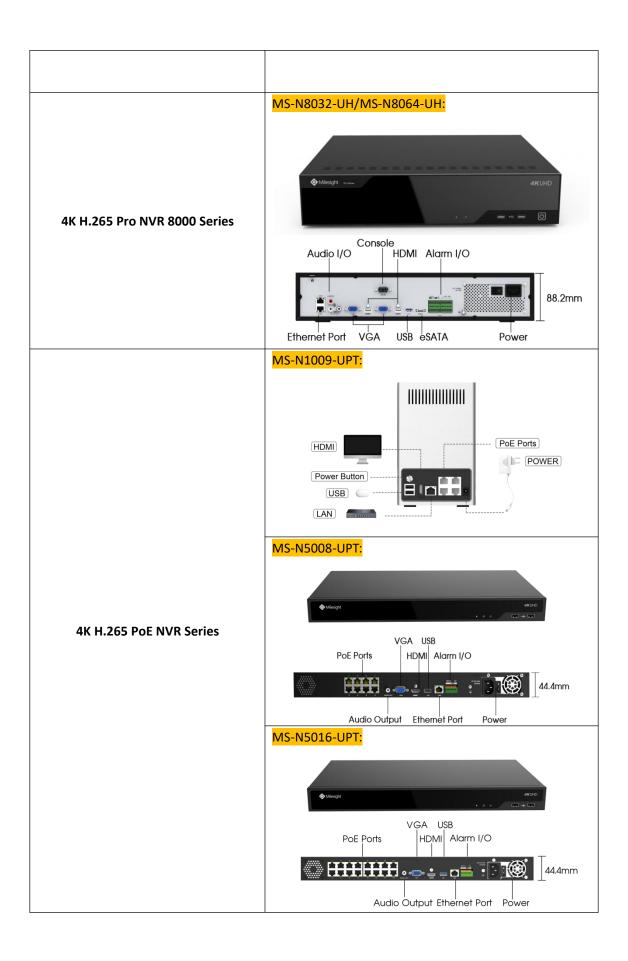


2. Hardware

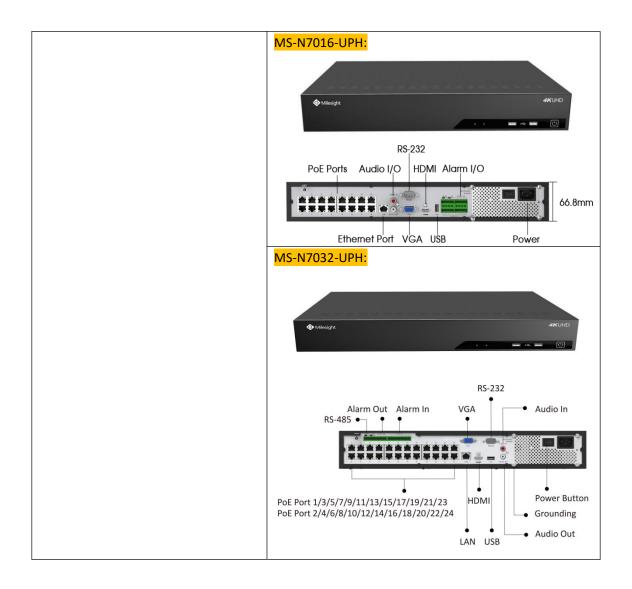
2.1 Panel Buttons











2.2 Using a USB Mouse

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



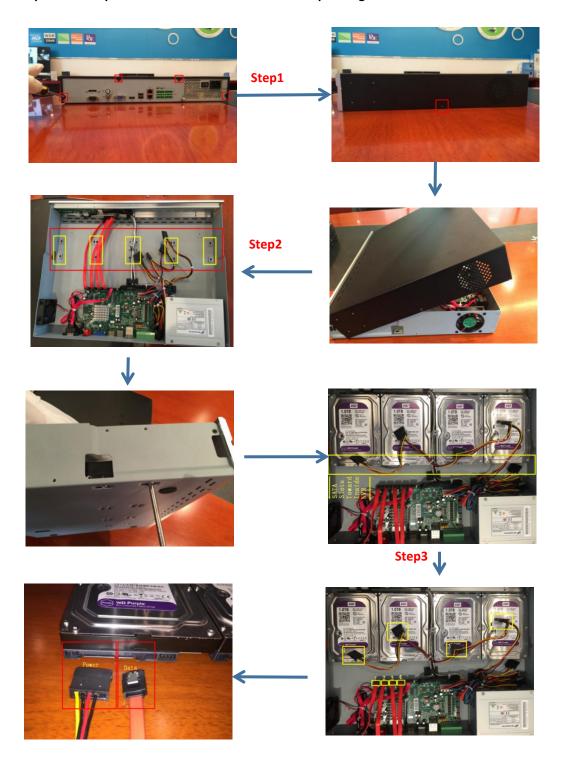
2.3 Hard Disk Installation

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

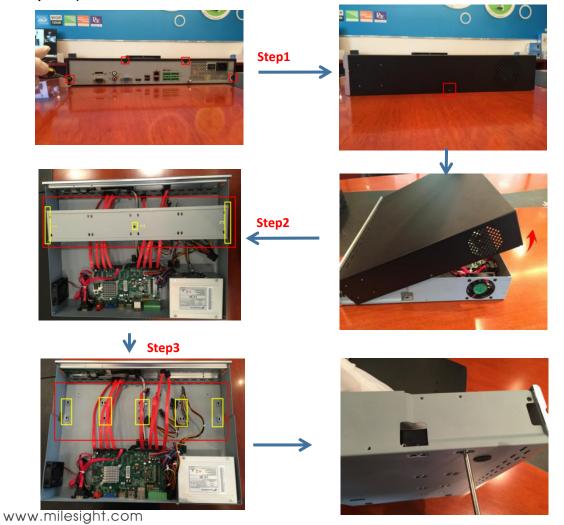
Step1. Unscrew the back and both sides' screws to open the upper lid.

Step2. Uninstall the upper hard disk panel.

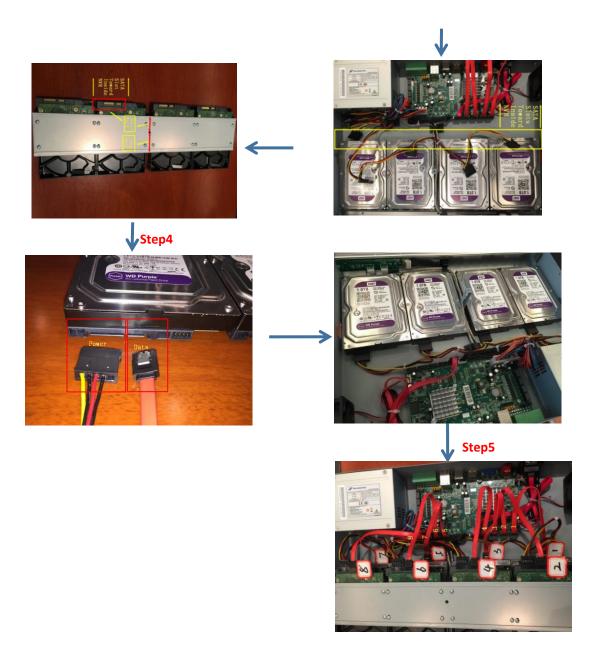
Step3. Install the hard disks into NVR with screws shown in below pictures.(SATA slots of hard disks should be toward inside NVR)

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)







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



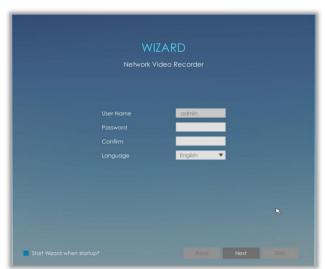
3.1 Wizard Setting

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.

Start Wizard when startup?

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

Step1. Set password to active admin account.



Note:

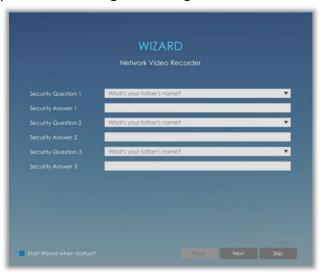
- 1. Only the NVR firmware version xx.9.0.3 or above supports activation function.
- 2. Password must be 8 to 32 characters long.
- 3. Password must contain at least one number and one letter.



Step2. 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.

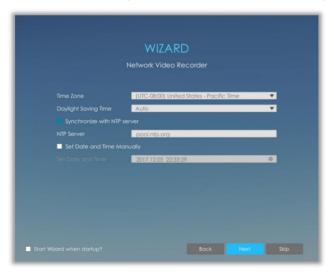


Note:

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

Step3. Date and time setting.

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

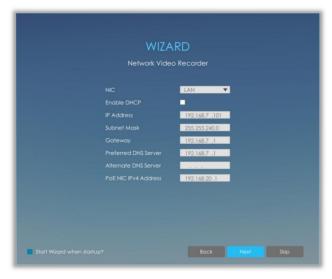


Step4. Network setting.

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

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





Step5. Camera Management.

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

Add

to add them to NVR.



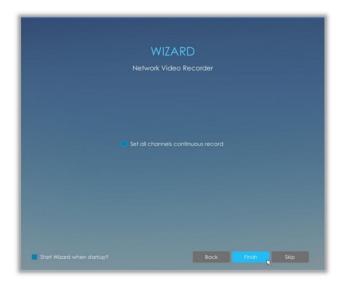
Note:

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

Step6. Record

The user can start all channels recording by clicking \square .



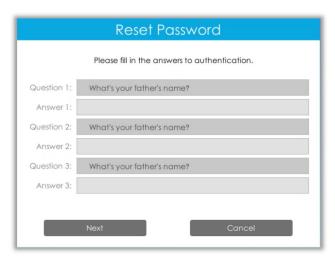


Step7. Login

Input the user name and password to login the system.



If you forget the password, click to reset password.



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



3.2 Live View

3.2.1 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
n	Lock/Unlock the tool bar		One screen layout
	4 screen layout		8 screens layout
	1+7 screens layout		9 screens layout
	16 screens layout	32	32 screens layout
*	Select other screen layouts		Start all channels recording
NO!	Stop all channels recording	洪	Adjust image in proportion
孠	Display settings	\odot	Sequence

Note:

Start all channels recording, Stop all channels recording, Adjust image in proportion and Display settings are **for all displaying channels**.

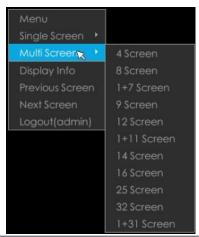
There are multiple icons on each channel displayed in live view, indicating different status of the



channel.

Icons	Descriptions
CAUS 172.168.8.150	It indicates video loss
=	It indicates motion detection alarm
	It indicates that the current channel is recording.
	It indicates exception alarm
•	It indicates smart event 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 8000 Series)
Multi Screen	Switch to multiple screen layouts
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



Quick Operation for single channel

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



Icons	Descriptions	Icons	Descriptions
0	Manually record		Image Configure
•	PTZ control	X	Original/Resize the image
•	Audio on/off	Q	Digital zoom
©	Snapshot manually	\odot	Instant Playback
-	Fisheye Mode	X	Close menu

Fisheye Mode:

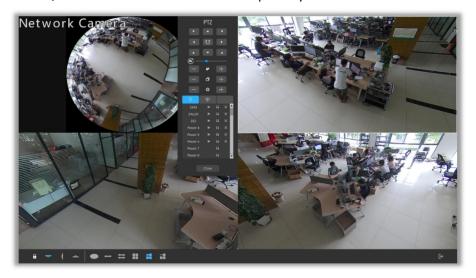
Click to enter Fisheye Mode, which will full screen fisheye channel. You can set installation modes and display modes for the camera on the Fisheye tool bar.



Installation Mode: Ceiling Mount/ Wall Mount/ Table Mount

Display Mode: Original Fisheye View/ 360° Panorama View/ Two 180° Panorama Views/ Four Regional Views/ One Original Fisheye View and Three Regional Views/ One 360° Panorama View and Three Regional Views

Select a fisheye channel(except for the original view), and click to enter PTZ Mode. You can operate PTZ, Preset and Patrol of this channel separately.





Note:

Only for Milesight Fisheye Camera in Bundle-Stream Mode.

PTZ Mode:

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



You can do PTZ, Preset, Patrol and Pattern operation in the PTZ panel. Meanwhile, there are three icons in the tool bar. The descriptions are as below.

Icons	Descriptions	Icons	Descriptions
a	Lock/Unlock the tool bar	3 D	Enable/Disable 3D positioning
!	Show/Hide the PTZ control panel		

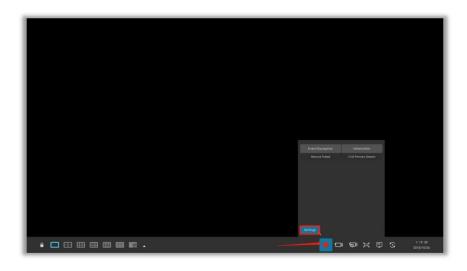
Event Notification:

in live view bottom tool bar when exception alarm is triggered.

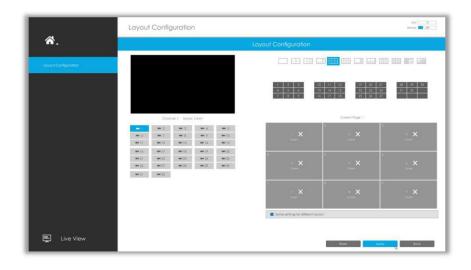
You can click it and check alarm details.

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





3.2.2 Layout



Step1. Select a layout format.



Step2. Set desired channels.

Click X to close a channel. Select a window and then select a desired channel to add in.

Click Apply to save the settings or click Reset to reset the layout.

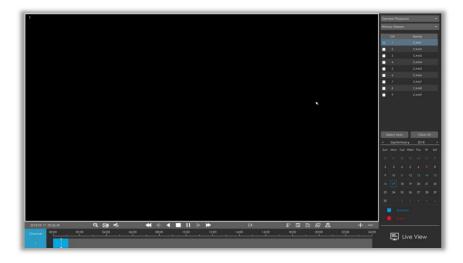




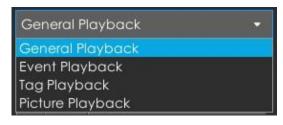
3.3 Playback

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.

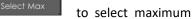
Primary Stream and Secondary Stream are available.



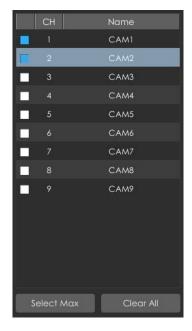
Step3. Select channel.



Select channels you want to do playback. User can click



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

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

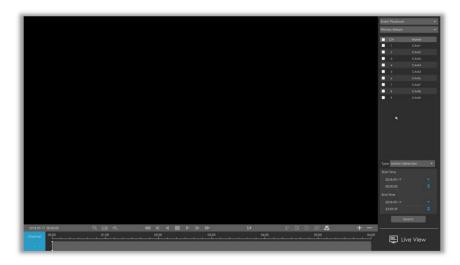
Icons	Descriptions	Icons	Descriptions
Q	Digital zoom	O.	Snapshot
%	Audio on	4	Audio off
≪	Speed down	▶	Speed up
4	Step reverse		Step forward
4	Rewind	>	Play
	Stop	11	Pause
₽	Timeline cutting	ā	Lock video file
	Quick tag	Ū	Custom tag
£	File Management	+	Zoom in timebar
_	Zoom out timebar		

Lock Video: Once the video is locked, the whole file where the video located won't be overwritten. 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. You can backup video via tag in Retrieve interface or do tag playback in Playback interface.



3.3.2 Event Playback



Step1. Select Event Playback as playback type.



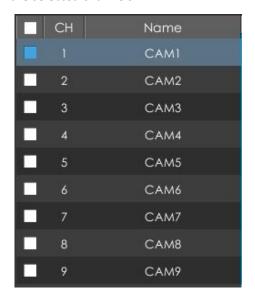
Step2. Select Stream Type.

Primary Stream and Secondary Stream are available.



Step3. Select channel.

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

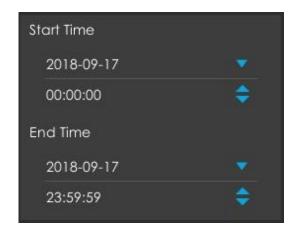




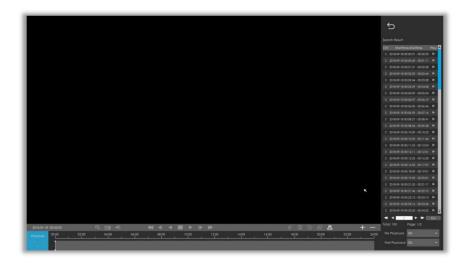
Step4. Select Event Type.



Step5: Select Start Time and End Time, click search the record.



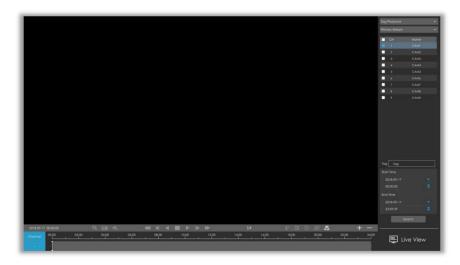
Step6: It would list all videos after clicking Search . Set pre playback and post playback time, then play the video by clicking .



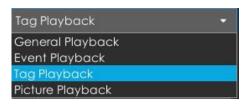
Video Playback Tool Bar Description are the same as General Playback.



3.3.3 Tag Playback



Step1. Select Tag Playback as playback type.



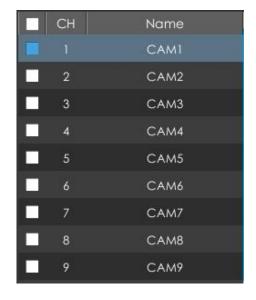
Step2. Select Stream Type.

Primary Stream and Secondary Stream are available.



Step3. Select channel.

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

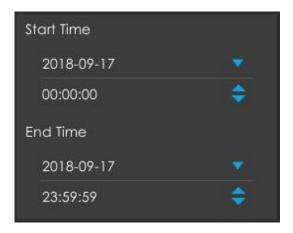




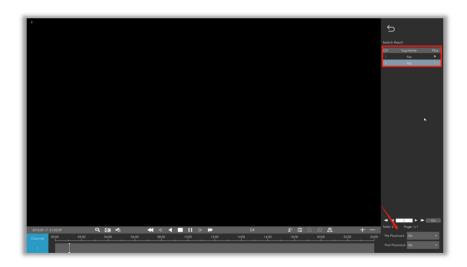
Step4. Input tag name or any key words of tag.



Step5: Select Start Time and End Time.



Step6: It would list all tagged video after clicking Search. Set pre playback and post playback time, then play the tag video by clicking.



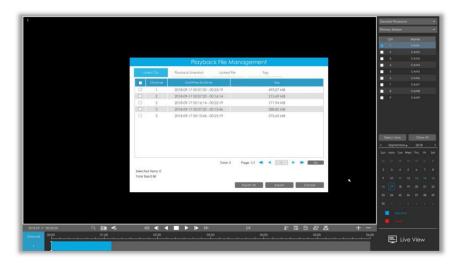
Video Playback Tool Bar Description are the same as General Playback.

3.3.4 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.

Step1. Cut recorded files.

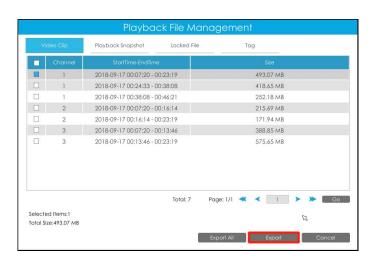
Select the channel and date you want to backup, then select the time at timeline and click then drag the timeline to select the start time and end time of video.



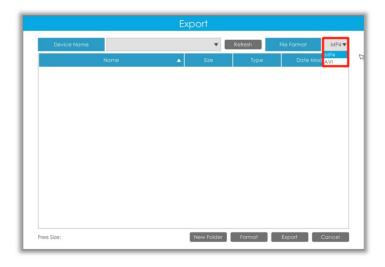
Step2. Click to save the clipped video.

Step3. Click to pop up File Management interface. Select the video you clipped and click

Export to export video.



Step4. Select the device to storage exported video and then click



Note:

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

There is an information promoted showing the export progress.



Note:

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

3.3.5 Picture Playback

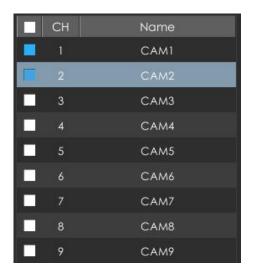


Step1. Select Picture Playback as playback type.

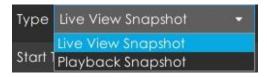




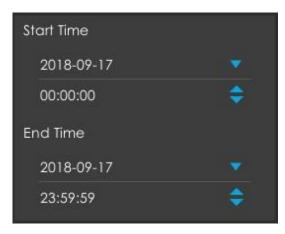
Step2. Select channel.

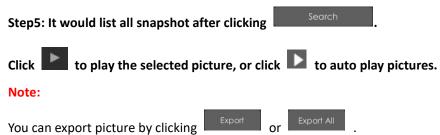


Step3. Select Snapshot type, including Live View Snapshot and Playback Snapshot.



Step4: Select Start Time and End Time.









Icons	Descriptions	Icons	Descriptions
•	Play backward		Play
←	Previous picture	→	Next picture
\hookrightarrow	Back to search interface		

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.





Step1: Set the search condition and click search video.



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 won't be overwritten.



3.4.2 Event Backup

Support to search out and backup picture according to event type. The event type includes Motion Detection, Alarm Input, Alarm Output and Smart Event.





Step1: Set the search condition and click search video.



Step2: Select the file you want to backup and click

Backup

. Also, you can click

Bockup All to backup all recorded video.

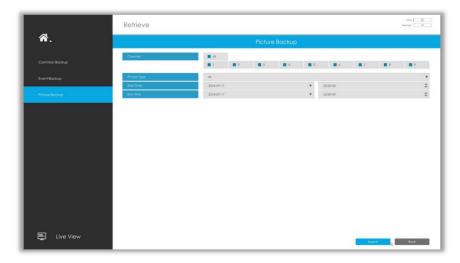
In Event Backup interface, you can click to play the video.





3.4.3 Picture Backup

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



Step1: Set the search condition and click search snapshot.



Step2: Select the file you want to backup and click

Backup

. Also, you can click

Backup All to backup all recorded videos.



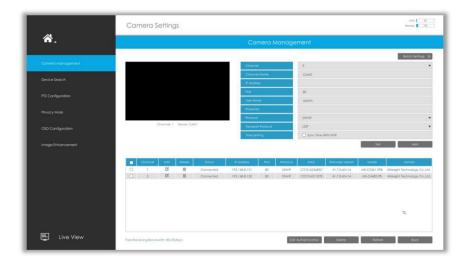
3.5 Camera Settings

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.

3.5.1 Camera Management



Step1. Add camera.

Method1. Add camera through Device Search interface. 'Settings' \Rightarrow 'Camera' \Rightarrow 'Device Search'.



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



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





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



4. Check to **batch adding** the network cameras if they are with the same password, you can choose TCP or UDP transport protocol for it. Click to finish batch adding **MSSP:** You can search out all Milesight camera which has different network segment in the LAN.



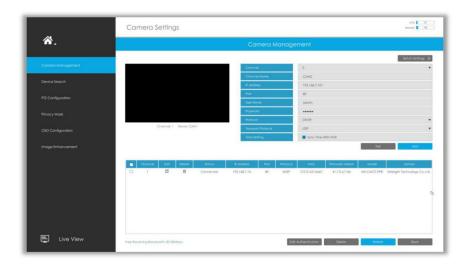
Note:

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.

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

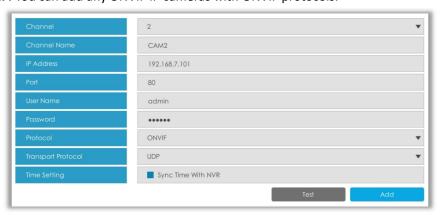




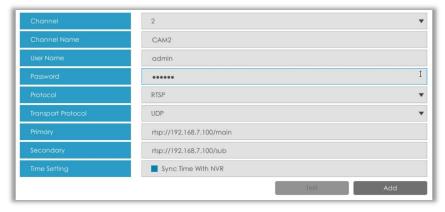
Select channel ID, input complete information, then click [Add] button.

There are three protocols available for camera connection:

• ONVIF: You can add any ONVIF IP cameras with ONVIF protocols.

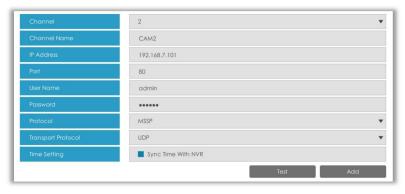


RTSP: You can add any IP cameras with RTSP protocol streams (Port: 554). It needs you to
input complete resource path of the IP camera to add it. Take Milesight device for example,
the resource path of main stream is "rtsp://IP:port/main" and secondary stream is
"rtsp://IP:port/sub".



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





Step2. Check the connection status.

After adding the IP channels, click button on Camera Management interface, then appears under Status. If it doesn't appear, you need to check if the network is connected or whether the user name or password is correct or not.



Step3. Configure camera.

Configure one camera

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



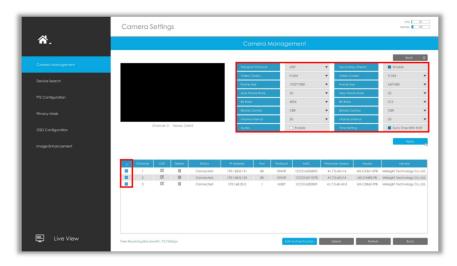
Select Parameters page to re-edit parameters of this channel . Click [OK] to save the configuration.





Batch configuring camera

Click settings , select multiple channels and set parameters of cameras.



Step4. Delete camera.

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

Delete to delete.



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 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.





3.5.2 Device Search

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



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.





3.5.3 PTZ Configuration

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.

Configuration

[Preset]

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

Step1. Use the PTZ direction key to rotate the position of preset. Then choose a preset number and click
to save a preset position.



Step2. Choose a preset number and click uto delete the preset position.

Step3. 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.

Step1. Select a path. Up to 8 paths could be set.



Step2. 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



Step3. Select a preset position, click and select research in the dialog box to delete it.

Step4. Click ► to preview the path patrol. Click ■ to stop.

Step5. Click and select in the dialog box to delete all preset positions of the path patrol.

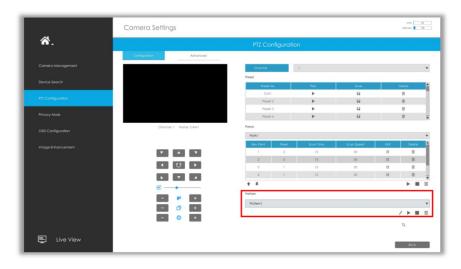
Note:

- 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.

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



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



Step3. Click 🗐 to save the PTZ movement patterns.

Step4. Click ▶ to preview the pattern. Click ■ to stop.

[PTZ Operation]



Icons	Descriptions	Icons	Descriptions
/ A T	PTZ direction control and auto scan button		PTZ speed
+	Zoom +, Focus +, Iris +	-	Zoom -, Focus -, Iris -
**	Zoom	ð	Focus
0	Iris		

3.5.4 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.





You can add a privacy mask by following steps:

Step1. Select channel and enable privacy mask.

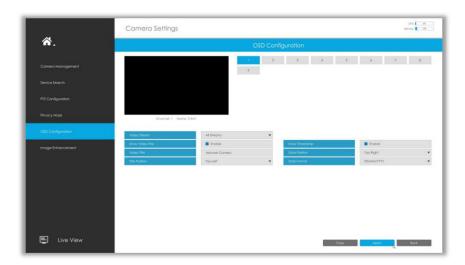
Step2. Set the privacy mask type and drag the mouse to select the area which is privacy on the live window. You can add 4 areas at most.

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

Step4. Select " ro save the settings.

3.5.5 OSD configuration

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



Step1. Select channel.

Step2. Select Video Stream, including All Streams, Primary Stream and Secondary Stream.

Step3. 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.

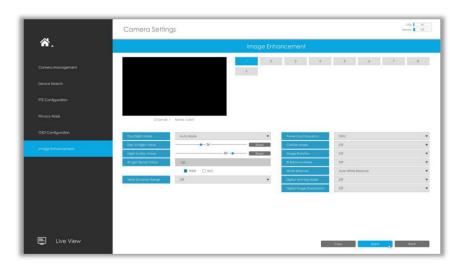
Step4. Copy the OSD settings to the other channels by clicking the "Copy button on the bottom of the windows." button on

Step5. Select " ro save the settings.



3.5.6 Image Enhancement

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



Step1. Select channel.

Step2. Set the configuration.

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

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.



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

Corridor Mode: Set corridor mode. **Image Rotation:** Set image rotation.

IR Balance Mode: Turn on to avoid IR overexposure.

White Balance: Choose a white balance mode for the channel. Digital Anti-fog Mode: Set the Anti-fog function on and off.

WDR/HLC: Click to configure Wide Dynamic Range or High Light Control.

Step3. Copy the image settings to other channels by clicking on the bottom of

the windows.

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

3.6 Storage

Preparation for Record

Step1. Ensure your NVR has been installed and the HDD has been initialized, please check it on "Storage" -> "Disk" interface.



Step2. Ensure that the HDD has sufficient storage space.

Enable [Recycle Mode] in the case of insufficient capacity of storage device on Storage -> Disk Management -> Advanced Settings interface .





3.6.1 Record Schedule

Step1. Select channel.

Step2. Set record schedule.

Method 1: Click to edit schedule. Select Day, Record Type and Time to finish editing.

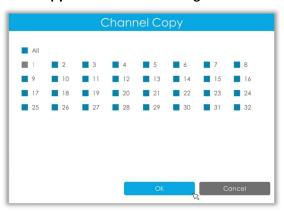


Method 2: Select operation type: Continuous, Event (Motion and Alarm) or Erase. Then drag a square in the time table to set record effective time. It is convenient for you to set or clear all

corresponding schedule by clicking Select All or Clear All or



Step3. Click Copy to copy the same record configuration to other channels.

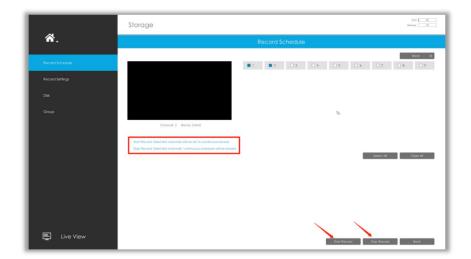


Batch Settings

Step1. Click Batch Settings >> to enter Batch Settings interface.

Step2. Select channels and click start always record.

Step3. Select channels and click Stop Record to stop record.





3.6.2 Record Settings

General 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.

 $\textbf{Post Record:} \ \textbf{Event post-record duration time.} \ \textbf{It will keep recording after the event is over.}$

Audio Record: Select to record audio or not.

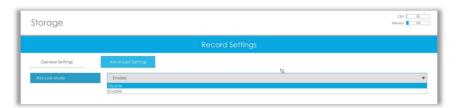
Record Stream Type: Select Main stream or sub stream for record. Primary+Secondary Stream is available for NVR model ends with T only.

Due Time: Set the due time of recording files, 1~120days or unlimit are available.



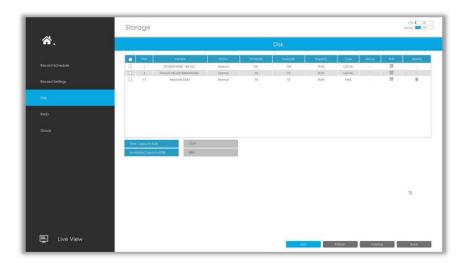
Advanced Settings

Enable or disable Recycle Mode for all storage device.





3.6.3 Disk

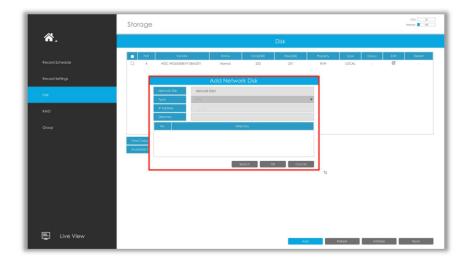


Network Disk

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 to initialize it, edit the Property by clicking.

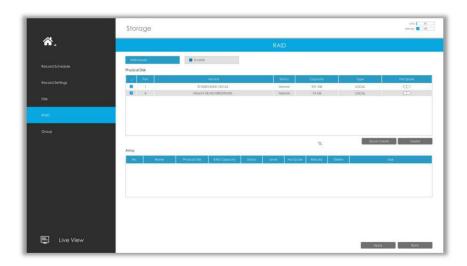
After that the storage device will be ready.





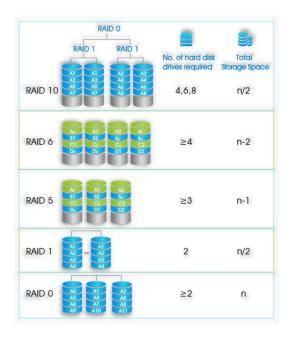
HDD Type: RAID means RAID, NAS means network attached storage while LOCAL means normal disk mode.

3.6.4 RAID



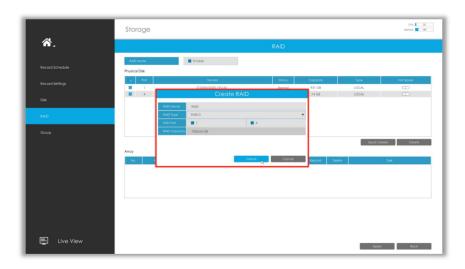
RAID (Redundant Array of Independent Disks) is a storage technology that combines multiple disk drive components into a logical unit. A RAID setup stores data over multiple hard disk drives to provide enough redundancy so that data can be recovered if one disk fails.





Step1. Enable RAID. NVR will reboot after enabling.

Step2. Select HDD and click or Quick Create or 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.



3.6.5 **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 interface. Click and set the group number of every disk.

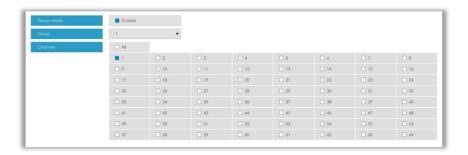
Note:

You can add 16 groups at most.



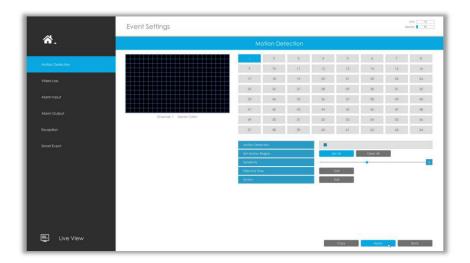
Step 3. Select group and channels which you want to record into this group.





3.7 Event

3.7.1 Motion Detection



Step 1. Enable Motion Detection.

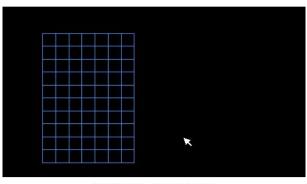
Select channel , Sensitivity and click 📮 to enable Motion Detection.



Step2: Set the area for triggering motion detection.

You can set the area by dragging a square on live view window.





Channel: 1 Name: CAM1

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

Select All

or

Clear All

to set or clear all time settings.



Step 4. Set Action for motion detection alarm by clicking

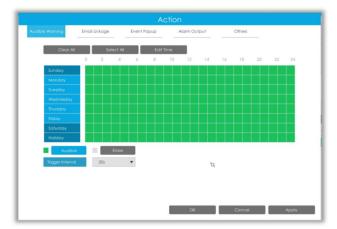
Audible Warning: NVR will trigger an audible beep when motion is detected.

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 select All or clear all time settings.

2 Click Edit Time to edit record effective time manually.

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





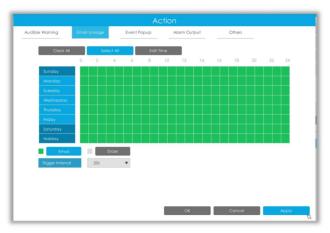
Email Linkage: NVR will send an email to the address you set before.

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.

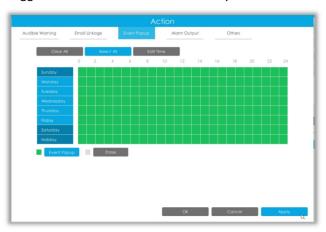
2 Click to edit effective time manually.

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

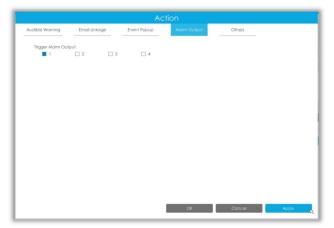


Event Popup: Trigger alarm screen popup to full screen when alarm is triggered.

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.



Alarm Output: Trigger alarm output when alarm is triggered.

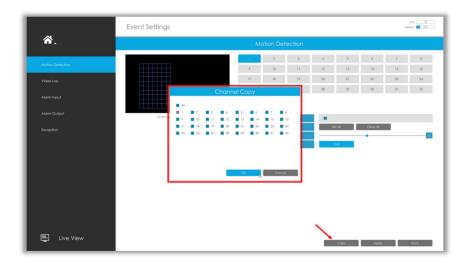




Others: Trigger other channels record when alarm is triggered.

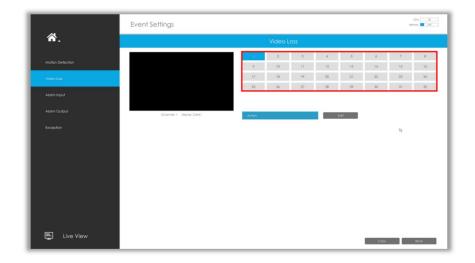


Step 5. Click and to copy the same configuration to other channels.



3.7.2 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: Email or Erase. Then drag a square on the time table for time setting, it will be more convenient by clicking Select All or to set or clear all time settings.
- (2) Click Edit Time to edit effective time manually.

Trigger 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:

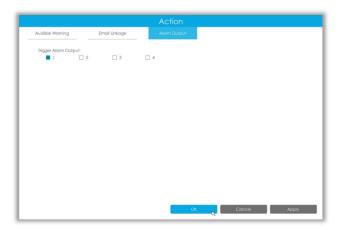
- ① Select the operation type: Email or Erase. Then drag a rectangle on the time table for time to set or clear all setting, it will be more convenient by clicking or time settings.
- (2) Click to edit record effective time manually.

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

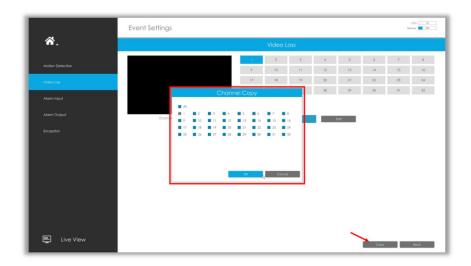


Alarm Output: Trigger alarm output when alarm is triggered.





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



3.7.3 Alarm Input

Alarm Input function is supported by MS-N5008-UT, MS-N5016-UT, MS-N7016-UH, MS-N7032-UH, MS-N8032-UH, MS-N8064-UH, 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.

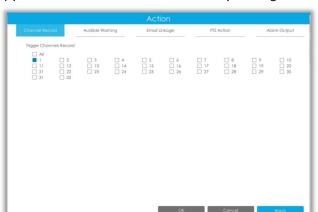
Step 2. Set action for alarm input by clicking

Channel Record: Start recording when alarm is triggered.



Trigger Channels Record: Trigger selected channels to record when alarm is triggered.

Copy to Channels: Copy record schedule to other channels by clicking

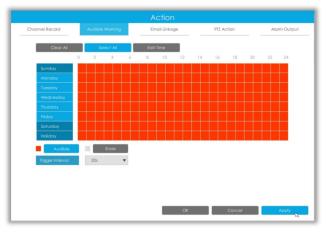


Audible Warning: NVR will trigger an audible beep when alarm is triggered.

User can set effective schedule as following two ways:

- 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 time settings.
- 2 Click to edit effective time manually.

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



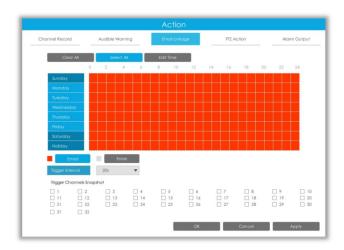
Email Linkage: NVR will send an email to the address you set before.

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 or Clear All to set or clear all time settings.
- 2 Click Edit Time to edit effective time manually.

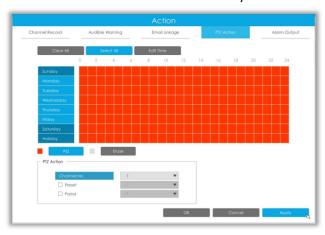
Trigger Interval: The effective interval between two actions when event triggered.

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



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: Email or Erase. Then drag a square on the time table for time setting, it will be more convenient by clicking or Clear All to set or clear to set or clear all time settings.
- 2 Click to edit record effective time manually.

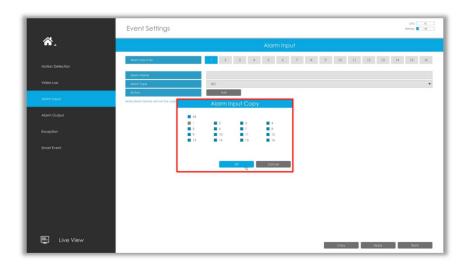


Alarm Output: Trigger alarm output when alarm is triggered.



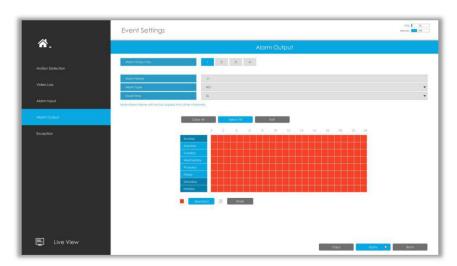
Step 3: Copy alarm input settings to other input interface by clicking





3.7.4 Alarm Output

Alarm Output function is supported by MS-N5008-UT, MS-N5016-UT, MS-N7016-UH, MS-N7032-UH, MS-N8032-UH, MS-N8064-UH, 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.

 $\textbf{Dwell Time:} \ \ \text{The output time for alarm.} \ \ \text{If the output alarm lasts too long, you can select the}$

Manually Clear to stop it.

Step 2. Select effective Time for alarm output.



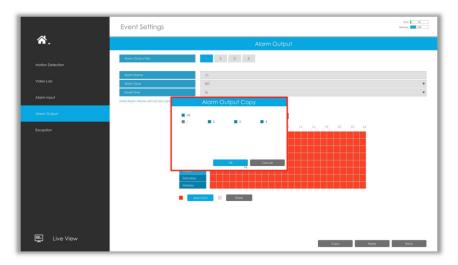
The user can set effective schedule as following two ways:

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

2 Click to edit record effective time manually.



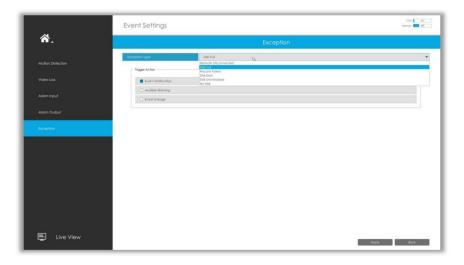
Step 3: Copy alarm output settings to other output interface by clicking



3.7.5 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.

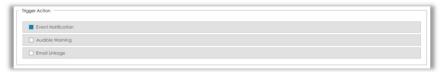
Disk Error: Failed to recognize HDD. **Disk Uninitialized:** Disk is uninitialized. **No Disk:** There is no storage device.

Step2. Select normal linkage includes Event Notification, Audible Warning and Email Linkage.

Event Notification: You will got 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.



3.7.6 Smart Event

Smart Event 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.

Note:

Please input license of selected channel in Settings page to activate Smart Event first.

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.



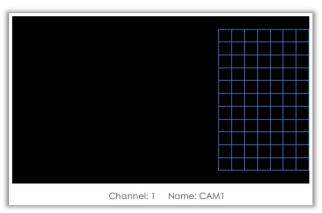


Step 1. Select channel and enable Region Entrance.



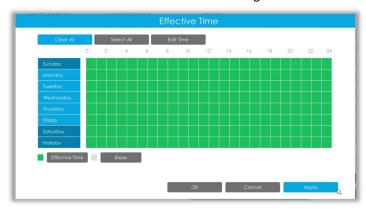
Step 2. Set entrance detection region.

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 and Clear All



Step 3. 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 Clear All to set or clear all time settings.



Step 4. Set Action for region entrance alarm by clicking

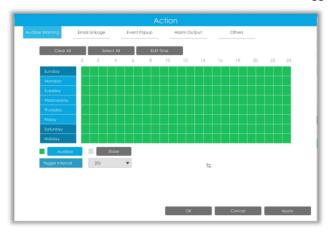


Audible Warning: NVR will trigger an audible beep when region entrance is detected.

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 Clear All to set or clear all time settings.
- 2 Click Ledit Time to edit record effective time manually.

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

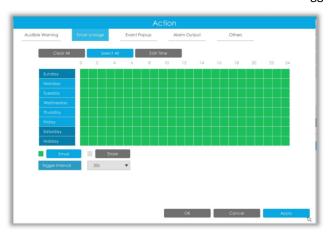


Email Linkage: NVR will send an email to the address you set before.

The user can set effective schedule as following two ways:

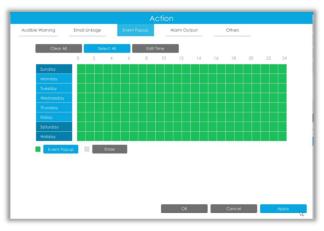
- ① Select the operation type, Email and Erase. Then drag a square on the time table for time setting, it will be more convenient by clicking or clear all time settings.
- 2 Click to edit effective time manually.

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



Event Popup: Trigger alarm screen popup to full screen when alarm is triggered.

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.



Alarm Output: Trigger alarm output when alarm is triggered.



Others: Trigger other channels record when alarm is triggered.



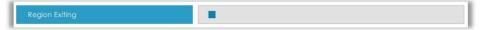
Region Exiting

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.



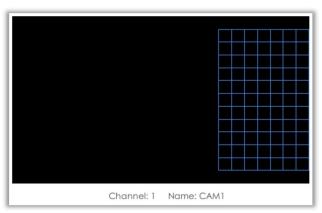


Step 1. Select channel and enable Region Exiting.



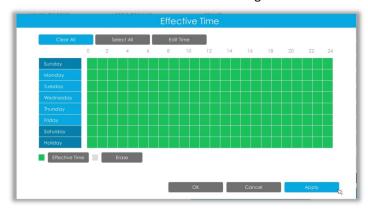
Step 2. Set exit detection region.

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 and Clear All.



Step 3. Set Effective Time of region exiting by clicking

NVR receives the alarm when effective time has been set. It will be more convenient by clicking or Clear All to set or clear all time settings.



Step 4. Set Action for region exiting alarm by clicking

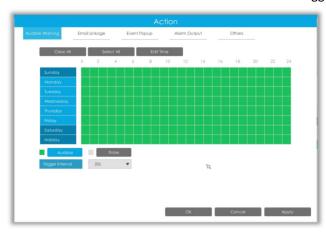


Audible Warning: NVR will trigger an audible beep when region exiting is detected.

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 Clear All to set or clear all time settings.
- 2 Click Ledit Time to edit record effective time manually.

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

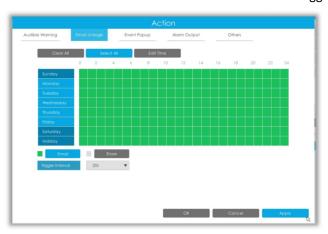


Email Linkage: NVR will send an email to the address you set before.

The user can set effective schedule as following two ways:

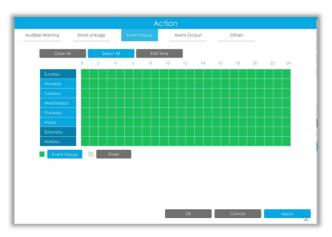
- ① Select the operation type, Email and Erase. Then drag a square on the time table for time setting, it will be more convenient by clicking Select All or Clear All to set or clear all time settings.
- 2 Click Edit Time to edit effective time manually.

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



Event Popup: Trigger alarm screen popup to full screen when alarm is triggered.

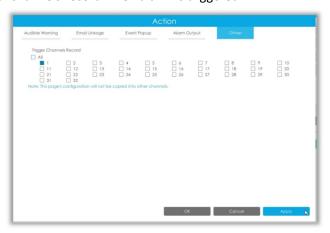
You can set display duration time of all triggered channel in 'Settings'->'General'->'Event Popup Duration Time'. Then triggered channel will be shown one by one as duration time.



Alarm Output: Trigger alarm output when alarm is triggered.



Others: Trigger other channels record when alarm is triggered.

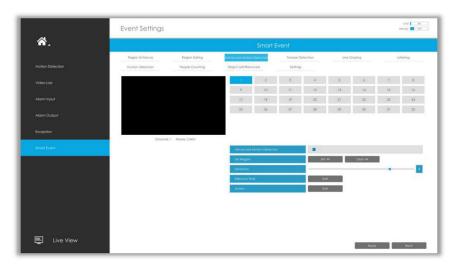


Advanced Motion Detection

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.

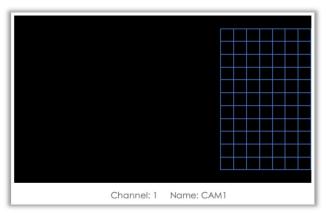
Step 1. Select channel and enable Advanced Motion Detection.





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 and Clear All.



Step 3. Set Sensitivity.

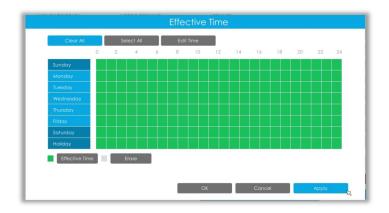
The sensitivity can be configured to detect various movement according to different requirements. When the level of sensitivity is low, slight movement won't trigger the alarm.



Step 4. Set Effective Time of advance motion detection by clicking

NVR receives the alarm when effective time has been set. It will be more convenient by clicking or Clear All to set or clear all time settings.





Step 5. Set Action for advanced motion detection alarm by clicking

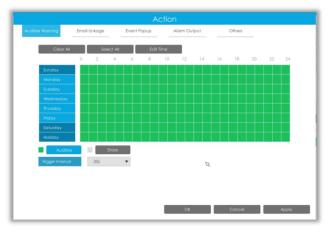
Audible Warning: NVR will trigger an audible beep when advanced motion is detected.

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 Clear All to set or clear all time settings.

2) Click Line to edit record effective time manually.

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



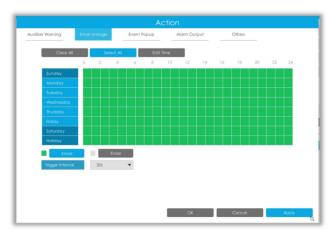
Email Linkage: NVR will send an email to the address you set before.

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 Clear All to set or clear all time settings.

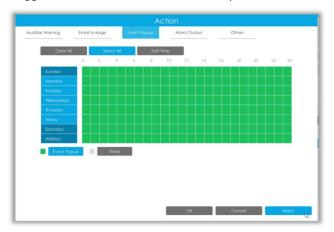
2 Click Local to edit effective time manually.

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



Event Popup: Trigger alarm screen popup to full screen when alarm is triggered.

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.



Alarm Output: Trigger alarm output when alarm is triggered.



Others: Trigger other channels record when alarm is triggered.

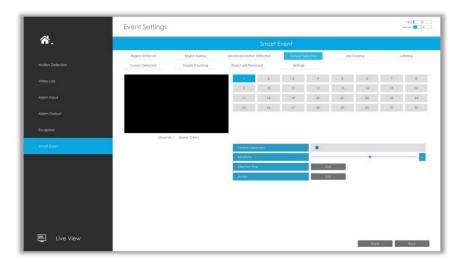




Tamper Detection

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.

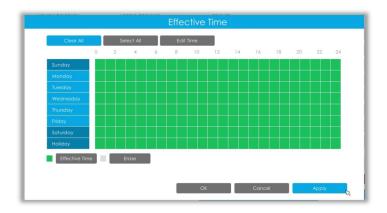
The sensitivity can be configured to detect various movement according to different requirements. When the level of sensitivity is low, slight movement won't trigger the alarm.



Step 3. Set Effective Time of tamper detection by clicking

NVR receives the alarm when effective time has been set. It will be more convenient by clicking or Clear All to set or clear all time settings.





Step 4. Set Action for tamper detection alarm by clicking

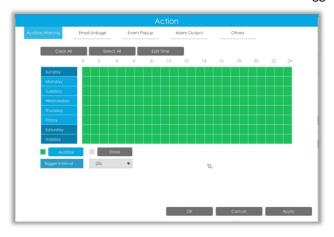
Audible Warning: NVR will trigger an audible beep when tamper is detected.

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 Line to edit record effective time manually.

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



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

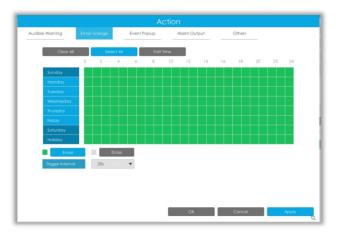
The user can set effective schedule as following two ways:

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 Clear All to set or clear all time settings.

2 Click Local to edit effective time manually.

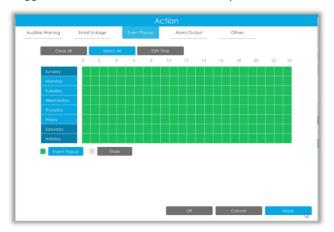
Trigger Interval: The effective interval between two actions when event triggered.





Event Popup: Trigger alarm screen popup to full screen when alarm is triggered.

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.



Alarm Output: Trigger alarm output when alarm is triggered.



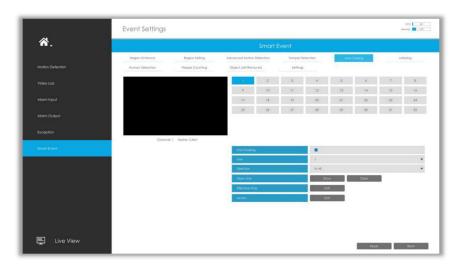
Others: Trigger other channels record when alarm is triggered.





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 enable Line Crossing.



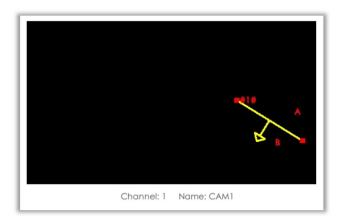
Step 2. Choose detection line number and define its direction.

It allows to set up to four lines at a time. There are three direction modes to choose for triggering alarm. " $A \rightarrow B$ " means when there is any object crossing the line from the "A" side to the "B" side, the alarm will be triggered. " $B \rightarrow A$ " vice versa. " $A \leftrightarrow B$ " means that the alarm will be triggered when objects cross line from either side.



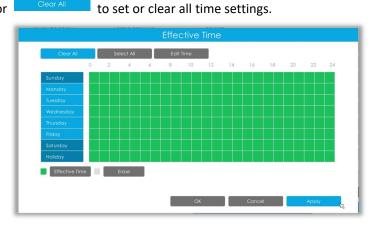
Step 3. Draw detection lines.





Step 4. 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 Clear All to set or clear all time settings.



Step 5. Set Action for line crossing alarm by clicking

Audible Warning: NVR will trigger an audible beep when line crossing is detected.

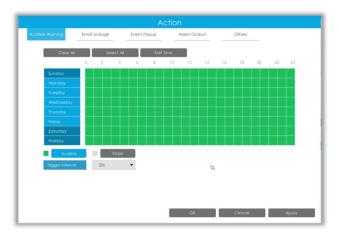
The user can set effective schedule as following two ways:

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.

Trigger 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 time settings.

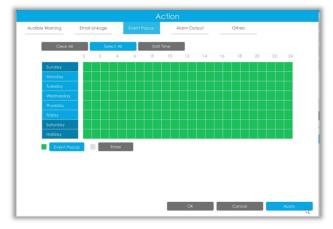
2 Click Edit Time to edit effective time manually.

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



Event Popup: Trigger alarm screen popup to full screen when alarm is triggered.

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.



Alarm Output: Trigger alarm output when alarm is triggered.

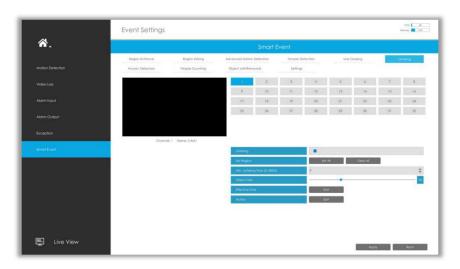


Others: Trigger other channels record when alarm is triggered.



Loitering

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



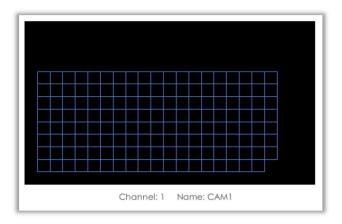
Step 1. Select channel and enable Loitering.





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.



Step 3. Set Min. Loitering Time and Object Size.

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



Step 4. 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 Clear All to set or clear all time settings.



Step 5. Set Action for loitering alarm by clicking

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

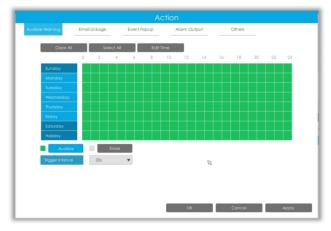
The user can set effective schedule as following two ways:

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 Clear All to set or clear all time settings.

2 Click to edit record effective time manually.



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

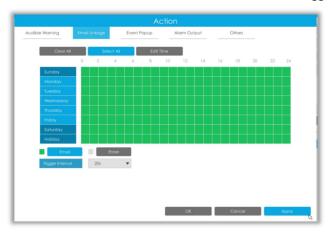


Email Linkage: NVR will send an email to the address you set before.

The user can set effective schedule as following two ways:

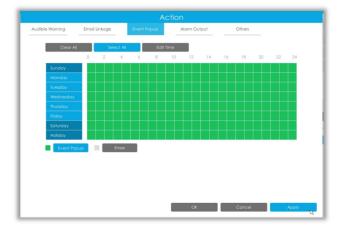
- ① Select the operation type, Email and Erase. Then drag a square on the time table for time setting, it will be more convenient by clicking or Clear All to set or clear all time settings.
- 2 Click Edit Time to edit effective time manually.

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



Event Popup: Trigger alarm screen popup to full screen when alarm is triggered.

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.





Alarm Output: Trigger alarm output when alarm is triggered.



Others: Trigger other channels record when alarm is triggered.

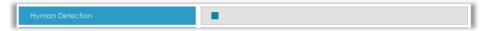


Human Detection

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



Step 1. Select channel and enable Human Detection.

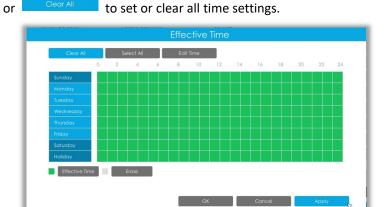


Step 2. Enable Show Tracks or not.



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



Step 4. Set Action for human detection alarm by clicking

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

The user can set effective schedule as following two ways:

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 Time to edit record effective time manually.

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



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

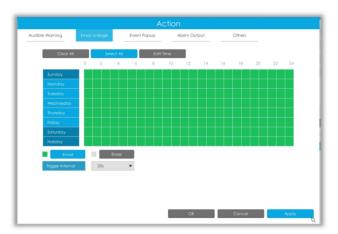
The user can set effective schedule as following two ways:

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 color to edit effective time manually.

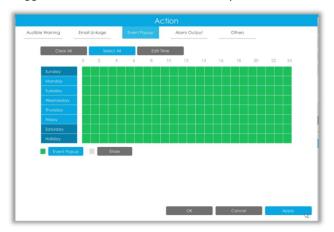
Trigger Interval: The effective interval between two actions when event triggered.





Event Popup: Trigger alarm screen popup to full screen when alarm is triggered.

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.



Alarm Output: Trigger alarm output when alarm is triggered.



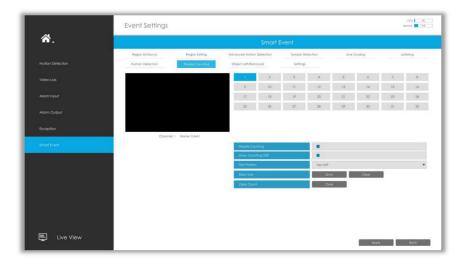
Others: Trigger other channels record when alarm is triggered.



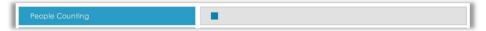


People Counting

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



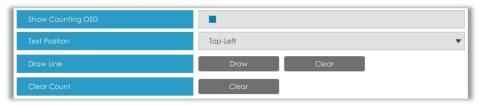
Step 1. Select channel and enable People Counting.



Step 2. Set counting OSD.

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

Besides, you can clear count by clicking

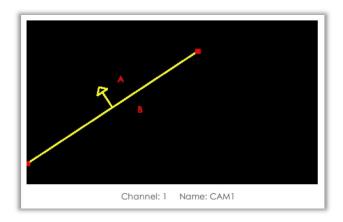


Note:

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

Step 3. Draw detection line.





Object Left/Removed(Optional)

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:

- 1. Object Left/Removed is optional, if you need this function, please contact Milesight sales first.
- 2. You need to upgrade the NVR to V7x.9.0.4-r2 or above to support this function.

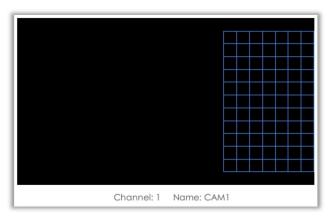
Step 1. Select channel and enable Object Left or Object Removed(Or you can enable both features at the same time).



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 Clear All.





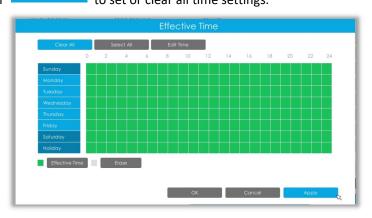
Step 3. Set Min. Time.

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 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 Clear All to set or clear all time settings.



Step 5. Set Action for object left/removed alarm by clicking

Audible Warning: NVR will trigger an audible beep when object left/removed is detected.

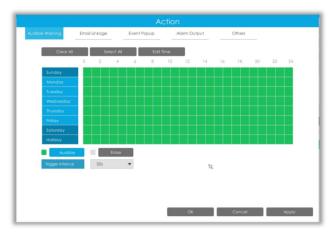
The user can set effective schedule as following two ways:

③ 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.

4) Click time to edit record effective time manually.

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





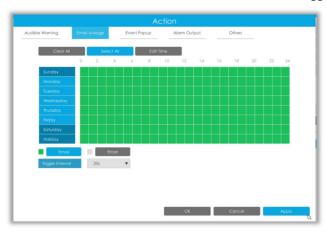
Email Linkage: NVR will send an email to the address you set before.

The user can set effective schedule as following two ways:

3 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 time settings.

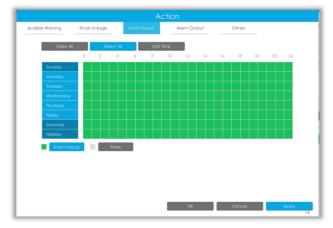
4 Click Edit Time to edit effective time manually.

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



Event Popup: Trigger alarm screen popup to full screen when alarm is triggered.

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.



Alarm Output: Trigger alarm output when alarm is triggered.





Others: Trigger other channels record when alarm is triggered.

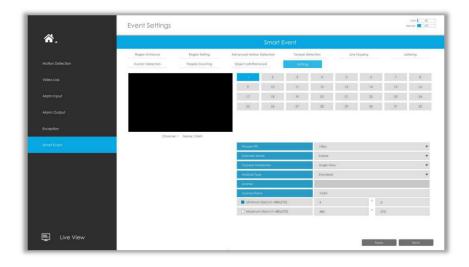


Settings

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

Draw Min. is to set the whether an object is big enough to trigger other settings. The frame you draw on the screen means that only if the object size is bigger than the frame, the settings for other VCA functions will take effect.

Draw Max. means 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.





Parameters	Descriptions	
Process FPS	Five different periods are available(5, 10, 15, 20, 25, fps) for process fps	
Scenario Mode	Select Indoor or Outdoor mode to meet your needs	
Camera Installation	Select camera installation view, including Angle View, Horizontal View and Overhead View	
Analysis Type	Select Standard or Advanced analysis type	
License	Generated by camera's information	
License Status	Show present license status, including Valid, Invalid, Expired, Unactivated	

3.8 Settings

3.8.1 General

It is for setting up the general parameters of NVR, including Device Name, Device ID, HDMI Resolution, Language, System time, etc.

Event Popup Duration Time: The display duration time for Motion Detection popup screen.

Boot Wizard: Enable it to pop up boot wizard after rebooting.

Local 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.





3.8.2 Network

3.8.2.1 Basic

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. The valid range of MTU is 500~9676.
- 3. Do not input an IP address conflicting with another device.
- 4. Working mode option is only for NVR 7000/8000 Series. Internal NIC IPv4 Address is only for PoE NVR Series.

3.8.2.2 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**.





3.8.2.3 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.



3.8.2.4 Email

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



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 Test to check if the Mail function is workable.





Note:

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

3.8.2.5 P2P

You can watch remote NVR live view in WAN by P2P on M-Sight Pro without doing port forwarding on router.

Click "Enable" and "Save" to enable P2P.

P2P is enabled successfully when P2P Status shows "Activated".

After enabling, you can add the NVR on the APP M-Sight Pro for live view via scanning the QR code on the "P2P" page directly, or inputting the MAC address manually.



There are several status shows on P2P Status after clicking Saving, please check corresponded possibilities below:

P2P Status	Description
Network unavailable	Failed to connect with internet
Authentication request failed	Failed to authenticate P2P encryption
No idle UUID	Please contact Milesight if this status shows up
Activated	P2P is available
Login failed	Failed to login P2P server
Initialization failed	Failed to initialize P2P
Unactivated	P2P is disabled
Unknown error	Other error

Note:

- 1. Please make sure that NVR is available for internet before enabling.
- 2. If your NVR firmware version is not 7x.7.0.9-r2 or above, please contact Milesight to registered P2P first.



3.8.2.6 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.

3.8.2.7 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.

Push Message

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 this option.

Push Event Type

Select which alarm type will be pushed to APP M-sight Pro. It includes Motion Detection, Video Loss, Region Entrance, Region Exiting, Advanced Motion Detection, Tamper Detection, Line Crossing, Loitering and Human Detection.

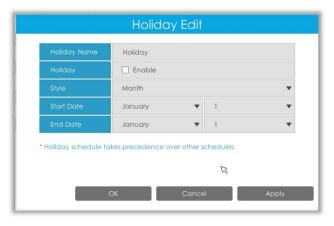
3.8.3 Holiday

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.



3.8.4 User



Note:

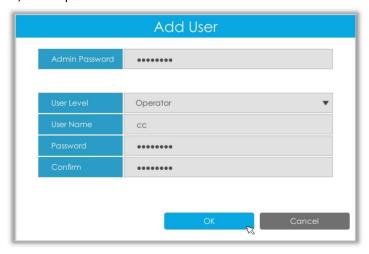




- 1. If the NVR firmware version is below xx.7.0.6, the default user name is "admin" and the default password is "123456".
- 2. If the NVR firmware version is between xx.7.0.6 and xx.9.0.3, the default user name is "admin" and the default password is "ms1234".
- 3. If the NVR firmware version is xx.9.0.3 or above, please set the password before login.

Add a new user

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



Note:

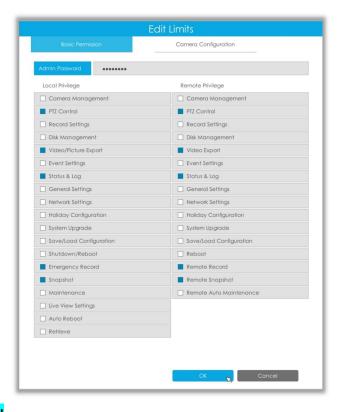
The user name can only contain letters and number. There are two user levels with different authority: Operator and Viewer.

Edit user limits

Select a user, when the background color changes into dark gray, click $^{\square}$ 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 \Box to modify password. 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.

104





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.

3.8.5 Maintenance

Upgrade

- **Step1.** Search for USB device, and select the corresponding firmware.
- **Step2.** Check if you need to reset settings to factory default (except IP Address and User Information) after upgrade.
- **Step3.** Click Upgrade confirm the upgrade.



Note:

The system will auto reboot after confirming upgrade.

Save/Load Configuration

Save Configuration: Select a folder and then click to export configuration to USB

device.

Load Configuration: Select a .cfg file and then click Restore to import configuration to

your NVR.

105





Reset

All parameters can be reset to default settings by clicking



3.8.6 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: 00:00, 01:00, 02.00 22:00, 23:00.

3.8.7 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.







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.

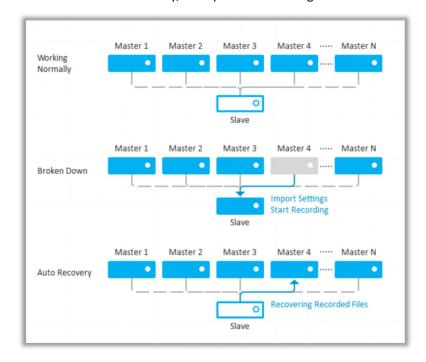


For example, there are three NVRs in LAN, 192.168.5.200, 192.168.5.201 and 192.168.5.202.

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.

3.9 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 parts accordingly.

3.9.1 Device Information

Device Information include Model, MAC Address, Hardware Version, Software Version, and Uptime.



3.9.2 Network Status

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

Network Status



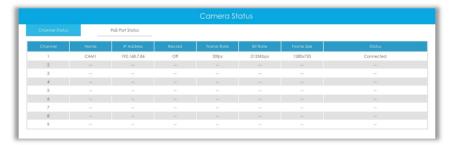
Bandwidth Status

108



3.9.3 Camera Status

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



The PoE Port Status is only for PoE NVR, it will show you the current power and connection status of PoE ports.



3.9.4 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.

109





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.



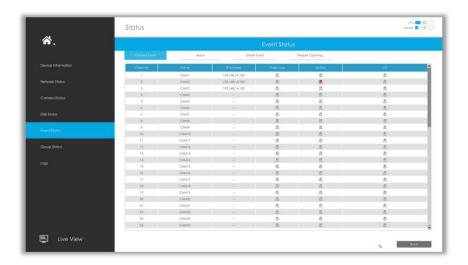
3.9.5 Event Status

Camera Event

The user can check Camera Event here, including Video Loss, Motion and I/O. — will turn into

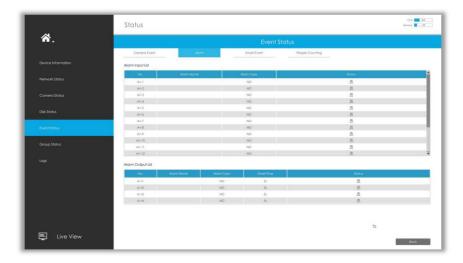
when the corresponding alarm is triggered.





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.



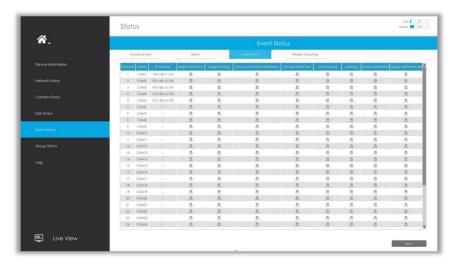
Smart Event

It shows the Smart Event status.

turns into

when alarm is triggered.





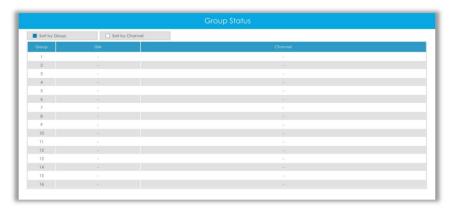
People Counting

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



3.9.6 Group Status

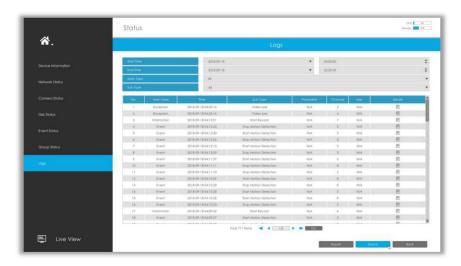
Check Group Status. The status of the all created Groups can be sorted by Group or Channel.



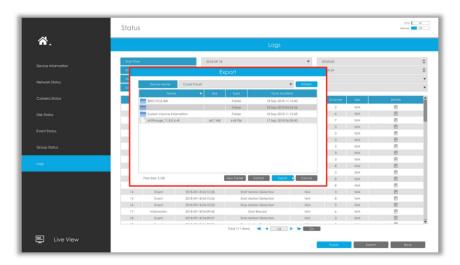


3.9.7 Logs

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

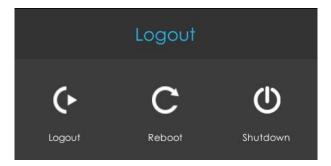


Click to export searched logs to media device.





3.10 Logout



Logout: Exit the current login account.

Reboot: Restart the NVR. **Shutdown:** Close the NVR.



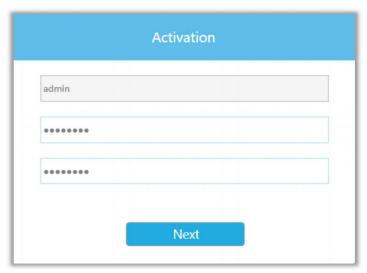
4.WEB Settings

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.



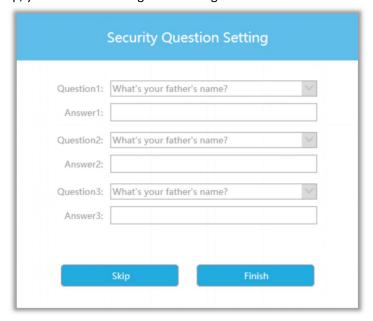
Note:

- 1. Password must be 8 to 32 characters long.
- 2. Password must contain at least one number and one letter.

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.





4.2 Login

Select Language on the top-right of interface.

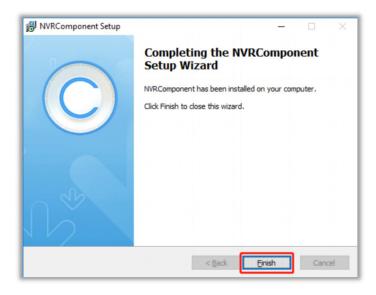
Input the user name, password and click Login to login NVR web page.



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:

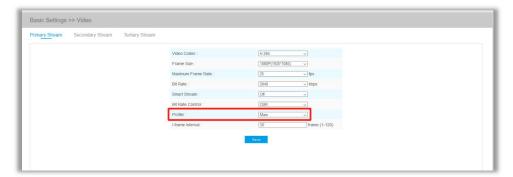
During installing the plugin, please keep the browsers close.

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.

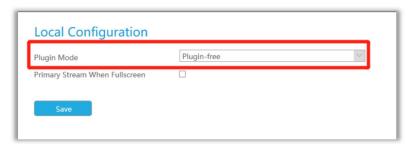


Only H.264 video codec are supported on Plugin-Free Mode for NVR. For better user experience, we recommend that you set the "profile" option to "main" on camera as shown below.

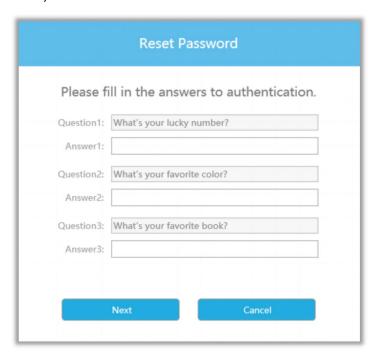


Note:

- 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.).

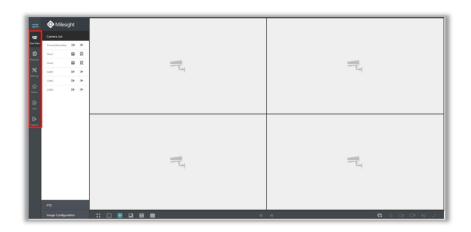


Note:



- 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".
- 3. 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	Live view
Playback	Play back the video
Settings	Make settings for Camera, Record, Event and System
Status	Check Device Information, Network Status, Camera Status, Disk Status and Event Status
Logs	Check all operation logs
Logout	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
22	Full screen		1 screen mode
Ħ	4 screens mode		8 screens mode
=	9 screens mode		16 screens mode
(40)	Previous page	•	Next page
Ci	Stop all live view		Start all live view
Q	Digital zoom		Snapshot
	Record	√ ô	Audio on
◄ 3)	Audio off	K X	Original Image



n ^k	Resize Image		
----------------	--------------	--	--

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

Icons	Descriptions		
3).	It indicates video loss		
= ₹	It indicates motion detection alarm		
•	It indicates smart event alarm		

4.4.2 PTZ

For PTZ cameras, you can operate PTZ, Preset, Patrol and Pattern on PTZ page directly.



For the Fisheye camera, select a Fisheye channel, and you can operate PTZ, Preset and Patrol of this channel separately.

Note:

Only for Milesight Fisheye Camera with Bundle-Stream Mode.





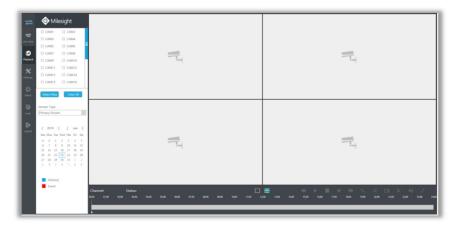
4.4.3 Image Configuration

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

Step1. Select channel you want to do playback.

Step2. Select Stream Type, including Primary Stream and Secondary Stream.

Step3. Select Date.

Step4. Click to play.

Note:

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



Video Playback Tool Bar Description



The tool bar can display multi-event record. 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 above as an example, it means in this recording period, timing have been triggered.

Icons	Descriptions	Icons	Descriptions
	1 screen mode	\blacksquare	4 screens mode
≪	Speed Down	>	Play
11	Pause		Stop
M	Forward Step	>>	Speed Up

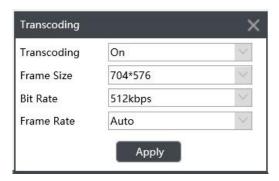


√ F	Transcoding	Q	Digital Zoom
Œ	Snapshot	*	Backup
√ ∂	Audio On	4)	Audio Off
××	Original Image	x	Resize Image

4.5.2 Transcoding

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

Step1. After successfully search out or play video, select the channel you want to transcoding and click to expand trancoding panel.



Step2. Set Transcoding parameters.

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

Step3. Click Apply to make transcoding take effect.

4.5.3 Video Files Backup

Recorded files can be cut and backed up from WEB.

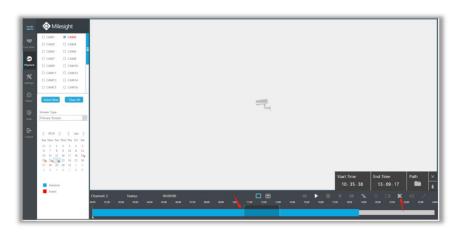
Step1. In playback interface, select camera, stream type, the date and time to search record video.





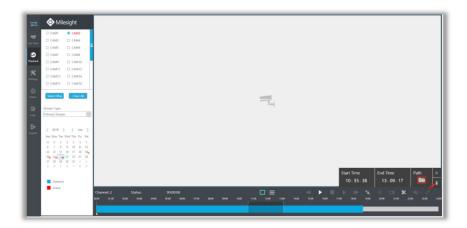
Step2. Select Recorded files for Backup.

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



Step3. Backup the recorded files.

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



4.5.4 Picture Files Backup

Step1. Browse a playback picture path in Local Configuration interface.



Record File Path	C:\Users\CC\WebView\RecordFile		Browse
Preview Picture Path	C:\Users\CC\WebView\LiveCaptureFile		Browse
Playback Picture Path	C:\Users\CC\WebView\PBCaptureFile		Browse
Connection Type	UDP	~	
Play Mode	Least Delay	~	
Primary Stream When Fullscreen			

Step2. 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 Settings

4.6.1 Local Configuration

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





4.6.2 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.

4.6.2.1 Camera Management



Step1. Add Camera.

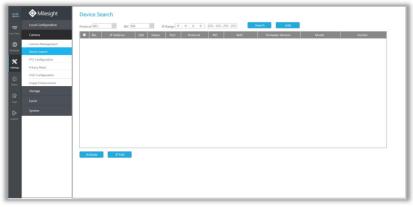
Method1. Add IP Channel in Device Search interface. 'Settings' → 'Camera' → 'Device Search'.

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.

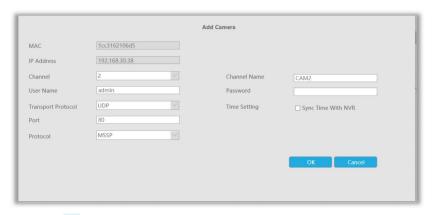


2. Click to search cameras at the same network segment with NVR.

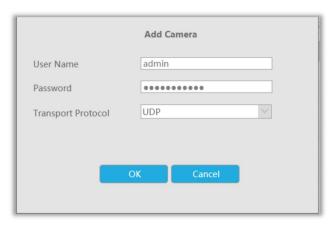


3. Select one channel, click button, input password and click tinish.





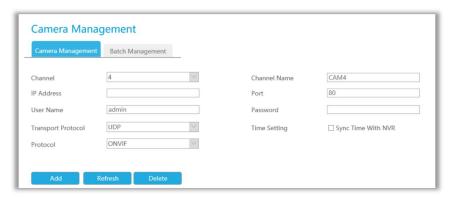
3. Or you can check to **batch adding** the network cameras if they are of the same password, and you can choose TCP or UDP transport protocol for it. Click to finish batch adding.



Note:

- 1. If camera status shows inactive, please click Activate to active it first.
- 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;
- Select PoE for NIC in Device Search interface, click search out cameras;
- 3 Select cameras and click to add them.

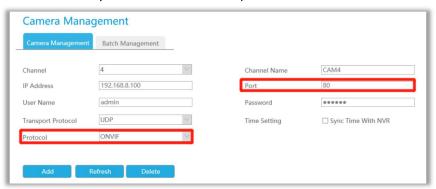
Method2. Add camera through camera management interface. 'Settings' → 'Camera' → 'Camera Management'.



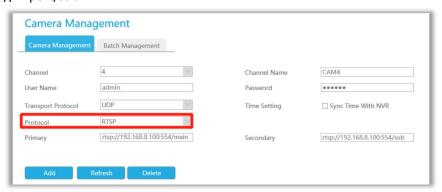
Select channel id, input complete information, then click button. There are three protocols available for camera connection:



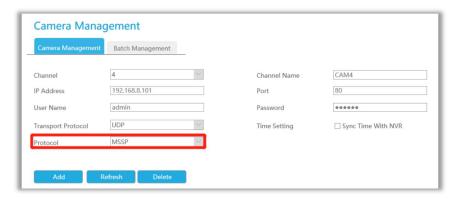
• ONVIF: You can add any IP cameras with ONVIF protocols.



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".

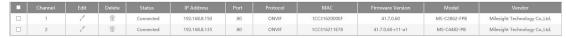


• MSSP: You can add Milesight cameras which are in the same LAN with this protocol.



Step2. Check the connection status.

After adding the IP channels, click on Camera Management interface, then appears under Status. If it doesn't appear, you need to check if the network is connected or whether the user name, password is correct or not.



Step3. Configure IP Channel.

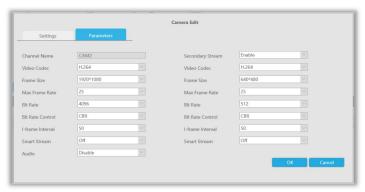
Configure one camera

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



	_		Camera Edit	
Settings	Parameters	_		
Channel IP Address	1 192.168.8.150		Channel Name Port	CAM1 80
User Name	UDP		Password	00000
Transport Protocol Protocol	ONVIF		Time Setting	Sync Time With NVR
				OK Cancel

Select [Parameters] page to re-edit this channel parameters. Click to save the configuration.



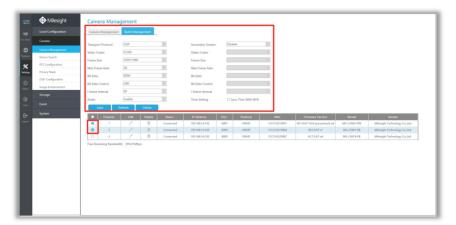
You can delete this channel by clicking $\overline{\mathbb{Q}}$, or you can select multiple devices and then click

Delete to delete.



Batch configuring camera

Click Batch Management, select multiple channels and set cameras parameters.



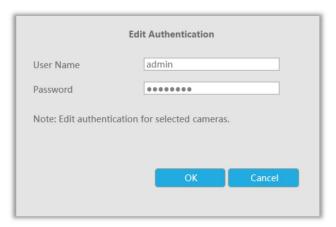
Note:

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



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

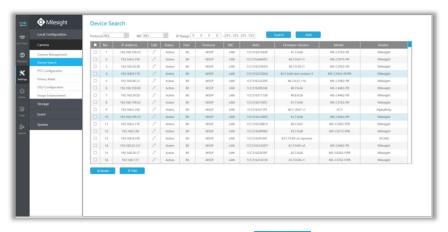


Note:

- 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.



4.6.2.2 Device Search

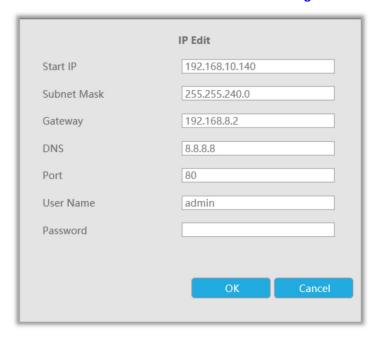


Select Protocol and NIC, set the IP range, then click to quickly search the IP devices that support selected protocol at the same LAN with NVR.



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.



4.6.2.3 PTZ Configuration

Select a channel and set the PTZ parameters. You can select [Copy to Camera] to copy the same configuration to other channels.



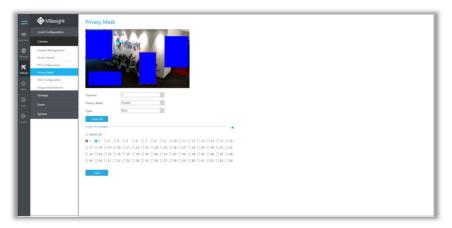
PTZ Configura	ition
Channel	1
Connection Type	ONVIF
Baud Rate	9600
Data Bit	8
Stop Bit	1 ~
Checksum Bit	None
PTZ Protocol	PELCO_D V
PTZ Address	1
Copy to Camera	
Save	

Note:

- 1. The PTZ protocol and address of IP channel must be consistent with those of the PTZ decoder.
- 2. 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.

4.6.2.4 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:

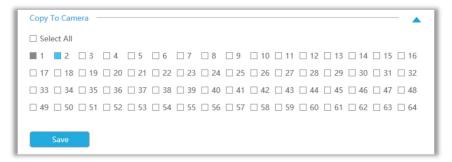
Step1. Select channel and enable privacy mask.

Step2. Set the privacy mask type and drag the mouse to select the area which is privacy on the live window. You can add 4 areas at most.





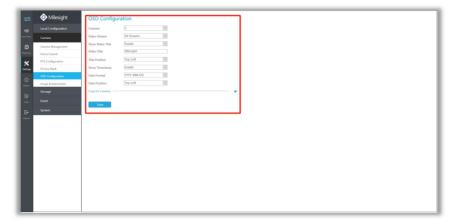
Step3. You can click [Copy to Camera] to copy the same configuration to other channels.



Step4. Select "Save" to save the settings.

4.6.2.5 OSD Configuration

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.

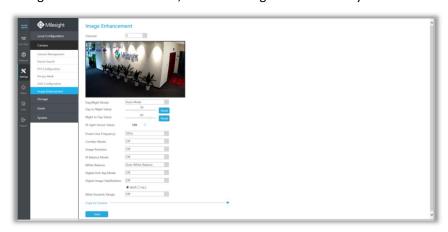
[Date Position]: Set the position for the date: Top-Left, Top-Right, Bottom-Left or Bottom-Right.

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



4.6.2.6 Image Enhancement

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



Step1. Select channel.

Step2. Set the configuration.

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

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.

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

Corridor Mode: Set corridor mode. **Image Rotation:** Set image rotation.

IR Balance Mode: Turn on to avoid IR overexposure.

White Balance: Choose a white balance mode for the channel. Digital Anti-fog Mode: Set the Anti-fog function on and off.

WDR/HLC: Click to configure Wide Dynamic Range or High Light Control.

Step4. You can click [Copy to Camera] to copy the same configuration to other channels.



4.6.3 Storage

Preparation for Configuration

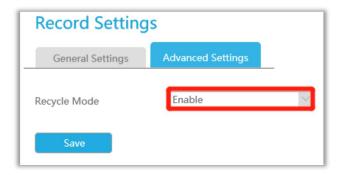
Step1. Ensure that your NVR has installed and initialized the HDD or Network Disk.



Step2. Ensure that Storage device has sufficient storage space.

Enable [Recycle Mode] in the case of insufficient capacity of storage device on Storage -> Disk Management -> Advanced Settings interface .



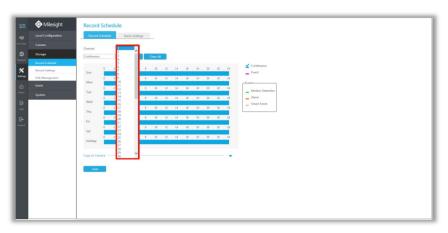


4.6.3.1 Record Schedule

Record Schedule

Step1. Select Record Schedule.

Step2. Select the desired channel.



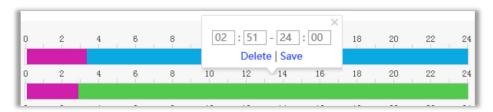
Step3. Set record schedule.

Select record type including Continuous, Event, Motion Detection and Alarm, then set the time you want to record. It is convenient for you to set or clear all schedule by clicking or

Clear All



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

Record and Stop are available for user to set or clear always record schedule for selected channels.

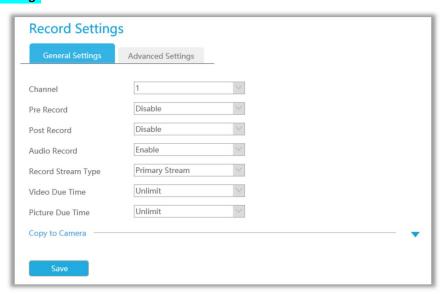




4.6.3.2 Record Settings

Make record settings for selected channels.

General Settings



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.

Due Time: Enable or unlimit the due time.

Expired Time: Set the due time of recording files.

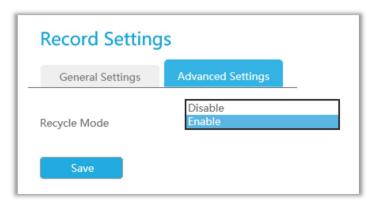
Click [Copy to Camera] and to copy the same configuration to other channels.





Advanced Settings

Enable or disable Recycle Mode for all storage device.



4.6.3.3 Disk Management

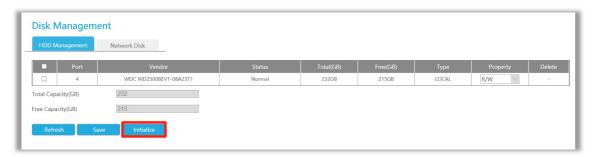
You can check Disk status and add Network Disk here.

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.

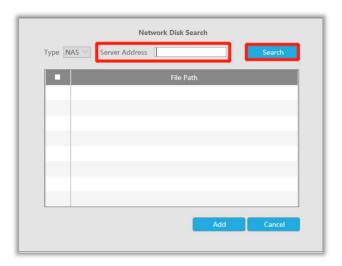
Note:

- NAS with NFS format is the only type for network disk adding.
- ② It's recommended to use Hard Disk rather than Network Disk.



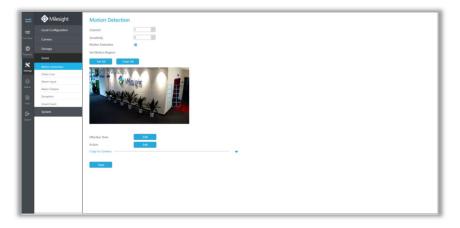


You can add it manually or search local NAS by clicking Batch Add



4.6.4 **Event**

4.6.4.1 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 and Clear All.



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 or Clear All 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

Select

or to set or clear all time settings.

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

Trigger 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 to set or clear all time settings.

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



Alarm Output: Trigger alarm output when alarm is triggered.



Others: Trigger other channels record when alarm is triggered.

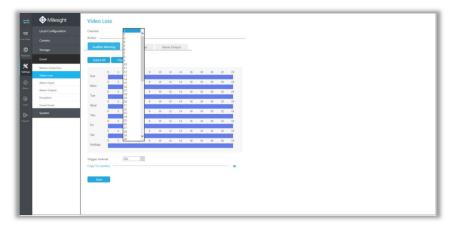


Step 5. Click [Copy to Camera] and to copy the same configuration to other channels.



4.6.4.2 Video Loss

Step1. Select a channel





Step2. Set Action for video loss.

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

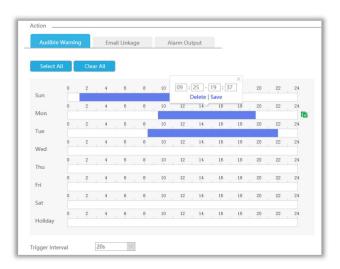
Drag a line on the time table for time setting, it will be more convenient by clicking or Clear All to set or clear all time settings.

Select All

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

Trigger 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

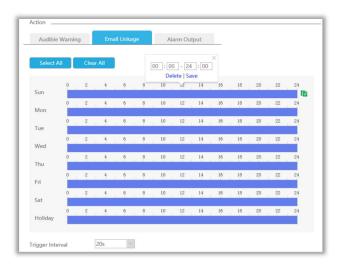
Select All

or Clear All to set or clear all time settings.

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



Alarm Output: Trigger alarm output when alarm is triggered.



Action			
Audible Warning	Email Linkage	Alarm Output	
Trigger Alarm Output	1 2	□ 3 □ 4	

Step 3. Click [Copy to Camera] and to copy the same configuration to other channels.



4.6.4.3 Alarm Input

Alarm Input function is supported by MS-N5008-UT, MS-N5016-UT, MS-N7016-UH, MS-N7032-UH, MS-N8032-UH, MS-N8064-UH, 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 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.

Channel Record: Start recording when alarm is triggered.



Trigger Channels Record: Trigger selected to record when alarm is triggered. Don't forget to set record schedule in Storate -> Record Schedule interface.

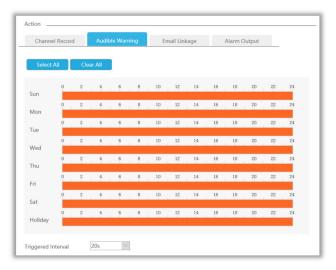
Copy to Alarm: Copy alarm settings to other channels which has alarm input.





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

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



Click [Copy to Alarm] and __ to copy the same configuration to other channels.



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

Trigger 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.



Click [Copy to Alarm] and to copy the same configuration to other channels.



	Copy to A	larm —								
	☐ Select	All								
	■ A<-1	■ A<-2	□ A<-3	□ A<-4	☐ A<-5	☐ A<-6	□ A<-7	□ A<-8	□ A<-9	☐ A<-10
	☐ A<-11	☐ A<-12	☐ A<-13	☐ A<-14	☐ A<-15	☐ A<-16				
Д										

Alarm Output: Trigger alarm output when alarm is triggered.



4.6.4.4 Alarm Output

Alarm Output function is supported by MS-N5008-UT, MS-N5016-UT, MS-N7016-UH, MS-N7032-UH, MS-N8032-UH, MS-N8064-UH, 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: The channel which will output the alarm signal.

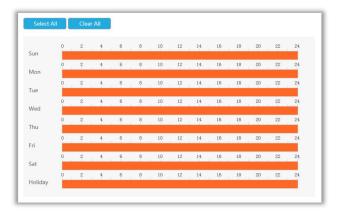
Alarm Type: Select alarm type: NO or NC.

Delay: Set the output time for alarm. If the output alarm lasts too long, you can select the

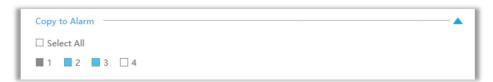
Manually Clear to stop it.

Alarm Name: Set a name for the alarm.

Step 2: Set effective time.



Step3. Click [Copy to Alarm] and _ to copy the same configuration to other alarm channels.



4.6.4.5 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 Uninitilized:** HDD is uninitialized.

No Disk: There is no Disk.

Step 2. Select normal linkage includes Pop up Alarm, Audible Warning and Email Linkage.

Audible Warning: NVR will trigger an audible beep.

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

4.6.4.6 Smart Event

Smart Event 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.

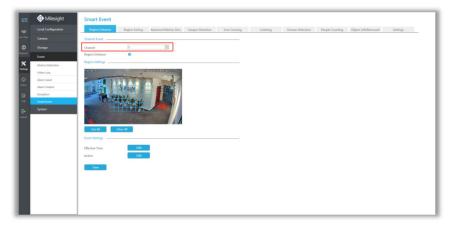
Note:

Please input license of selected channel in Settings page to activate Smart Event first.

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.



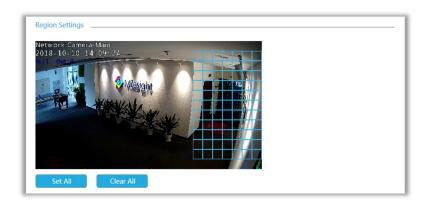
Step 2. Enable Region Entrance.

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 and Clear All.





Step 4. 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 Clear All to set or clear all time settings.



Step 5. Set Action for region entrance alarm by clicking ______.

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

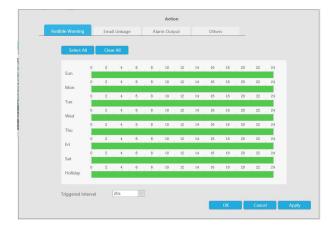
Drag a line on the time table for time setting, it will be more convenient by clicking or Clear All to set or clear all time settings.

Select All

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

Trigger 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 Clear All to set or clear all time settings.

Select All

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



Alarm Output: Trigger alarm output when alarm is triggered.



Others: Trigger other channels record when alarm is triggered.

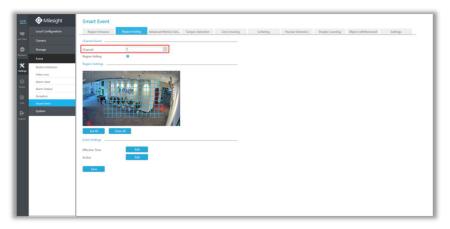




Region Exiting

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.



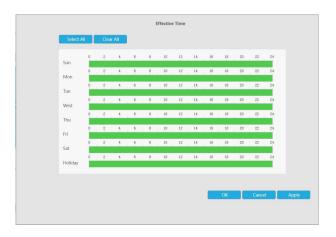
Step 3. Set exit detection region.

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 and clear All.



Step 4. Set Effective Time of region exiting by clicking

NVR receives the alarm when effective time has been set. It will be more convenient by clicking or Clear All to set or clear all time settings.



Step 5. Set Action for region exiting alarm by clicking

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

Drag a line on the time table for time setting, it will be more convenient by clicking or Georal to set or clear all time settings.

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

Trigger 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.

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



Alarm Output: Trigger alarm output when alarm is triggered.



Others: Trigger other channels record when alarm is triggered.



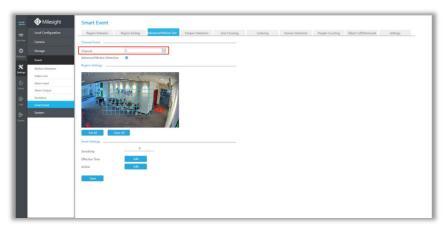
Advanced Motion Detection

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.

154



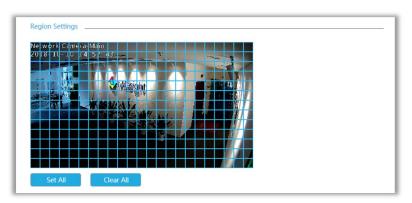


Step 2. Enable Advanced Motion Detection.



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 Clear All



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. Set Effective Time of advance motion detection by clicking

NVR receives the alarm when effective time has been set. It will be more convenient by clicking or Clear All to set or clear all time settings.



Step 6. Set Action for advanced motion detection alarm by clicking

Edit

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

Drag a line on the time table for time setting, it will be more convenient by clicking or Clear All to set or clear all time settings.



What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

Trigger 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 Clear All to set or clear all time settings.

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



Alarm Output: Trigger alarm output when alarm is triggered.



Others: Trigger other channels record when alarm is triggered.

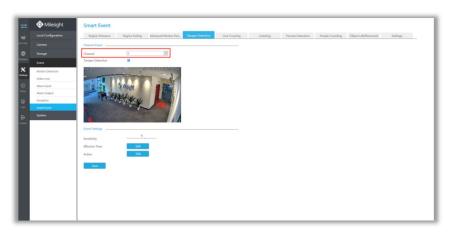


Tamper Detection

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.



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.



Step 4. Set Effective Time of tamper detection by clicking

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

Drag a line on the time table for time setting, it will be more convenient by clicking or Clear All to set or clear all time settings.

Select All

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

www.milesight.com

158



Trigger 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 Clear All to set or clear all time settings.

Select All

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



Alarm Output: Trigger alarm output when alarm is triggered.



Others: Trigger other channels record when alarm is triggered.

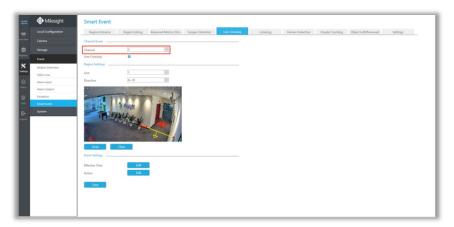




Line Crossing

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.



Step 2. Enable Line Crossing.



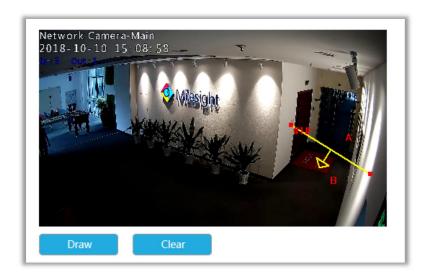
Step 3. Choose detection line number and define its direction.

It allows to set up to four lines at a time. There are three direction modes to choose for triggering alarm. " $A \rightarrow B$ " means when there is any object crossing the line from the "A" side to the "B" side, the alarm will be triggered. " $B \rightarrow A$ " vice versa. " $A \leftrightarrow B$ " means that the alarm will be triggered when objects cross line from either side.



Step 4. Draw detection lines.





Step 5. 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 Clear All to set or clear all time settings.



Step 6. Set Action for line crossing alarm by clicking

Audible Warning: NVR will trigger an audible beep when line crossing is detected.

Drag a line on the time table for time setting, it will be more convenient by clicking or Clear All to set or clear all time settings.

Select All

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

Trigger 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 Georal to set or clear all time settings.

Select All

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



Alarm Output: Trigger alarm output when alarm is triggered.



Others: Trigger other channels record when alarm is triggered.

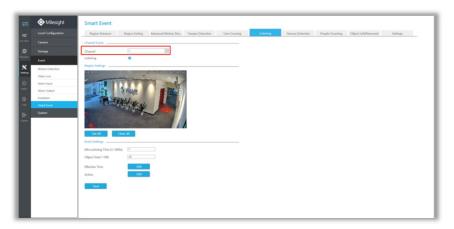




Loitering

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.



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 and Clear All.





Step 4. Set Min. Loitering Time and Object Size.

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



Step 5. 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 Clear All to set or clear all time settings.



Step 6. Set Action for loitering alarm by clicking

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

Drag a line on the time table for time setting, it will be more convenient by clicking or Clear All to set or clear all time settings.

Select All

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



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



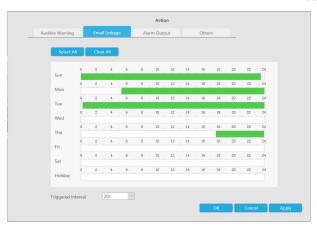
Drag a line on the time table for time setting, it will be more convenient by clicking or Clear All to set or clear all time settings.

Select A

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



Alarm Output: Trigger alarm output when alarm is triggered.



Others: Trigger other channels record when alarm is triggered.

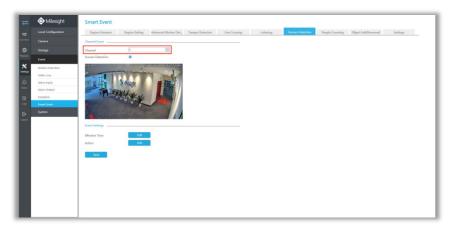


Human Detection

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



Step 1. Select channel.



Step 2. Enable Human Detection.

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 Clear All 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 human is detected.

Drag a line on the time table for time setting, it will be more convenient by clicking or Clear All to set or clear all time settings.

Select All

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

Trigger 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 Georal to set or clear all time settings.

Select All

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

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



Alarm Output: Trigger alarm output when alarm is triggered.



Others: Trigger other channels record when alarm is triggered.

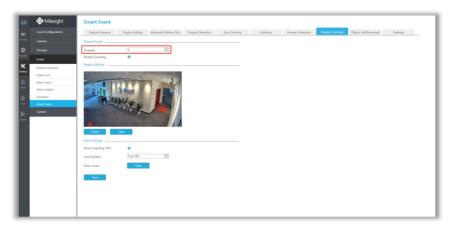




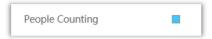
People Counting

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

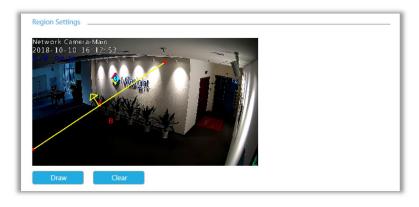
Step 1. Select channel.



Step 2. Enable People Counting.



Step 3. Draw detection line.



Step 4. 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:

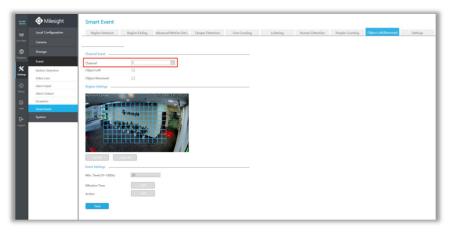
- ③ To enable people counting, human detection should be enabled first.
- ④ Crossing along the direction of the arrow will record as "In", opposite is "Out".

Object Left/Removed(Optional)

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.

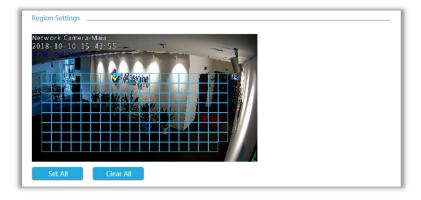
Note:

- 1.Object Left/Removed is optional, if you need this function, please contact Milesight sales first.
- 2. 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 clear All.



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 Effective Time of object left/removed by clicking

Edit

NVR receives the alarm when effective time has been set. It will be more convenient by clicking or Clear All to set or clear all time settings.



Step 5. Set Action for object left/removed alarm by clicking

Audible Warning: NVR will trigger an audible beep when object left/removed 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.

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.

Trigger 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.

What's more, you can click time bar to edit the time accurately.

Click to copy time setting to other day.



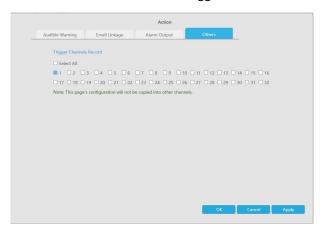
Trigger Interval: The effective interval between two actions when event triggered.



Alarm Output: Trigger alarm output when alarm is triggered.



Others: Trigger other channels record when alarm is triggered.



Settings

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

Draw Min. is to set the whether an object is big enough to trigger other settings. The frame you draw on the screen means that only if the object size is bigger than the frame, the settings for other VCA functions will take effect.

Draw Max. means 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.



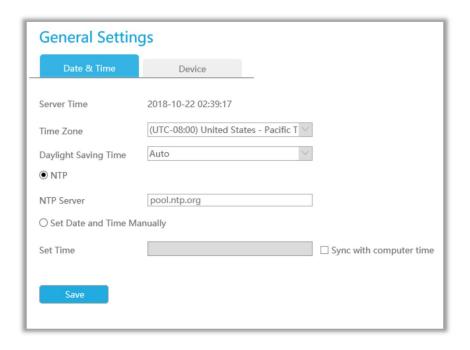


Parameters	Descriptions		
Process FPS	Five different periods are available(5, 10, 15, 20, 25, fps) for process fps		
Scenario Mode	Select Indoor or Outdoor mode to meet your needs		
Camera Installation	Select camera installation view, including Angle View, Horizontal View and Overhead View		
Analysis Type	Select Standard or Advanced analysis type		
License	Generated by camera's information		
License Status	Show present license status, including Valid, Invalid, Expired, Unactivated		

4.6.5 System

4.6.5.1 General Settings

To setup the general parameters of NVR, including modify the Device Name, Boot Wizard, set system time manually and auto logout, etc.



4.6.5.2 Network

4.6.5.2.1 Basic

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

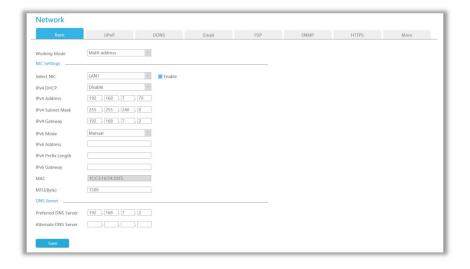
Manual/ Router Advertisement/ DHCPv6 are available.

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. The valid range of MTU is 500~9676.
- 3. Do not input an IP address conflicting with another device.

4.6.5.2.2 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**.



4.6.5.2.3 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.





4.6.5.2.4 Email

Email will send receivers a screenshot when the alarm is triggered.



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 Test to check if the Mail function is workable.

Note:

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

4.6.5.2.5 P2P

You can watch remote NVR live view in WAN by P2P on M-Sight Pro without doing port forwarding on router.

Click "Enable" and "Save" to enable P2P.

P2P is enabled successfully when P2P Status shows "Activated".

After enabling, you can add the NVR on the APP M-Sight Pro for live view via scanning the QR code on the "P2P" page directly, or inputting the MAC address manually.



There are several status shows on P2P Status after clicking Saving, please check corresponded possibilities below:

P2P Status	Description
Network unavailable	Failed to connect with internet.Please check again for the
	network settings, like Gateway or DNS, make sure the NVR is
	able to the Internet.
Authentication request failed	Failed to authenticate P2P encryption.Please contact with
	Milesight.
No idle UUID	Please contact Milesight if this status shows up
Activated	P2P is available
Login failed	Failed to login P2P server. Please contact with Milesight.
Initialization failed	Failed to initialize P2P. Please contact with Milesight.
Unactivated	P2P is disabled
Unknown error	Other error. Please contact with Milesight.

Note:

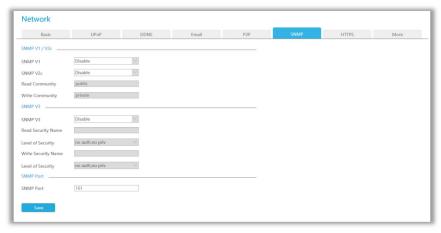
- 1. Please make sure that NVR is available for internet before enabling.
- 2. If your NVR firmware version is not 7x.7.0.9-r2 or above, please contact Milesight to registered P2P first.

4.6.5.2.6 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)

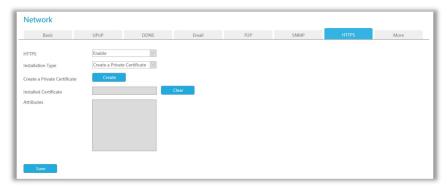
Write Security Name: Input the name of Write Security Community

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

4.6.5.2.7 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.

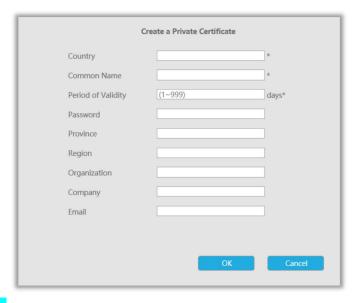


There are three certificate installation types:

Create a Private Certificate

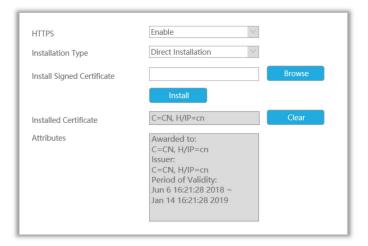
Click "Create" to create the following dialog box. And then enter Country, Common Name, Period of Validity and other information. And then click "OK" to generate a private certificate.





Direct Installation

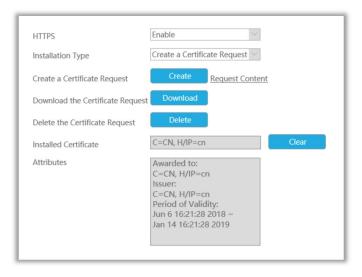
Click "Browse" to select a signed certificate locally and click "Install" to install it.



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.



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.



Note:

The default HTTPS port is 443, you can modify it on the "More" interface.

4.6.5.2.8 More



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:

- 3. The default HTTPS port for IE browser is 443.
- 4. 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.

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:

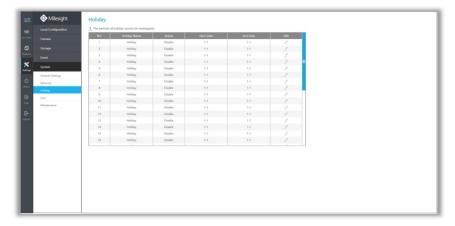
Only NVR model ends with letter T support.

Push Type

Select which alarm type will be pushed to APP M-sight Pro. It includes Motion Detection, Video Loss, Region Entrance, Region Exiting, Advanced Motion Detection, Tamper Detection, Line Crossing, Loitering and Human Detection.

4.6.5.3 Holiday

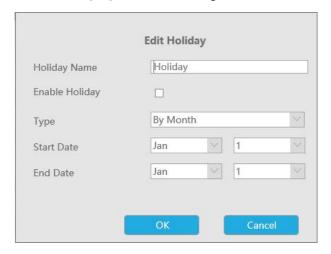
It can configure the record or image capture schedule for holidays of the current year.



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 ByO Month, By Week, and By Date in [Type] mode. Then click [OK] to save the configuration and return to holiday page.



4.6.5.4 User

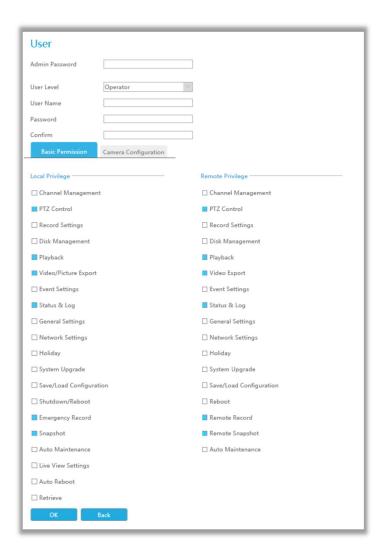


Note:

- 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 Add 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:

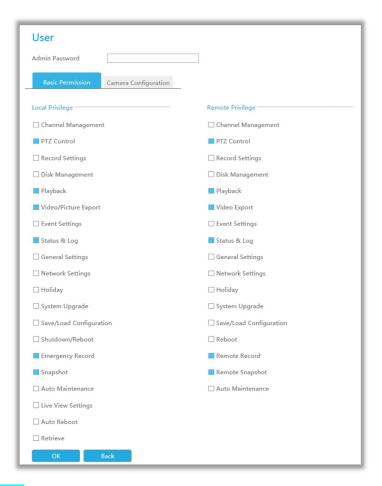
User name can only contain letters and number. There are two user levels with different authority: Operator and Viewer;

Edit user limits

Click a user, when the background color changes into blue, click Edit Limit 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.

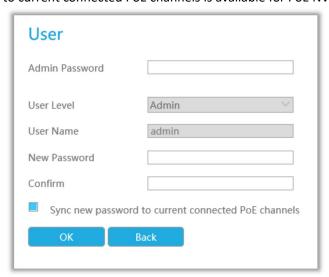




Edit user password

Click Edit Password to modify password.

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



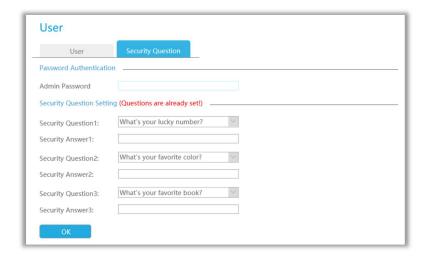
Delete user

Select a user and click to delete a user.



Modify Security Question

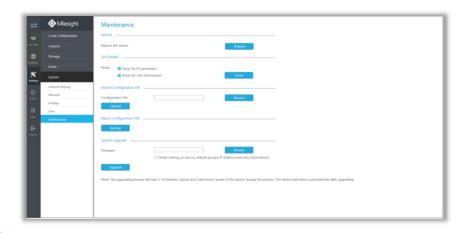
Input Admin Password, select security question and answer. Click to save.



Note:

- 1. This option is available for the NVR firmware version xx.9.0.3 or above only.
- 2. Security question is used for resetting admin password if you forget current one.

4.6.5.5 Maintenance



Reboot

Click Reboot to reboot the NVR.



Set Default

Click Reset to reset the NVR to factory defaults.

Keeping the IP parameters and keeping the User information are available.



	Set Defau	lt
	Reset:	■ Keep the IP parameters
		■ Keep the User Information Reset
Import	Configura	<mark>tion File</mark>
Click	Browse	to select one file and click Upload to import the NVR configuration.
	Import Cor	nfiguration File
	Configurati	
Export (Configura	
Click	Backup	to backup current NVR settings.
	Export Cor	nfiguration File
	Back	up
System	Upgrade	
Click	Browse	to select the firmware file, and you can check to reset configuration to
factory	defaults.	
Click	Upgrade	to upgrade.
	System Upgrade	
	Firmware	Reset settings to factory default (Except IP Address)
	Upgrade	
	Note: The upgra	ding process will take 5-10 minutes, please don't disconnect power of the device during the process. The device will reboot automatically after upgrading.

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.

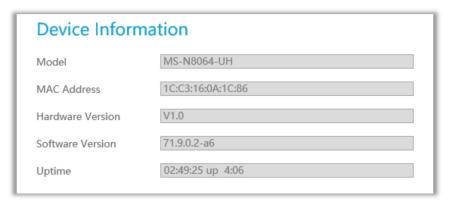
4.7 Status

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.



4.7.1 Device Information

Device information includes Model, MAC Address, Hardware Version, Software Version and Uptime.



4.7.2 Network Status

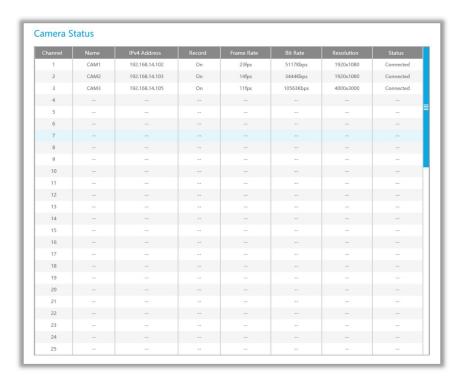
Network Status includes three main parts: Receive Bandwidth, LAN1 and LAN2.



4.7.3 Camera Status

Camera status includes Channel, Name, IPv4 Address, Record, Frame Rate, Bit rate, Resolution and Status.





4.7.4 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.



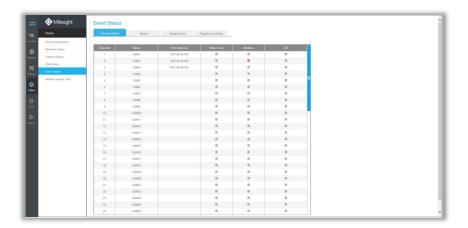
4.7.5 Event Status

Camera Event

Camera Event shows camera event, including Video Loss, Motion and I/O. — turns into

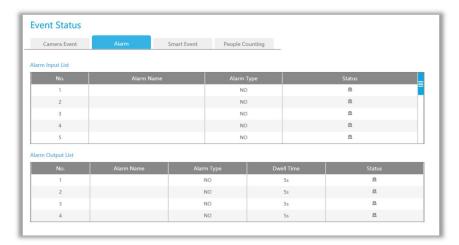
when alarm is triggered.



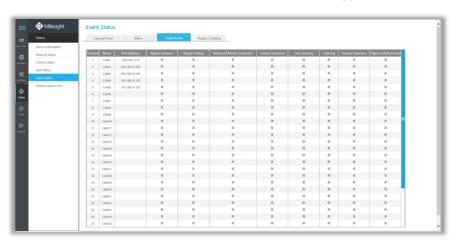


Alarm

Alarm shows the Alarm Input and Alarm Output status. — turns into — when alarm is triggered.



Smart Event



People Counting



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



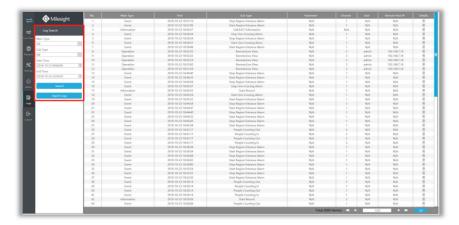
4.7.6 Packet Capture Tool

Input IP and Port, then click [Start] to start capture and click [End] to stop. Click [Download] to backup the captured packet locally.



4.8 Logs

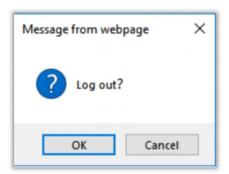
In Log interface, you can check, search and export logs. By selecting the Main Type, Sub Type, Start Time and End Time which can narrow down the scale of logs, you can search for logs that you need and then export them locally.





4.9 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

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

TEL: +86-592-5922772

Add: No.23 Wanghai Road,2nd Software Park, Xiamen, China

Milesight Better Inside, More in Sight