



Network Camera User Manual

Mini Series

Applicable Models: MS-CXXXX-PD2

Version: V1.0

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Chapter 1. Introduction

1.1 Copyright Statement

This manual may not be reproduced in any form or by any means to create any derivative work, such as translation, transformation, or adaptation, without the prior written permission of Milesight IoT Co., Ltd. (hereinafter referred to as Milesight).



reserves the right to change this manual and the specifications without prior notice. The latest specifications and user documentation for all Milesight products are available on our official website <http://www.milesight.com>

1.2 Safety Instruction

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 are neglected.

- This installation must be performed by a qualified service person and should strictly comply with the local electrical safety regulations
- To avoid risk of fire and electric shock, keep the product away from rain and moisture before installation.
- Do not touch components such as heat sinks, power regulators, and processors, as they may be hot
- Power Supply: 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, it should be firmly fixed
- If the product does not work properly, please contact your dealer. Never attempt to disassemble the camera yourself

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

- Make sure that the power supply voltage is correct before using the camera
- Do not store or install the device in extremely hot or cold temperatures, dusty or damp locations, and do not expose it to high electromagnetic radiation
- Only use components and parts recommended by the 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 areas where 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 finish
- Save the packaging to ensure shipping containers are available for future transportation

1.3 EU Conformity Statement

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.

1.4 Revision History

Table 1.

Version	Revision Content	Release Date
V1.0	First release	August 2026

Chapter 2. Product Description

2.1 Product Overview

Milesight provides a comprehensive range of cost-effective and reliable network cameras to fully meet your requirements. Based on the embedded Linux operating system, Milesight network cameras could be easily accessed and managed either locally or remotely with great reliability. With built-in high-performance DSP video processing modules, the cameras feature low power consumption and high stability. They support state-of-the-art H.265/ H.264/MJPEG video compression algorithm and industry-leading HD dual-stream technology to achieve the highest level of video image quality under the limited network resources. It is fully functional, supporting a flexible and comprehensive alarm linkage mechanism, day and night auto switch and privacy masking, etc.

In practical applications, Milesight network cameras can either work independently in the LAN or be networked to form a powerful safety monitoring system. It is widely used in fields such as finance, education, industrial production, civil defense, health care for security's sake.

2.2 System Requirements

Operating System: Windows XP/Windows 7/8/10/11/Server 2000/Windows Server 2008

CPU: 1.66 GHz or higher

RAM: 1 GB or higher

Graphics memory: 128 MB or more

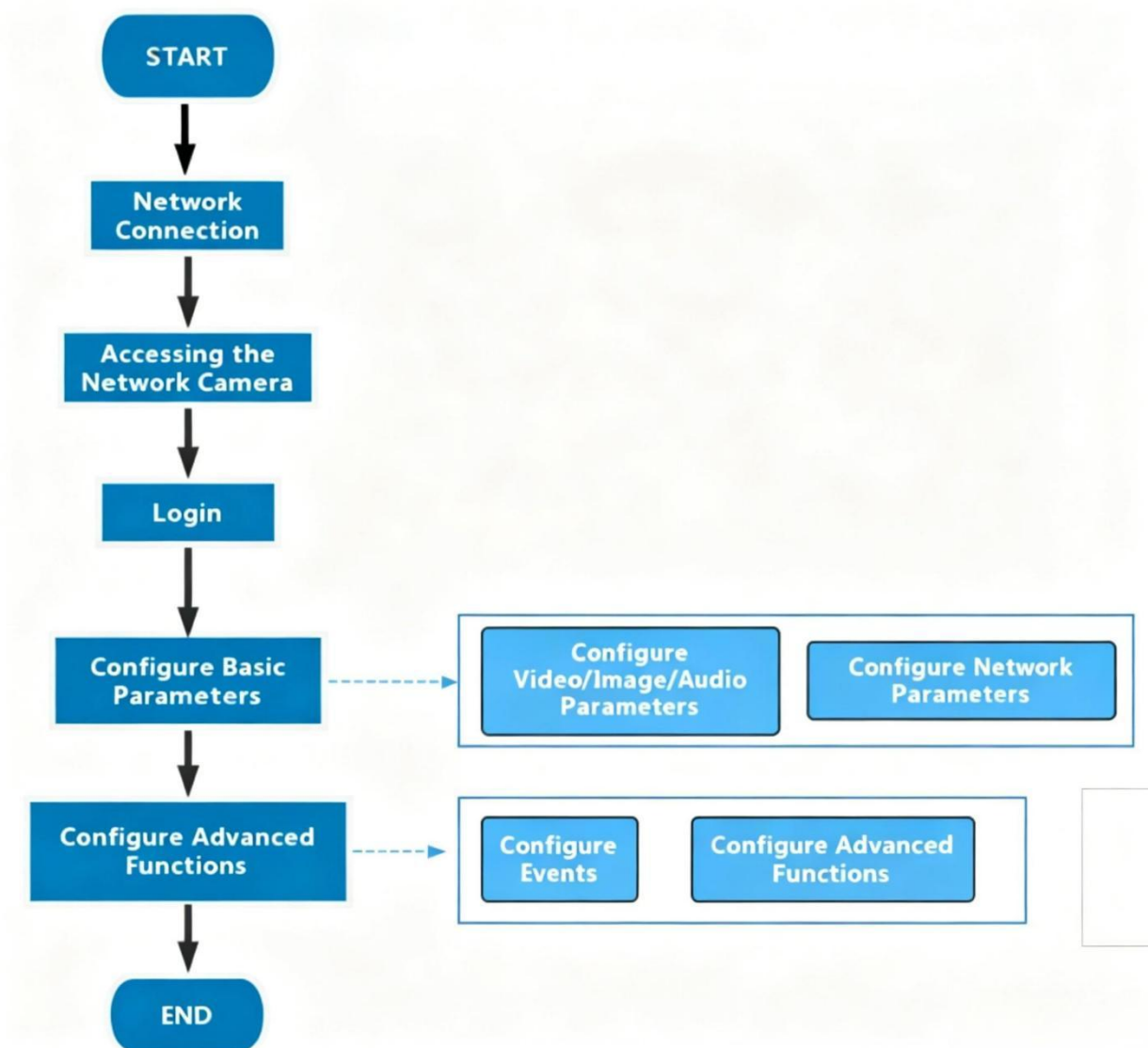
Internet Protocol: TCP/IP (IPv4/IPv6)

Web Browsers: Microsoft Edge, Google Chrome, Safari, Mozilla Firefox

Chapter 3. Configuration Flow

The configuration flow of the cameras is shown in the following figure.

 **Note:** The configuration must be based on the actual situation of different models.



More configuration details are shown in the following table.

Table 2. Description of flow

Configuration	Description	Reference
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Configuration	Description	Reference
Network Connection	Connect the network camera. You can set the camera over the LAN or dynamic IP connection.	4.1 Setting the Camera over the LAN
Accessing the Network Camera	Accessing from IP address, web browser and Milesight back-end software are available.	5.1 Assigning an IP Address
Configure Basic Parameters	After login the camera, you can adjust the video/image/audio/network parameters as needed.	8.1 Media 8.2 Network
Configure Advanced Functions	Configure the advanced functions, such as VCA and people counting.	8.4 Event

Chapter 4. Network Connection

4.1 Setting the Camera over the LAN

Connecting the camera to a switch or router is the most common connection method. The camera must be assigned an IP address that is compatible with its LAN.

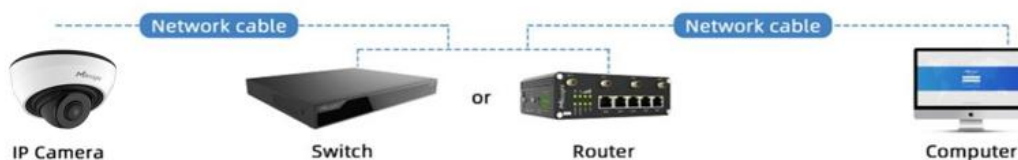
4.1.1 Connecting the Camera to the PC Directly

In this method, only the computer connected to the camera will be able to access it. The camera must be assigned a compatible IP address to the computer. Details are shown in the following figure.



4.1.2 Connecting via a Switch or Router

Refer to the following figure to set up the network camera over the LAN via a switch or router.



4.2 Dynamic IP Connection

Step1: Connect the network camera to a router.

Step2: On the camera, assign a LAN IP address, the subnet mask, and the gateway.

Step3: On the router, set up port forwarding. E.g., 80, 8000, and 554 ports. The steps for port forwarding vary depending on different routers. Please look up the router's user manual for assistance with port forwarding.

Step4: Apply for a domain name from a domain name provider.

Step5: Configure the DDNS settings in the settings interface of the router.

Step6: Access the camera via the domain name.



Chapter 5. Accessing the Network Camera

5.1 Assigning an IP Address

The network camera must be assigned an IP address to be accessible. The default IP address of Milesight network cameras is 192.168.5.190.

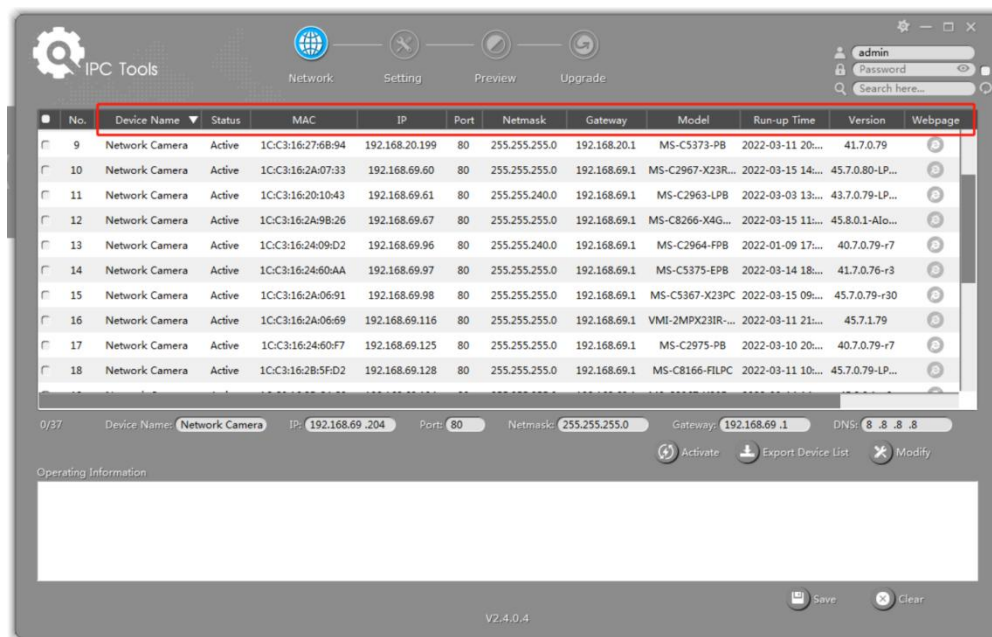
You can change the IP address of the camera via either Smart Tools or a browser. Please connect the camera to the same LAN as your computer.

5.1.1 Assigning an IP Address Using Smart Tools

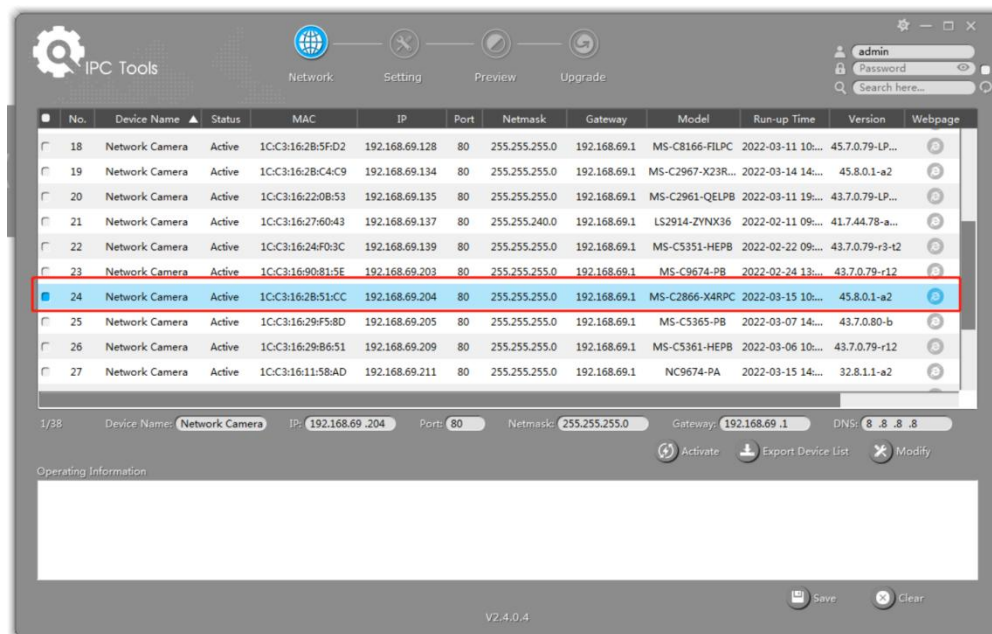
Smart Tools is a software tool that can automatically detect multiple online Milesight network cameras in the LAN, set IP addresses, and manage firmware upgrades. It's recommended to use when assigning IP addresses for multiple cameras.

Step1: Install Smart Tools (The software can be downloaded from our website).

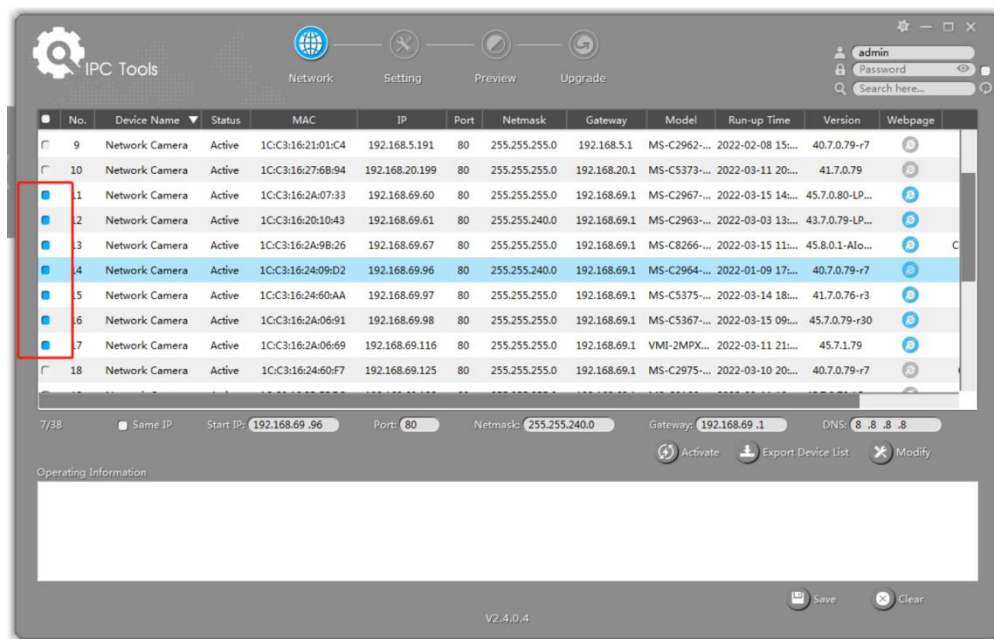
Step2: Start Smart Tools, click the IPC Tools page, then enter the device information, such as IP address, MAC address, status, port number, netmask, and gateway. Then all related Milesight network cameras in the same network will be displayed. Details are shown as the figure below.



Step3: Select a camera or multiple cameras according to the MAC addresses. Select a single camera:



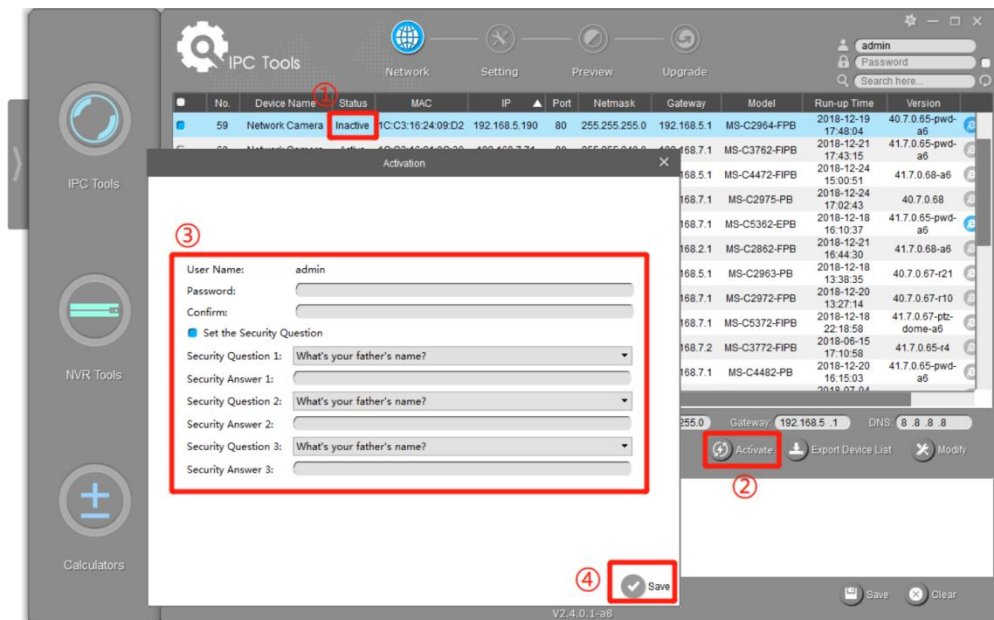
Select multiple cameras:



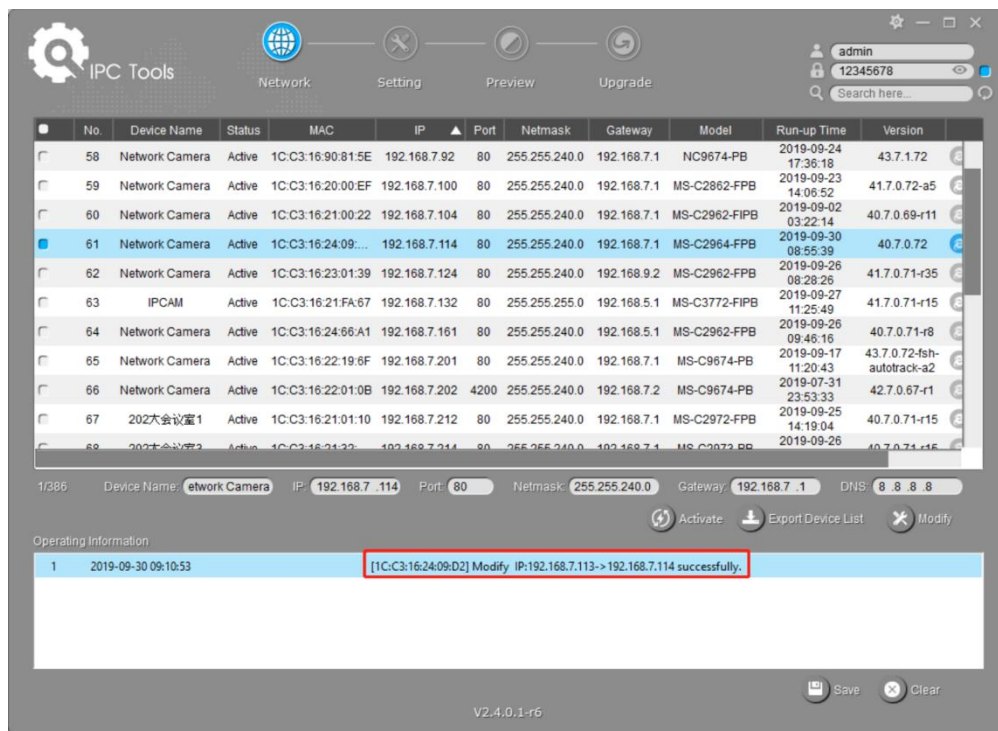
Step4: If the selected camera shows "Inactive" in the status bar, click "Activate" to set the password when using it for the first time. You can also set the security questions when activating the camera in case you forget the password (You can reset the password by answering three security questions correctly). Click 'Save' and it will indicate successful activation.

Note:

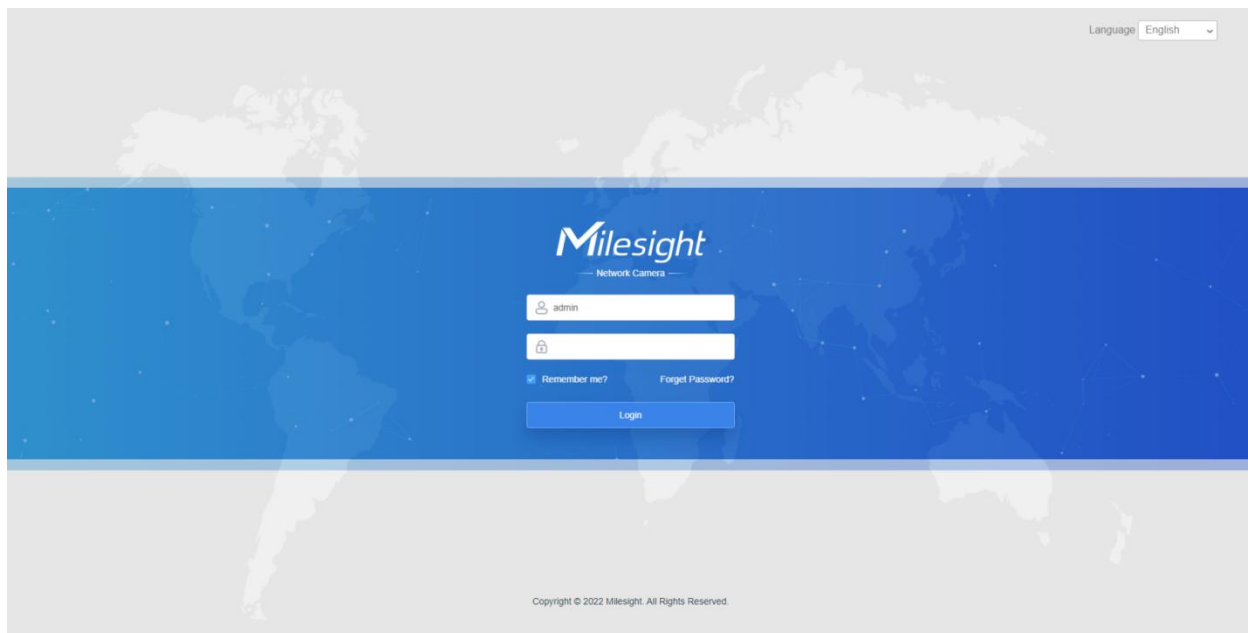
- The password must be 8 to 32 characters long, contain at least one number and one letter.
- You need to upgrade Smart Tools version to V2.4.0.1 or above to activate the camera.



Step5: After activation, you can change the IP address or other network values, and then click "Modify" button.



Step6: By double clicking the selected camera or the browser of interested camera, you can access the camera via web browser directly. A browser window will open.



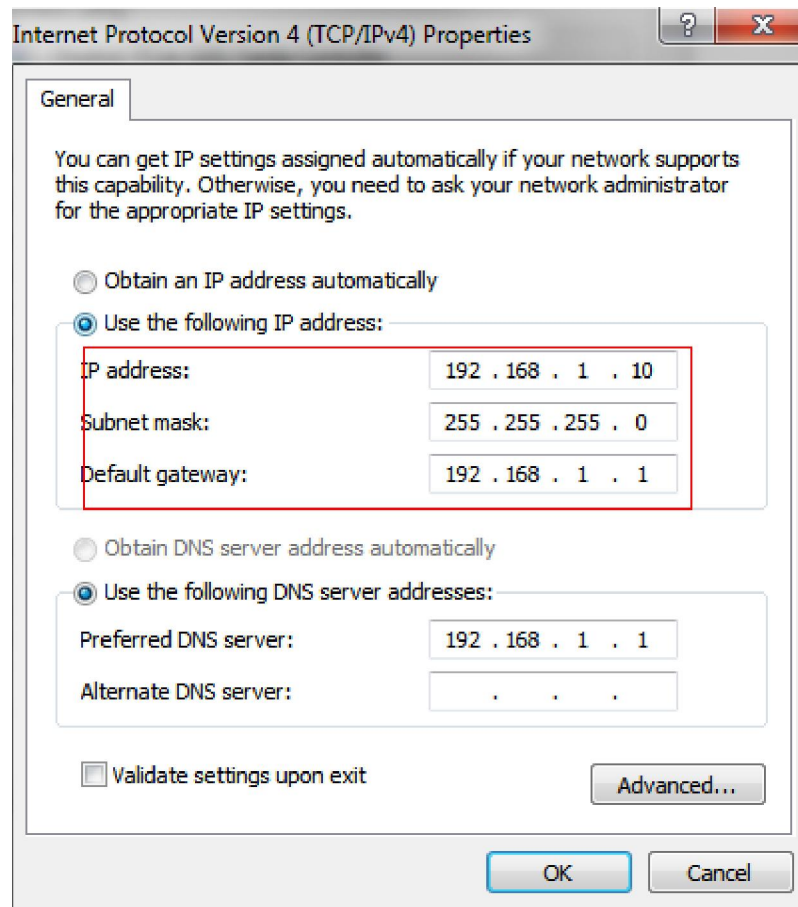
For more usage of Smart Tools, please refer to the Smart Tools User Manual.

5.1.2 Assigning an IP Address via Browser

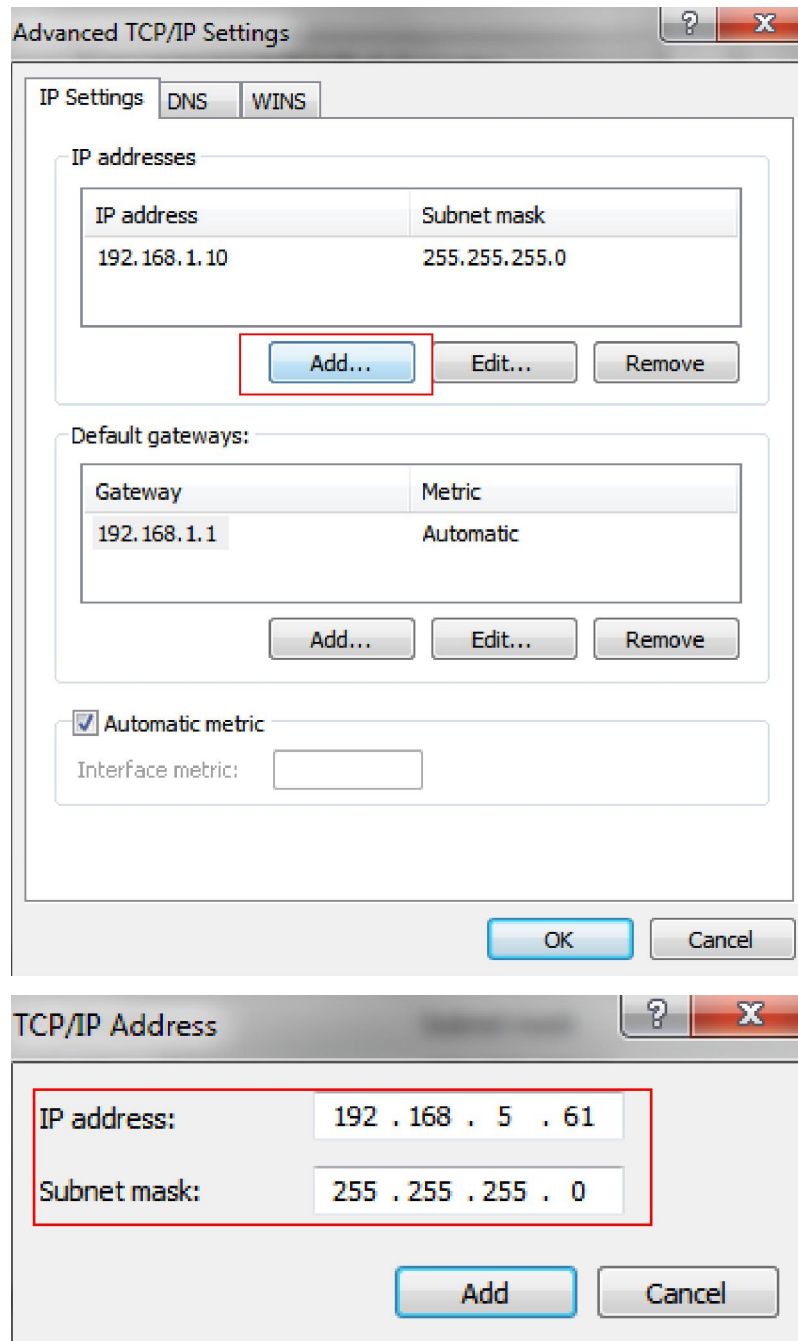
If the network segment of the computer and that of the camera are different, please follow the steps below to change the IP address:

Step1: Change the computer's IP address to the 192.168.5.x subnet, here are two ways as shown below:

a. Start → Control Panel → Network and Internet → Network Connections → Local Area Connection, and double-click it.



b. Click "Advanced", and then click "IP settings"--> "IP address"--> "Add". In the pop-up window, enter an IP address that is in the same subnet with Milesight network camera (e.g. 192.168.7.41, but please note that this IP address must not conflict with existing IP addresses on the network).



Step2: Open the browser. In the address bar, enter the default IP address of the camera:<http://192.168.5.190>;

Step3: You need to set a password when using it for the first time. And you can also set three security questions for your device after activation. Then you can log in to the camera with the user name (admin) and a custom password.

 Note:

- The password must be 8 to 32 characters long, contain at least one number and one letter.
- You can click the "forget password" in login page to reset the password by answering three security questions when you forget the password, if you set the security questions in advance.

Step4: After login, please select “Settings” --> “Network” --> “Basic” --> “TCP/IP”. The Network Settings page appears (as shown in the figure below).

The screenshot displays the 'Milesight Network Camera' web interface. On the left is a sidebar with icons for Media, Network, Storage, Event, and System. The 'Network' section is expanded, showing 'Basic' and 'Advanced' sub-options. The main panel is titled 'TCP/IP' and contains settings for IPv4 and IPv6. Under 'IPv4', the 'Type' is set to 'Static'. Fields for 'IP Address' (192.168.69.66), 'IPv4 Subnet Mask' (255.255.255.0), 'IPv4 Default Gateway' (192.168.69.1), and 'Preferred DNS Server' (8.8.8.8) are visible. A 'Test' button is next to the IP address field. The 'IPv6' section shows 'IPv6 Mode' set to 'Manual' and empty fields for 'IPv6 Address', 'IPv6 Prefix', and 'IPv6 Default Gateway'. At the bottom, the 'MTU' is set to 1500. A 'Save' button is at the bottom center.

Step5: Change the IP address or other network values. Then click “Save” button.

Step6: The default IP address has been changed.

5.2 Accessing from the Web Browser

The camera can be used with most standard operating systems and browsers. It supports accessing the web interface in Plugin-Free Mode. In Plugin-Free Mode, you can preview the video on the browser without plugin. Currently, Plugin-Free Mode is supported in Firefox, Google Chrome, Safari, and Edge browsers for Windows, macOS, iOS, and Android systems. Both H.265 and H.264 video codecs are supported in Plugin-Free Mode for camera, and it will play the secondary stream by default.

Note:

- For more details about setting the plugin-free mode of Milesight cameras, please refer to <https://milesight.freshdesk.com/a/solutions/articles/69000643388>.

Chapter 6. Live View

6.1 Live Video

After logging in to the network camera web GUI successfully, the user can view live video as follows.

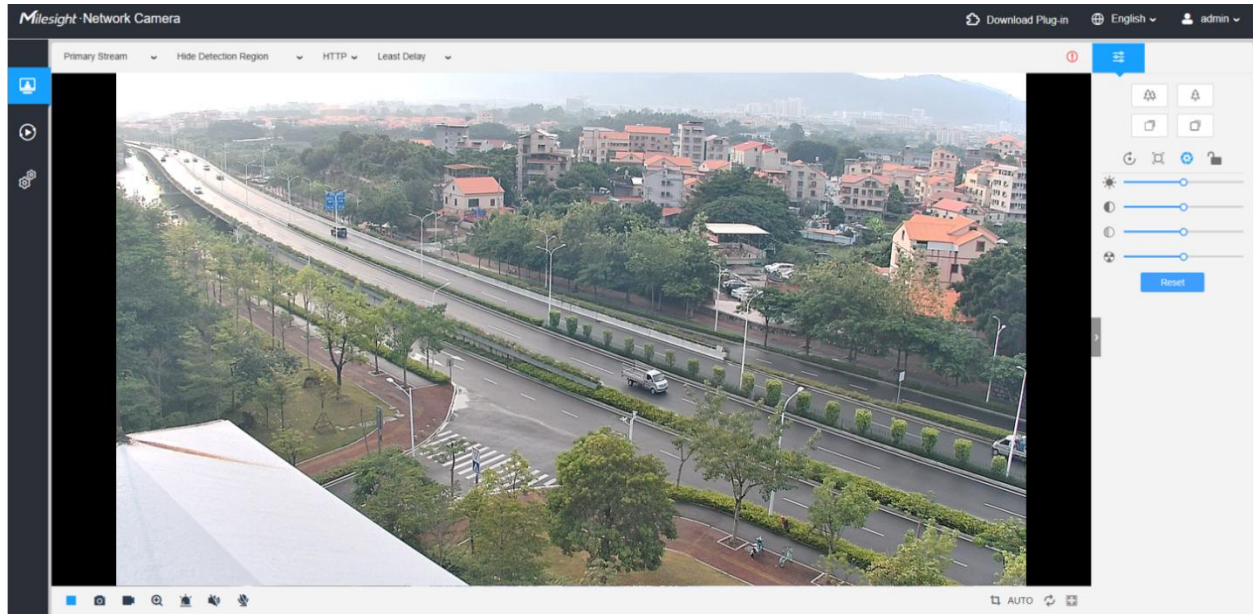
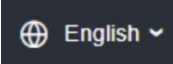
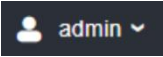
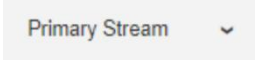
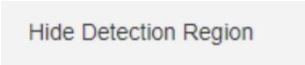
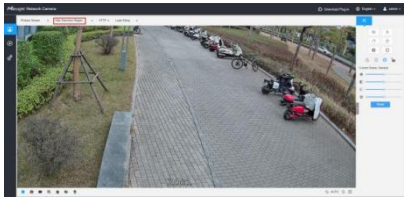
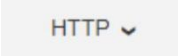
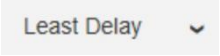
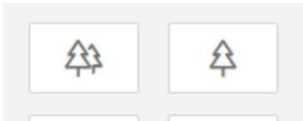
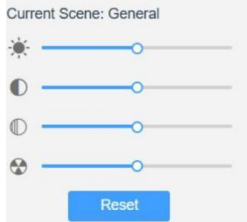


Table 3. Description of the buttons

No.	Parameter	Description
1	 Live Video	Click to access the live view page.
2	 Playback	Click to access the playback page.
3	 Settings	Click to access the configuration page.
4	 Download Plug-in	It enables your browser to display and manage the camera's live video stream, and supports advanced functions such as video recording, greatly improving convenience and compatibility. Click it to download the plugin and install "Mplayer" according to the displayed window.

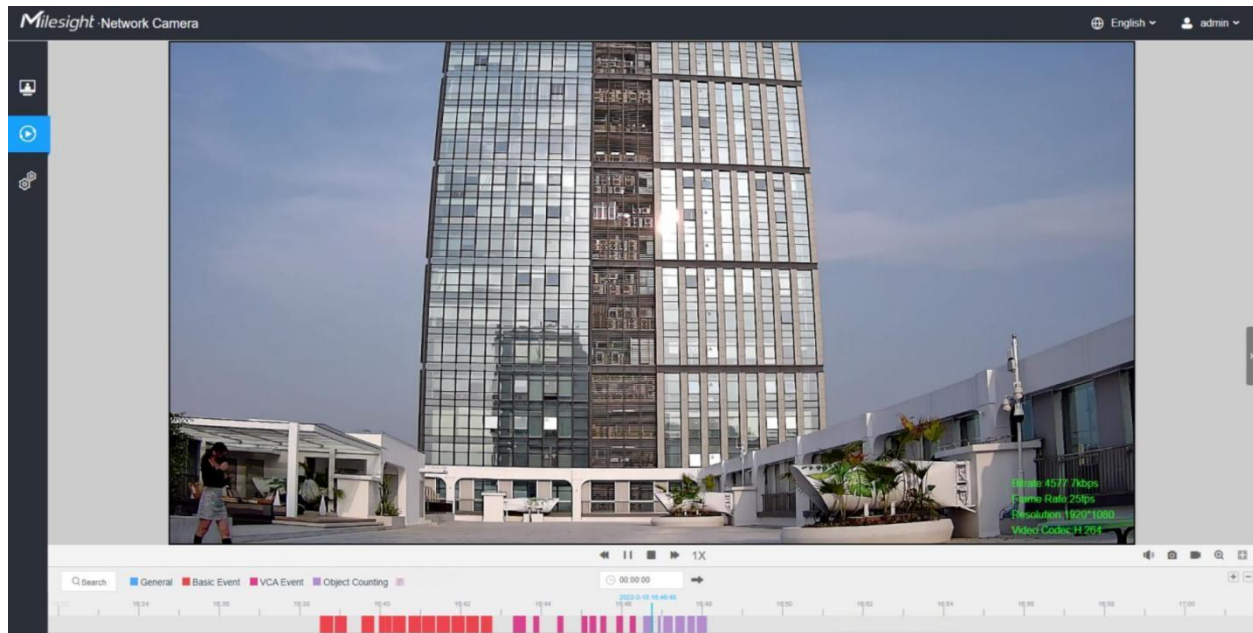
No.	Parameter	Description
5		Click to select system language.
6		Display the username and click to logout.
7		Choose the stream (Primary/Secondary/Tertiary) to show on the current video window.
8		Choose the options (Hide Detection Region/ Region Entrance/Region Exiting/Advanced Motion/Line Crossing/Loitering/Object Left/Object Removed//Object Counting/Regional People Counting/Motion Detection) to hide/display detection region on the current video window. 
9		TCP: More reliable connection. UDP: More instantaneous connection, but if you cannot get the live view successfully, please turn into TCP connection. HTTP: Recommended for Internet environment.
10		Least Delay: The most instantaneous mode. Balanced: A balanced mode between Least Delay and Best Fluency, maintains the fluency while keeps an acceptable delay. Best Fluency: The most fluent mode.
11	 Recording	When recording, the icon appears.
12	 VCA Event Alarm	When an alarm of VCA event was triggered, the icon appears.
13	 Object Counting Alarm	When an alarm of object counting is triggered, the icon appears.
14	 Motion Detection Alarm	When an alarm of Motion Detection is triggered, the icon appears.

No.	Parameter	Description
15	 Alarm	Except for the kinds of alarms above, when other alarms are triggered, the icon appears.
16	 Stop/Play	Stop/Play live view.
17	 Snapshot	Click to capture the current image and save to the configured path. The default path is: C:\VMS\+-1\ IMAGE-MANUAL.
18	 Start/Stop Recording	Click to start recording a video and save to the configured path. Click again to stop recording the video.
19	 Digital Zoom	When enabled, you can zoom in a specific area of video image with your mouse wheel.
20	 Manual Output	Manually trigger Camera Alarm Output.
21	 Mute On/Off	Controls the audio input from the camera's built-in microphone during web access.
22	 Start/Stop Talking	Turn on to start talking, so your voice from the camera's web is played through the camera's audio output for two-way audio.
23	 Pixel Counter	By clicking to enable the Pixel Counter function, you can either input the pixel value or draw on the live view to measure the object's size. 

No.	Parameter	Description
24	 Window Size	Click to display images at a window size.
	 Real Size	Click to display images at a real size.
	 Full Screen	Click to display images at full-screen.
25		Zoom: Click +/- to zoom in and zoom out.
26		Focus-/Focus+: Adjust focus of the lens.  Note: Only work when your camera is equipped with motorized or auto focal motorized lens.
27		Lens Initialization, Auxiliary Focus, Auto Iris, and PTZ Lock/Unlock.  Note: • The Auto Iris support turn on/off when your camera is equipped with P-Iris. • PTZ Lock is used to prevent unintended zoom or focus changes by locking the camera's zoom and focus.
28		Brightness: Adjust the Brightness of the scene. Contrast: Adjust the color and light contrast. Saturation: Adjust the Saturation of the image. Higher Saturation makes colors appear more "pure" while lower one appears more "wash-out". Sharpness: Adjust the Sharpness of image. Higher Sharpness sharpens the pixel boundary and makes the image looks "more clear".

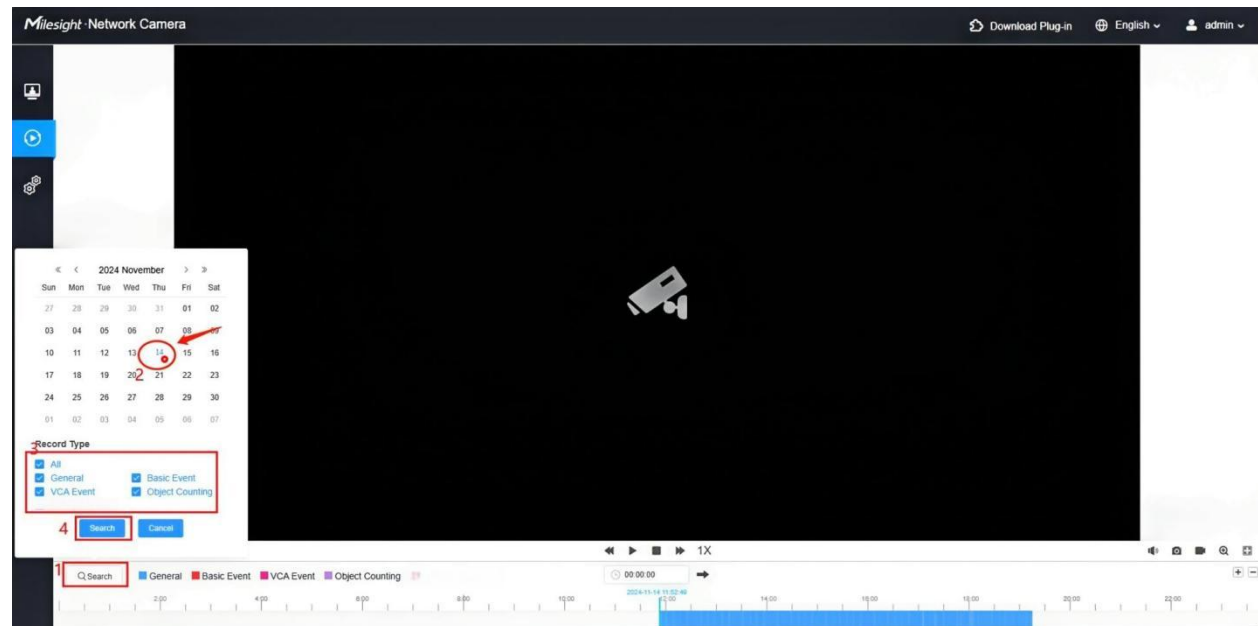
Chapter 7. Playback

Click  to enter playback interface. In this part, you can search and playback the recorded video files stored in SD cards or NAS. The Playback interface is as below:



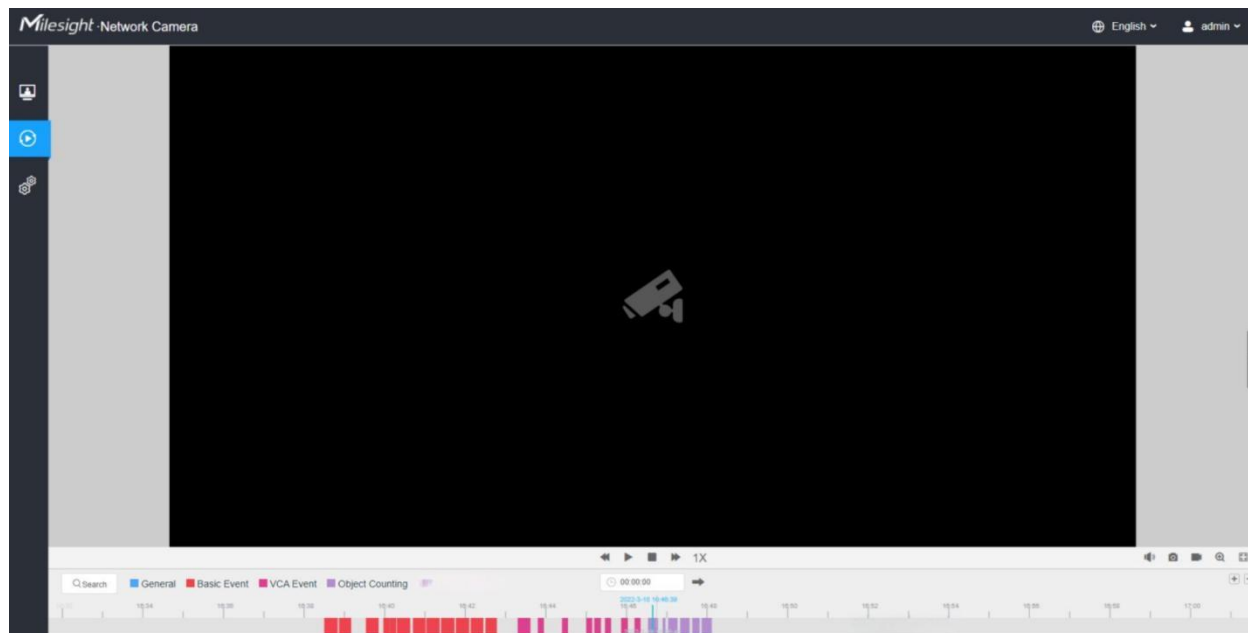
Step1: Click the “Search” button, choose the date and record type when the window pops up.

 **Note:** A red icon will appear under the corresponding date when there is a recording for that day users can quickly identify which dates have recordings.



Step2: The timeline displays the video files for the day and show different colors according to selected record type. Drag the progress bar with the mouse to locate the exact playback point as needed.

 **Note:** You can also input the time and click  to locate the playback point in the filed. You can also click   to zoom out/in the progress bar.



Step3: Click  to play the video files found on this date. The toolbar on the bottom of playback interface can be used to control playing progress.

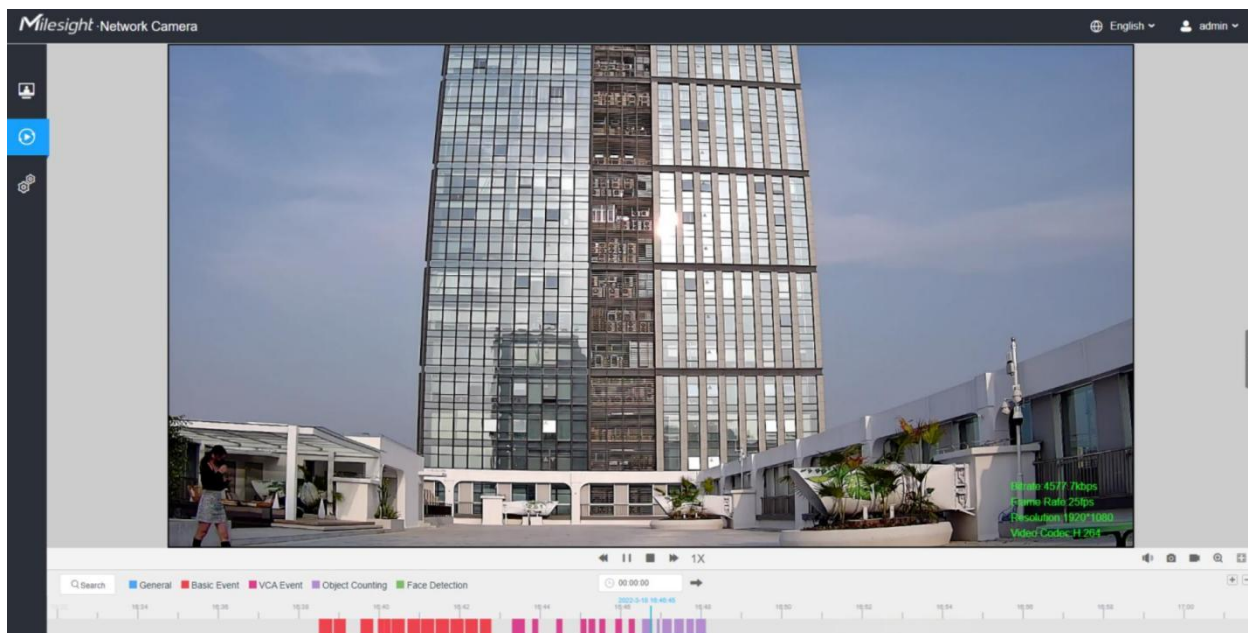


Table 7. Description of the buttons

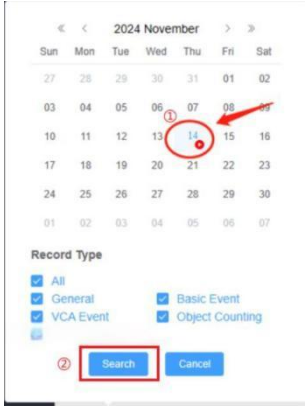
No.	Parameter	Description
 Search		Choose date to search recorded videos.
		Search the recorded videos by record type (All/General/Basic Event/VCA Event/Object Counting). The timeline will show different colors according to selected record type as below: - General - Basic Event - VCA Event - Object Counting
1	 Speed Down/Speed Up/Speed	Adjust the speed of video playback. Speed Down: Includes 0.5X and 0.25X for Play. Speed Up: Includes 2X and 4X for Play. Speed: The default playback speed is 1X
2	 Play/Pause	Play/Pause the video.
3	 Stop	Stop the video.
4	 Search Time	Select the time that want to locate.
5	 Jump	Go To.

Table 8. Description of the buttons

No.	Parameter	Description
1	 Mute	Click to enable the audio.

No.	Parameter	Description
2	 Snapshot	Click to take a snapshot.
3	 Start/Stop recording	Click to start/stop recording.
4	 Digital Zoom	Click to zoom on/off .
5	 Full Screen	Full Screen.
6	 Time Expand/Narrow	Time narrow/expand.

Chapter 8. Settings

8.1 Media

8.1.1 Video

Stream parameters can be set in this module, adapting to different network environments and demands.

Primary Stream Settings

The screenshot displays the 'Primary Stream' settings page in the Milesight Network Camera web interface. The left sidebar contains a menu with options: Media, Video, Image, Audio, Network, Storage, Event, and System. The 'Video' option is selected. The main content area is divided into three tabs: 'Primary Stream', 'Secondary Stream', and 'Tertiary Stream'. The 'Primary Stream' tab is active, showing settings for 'General' and 'Event' streams. The 'General' stream is enabled, while the 'Event' stream is disabled. Both streams are configured with H.264 video codec, 1920*1080 frame size, 25 fps maximum frame rate, 4096 kbps bit rate, Off smart stream, CBR bit rate control, Main profile, and 50 frame I-frame interval. A 'Save' button is located at the bottom of the settings.

Record Stream Type	General	Event
Enable	☒	☐
Video Codec	H.264	H.264
Frame Size	1920*1080	1920*1080
Maximum Frame Rate	25	25
Bit Rate	4096	4096
Smart Stream	Off	Off
Bit Rate Control	CBR	CBR
Profile	Main	Main
I-frame Interval	50	50

Secondary Stream Settings

The screenshot displays the 'Secondary Stream' settings page in the Milesight Network Camera web interface. The left sidebar is the same as the previous screenshot. The 'Secondary Stream' tab is active, showing settings for the secondary stream. The stream is enabled. It is configured with H.265 video codec, 704*576 frame size, 30 fps maximum frame rate, 512 kbps bit rate, Off smart stream, CBR bit rate control, Base profile, and 60 frame I-frame interval. A 'Save' button is located at the bottom of the settings.

Record Stream Type	Secondary Stream
Enable	☒
Video Codec	H.265
Frame Size	704*576
Maximum Frame Rate	30
Bit Rate	512
Smart Stream	Off
Bit Rate Control	CBR
Profile	Base
I-frame Interval	60

Tertiary Stream Settings

The screenshot displays the Milesight Network Camera configuration interface. On the left is a sidebar menu with options: Media, Video, Image, Audio, Network, Storage, Event, PTZ, and System. The 'Media' section is expanded, showing 'Video', 'Image', and 'Audio'. The 'Video' sub-section is active, displaying settings for three streams: Primary Stream, Secondary Stream, and Tertiary Stream. The 'Tertiary Stream' tab is selected. The settings for the Tertiary Stream are as follows:

- Enable: ☒
- Video Codec: H.264
- Frame Size: 640*480
- Maximum Frame Rate: 25 fps
- Bit Rate: 1024 kbps
- Smart Stream: Off
- Bit Rate Control: CBR
- Profile: Main
- I-frame Interval: 50 frame (1-120)

A 'Save' button is located at the bottom of the settings panel.

Table 9. Description of the buttons

Parameters	Function Introduction
Record Stream Type	General & Event are available only for Primary Stream. General refers to continuous record video, while Event includes events that can trigger alarms, such as Motion, Exception and so on. This item can separately set different bit rate and frame rate for different Recording Stream Types. If user chooses Event, video will be recorded according to the configuration of video stream type when an event happens, thereby greatly reducing the recording storage space.
Enable Event Stream	This item is optional only if you selected the Event.
Video Codec	Primary Stream: H.265/H.264 are available. Secondary Stream: H.265/H.264/MJPEG are available. Tertiary Stream: H.265/H.264 are available.
Frame Size	Choose a proper stream resolution. The higher the resolution is, the more details the image has.
Maximum Frame Rate	Maximum refresh frame rate of per second and it is variable according to the mode.
Bit Rate	Transmitting bits of data per second, this item is optional only if you select the H.265/H.264 Set the bitrate to 16~16384 Kbps. The higher value corresponds to the higher video quality, and the higher bandwidth is required as well.

Parameters	Function Introduction
Smart Stream	Optional to turn On/Off Smart Stream mode. Smart Stream mode remarkably reduces the bandwidth and the data storage requirements for network cameras while ensuring the high quality of images, and it is a 10-level adjustable codec. Level: Level 1~10 are available as needed.
Bit Rate Control	CBR: Constant Bitrate. The rate of CBR output is constant.
Bit Rate Control	VBR: Variable Bitrate. VBR files vary the amount of output data per time segment.
Image Quality	Low/Medium/High are available, this item is optional only if you select VBR.
Profile	The option is for H.264, Main/High/Base can be selected as needed.
I-frame Interval	Set the I-frame interval to 1~120, 50 for the default. This item is optional only if you select the H.265/H.264. The number must be a multiple of the number of frames.

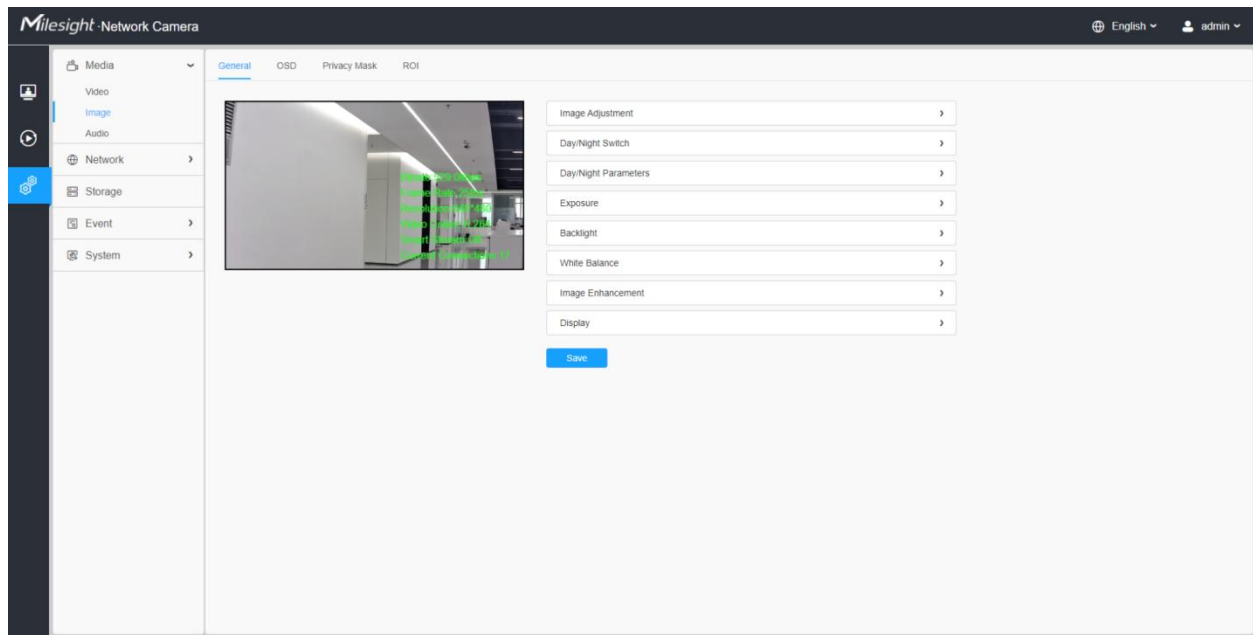
8.1.2 Image

General settings of image including the image adjustment, day/night setting and image enhancement can be set in this module. OSD (On Screen Display) content, privacy mask and video time can be displayed to rich the image information.

8.1.2.1 General

General settings of image including the Image Adjustment, Day/Night Switch, Day/Night

Parameters, Exposure, Backlight, White Balance, Image Enhancement and Display can be set in this module.



[Image Adjustment]

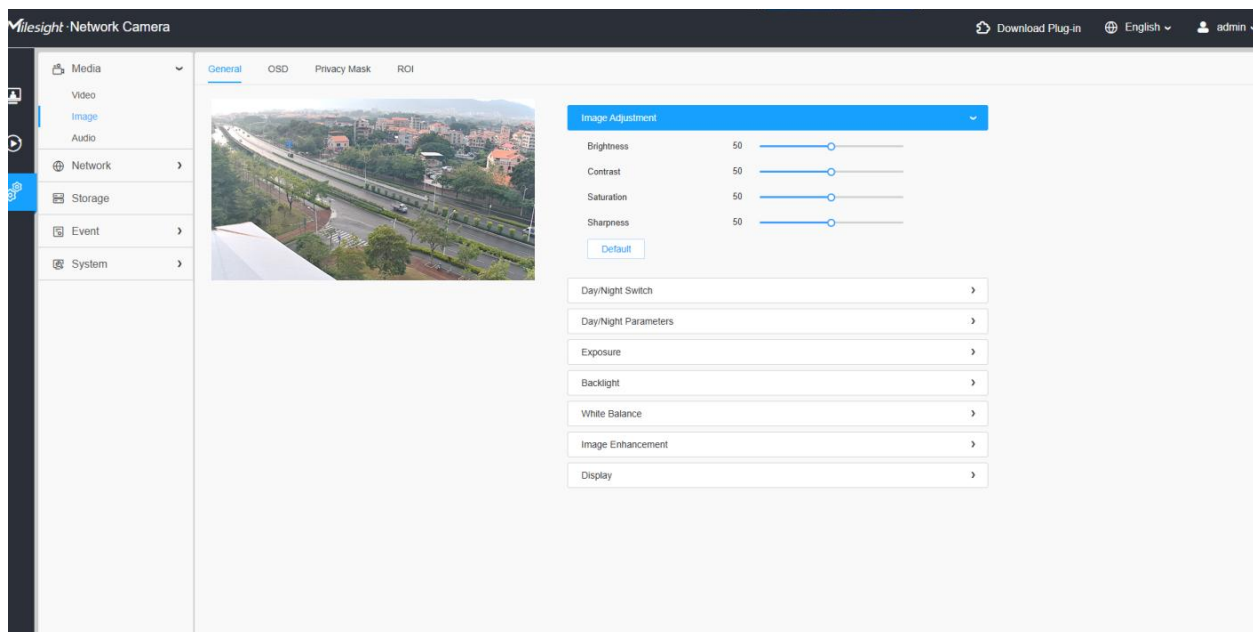


Table 10. Description of the buttons

Parameters	Function Introduction
Brightness	Adjust the Brightness of the scene.
Contrast	Adjust the color and light contrast.
Saturation	Adjust the Saturation of the image. Higher Saturation makes colors appear more "pure" while lower one appears more "wash-out".

Parameters	Function Introduction
Sharpness	: Adjust the Sharpness of image. Higher Sharpness sharps the pixel boundary and makes the image looks "more clear".
Default	Reset the image adjustment parameters to their default values.

[Day/Night Switch]

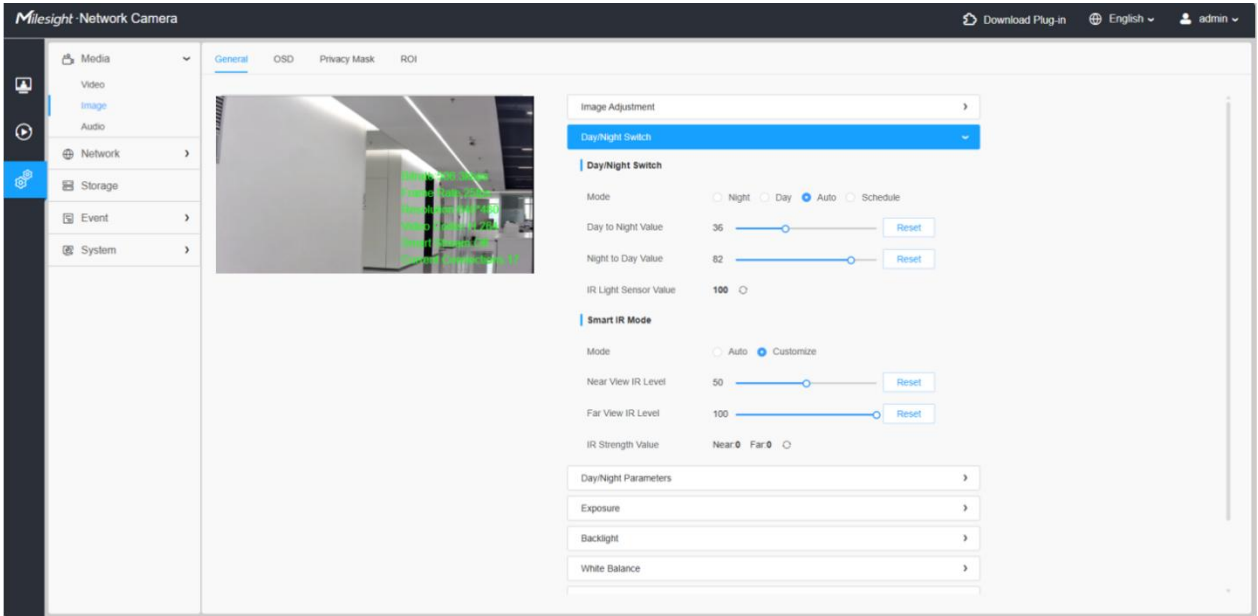
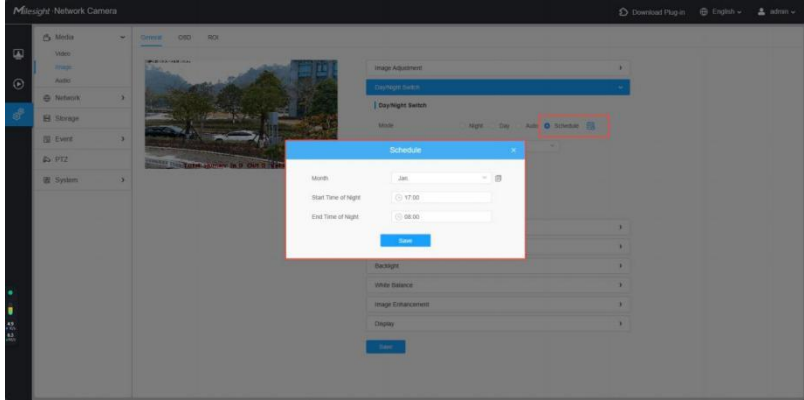
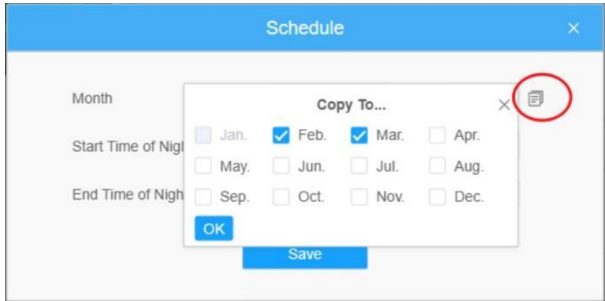


Table 11. Description of the buttons

Parameters	Function Introduction
------------	-----------------------

Parameters	Function Introduction
	Night Mode: Shown in live view based on Night Mode settings. Day Mode: Shown in live view based on Day Mode settings. Auto Mode: Shown in live view based on environment, set the sensitivity for switching Day Mode to Night Mode, or Night Mode to Day Mode. Schedule: The live view will display according to your configured start and end times for Night Mode based on each month. You can set the day/night switching times for each month and copy the settings from one month to another.
Day/Night Switch	 

Parameters	Function Introduction
Day/Night Switch	Day to Night Value: You can set the sensitivity for switching Day Mode to Night Mode. When IR Light Sensor Current Value is lower than this value, it will switch Day Mode to Night Mode. You can click  to reset the value to 36. Night to Day Value: This is the sensitivity for switching Night Mode to Day Mode. When IR Light Sensor Current Value is higher than this value, it will switch Night Mode to Day Mode. You can click  to reset the value to 82. IR Light Sensor Value: The current value of the IR light sensor. Note: The three buttons are optional only if you select Auto Mode.
Day/Night Switch	Start Time of Night: You can set the time for start the Night Mode. End Time of Night: You can set the time for start the Day Mode.  Note: Start/End Time of Night are optional only if you select Customize Mode.
Smart IR Mode	Support to set the strength of the IR to Auto Mode or Customize to achieve the best effect. With the combination of the High Beam and Low Beam, the IR LEDs technology has been upgraded to provide better image clarity and quality regardless of the object distance. Also, the Low Beam and High Beam's brightness can be adjusted manually or automatically on the basis of the Zoom ratio. Moreover, with the IR anti-reflection panel, the infrared light transmittance is highly increased.
Smart IR Mode	Near View IR Level: Adjust the light strength of Low-Beams LED light level from 0 to 100. Far View IR Level: Adjust the light strength of High-Beams LED light level from 0 to 100. Note: - Near/Far View IR Level are optional only if you select Customize Mode of Smart IR. - Click  to reset the light strength to 50. IR Strength Value: The current value of Low-Beams LED and High-Beams LED light value.

[Day/Night Parameters]

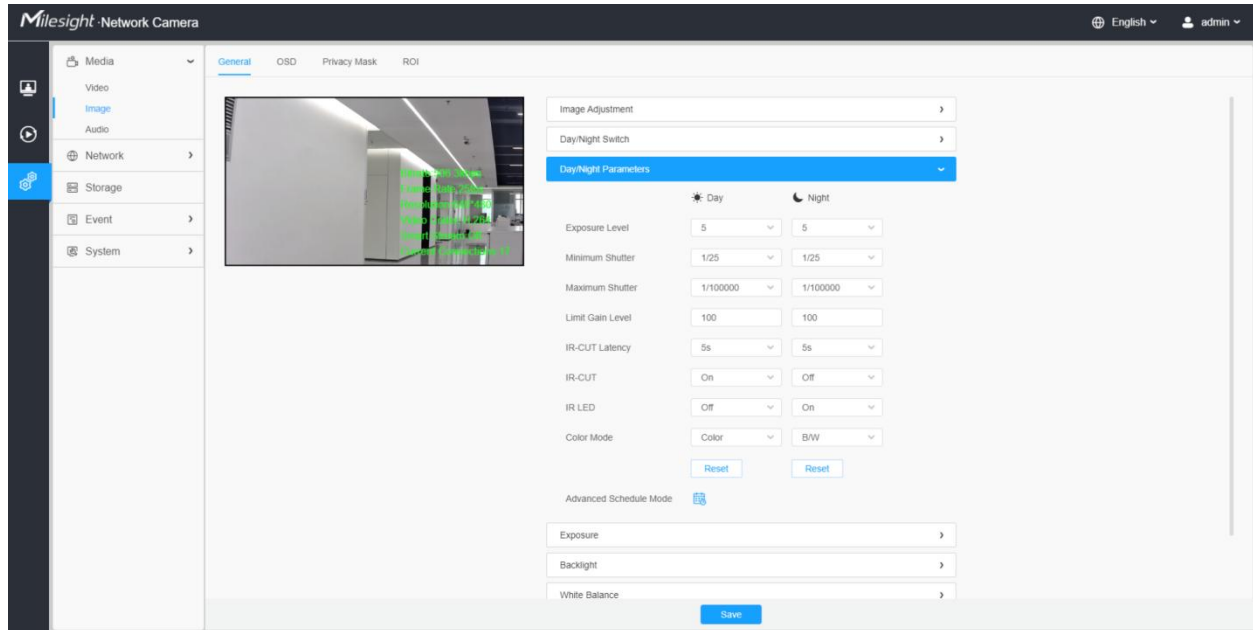
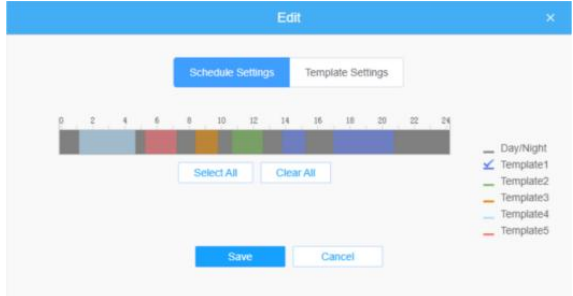
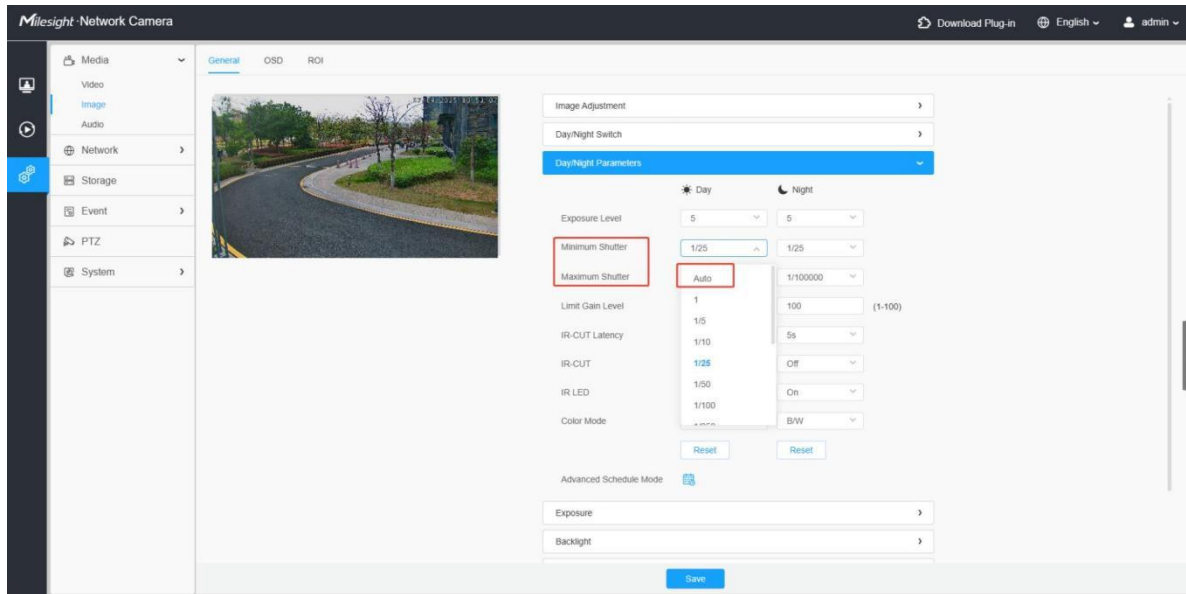
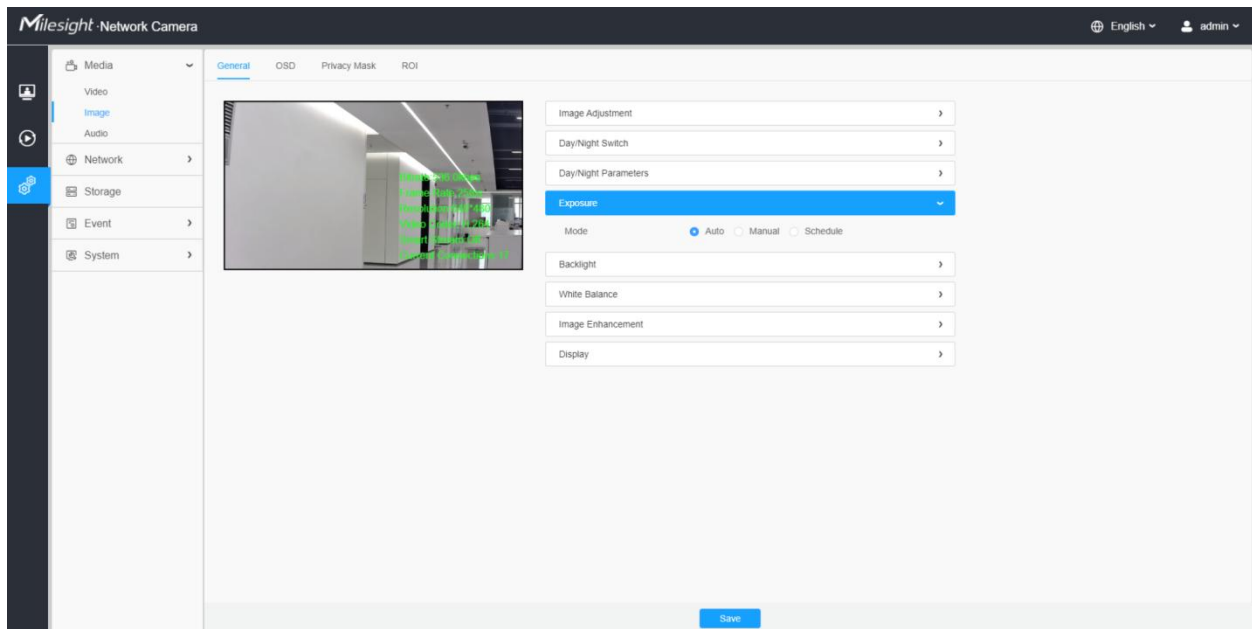


Table 12. Description of the buttons

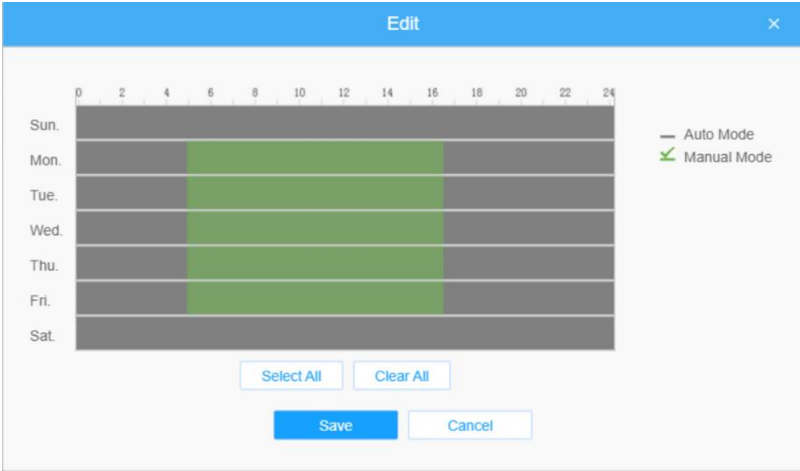
Parameters	Function Introduction
Exposure Level	Level 0~10 are available to meet your need.
Minimum Shutter	Minimum Shutter is the same as Maximum Exposure Time. Set the minimum Shutter to 1~1/100000s.
Maximum Shutter	Maximum Shutter is the same as Minimum Exposure Time. Set the maximum Shutter to 1~1/100000s.
IR-CUT Latency	The interval time of switching one mode to another.
Limit Gain Level	Set the Limit Gain Level to 1~100.
IR-CUT	Turn on/off IR-CUT.
IR LED	Turn on/off IR-LED.
Color Mode	Select B/W or Color mode.
 Advanced Schedule Mode	Here you can customize your special demands for different time, then the Day mode and Night mode will switch automatically according to your settings. 

Note:

- Both Minimum Shutter and Maximum Shutter have an Auto option. Enabling Auto activates Frame Rate Reduction technology, which improves static image quality in low-light environments by reducing the frame rate, extending the exposure time per frame, increasing brightness, and minimizing noise.
- When the Shutter is set to Auto, static images will appear brighter with reduced noise, but moving objects may experience motion blur.

**[Exposure]****Table 13. Description of the buttons**

Parameters	Function Introduction
------------	-----------------------

Parameters	Function Introduction
Exposure Mode	Auto Mode, Manual Mode and Schedule Mode are available. Auto Mode: The camera will adjust the brightness according to the light environment automatically. Manual Mode: The camera will adjust the brightness according to the value you set, you can set the exposure time from 1~1/100000s, the higher the value is, the brighter the image is. Schedule Mode: You can customize the schedule to enable/disable Auto Mode and Manual Mode. 

[Backlight]

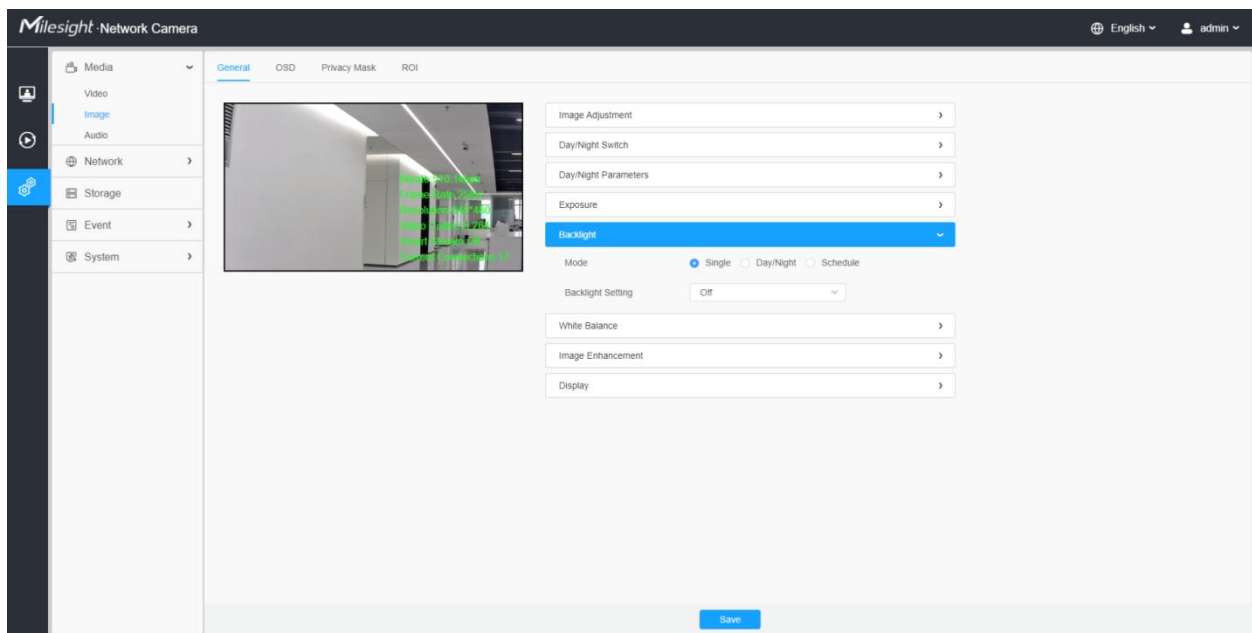
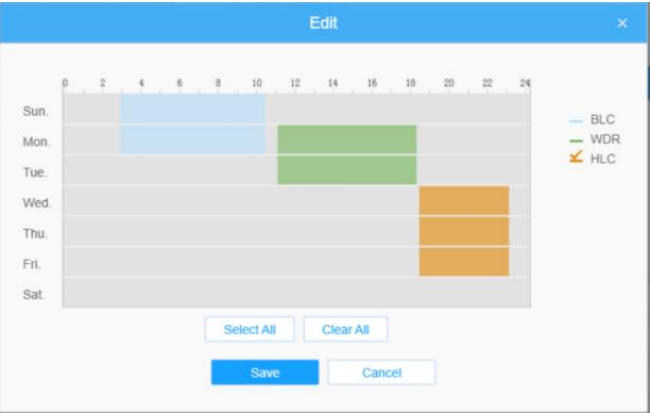


Table 14. Description of the buttons

Parameters	Function Introduction
Backlight	Single Mode: Set single mode for BLC/WDR/HLC. Note: Do not support WDR and General HLC while High Frame Rate is enabled. Day/Night Mode: Support BLC/WDR/HLC on Day Enhancement Mode/Night Enhancement Mode separately. Schedule Mode: Set schedule mode for BLC/WDR/HLC. You can customize the schedule to enable/disable BLC/WDR/HLC mode. 

[White Balance]

Image Adjustment >

Day/Night Switch >

Day/Night Parameters >

Exposure >

Backlight >

White Balance ▾

Mode ☒ General ☐ Schedule

White Balance

Manual White Balance ▾

Red Gain Level 50

Blue Gain Level 50

Image Enhancement >

Display >

Table 15. Description of the buttons

Parameters	Function Introduction
White Balance	To restore white objects, removed color distortion caused by the light of the environment. Mode: General and Schedule are available.

Parameters	Function Introduction
White Balance	General Mode: Select a white balance mode as required • Auto White Balance: This option will automatically enable the White Balance function. • Manual White Balance: Set Red Gain Level and Blue Gain Level manually. • Incandescent Lamp: Select this option when light is similar with incandescent lamp. • Warm Light Lamp: Select this option when light is similar with warm light lamp. • Natural Light: Select this option when there is no other light but natural light. • Fluorescent Lamp: Select this option when light is similar with Fluorescent Lamp.
White Balance	Schedule Mode: Select this option that you can customize the schedule to enable/ disable above modes. 

[Image Enhancement]

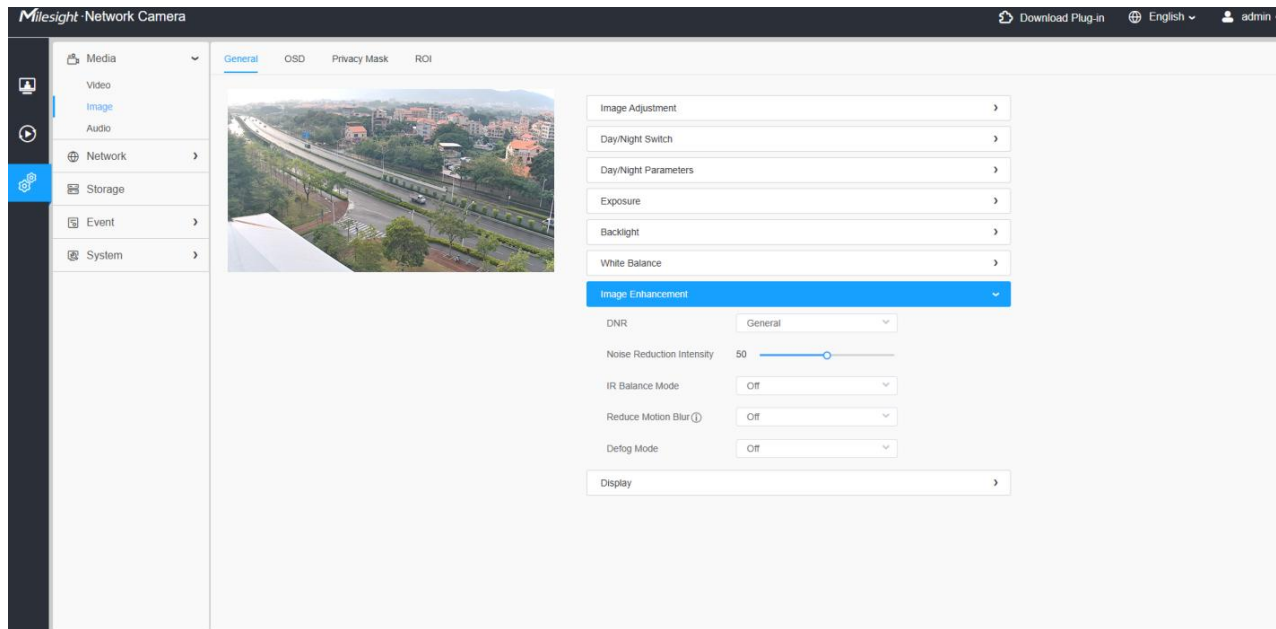
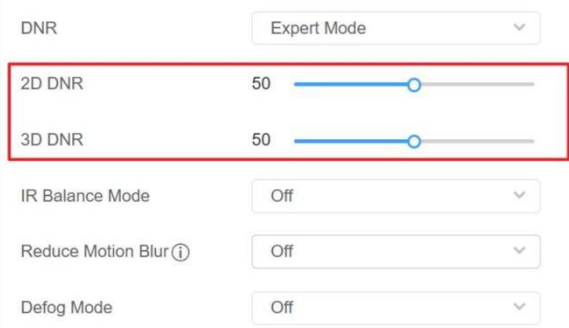


Table 16. Description of the buttons

Parameters	Function Introduction
DNR	Choose the DNR mode, General and Expert Mode are available. General: Automatically adjust noise reduction using algorithms. Expert Mode: You can manually adjust the 3D and 2D DNR settings to reduce image noise. 
Noise Reduction Intensity	Adjust the bar to set the DNR level, a higher level indicates stronger DNR capabilities, the range of adjustment is from 0 -100, with a default value of 50.
IR Balance Mode	There is an option to turn On/Off the IR LED. IR Balance Mode would avoid the problem of overexposure and darkness, and the IR LED will change according to the actual illumination.

Parameters	Function Introduction
Reduce Motion Blur	Enable this function to reduce the motion blur of objects effectively. You can adjust the deblur level from 1 to 100.  Note: For more details about Milesight Deblur, you can click to the YouTube: https://www.youtube.com/watch?v=-vynrami51s
Defog Mode	Better image effect in foggy weather. Anti-fog Intensity can be adjusted from 0 to 100, with a default value of 50.  Note: For more details about Milesight Defog, you can click to the YouTube: https://www.youtube.com/watch?v=a9od7Trao4U

[Display]

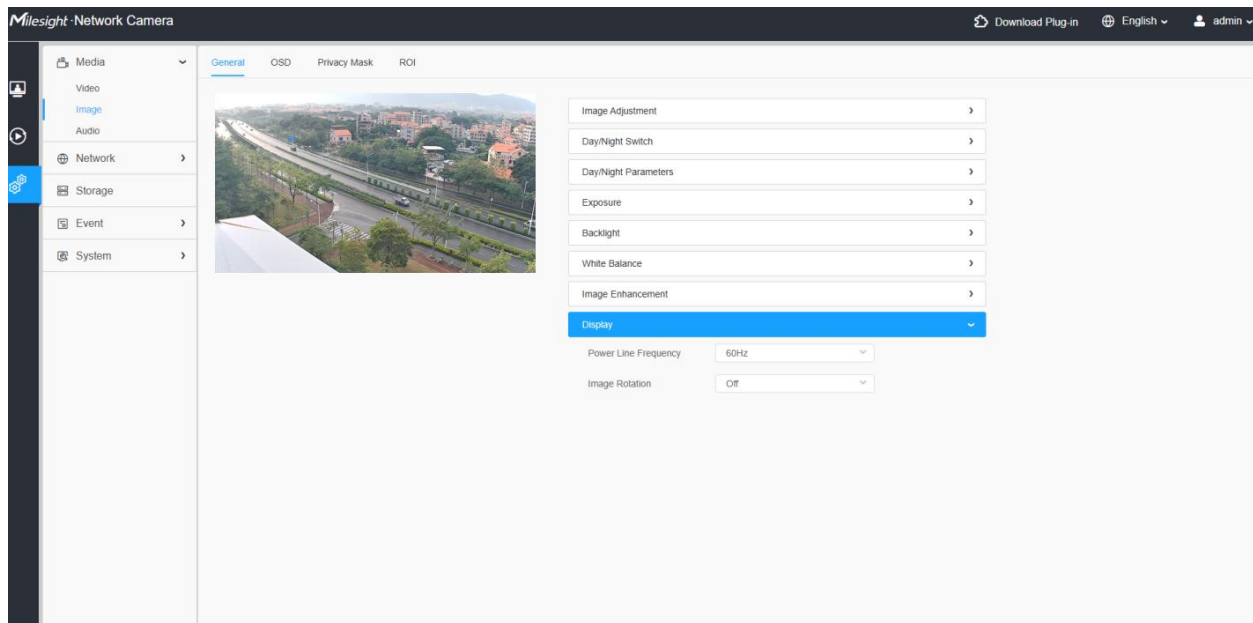


Table 17. Description of the buttons

Parameters	Function Introduction
Power Line Frequency	60Hz and 50Hz are available.
Image Rotation	There are four options available, you can select one to meet your need. Off: Keep the image in normal direction. Rotating 180°: Upside down the image. Flip Horizontal: Flip the image horizontally. Flip vertical: Flip the image vertically.

8.1.2.2 OSD

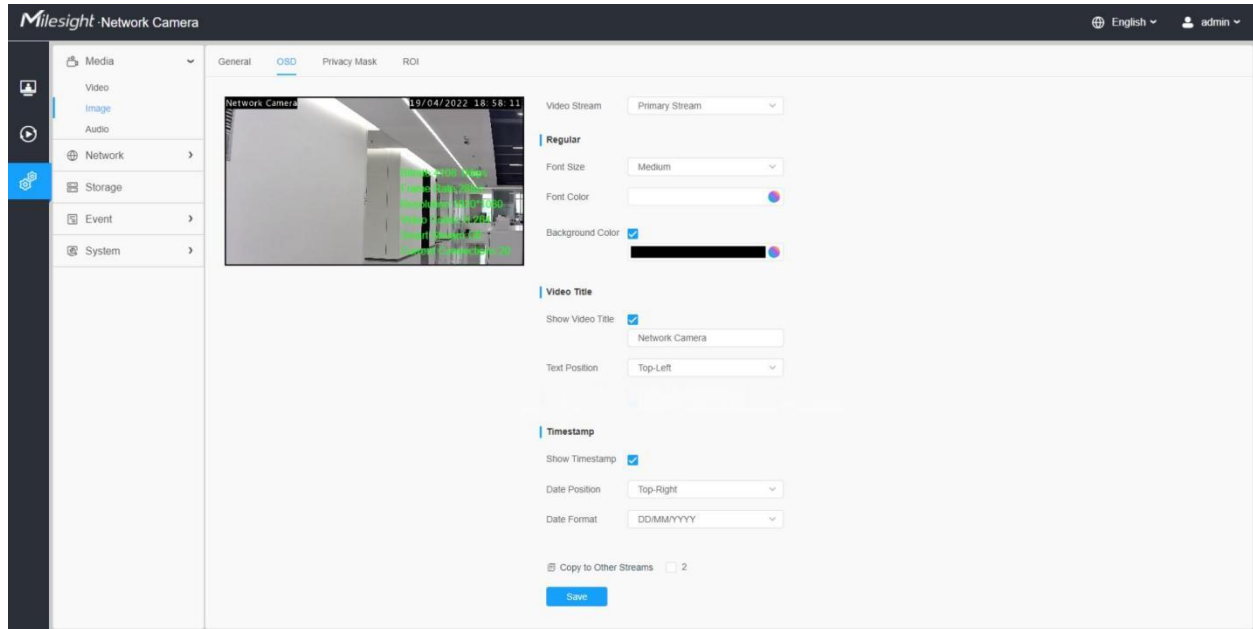


Table 18. Description of the buttons

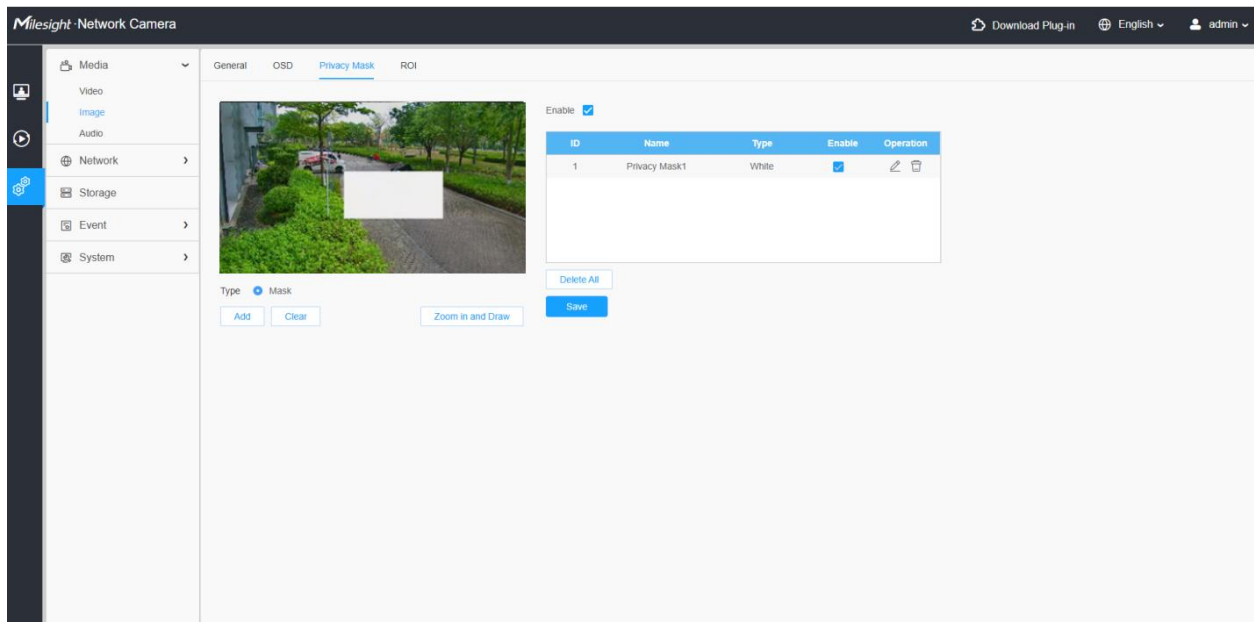
Parameters	Function Introduction
Video Stream	Enable to set OSD for primary stream and secondary stream.
Font Size	Smallest/Small/Medium/Large/Largest/Auto are available for title and date.
Font Color	Enable to set different color for title and date.
Background Color	Enable to set different colors for display information background on screen. You can set different colors for font and background of image , then the image OSD will show as below: 
Show Video Title	Check the check box to show video title.
Video Title	Customize the OSD content.
Text Position	OSD display position on the image.

Parameters	Function Introduction
Show Timestamp	Check the checkbox to display date on the image.
Date Position	Date display position on the image.
Date Format	The format of date.
Copy to Other Streams	Copy the settings to other streams.

8.1.2.3 Privacy Mask

Privacy mask enables to cover certain areas on the live video to prevent certain spots in the surveillance area from being viewed and recorded.

[Privacy Mask]



You can select the color to use for the cover certain areas on the live video.

Note:

- Up to 4 areas are supported.

Table 19. Description of the buttons

Parameters	Function Introduction
Enable	Check the check box to enable the Privacy Mask function.

Parameters	Function Introduction
Type	You can select a color for the privacy areas, Eight colors are available: White, Black, Blue, Yellow, Green, Brown, Red and Purple.
Add	Drew a privacy area on the live video as needed.
Zoom in and Draw	By clicking the ' Zoom in and Draw ' button, you can activate a full-screen pop-up window to draw more accurate detection areas.
Clear	Clear the area you drew on the live video.
Delete All	Clear all areas you drew before.

8.1.2.4 ROI

Region of interest (often abbreviate ROI) is a selected subset of samples within a dataset identified for a particular purpose. Users can select up to 8 key regions of a scene to

transmit through separate streams for targeted preview and recording.

By using Milesight ROI technology, more than 50% of bit rate can be saved and therefore less bandwidth demanded and the storage usage reduced. So according to this, you can set a small bit rate for high resolution.



Note: For more details about how to set ROI, please refer to <https://milesight.freshdesk.com/a/solutions/articles/69000643441>.

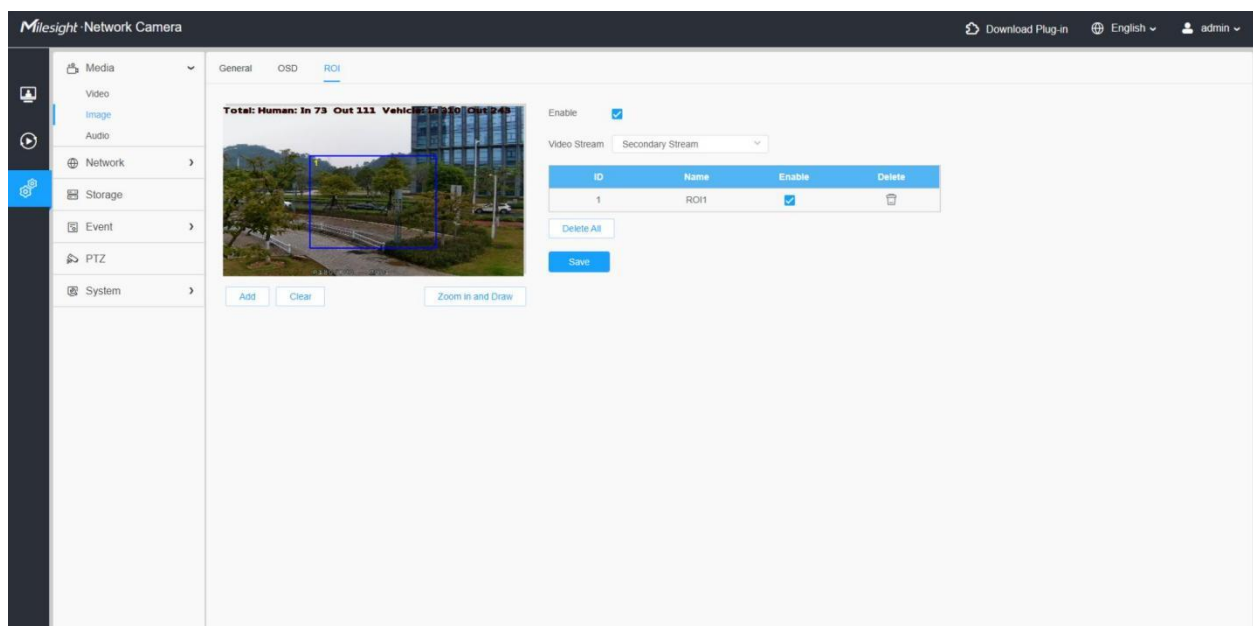
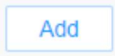


Table 20. Description of the buttons

Parameters	Function Introduction	
Enable	Check the checkbox to enable the ROI function.	
Video Stream	Choose the Video Stream.	
ROI		Enable/disable the selected ROI areas.
ROI		Delete the selected ROI areas.
	Drew a ROI area on the live video as needed.	
	Clear the area you drew on the live video.	
	By clicking the ' Zoom in and Draw ' button, you can activate a full-screen pop-up window to draw more accurate detection areas.	
	Clear all areas you drew before.	

 Note:

- You can set a low bit rate. For example, you can set a bit rate with 512Kbps and a resolution with 1080P, then you can see the image quality of ROI is more clear and fluent than the other region.

8.1.3 Audio

8.1.3.1 Audio

This audio function allows you to hear the sound from the camera or transmit your sound to the camera side. A two-way communication is also possible to be achieved with this feature. Alarm can be triggered when the audio input is above a certain alarm level you set, and configured audio can be played when an alarm occurs.

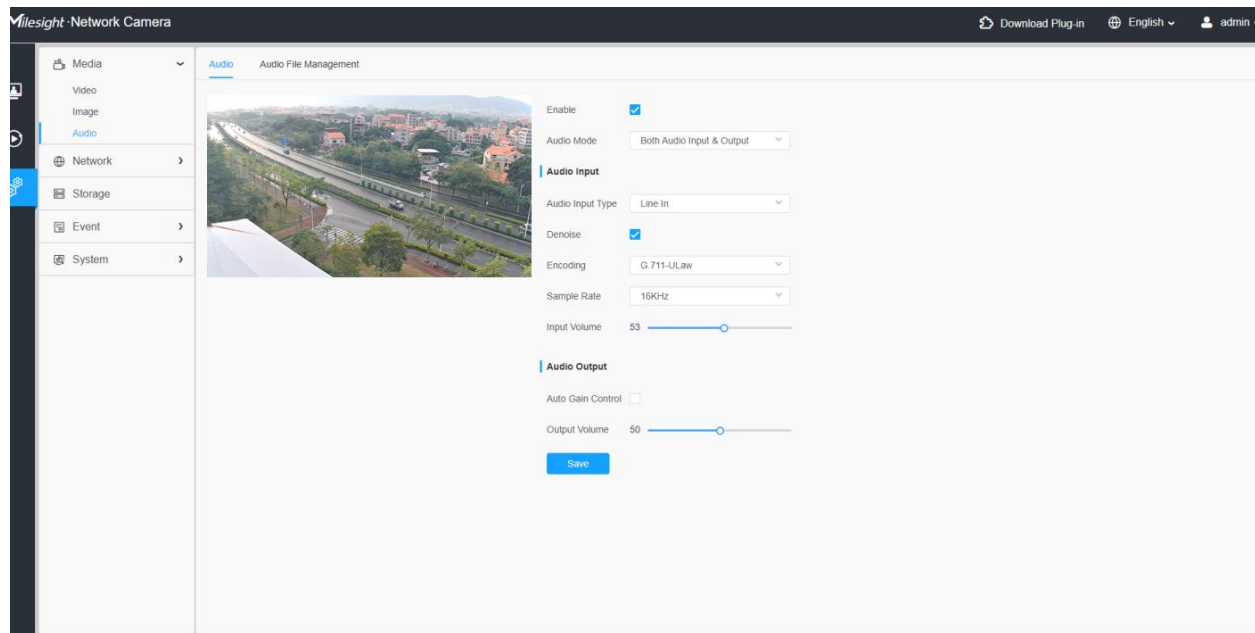
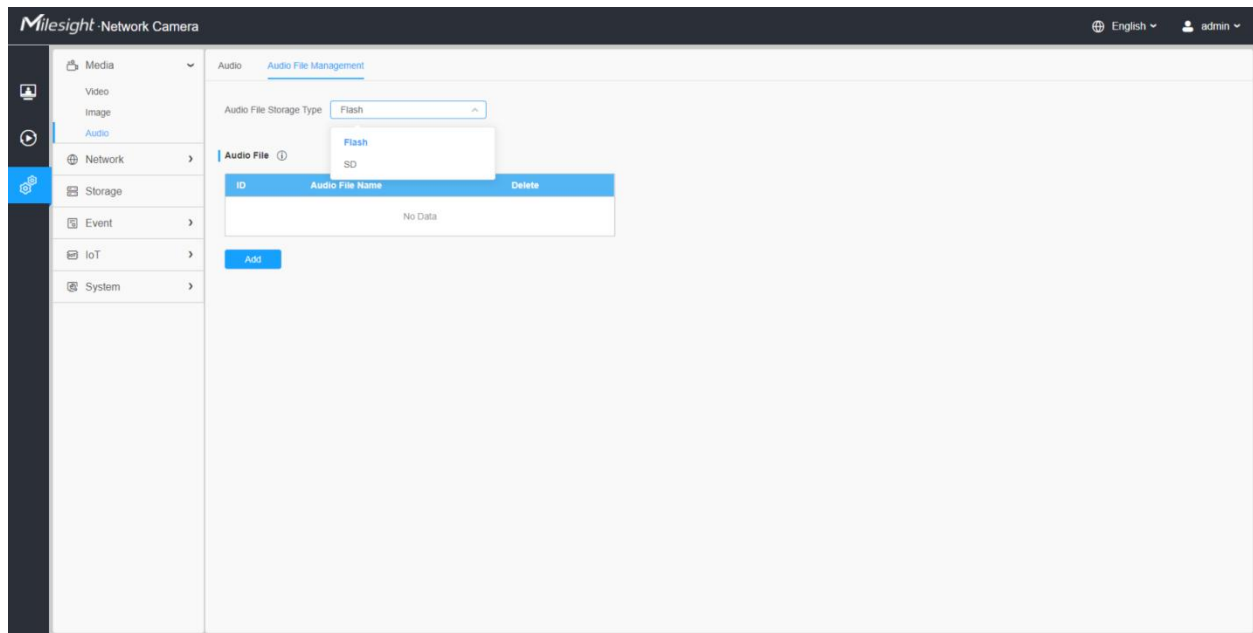


Table 21. Description of the buttons

Parameters	Function Introduction
Enable	Check on the checkbox to enable audio feature.
Audio Mode	Audio Input/Audio Output/Both Audio Input & Output are optional.
Audio Input	Audio Input Type: Mic is available only for models equipped with microphone. Line In is available only for models equipped with an audio input cable. Denoise: Set it as On/Off. When you set the function on, the noise detected can be filtered. Encoding: G.711-ULaw, G.711-ALaw, AAC LC, G.722 and G.726 are available Audio Bit Rate: The function is available only for AAC LC, and supports up to 48kbps. Sample Rate: 8KHz, 16KHz, 32KHz and 48KHz are available. Input Gain: Input audio gain level, 0-100.
Audio Output	Auto Gain Control: This function is only for H.265 series, improve the quality of audio Output Volume: Adjust volume of output

8.1.3.2 Audio File Management

You can upload up to 5 audio files manually to Flash or SD Card on the Audio web page and you can also edit the audio file's name when upload.



 Note:

- The Audio mode and Audio Output are only for certain modules.
- Only support '.wav' audio files with codec type PCM/PCMU/PCMA, 64kbps or 128 kbps and no more than 500k.

8.2 Network

8.2.1 Basic

8.2.1.1 TCP/IP

Table 22. Description of the buttons

Parameters	Function Introduction
IPv4	Type: Static Type and DHCP Type are optional for user to get IPv4 address automatically or use fixed IP address. IPv4 Address: An address that used to identify a network camera on the network. Note: The Test button is used to test if the IP is conflicting. IPv4 Subnet Mask: It is used to identify the subnet where the network camera is located. IPv4 Default Gateway: The default router address. Preferred DNS Server: The DNS Server translates the domain name to IP address.
IPv6	IPv6 Mode: Choose different modes for IPv6: Manual/Route Advertisement/DHCPv6 IPv6 Address: IPv6 Address used to identify a network camera on the network IPv6 Prefix: Define the prefix length of IPv6 address IPv6 Default Gateway: The default router IPv6 address

Parameters	Function Introduction
MTU	Maximum Transmission Unit. The default value is 1500. You can customize the value from 1200 to 1500 as needed.
	Save the configuration.

8.2.1.2 HTTP

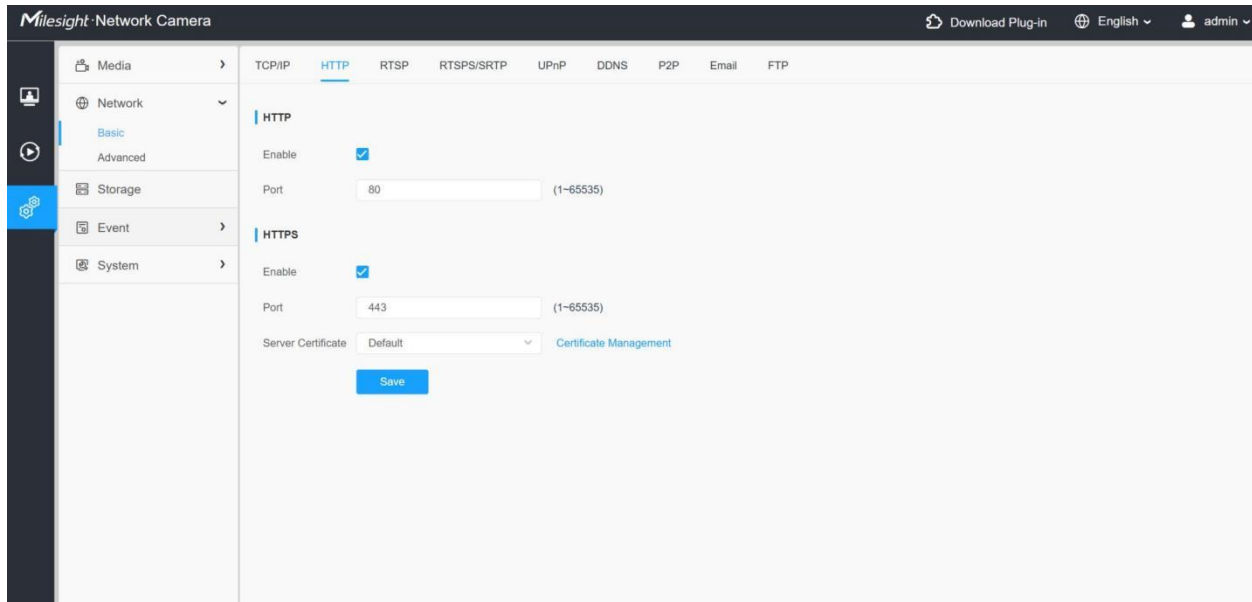


Table 23. Description of the buttons

Parameters	Function Introduction
HTTP	Enable: Start or stop using HTTP. Port: Enter a Web GUI login port from 1 to 65535. The default is 80, same with ONVIF port.
HTTPS	Enable: Start or stop using HTTPSs. Port: Enter a Web GUI login port via HTTPS from 1 to 65535. The default is 443.  Note: For more details about how to enable HTTPS access, see https://milesight.freshdesk.com/a/solutions/articles/69000797384.
Installed Certificate	Upload and set the SSL certificate.
Attributes	
Installation Type	

Parameters	Function Introduction
Save	Save the configurations.

Table 24. HTTP URL are as below:

Stream	URL
Main Stream	https://username:password@IP:port/ipcam/mjpeg.cgi
Secondary Stream	https://username:password@IP:port/ipcam/mjpegcif.cgi
Tertiary Stream	https://username:password@IP:port/ipcam/mjpegthird.cgi

8.2.1.3 RTSP

The screenshot shows the 'RTSP' configuration page in the Milesight Network Camera web interface. The left sidebar contains navigation options: Media, Network (Basic, Advanced), Storage, Event, PTZ, and System. The main content area has tabs for TCP/IP, HTTP, RTSP, UPnP, DDNS, P2P, Email, and FTP. Under the RTSP tab, the following settings are visible:

- RTSP Port: 554 (range 1-65535)
- Playback Port: 555 (range 0-65535)
- RTP Packet: Better Compatibility
- QoS DSCP(0-63): 0
- Multicast Group:
 - Video Stream: Primary Stream
 - Enable: ☒
 - Multicast Group Address: 239.6.6.6 (range 224.0.0.0-239.255.255.255)
 - Port: 7034 (range 1-65535)
- A 'Save' button is located at the bottom of the Multicast Group section.

Table 25. Description of the buttons

Parameters	Function Introduction
RTSP Port	The port of RTSP, the default is 554.

Parameters	Function Introduction	
Playback Port	Playback Port The port of playback, the default is 555.  Note: Port 0 means closing playback function.	
RTP Packet	There are Better Compatibility and Better Performance two options, if your camera's image mess up, please switch this option.	
QoS DSCP	The valid value range of the DSCP is 0-63.	
Multicast Group	Video Stream	Primary Stream or Secondary Stream are optional.
	Enable	Enable or disable the Multicast Group feature.
	Multicast Group Address	Support multicast function.
	Port	The port of multicast group, the default is 7034. The valid value range of the port is 1-65535.
	Save the configuration.	

Table 26. RTSP URL are as below:

Stream	URL
Primary Stream	rtsp://IP:RTSP Port/main
Secondary Stream	rtsp://IP:RTSP Port/sub
Tertiary Stream	rtsp://IP:RTSP Port/third

 Note:

- DSCP refers to the Differentiated Service Code Point; and the DSCP value is used in the IP header to indicate the priority of the data.
- A reboot is required for the settings to take effect.

8.2.1.4 UPnP

Universal Plug and Play (UPnP) is a networking architecture that provides compatibility among networking equipment, software and other hardware devices. The UPnP protocol allows devices to connect seamlessly and to simplify the implementation of networks in the home and corporate environments. With the function enabled, you don't need to configure the port mapping for each port, and the camera is connected to the Wide Area Network via the router.

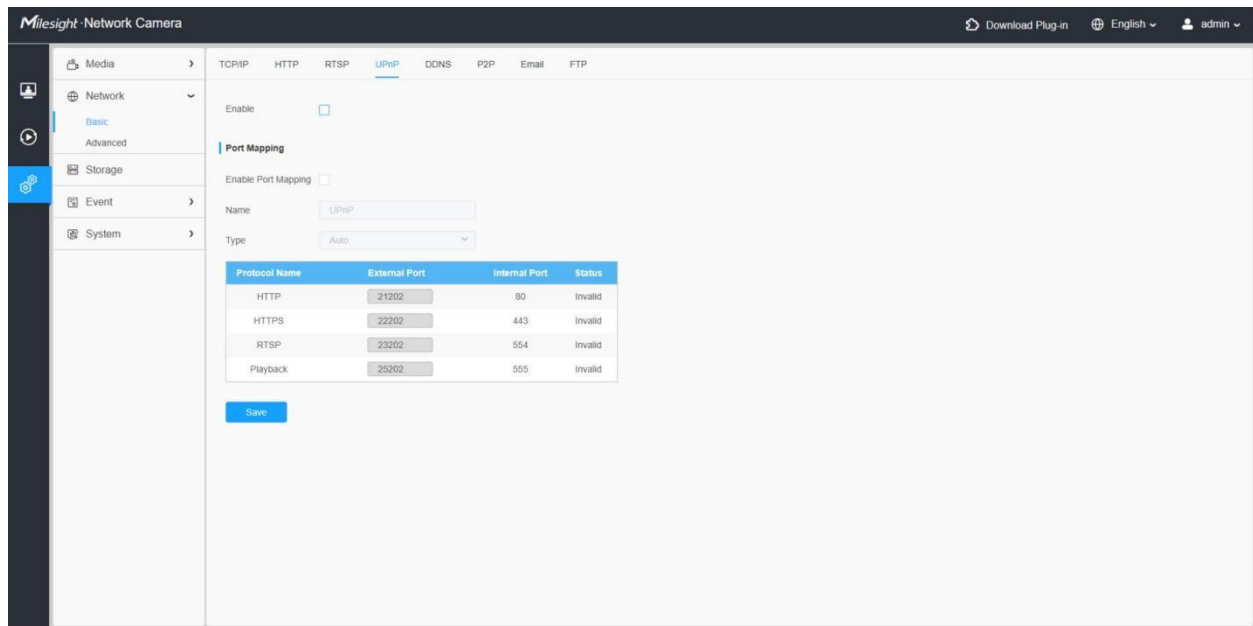


Table 27. Description of the buttons

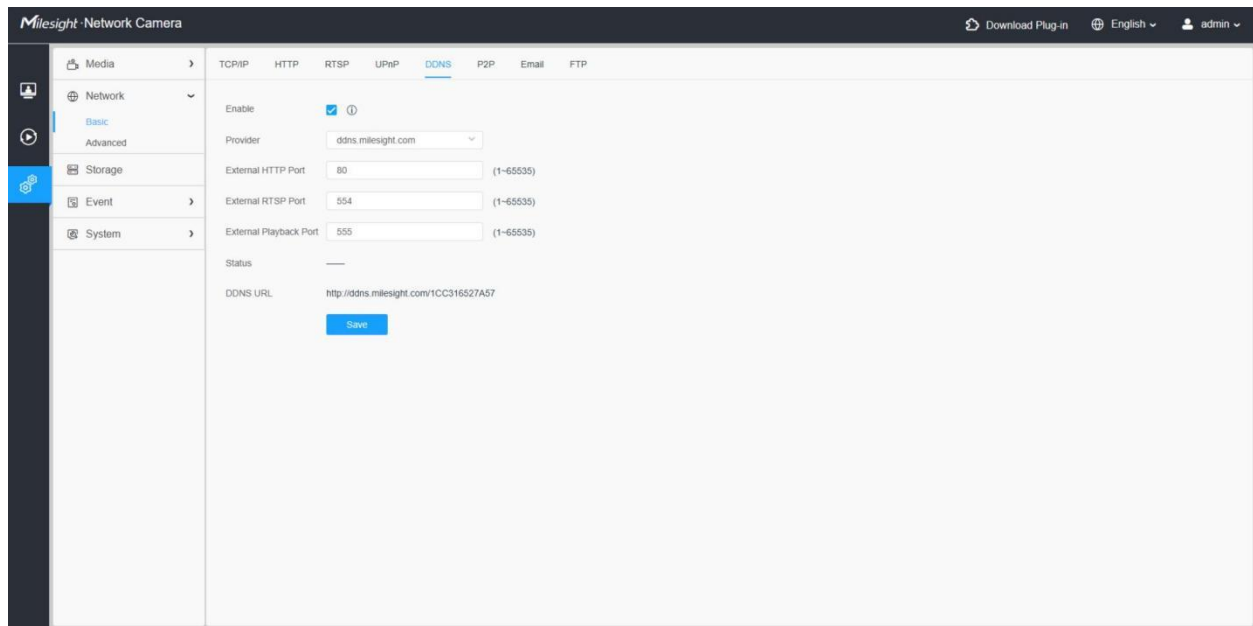
Parameters	Function Introduction
Enable	Check the checkbox to enable the UPnP function.
Enable Port Mapping	Check the checkbox to enable the Port Mapping
Name	The name of the device detected online can be edited
Type	Auto: Automatically obtain the corresponding HTTP and RTSP port, without any settings Manual: Need to manually set the appropriate HTTP port and RTSP Port. When choose Manual, you can customize the value of the port number by yourself
Save	Save the configuration.

8.2.1.5 DDNS

DDNS allows you to access the camera via domain names instead of IP address. It

manages to change IP address and update your domain information dynamically. You need to register an account from a provider.

 **Note:** For more details about how to set DDNS, please refer to <https://milesight.freshdesk.com/a/solutions/articles/69000643406>.



You can choose “ddns.milesight.com” as provider for DDNS. After enabling it, you can access the device via the URL “http://ddns.milesight.com/MAC address”.

Table 28. Description of the buttons

Parameters	Function Introduction
Enable DDNS	Check the checkbox to enable DDNS service.  Note: Recommend to enable and configure UPnP ports which can be used directly in DDNS.
Provider	Get support from DDNS provider: ddns.milesight.com, freedns.afraid.org, dyndns.org, www.no-ip.com, www.zoneedit.com. You can also customize the provider for DDNS.
Hash	A string used for verifying, only for "freedns.afraid.org".
User name	Account name from the DDNS provider, unavailable for "freedns.afraid.org".
Password	Account password, unavailable for "freedns.afraid.org".
Host name	DDNS name enabled in the account.
Status	Display DDNS running status.

Parameters	Function Introduction
Save	Save the configuration.

 Note:

- Please do the Port Forwarding of HTTP Port and RTSP Port before you use Milesight DDNS.
- Make sure that the internal and the external port number of RTSP are the same.

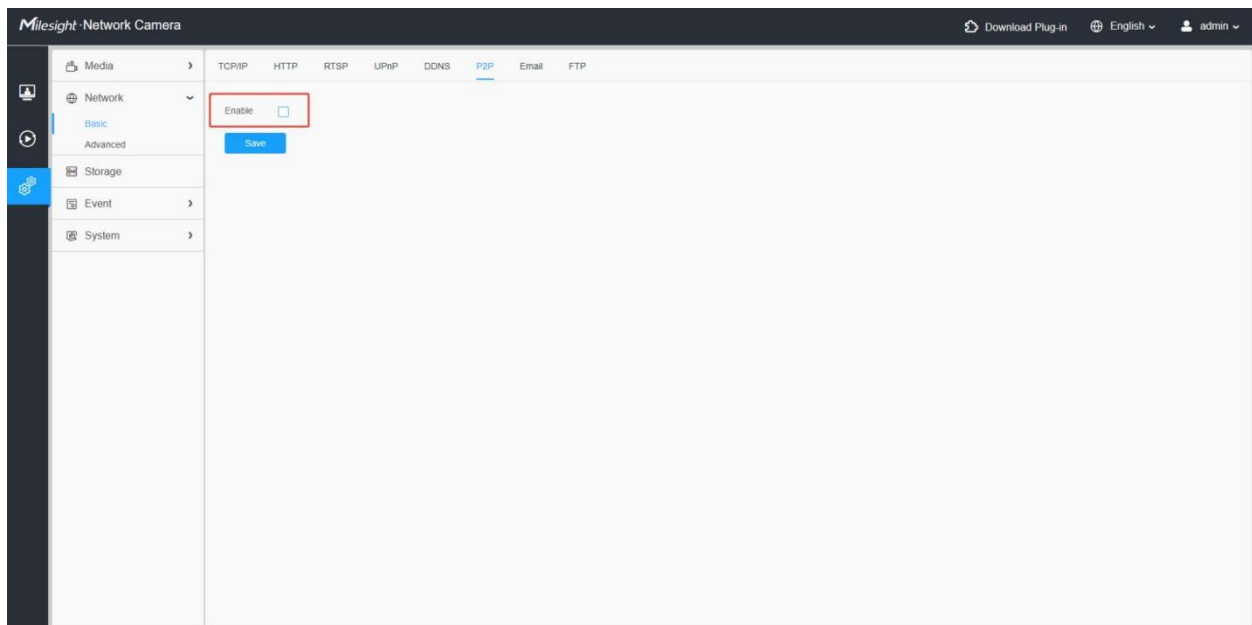
8.2.1.6 P2P

Peer-to-peer (P2P) protocols are network protocols that enable direct communication between nodes (peers) in a network, without requiring a central server or intermediary.

These protocols are fundamental in various applications, including file sharing, distributed computing, and decentralized networks. Milesight camera supports P2P protocol, you can enable it within the Network interface.

You can enable P2P simply by ticking the checkbox.

Note: Before using P2P, please reach out to our support team to activate the P2P feature on our cloud.



8.2.1.7 Email

Alarm video files can be sent to specific mail account through SMTP server. You must configure the email settings correctly before using it.

The screenshot shows the Milesight Network Camera web interface. The top navigation bar includes 'Download Plug-in', 'English', and 'admin'. The left sidebar has icons for Media, Network, Storage, Event, and System. The 'Email' tab is selected and highlighted with a red box. The main content area shows the following configuration options:

- Enable:** A checkbox to enable the email function.
- User Name:** A text field with the value 'hdipnc'.
- Sender Email Address:** A text field with the value 'hdipnc@sina.com'.
- Password:** A text field with masked characters '*****'.
- Email Server:** A text field with the value 'smtp.sina.com'.
- Email Port:** A text field with the value '25' and a note '(1-65535)'.
- Recipient Email Address1:** A text field with the value 'user@domain.com'.
- Recipient Email Address2:** An empty text field.
- Encryption:** Radio buttons for 'None', 'SSL', and 'TLS'.
- Record Settings:**
 - Alarm Record File Name:** A dropdown menu with the value 'YYYY-MM-DD'.
 - Record Format:** A dropdown menu with the value 'AVI' and an information icon.
 - Max Record Segment Size:** A text field with the value '15M'.

Table 29. Description of the buttons

Parameters	Function Introduction
Enable	Check the checkbox to enable Email function.
User Name	The sender's name. It is usually the same as the account name.
Sender Email Address	Email address to send video files attached emails.
Password	The password of the sender.
Email Server	The email server IP address or host name(e.g. smtp.gmail.com).
Email Port	The default TCP/IP port for SMTP is 25(not secured). For SSL/TLS port, it depends on the mail you use.
Recipient Email Address1	Email address to receive video files.
Recipient Email Address2	Email address to receive video files.
Encryption	Check the checkbox to enable SSL or TLS if it is required by the SMTP server. You can also select None .
Record Settings	Alarm Record File Name: Default(YYYY-MM-DD) /MM-DD-YYYY/ DD- MM-YYYY/ Add prefix/ Customize are available. Record Format: Selects the recording file format; MP4 and AVI are available. Max Record Segment Size: Limits the size of each recording file.

Parameters	Function Introduction
Snapshot Settings	Alarm Snapshot File Name: Default(YYYY-MM-DD) /MM-DD-YYYY/ DD- MM-YYYY/ Add prefix/ Customize are available. Timing Snapshot File Name: Default(YYYY-MM-DD) /MM-DD-YYYY/ DD- MM-YYYY/ Add prefix/ Customize are available.
Save	Save the configuration.
Test	Test whether the configurations are successful.

 **Note:** You can refer to the following file name tip to customize the file name.

File Name Tip
 &Device - Device Name
 &Y - Year
 &M - Month
 &D - Day
 &h - hour
 &m - minute
 &s - second
 &ms - millisecond
 && - &

8.2.1.8 FTP

Alarm video files can be sent to specific FTP server. You must configure the FTP settings correctly before using it.

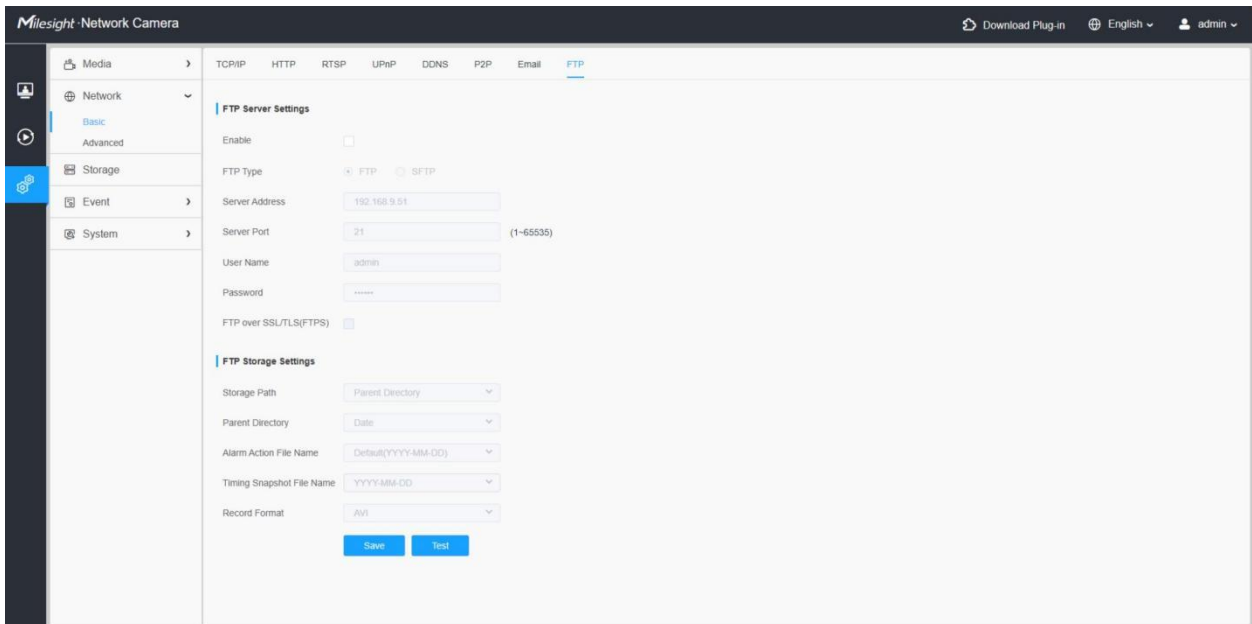


Table 30. Description of the buttons

Parameters		Function Introduction
FTP Server Settings	Enable	Check the checkbox to enable the FTP function.
	FTP Type	FTP and SFTP are optional.
	Server Address	FTP/SFTP server address.
FTP Server Settings	Server Port	The port of the FTP server. Generally it is 21. The port of the SFTP server. Generally it is 22.
	User Name	User name used to log in to the FTP/SFTP sever.
	Password	User password.
FTP Storage Settings	Storage Path	Storage Path where video and image will be uploaded to the FTP server. Four FTP storage path types are available, including Root Directory, Parent Directory, Child Directory and Customize.
FTP Storage Settings	Parent Directory	Choose IP Address/ Device Name/ Date as the folder name of Parent Directory, or customize the folder name.
	Child Directory	Choose IP Address/ Device Name/ Date as the folder name of Child Directory, or customize the folder name.
FTP Storage Settings	Multilevel Folder Name	If the storage path is more than two levels, enter Multilevel FTP storage path here manually.
	Alarm Action File Name	Choose the default(YYYY-MM-DD) or customize the alarm action file name.
	Video File Name	If you choose to customize the alarm action file name, YYYY-MM-DD/ MM-DD-YYYY/ DD-MM-YYYY/ Add prefix are available.
	Image File Name	If you choose to customize the alarm action file name, YYYY-MM-DD/ MM-DD-YYYY/ DD-MM-YYYY/ Add prefix are available.
	Timing Snapshot File Name	Default(YYYY-MM-DD) /MM-DD-YYYY/ DD-MM-YYYY/ Add prefix/ Overwrite with the base file name are available.
	Pre Second	Reserve the record time before alarm, 0~10 sec.
	Record Format	AVI and MP4 are optional.
Save		Save the configuration, 0s ~ 10s are optional.

Parameters	Function Introduction
Test	Test whether the configuration is successful.

 Note:

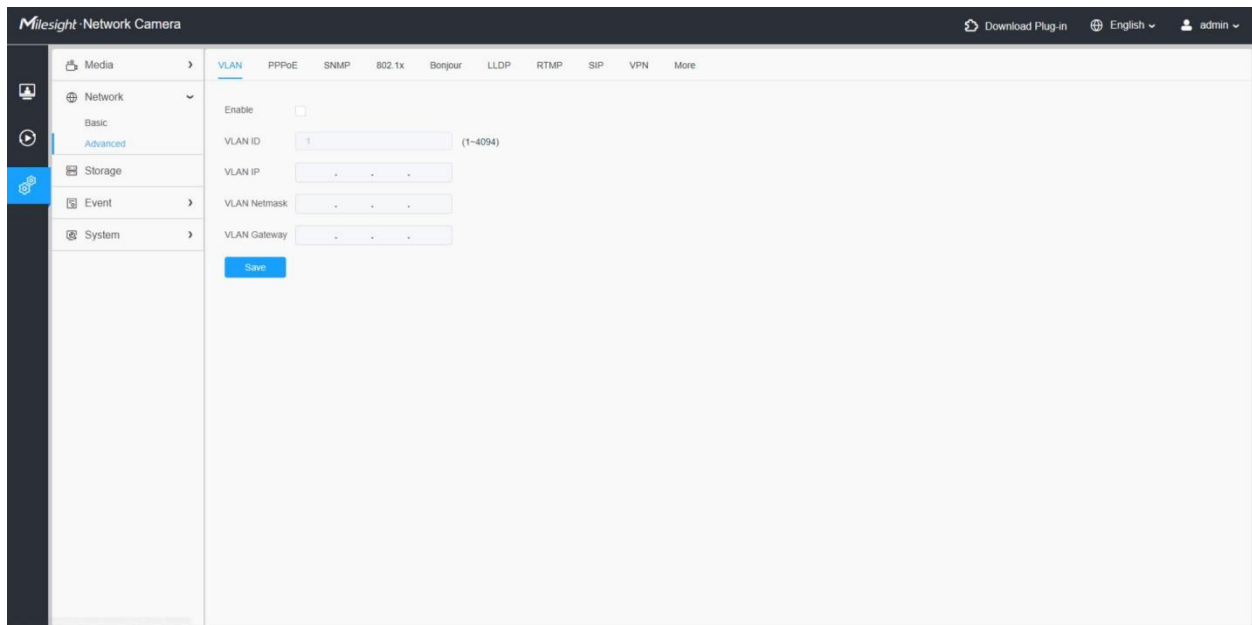
- Parent Directory will be under Root Directory, and Child Directory will be under Parent Directory.
- You can refer to the following file name tip to customize the file name.

8.2.2 Advanced

8.2.2.1 VLAN

A virtual LAN (VLAN) is any broadcast domain that is partitioned and isolated in a computer network at the data link layer (OSI layer 2). LAN is an abbreviation of local area network.

VLANs allow network administrators to group hosts together even if the hosts are not on the same network switch. This can greatly simplify network design and deployment, because VLAN membership can be configured through software. Without VLANs, grouping hosts according to their resource needs necessitates the labour of relocating nodes or rewiring data links.



 **Note:** About how to set up VLAN in switches, please refers to your switches user manual.

8.2.2.2 PPPoE

This camera supports the PPPoE auto dial-up function. The camera gets a public IP address by ADSL dial-up after the camera is connected to a modem. You need to configure the PPPoE parameters of the network camera.

The screenshot shows the Milesight Network Camera web interface. The top navigation bar includes 'Download Plug-in', 'English', and 'admin'. The left sidebar has a menu with 'Media', 'Network', 'Storage', 'Event', and 'System'. The 'Network' menu is expanded, showing 'Basic' and 'Advanced' options. The 'Advanced' option is selected, and the 'PPPoE' tab is active. The configuration form includes fields for 'Enable' (checkbox), 'Dynamic IP' (text box with '0.0.0.0'), 'User Name', 'Password', and 'Confirm Password'. A 'Save' button is at the bottom of the form.

**Note:**

- The obtained IP address is dynamically assigned via PPPoE, so the IP address always changes after rebooting the camera. To solve the inconvenience of the dynamic IP, you need to get a domain name from the DDNS provider (e.g. DynDns.com).
- The user name and password should be assigned by your ISP.

8.2.2.3 SNMP

You can set the SNMP function to get camera status, parameters and alarm related information and manage the camera remotely when it is connected to the network.

Before setting the SNMP, please download the SNMP software and manage to receive the camera information via SNMP port. By setting the Trap Address, the camera can send the alarm event and exception messages to the surveillance center.

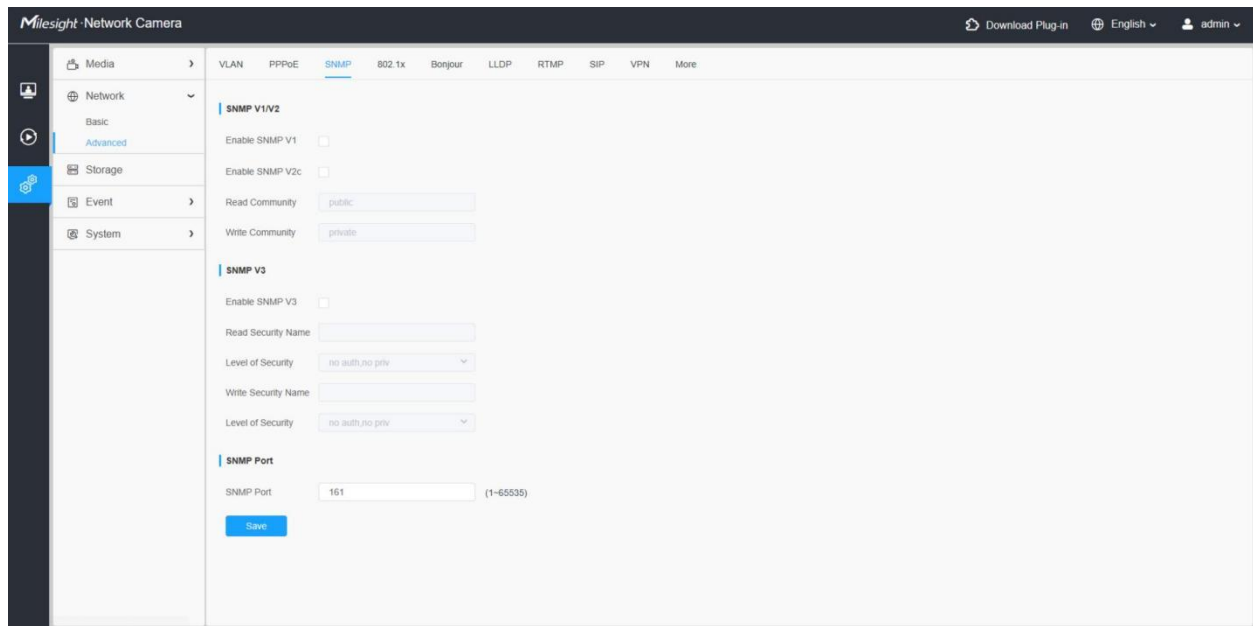


Table 31. Description of the buttons

Parameters	Function Introduction
SNMP v1/v2	The version of SNMP, please select the version of your SNMP software. Enable SNMP v1: Provide no security. Enable SNMP v2: Require community string for access. Write Community: Input the name of Write Community. Read Community: Input the name of Read Community
SNMP v3	Enable SNMP v3: Provide encryption and the HTTPS protocol must be enabled. 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 port of SNMP, the default is 161.
Save	Save the configuration.

 Note:

- The settings of SNMP software should be the same as the settings you configure here.
- A reboot is required for the settings to take effect.

8.2.2.4 802.1x

The IEEE 802.1X standard is supported by the network cameras, and when the feature is enabled, the camera data is secured and user authentication is needed when connecting the camera to the network protected by the IEEE 802.1X.

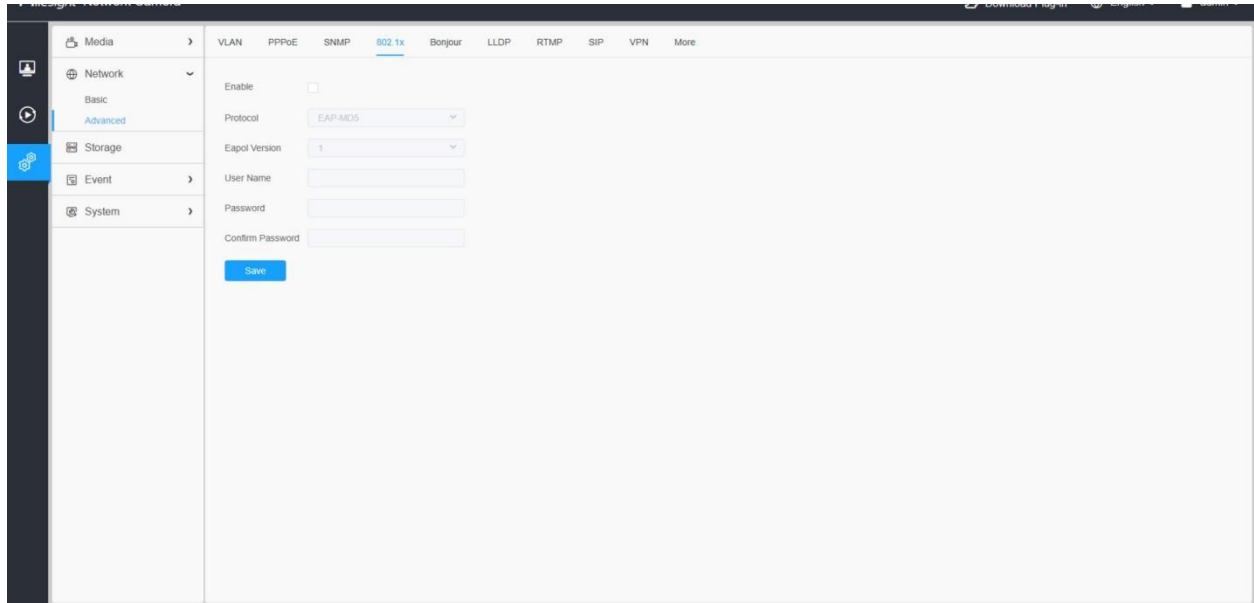


Table 32. Description the Buttons

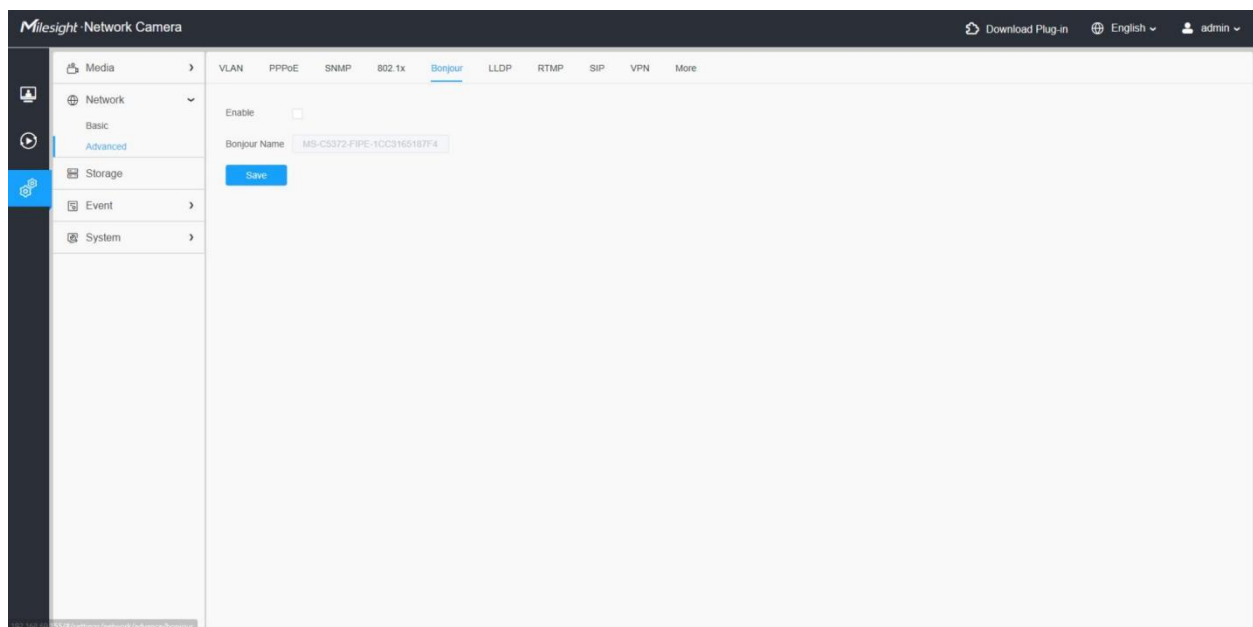
Parameters		Function Introduction
Enable		Start or stop using 802.1x certification.
Protocol		Choose the protocol, EAP-MD5 and EAP-TLS are available.
EAP-MD5	Eapol Version	This version number helps ensure compatibility between devices implementing different versions of the EAPOL protocol. Version 1 and version 2 can be chosen.
	User Name	EAP-MD5 encryption account name.
	Password	EAP-MD5 encryption account password.
	Confirm Password	Re-enter the EAP-MD5 encryption account password.
	Identify	EAP-TLS encryption account name.  Note: Please insert letters/digits/space/other standard characters, and make sure the amount of identify not more than 32.
	Eapol Version	Version 1 and version 2 can be chosen.
	Client Certificate	Upload and set the client certificate.

Parameters		Function Introduction
EAP-TLS	Private Key	The key certificate in the client certificate.
	Private-key Password	Enter the password of the client certificate Note: Please insert letters/digits/other standard characters, and make sure the amount of password not more than 32
	CA Certificate	Upload and set the CA certificate.

8.2.2.5 Bonjour

Bonjour is based on Apple's multicast DNS service. Bonjour devices can automatically broadcast their service information and listen to the service information of other devices.

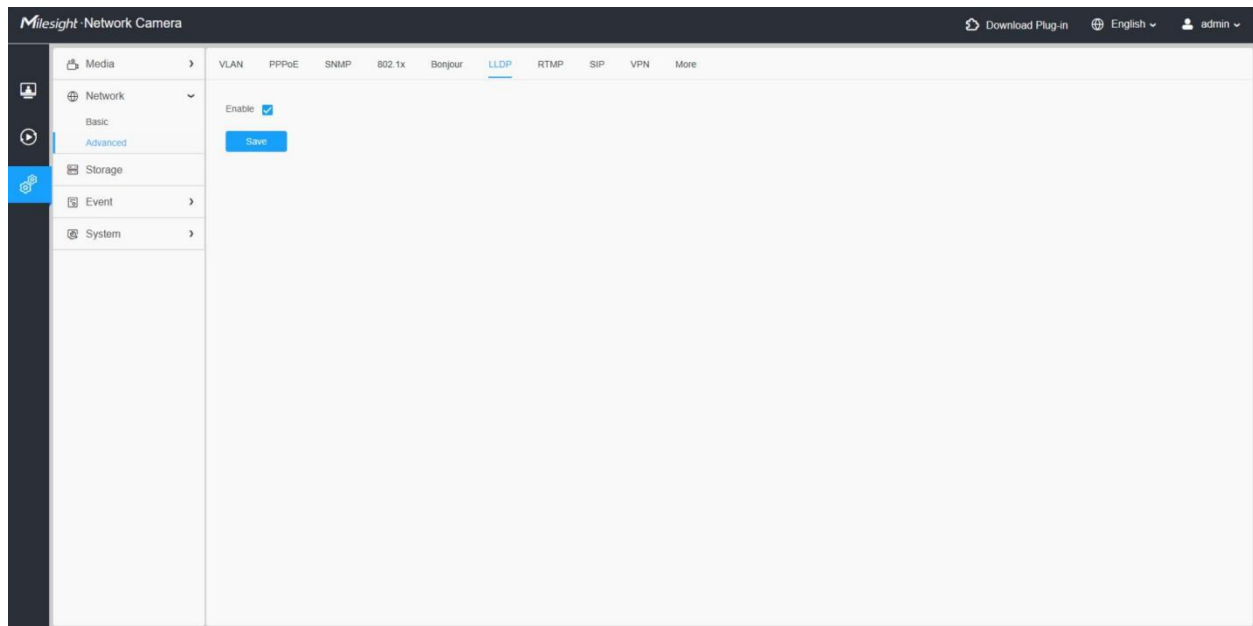
If you don't know the camera information, you can use the Bonjour service on the same LAN to search for network camera devices and then to access the devices.



8.2.2.6 LLDP

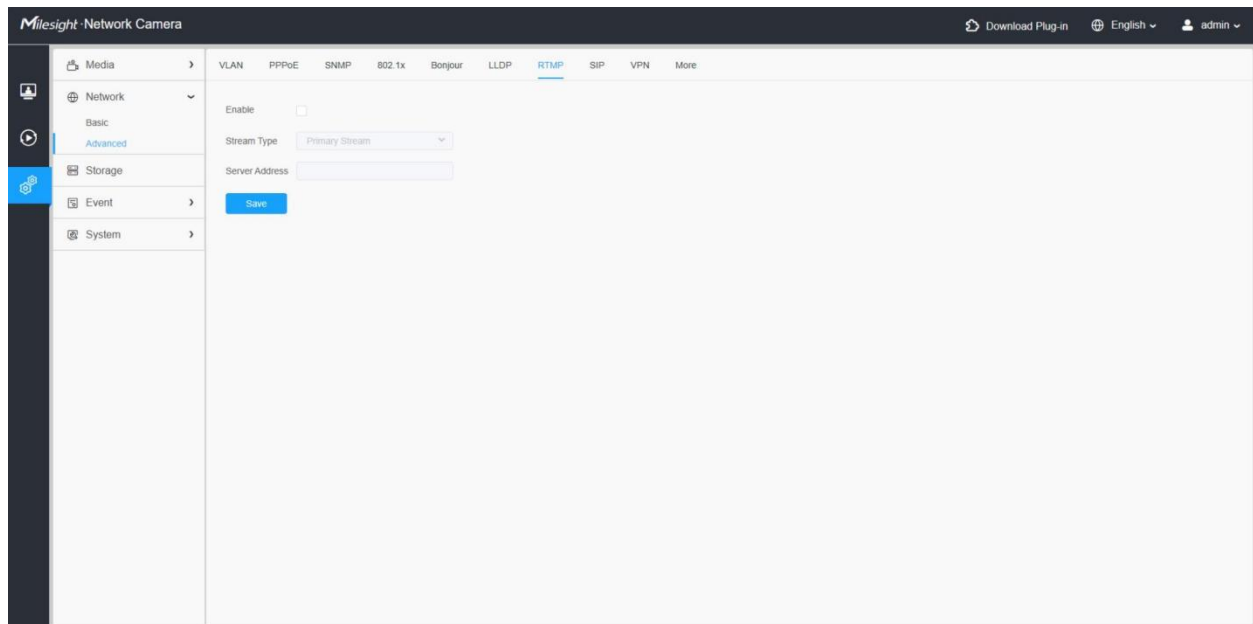
The Link Layer Discovery Protocol (LLDP) is a standardized network discovery protocol used by network devices to advertise their identity, capabilities, and neighbors on a local area network (LAN). It operates at the data link layer (Layer 2) of the OSI model. LLDP is defined by the IEEE 802.1AB standard. By using this protocol, devices can automatically discover and understand each other's presence and capabilities, which simplifies network management and configuration.

Once the LLDP protocol is enabled, you can obtain the camera's information on your switch that supports the LLDP protocol.



8.2.2.7 RTMP

Real-Time Messaging Protocol (RTMP) was initially a proprietary protocol for streaming audio, video and data over the Internet, between a Flash player and a server. RTMP is a TCP-based protocol which maintains persistent connections and allows low-latency communication. It can realize the function of live broadcast so that customers can log in to the camera wherever there is a network.



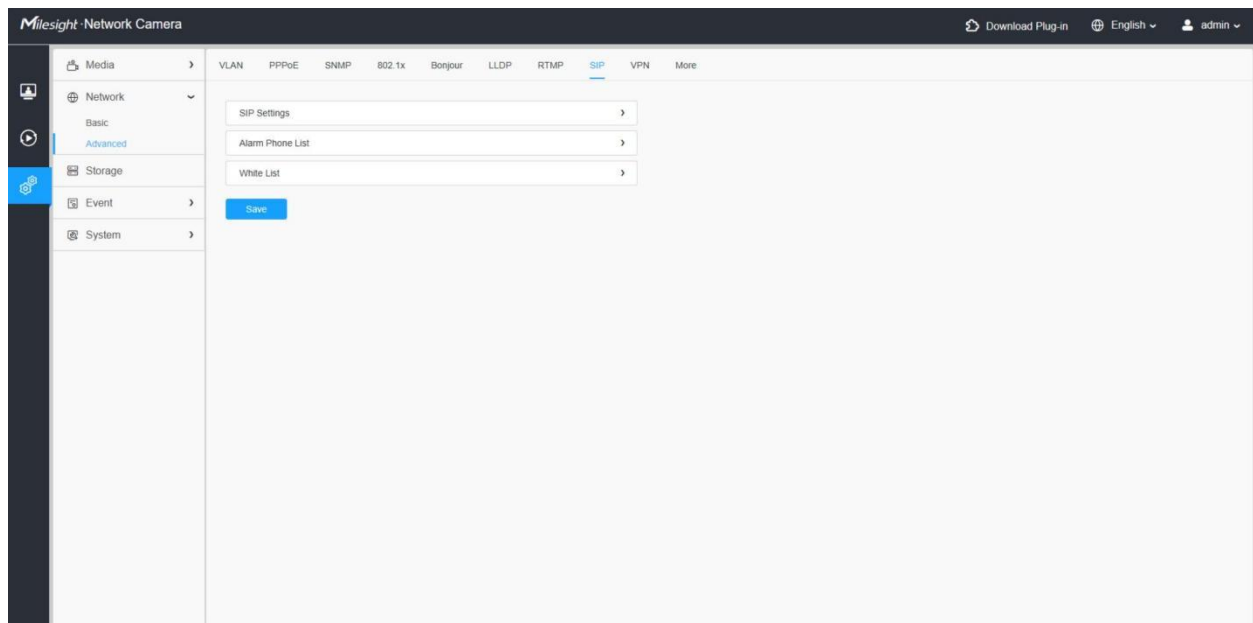
Note:

- For YouTube live broadcast, if you use a newly created account to live broadcast, you need to wait for 24hrs to activate the account for using live function.
- For RTMP, since G.711 is not available for YouTube, so you can only play video from Milesight Network Camera with H.264 video coding and AAC audio coding on YouTube.
- Server Address in Network Camera RTMP interface needs to be filled with the format: `rtmp://< Server URL >/< Stream key >`, remember it needs `'/'` to connect between `< Server URL >` and `< Stream key >`.
- RTMP function is only supported on MS-Cxxxx-PA models.
- For more details about how to use RTMP for live broadcast, please refer to <https://milesight.freshdesk.com/a/solutions/articles/69000643313>.

8.2.2.8 SIP

The Session Initiation Protocol(SIP) is a signaling communications protocol, widely used for controlling multimedia communication sessions such as voice and video calls over Internet Protocol (IP) networks. This page allows user to configure SIP related parameters. Milesight can be configured as SIP endpoint to call out when alarm triggered; or allow permitted number to call in to check the video if the video IP phone is used.

 **Note:** For more details about how to use SIP, please refer to <https://milesight.freshdesk.com/a/solutions/articles/69000643391>.



To use this function, the settings in SIP page must be configured properly. There are two ways to get video through SIP, one is to dial the IP address directly, the other is account registration mode. the details are as follows:

Method 1: IP Direct mode

Dial on the camera's IP address directly through SIP phone, so you can see the video. **Note:** SIP phone and the camera should in the same network segment.

Method2: Account registration mode

- Before using the SIP, you need to register an account for the camera from the SIP server;
- Register another user account for the SIP device from the same SIP server;
- Call the camera User ID from the SIP device, you will get the video on the SIP device.

[SIP Settings]

SIP Settings

Enable ☐ ⓘ

Register Mode Enable

User ID 500

User Name sipclient

Password *****

Server Address 192.168.5.101

Server Port 5060 (1~65535)

Connection Protocol UDP

Video Stream Secondary Stream

Enable Audio in SIP Call ☐

Max Call Duration 1800 s (0 means no limitation.)

Status Unregistered

Alarm Phone List >

White List >

Save

Table 33. Description of the buttons

Parameters	Function Introduction
Enable	Start or stop using SIP. Note: SIP supports Direct IP call.
Register Mode	Choose to use Enable mode or Disable mode. Enable mode means to use SIP with register account. Disable mode refers to use SIP without register account, just use the IP address to call.

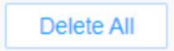
Parameters	Function Introduction
User ID	SIP ID.
User Name	SIP account name.
Password	SIP account password.
Server Address	Server IP address.
Server Port	Server port.
Connection Protocol	UDP/TCP.
Video Stream	Choose the video stream.
Enable Audio in SIP Call	Enable/disable audio in SIP call.
Max Call Duration	The max call duration when use SIP.
Status	SIP registration status. Display “Unregistered” or “Registered” .

[Alarm Phone List]

The screenshot shows a web interface for SIP Settings. At the top is a 'SIP Settings' header with a right arrow. Below it is a blue 'Alarm Phone List' section with a dropdown arrow. Inside this section is a table with the following headers: SIP Phone, Phone Type, Remark Name, Duration, and Delete. The table body is empty, displaying 'No Data'. Below the table is an 'Add' button. Underneath the 'Add' button is a 'White List' section with a right arrow. At the bottom of the interface is a blue 'Save' button.

Table 34. Description of the buttons

Parameters	Function Introduction
------------	-----------------------

Parameters	Function Introduction
	Add alarm phone to the camera. Phone Type: Phone Number(Call by phone number) & Direct IP Call(Check to accept peer to peer IP call). To Phone Number/IP Address: Call by phone number or IP address. Remark Name: Display name. Duration: The time schedule to use SIP.
	Delete the selected alarm phone.
	Delete all added alarm phone.

[White List]

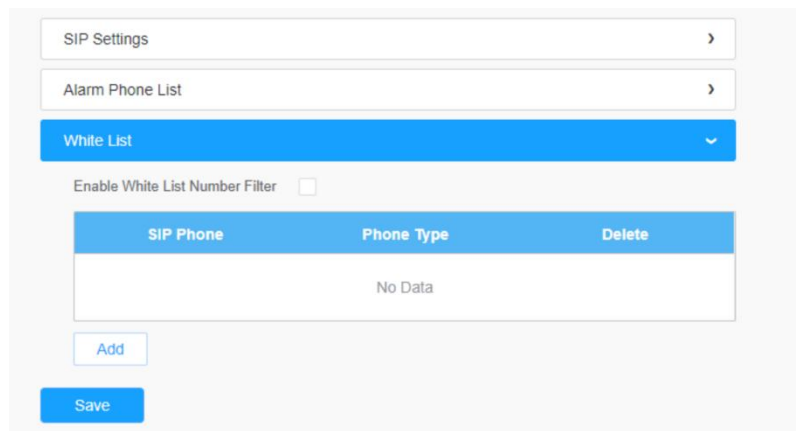


Table 35. Description of the buttons

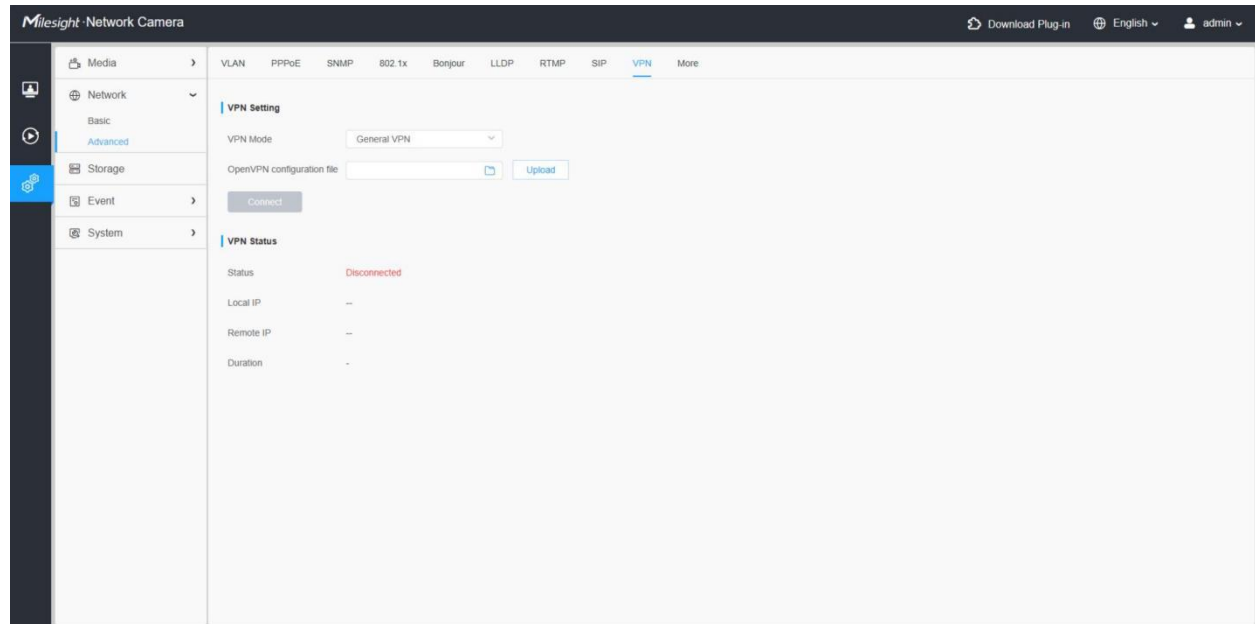
Parameters	Function Introduction
Enable White List Number Filter	When enabled, only the designated phone number or IP address can visit
	Phone Type: Phone Number(Call by phone number) & Direct IP Call. Phone Number/IP Address: Including the phone number or IP address on the white list.

8.2.2.9 VPN

VPN stands for Virtual Private Network. It is a network protocol that can provide you secure encrypted connection over the public internet. It is a significant technology in surveillance industry. Imagine that you have a network camera connected via public IP address, it's possible for others to log in or listen illegally if someone knows the specific IP address and forwarded port. Via VPN the camera streams and data will be

transferred through an encrypted tunnel. This encrypted VPN tunnel makes it appear as though you are directly connected to the private network, keeping your online activity (including your browsing history) hidden. For Milesight camera, VPN feature allows us to log in the camera via a virtual IP, which makes it easier to configure the camera remotely.

For more details about **How to use VPN on Milesight Camera**, please refer to <https://milesight.freshdesk.com/support/solutions/articles/69000829102-how-to-use-vpn-on-milesight-network-camera>.



8.2.2.10 More

Here you can set more functions, like Push Message Settings and ONVIF Settings.

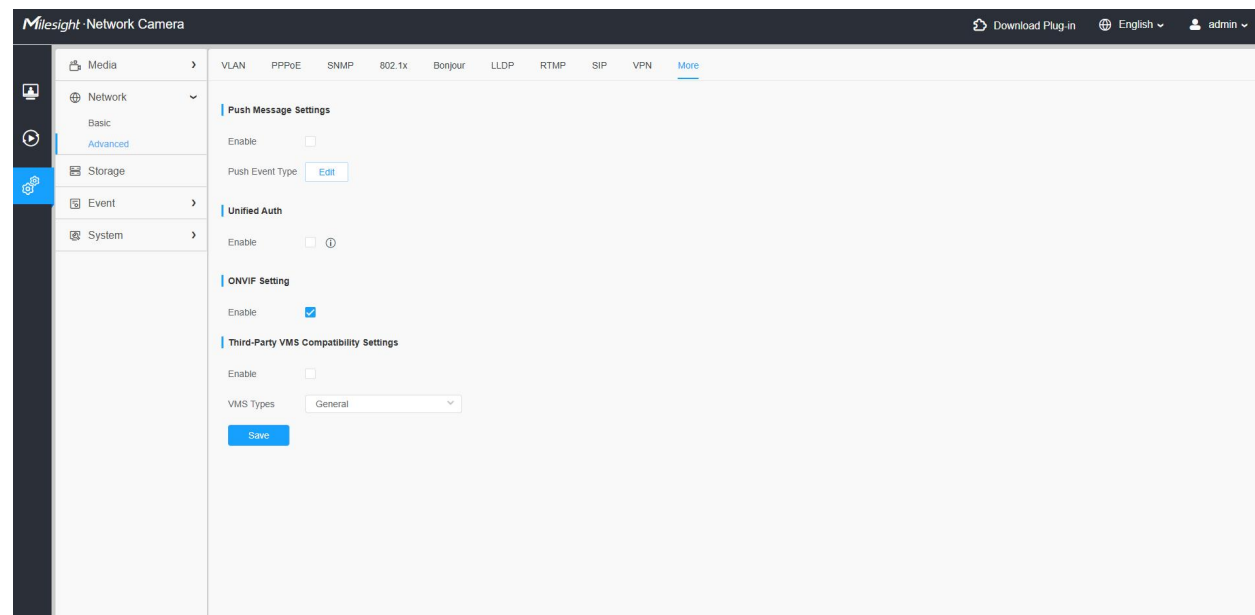
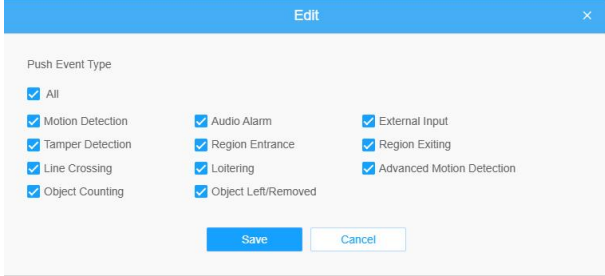
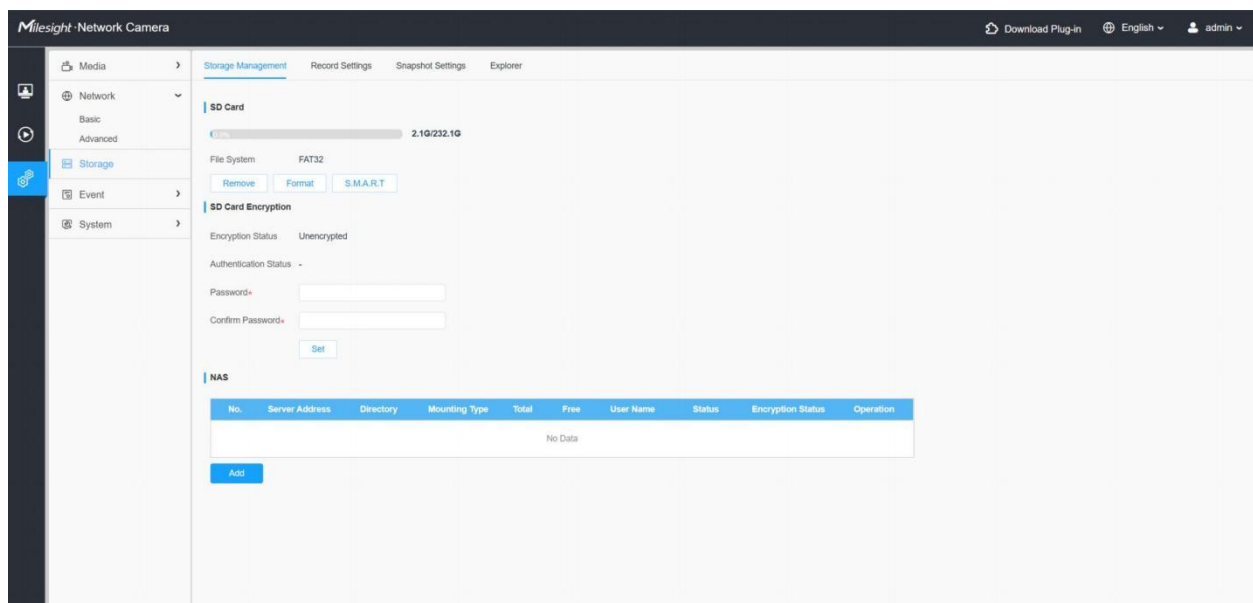


Table 40. Description of the buttons

Parameters	Function Introduction
Push Message Settings	Enable: Enable/disable the Push Message function. Push Event Type: You can click Edit to choose the types of Events' message which will be pushed to M-sight Pro and i-SightApp as shown below: 
Unified Auth	Enable to let your browser remember login details for next time and enable passwordless login.
ONVIF Setting	Enable: Select to enable/disable the camera's ONVIF function; enabled by default, allowing third-party software to search, add and connect via ONVIF protocols.
Third-Party VMS Compatibility Settings	Enable: Check the checkbox to enable compatibility with third-party VMS systems. VMS Types: Select the desired third-party VMS type for compatibility.

8.3 Storage

8.3.1 Storage Management



- Insert the SD card into the SD card slot of the device. After that, it will be automatically detected , and the detailed information of the SD card will be displayed on the SD Card bar.

- In the SD card bar, you can click on **Remove** to remove the SD card or click on **Format** to format the SD card and clear all files on it. It supports two file system formats including EXT4 and FAT32, and EXT4 is recommended to prevent data loss during card ejection or power failure, while FAT32 offers better compatibility for Operating systems.

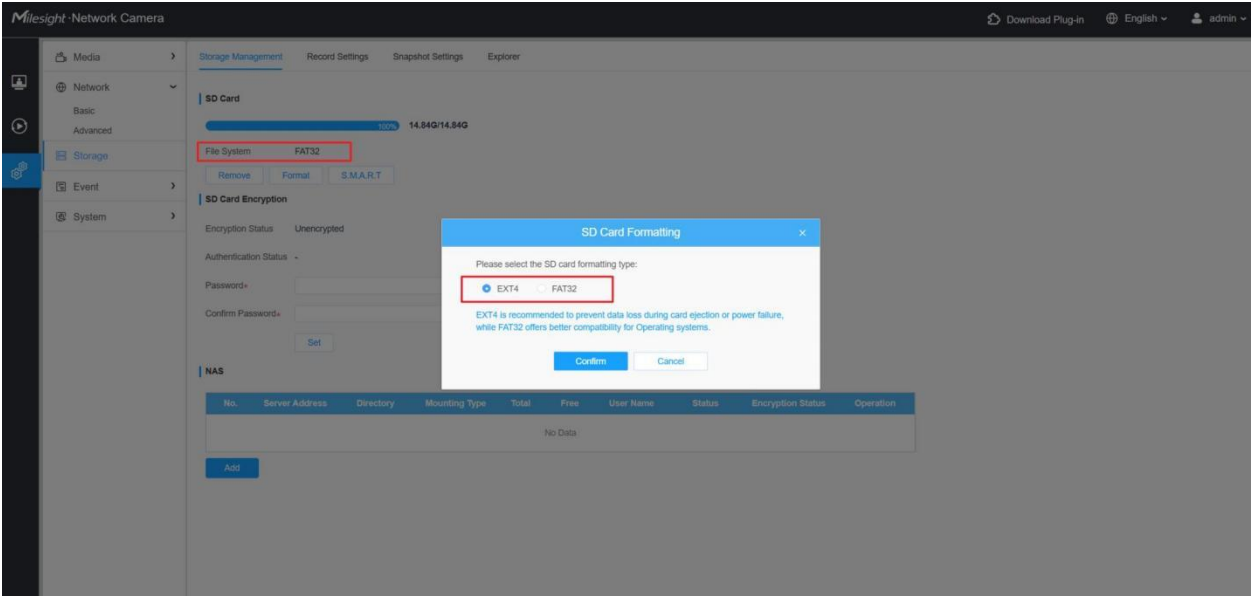
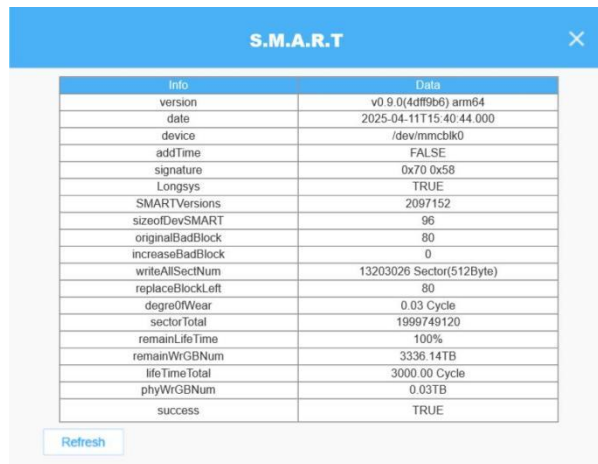


Table 38. Description of the buttons

Parameters	Function Introduction
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Parameters	Function Introduction																																								
SD Card	Format: Format SD card, the files in SD card will be removed. Remove: Remove SD card. Encryption Status: Show the encryption status of the SD card, including Encrypted and Unencrypted. S.M.A.R.T: It is used to detect and display the SD card's health status. Click to view detailed health status information and the following window will displayed.  The screenshot shows a window titled 'S.M.A.R.T.' with a close button. It contains a table with two columns: 'Info' and 'Data'. <table border="1"> <thead> <tr> <th>Info</th><th>Data</th></tr> </thead> <tbody> <tr><td>version</td><td>v0.9.0(4df9b6) arm64</td></tr> <tr><td>date</td><td>2025-04-11T15:40:44.000</td></tr> <tr><td>device</td><td>/dev/mmcblk0</td></tr> <tr><td>addTime</td><td>FALSE</td></tr> <tr><td>signature</td><td>0x70 0x58</td></tr> <tr><td>Longsys</td><td>TRUE</td></tr> <tr><td>SMARTVersions</td><td>2097152</td></tr> <tr><td>sizeOfDevSMART</td><td>96</td></tr> <tr><td>originalBadBlock</td><td>80</td></tr> <tr><td>increaseBadBlock</td><td>0</td></tr> <tr><td>writeAllSectNum</td><td>13203026 Sector(512Byte)</td></tr> <tr><td>replaceBlockLeft</td><td>80</td></tr> <tr><td>degreeOfWear</td><td>0.03 Cycle</td></tr> <tr><td>sectorTotal</td><td>1999749120</td></tr> <tr><td>remainLifeTime</td><td>100%</td></tr> <tr><td>remainWrGBNum</td><td>3336.14TB</td></tr> <tr><td>lifeTimeTotal</td><td>3000.00 Cycle</td></tr> <tr><td>phyWrGBNum</td><td>0.03TB</td></tr> <tr><td>success</td><td>TRUE</td></tr> </tbody> </table> Below the table is a 'Refresh' button. Authentication Status: Display the authentication status. Password/ Confirm Password: Enter the password to lock you SD card.	Info	Data	version	v0.9.0(4df9b6) arm64	date	2025-04-11T15:40:44.000	device	/dev/mmcblk0	addTime	FALSE	signature	0x70 0x58	Longsys	TRUE	SMARTVersions	2097152	sizeOfDevSMART	96	originalBadBlock	80	increaseBadBlock	0	writeAllSectNum	13203026 Sector(512Byte)	replaceBlockLeft	80	degreeOfWear	0.03 Cycle	sectorTotal	1999749120	remainLifeTime	100%	remainWrGBNum	3336.14TB	lifeTimeTotal	3000.00 Cycle	phyWrGBNum	0.03TB	success	TRUE
Info	Data																																								
version	v0.9.0(4df9b6) arm64																																								
date	2025-04-11T15:40:44.000																																								
device	/dev/mmcblk0																																								
addTime	FALSE																																								
signature	0x70 0x58																																								
Longsys	TRUE																																								
SMARTVersions	2097152																																								
sizeOfDevSMART	96																																								
originalBadBlock	80																																								
increaseBadBlock	0																																								
writeAllSectNum	13203026 Sector(512Byte)																																								
replaceBlockLeft	80																																								
degreeOfWear	0.03 Cycle																																								
sectorTotal	1999749120																																								
remainLifeTime	100%																																								
remainWrGBNum	3336.14TB																																								
lifeTimeTotal	3000.00 Cycle																																								
phyWrGBNum	0.03TB																																								
success	TRUE																																								

Parameters	Function Introduction
NAS	The network disk should be available within the network and properly configured to store the recorded files, etc. NAS (Network-Attached Storage), connecting the storage devices to the existing network, provides data and files services. Add Server Address* Directory* Mounting Type NFS Save Cancel Server Address: IP address of NAS server. Directory: Input the NAS directory, e.g. "\\path". Mounting Type: NFS and SMB/CIFS are available. And you can set the user name and password to guarantee the security if SMB/CIFS is selected.  Note: • Up to 5 NAS disks can be connected to the camera. • For more details about how to use NAS on Milesight Network Camera, please refer to https://milesight.freshdesk.com/a/solutions/articles/69000797902.

8.3.2 Record Settings

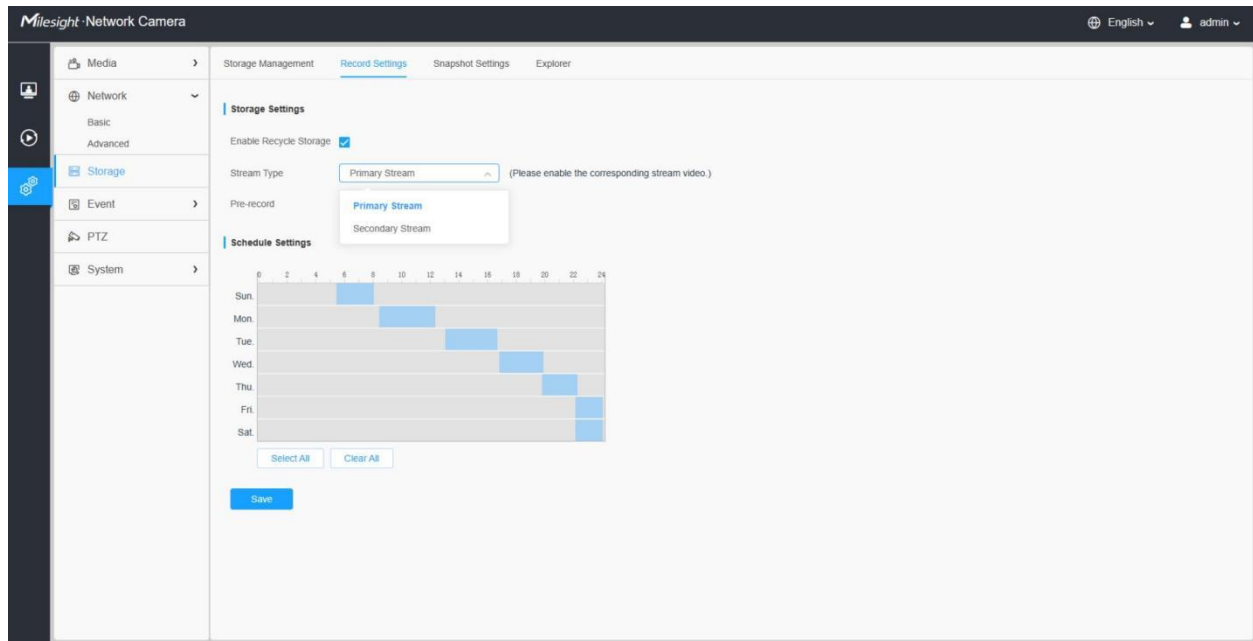
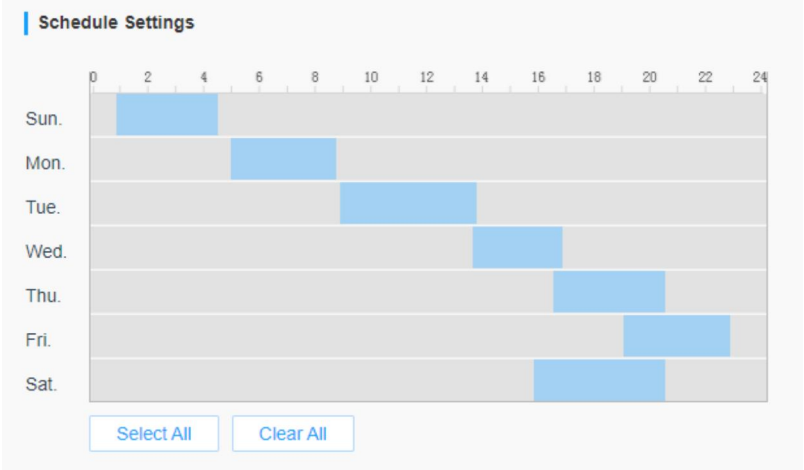
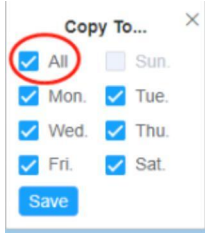
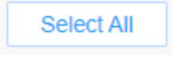


Table 39. Description of the buttons

Parameters	Function Introduction
Enable Recycle Storage	Enable/Disable Recycle Storage, if you enable this option, it will delete the files when the free disk space reaches a certain value.
Stream Type	Select the Stream type, including Primary Stream, Secondary Stream and Tertiary Stream. Note: please enable the corresponding stream video.
Pre Second	Reserve the record time before alarm, 0~10 sec.

Parameters	Function Introduction	
Schedule Settings	Edit record schedule as needed. Intuitive scheduling by drawing the time bar directly. 	
Parameters	Function Introduction	
Schedule Settings		Copy the schedule area to another date. The "All" button is handy to copy today's schedule to all days.
		Select all schedule.
		Clear all schedule.
	Save the configuration.	

 **Note:** SD Card or NAS are available.

8.3.3 Snapshot Settings

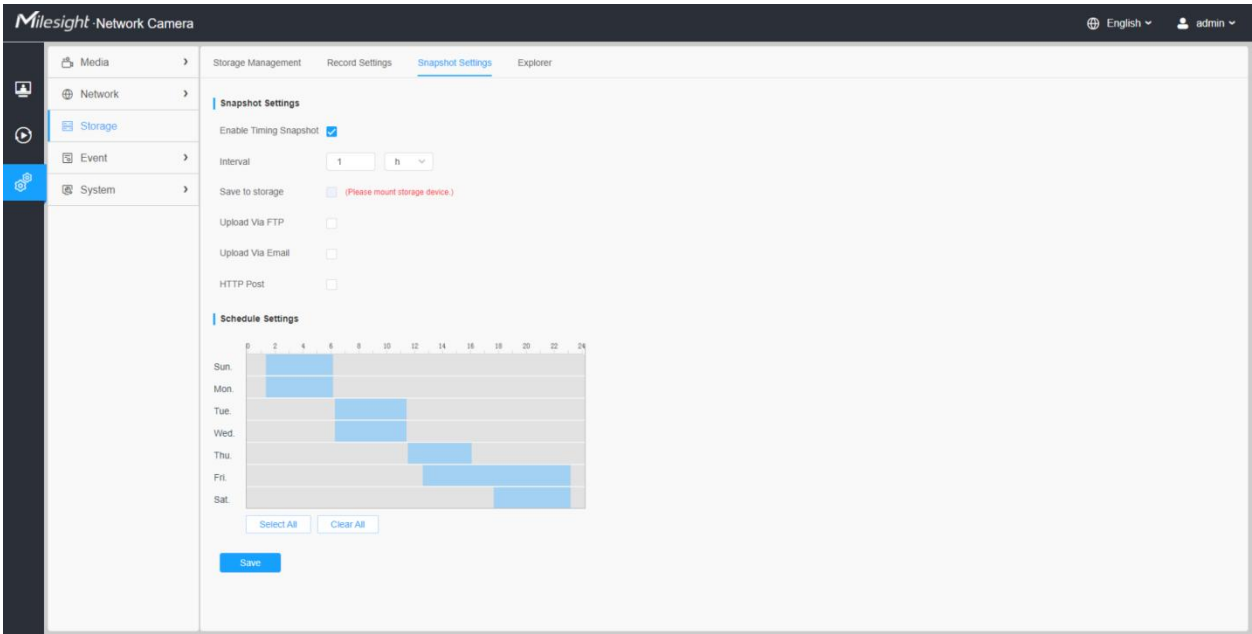
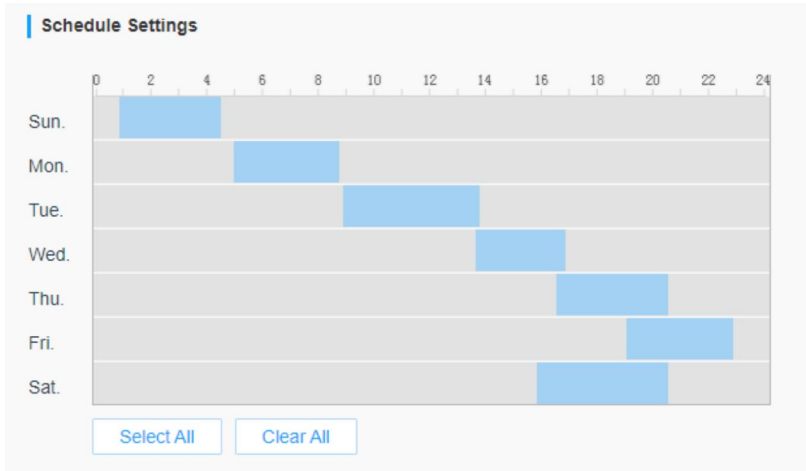
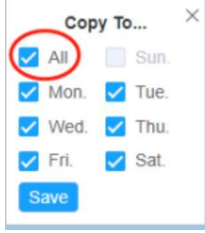


Table 40. Description of the buttons

Parameters	Function Introduction	
Snapshot Settings	Enable Timing Snapshot: Check the checkbox to enable the Timing Snapshot function Interval: Set the snapshots interval, input the number and choose the unit(millisecond, second, minute, hour, day). Save Into Storage: Save the snapshots into SD card or NAS, and choose the file name to add time suffix or overwrite the base file name. Save Into NAS: Save the snapshots into NAS, and choose the file name to add time suffix or overwrite the base file name. Upload Via FTP: Upload the snapshots via FTP. Upload Via Email: Upload the snapshots via Email. Note: If you choose to add time suffix, every snapshot picture will be saved, but if you choose to overwrite the base file name, only one latest picture will be saved. When you choose add overwrite the base file name to SD Card or NAS, it will create a file named "Snapshot" to place the snapshot. HTTP Post: Upload the snapshots via HTTP Post. Support uploading the snapshots to specified HTTP URL.	
Schedule Settings	Edit record schedule as needed. Intuitive scheduling by drawing the time bar directly. 	
		Copy the schedule area to another date. The "All" button is handy to copy today's schedule to all days.
Schedule Settings		Select all schedule.

Parameters	Function Introduction	
Schedule Settings	Clear All	Clear all schedule.
Save	Save the configuration.	

8.3.4 Explorer

Files will be seen on this page when they are configured to save into SD card or NAS. You can set time schedule every day for recording videos and save video files to your desired location.

Note:

1. Files are visible once SD card is inserted. Don't insert or pull out SD card when power on
2. A red icon will appear under the corresponding date when there is a recording or snapshot exists for that day, allowing you to swiftly discern which dates possess files.

Video files are arranged by date. Set file type and start/end time to search out files. Each day files will be displayed under the corresponding date, from here you can

copy and delete files etc. You can visit the files in SD card by ftp, for example, ftp://username:password@192.168.5.190 (user name and password are the same as the camera account and the IP followed is the IP of your device.).

The screenshot shows the Milesight Network Camera Explorer interface. The main area displays a table of files with columns for File Name, Start Time, Type, and Size. A calendar overlay is visible, showing the date 2024-11-14 and a red icon indicating a recording or snapshot. The interface also includes search filters for Main Type, Sub Type, Start Time, and End Time, and a Search button. A Download button is located at the bottom right.

The screenshot shows the 'IPCAM Network Camera' web interface. The left sidebar contains navigation options: Media, Network, Storage, Event, and System. The main area is titled 'Explorer' and displays a table of recorded files. A calendar overlay is visible, showing the month of April 2025, with the 27th, 28th, and 29th highlighted. The table lists files with columns for File Name, Start Time, Type, and Size.

File Name	Start Time	Type	Size
120250429000000.mp4	2025-04-29 00:00:00	Timing	96.74M
120250429000117.mp4	2025-04-29 00:01:17	Timing	249.42M
120250429000435.mp4	2025-04-29 00:04:35	Timing	249.18M
120250429000754.mp4	2025-04-29 00:07:54	Timing	249.09M
120250429001112.mp4	2025-04-29 00:11:12	Timing	249.54M
120250429001431.mp4	2025-04-29 00:14:31	Timing	250.20M
120250429001749.mp4	2025-04-29 00:17:49	Timing	249.39M
120250429002108.mp4	2025-04-29 00:21:08	Timing	249.83M
120250429002427.mp4	2025-04-29 00:24:27	Timing	250.16M
120250429002745.mp4	2025-04-29 00:27:45	Timing	249.40M
120250429003104.mp4	2025-04-29 00:31:04	Timing	249.20M
120250429003422.mp4	2025-04-29 00:34:22	Timing	249.64M
120250429003741.mp4	2025-04-29 00:37:41	Timing	250.14M
120250429004059.mp4	2025-04-29 00:40:59	Timing	249.41M
120250429004418.mp4	2025-04-29 00:44:18	Timing	249.20M
120250429004736.mp4	2025-04-29 00:47:36	Timing	249.65M
120250429005055.mp4	2025-04-29 00:50:55	Timing	250.18M

8.4 Event

The event provides advanced, accurate smart video analytics for Milesight network cameras. It enhances the performance of network cameras through basic events and VCA events, enabling a comprehensive surveillance system and quicker response of cameras to different monitoring scenes.

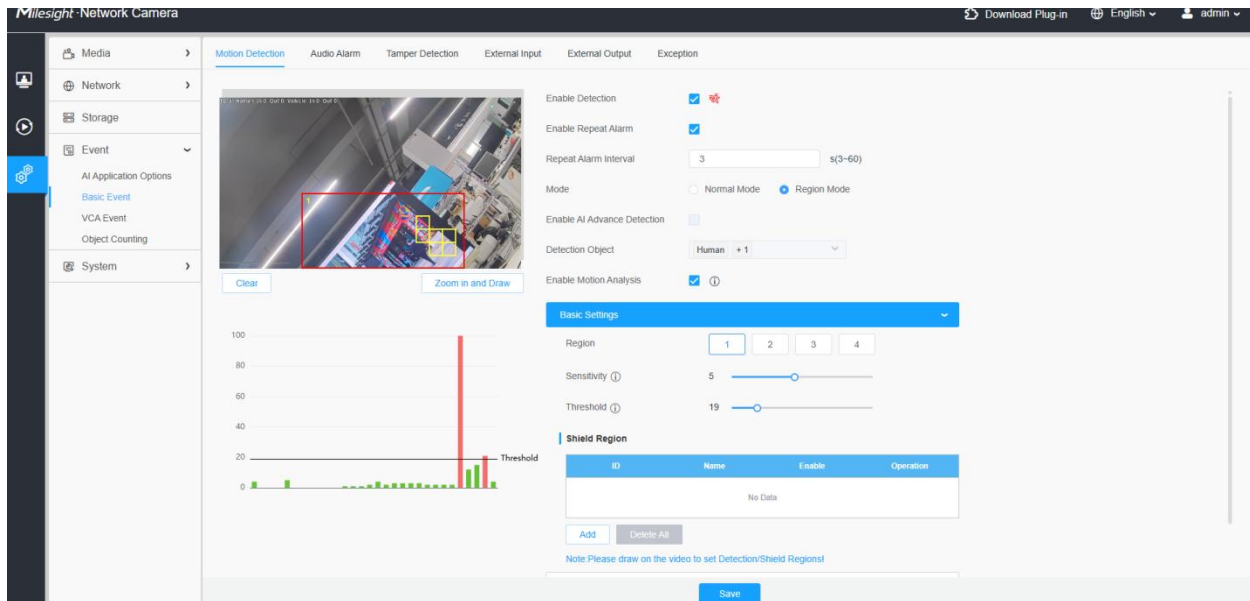
Note:

Before you utilizing the corresponding function, please enable it within the AI Application Options interface.

The screenshot shows the 'AI Application Options' page in the Milesight Network Camera web interface. The left sidebar contains navigation options: Media, Network, Storage, Event, and System. The main area displays two toggle switches: 'VCA Event' and 'Object Counting', both of which are currently enabled (checked). A 'Save' button is located below the toggles.

8.4.1 Basic Event

8.4.1.1 Motion Detection



Note: For details about how to configure Motion Detection, see <https://milesight.freshdesk.com/a/solutions/articles/69000643423>.

Configuration steps are shown as follows:

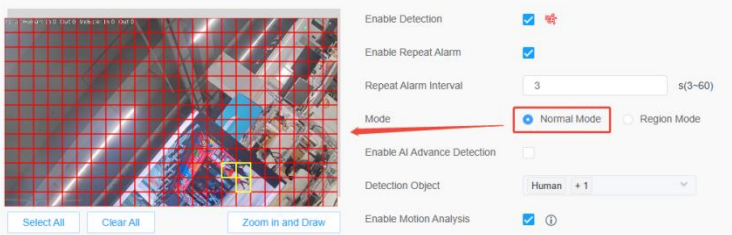
Step1: Choose Settings > Event > Basic Event > Motion Detection.

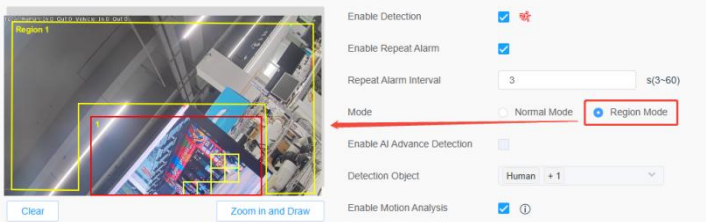
Step2: Check the check box to enable the function.

Step3: Check the check box to enable repeat alarms, enter the repeat interval from 3 to 60.

Step4: Select the detection mode and then draw the detection region.

Table 41. Description of the buttons

Parameters	Function Introduction
Enable Detection	Check the checkbox to enable the motion detection function.
Enable Repeat Alarm	Check this checkbox to enable repeat alarms.
Repeat Alarm Interval	Enter the repeat interval from 3 to 60.
Mode	Region Mode and Normal Mode are available. Normal Mode allows you to draw and customize detection zones freely across the entire live view 

Parameters	Function Introduction
	Region Mode allows you to configure up to four independent rectangular detection areas. To exclude specific zones from detection, you can also draw and add up to four shield regions using the same method. Detection regions are marked with blue boxes, which turn red when an event is triggered, while shield regions are indicated by yellow boxes. 
Enable AI Advanced Detection	By enabling this option and choosing “Human” or “Vehicle” as the detection target, the system will only respond to movements of the selected type, filtering out background disturbances like swaying leaves.  Note: This option is only available in normal mode.
Enable Motion Analysis	When Motion Analysis is enabled, the moving region will turn yellow so that the user can know exactly where the motion occurred.  Note: Only support when HTTP is selected in Live View. 
	Click it to select the whole area.
	Click it to clear the selected areas.
	Click it to draw more precise detection regions in the pop-up window.
	Click it to save the configurations.

[Basic Settings]

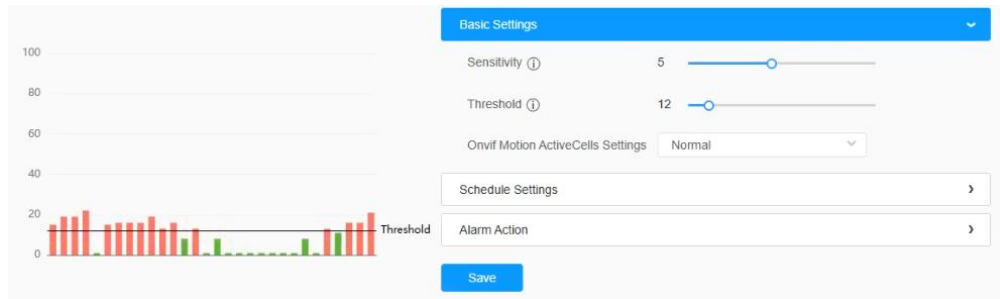


Table 42. Description of the buttons

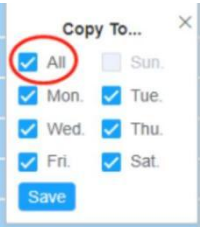
Parameters	Function Introduction
Threshold	Higher threshold requires a greater amount of motion area change to trigger an alarm.
Sensitivity	Higher sensitivity detects smaller movement to trigger alarm. Sensitivity level: 1~10.
Threshold Curve	The threshold curve displays whether the detection value exceeds the preset threshold over time, helping you visualize and fine-tune the motion detection settings.
Onvif Motion ActiveCells Settings	Normal and Compatible are available for the option. If the setting of motion region of the third-party software is different from ours, select Compatible here.

[Schedule Settings]

Step5: Set motion detection schedule.

Table 43. Description of the buttons

Parameters	Function Introduction
------------	-----------------------

Parameters	Function Introduction
	Copy the schedule area to another date. The "All" button is handy to copy today's schedule to all days.
	Select all schedule.
	Clear all schedule.

[Alarm Action]

Step6: Set alarm action.

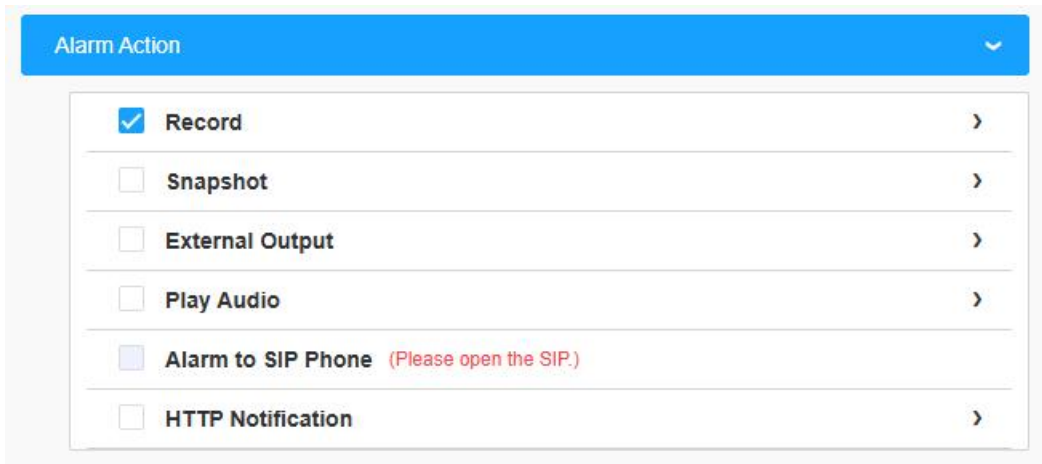


Table 44. Description of the buttons

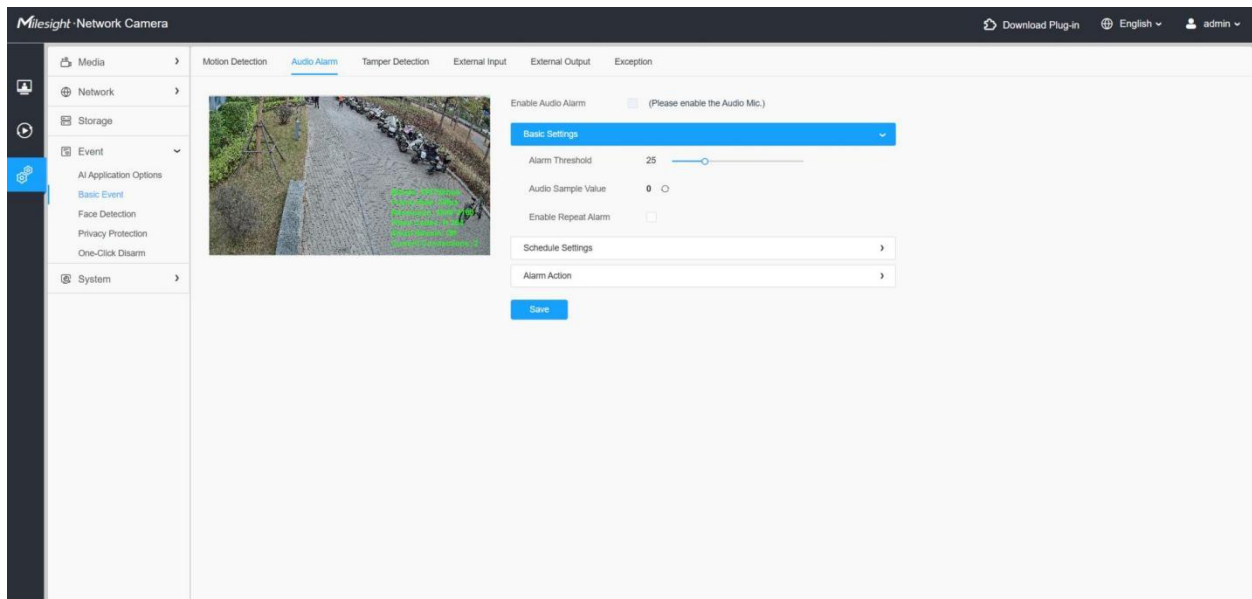
Parameters	Function Introduction
Record	Duration: Selected the duration time of alarm. 5s/10s/15s/20s/25s/30s are available. Linkage: Save alarm recording files into SD Card or NAS or Upload the recording files via FTP.
Snapshot	Number: The number of snapshot, 1~5 are available. Interval: This cannot be edited unless you choose more than 1 to Snapshot. Linkage: Save alarm recording files into SD Card or NAS, Upload the recording files via FTP and send alarm email.

Parameters	Function Introduction
External Output	If the camera equips with External Output, you can enable the action after configuring the trigger duration. Action Time: Customize/10 seconds/30 seconds/1 minute/5 minutes/Constant are available.
Play Audio	Auto/10 seconds/30 seconds/1 minute/5 minutes/10 minutes are available. Note: Please enable the Audio Speaker.
Alarm to SIP Phone	Support to call the SIP phone after enable the SIP function.
HTTP Notification	Support to pop up the alarm news to specified HTTP URL. Note: • Three HTTP notifications at most can be added to the same event. • HTTP Notification supports Basic & Digest authentication

8.4.1.2 Audio Alarm

Check the checkbox to enable the audio alarm function.

 **Note:** Enable the Audio Mic before using Audio Alarm function.



[Basic Settings]

Table 45. Description of the buttons

Parameters	Function Introduction
------------	-----------------------

Parameters	Function Introduction
Alarm Threshold	Audio Alarm will be triggered when the thresholds reaches to a certain value from 0 to 100 .
Audio Sample Value	The current value of the audio sample.
Enable Repeat Alarm	Check this checkbox to enable repeat alarms.
Repeat Alarm Interval	Enter the repeat interval from 3 to 60 .

[Schedule Settings]

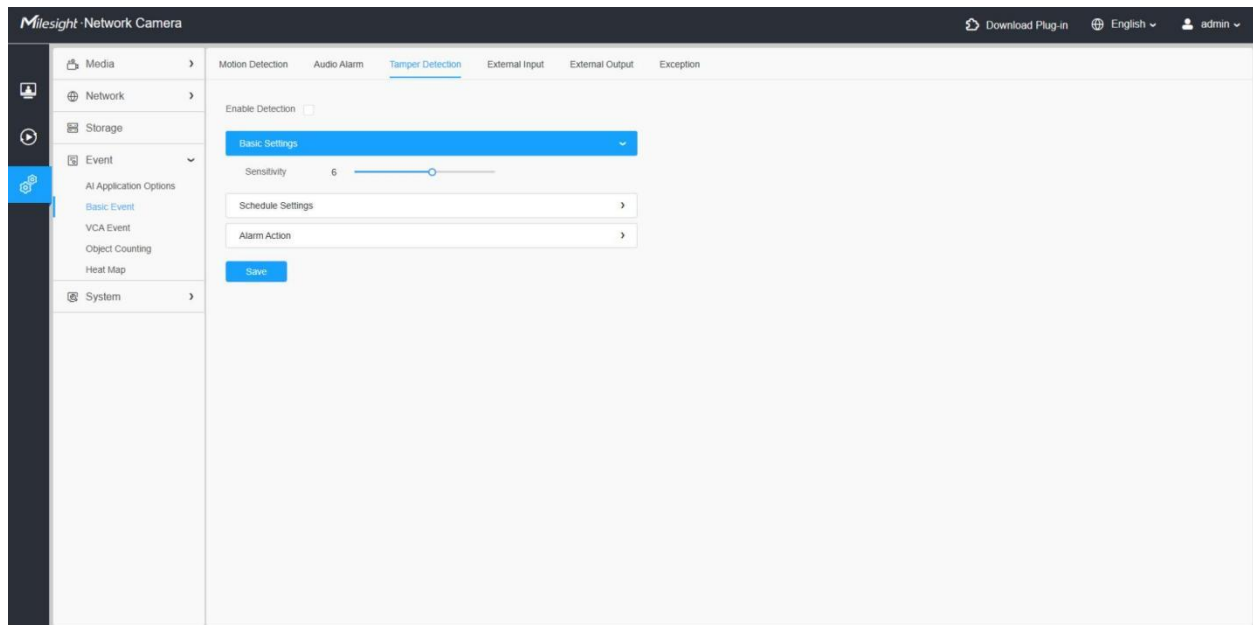
For details about **Schedule Settings**, see [Motion Detection](#).

[Alarm Action]

For details about **Alarm Action**, see [Motion Detection](#).

8.4.1.3 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.



Settings steps are shown as follows:

Step1: Enable Tamper Detection.

Enable Detection ☐

Basic Settings ›

Schedule Settings ›

Alarm Action ›

Save

Detection Settings ▾

Enable Detection ☐

Sensitivity 6

Schedule Settings ›

Alarm Action ›

Save

[Schedule Settings]

Step2: Set detection schedule.

 **Note:** This part is the same as the regular schedule settings. You can refer to [Motion Detection](#).

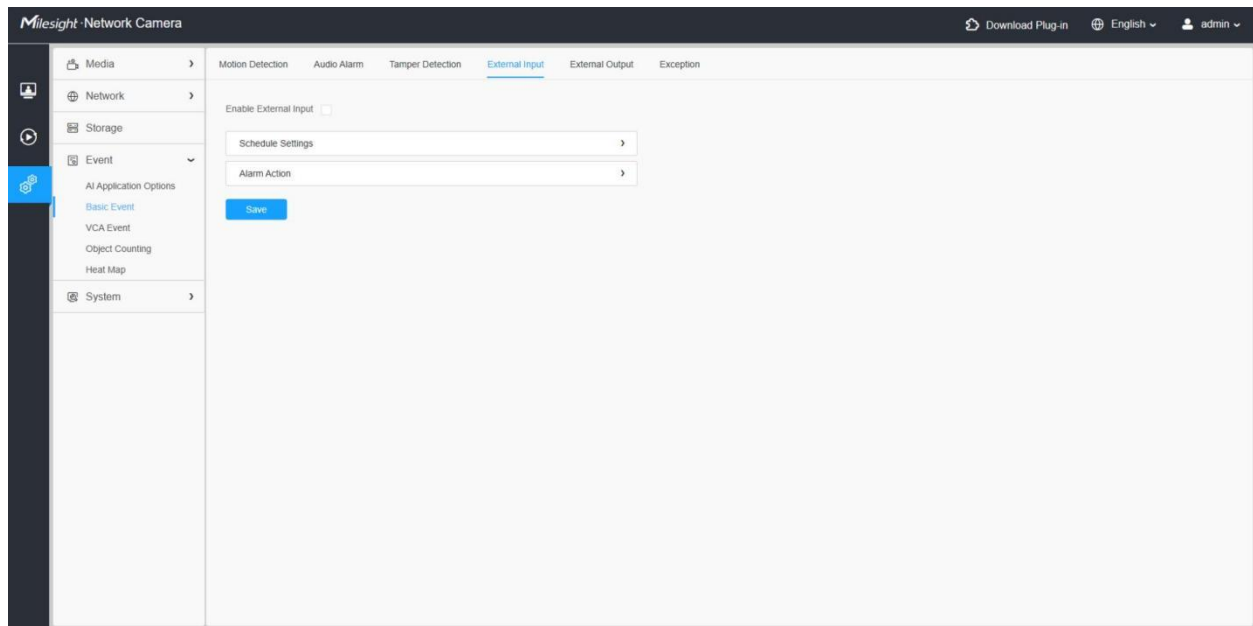
[Alarm Action]

Step3: Set alarm action.

.Note:

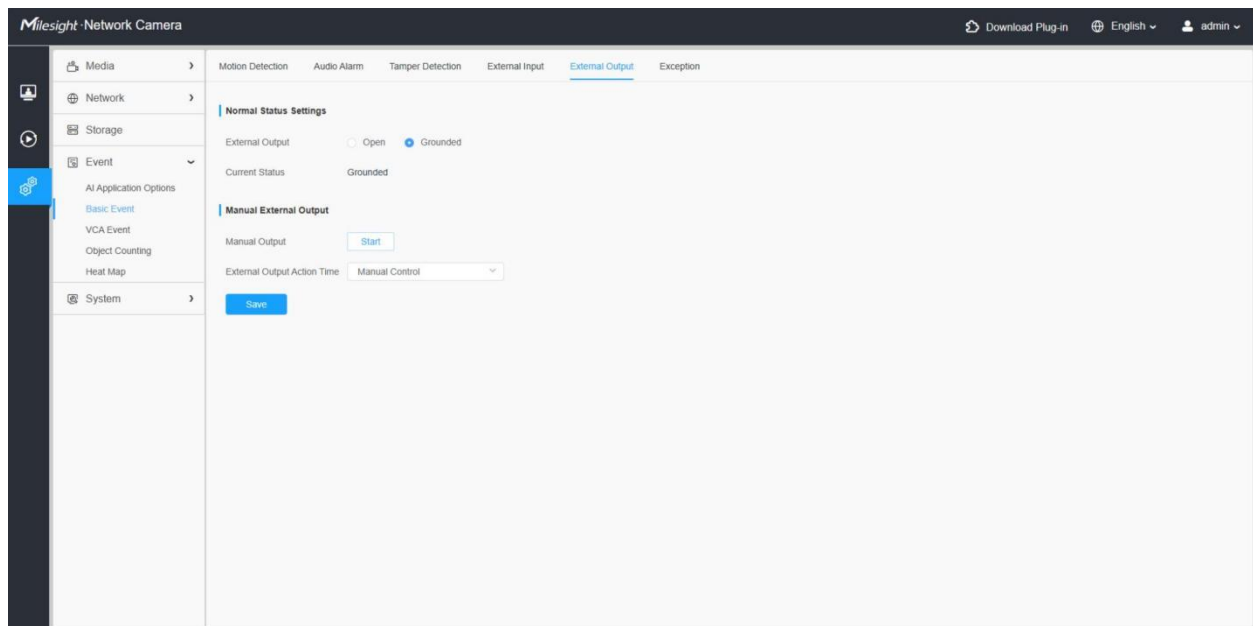
- This part is the same as the regular alarm settings. You can refer to [Motion Detection](#).
- If you enable External Output and choose Constant External Output Action Time, when possible tampering is detected, External Output Action alarm time will be always constant till the alarm is released.
- The algorithm supports defocus detection in Tamper Detection function.

8.4.1.4 External Input



Refer to the table [Motion Detection](#) for the meanings of the items, here will not repeat again.

8.4.1.5 External Output



[Normal Status Settings]

Please set the **Normal Status** firstly, when the **Current Status** is different with **Normal Status**, it will lead to the alarm.

[Manual External Output]

You can set the manual external output.

Table 46. Description of the buttons

Parameters	Function Introduction
Manual Output	Click to Start/Stop manual external output.
External Output Action Time	Manual Control/Customize/10 s/1 min./5 min./10 min. are available.

8.4.1.6 Exception

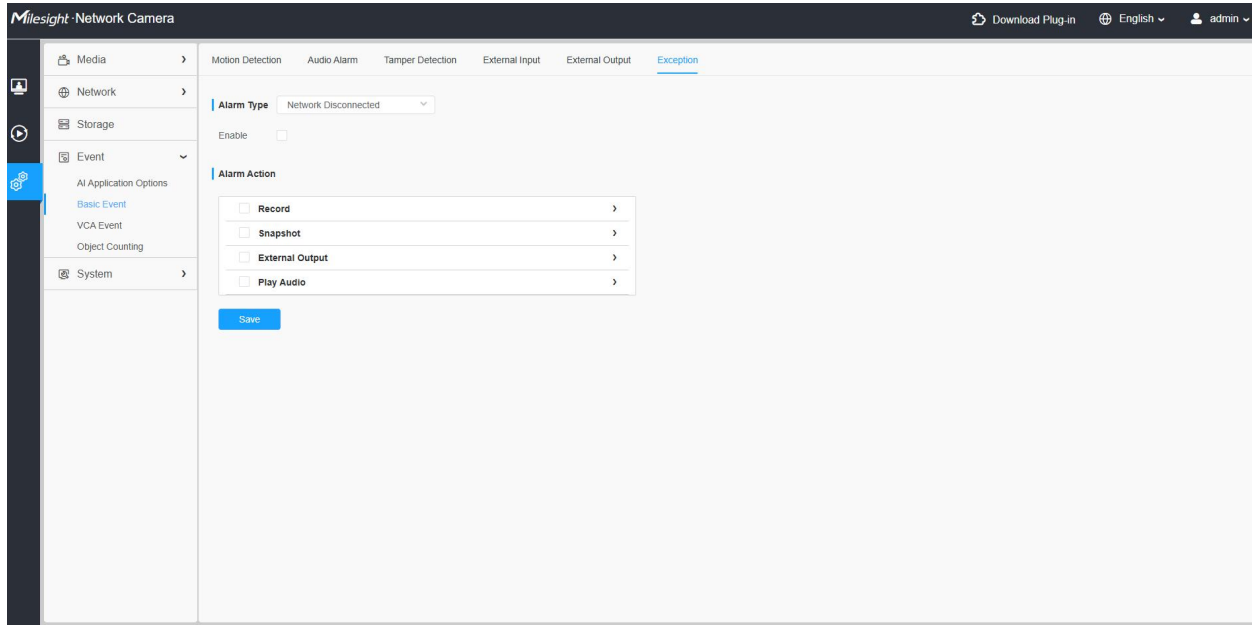


Table 47. Description of the buttons

Parameters	Function Introduction
Alarm Type	Network Disconnected, IP Address Conflicted, Record Failed, SD Card Full, SD Card Uninitialized, SD Card Error and No SD Card are available Check the checkbox to enable the alarm type you selected
Alarm Action	Refer to the table 8.4.1.1 Motion Detection for the meanings of the items, here will not repeat again.

8.4.2 VCA Event

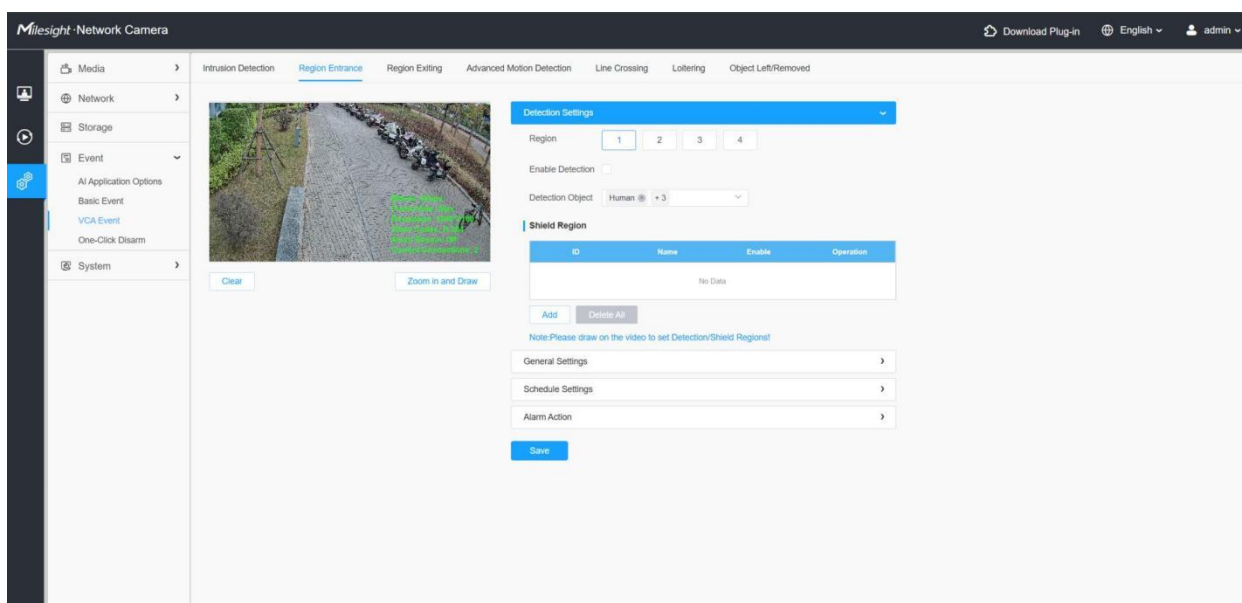
Smart Event uses VCA (Video Content Analysis) technology, which provides advanced, accurate smart video analysis for Milesight network cameras. Powered by AI chip, the new generation video analytics is capable of recognizing vast attributes of human, vehicle, and object pattern recognition models. As vehicle and human related events are very important in security monitoring, the filtering is supported to better optimize the efficiency.

Note:

- For more details about how to use the VCA solution, please refer to <https://milesight.freshdesk.com/a/solutions/articles/69000643371>.
- For more details about the Milesight AI Video Content Analysis information, please refer to <https://resource.milesight.com/milesight/security/document/a-milesight-technology-moment/a-milesight-technology-moment-milesight-vca.pdf>

8.4.2.1 Region Entrance

Region entrance helps to protect a special 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.



Settings steps are shown as follows:

[Detection Settings]

Step1: Choose **Settings > Event > VCA Event > Region Entrance**.

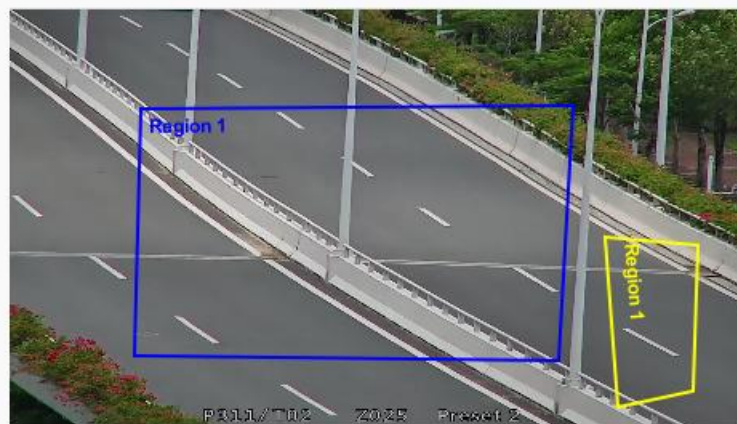
Step2: Select a detection region and enable Region Entrance.

Draw a detection area on the live view. Alternatively, you can click **Zoom in and Draw** to draw more precise detection areas.

Step3: Choose a detection object. Check **Human** or **Vehicle** attribute. An alarm will be triggered once detecting objects.

Step 4:

To exclude certain areas from detection, manually draw and add up to four **Shield Regions**. The method is the same as drawing detection regions. Detection regions are marked with a blue box, and shield regions with a yellow box.



Detection Settings

Region

1

2

3

4

Enable Detection

☒

Detection Object

Human  + 1 

Shield Region

ID	Name	Enable	Operation
No Data			

Add

Delete All

Note: Please draw on the video to set Detection/Shield Regions!

General Settings



Schedule Settings



Alarm Action



Save

[General Settings]

Step4: Set detecting sensitivity, choose Trigger Mode and object size limits.

Table 48. Description of the buttons

Parameters	Function Introduction
Sensitivity	Level 1~10 are available, the default level is 5. The higher the sensitivity, the easier it is for moving objects to be recorded in the results.
Trigger Mode	Set the desired mode of the trigger logic including General Mode and Bottom Mode. General Mode: The alarm is triggered when the object's body roughly enters the detection area. Bottom Mode: the alarm will be triggered as soon as the bottom of the object enters the detection area. Suitable for scenarios that require sensitivity to intrusion status/ bottom detection preference.
Min. Size	Draw on the screen to set the minimum size of the detected object. Objects smaller than this size will not be detected. The default minimum size is 3x3.
Max. Size	Draw on the screen to set the maximum size of the detected object. Objects larger than this size will not be detected. The default maximum size is 320x240.

[Schedule Settings]

Step5: Set a detection schedule.

Detection Settings

General Settings

Schedule Settings

0 2 4 6 8 10 12 14 16 18 20 22 24

Sun.

Mon.

Tue.

Wed.

Thu.

Fri.

Sat.

Select All Clear All

Alarm Action

Save

 **Note:** This part is the same as the regular schedule settings. You can refer to [8.4.1.1 Motion Detection](#).

[Alarm Action]

Step6: Set an alarm action.

Detection Settings

General Settings

Schedule Settings

Alarm Action

☐ Record

☐ Snapshot

☐ External Output

☐ Play Audio (Please enable the Audio Speaker.)

☐ Alarm to SIP Phone (Please open the SIP.)

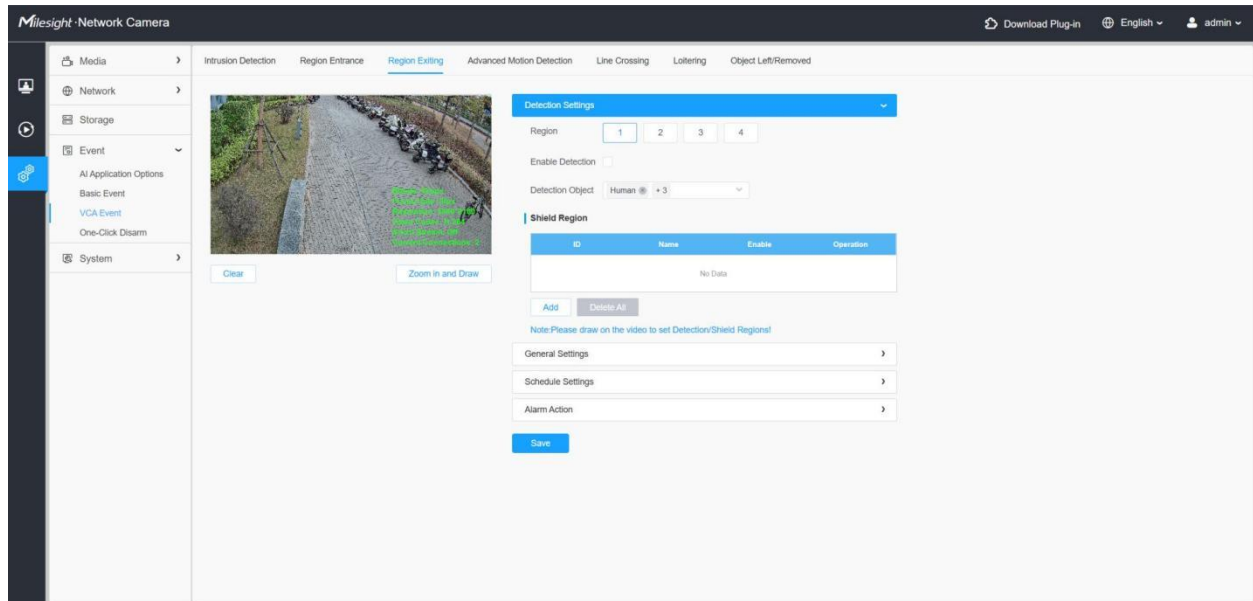
☐ HTTP Notification

Save

 **Note:** This part is the same as the regular alarm settings. You can refer to [8.4.1.1 Motion Detection](#).

8.4.2.2 Region Exiting

Region exiting is to make sure that any person or object won't exit the area that is being monitored. Any exit of people or objects will trigger an alarm.



Settings steps are shown as follows:

[Detection Settings]

 **Note:** General Settings will take effect in all detection regions/lines!

Step1: Choose **Settings > Event > VCA Event > Region Exiting**.

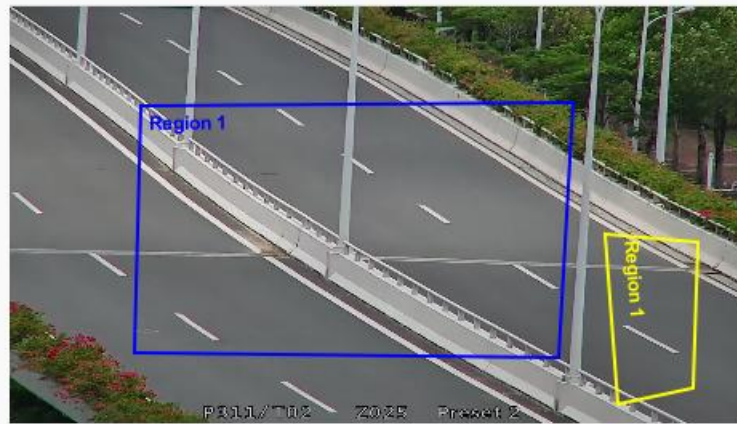
Step2: Select a detection region and enable Region Exiting.

Draw a detection area on the live view. Alternatively, you can click **Zoom in and Draw** to draw more precise detection areas.

Step3: Choose a detection object. Check **Human** or **Vehicle** attribute. An alarm will be triggered once detecting objects.

Step 4:

To exclude certain areas from detection, manually draw and add up to four **Shield Regions**. The method is the same as drawing detection regions. Detection regions are marked with a blue box, and shield regions with a yellow box.



Detection Settings

Region

1

2

3

4

Enable Detection☐

Detection Object

Human

+ 1

Shield Region

ID	Name	Enable	Operation
No Data			

Add

Delete All

Note: Please draw on the video to set Detection/Shield Regions!

General Settings

Schedule Settings

Alarm Action

Save

[General Settings]

Step4: Set detecting sensitivity and object size limits, and set the trigger mode with General Mode or Bottom Mode.

Table 49. Description of the buttons

Parameters	Function Introduction
Sensitivity	Level 1~10 are available, the default level is 5. The higher the sensitivity, the easier it is for moving objects to be recorded in the results.
Trigger Mode	Set the desired mode of the trigger logic including General Mode and Bottom Mode. General Mode: The alarm is triggered when the object's body roughly enters the detection area. Bottom Mode: the alarm will be triggered as soon as the bottom of the object enters the detection area. Suitable for scenarios that require sensitivity to intrusion status/bottom detection preference.
Min. Size	Draw the screen to set the minimum size of the detected object. When the object is smaller than this size, it will not be detected. The default minimum size is 3*3.
Max. Size	Draw the screen to set the maximum size of the detected object. When the object is larger than this size, it will not be detected. The default maximum size is 320*240.

[Schedule Settings]

Step5: Set a detection schedule.

Detection Settings >

General Settings >

Schedule Settings ▾

0 2 4 6 8 10 12 14 16 18 20 22 24

Sun.

Mon.

Tue.

Wed.

Thu.

Fri.

Sat.

Select All Clear All

Alarm Action >

Save

 **Note:** This part is the same as the regular schedule settings. You can refer to [8.4.1.1 Motion Detection](#).

[Alarm Action]

Step6: Set an alarm action.

Detection Settings >

General Settings >

Schedule Settings >

Alarm Action ▾

☐ Record >

☐ Snapshot >

☐ External Output >

☒ Play Audio (Please enable the Audio Speaker.)

☒ Alarm to SIP Phone (Please open the SIP.)

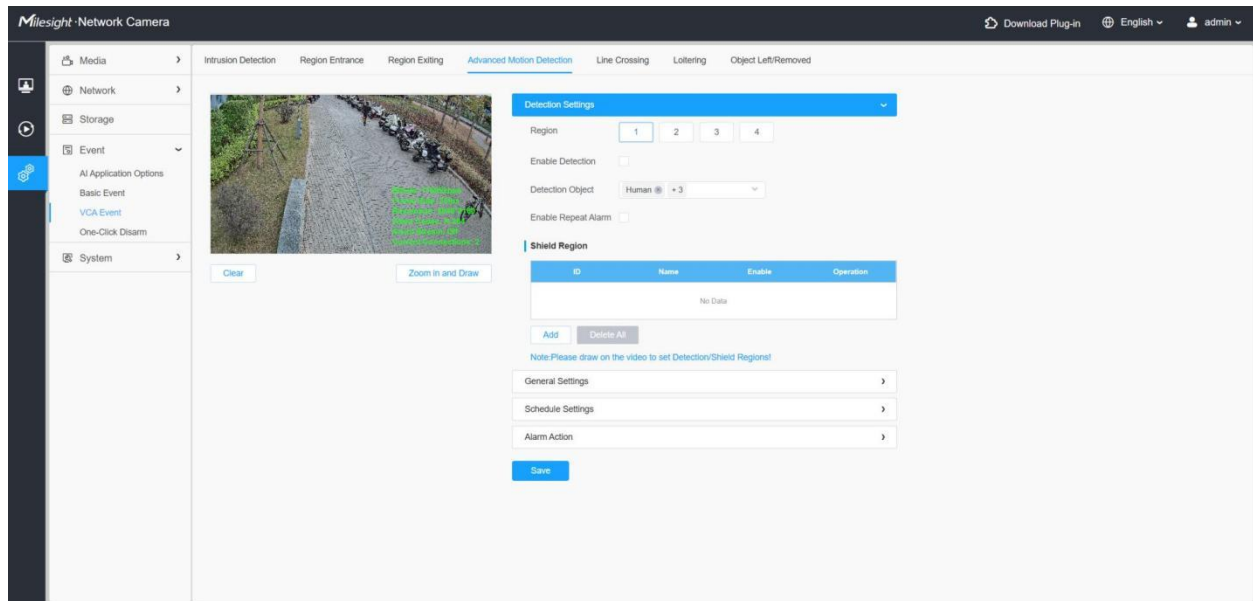
☐ HTTP Notification >

Save

 **Note:** This part is the same as the regular alarm settings. You can refer to [8.4.1.1 Motion Detection](#).

8.4.2.3 Advanced Motion Detection

Different from traditional motion detection, advanced motion detection can filter out “noise” such as lighting changes, natural tree movements, etc. When an object moves in the selected area, it will trigger alarm.



Settings steps are shown as follows:

Step1: Choose **Settings > Event > VCA Event > Advanced Motion Detection**.

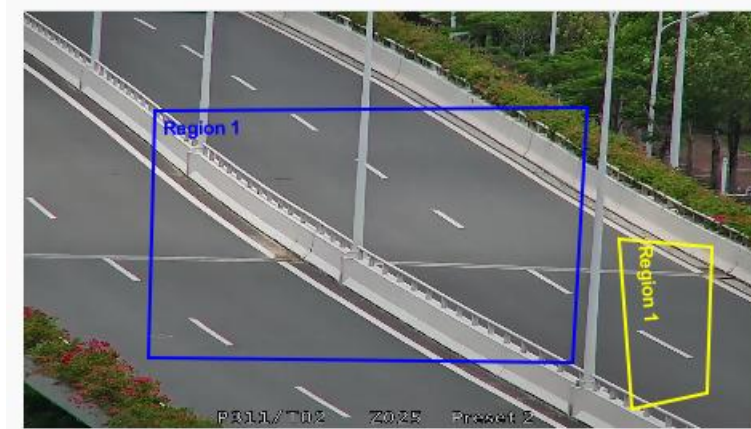
Step2: Select Detection Region and enable advanced motion detection.

Draw a detection area by clicking on the live view. Alternatively, you can click the 'Zoom in and Draw' button to activate a full-screen pop-up window, allowing you to draw more accurate detection areas.

Step3: Enable advanced motion detection. And choose detection object. Check Human or Vehicle attribute. An alarm will be triggered once detecting objects.

Step 4:

To exclude certain areas from detection, manually draw and add up to four **Shield Regions**. The method is the same as drawing detection regions. Detection regions are marked with a blue box, and shield regions with a yellow box.



Detection Settings

Region

1

2

3

4

Enable Detection☐

Detection Object

Human

+ 1

Shield Region

ID	Name	Enable	Operation
No Data			

Add

Delete All

Note: Please draw on the video to set Detection/Shield Regions!

General Settings

Schedule Settings

Alarm Action

Save

[Detection Settings]

Table 50. Parameter Description

Parameter	Description
Region	You can set up to four regions.
Enable Detection	Check the checkbox to enable the function.

Parameter	Description
Detection Object	Select the Human , Non-motor Vehicle , or Vehicle options, the camera will trigger an alarm when it detects a person, a non-motor vehicle, or a vehicle.
Enable Repeat Alarm	Check this checkbox to enable repeat alarms.
Repeat Alarm Interval	Enter the repeat interval from 3 to 60 .
Shield Region	Click Add to add shield regions. Click Delete All to delete all regions.

[General Settings]

Step4: Set Ignore Short-Lived Motion time. If you set the time, when the moving duration of an object is within the setting time, the alarm will not be triggered.

Step5: Set detecting sensitivity and object size limits.

Table 51. Description of the buttons

Parameters	Function Introduction
Ignore Short-Lived Motion	The alarm will not be triggered when the moving duration of an object is within the setting time. Off/1s/2s/3s/4s/5s are available.  Note: Ignore Short-Lived Motion time is to avoid false alarm caused by instant object movement within time setting.

Parameters	Function Introduction
Sensitivity	Level 1~10 are available, the default level is 5. The higher the sensitivity, the easier it is for moving objects to be recorded in the results.  Note: 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.
Trigger Mode	Set the desired mode of the trigger logic including General Mode and Bottom Mode. General Mode: The alarm is triggered when the object's body roughly enters the detection area. Bottom Mode: the alarm will be triggered as soon as the bottom of the object enters the detection area. Suitable for scenarios that require sensitivity to intrusion status/bottom detection preference.
Min. Size	Draw the screen or input pixel number to set the minimum size of the detected object. When the object is smaller than this size, it will not be detected. The default minimum size is 3*3.
Max. Size	Draw the screen or input pixel number to set the maximum size of the detected object. When the object is larger than this size, it will not be detected. The default maximum size is 320*240.

[Schedule Settings]

Step6: Set a detection schedule.

 **Note:** This part is the same as the regular schedule settings. You can refer to [8.4.1.1 Motion Detection](#).

[Alarm Action]

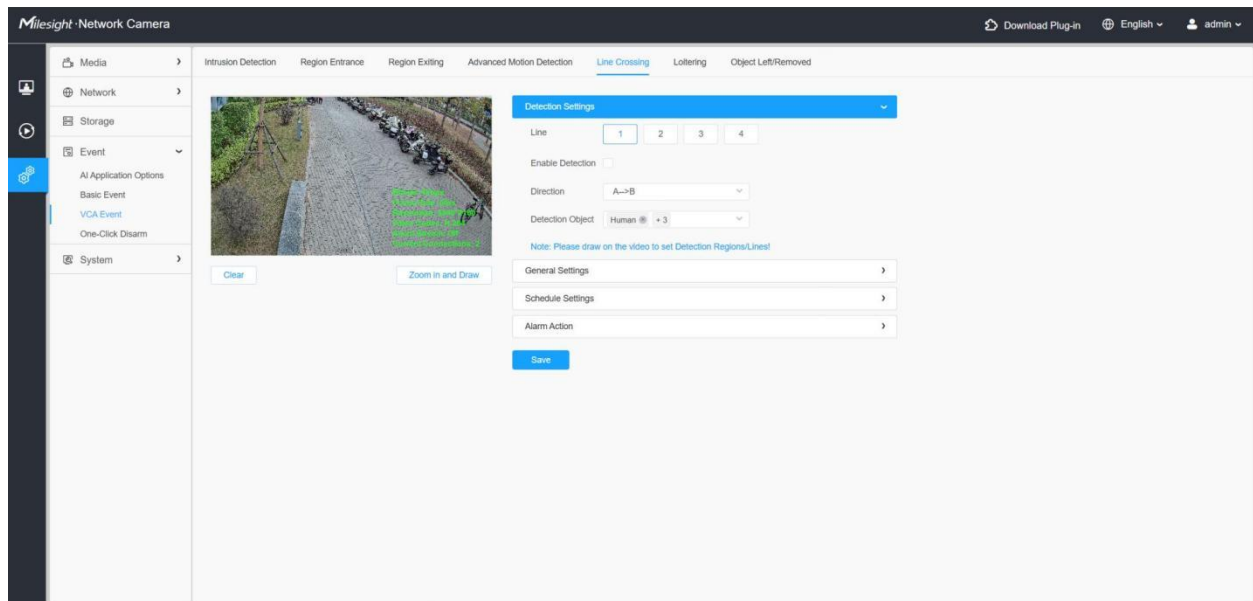
Step7: Set an alarm action.

 **Note:**

- This part is the same as the regular alarm settings. You can refer to [8.4.1.1 Motion Detection](#).
- If you enable External Output and choose Constant External Output Action Time, when object motion time is longer than the Ignore Short-Lived Motion time which you set in the selected regions, External Output Action alarm time will be always constant till the alarm is released.

8.4.2.4 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:

[Detection Settings]

Step1: Choose **Settings > Event > VCA Event > Line Crossing**.

Step2: Select a detection line, enable line crossing detection and define its direction.

Draw a detection area by clicking on the live view. Alternatively, you can click the '**Zoom in and Draw**' button to activate a full-screen pop-up window, allowing you to draw more accurate detection lines.

Note:

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

Step3: Choose a detection object. Check Human or Vehicle attribute. An alarm will be triggered once detecting objects.

Detection Settings

Line 1 2 3 4

Enable Detection ☒

Direction A-->B

Detection Object Human + 3

Note: Please draw on the video to set Detection Regions/Lines!

General Settings

Schedule Settings

Alarm Action

[General Settings]

Step4: Set detecting sensitivity and object size limits.

Detection Settings

General Settings

Sensitivity 5

Trigger Mode General Mode

Object Size Filter General Mode Bottom Mode

Edit

Min. Size Max. Size

Note: Please draw on the video to set Detection Regions/Lines!

Schedule Settings

Alarm Action

Save

Table 52. Description of the buttons

Parameters	Function Introduction
Sensitivity	Level 1~10 are available. The default level is 5. The higher the sensitivity, the easier it is for moving objects to be recorded in the results.

Parameters	Function Introduction
Trigger Mode	Set the desired mode of the trigger logic including General Mode and Bottom Mode. General Mode: The alarm is triggered when the object's body roughly enters the detection area. Bottom Mode: the alarm will be triggered as soon as the bottom of the object enters the detection area. Suitable for scenarios that require sensitivity to intrusion status/bottom detection preference.
Min. Size	Draw the screen to set the minimum size of the detected object. When the object is smaller than this size, it will not be detected. The default minimum size is 3*3.
Max. Size	Draw the screen to set the maximum size of the detected object. When the object is larger than this size, it will not be detected. The default maximum size is 320*240.

[Schedule Settings]

Step5: Set a detection schedule.

Detection Settings

General Settings

Schedule Settings

0 2 4 6 8 10 12 14 16 18 20 22 24

Sun.

Mon.

Tue.

Wed.

Thu.

Fri.

Sat.

Select All Clear All

Alarm Action

Save

 **Note:** This part is the same as the regular schedule settings. You can refer to [8.4.1.1 Motion Detection](#).

[Alarm Action]

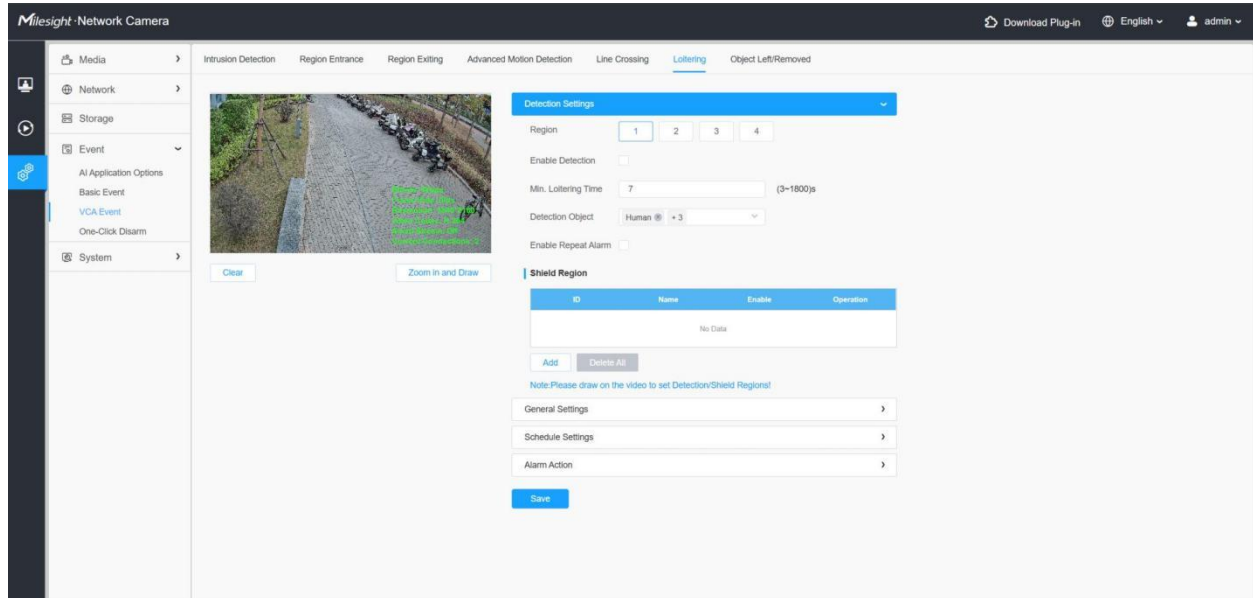
Step6: Set an alarm action.

Note:

- This part is the same as the regular alarm settings. You can refer to [8.4.1.1 Motion Detection](#).
- If you enable External Output and choose Constant External Output Action Time, when objects cross a defined virtual line, External Output Action alarm time will be always constant till the alarm is released

8.4.2.5 Loitering

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



Settings steps are shown as follows:

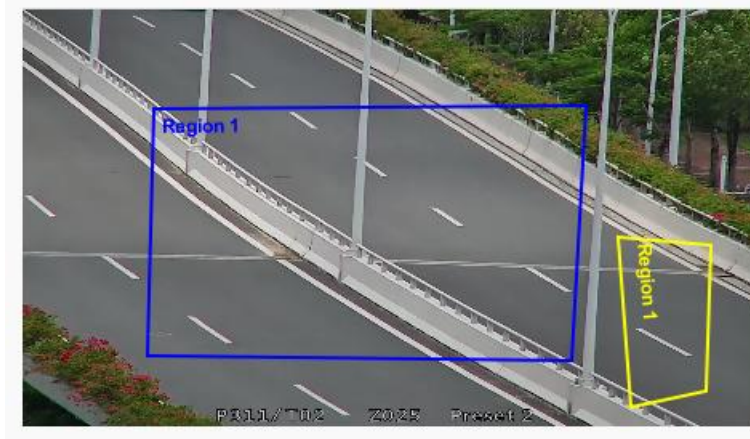
[Detection Settings]

Note: General Settings will take effect in all detection regions/lines!

Step1: Choose **Settings > Event > VCA Event > Loitering**.

Step2: Select a detection region and enable loitering detection.

Draw a detection area by clicking on the live view. Alternatively, you can click the '**Zoom in and Draw**' button to activate a full-screen pop-up window, allowing you to draw more accurate detection areas. To exclude certain areas from detection, manually draw and add up to four **Shield Regions**. The method is the same as drawing detection regions. Detection regions are marked with a blue box, and shield regions with a yellow box.



Step3: Set Min. Loitering Time. After setting minimum loitering time from 3s to 1800s, any objects loitering in the selected area over the minimum loitering time will trigger the alarm.

Detection Settings

Region

1234

Enable Detection

☐

Min. Loitering Time

7

(3~1800)s

Detection Object

☒ Human ☒ Vehicle

Note: General Settings will take effect in all detection regions/lines!

General Settings

>

Schedule Settings

>

Alarm Action

>

Save

Step4: Choose a detection object. Check Human or Vehicle attribute, and the camera will alarm once detecting objects.

[General Settings]

Step5: Set object size limits.

Table 54. Description of the buttons

Parameters	Function Introduction
Trigger Mode	Set the desired mode of the trigger logic including General Mode and Bottom Mode. General Mode: The alarm is triggered when the object's body roughly enters the detection area. Bottom Mode: the alarm will be triggered as soon as the bottom of the object enters the detection area. Suitable for scenarios that require sensitivity to intrusion status/bottom detection preference.

Parameters	Function Introduction
Min. Size	Draw the screen to set the minimum size of the detected object. When the object is smaller than this size, it will not be detected. The default minimum size is 3*3.
Max. Size	Draw the screen to set the maximum size of the detected object. When the object is larger than this size, it will not be detected. The default maximum size is 320*240.

[Schedule Settings]

Step6: Set a detection schedule.

 **Note:** This part is the same as the regular schedule settings. You can refer to [Motion Detection \(page 96\)](#).

[Alarm Action]

Step7: Set an alarm action.

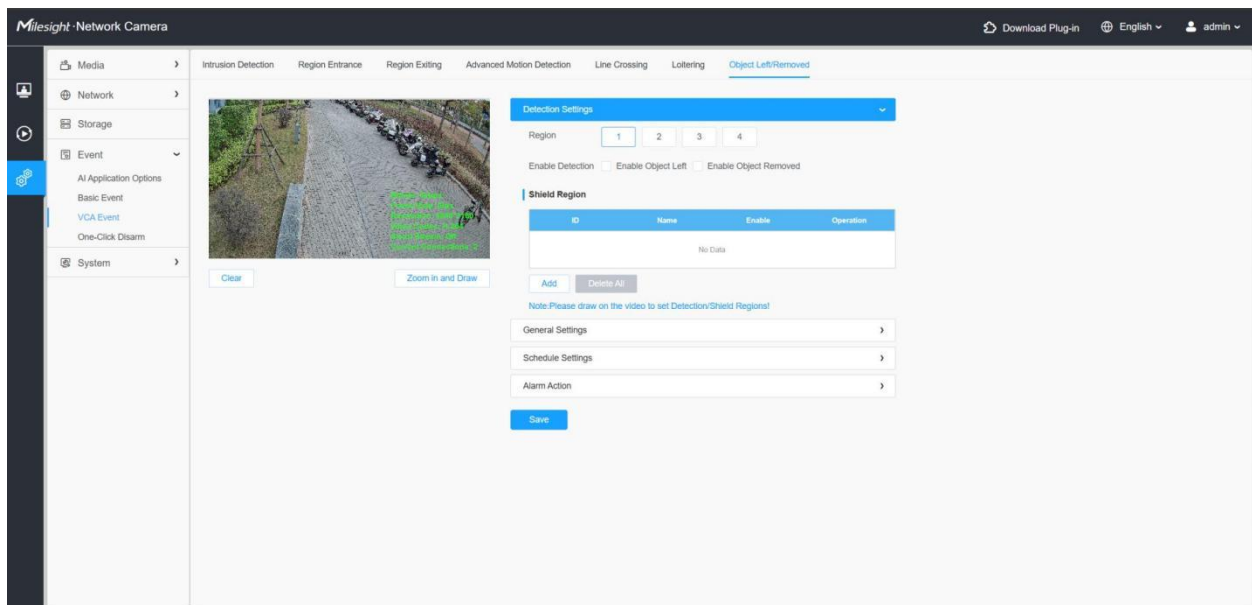
 **Note:**

- This part is the same as the regular alarm settings. You can refer to [8.4.1.1 Motion Detection](#).
- If you enable External Output and choose Constant External Output Action Time, when objects loiter in the selected regions, External Output Action alarm time will be always constant till the alarm is released.

8.4.2.6 Object Left/Removed

Object Left can detect and prompt an alarm if an object is left in a pre-defined region.

Object Removed can detect and prompt an alarm if an object is removed from a pre-defined region.



Settings steps are shown as follows:

[Detection Settings]

 **Note:** General Settings will take effect in all detection regions/lines!

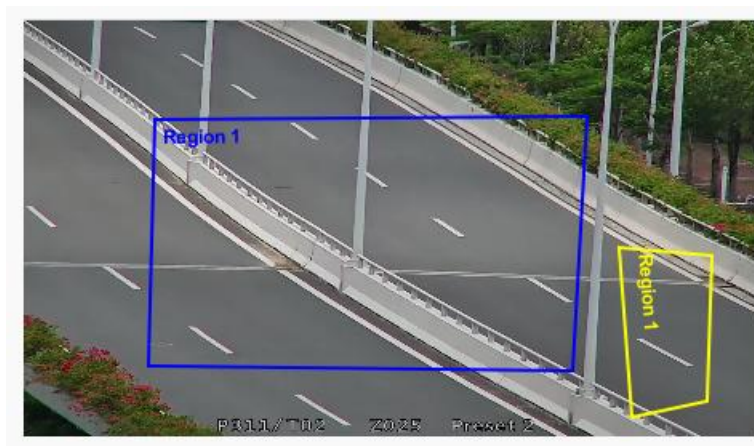
Step1: Choose **Settings > Event > VCA Event > Object Left/Removed**.

Step2: Select a detection region and enable object left/removed detection (Or you can enable both features at the same time).

Draw a detection area by clicking on the live view. Alternatively, you can click the **Zoom in and Draw** button to activate a full-screen pop-up window, allowing you to draw more accurate detection areas.

Step 3:

To exclude certain areas from detection, manually draw and add up to four **Shield Regions**. The method is the same as drawing detection regions. Detection regions are marked with a blue box, and shield regions with a yellow box.



Detection Settings

Region

1

2

3

4

Enable Detection☐ Enable Object Left☐ Enable Object Removed☐

Shield Region

ID	Name	Enable	Operation
No Data			

Add

Delete All

Note:Please draw on the video to set Detection/Shield Regions!

General Settings

Schedule Settings

Alarm Action

Save

[General Settings]

Step3: Set Min. time, detecting sensitivity and object size limits.

The screenshot shows the 'Detection Settings' interface. At the top is a 'Detection Settings' header with a right arrow. Below it is a 'General Settings' section with a dropdown arrow. Inside 'General Settings', there are two input fields: 'Min. Time' set to 20 with a range of (5~1800)s, and 'Sensitivity' set to 5 with a slider. Below these is the 'Object Size Limits' section, which includes an 'Edit' button and two radio buttons: 'Min. Size' (set to 3 * 3 Pixels) and 'Max. Size' (set to 320 * 240 Pixels). A note states: 'Note: General Settings will take effect in all detection regions/lines!'. Below the 'Object Size Limits' section are three more sections: 'Schedule Settings', 'Alarm Action', and a 'Save' button at the bottom.

Table 55. Description of the buttons

Parameters	Function Introduction
Min. Time	After setting Min. time from 5s to 1800s, any objects are left in the selected area or removed from the selected area over the minimum time will trigger the alarm.
Sensitivity	Level 1~10 are available, the default level is 5. The higher the sensitivity, the easier it is for moving objects to be recorded in the results.  Note: 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.
Min. Size	Draw the screen or input pixel number to set the minimum size of the detected object. When the object is smaller than this size, it will not be detected. The default minimum size is 3*3.
Max. Size	Draw the screen or input pixel number to set the maximum size of the detected object. When the object is larger than this size, it will not be detected. The default maximum size is 320*240.
Enable Repeat Alarm	Check this checkbox to enable repeat alarms.
Repeat Alarm Interval	Enter the repeat interval from 3 to 60.

[Schedule Settings]

Step4: Set a detection schedule.

 **Note:** This part is the same as the regular schedule settings. You can refer to [8.4.1.1 Motion Detection](#).

[Alarm Action]

Step5: Set an alarm action.

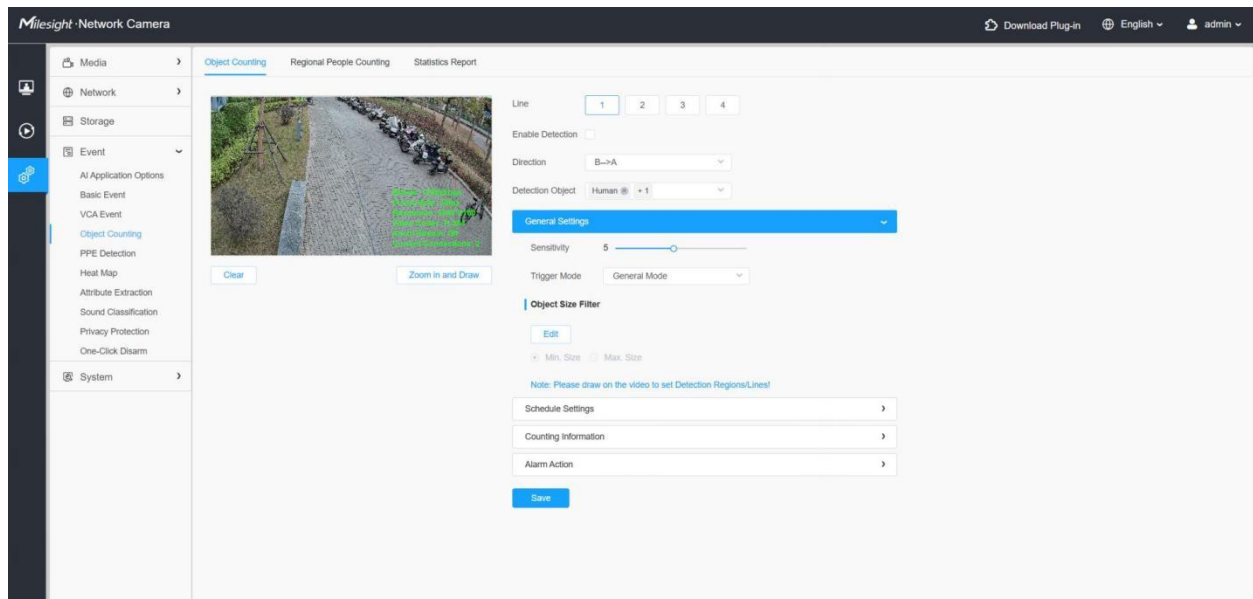
Note:

- This part is the same as the regular alarm settings. You can refer to [8.4.1.1 Motion Detection](#).
- If you enable External Output and choose Constant External Output Action Time, when an object is left/removed from the selected regions, External Output Action alarm time will be always constant till the alarm is released.

8.4.3 Object Counting

8.4.3.1 Object Counting

Object counting is able to count how many object enter or exit during the setting period.



Settings steps are as shown below:

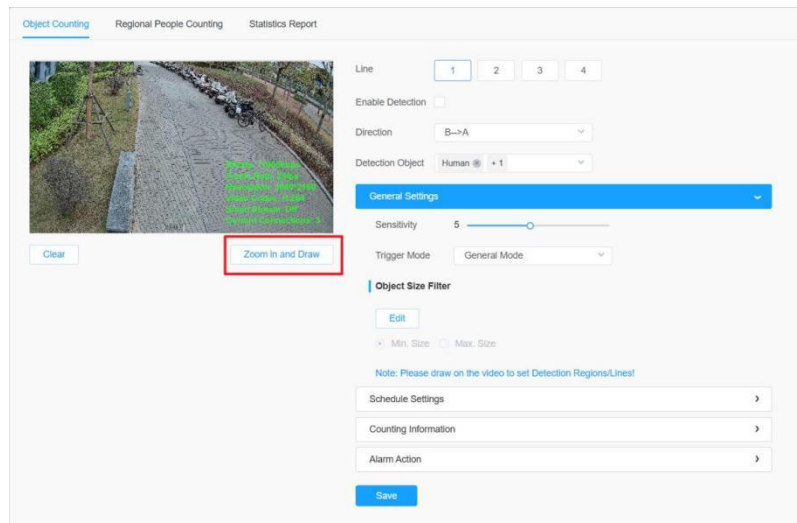
Step1: Choose **Settings > Event > AI Application Options > Object Counting**.

Step2: Select a detected region, up to 4 regions can be chosen.

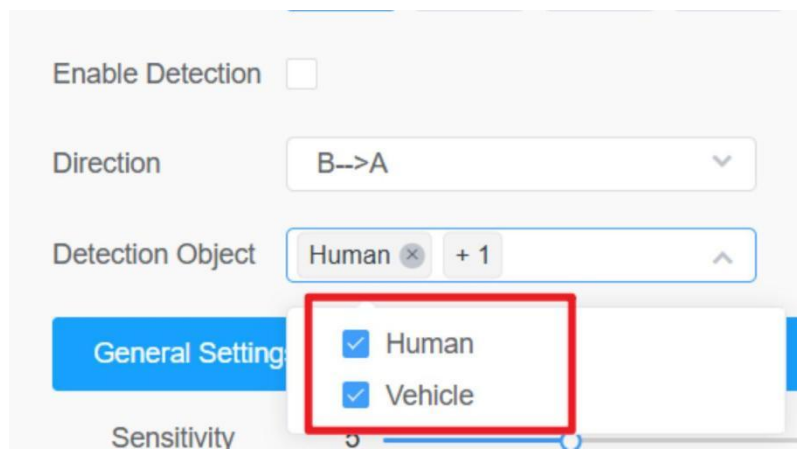
Step3: Enable Object Counting.

Step4: Set a detection line and direction.

By clicking the '**Zoom in and Draw**' button, you can activate a full-screen pop-up window to draw more accurate detection lines or areas.

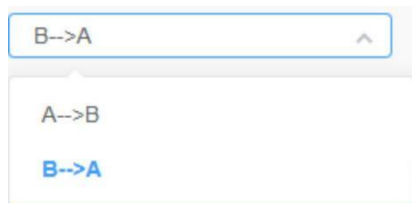


Step5: Select a detection object including human and vehicle.



Note:

- Crossing along the direction of the arrow will record as “In”, opposite is “Out”.
- Support up to 4 detection lines.



[General Settings]

Step6: Set sensitivity and object size limits.

Table 56. Description of the buttons

Parameters	Function Introduction
Trigger Mode	Set the desired mode of the trigger logic including General Mode and Bottom Mode. General Mode: The alarm is triggered when the object's body roughly enters the detection area. Bottom Mode: the alarm will be triggered as soon as the bottom of the object enters the detection area. Suitable for scenarios that require sensitivity to intrusion status/bottom detection preference.
Sensitivity	Level 1~10 are available, the default level is 5. The higher the sensitivity, the easier it is for moving objects to be recorded in the results.
Min. Size	Draw the screen to set the minimum size of the detected object. When the object is smaller than this size, it will not be detected. The default minimum size is 3*3.
Max. Size	Draw the screen to set the maximum size of the detected object. When the object is larger than this size, it will not be detected. The default maximum size is 320*240.

[Schedule Settings]

Step7: Set a detection schedule.

 **Note:** This part is the same as the regular schedule settings. You can refer to [8.4.1.1 Motion Detection](#).

[Counting Information]

Step8: Set counting information.

Counting Information

Count Type

All

In

Out

Sum

Capacity

Total Counting

Show OSD

Font Size

Font Color

Text Position

Single Counting

Show Information

Manual Reset

Auto Reset

Day

Time

Reset

Reset the statistics report together?

Everyday

00:00:00

Alarm Action

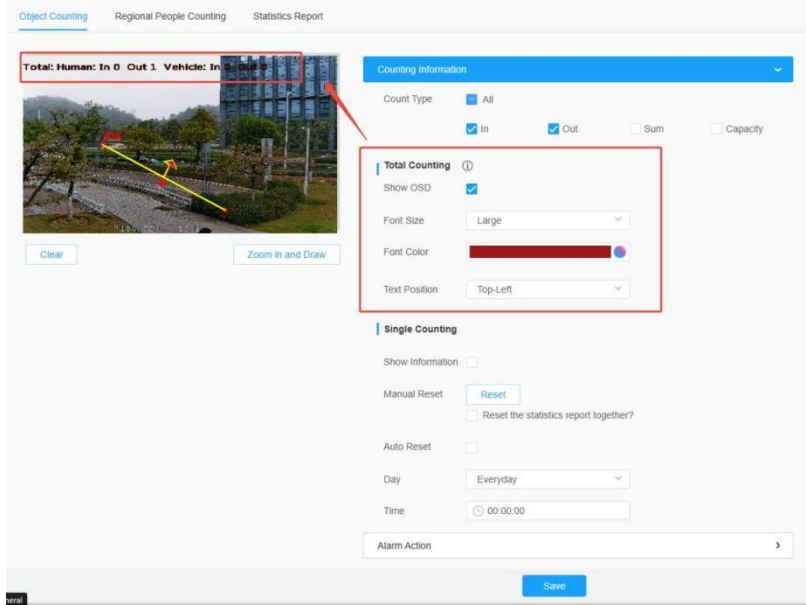
Save

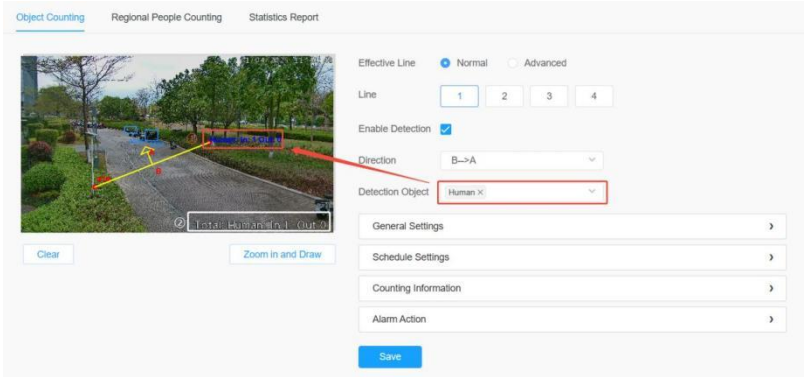
Table 57. Description of the buttons

Parameters	Function Introduction
Count Type	Choose the information you want to display in Live Video.

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Parameters	Function Introduction
Total Counting	Set counting OSD.  Note: The Total Counting OSD configuration is linked in all detection lines. Show OSD: Click to enable/disable the OSD shown. Font Size: The font size of the OSD display. Font Color: The font color of the OSD display. Text Position: The text position of the OSD display. 

Parameters	Function Introduction
Single Counting	Set Single Counting.  Note: The Total Counting OSD configuration is linked in all detection lines. Show Information: Click it to show the information.  Note: - When the detection object is set to "Human" or "Vehicle" only, the Line OSD will display "Human" or "Vehicle" accordingly to indicate the counting of these objects. Otherwise, this data will not be shown. - To hide the "Human" or "Vehicle" count in the Total OSD, you must deselect the corresponding detection object in all four regions. If at least one region has "Human" or "Vehicle" detection enabled, the Total OSD will continue to display the respective count.  Manual Reset: Reset the counting of each single line. You can choose to reset the statistics report together. Auto Reset: It is used to automatically clear the single counting information. Day: The day of Auto Reset. Time: The time of Auto Reset.

[Alarm Action]

Step9: Set alarm trigger and alarm action.

The screenshot displays the 'Alarm Action' configuration page. At the top, there's a blue header with 'Alarm Action' and a dropdown arrow. Below it, the 'Alarm Trigger Thresholds' section is active, showing two tabs: 'Total Counting' (selected) and 'Single Counting'. Under 'Total Counting', there are two main categories: 'Human' and 'Vehicle'. Each category has four checkboxes: 'In', 'Out', 'Capacity', and 'Sum'. Each checkbox is followed by a numeric input field, all of which are currently set to '9999'. Below this, the 'Alarm Action' section is visible, containing a list of actions with checkboxes: 'Record', 'Snapshot', 'External Output', 'Play Audio' (with a red note 'Please enable the Audio Speaker.'), 'Alarm to SIP Phone' (with a red note 'Please open the SIP.'), and 'HTTP Notification'. Each action has a right-pointing arrow. At the bottom left of the configuration area is a blue 'Save' button.

Table 58. Description of the buttons

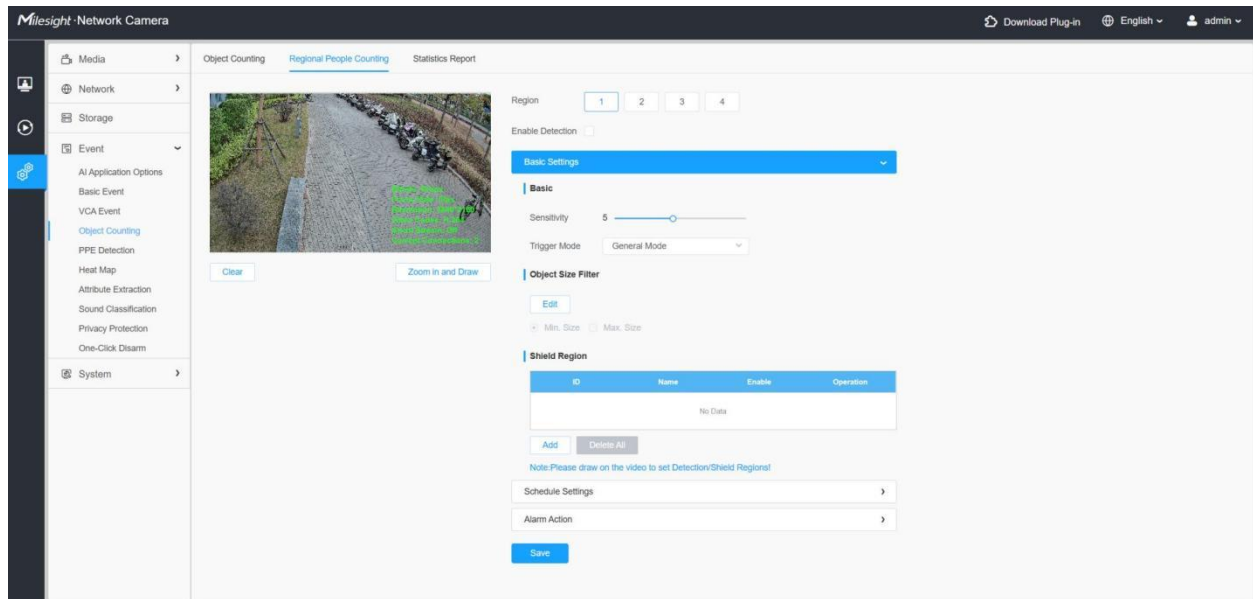
Parameters	Function Introduction
Alarm Trigger	Alarm will be triggered when the thresholds reaches to a certain value from 1 to 9999. Total Counting and Single Counting are available. You can set the Alarm Thresholds of In/Out/Capacity/Sum.  Note: • For Total Counting, the thresholds are the sum of the total number of 4 detection lines. • For Single Counting, the threshold is for the selected detection line.
Alarm Action	This part is the same as the regular alarm settings. You can refer to 8.4.1.1 Motion Detection.  Note: • The alarm action is effective on 4 detection lines simultaneously. • If you enable External Output and choose Constant External Output Action Time, when the thresholds reach to a certain value you set, External Output Action alarm time will be always constant till the alarm is released.

8.4.3.2 Regional People Counting

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

Note:

- You can check the real-time number of people and the time of each person's stay in the detection region on Live View interface.



Settings steps are as shown below:

Step1: Choose **Settings > Event > AI Application Options > Object Counting > Regional People Counting**.

Step2: Select a detection region and enable regional people counting detection.

Region 1 2 3 4

Enable Detection ☐

Note: Support up to 4 detection regions.

[Basic Settings]

Step3: Set sensitivity and object size limits.

The screenshot shows the 'Basic Settings' configuration page. At the top is a blue header with 'Basic Settings' and a dropdown arrow. Below it, the 'Basic' section is highlighted. It contains a 'Sensitivity' slider set to 5, a 'Trigger Mode' dropdown menu set to 'General Mode', and an 'Object Size Filter' section with an 'Edit' button and radio buttons for 'Min. Size' (selected) and 'Max. Size'. A note below states: 'Note: Please draw on the video to set Detection Regions/Lines!'. At the bottom of the settings area are two expandable sections: 'Schedule Settings' and 'Alarm Action', each with a right-pointing arrow. A blue 'Save' button is at the very bottom.

Table 59. Description of the buttons

Parameters	Function Introduction
Trigger Mode	Set the desired mode of the trigger logic including General Mode and Bottom Mode. General Mode: The alarm is triggered when the object's body roughly enters the detection area. Bottom Mode: the alarm will be triggered as soon as the bottom of the object enters the detection area. Suitable for scenarios that require sensitivity to intrusion status/bottom detection preference.
Sensitivity	Level 1~10 are available, the default level is 5. The higher the sensitivity, the easier it is for moving objects to be recorded in the results.
Min. Size	Draw the screen or input pixel number to set the minimum size of the detected object. When the object is smaller than this size, it will not be detected. The default minimum size is 3*3.
Max. Size	Draw the screen or input pixel number to set the maximum size of the detected object. When the object is larger than this size, it will not be detected. The default maximum size is 320*240.
Shield Region	The camera will ignore content in shield regions to prevent false fall detection alarms. Click Add to add a shield region. Up to 4 regions are supported.

[Schedule Settings]

Step4: Set a detection schedule.



Note: This part is the same as the regular schedule settings. You can refer to [8.4.1.1 Motion Detection](#).

[Alarm Action]

Step5: Set alarm trigger and alarm action.

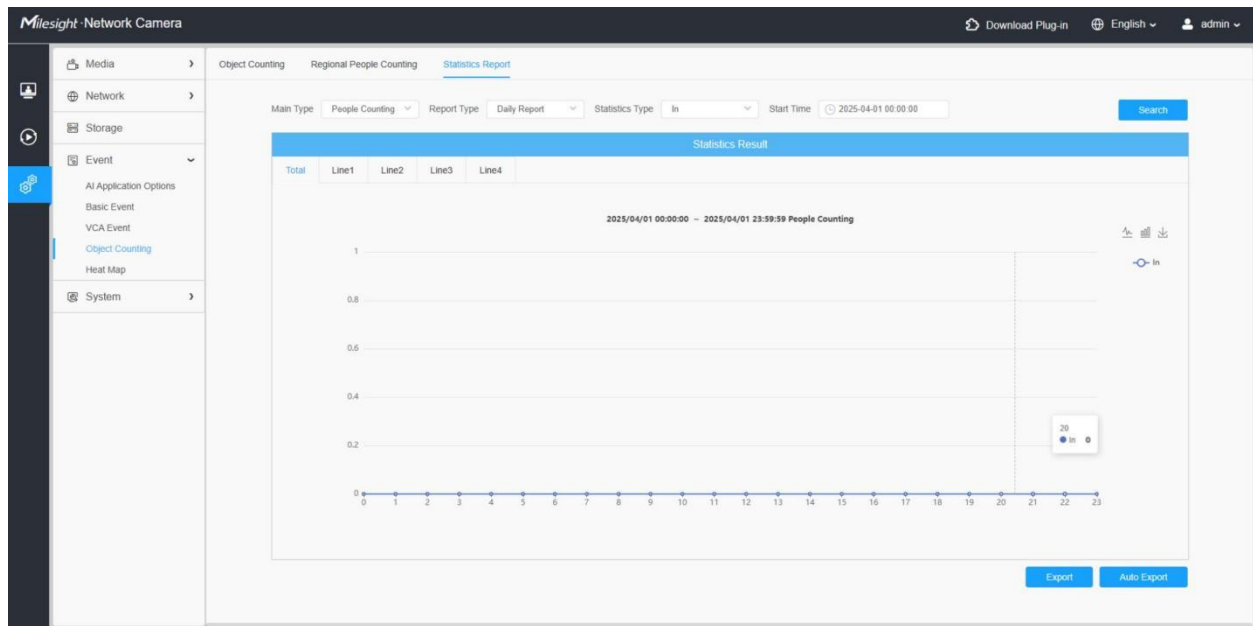
The screenshot shows the 'Alarm Action' configuration window. At the top, there's a blue header with 'Alarm Action' and a dropdown arrow. Below it, the 'Alarm Trigger' section is active, showing three thresholds: 'Max.Stay' set to 60, 'Min.Stay' set to 1, and 'Max.Length of Stay' set to 30 with a unit 's'. Each threshold has a checked checkbox. Below this, the 'Alarm Action' section is visible, listing several actions with checkboxes: 'Record', 'Snapshot', 'External Output', 'Play Audio' (with a red note 'Please enable the Audio Speaker.'), 'Alarm to SIP Phone' (with a red note 'Please open the SIP.'), and 'HTTP Notification'. A blue 'Save' button is located at the bottom left of the configuration area.

Table 60. Description of the buttons

Parameters	Function Introduction
Alarm Trigger	Alarm will be triggered when the Max./Min. Stay/Max. Length of Stay thresholds reaches to the value.  Note: The value must be in the range of 1 to 60.
Alarm Action	This part is the same as the regular alarm settings. You can refer to 8.4.1.1 Motion Detection.  Note: • The alarm action is effective on 4 detection regions simultaneously. • If you enable External Output and choose Constant External Output Action Time, when the thresholds reach to a certain value you set, External Output Action alarm time will be always constant till the alarm is released.

8.4.3.3 Statistics Report

The results during the enabling period will be displayed on “**Statistics Report**” interface.



Step 1: Select Main Type.

Step2: Select Report Type including Daily Report, Weekly Report, Monthly Report and Annual Report.

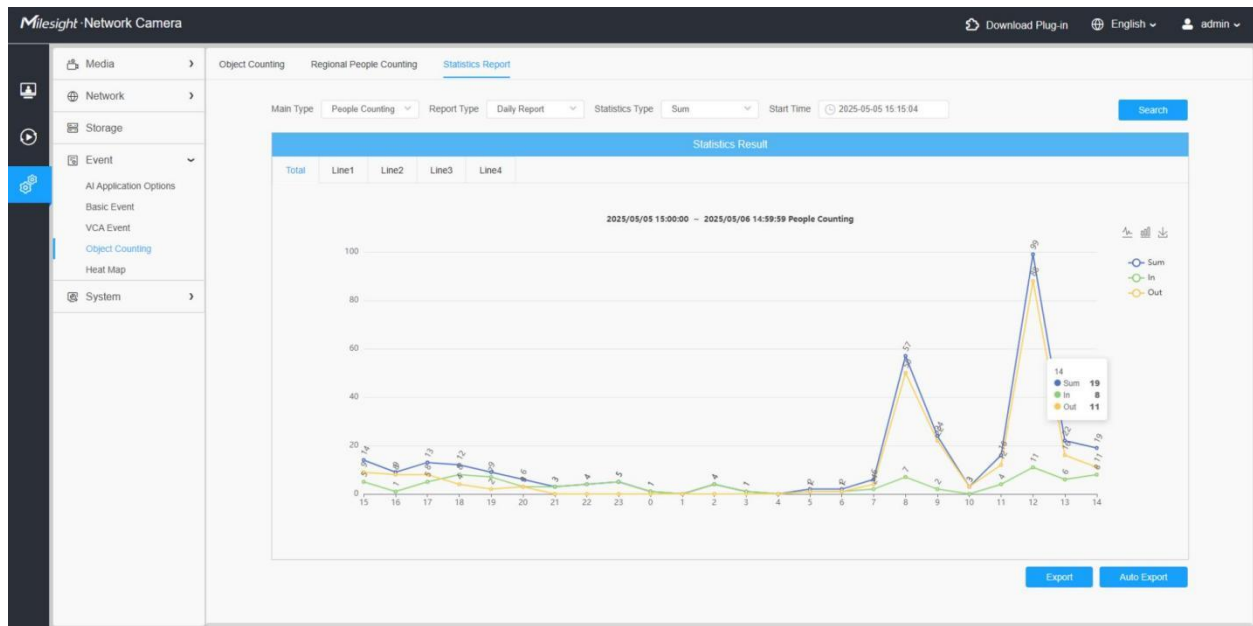
Step3: For people counting, select Statistics Type including In, Out and Sum. For regional people counting, select Length of Stay including All, More Than and Less Than and set the time of more then/less then.

Note: For regional people counting, check the check box to search the report of regions as needed.

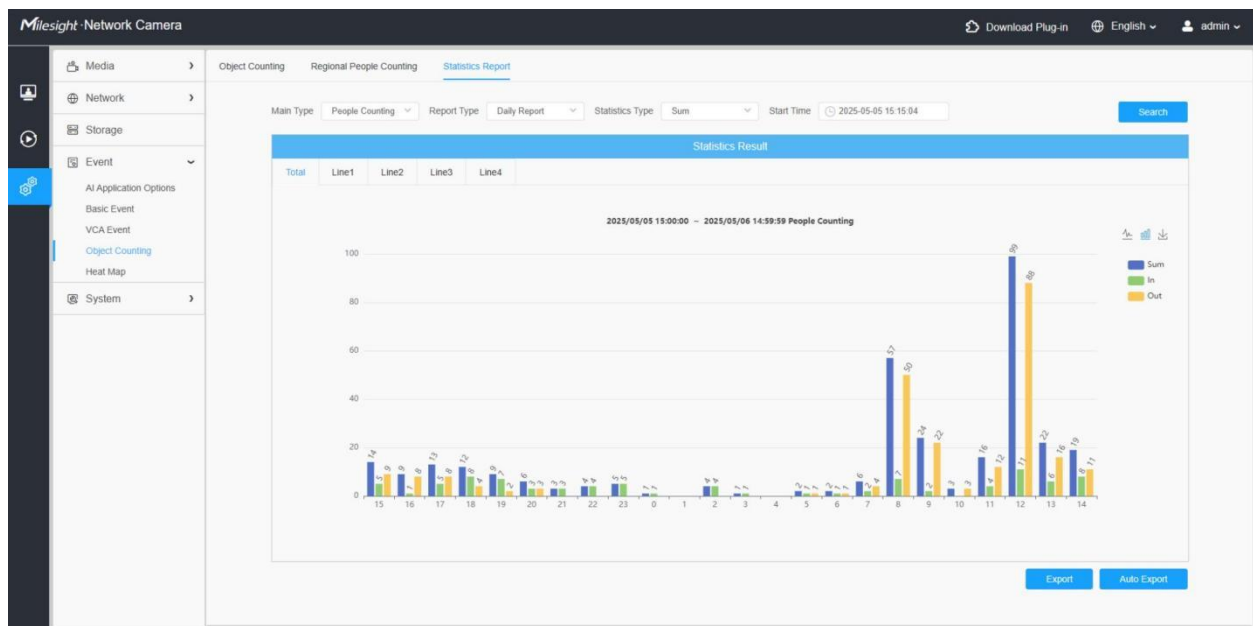
Step4: Select Start Time, then click "Search" button, the camera will automatically count the data for the day/ week/ month/ year (based on the report type selected by the user) from the start time and generate the corresponding report.

Step5: Moreover, you can also click "Line Chart" or "Bar Chart" to switch display mode of Statistics Report as shown below.

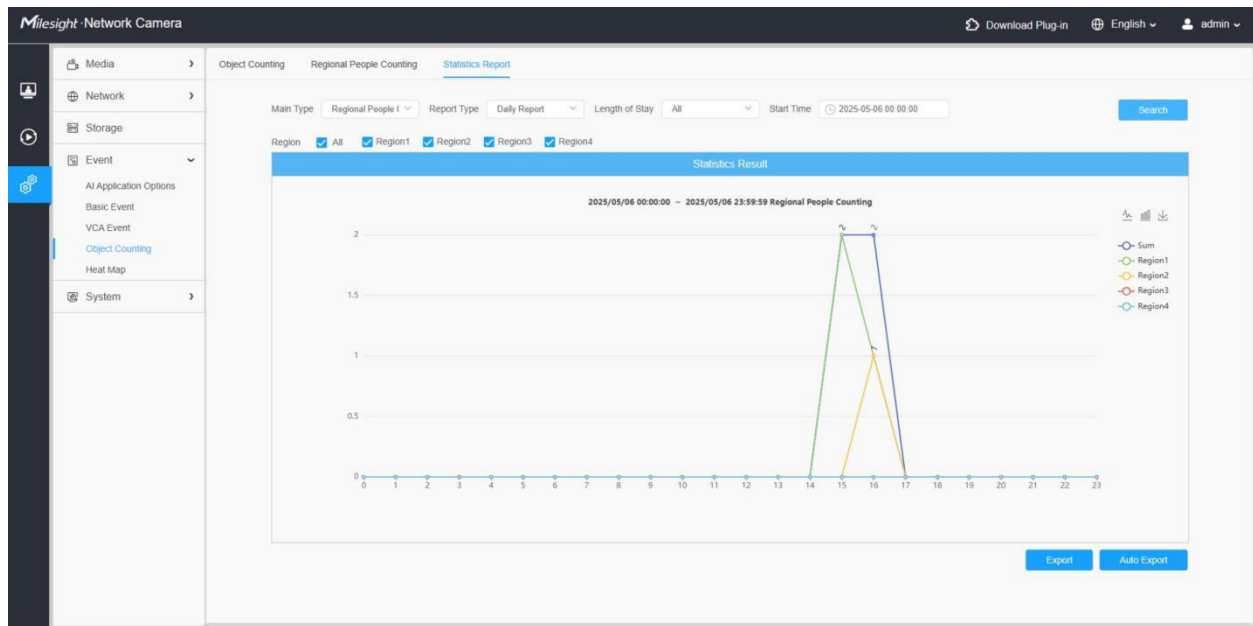
People Counting-Statistics Report (Line Chart)



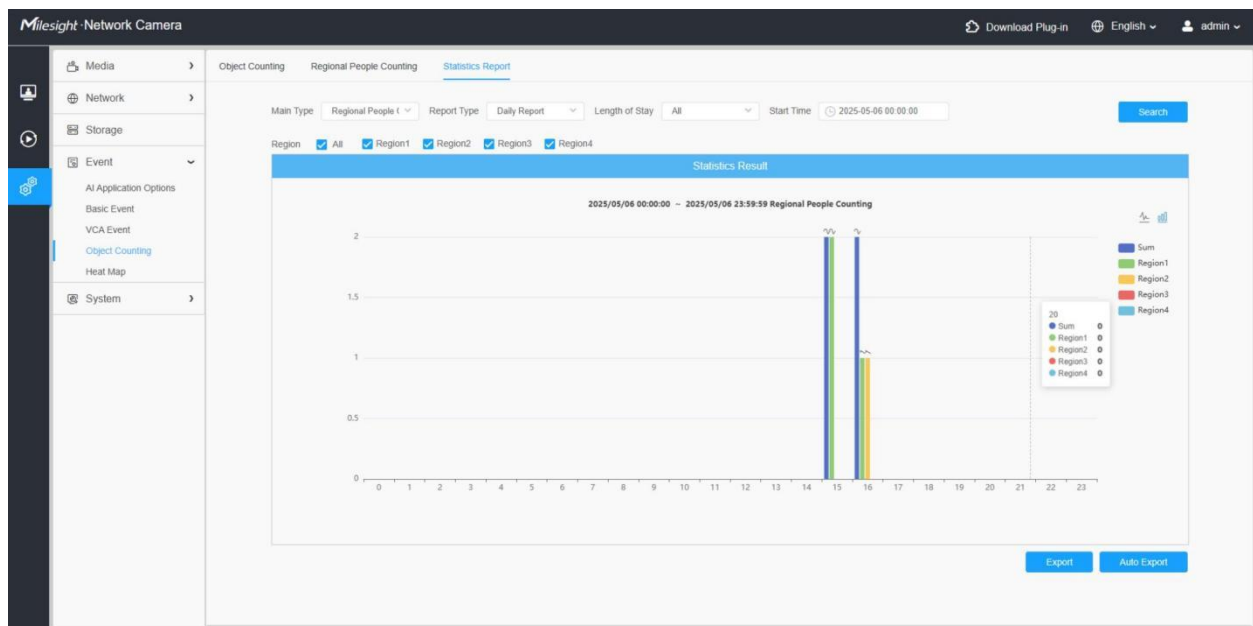
People Counting-Statistics Report (Bar Chart)



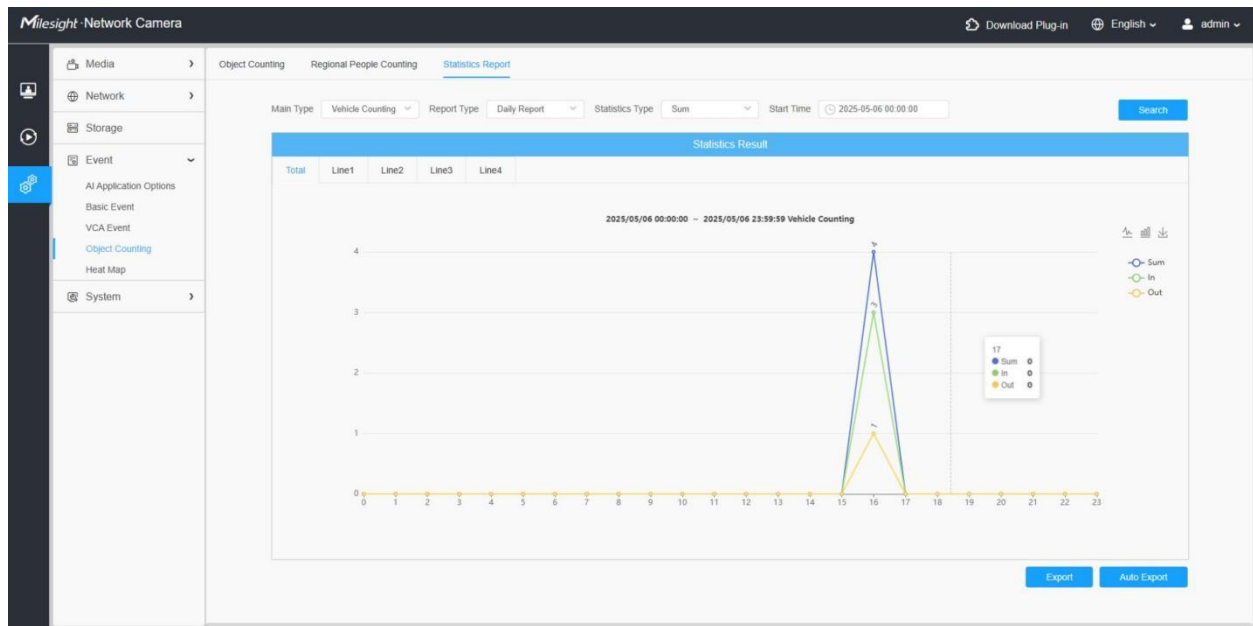
Regional People Counting-Statistics Report (Line Chart)



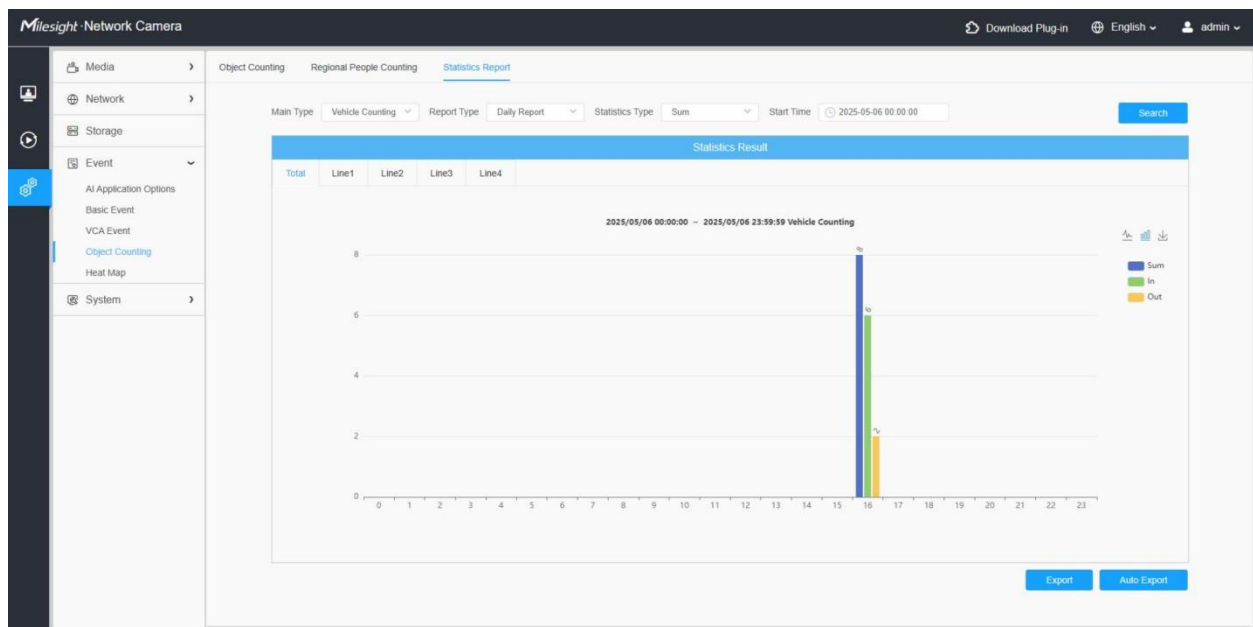
Regional People Counting-Statistics Report (Bar Chart)



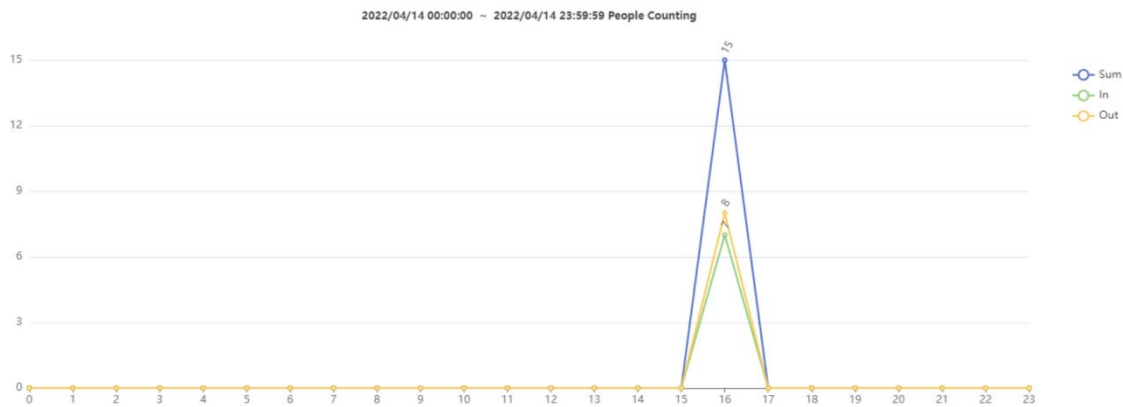
Vehicle Counting-Statistics Report (Line Char)



Vehicle Counting-Statistics Report (Bar Chart)



Step6: Click "Download" button to download the screenshot of the statistical report chart.



Step7: Click "Export" button to pop up the Export window as shown below, and you can choose File Format to export the report to local. For people counting Statistics Report, you can check the check box to export the report of different lines as needed.

People Counting-Export

Export

File Format ☐ CSV

Line

☒ All

☒ Total☒ Line1☒ Line2

☒ Line3☒ Line4

Export

Cancel

Regional People Counting-Export

Export

File Format ☐ CSV

Export

Cancel

Step8: Click "Auto Export" button to pop up the Statistics Report Settings as shown below. *People Counting-Auto Export*

- Check the check box to enable the auto export of people counting, then select the lines as needed.
- Set Day. User can choose Everyday to export daily reports, while choosing others to export reports on a specific day of the week;

- Set Time. User can choose the time of day to export the Statistics Report automatically, click the calendar icon to pop up the following Quick Selection;

Time: 03:03:03

Export Time Range: 01 01 01, 02 02 02, 03 03 03, 04 04 04, 05 05 05

Export to: [field]

Buttons: Save, Cancel, OK

- Set Export Time Range;

Export Time Range: Last 1 day

Export to: Last 1 day, Export All

Buttons: Save, Cancel

- Set the destination path of the automatically exported report. The report can be exported to FTP/Email/Storage automatically as the form of an Excel spreadsheet according to the day, time and export time range you set. Then click “Save”.

Export to: ☐ FTP ☐ Email ☒ Storage

Buttons: Save, Cancel

 **Note:** If the current Statistics Report is generated, it will be saved as a csv form.

Regional People Counting-Auto Export

Auto Export

People Counting [Regional People Counting](#)

Enable ☐

Day Everyday

Length of Stay All

Time 00:00:00

Export Time Range Last 1 day

Export to ☐ FTP ☐ Email ☐ Storage

Save Cancel

- Check the check box to enable the auto export of regional people counting.
- Set Day. User can choose Everyday to export daily reports, while choosing others to export reports on a specific day of the week;

Day Monday

Length of Stay

Time

Export Time Range

Export to

Save

Everyday

Sunday

Monday

Tuesday

Wednesday

Thursday

Friday

- Set Length of Stay.

Length of Stay All

Time

Export Time Range

Export to

Save

All

More Than

Less Than

- Set Time. User can choose the time of day to export the Statistics Report automatically, click the calendar icon to pop up the following Quick Selection;

Time 03:03:03

Export Time Range

Export to

Save

Cancel OK

- Set Export Time Range;

Export Time Range Last 1 day

Export to

Save

Cancel

- Set the destination path of the automatically exported report. The report can be exported to FTP/Email/Storage automatically as the form of an Excel spreadsheet according to the day, time and export time range you set. Then click “Save”.

Export to ☐ FTP ☐ Email ☒ Storage

Save Cancel

 **Note:** If the current Statistics Report is generated, it will be saved as a csv form.

Vehicle Counting-Auto Export

Auto Export

People Counting Regional People Counting Vehicle Counting

Enable ☐

Line ☒ All ☒ Total ☒ Line1 ☒ Line2 ☒ Line3 ☒ Line4

Day

Time

Export Time Range

Export to ☐ FTP ☐ Email ☐ Storage

- Check the check box to enable the auto export of vehicle counting, then select the lines as needed.
- Set Day. User can choose Everyday to export daily reports, while choosing others to export reports on a specific day of the week;

Day

Length of Stay

Time

Export Time Range

Export to

Everyday
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday

- Set Time. User can choose the time of day to export the Statistics Report automatically, click the calendar icon to pop up the following Quick Selection;

Time: 03:03:03

Export Time Range: 01 01 01, 02 02 02, 03 03 03, 04 04 04, 05 05 05

Export to: [field]

Buttons: Save, Cancel, OK

- Set Export Time Range.

Export Time Range: Last 1 day

Export to: [field]

Buttons: Save, Cancel

- Set the destination path of the automatically exported report. The report can be exported to FTP/Email/Storage automatically as the form of an Excel spreadsheet according to the day, time and export time range you set. Then click “Save”.

Export to: ☐ FTP ☐ Email ☒ Storage

Buttons: Save, Cancel

 **Note:** If the current Statistics Report is generated, it will be saved as a csv form.

8.5 System

Here you can configure System Setting, Security, Logs and Maintenance.

8.5.1 System Setting

Here you can check System information and Date&Time.

8.5.1.1 System Info

All information about the hardware and software of the camera can be checked on this page.

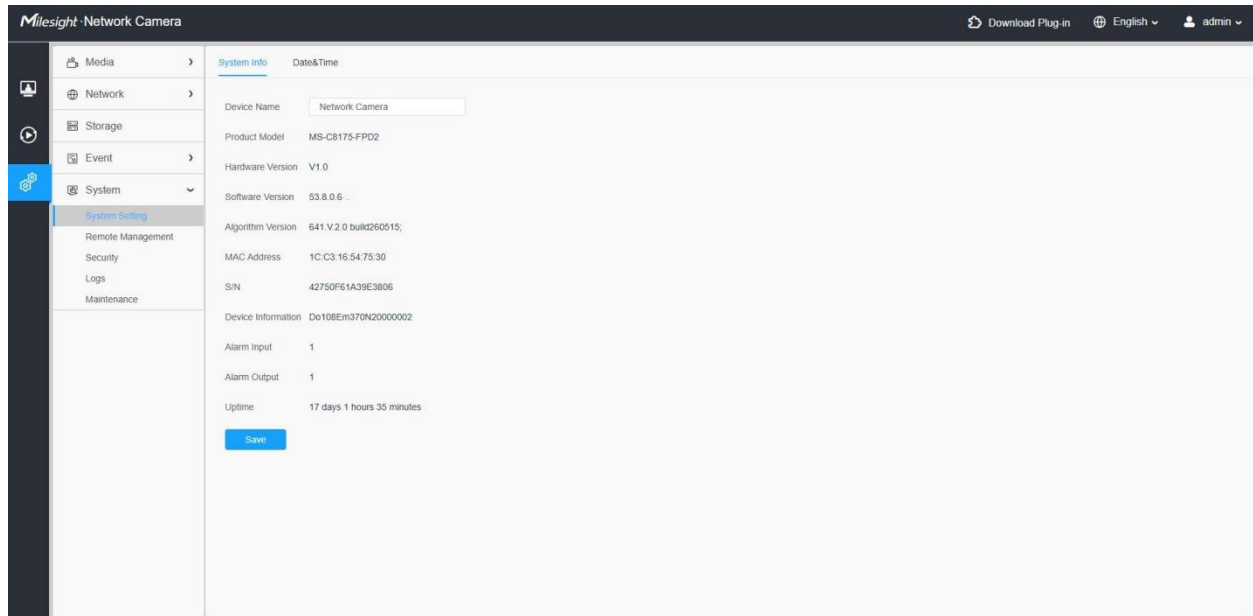


Table 61. Description of the buttons

Parameters	Function Introduction
Device Name	The device name can be customized. It will be seen in file names of video files.
Product Model	The product model of the camera.
Hardware Version	The hardware version of the camera.
Software Version	The software version of the camera can be upgraded.
Algorithm Version	Display Current Algorithm Version.
MAC Address	Media Access Control address.
S/N	Serial Number.
Device Information	The device information, including information about alarm I/O and clipper chip.
Alarm Input	The number of Alarm Input interface.  Note: The Alarm Input will appear only when the camera have alarm input/output interface.

Parameters	Function Introduction
Alarm Output	The number of Alarm Output interface. Note: The Alarm Output will appear only when the camera have alarm input/output interface.
Uptime	The elapsed time since the last restarted of the device.
Save	Save the configuration.

8.5.1.2 Date&Time

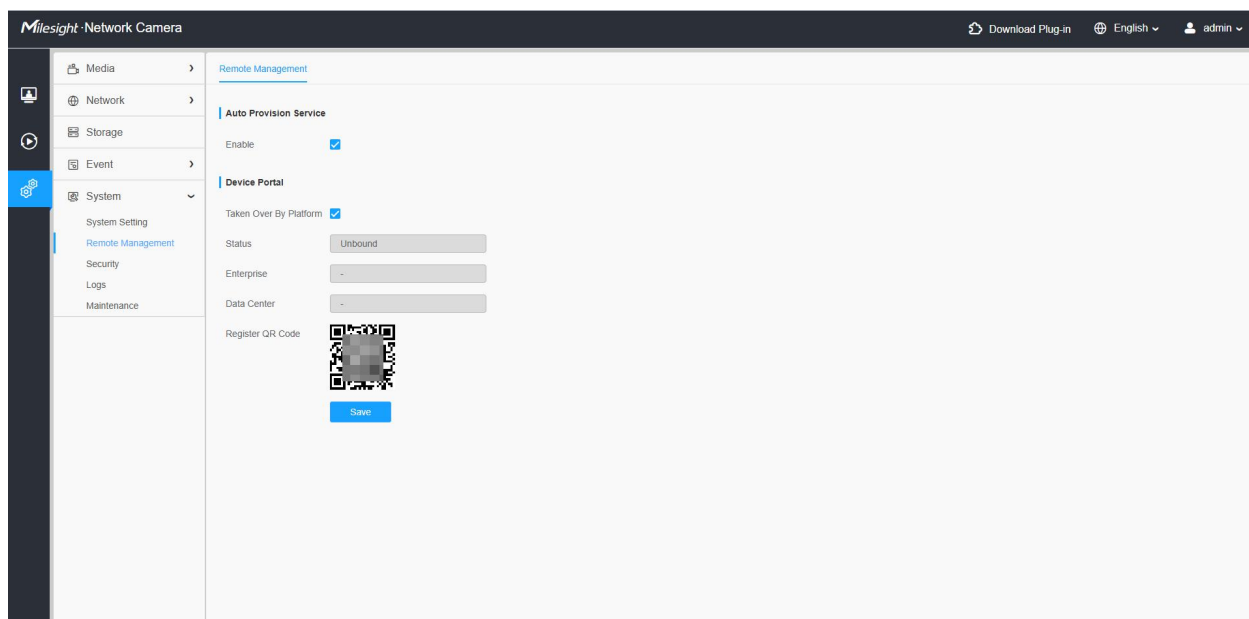
The screenshot displays the 'Date&Time' configuration page in the Mileight Network Camera web interface. The left sidebar contains navigation links: Media, Network, Storage, Event, and System. The 'System' menu is expanded, showing 'System Setting', 'Security', 'Logs', and 'Maintenance'. The main panel is titled 'Date&Time' and is divided into two sections: 'Current System Time' and 'Set the System Time'. The 'Current System Time' section shows the current date as 06/04/2023 and time as 00:46:43. The 'Set the System Time' section includes a 'Time Zone' dropdown set to '(UTC-08:00) United States - Pt', a 'Daylight Saving Time' dropdown set to 'Automatic', and three radio buttons for 'Synchronize Mode': 'NTP server' (selected), 'Manual', and 'Synchronize with computer time'. Below these are a 'Server Address' text field with 'pool.ntp.org', an 'NTP Sync' checkbox (checked), and an 'Interval' text field with '1440' and a unit 'min. (1-43200)'. A 'Save' button is located at the bottom of the configuration options.

Table 62. Description of the buttons

Parameters	Function Introduction
Current System Time	Current Date&Time of the system.
Set the System Time	Time Zone: Choose a time zone for your location.
	Daylight Saving time: Select Disabled , Manual , or Automatic as a daylight saving time mode.
	Time Format: Choose a time format. HH:mm:ss displays time in 24-hour format (e.g., 14:30:25), while hh:mm:ss tt uses 12-hour format with AM/PM indicators (e.g., 02:30:25 PM).

Parameters	Function Introduction
	Synchronize Mode: Select a time synchronization mode from NTP server, Manual, and Synchronize with computer time. NTP server: Input the address of NTP server. Server Address: Input the server address. NTP Sync: Regularly update your time according to the interval time. Interval: Input an interval from 1 to 43,200 (min). Manual: Set the system time manually. Synchronize with computer time: Synchronize the time with your computer.
Save	Save the configurations.

8.5.2 Remote Management



The Remote Management section allows you to configure various settings that enable remote control and management of your security camera. This includes enabling the Auto Provision Service, Development Platform, and configuring Wake Up Settings.

You can use the Milesight Development Platform for remote and bulk management of devices. Platform address:

<https://account.milesight.com/login>

For instructions on how to add a device, please refer to the platform manual:

<https://www.milesight.com/docs/en/development-platform/introduction/connect-a-device.html>

Auto Provision Service

- **Enable Auto Provision Service:**
 - o Enabling this option means that the camera will automatically obtain pre-configuration from the Milesight Development Platform after rebooting.

Development Platform

- **Enable Development Platform:**
 - o Enabling this option allows the Milesight Development Platform to modify camera settings. Users can then more conveniently modify camera settings remotely in bulk via the Milesight Development Platform.

Table 63. Description of the buttons

Parameters	Function Introduction
Taken Over by Platform	Toggle to allow or restrict the device from connecting to the management platform. (Default: Enabled)
Status	Displays the real-time connection status: • Unbound: Device has not been added to any account. • Online: Device is successfully connected to the platform. • Offline: Device is registered but currently disconnected.
Enterprise	Displays the enterprise.
Taken Over by Platform	Toggle to allow or restrict the device from connecting to the management platform. (Default: Enabled)
Data Center	Displays the region of the connected server (e.g., EU).

8.5.3 Security

Here you can configure User, Access List, Security Service, Watermark, etc.

8.5.3.1 User

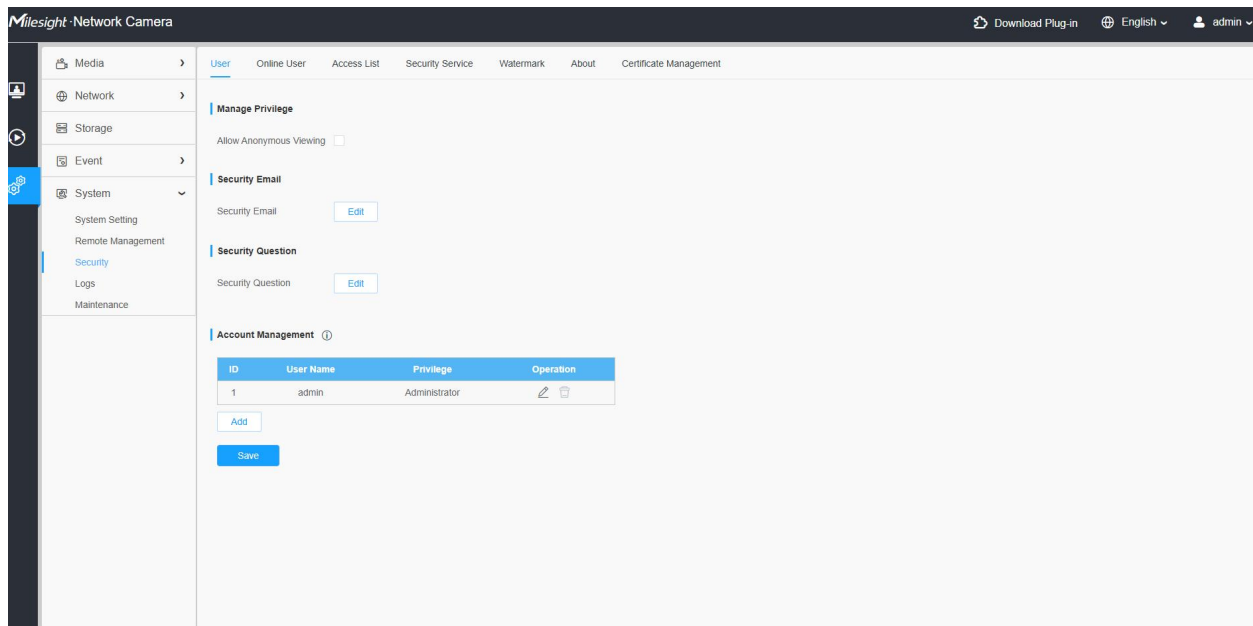
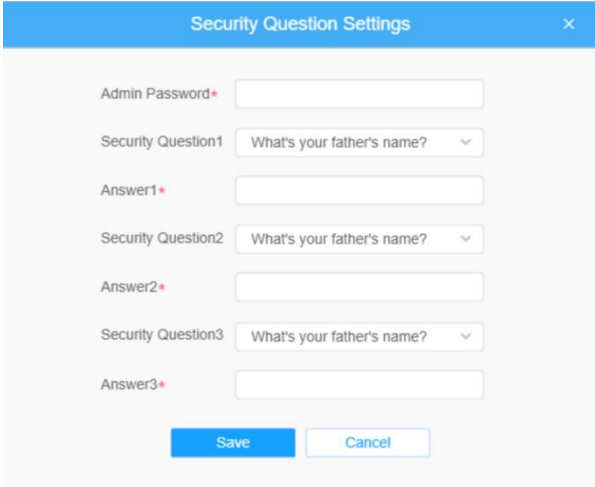
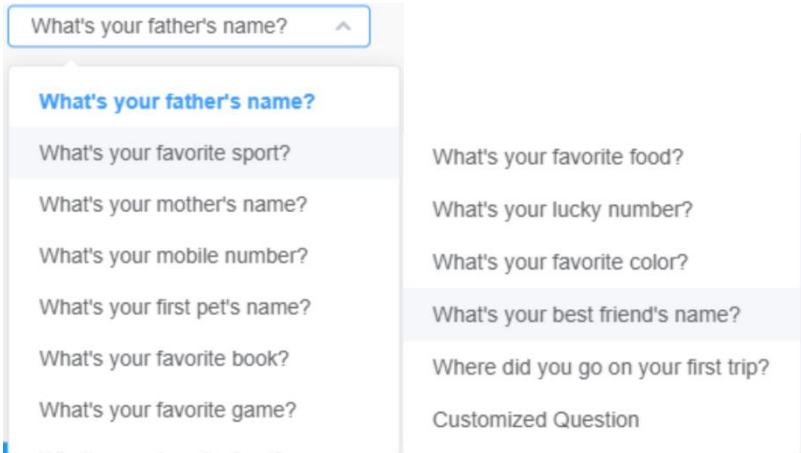


Table 64. Description of the buttons

Parameters	Function Introduction
Manage Privilege	Allow anonymous viewing: Check the checkbox to enable visit from whom doesn't have account of the device.
Security Email	Set a security email for your camera. If you forget your password, click "Forgot Password" on the login page. A security code will be sent to your email. Enter the code to reset your password. Security Email Settings Admin Password Security Email Save Cancel
Security Question	Click "Edit" button to set three security questions for your camera. In case that you forget the password, you can click "Forget Password" button on login page to reset the password by answering three security questions correctly.

Parameters	Function Introduction
	 There are twelve default questions below, you can also customize the security questions. 
Account Management	Click “Add” button, it will display Account Management page. You can add an account to the camera by entering Admin Password, User Level, User Name, New Password, Confirm, and edit user privilege by clicking . The added account will be displayed in the account list. Admin Password: You can add an account only after you enter the correct admin password. User Level: Set the privilege for the account. User Name: Input user name for creating an account. New Password: Input password for the account.

Parameters	Function Introduction
	Confirm: Confirm the password. You can edit and delete the account in the account list under the admin account. For the default admin account, you can only change the password, and it cannot be deleted.  Note: • Support up to 20 users, including a default user and 19 custom added users. • The operator privilege is all checked by default.

8.5.3.2 Online User

Here real-time status of user logging in camera will be shown.

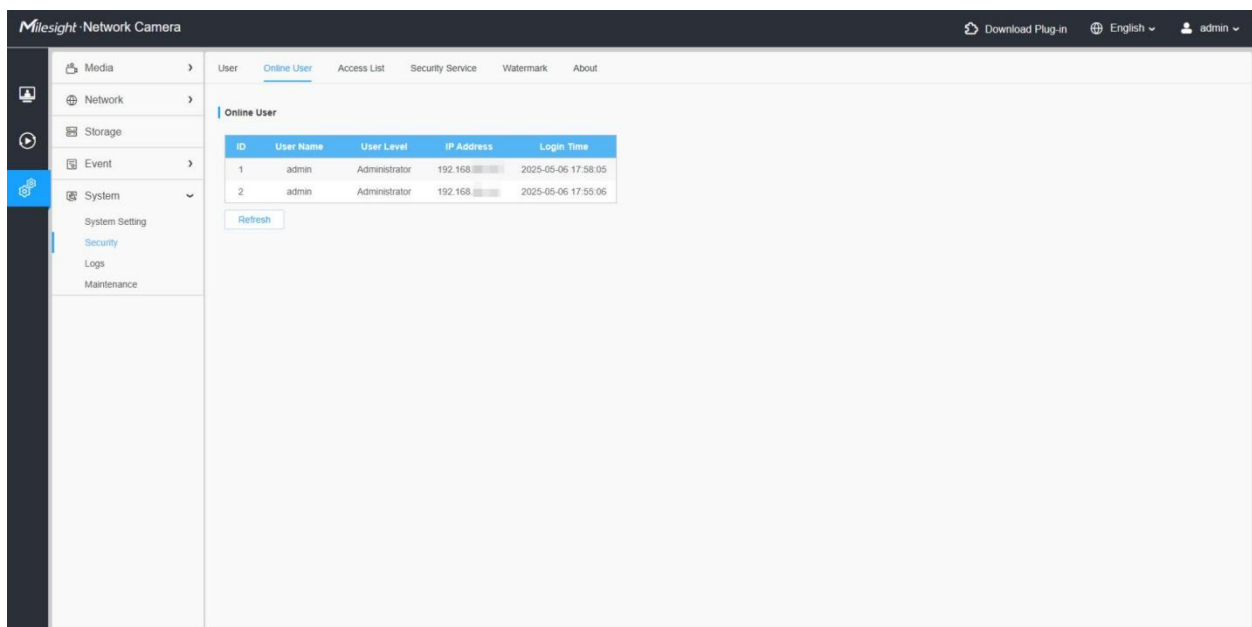


Table 65. Description of the buttons

Parameters	Function Introduction
Refresh	Click to get latest status of user accessing to camera.

Parameters	Function Introduction
ID	Record serial number of user logging in camera. Note: - There are at most 30 records shown at the list. - There is only one record if the same user logging on camera by the same IP address.
User Name	Name of user logging in camera.
User Level	Level of user logging in camera.
IP Address	Device IP address where user logging in camera web located.
Login Time	Camera system time of user logging in camera.

8.5.3.3 Access List

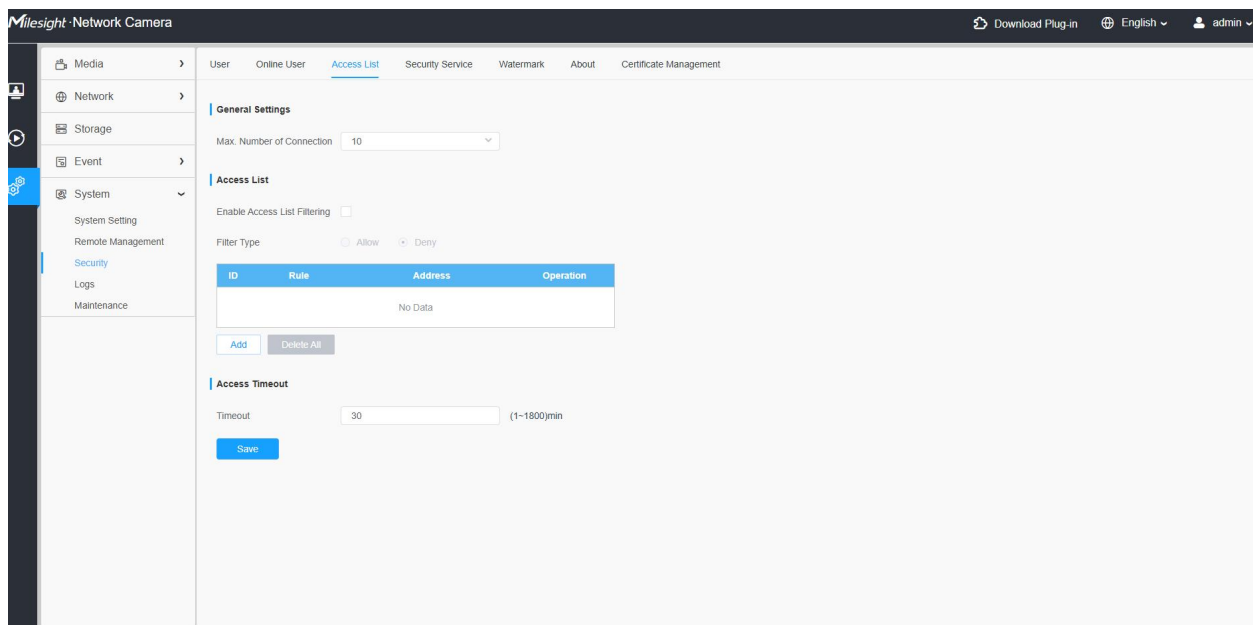
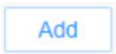


Table 66. Description of the buttons

Parameters	Function Introduction
General Settings	Max. Number of Connection: Select the maximum number of concurrent streaming. Options include No Limit, 1~10.
Access List	Enable Access List Filtering: Able to access or restrict access for some IP address.
	Filter type: Allow or deny access.

Parameters	Function Introduction	
Access List		Rule: Single, Network and Range are available. IP address: Input the address to get the access to the device.
		Delete all the access list.
		Edit the selected IP on access list.
		Delete the selected IP on access list.
Access Timeout	Allow administrators to configure an automatic logout duration from 1 to 1,800 minutes (default: 30 minutes). After the configured timeout period of inactivity, the user is automatically logged out.	
	Save the configuration.	

8.5.3.4 Security Service

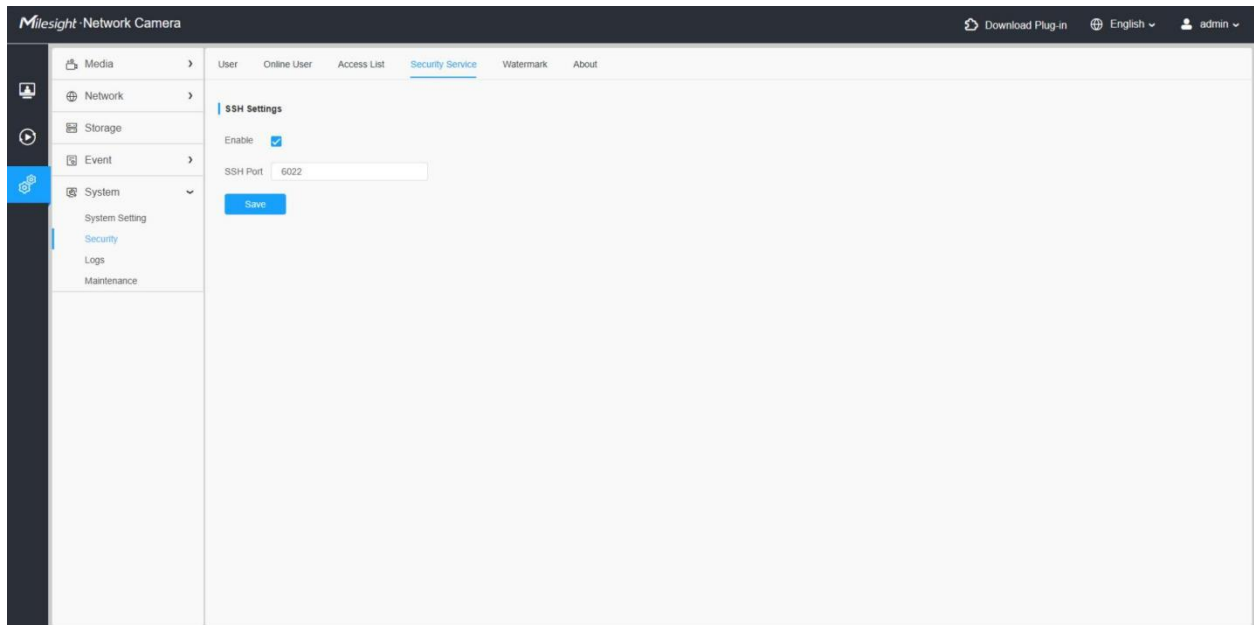


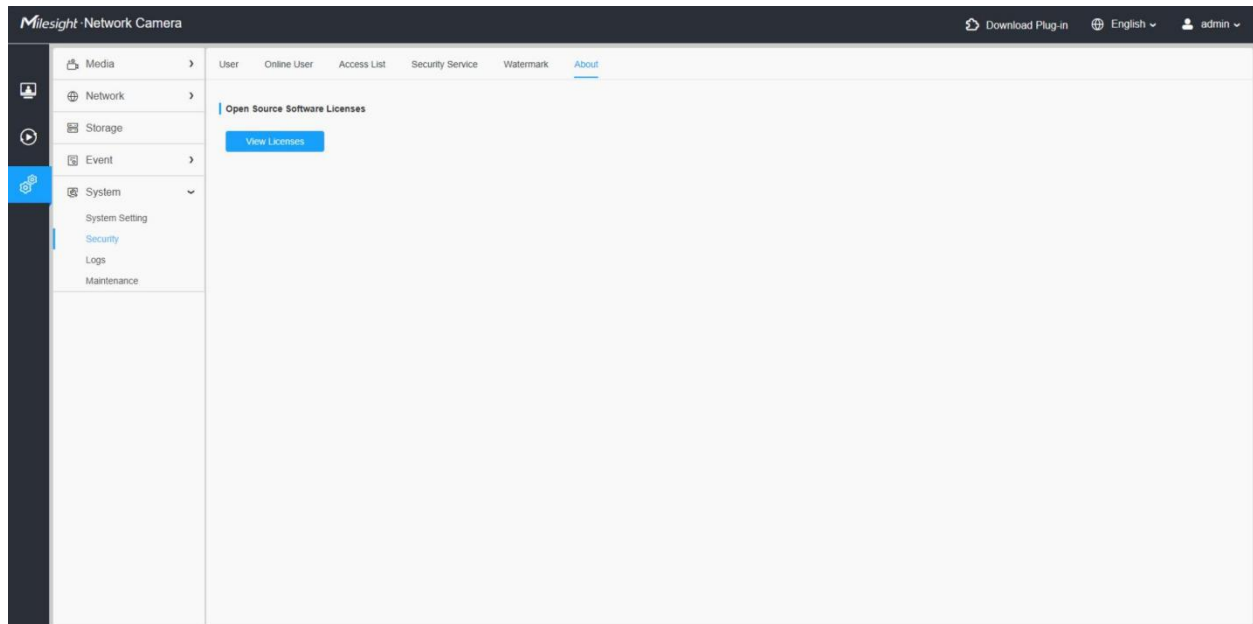
Table 67. Description of the buttons

Parameters	Function Introduction
SSH Settings	Secure Shell (SSH) has many functions: it can replace Telnet and also provides a secure channel for FTP, POP, even for PPP.

8.5.3.5 Watermark

Watermarking is an effective method to protect information security, realizing anti-counterfeiting traceability and copyright protection. Milesight supports Watermark function to ensure information security.

8.5.3.6 About



User can view some open source software licenses about the camera by clicking the View Licenses button.

8.5.3.7 Certificate Management

This section describes the information about certificate management.

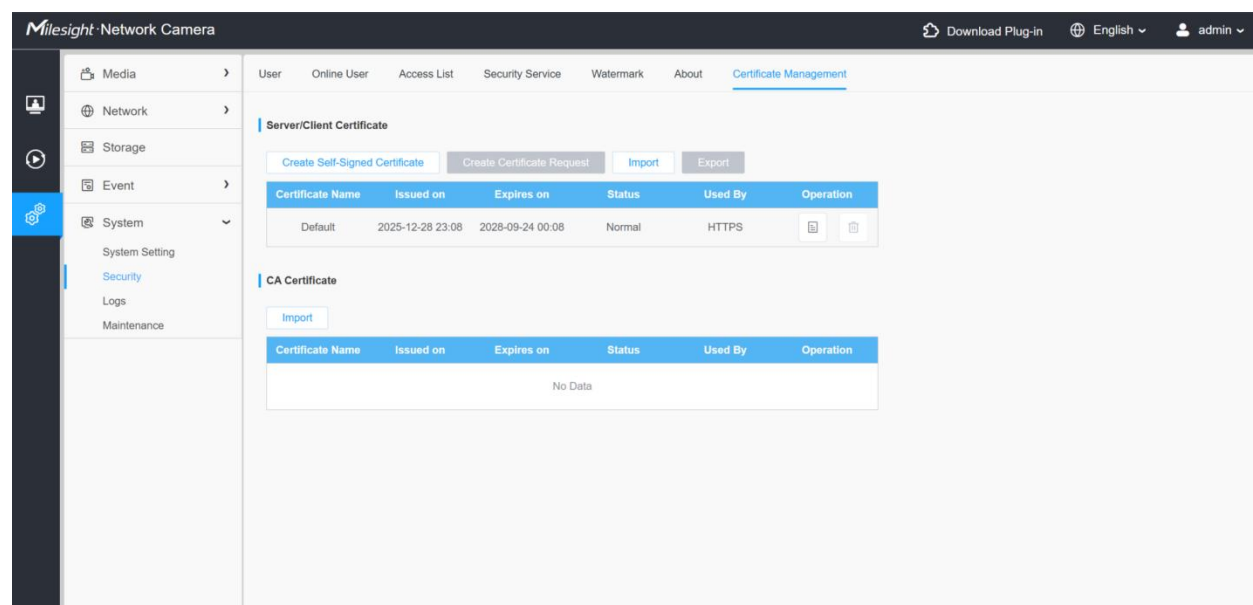
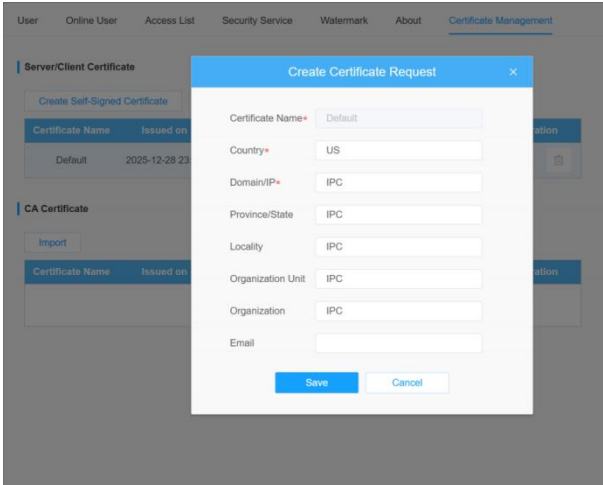
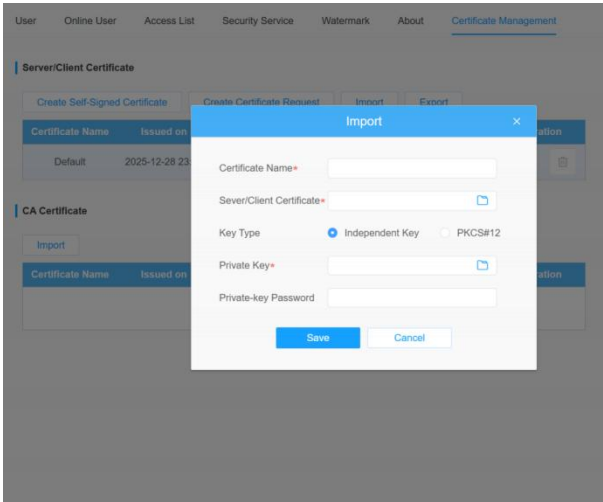
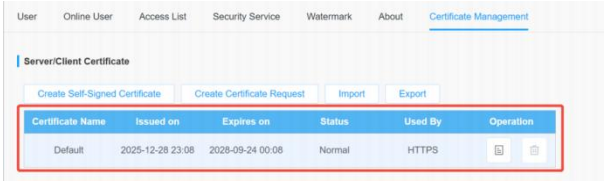
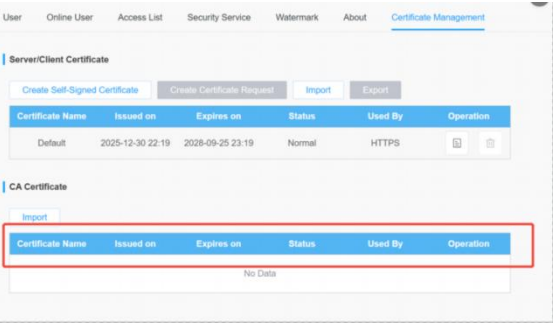
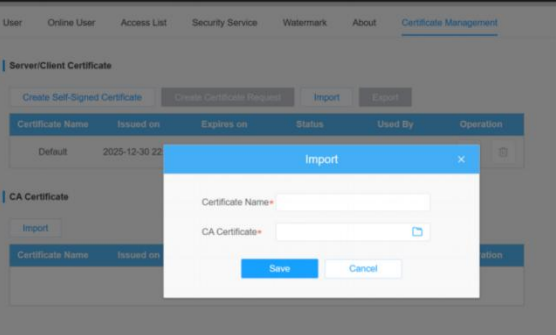


Table 68. Parameter Description

Parameters	Function Introduction
Server/Client Certificate	Create Self-Signed Certificate: Click it to create a self- signed certificate. When you click it, the following buttons are displayed. Certificate Name: Enter a certificate name. Public Key Length: Select 1024 or 2048 for the public key length. Country: Enter a country. Domain/IP: Enter a domain or an IP. Validity Period: Enter a validity period (day) from 1 to 5,000. Password: Enter a password. Province/State: Enter a province or state. Locality: Enter a locality. Organization Unit: Enter an organization unit. Organization: Enter an organization. Email: Enter an email address.

The screenshot shows a web interface with a sidebar on the left containing 'Server/Client Certificate' and 'CA Certificate' sections. The 'Server/Client Certificate' section is active, showing a 'Create Self-Signed Certificate' button. A modal dialog box is open, titled 'Create Self-Signed Certificate', with the following fields: Certificate Name, Public Key Length (2048), Country, Domain/IP, Validity Period (day (1-5000)), Password, Province/State, Locality, Organization Unit, Organization, and Email. The dialog box has 'Save' and 'Cancel' buttons at the bottom.

Parameters	Function Introduction
Server/Client Certificate	Create Certificate Request: Click it to create a certificate request. When creating a certificate request, you are advised to enter the following buttons: Certificate Name, Country, Domain/IP, Province/State, Locality, Organization Unit, Organization, and Email. 
Server/Client Certificate	Import: Import a certificate. Certificate Name: Enter a certificate name. Sever/Client Certificate: Import a sever or client certificate. Key Type: Select Independent Key or PKCS#12. Private Key: Import a private key. Private-key Password: Enter a private-key password.  Export: Click it to export the certificate.

Parameters	Function Introduction
Server/Client Certificate	 Certificate Name: Certificate name. Issued On: The Issue time of the certificate. Expires On: The validate period of the certificate. Status: The status of the certificate. Used By: The application method of the certificate. Operation: The following icons are displayed under the column of Operation.   Click the first icon to see the detailed information of the certificate; click the latter to delete the certificate.
CA Certificate	You can import CA certificates by clicking Import and configuring Certificate Name and CA Certificate. There also have Certificate Name, Issued On, Expires On, Status, Used By, and Operation options.  

8.5.4 Logs

The section describes the information about **Logs**, **Security Audit Logs**, and **Remote Logs**.

8.5.4.1 Logs

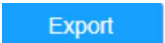
Time	Main Type	Sub Type	Param	User	IP	Detail
2025-05-06 18:07:07	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 18:06:36	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 18:06:23	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 18:05:17	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 18:05:15	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 18:04:58	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 18:04:56	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 18:04:40	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 18:04:19	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 18:04:17	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 18:03:57	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 18:03:55	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 18:03:36	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 18:03:34	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 18:02:18	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 18:02:16	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 18:02:13	Smart	Intrusion Detection	-	-	-	region.1
2025-05-06 17:59:23	Smart	Intrusion Detection	-	-	-	region.1

Note:

This interface is used to record logs (including **All Types**, **Event**, **Operation**, **Information**, **Exception**, and **Smart**). Before configuring it, ensure a storage device is available.

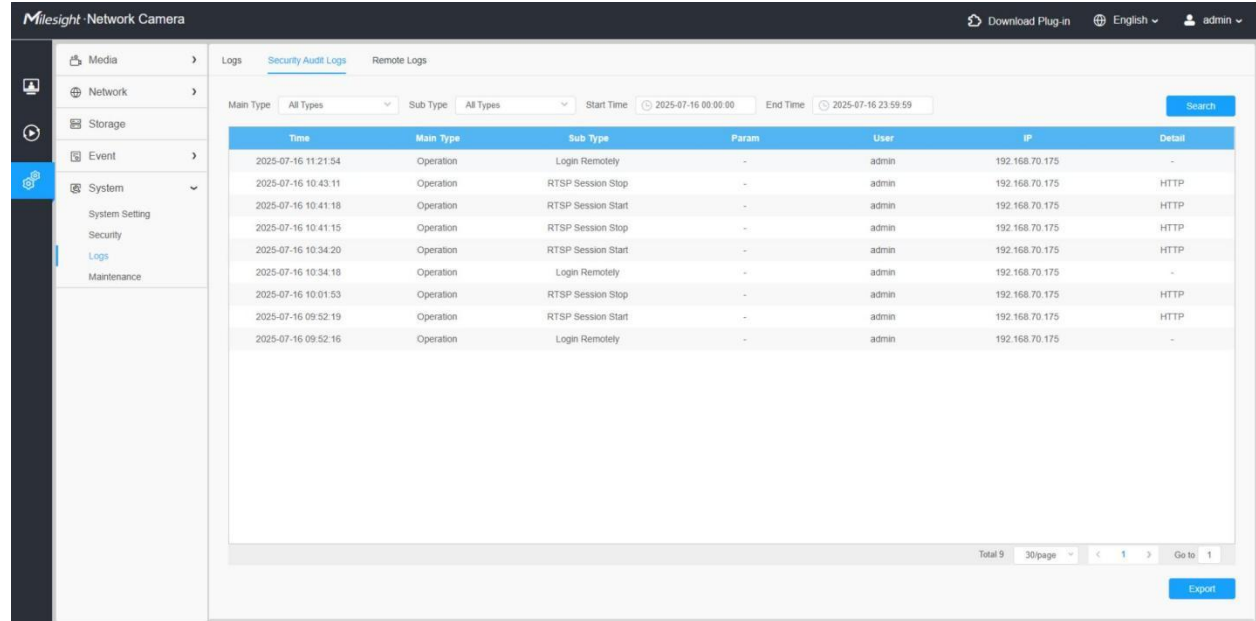
Logs can only be stored on the SD card or NAS.

Table 69. Description of the buttons

Parameters	Function Introduction
Main Type	Six main types are supported: All Types , Event , Operation , Information , Exception , and Smart .
Sub Type	Configure Main Type first, and then select the sub type to narrow the range of logs.
Start Time	The start time of logs.
End Time	The end time of logs.
	Search the logs.
	Export the logs.

Parameters	Function Introduction
Go to	Enter the log page number to navigate to the target page.

8.5.4.2 Security Audit Logs



The **Security Audit Logs** interface records critical operations and exception information related to the camera. The **Main Type** options include: **All Types**, **Operation**, **Information**, and **Exception**. Compared to the standard **Logs** interface, the information category here excludes **Basic Event**, **VCA**, and **Advanced Events**.

- These logs contain vital data for device security and exception tracking.
- The logs must be persistently stored and must not be lost even after the camera reboots.

Table 70. Description of the buttons

Parameters	Function Introduction
Main Type	Six main types are supported: All Types , Event , Operation , Information , Exception , and Smart .
Sub Type	Configure Main Type first, and then select the sub type to narrow the range of logs.
Start Time	The start time of logs.
End Time	The end time of logs.
Search	Search logs.

Parameters	Function Introduction
Export	Export logs.
Go to	Enter the log page number to navigate to the target page.

8.5.4.3 Remote Logs

This section is about how to forward logs to a third-party server for centralized management.

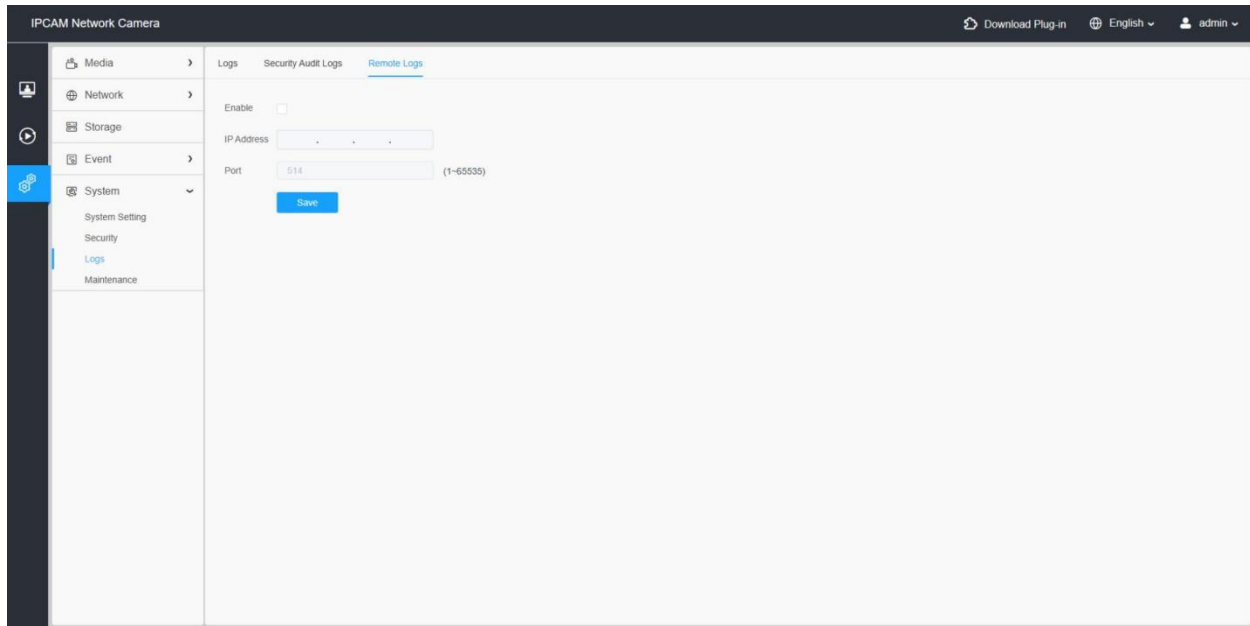


Table 71. Parameter Description

Parameter	Function Introduction
Enable	Turn on this option to activate log forwarding.
IP Address	Enter the destination IP address of the server that can receive the logs.
Port	Specify a port number used by the receiving server to accept log data.

8.5.5 Maintenance

Here you can configure System Maintenance and Auto Reboot.

8.5.5.1 System Maintenance

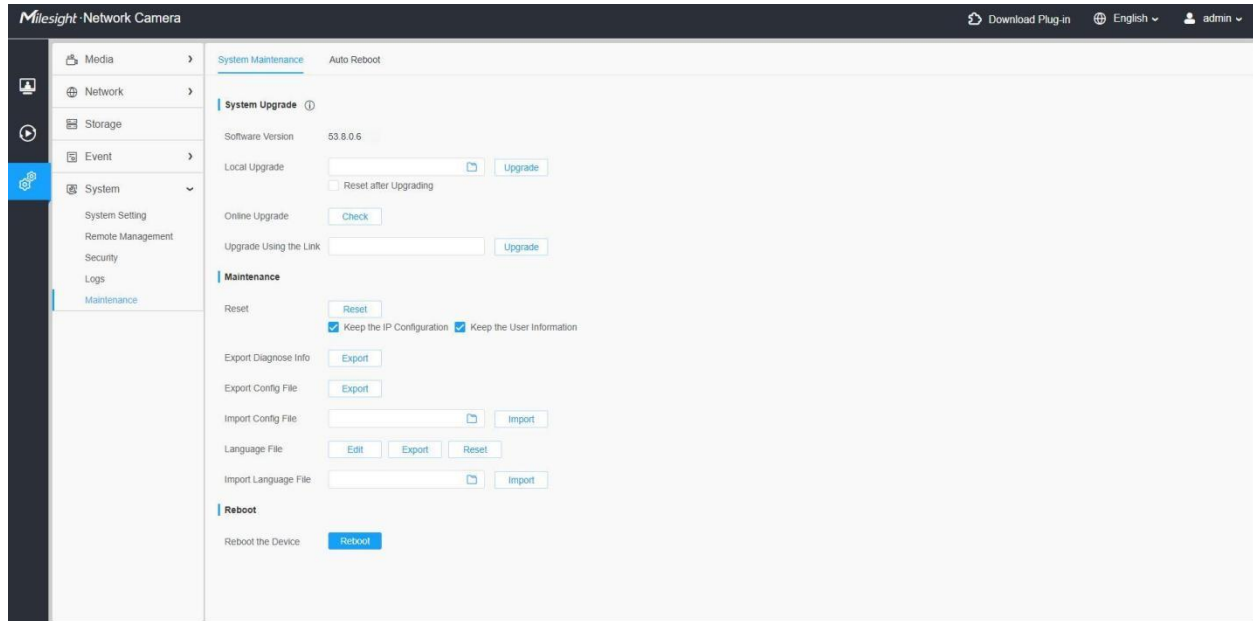
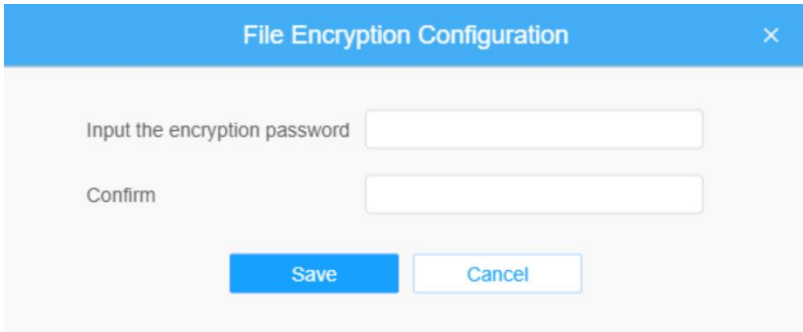
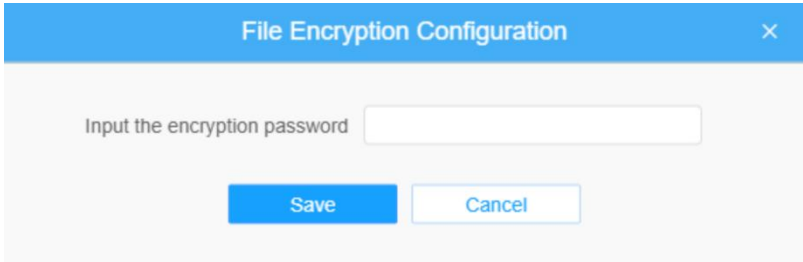


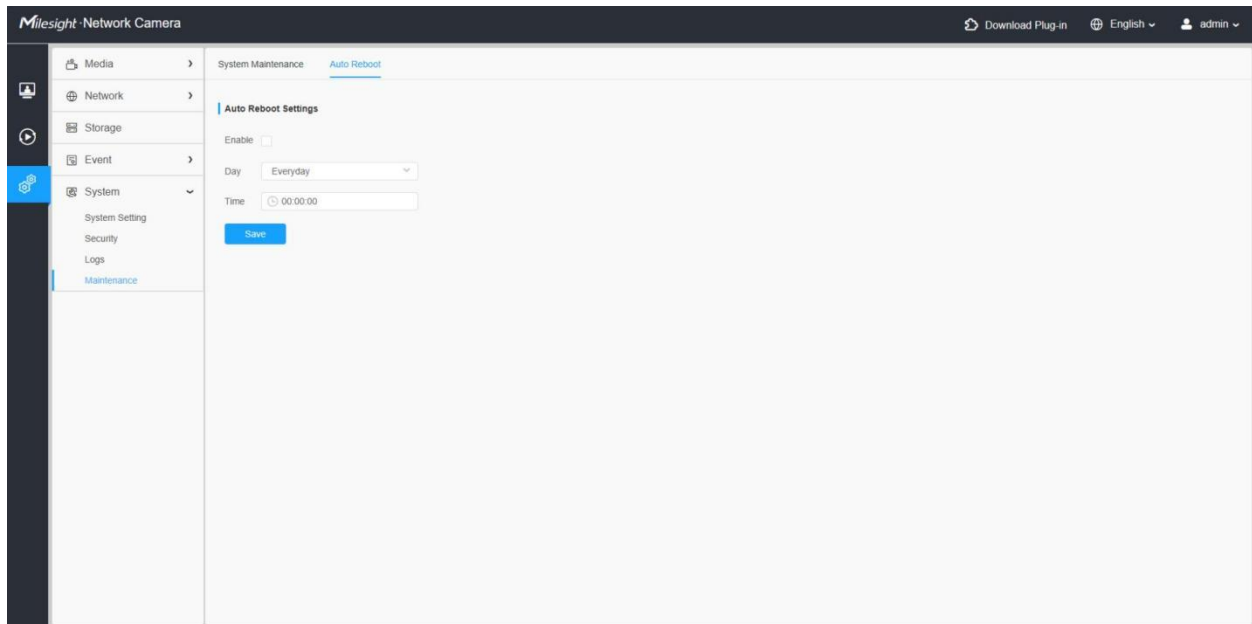
Table 72. Description of the buttons

Parameters	Function Introduction
System Upgrade	Software Version: The software version of the camera. Local Upgrade: Click the "Browse" button and select the upgrading file, then click the "Upgrade" button to upgrade. After the system reboots successfully, the update is done. You can check "Reset after Upgrading" to reset the camera after upgrading it. Online Upgrade: Click the "Check" button to check the current latest firmware version on our website, and then click "OK" to upgrade to this version. It will prompt "The current version is the latest version" if your camera is already the latest version. Tips The current version is the latest version. OK Upgrade Using the Link: When you have uploaded the upgrading file to the cloud, like Google Driver, etc., you can input the link address and then click the "Upgrade" button to upgrade. Note: Do not disconnect the power of the device during the update. The device will be restarted to complete the upgrading.

Parameters	Function Introduction
Maintenance	Reset: Click "Reset" button to reset the camera to factory default settings. Keep the IP Configuration: Check this option to keep the IP configuration when resetting the camera. Keep the User information: Check this option to keep the user information when resetting the camera. Export Diagnose Info: Click this button to export logs and system information of the device operation status.  Note: The file format is ".txt". Export Config File: Click this button and a window will pop up as shown below:  You need to enter and confirm password again, then click save button to export configuration file. Import Config File: Click this button, then a window will pop up and you can click "OK" to update the configuration. It will pop up a window to prompt "Input the password of config file" , then enter password and click save button to import configuration file.  Note: Export and import the same configuration file. Password must be the same. Language File: Here, you can edit, export, and reset the language file. Import Language File: Import the language file then click the "Import" button, then a window will pop up and you can click "OK" to update the configuration. It allows you to modify or import predefined language translation packs, enabling you to customize the interface language based on your preferences, achieving better adaptation to various linguistic environments.

Parameters	Function Introduction
Reboot	Click "Reboot" button to restart the device immediately.

8.5.5.2 Auto Reboot



Set the date and time to enable Auto Reboot function, the camera will reboot automatically according to the customized time in case that camera overload after running a long time.

Chapter 9. Services

Milesight provides customers with timely and comprehensive technical support services. End-users can contact your local dealer to obtain technical support. Distributors and resellers can contact directly with Milesight for technical support.

Technical Support Mailbox: support@milesight.com

Web: <http://www.milesight.com>

Online Problem Submission System: <http://www.milesight.com/service/feedback.asp>

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