Network Camera User Manual
Q Series

Version: V1.0

Date: 2025-07-24

Chapter 1. Introduction

1.1 Copyright Statement

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

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 is neglected.

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

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

- Make sure that the power supply voltage is correct before using the camera
- Do not store or install the device in extremely hot or cold temperatures, dusty or damp locations, and do not expose it to high electromagnetic radiation
- Only use components and parts recommended by manufacturer
- Do not drop the camera or subject it to physical shock

- To prevent heat accumulation, do not block air circulation around the camera
- Laser beams may damage image sensors. The surface of image sensors should not be exposed to where a laser beam equipment is used
- Use a blower to remove dust from the lens cover
- Use a soft, dry cloth to clean the surface of the camera. Stubborn stains can be removed using a soft cloth dampened with a small quantity of detergent solution, then wipe dry
- Do not use volatile solvents such as alcohol, benzene or thinners as they may damage the surface finishes
- Save the package to ensure availability of shipping containers for future transportation

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	July 2025

Chapter 2. Product Description

2.1 Product Overview

Milesight provides a consistent range of cost-effective and reliable network cameras to fully meet your requirements. Based on 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 pride on 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 for flexible and comprehensive alarm linkage mechanism, day and night auto switch and privacy masking, etc.

In practical applications, Milesight network cameras could 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

Ensure that your computer meets the system requirements to access and operate the product properly.

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

CPU: 1.66GHz or higher

RAM: 1G or higher

Graphic memory: 128MB or more

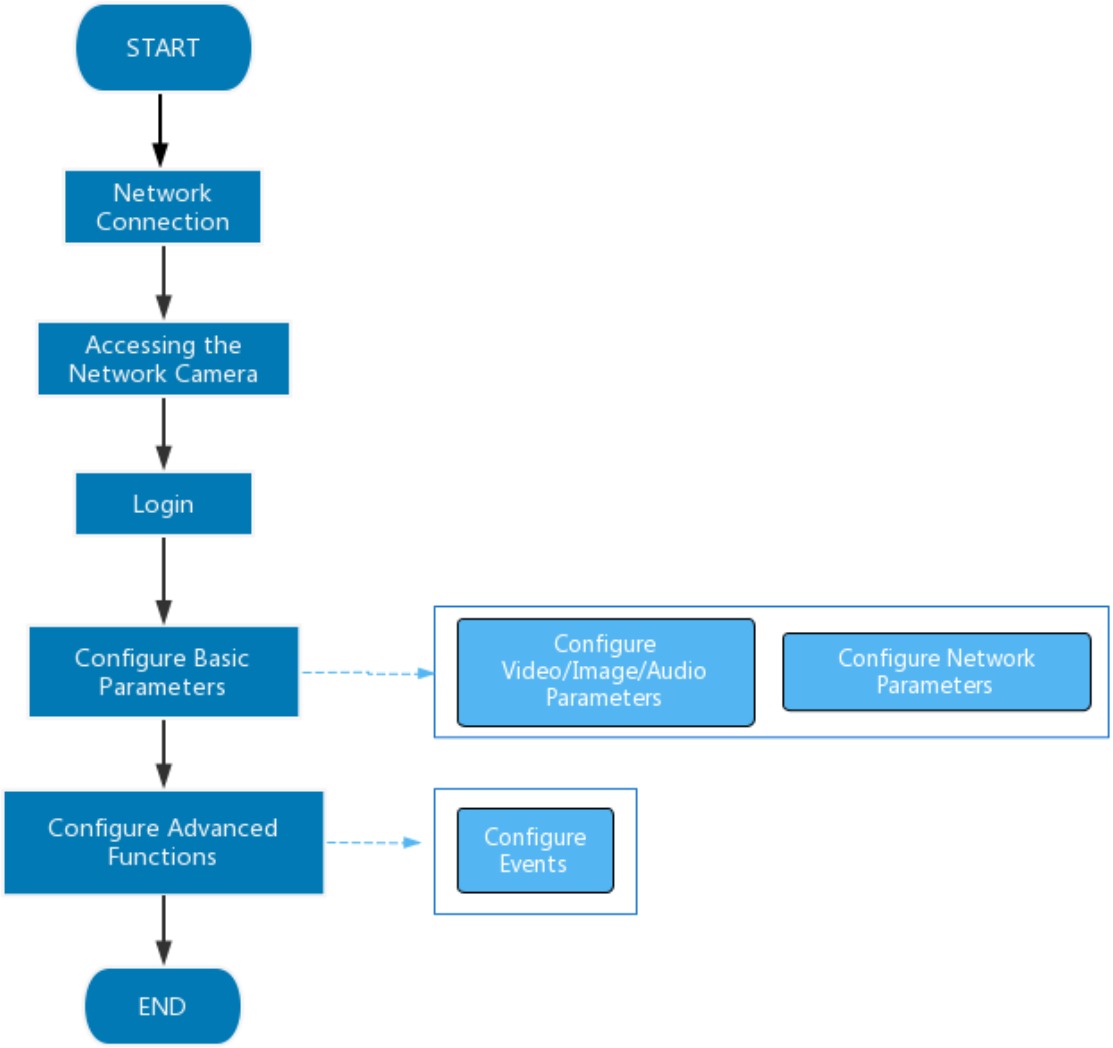
Internet protocol: TCP/IP (IPv4/IPv6)

Web Browsers: Support Micro Edge/ Google Chrome/ Safari/ Mozilla Firefox Browser

Chapter 3. Configuration Flow

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

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



More configuration details is shown in the following table.

Table 2. Description of flow

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 *(page 9)*
Accessing the Network Camera	Accessing from IP address, web browser and Milesight back-end software are available.	5.1 Assigning An IP Address *(page 11)*
Configure Basic Parameters	After login the camera, you can adjust the video/image/audio/network parameters as needed.	8.1 Media *(page 34)* 8.2 Network *(page 60)*
Configure Advanced Functions	Configure the advanced functions, such as VCA and people counting.	8.4 Event *(page 94)*

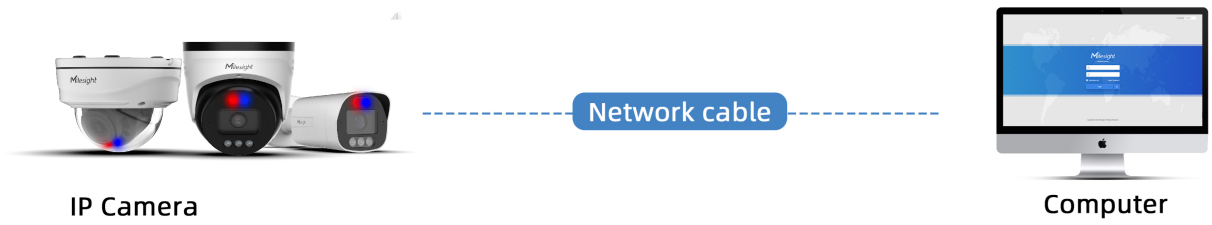
Chapter 4. Network Connection

4.1 Setting the Camera over the LAN

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

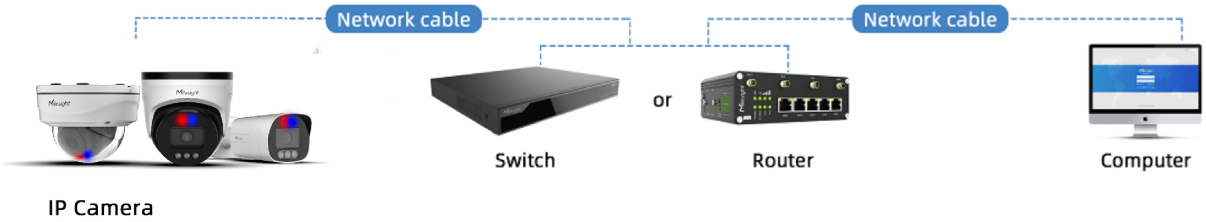
4.1.1 Connect the Camera to the PC Directly

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



4.1.2 Connect via a Switch or a Router

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



4.2 Dynamic IP Connection

Step1: Connect the network camera to a router.

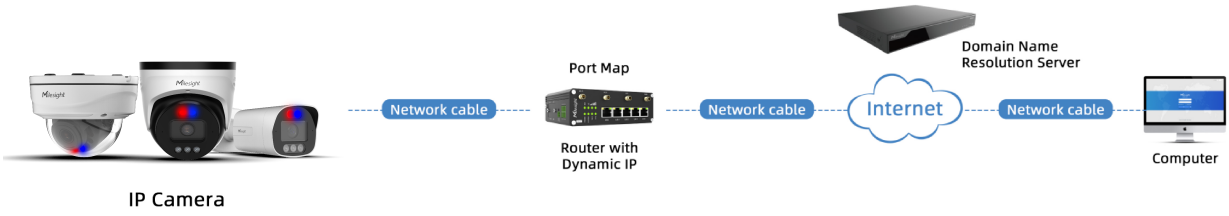
Step2: On the camera, assign a LAN IP address, the Subnet mask and the Gateway.

Step3: On the router, set 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 a domain name from a domain name provider.

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

Step6: Visit 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 on the network. By default, the camera has DHCP enabled and will attempt to obtain an IP address automatically.

If DHCP communication fails within 30 seconds, the camera will fall back to its default static IP address: **192.168.5.190**.

You can change the camera's IP address using **Milesight Smart Tools** or directly via a web browser.

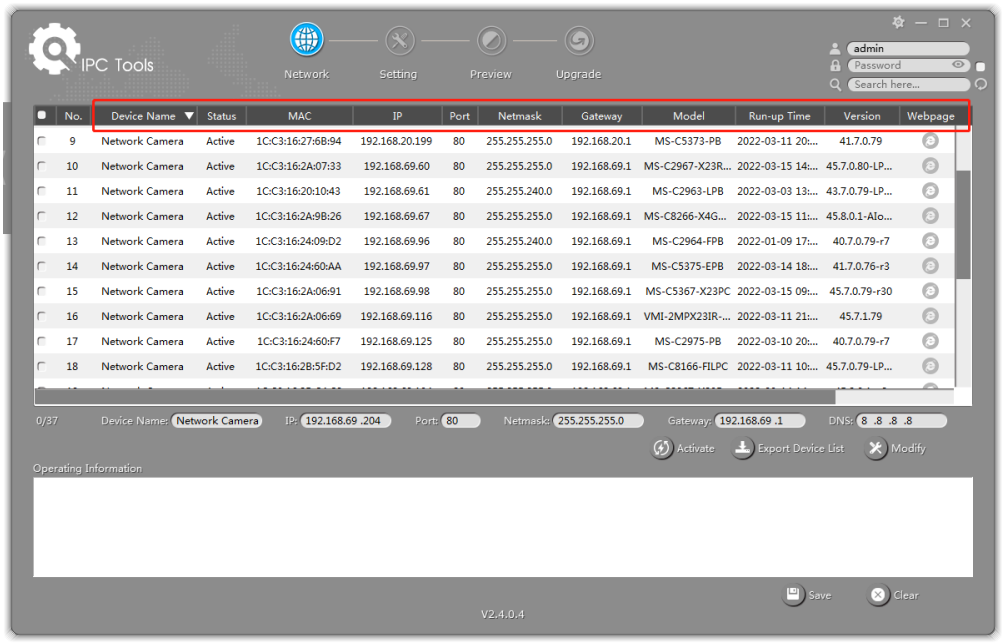
📝 **Note:** Please ensure the camera is connected to the same LAN as your computer.

5.1.1 Assigning An IP Address Using Smart Tools

Smart Tools is a software tool which 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.

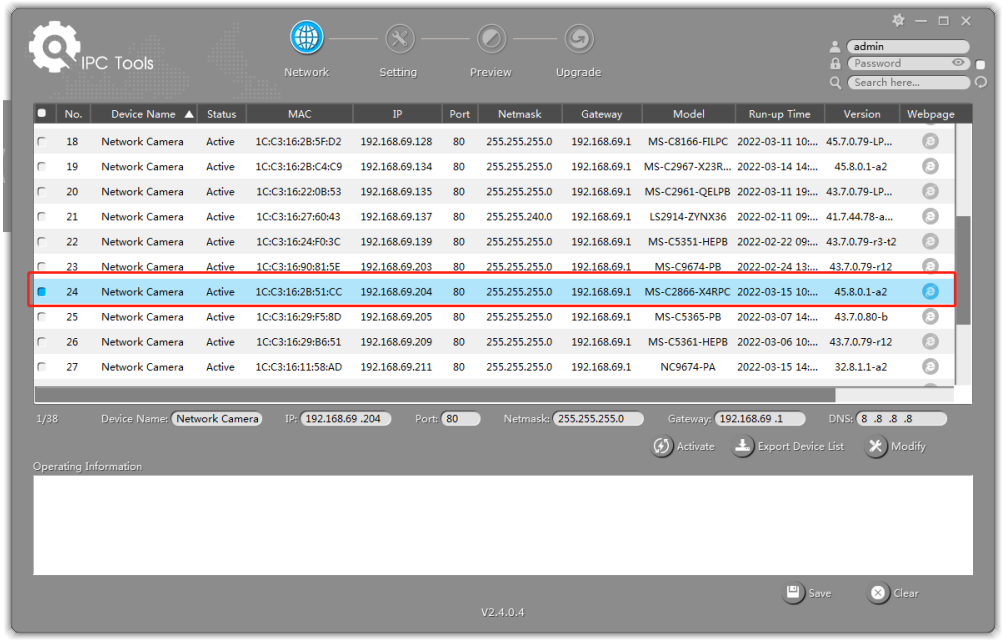
Step1: Install Smart Tools (The software could be downloaded from our website).

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 camera in the same network will be displayed. Details are shown as the figure below.

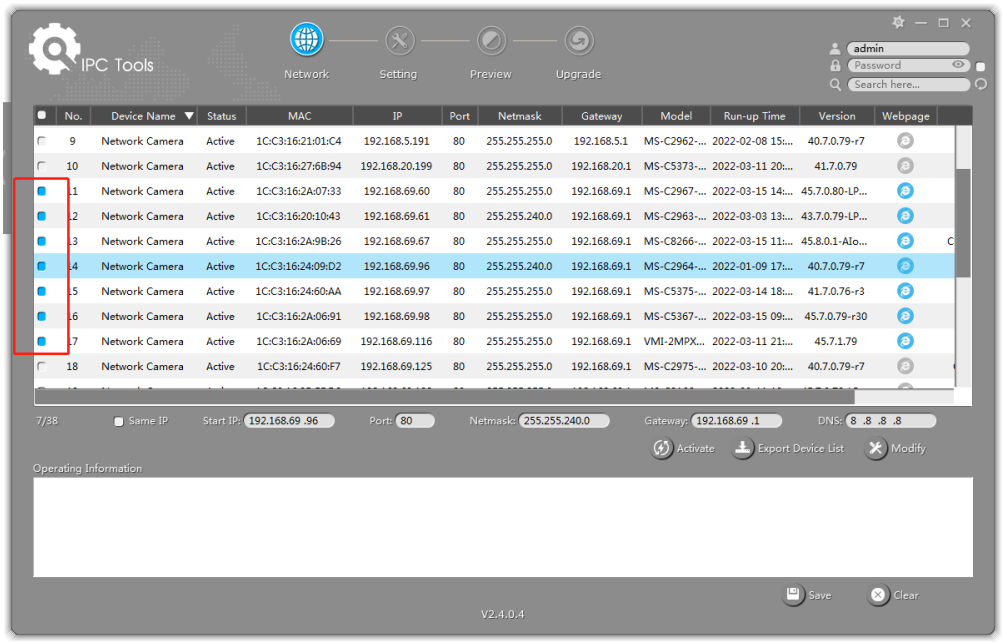


Step3: Select a camera or multiple cameras according to the MAC addresses.

Select single camera:



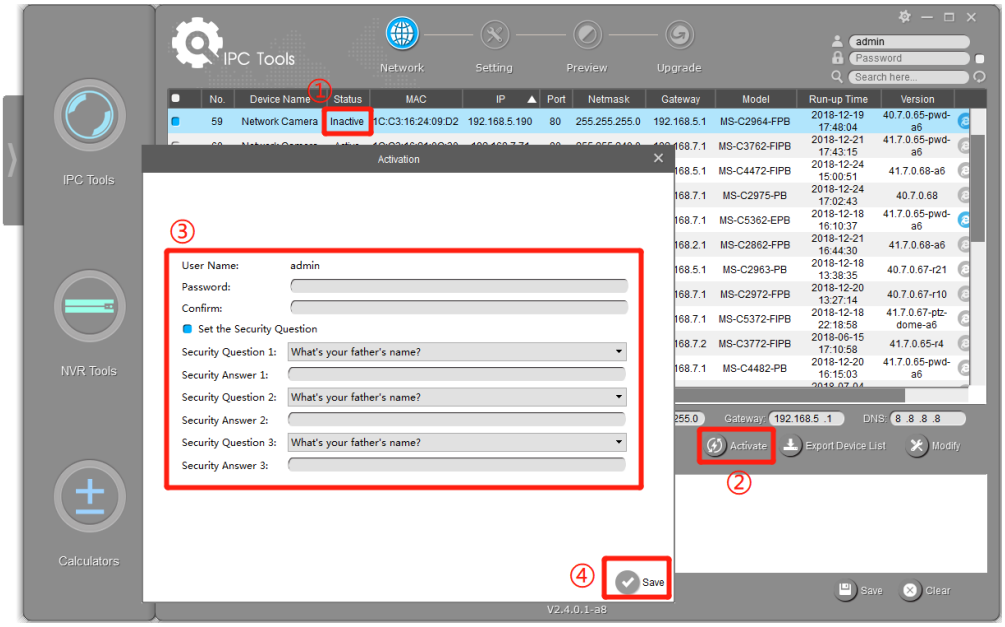
Select multiple cameras:



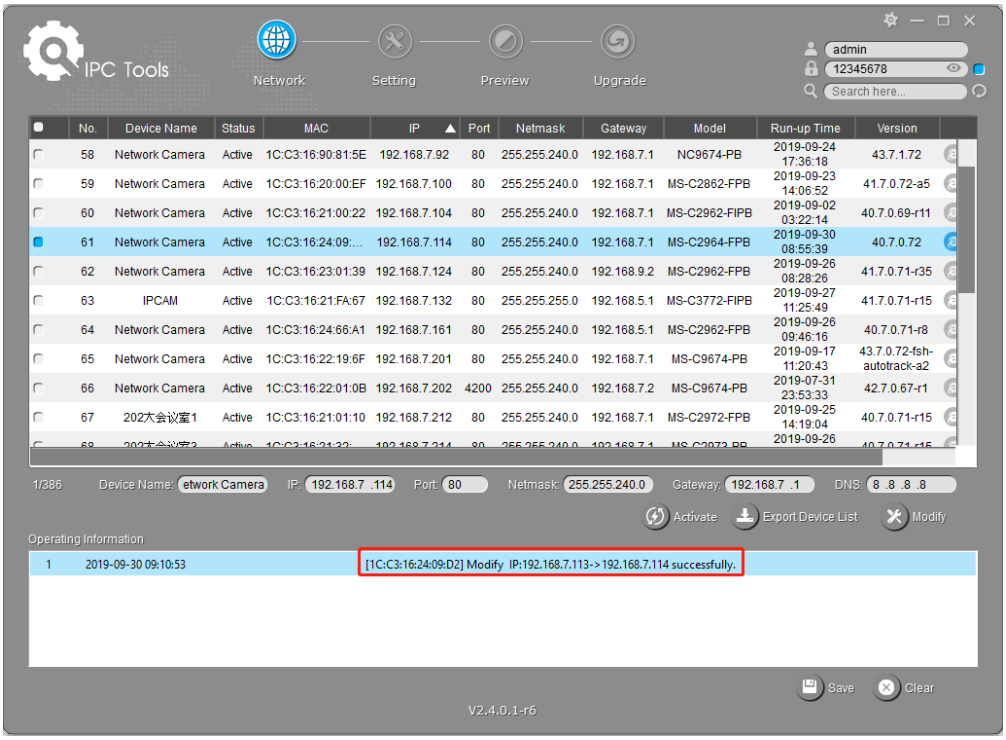
Step4: If the selected camera shows "Inactive" in the status bar, click "Activate" to set the password when using it for the first time. You can also set the security questions when activating the camera in case that you forget the password (You can reset the password by answering three security questions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

Note:

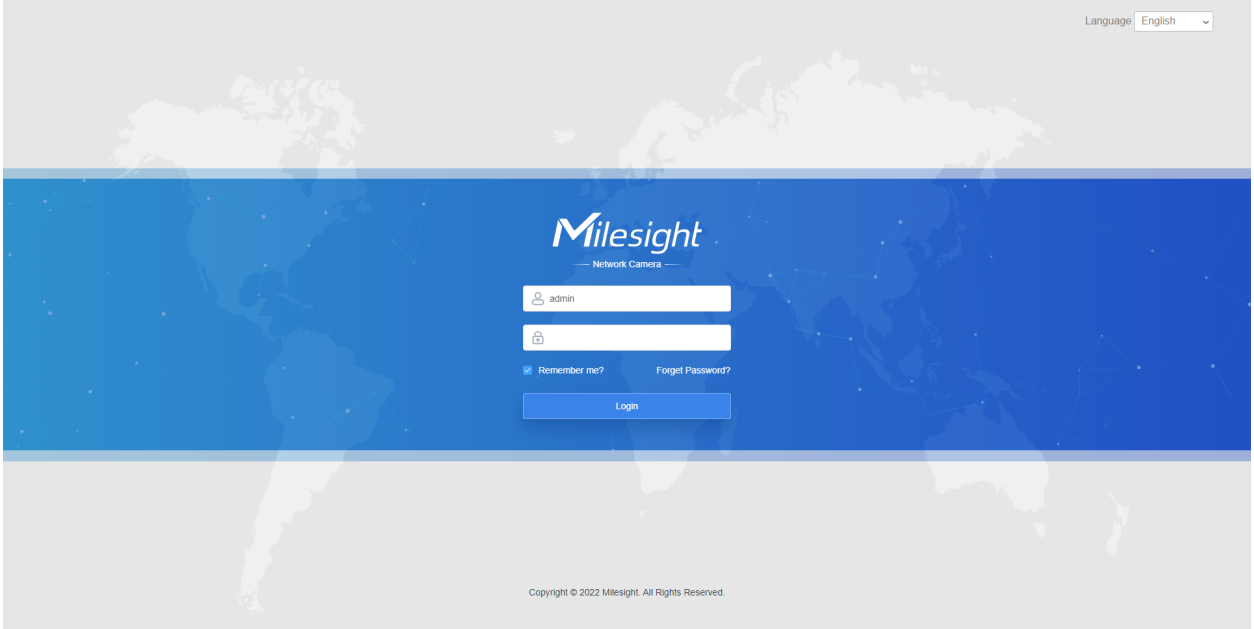
- Password must be 8 to 32 characters long, contain at least one number and one letter.
- You need to upgrade Smart Tools version to V2.4.0.1 or above to activate the camera.



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. The Internet Explorer window will pop up.



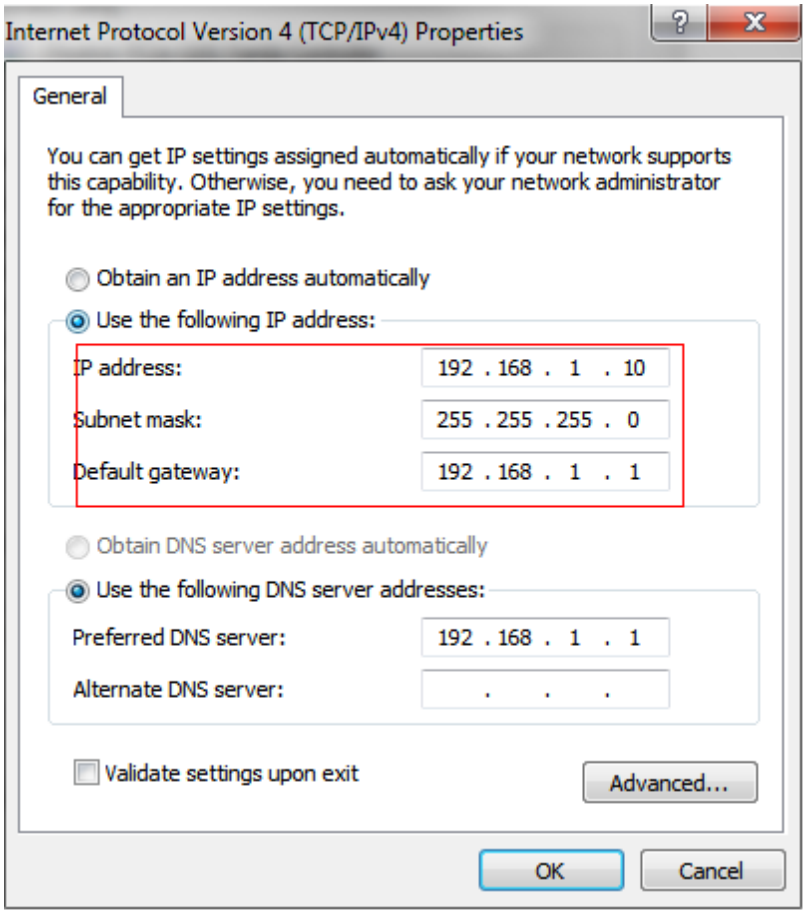
More usage of Smart Tools, please refer to the ***Smart Tools User Manual***.

5.1.2 Assign An IP Address via Browser

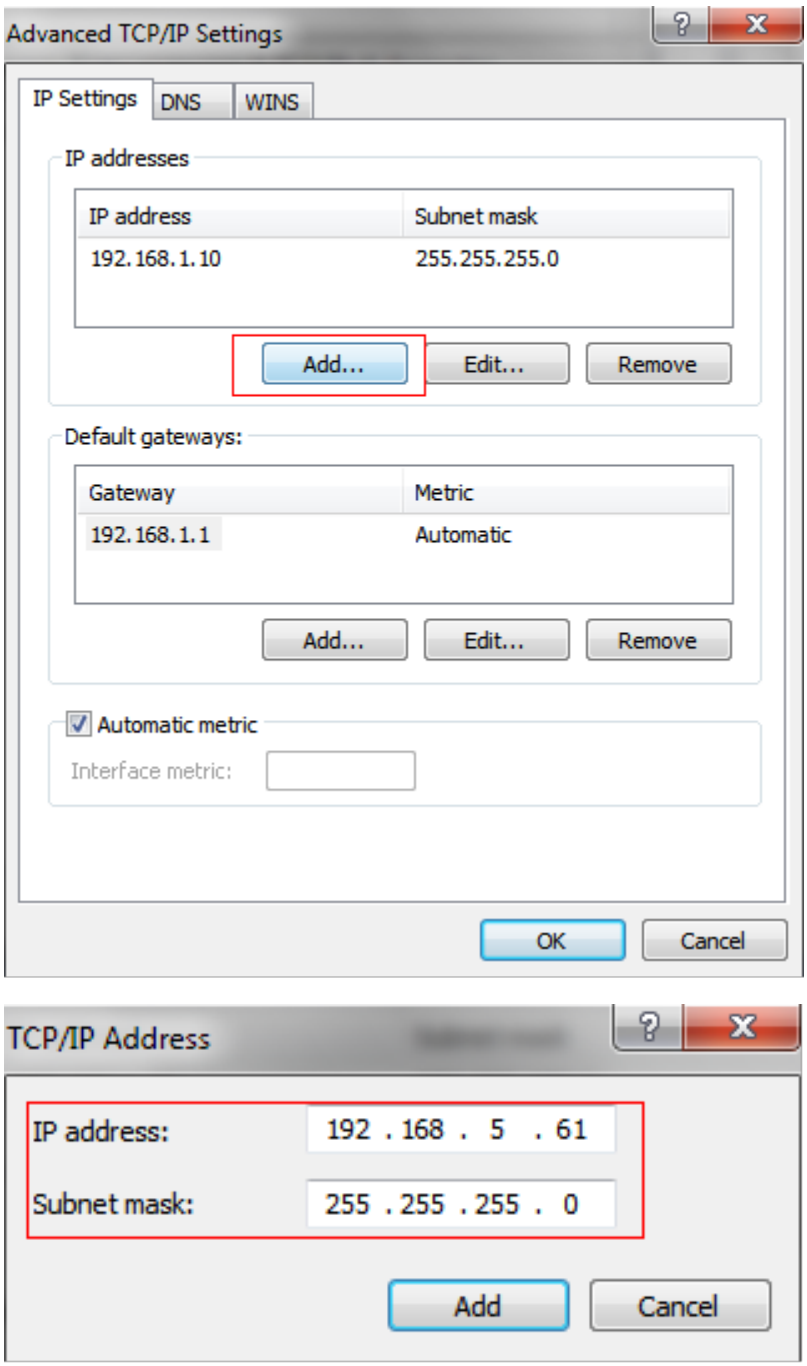
If the network segment of the computer and that of the camera are different, please follow the steps to change the IP address:

Step1: Change the IP address of computer to 192.168.5.0 segment, here are two ways as below:

a. Start-->Control Panel-->Network and Internet Connection-->Network Connection-->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 in the same segment with Milesight network camera (e.g. 192.168.5.61, but please note that this IP address shall not conflict with the IP address on the existing network).



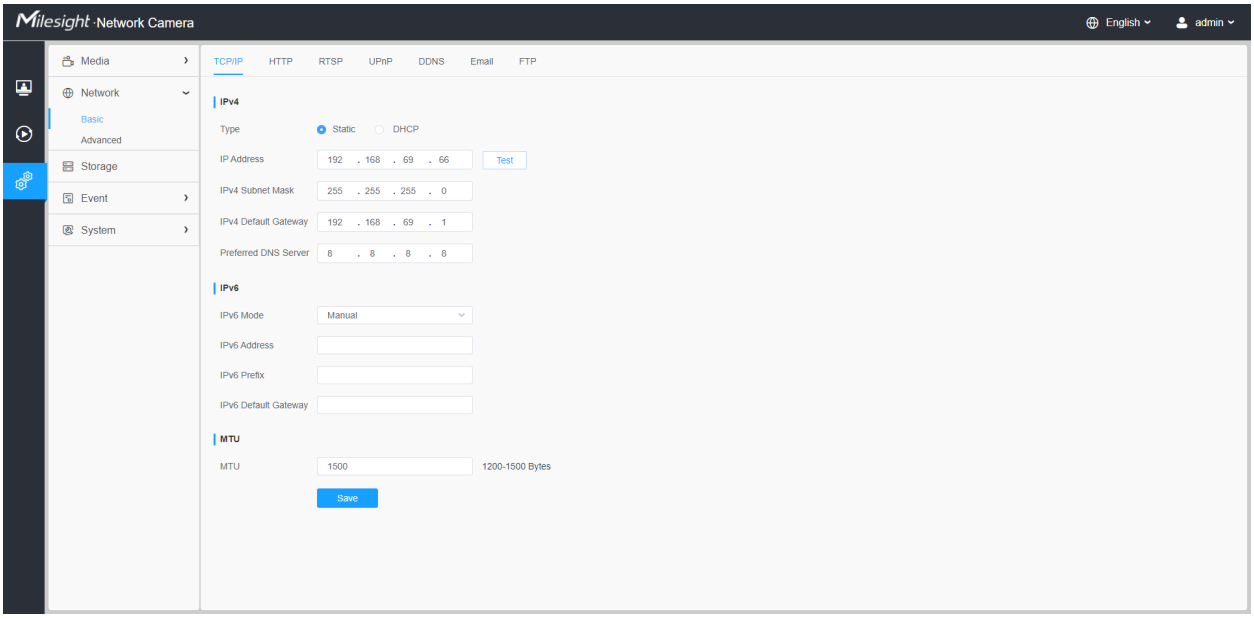
Step2: Start the browser. In the address bar, enter the default IP address of the camera:http://192.168.5.190;

Step3: You need to set the password first 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:

- 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 (Shown as below Figure).



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

Step6: The change of default IP address is completed.

5.2 Accessing from the Web Browser

The camera can be used with the most standard operating systems and browsers. And the camera was upgraded to support 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 & Edge browser for Windows system, MAC system, iOS system and Android system. Both H.265&H.264 video codec are supported in Plugin-Free Mode for camera, and it will play the secondary stream by default.

Note:

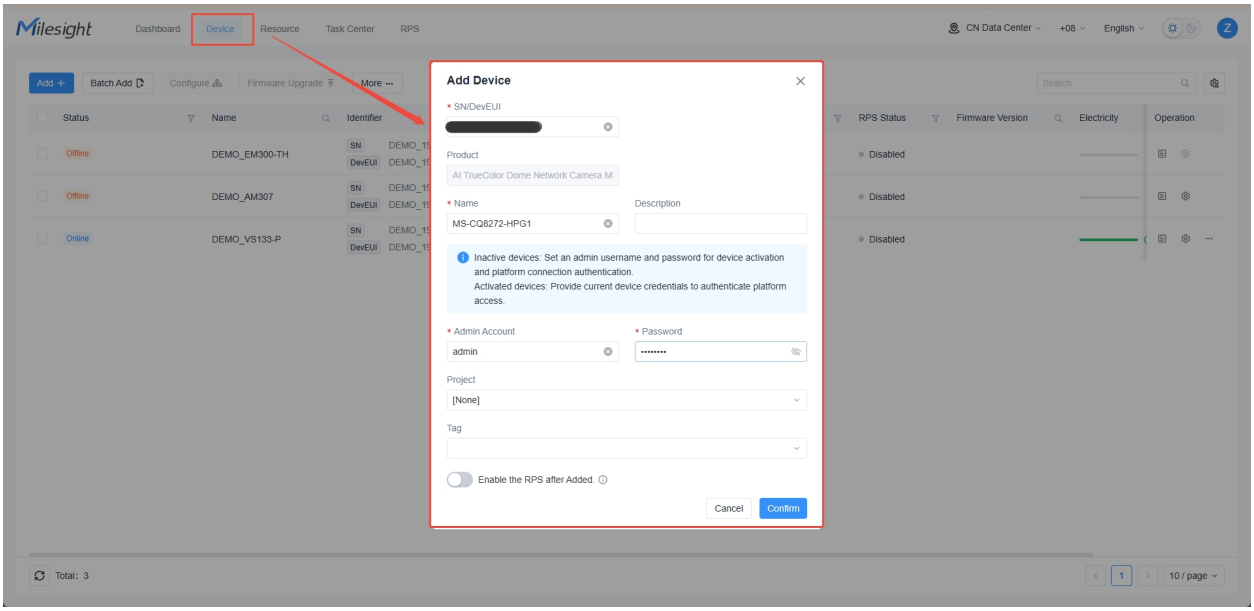
- For more details about set plugin-free mode of Milesight camera, please refer to https://milesight.freshdesk.com/a/solutions/articles/69000643388.

5.3 Access from Milesight Device Portal

Milesight Device Portal is a centralized platform that allows operations and maintenance teams to easily connect, manage, and operate large numbers of devices. It supports remote operation over the internet, empowering users to efficiently manage the entire device lifecycle.

To begin, please log in to **Milesight Device Portal** and add your camera via the **Device** module.

For detailed instructions, refer to the ***Milesight Device Portal User Manual.***



5.4 Accessing from Milesight Back-end Software

5.4.1 Accessing from Milesight NVR (Network Video Recorder)

Milesight NVR Series can work with Milesight network cameras. Based on embedded Linux operation system, Milesight NVR Series manages and stores HD video data. It owns multi-disk management systems, front end HD device management system, HD video analysis system and high-capacity system for video. Also, it adopts the technology of high flow capacity data network transmitting&transmission,

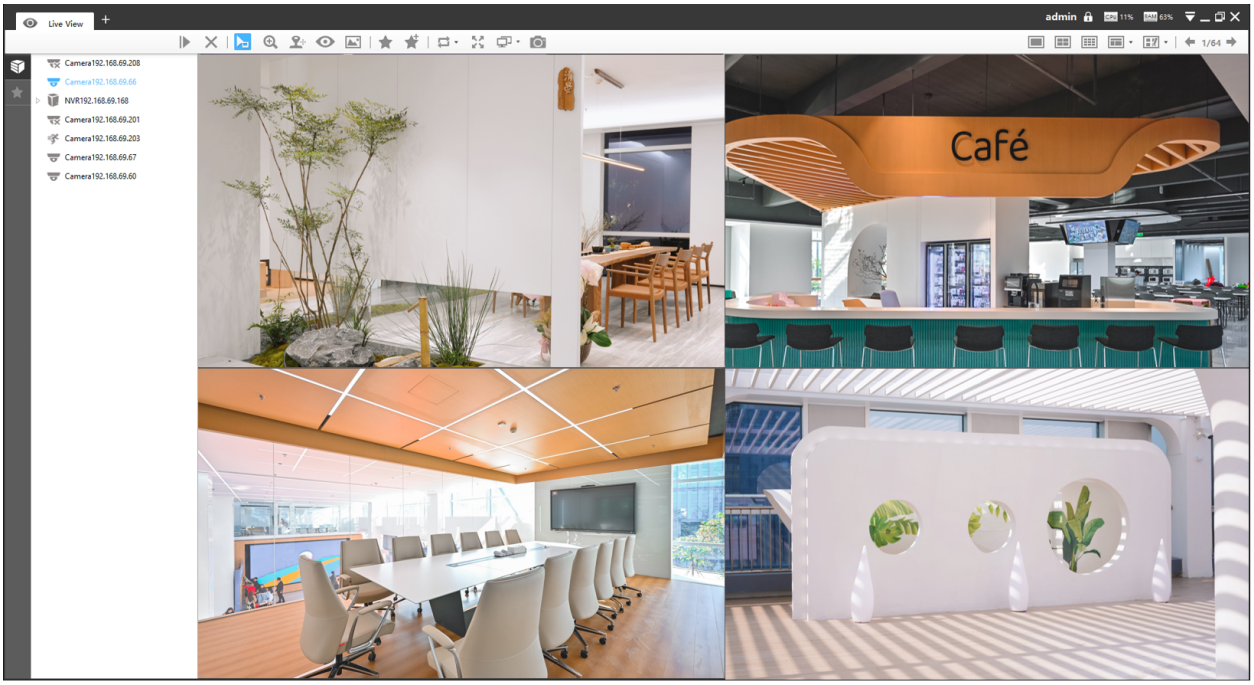
with multi-channel video decoding, to achieve functions like intelligent management, safe storage, HD decoding, etc.

For detailed information about how to use the Milesight NVR Series, please refer to ***Milesight NVR User Manual***.

5.4.2 Accessing from Milesight CMS (Center Management System)

Milesight Central Management System (CMS) is a central management system for Milesight network cameras and Milesight NVR. It is an intelligent surveillance solution for users to control up to 256 devices, to remote preview and playback more conveniently. With high-efficient management performance, Milesight CMS software offers users a superior administration experience in such centralized system. Featured with friendly UI design, the intelligent video management system CMS allows users of all levels to setup and deploy solutions as easy as ABC. Moreover, E-map function provides users a smarter way to show the devices spatial distribution. The software could be downloaded from our website https://www.milesight.com/.

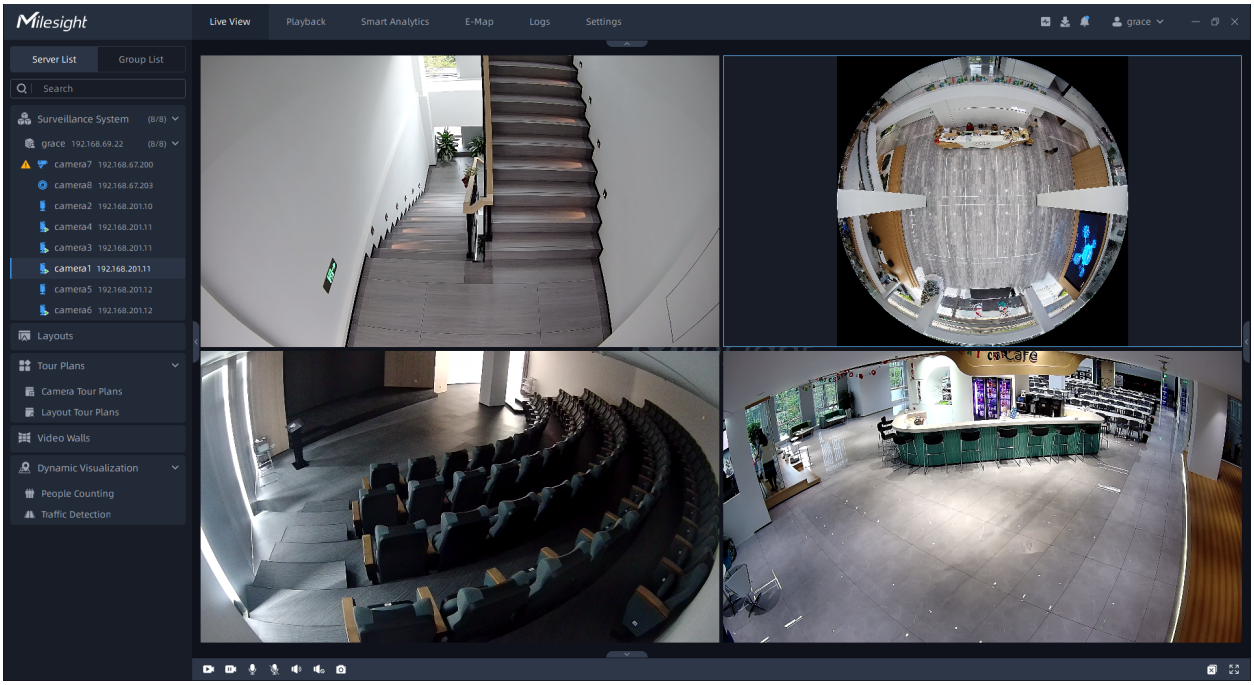
Please install Milesight CMS; then launch the program to add the camera to the channel list. For detailed information about how to use the software, please refer to ***Milesight CMS User Manual***.



5.4.3 Accessing from Milesight VMS Enterprise (Video Management System)

Milesight VMS Enterprise is a professional and intelligent video management software for businesses. Together with our cameras, it can simplify and freshen up your video surveillance. With advanced C/S architecture, it fulfills your demands and expectations, with rich core functions including live view, record, E-Map, event alarm and smart analysis etc. The software could be downloaded from our website https://www.milesight.com/.

Please install Milesight VMS Enterprise; then launch the program to add the camera to the channel list. For detailed information about how to use the software, please refer to ***Milesight VMS Enterprise User Manual.***


Milesight
Live View
Playback
Smart Analytics
E-Map
Logs
Settings
grace
Server List
Group List
Search
Surveillance System
grace 192.168.69.22
camera7 192.168.67.200
camera8 192.168.67.203
camera2 192.168.201.10
camera4 192.168.201.11
camera3 192.168.201.11
camera1 192.168.201.11
camera5 192.168.201.12
camera6 192.168.201.12
Layouts
Tour Plans
Camera Tour Plans
Layout Tour Plans
Video Walls
Dynamic Visualization
People Counting
Traffic Detection

Chapter 6. Live View

6.1 Live Video

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

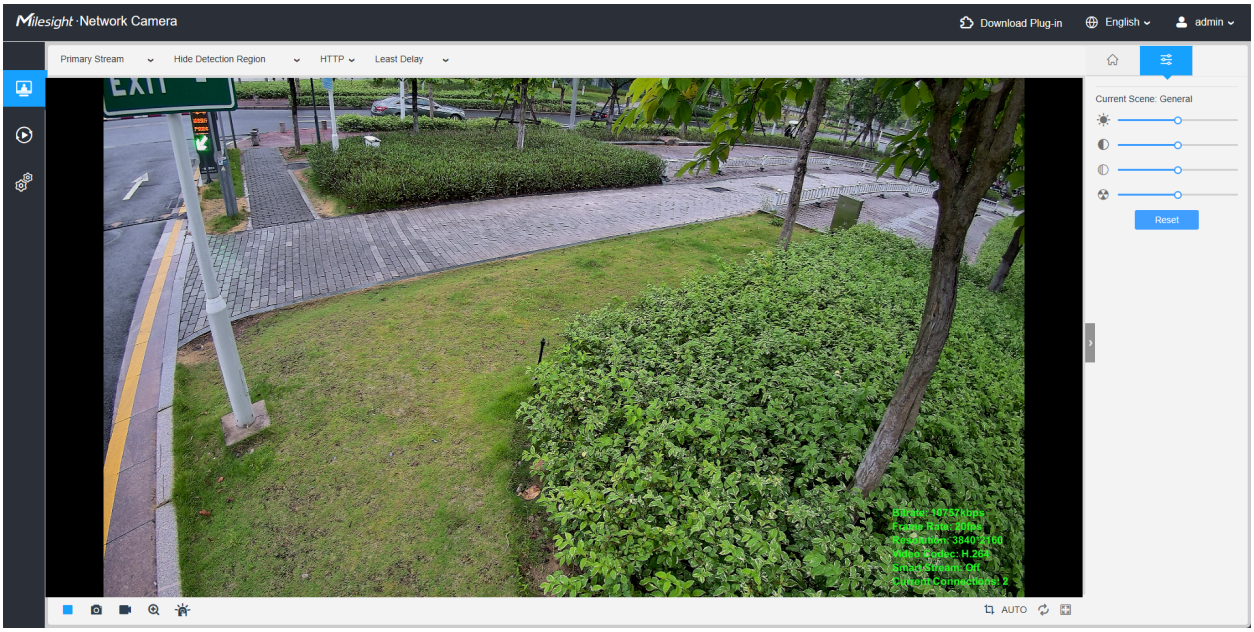
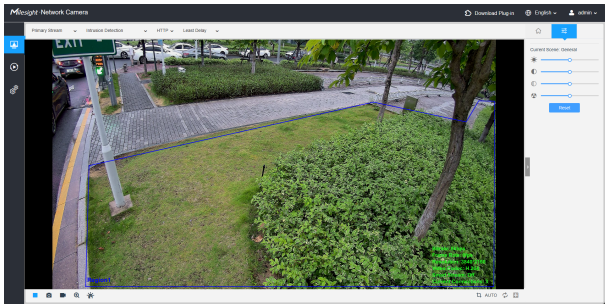
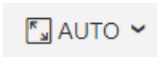
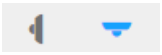


Table 3. Description of the buttons

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.

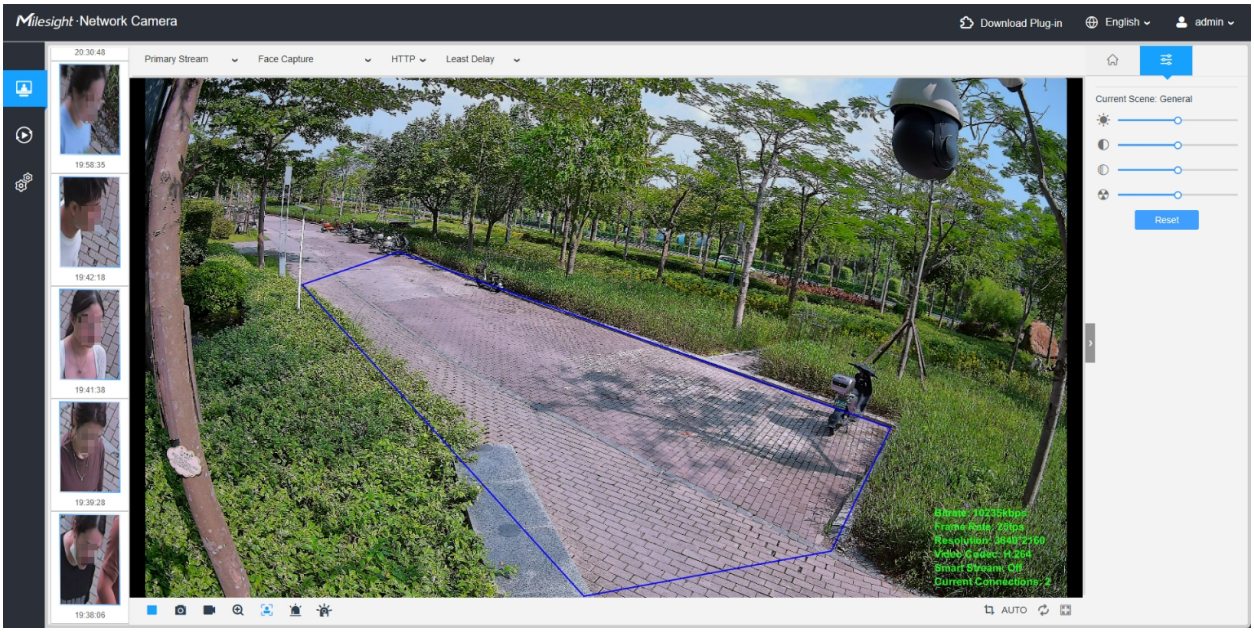
No.	Parameter	Description
4	English	Click to select system language.
5	admin	Display the user name and click to logout.
6	Primary Stream	Choose the stream (**Primary/Secondary**) to show on the current video window.
7	Hide Detection Region	Choose the options (**Hide Detection Region/Intrusion Detection/Region Entrance/Region Exiting/Advanced Motion/Line Crossing/Loitering//Object Left/Object Remove//Object Counting/Regional People Counting**) to hide/display detection region on the current video window. 
8	HTTP	**TCP:** More reliable connection. **UDP:** More instantaneous connection, but if you cannot get the live view successfully, please turn into TCP connection. **HTTP:** Faster and safer connection especially in Internet environment.
9	Least Delay	**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.
10	Recording	When recording, the icon appears.

No.	Parameter	Description
11	 Alarm	When an alarm of VCA event was triggered, the icon appears.
12	 Alarm	When an alarm of object counting was triggered, the icon appears.
13	 Alarm	When an alarm of Motion Detection was triggered, the icon appears.
14	 Alarm	Except for the kinds of alarms above, when other alarms were triggered, the icon appears.
15	 Stop/Play	**Stop/Play** live view.
16	 Snapshot	Click to capture the current image and save to the configured path. The default path is: C:VMS\+-1\ IMAGE-MANUAL.
17	 Start/Stop Recording	Click to **Start Recording** video and save to the configured path. The default path is C:VMS\+-1\MS_Record. Click again to **Stop Recording**.
18	 Digital Zoom	When enabled, you can zoom in a specific area of video image with your mouse wheel.
19	 Manual Output	Manually trigger Camera Alarm Output.

No.	Parameter	Description
20	 Window Size	Click to display images at a window size.
21	 Full Screen	Click to display images at full-screen.
22	 Face Capture	Click to enable the Face Capture Mode.
23		Click to enable the red and blue flashing light, which serves as a visual deterrent to intruders in the detection area.
	 Wall/Ceiling	Click to access installation. And the AI algorithm will change according to the installation (Wall algorithm/Ceiling algorithm).
		**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 sharps the pixel boundary and makes the image looks “more clear”.
		2D DNR/3D DNR: Adjust the noise reduction level.
		Default: Restore brightness, contrast and saturation to default settings.

6.2 Face Capture Mode

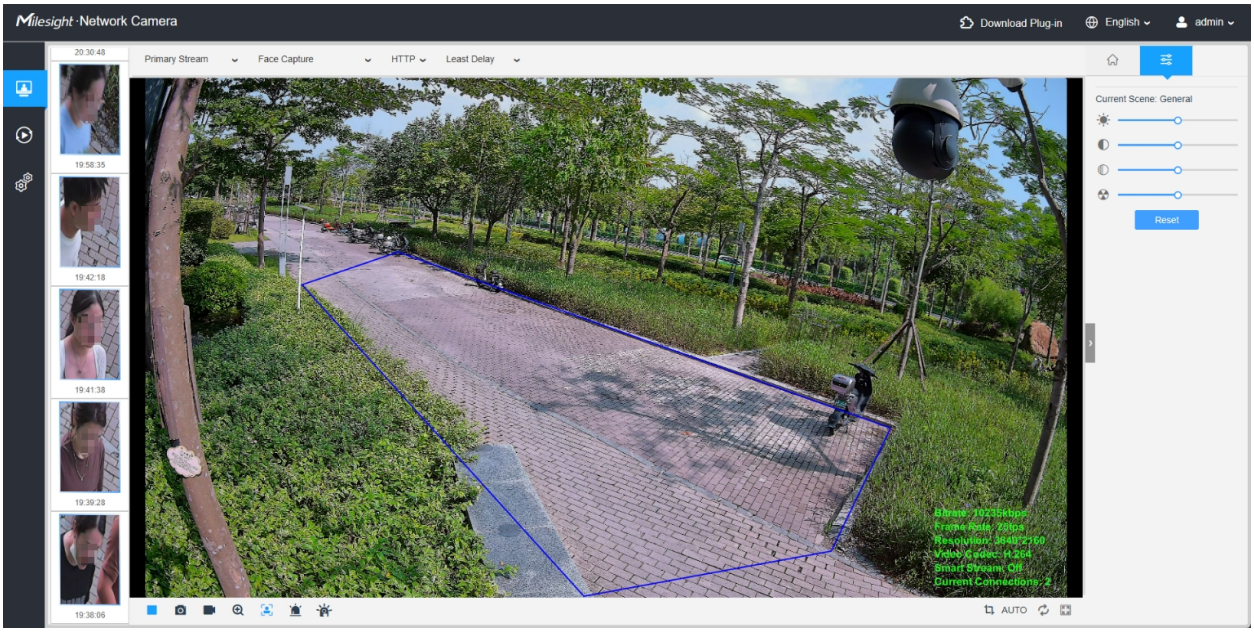
Milesight face capture function captures the snapshots of human faces in the monitoring scene, which greatly enhances the monitoring efficiency and benefits the large population related industries such as public security, access control and business management.



Step1: Click  to enable the Face Capture Mode, and the camera will capture faces in live view according to the region and conditions you set.

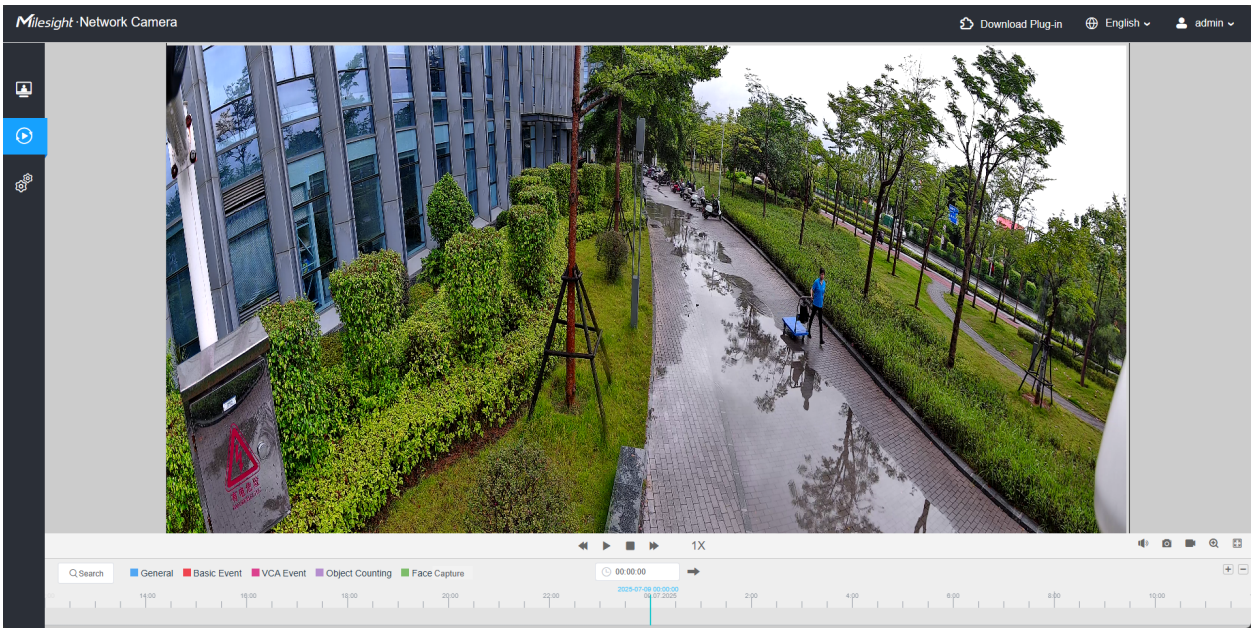
Note: Before enabling the face capture mode, ensure that the face capture function has been enabled and configured. For more details about how to configure the face detection, please refer to 8.4.5 Face Capture *(page 156)*.

Step2: When a face is captured, it will be displayed on the left side of the Live View interface.


Milesight Network Camera
Download Plug-in
English
admin
Primary Stream
Face Capture
HTTP
Least Delay
Current Scene: General
Reset
AUTO

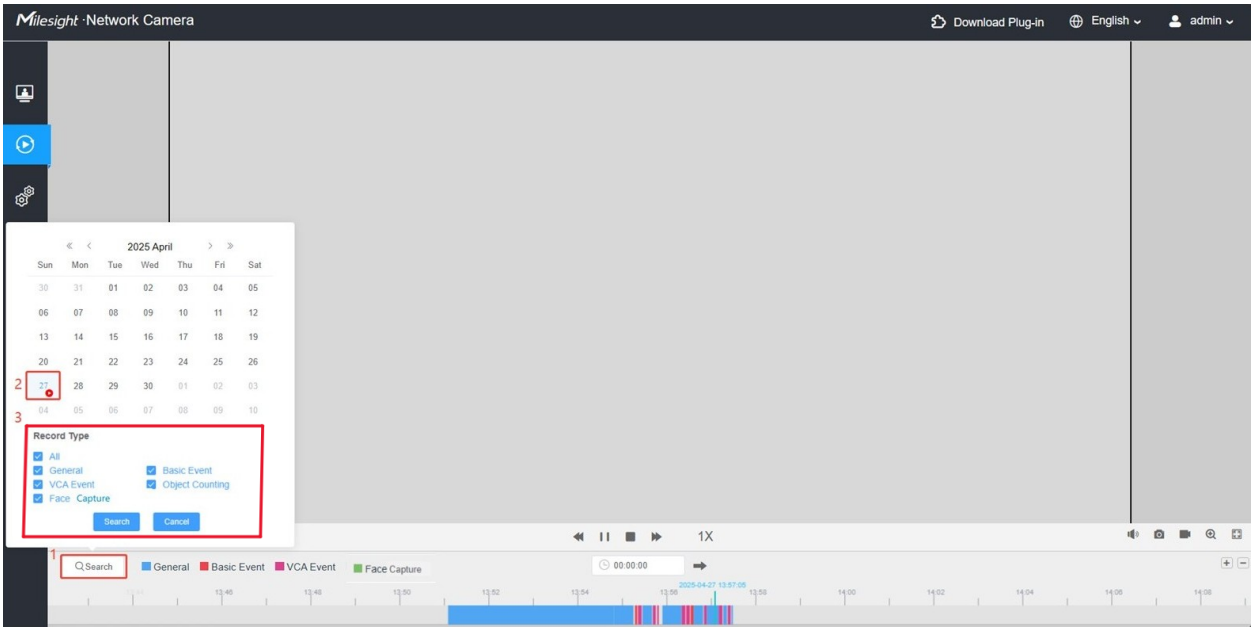
Chapter 7. Playback

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:



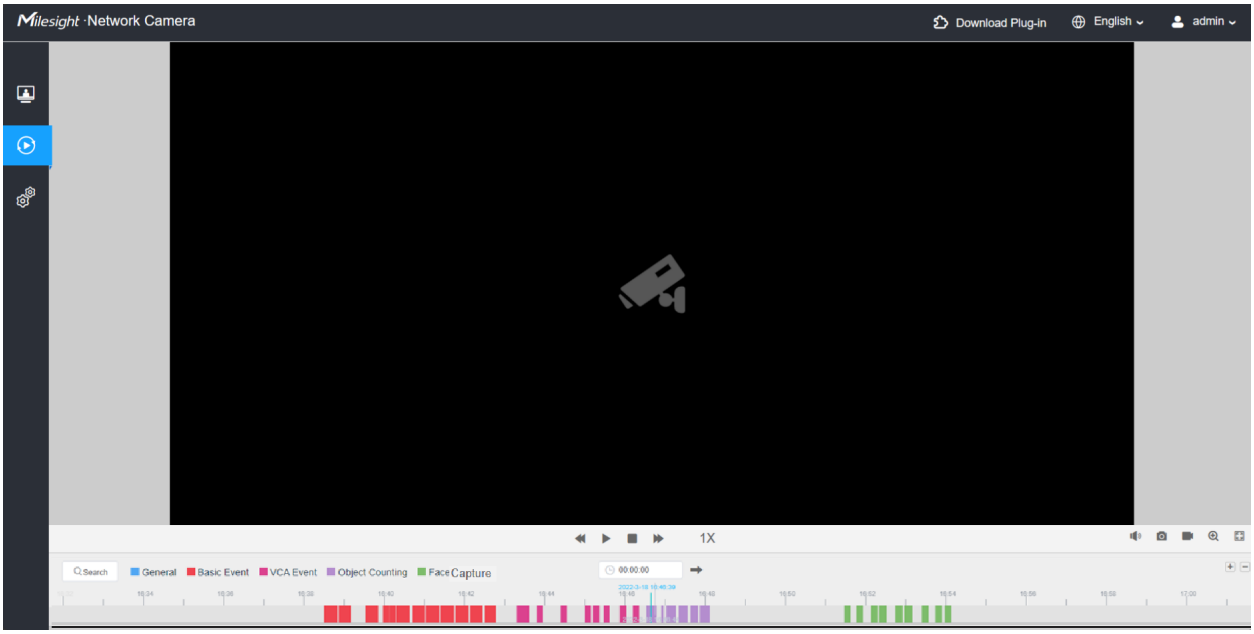
Step1: Click the "**Search**" button, choose the data and record type when the window pops up.

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 00:00:00 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 button of playback interface can be used to control playing progress.

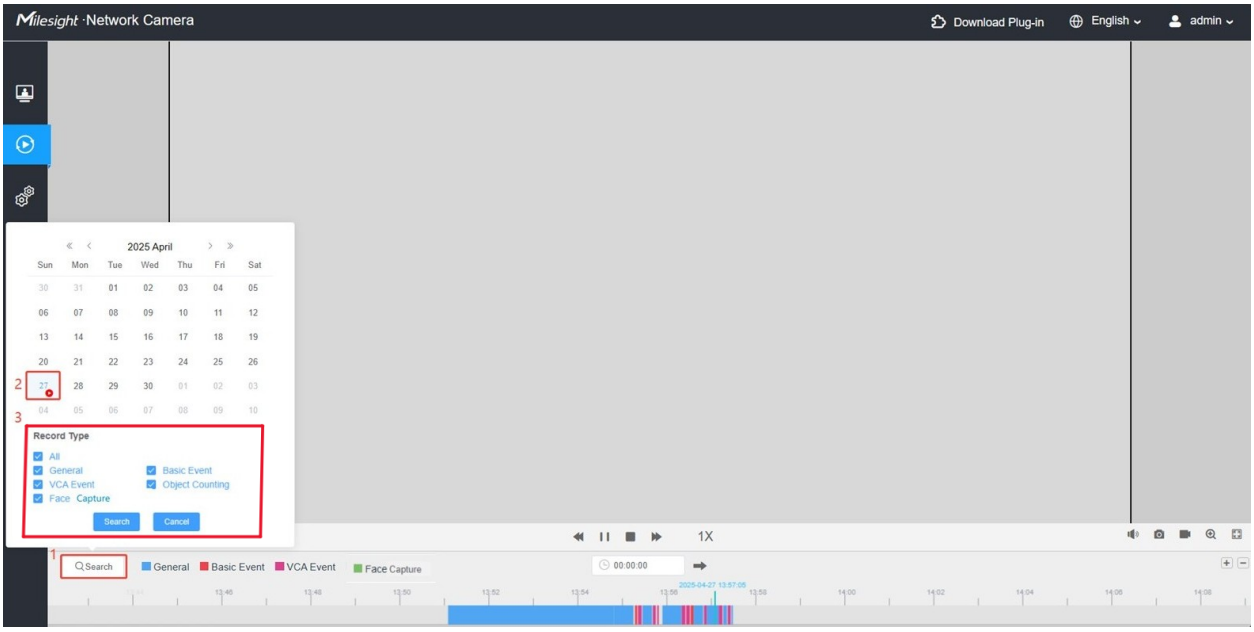
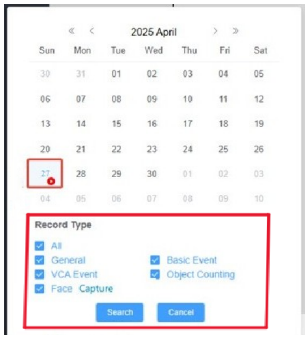
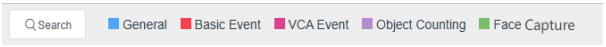


Table 4. Description of the buttons

No.	Parameter	Description
		Choose date to search recorded videos.
	Search	Search the recorded videos by record type (**All/General/Basic Event/ VCA Event/Object Counting/Face Capture**). The timeline will show different colors according to selected record type as below: 
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

No.	Parameter	Description
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 5. Description of the buttons

No.	Parameter	Description
1	 Mute	Click to enable the audio.
2	 Snapshot	Click to take a snapshot.
3	 Start/Stop recording	Click to start/stop recording.
4	 Digital Zoom	Click to zoom on/off .

No.	Parameter	Description
5	 Full Screen	Full Screen.
6	 Time Expand/Narrow	Time narrow/expand.

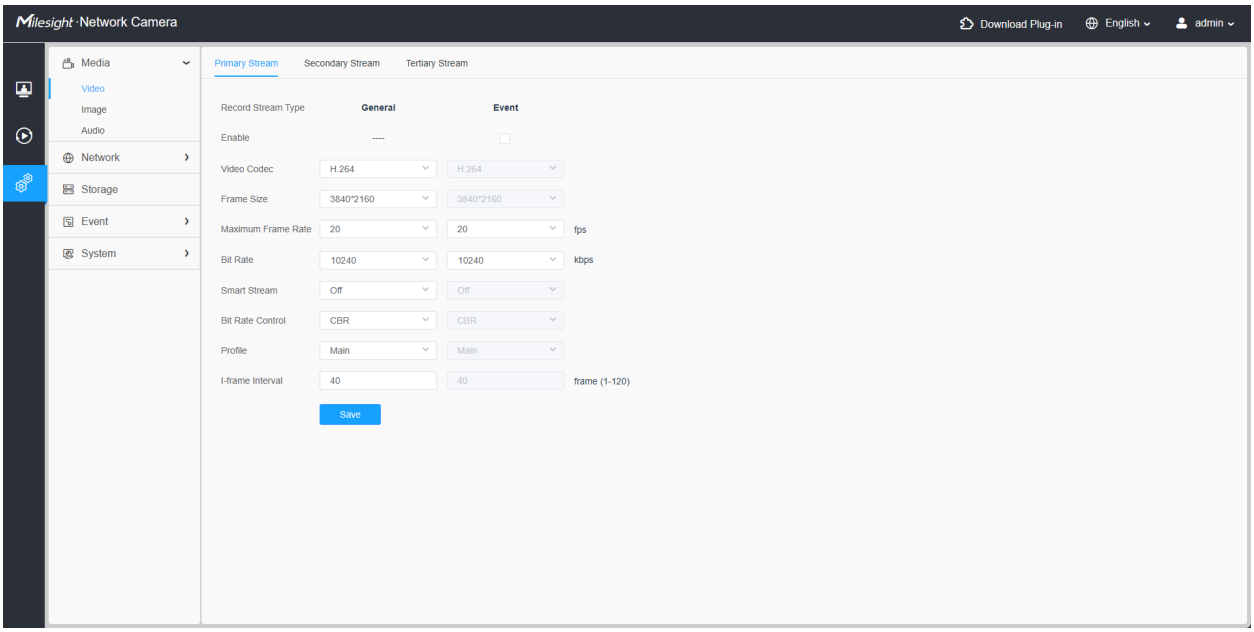
Chapter 8. Settings

8.1 Media

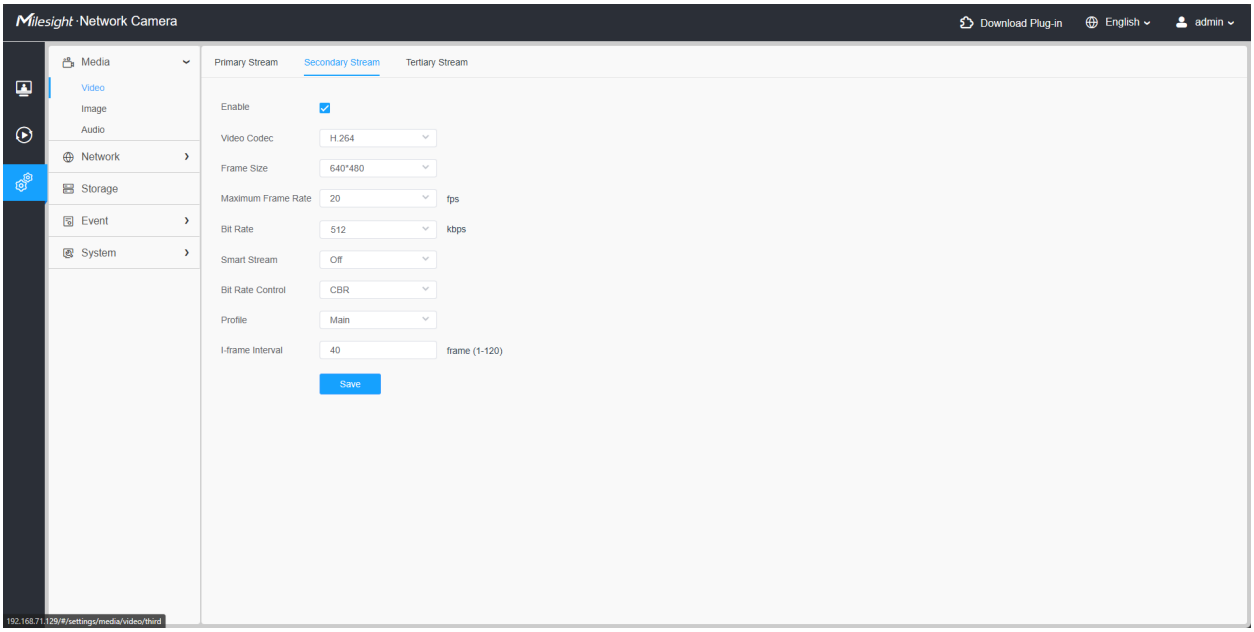
8.1.1 Video

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

Primary Stream Settings



Secondary Stream Settings



Tertiary Stream Settings

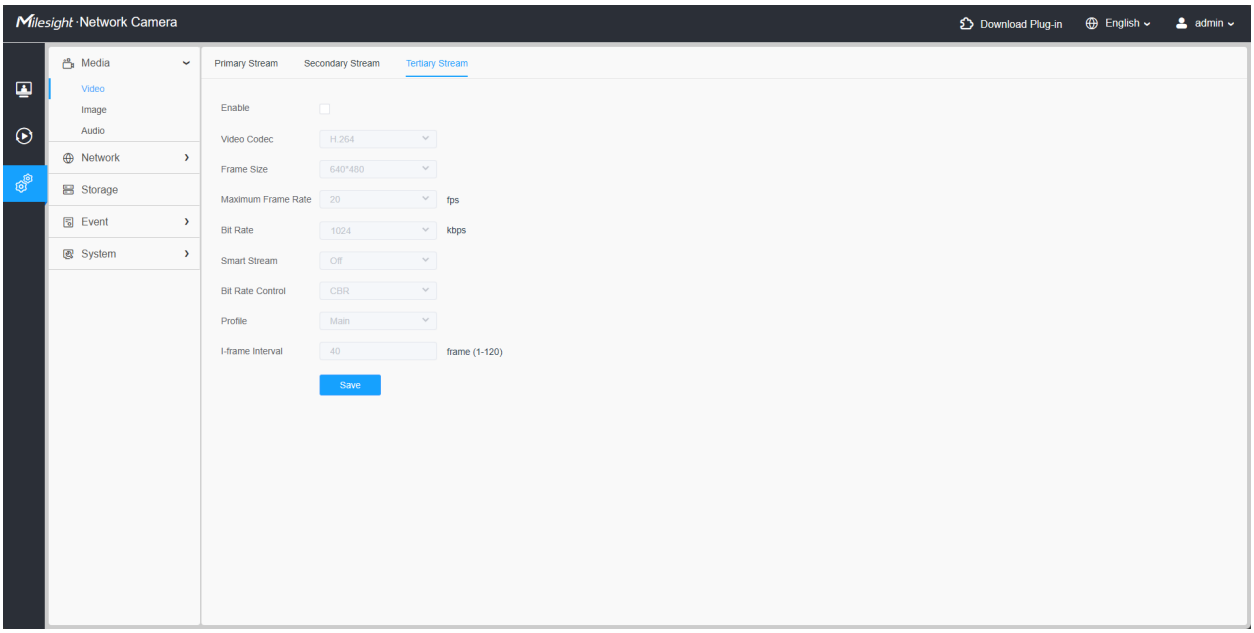


Table 6. Description of the buttons

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, LPR 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	H.265/H.264/MJPEG are available. **Note:** For more details about **Milesight-H.264 VS H.265+**, you can click to the YouTube: https://www.youtube.com/watch?v=Wkom8HQ00jI
Frame Size	**Primary Stream of Channel 1:** Supports 8MP (3840x2160), 5MP (2960x1664), 4MP (2688×1520), 3MP (2304×1296), 2MP (1920×1080), 1.3M (1280×720). **Secondary Stream** Supports 704x576, 640x480, 640x360. **Tertiary Stream of Channel 1:** Supports 1920x1080, 1280x720, 704x576, 640x480, 640x360. **Note:** The options of **Frame Size** are variable according to the model.
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.
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.

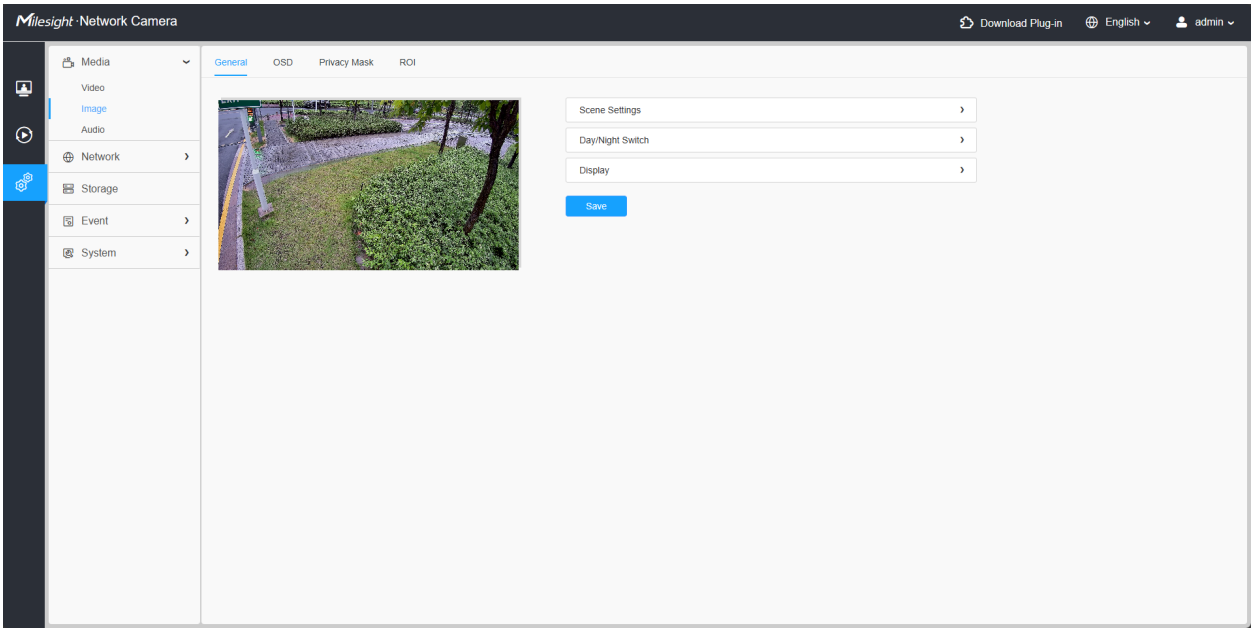
Parameters	Function Introduction
Bit Rate Control	**CBR**: Constant Bitrate. The rate of CBR output is constant.
Bit Rate Control	**VBR**: Variable Bitrate. VBR files vary the amount of output data per time segment.
Image Quality	**Low/Medium/High** are available, this item is optional only if you select 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 enrich 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.



Scene Settings

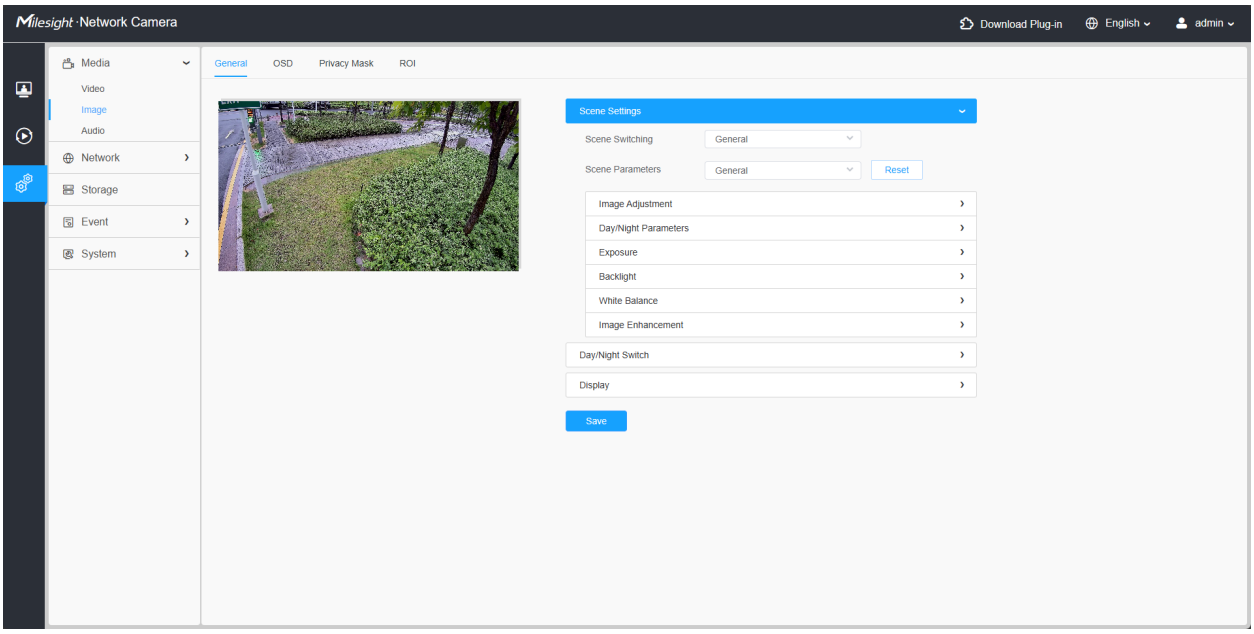
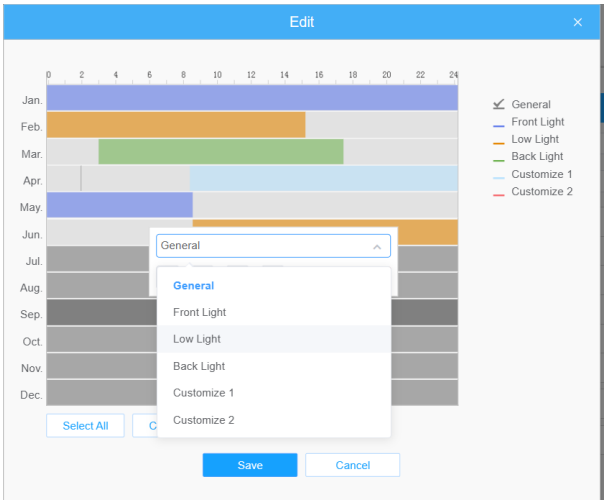


Table 7. Description of the buttons

Parameters	Function Introduction
Scene Switching	Once the parameters for each scenario have been set, employ this option to switch between the parameters in use for the current scenario.

Parameters	Function Introduction
	Set the scene switching schedule after selecting "Schedule" in the Scene Switching settings. 
Scene Parameter	This function allows you to configure a customized set of parameters for each specific scenario.
Reset	You can reset the image parameter of the selected scene, by clicking "reset".

Step 1: After selecting a scene parameter, you will see multiple scene options, including **General, Front Light, Low Light, Back Light, Customize 1, Customize 2 and Schedule**.

Step 2: Adjust the detailed parameters using functions such as **Image Adjustment, Day/Night Parameter, Exposure, Backlight, White Balance, and Image Enhancement**.

Step 3: Select Scene Switching to change to the corresponding scene, by selecting **"Save"** to apply the adjustments to the current real-time stream.

Scene Settings--> Image Adjustment

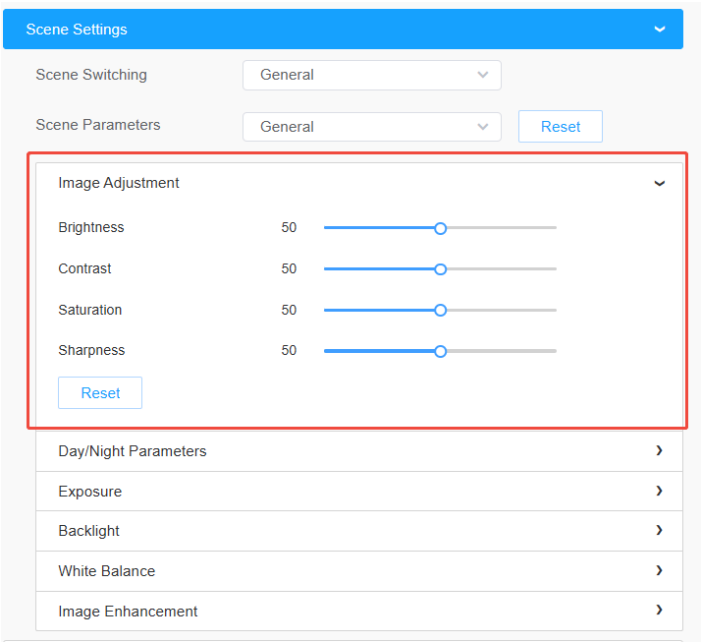


Table 8. Description of the buttons

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”.
Sharpness	Adjust the Sharpness of the image. Higher Sharpness sharpens the pixel boundary and makes the image look “more clear”.
Reset	Reset the image adjustment parameters to their default values.

Scene Settings--> Day/Night Parameters

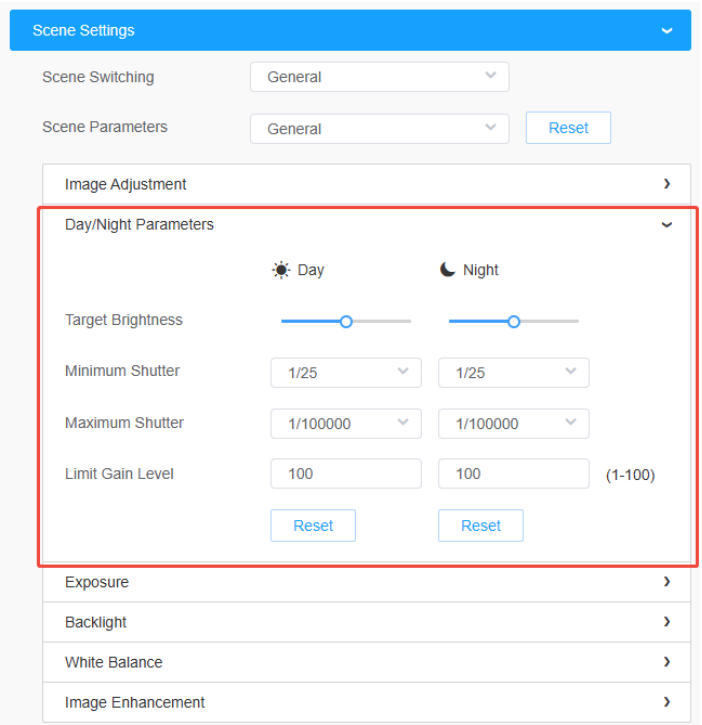
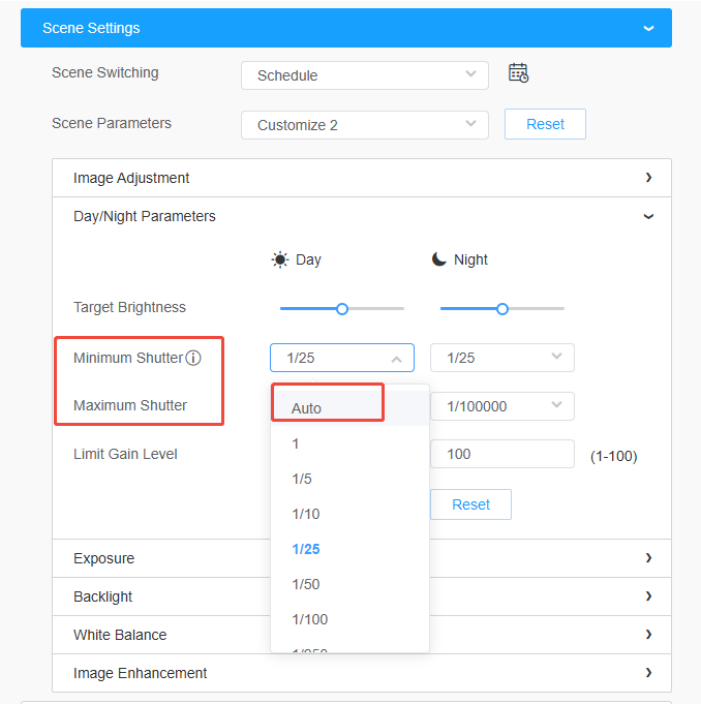


Table 9. Description of the buttons

Parameters	Function Introduction
Target Brightness	When the exposure is set to Auto mode, the image brightness will be adjusted to the predefined value when exposure changes occur.
Minimum Shutter	Minimum Shutter is the same as Maximum Exposure Time. Set the minimum Shutter to 1~1/100000s and auto.
Maximum Shutter	Maximum Shutter is the same as Minimum Exposure Time. Set the maximum Shutter to 1~1/100000s and auto.
Limit Gain Level	Set the Limit Gain Level to 1~100.

Note:

1. Both Minimum Shutter and Maximum Shutter now support 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.
2. When the Shutter is set to Auto, static images will appear brighter with reduced noise, but moving objects may experience motion blur.



Scene Settings--> Exposure

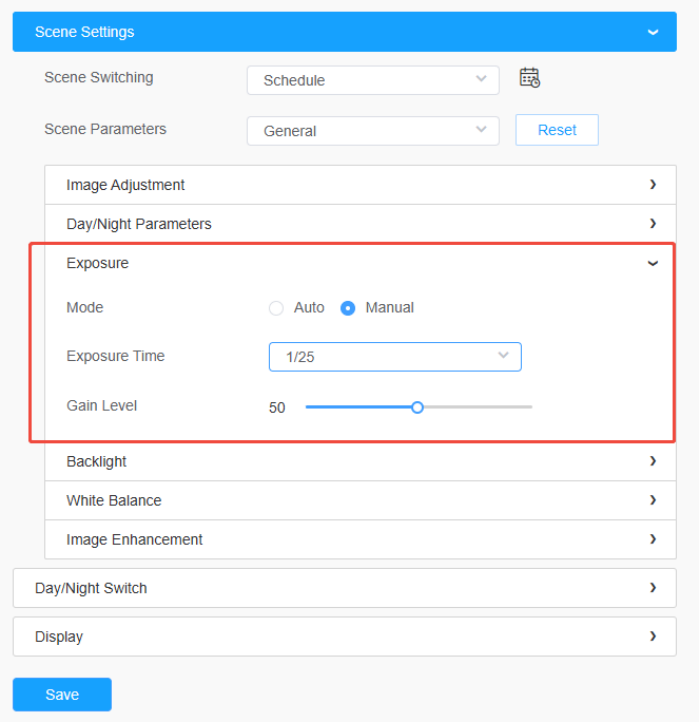


Table 10. Description of the buttons

Parameters	Function Introduction
Exposure Mode	Auto Mode and Manual Mode are available. **Auto Mode:** The camera will adjust the brightness according to the light environment automatically. **Manual Mode:** Tn he camera will adjust the brightness according to the value you set, you can configure the exposure time from 1~1/100000s and set Gain Level from 1~100 (default value: 50), the higher the gain value is, the brighter the image is.

Scene Settings--> Backlight

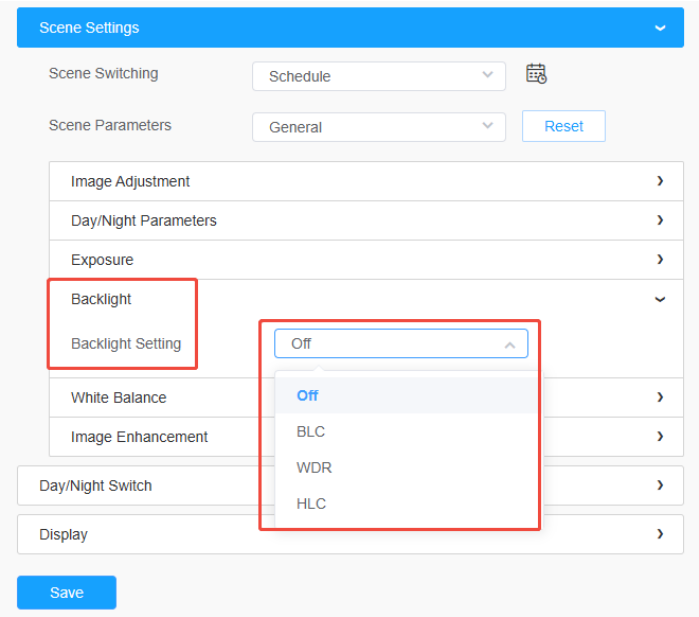
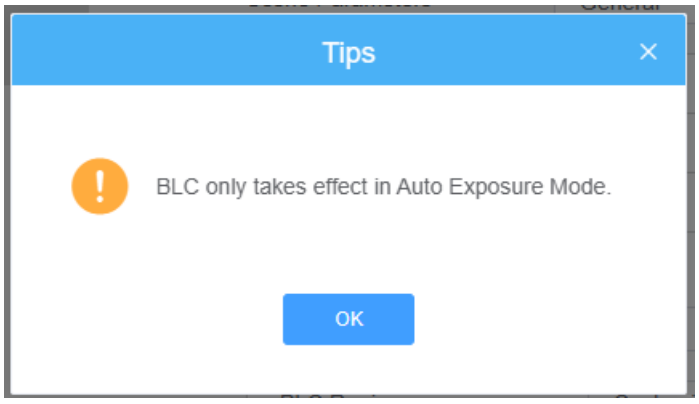


Table 11. Description of the buttons

Parameters	Function Introduction
Backlight Mode	**Backlight Setting:** Off, BLC, WDR, and HLC are available for detailed configuration. The default setting is "Off.". **BLC > BLC Region:** Customize and Center are available, when you select Customize, you must draw on the screen to define the BLC region. **Type:** You can choose between "**Inclusive**" or "**Exclusive**" options. "**Inclusive**" is selected by default. **WDR > Wide Dynamic Level:** This setting allows you to choose the Wide Dynamic Range (WDR) level. **Low:** Selecting this option enhances the compensation of bright areas, resulting in clearer image details in those regions. **High:** Choosing this option brightens the overall image, allowing for better details to be captured in darker areas. **Auto:** This setting automatically adjusts the exposure for bright and dark areas according to the scene. **HLC > HLC Level:** When HLC is enabled, the HLC Level can be configured from 0 to 100. A higher HLC Level results in a stronger light compensation effect. **Note:** To enable WDR, BLC, and HLC, you must set the exposure to **Auto** mode. 

Note:

- For more details about **Milesight WDR on & off Video**, you can click to the YouTube:

https://www.youtube.com/watch?v=McoOL0Pyk0w

- For more details about **Milesight Ultra Low-light Video Demo - HLC**, you can click to the YouTube:

  https://www.youtube.com/watch?v=Iy8uKWbii40

- For more details about **Milesight Super WDR Pro**, you can click to the YouTube:

  https://www.youtube.com/watch?v=edsPZXBJRnI

- For more details about **Milesight Super WDR Performance**, you can click to the YouTube:

  https://www.youtube.com/watch?v=BKEZ6BW-YZE

Scene Settings--> White Balance

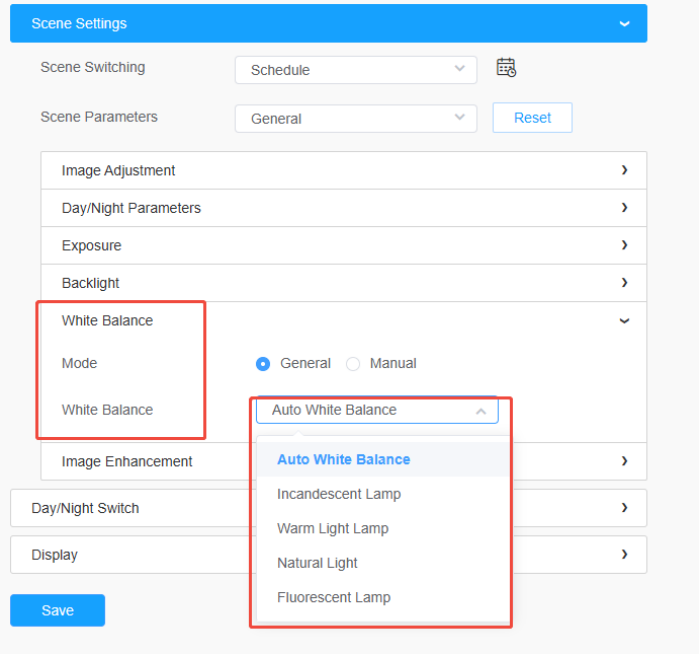


Table 12. Description of the buttons

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

Parameters	Function Introduction
White Balance	**Manual > Manual White Balance Settings:** Set Red Gain Level and Blue Gain Level manually. **General Mode:** Select a white balance mode as required • **Auto White Balance:**This option will automatically enable the White Balance function. • **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.

Scene Settings--> Image Enhancement

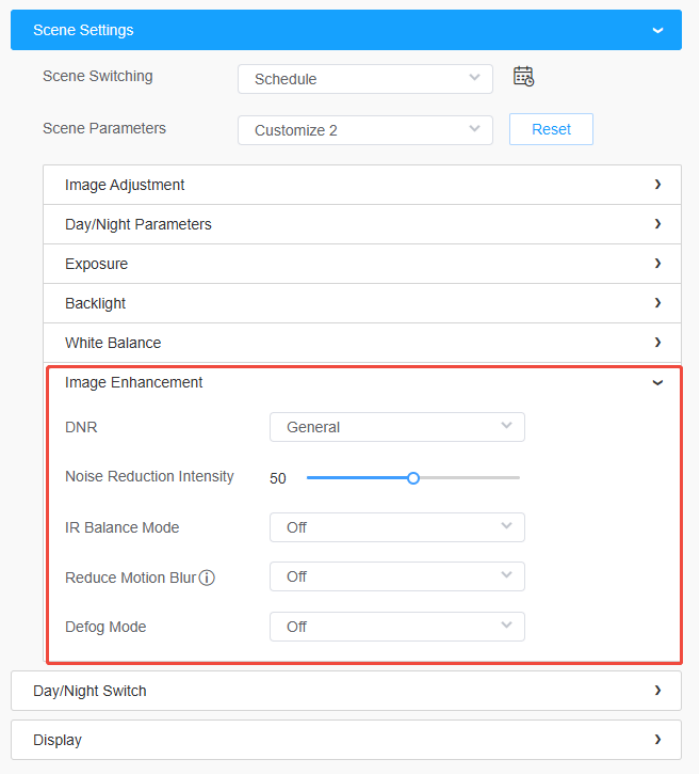
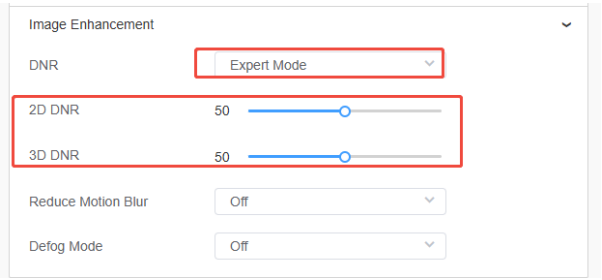


Table 13. Description of the buttons

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.
Reduce Motion Blur	Enable this function to reduce the motion blur of objects effectively. You can adjust the deblur level from 1 to 100.
Defog Mode	Better image effect in foggy weather. **Anti-fog Intensity** can be adjusted from 0 to 100, with a default value of 50.

Day/Night Switch

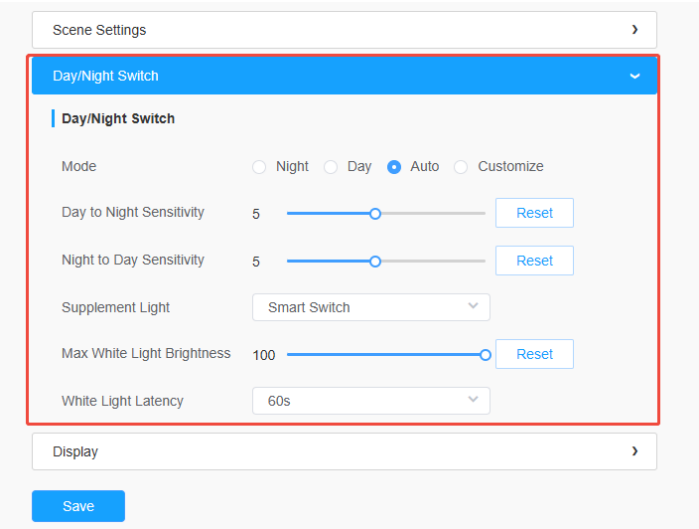
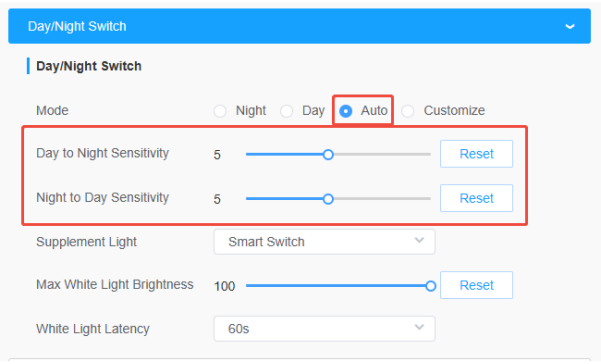
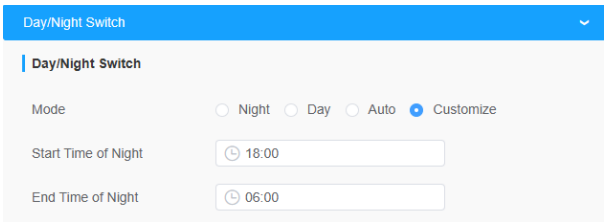


Table 14. Description of the buttons

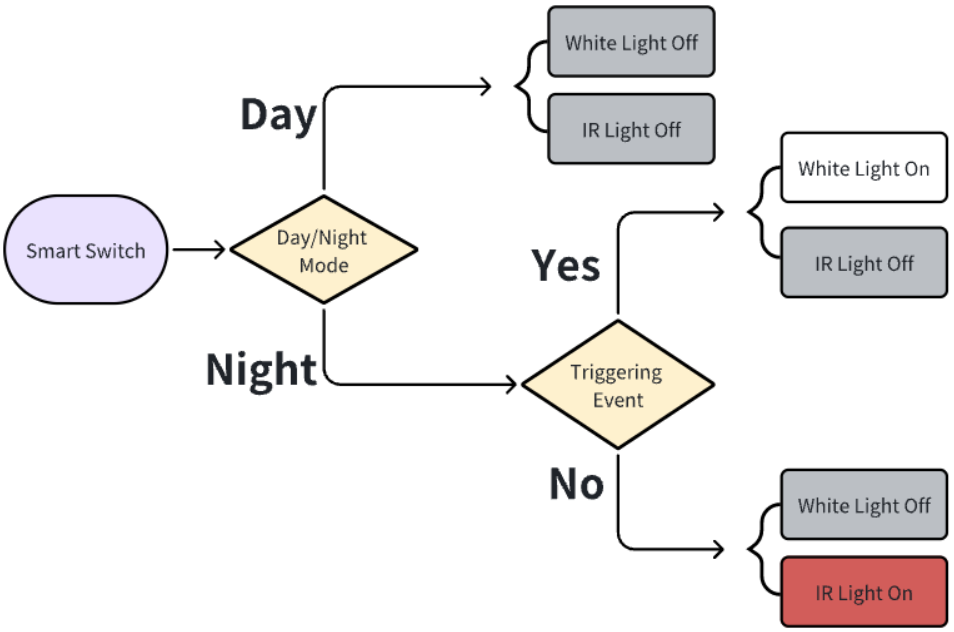
Parameters	Function Introduction
Mode	**Night Mode:** Shown in live view based on Night Mode settings. **Day Mode:** Shown in live view based on Day Mode settings. **Auto Mode:** Shown in live view based on environment, set the sensitivity for switching Day Mode to Night Mode, or Night Mode to Day Mode. **Customize:** Shown in live view based on the Night Mode start/end time you set.

Parameters	Function Introduction
Auto Mode	**Day to Night Sensitivity:** 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 Reset to reset the value to 5. **Night to Day Sensitivity:** 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 Reset to reset the value to 5.  **Note:** The two buttons are optional only if you select Auto Mode.
Customize	**Start Time of Night:** You can set the time for start the Night Mode. **End Time of Night:** You can set the time for end the Day Mode.  **Note:** Start/End Time of Night are optional only if you select Customize Mode.

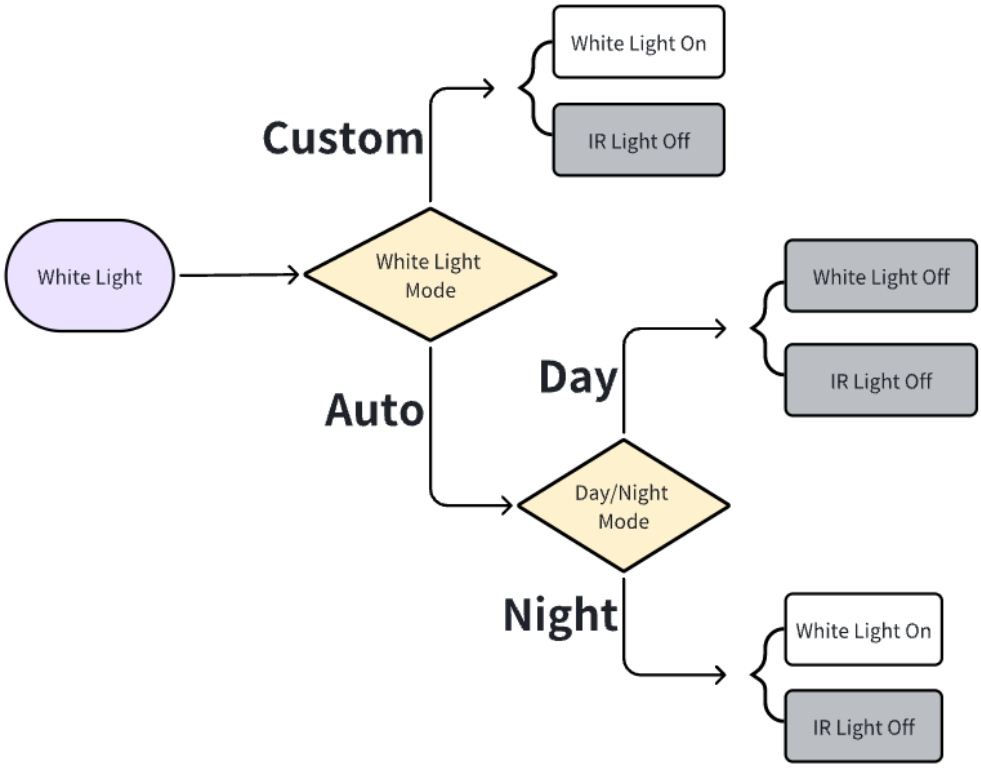
Parameters	Function Introduction
Supplement Light	**Smart Switch, White Light, IR Light, and Off** modes are available. • **Smart Switch:** The camera automatically switches to full-color lighting upon detecting an event, revealing more details with vivid clarity. **Max White Light Brightness:** Set the maximum white light brightness threshold. The higher the value, the brighter the white light. You can adjust the value from 0 to 100 (Default value: 100). **White Light Latency:** Set the duration for which the white light remains on after an event is triggered and the camera switches to full-color mode. • **White Light:** The camera's white light remains always on to provide brightness for the image. **White Light Mode:** Auto and Customize modes are available. In Auto mode, you can set the maximum white light brightness. The actual brightness will be automatically adjusted based on the environment lighting, without exceeding the maximum level you set. In Customize mode, you can directly set the white light brightness. The default value is 100. • **IR Light:** The camera's IR light remains always on. **IR Light Mode:** Auto and Customize modes are available. In Customize mode, you can set the IR light brightness, with 100 as the default value. • **Off:** Turns off all lights.

Note: The following diagram shows how the light operates:

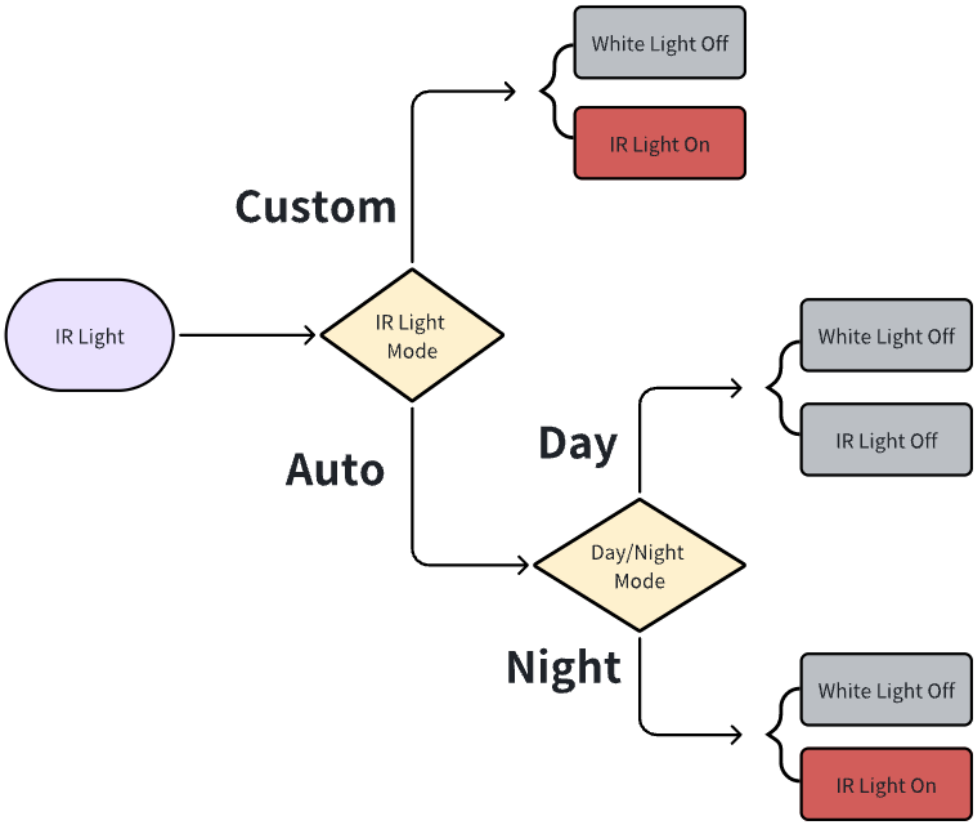
When Supplement Light is set as **Smart Switch.**



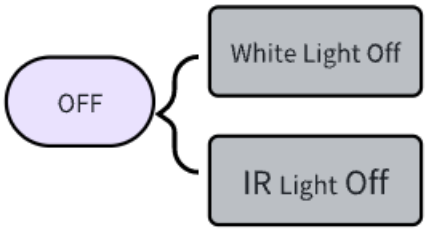
When Supplement Light is set as **White Light.**



When Supplement Light is set as **IR Light.**



When Supplement Light is set as **OFF.**



Display

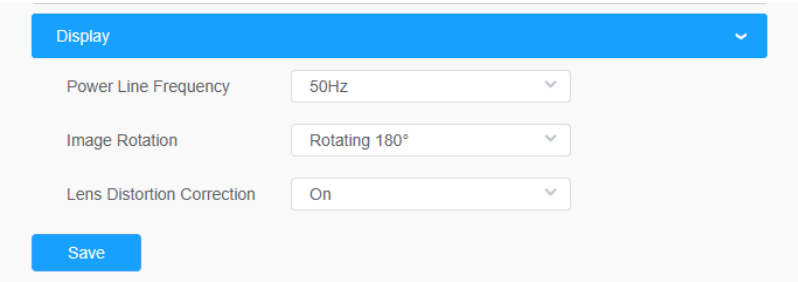


Table 15. Description of the buttons

Parameters	Function Introduction
Power Line Frequency	60Hz and 50Hz are available.
Image Rotation	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. **Clockwise 90°:** Rotate the image 90° in the clockwise direction. **Anticlockwise 90°:** Rotate the image 90° in the anticlockwise direction.
Lens Distortion Correction	There are two options available, you can select one to meet your need. **Off:** Select the original image of camera. **On:** Select the dewarping image of camera.

8.1.2.2 OSD

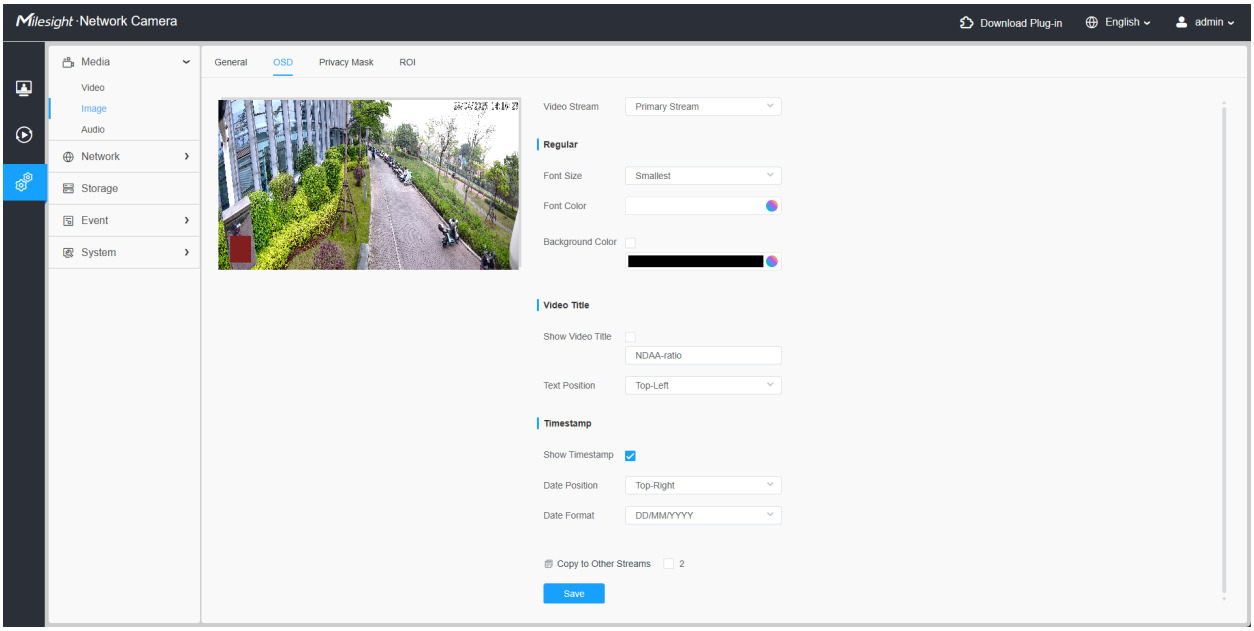


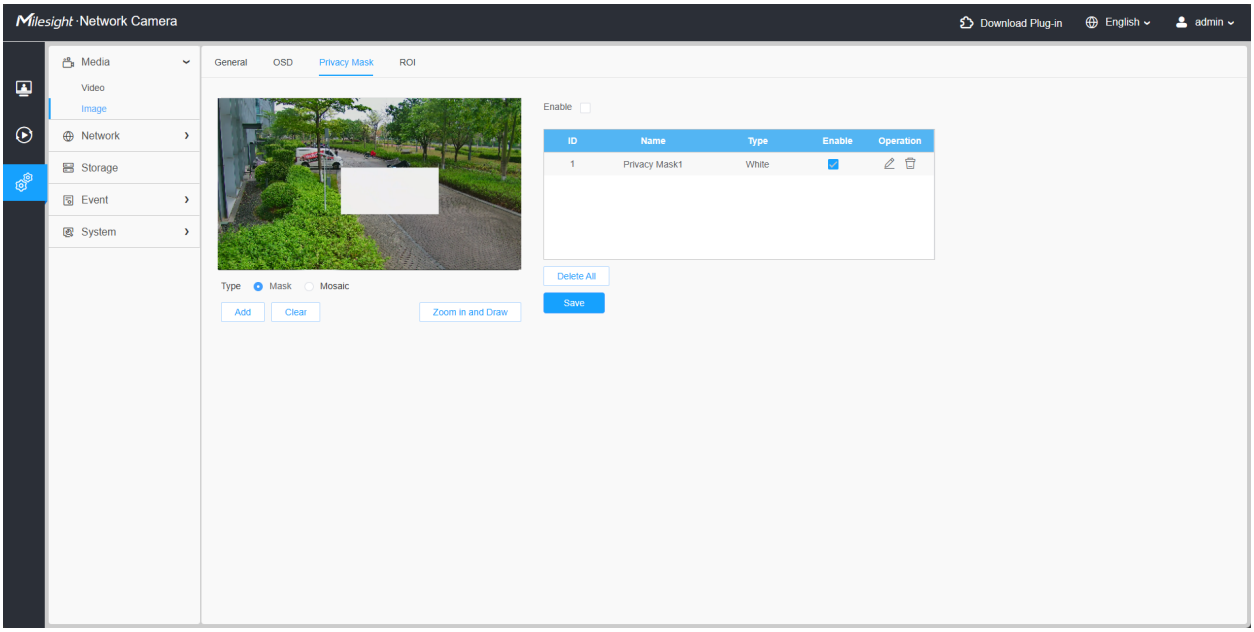
Table 16. Description of the buttons

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.
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]

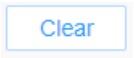
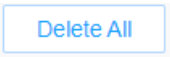


You can select the color to use for the cover certain areas on the live video.

Note:

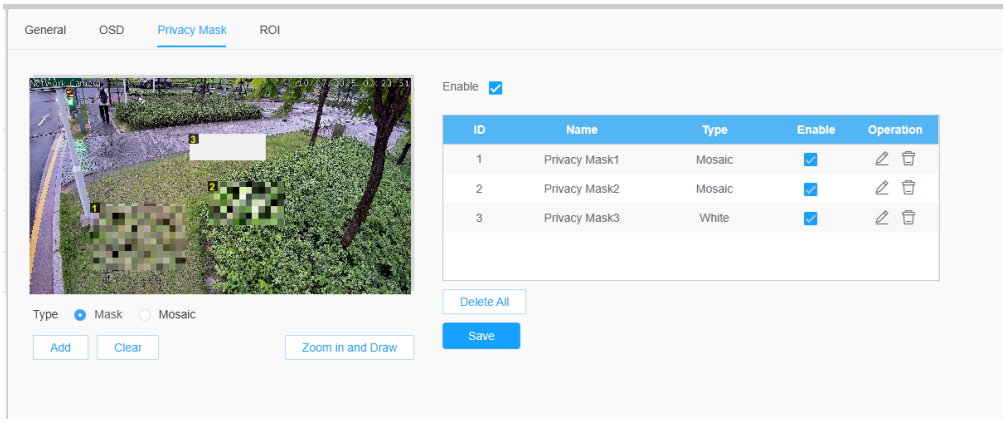
Table 17. Description of the buttons

Parameters	Function Introduction	
Enable	Check the check box to enable the Privacy Mask function.	
Type	Select the type to use for the privacy areas, there are two types available: Mask and Mosaic. When the privacy type is set to Mask, you can select a color for the privacy areas, eight colors are available: White, Black, Blue, Yellow, Green, Brown, Red and Purple. The Mosaic type is also available as an alternative privacy option.	
Add	Draw 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.	
Operation	/	Enable/disable the selected ROI areas.

Parameters	Function Introduction	
Operation		Change the color of Mask area, there are eight colors available: White, Black, Blue, Yellow, Green, Brown, Red and Purple
		Delete the privacy mask area
	Clear the area you drew on the live video.	
	Clear all areas you drew before.	

[Mosaic type of Privacy Mask]

You can select the color type and mosaic type to use for the cover certain areas on the live video. The mosaic type can maintain the continuity of the picture and improve the visual effect.



8.1.2.4 ROI

Region of interest (often abbreviate as 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.

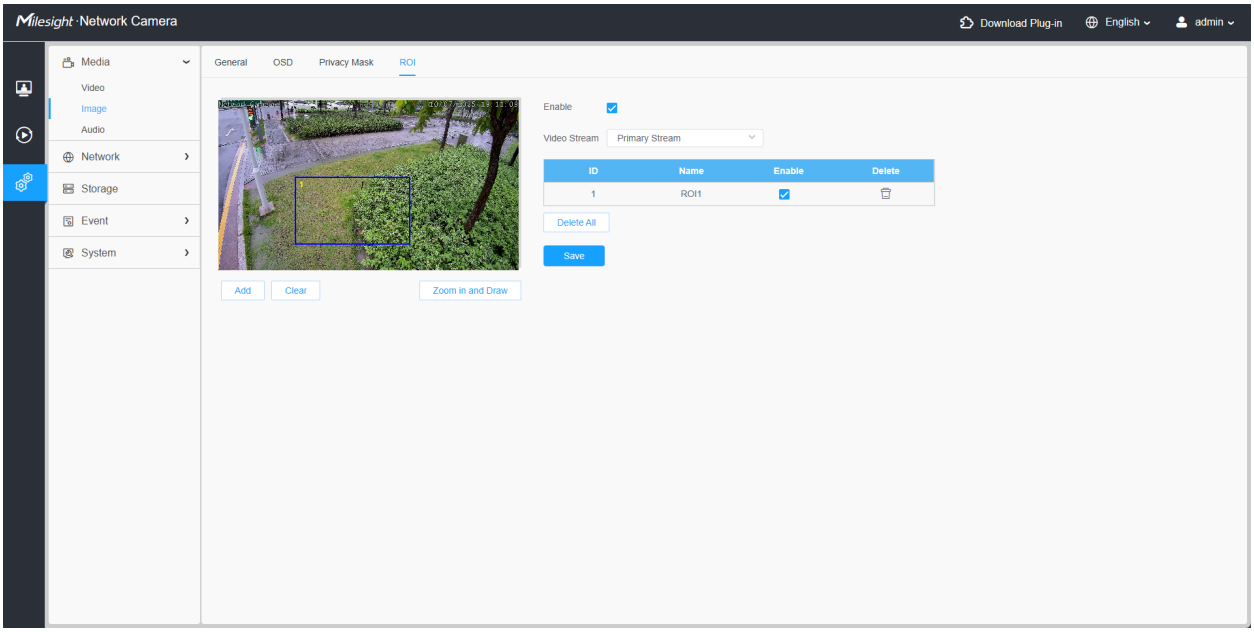


Table 18. Description of the buttons

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.
		Delete the selected ROI areas.
Add	Drew a ROI area on the live video as needed.	
Clear	Clear the area you drew on the live video.	
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.	

Parameters	Function Introduction
Delete All	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.

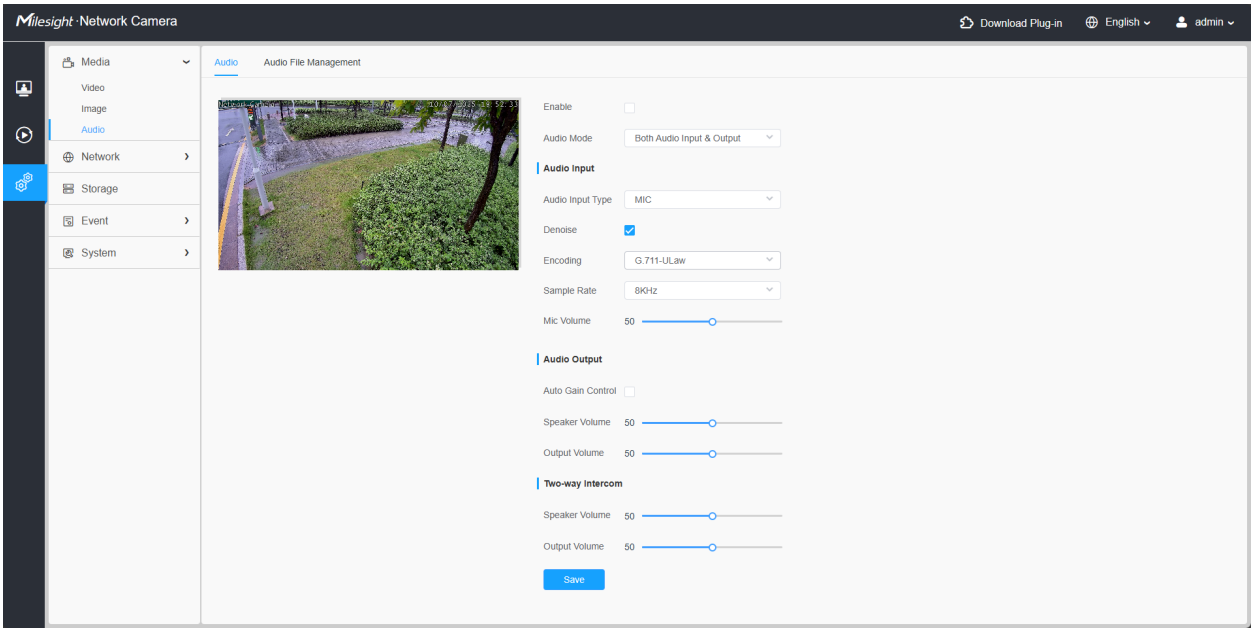
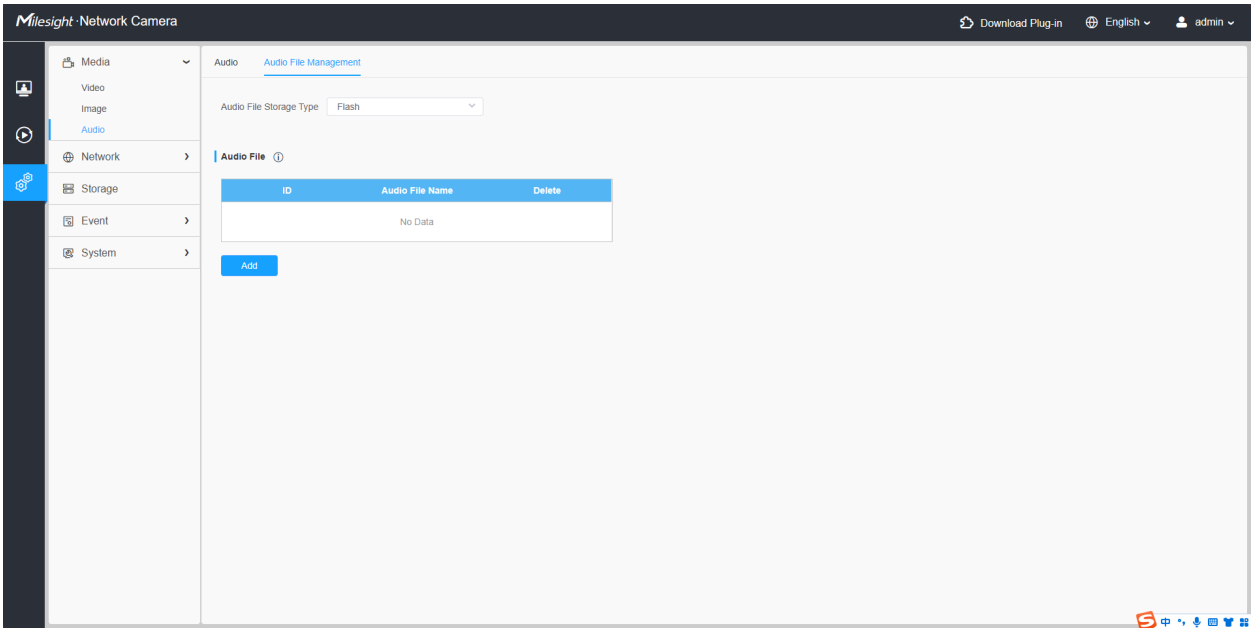


Table 19. Description of the buttons

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:** Supports both Mic and Line In. 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 **Sample Rate:** 8KHz, 16KHz, 32KHz, 44.1KHz, and 48KHz are available. **Audio Bit Rate:** The function is available only for AAC LC, and supports up to 48kbps. **Input Volume:** Input audio volume level, 0-100. **Mic Volume / Input Volume:** Input audio volume level, 0-100.
Audio Output	**Auto Gain Control:** This function is only for H.265 series, improve the quality of audio. **Speaker volume:** Adjust the speaker volume when the alarm is triggered, 0-100. **Output volume:** Adjust the output volume when the alarm is triggered, 0-100.
Two-way Intercom	**Speaker Volume:** Adjust the speaker volume when using two-way communication, 0-100. To use the Two-way Intercom function, please ensure that 'Start Talking' is enabled and the audio is not muted. For more detailed instructions, please refer to the Live View *(page 23)* section. **Output Volume:** Adjust the output volume when using two-way communication, 0-100.

8.1.3.2 Auto 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.
- Only support '.wav' audio files with codec type PCM/PCMU/PCMA, 64kbps or 128kbps bitrate and no more than 500k!

8.2 Network

8.2.1 Basic

8.2.1.1 TCP/IP

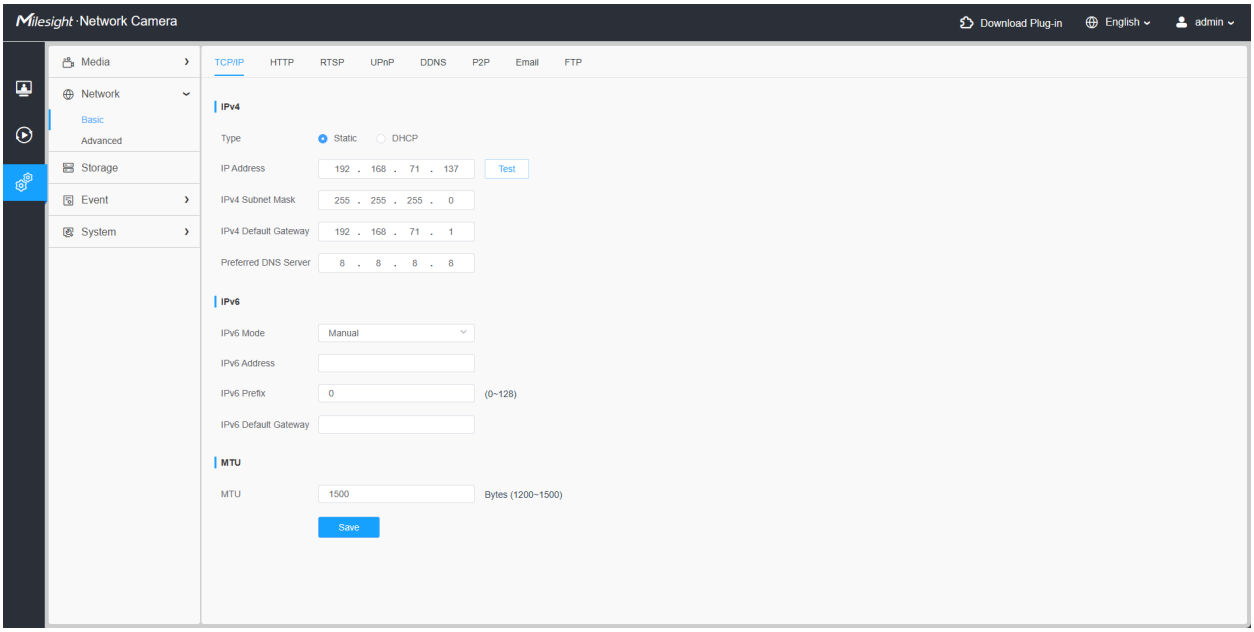


Table 20. Description of the buttons

Parameters	Function Introduction
IPv4	**Type:** You can choose between **Static** and **DHCP** types to obtain the IPv4 address. • **DHCP**: The camera automatically obtains an IP address from the DHCP server (enabled by default). • **Static**: Allows you to manually assign a fixed IP address to the camera. **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.

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

8.2.1.2 HTTP

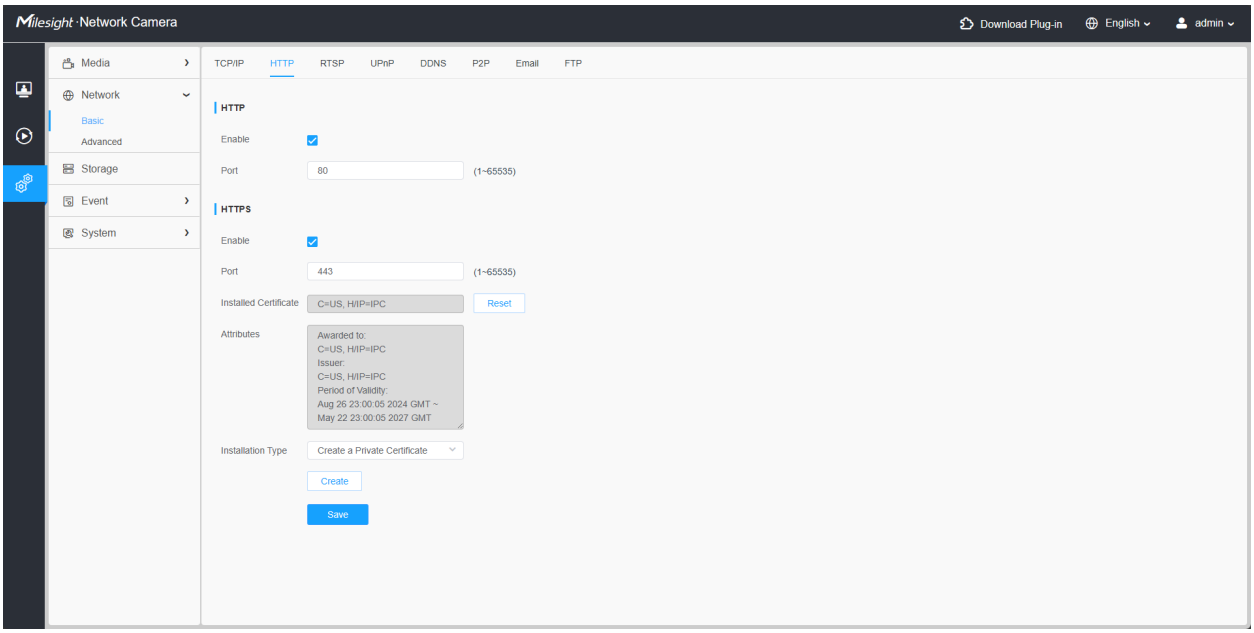


Table 21. Description of the buttons

Parameters	Function Introduction
HTTP	**Enable:** Start or stop using HTTP. **Port:** Web GUI login port, the default is 80, the same with ONVIF port.

Parameters	Function Introduction
HTTPs	**Enable:** Start or stop using HTTPs. **Port:** Web GUI login port via HTTPS, the default is 443. **Note:** For more details about how to use enable HTTPS access, please refer to https://milesight.freshdesk.com/a/solutions/articles/69000797384.
Installed Certificate	Upload and set the SSL certificate.
Attributes	
Installation Type	
Save	Save the configuration.

Table 22. 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

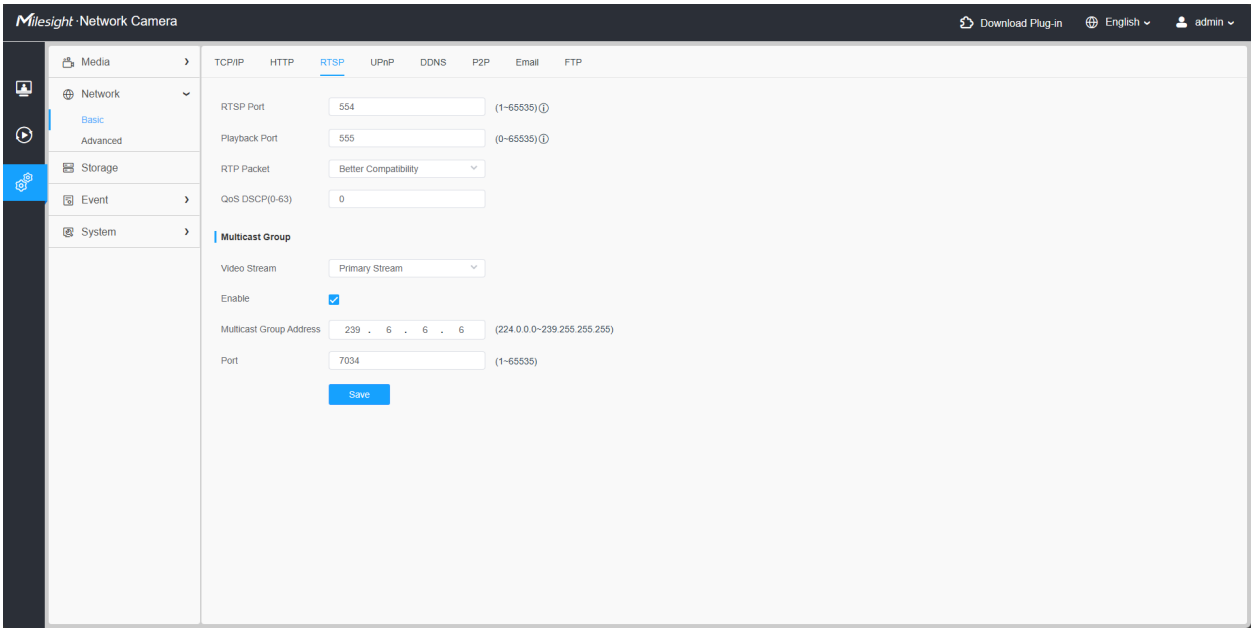


Table 23. Description of the buttons

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

Parameters	Function Introduction
Save	Save the configuration.

Table 24. 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.

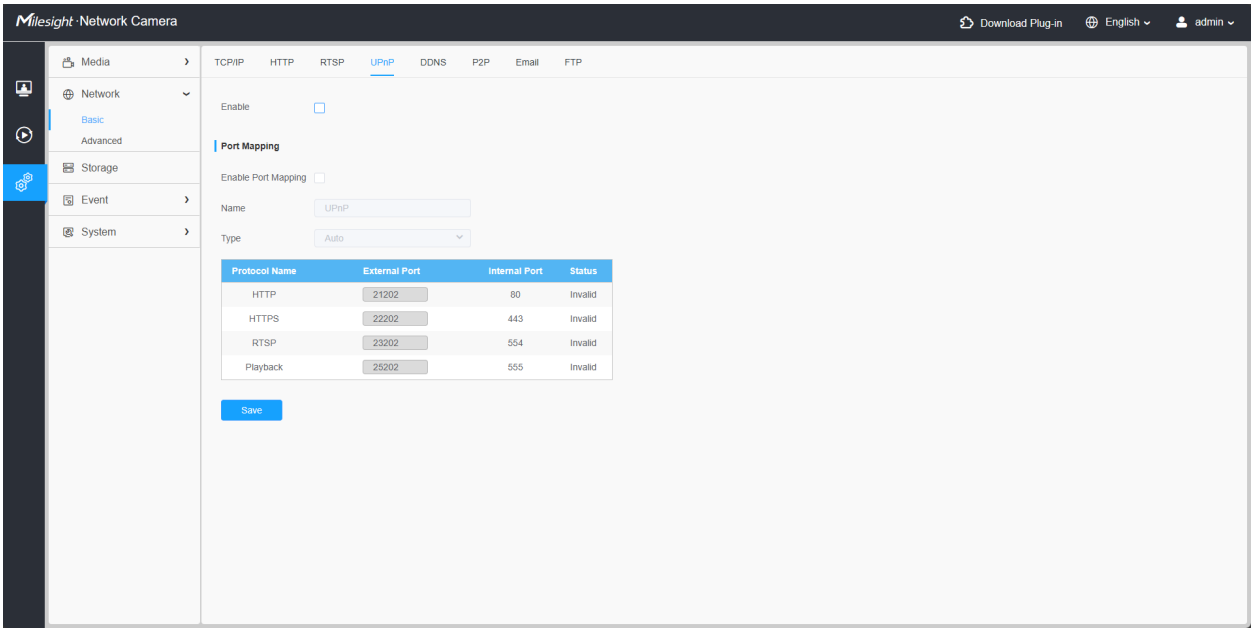


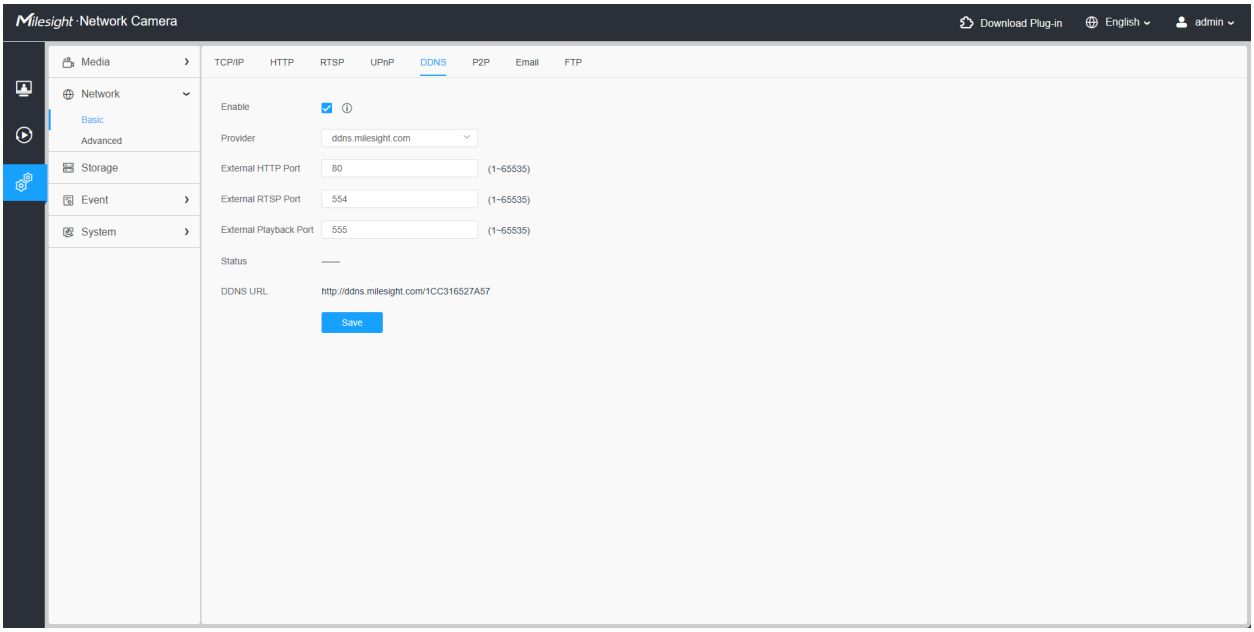
Table 25. Description of the buttons

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 26. 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".

Parameters	Function Introduction
Password	Account password, unavailable for "freedns.afraid.org".
Host name	DDNS name enabled in the account.
Status	Display DDNS running status.
Save	Save the configuration.

Note:

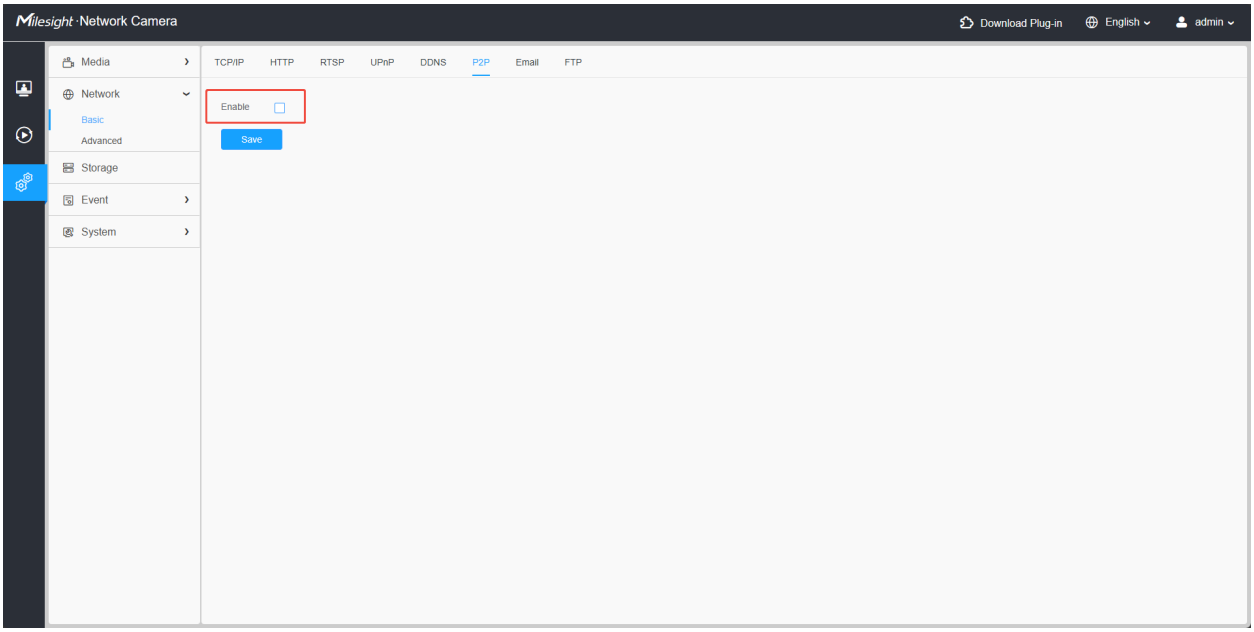
- Please do the Port Forwarding of HTTP Port and RTSP Port before you use Milesight DDNS.
- Make sure that the internal and the external port number of RTSP are the same.

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.

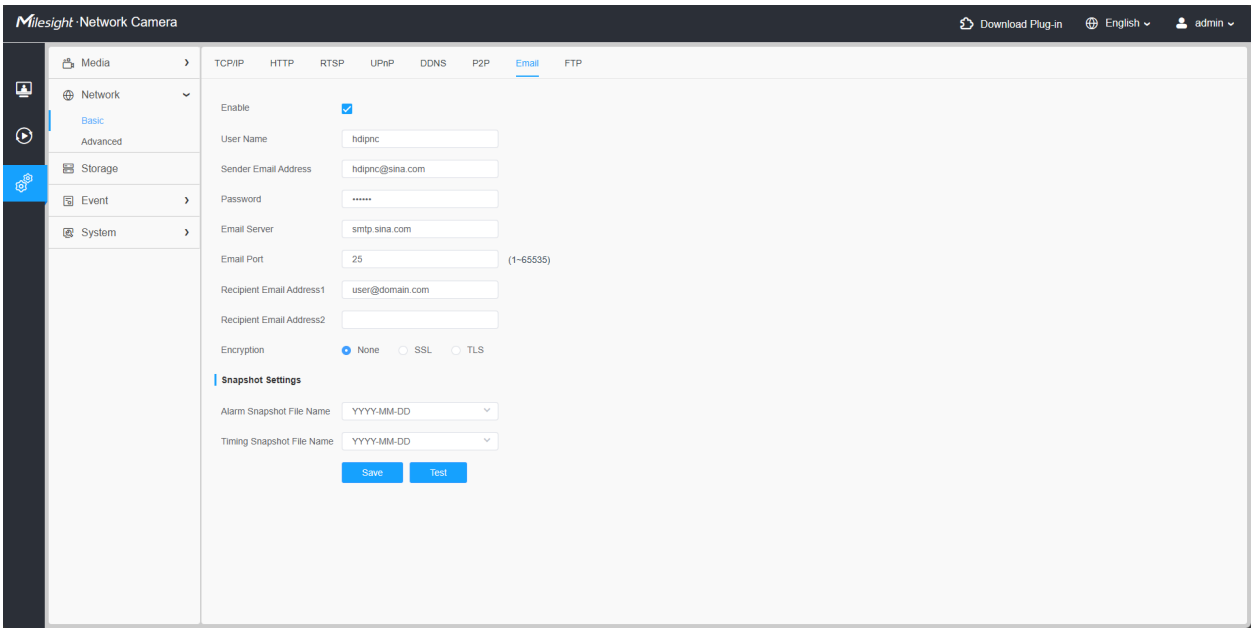


Table 27. Description of the buttons

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.
Snapshot Settings	**Alarm Snapshot File Name:** Default(YYYY-MM-DD) /MM-DD-YYYY/ DD-MM-YYYY/ Add prefix/ Overwrite with the base file name/ Customize are available. **Timing Snapshot File Name:** Default(YYYY-MM-DD) /MM-DD-YYYY/ DD-MM-YYYY/ Add prefix/ Overwrite with the base file name/ Customize are available.
Save	Save the configuration.
Test	Test whether the configuration is 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.

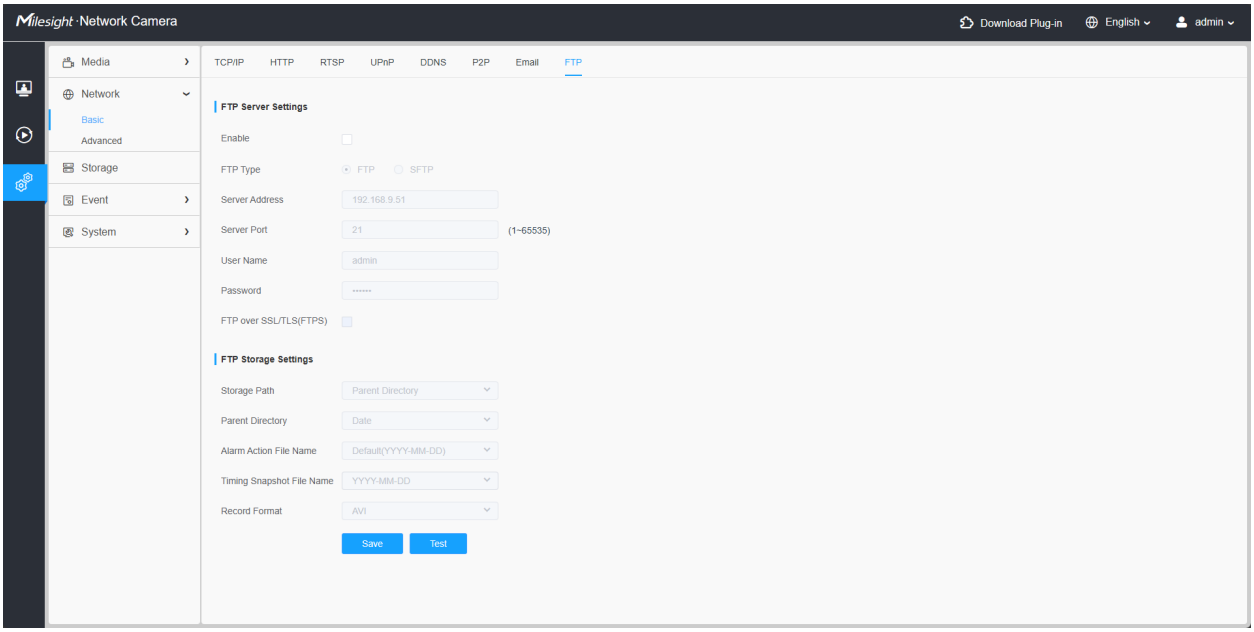


Table 28. Description of the buttons

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.

Parameters		Function Introduction
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.

Parameters		Function Introduction
FTP Storage Settings	**Record Format**	AVI and MP4 are optional.
Save		Save the configuration, 0s ~ 10s are optional.
Test		Test whether the configuration is successful.

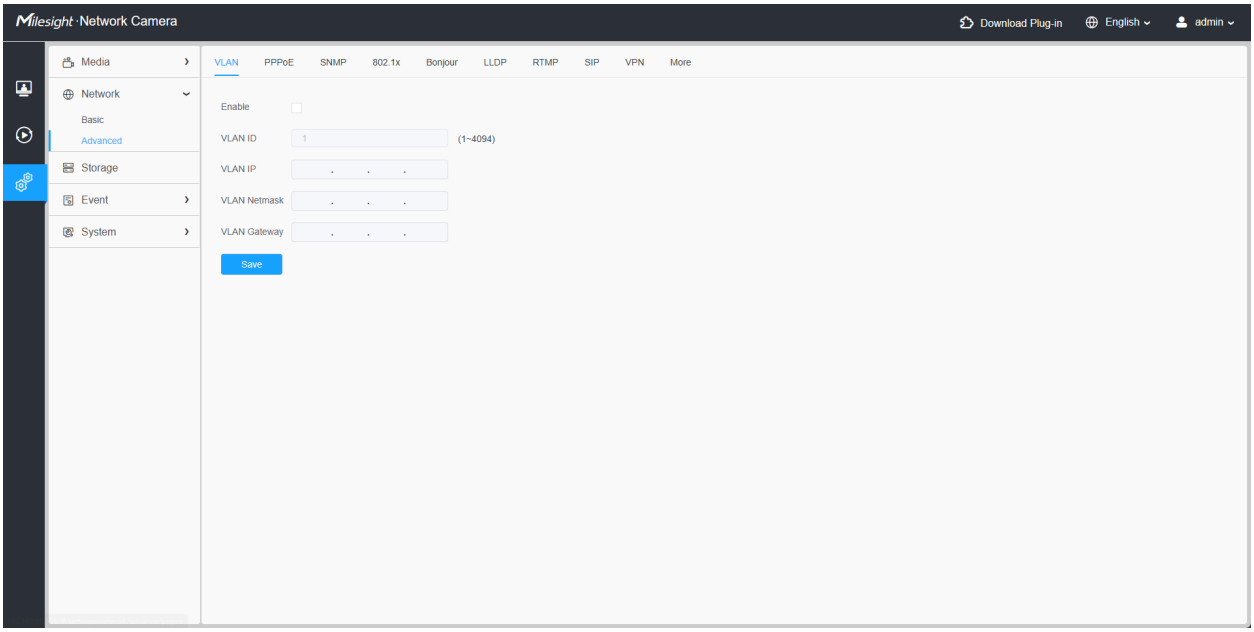
Note:

- 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

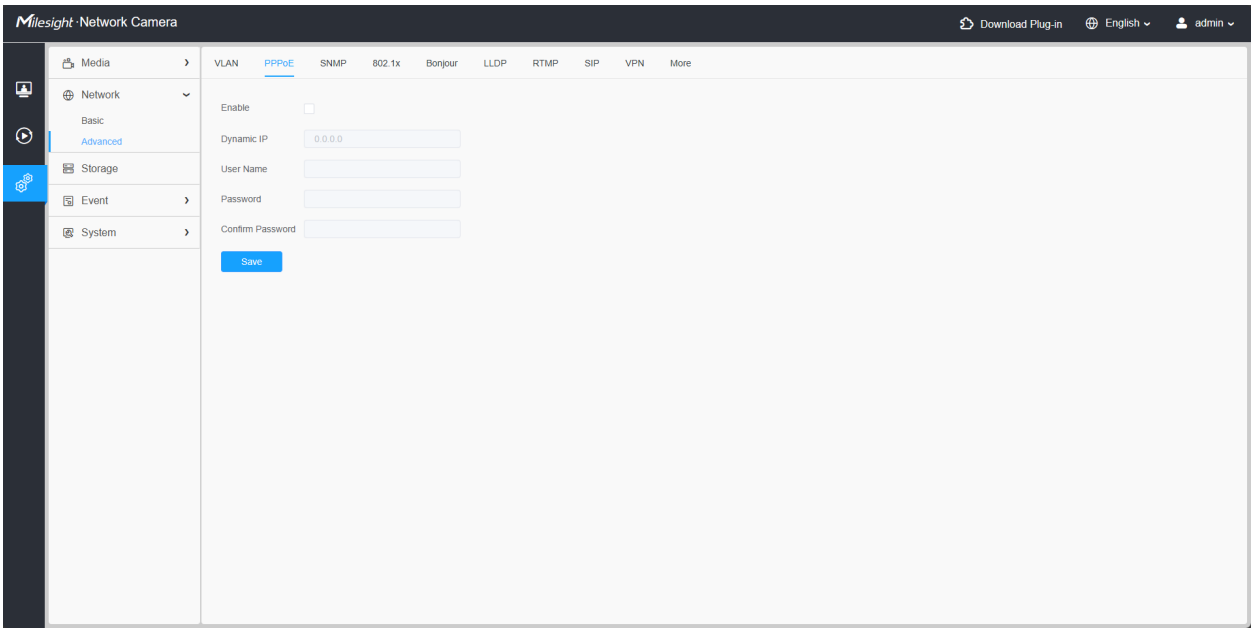
A virtual LAN (VLAN) is any broadcast domain that is partitioned and isolated in a computer network at the data link layer (OSI layer 2). LAN is an abbreviation of local area network. VLANs allow network administrators to group hosts together even if the hosts are not on the same network switch. This 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.



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.

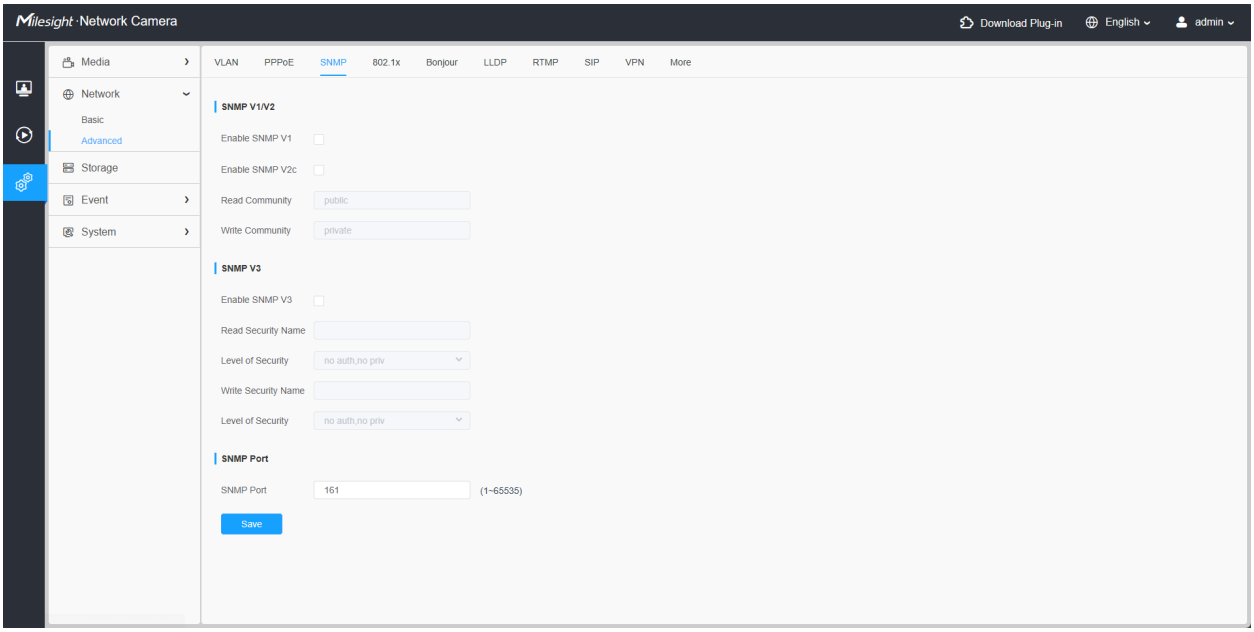


Table 29. Description of the buttons

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 password 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.

Parameters	Function Introduction
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.

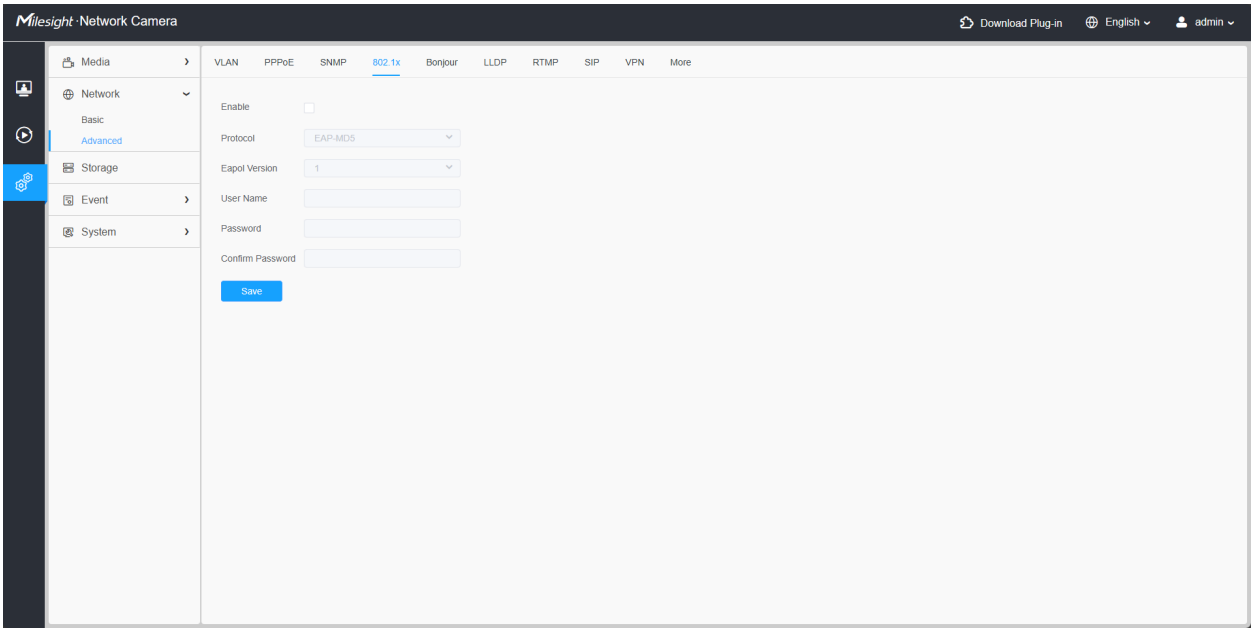


Table 30. Description the Buttons

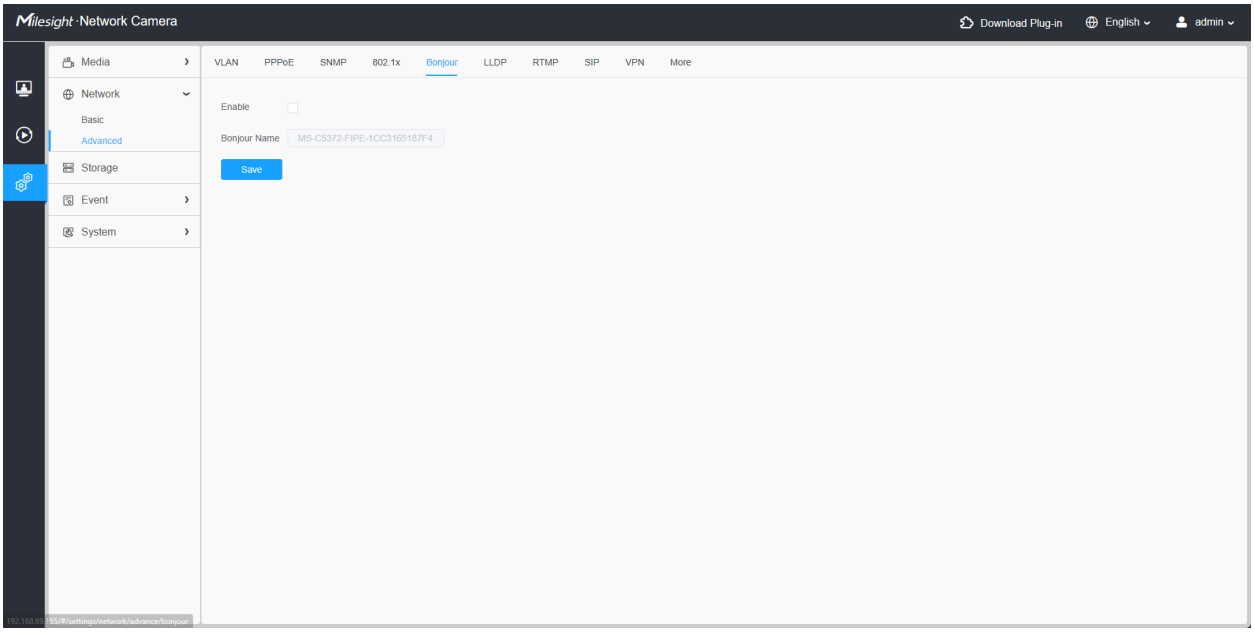
Parameters		Function Introduction
Enable		Start or stop using 802.1x certification.
Protocol		Choose the protocol, **EAP-MD5** and **EAP-TLS** are available.
EAP-MD5	**Eapol Version**	This version number helps ensure compatibility between devices implementing different versions of the EAPOL protocol. Version 1 and version 2 can be chosen.

Parameters		Function Introduction
EAP-MD5	**User Name**	EAP-MD5 encryption account name.
	Password	EAP-MD5 encryption account password.
	Confirm Password	Re-enter the EAP-MD5 encryption account password.
EAP-TLS	**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.
	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.

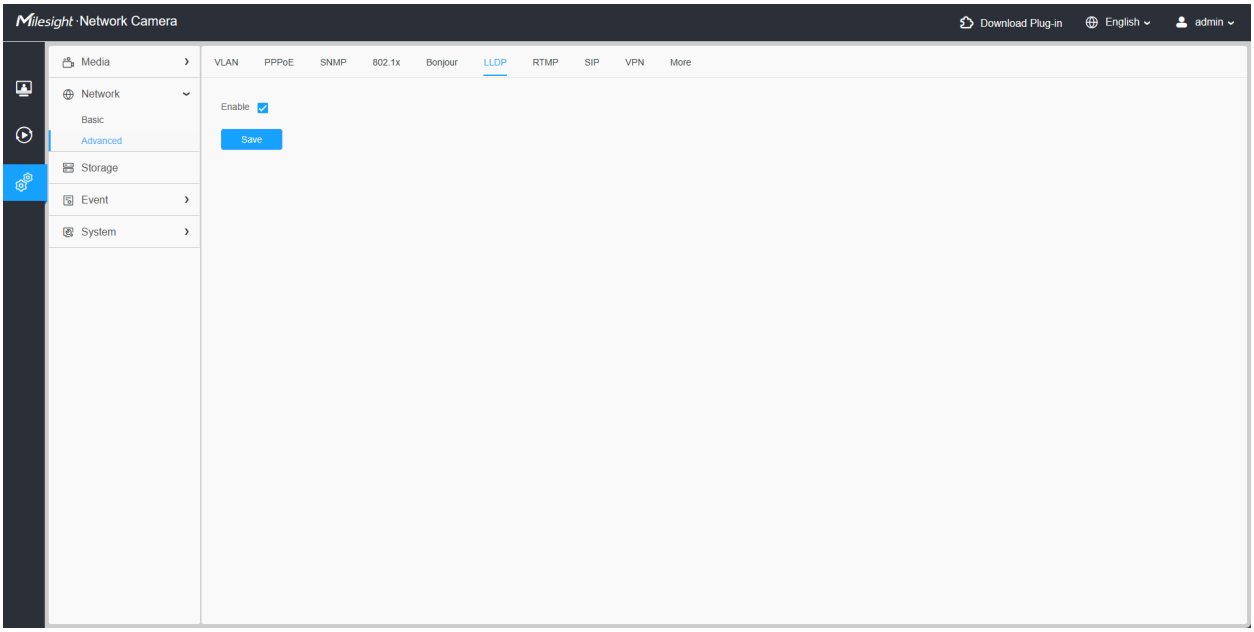
If you don't know the camera information, you can use the Bonjour service on the same LAN to search for network camera devices and then to access the devices.



8.2.2.6 LLDP

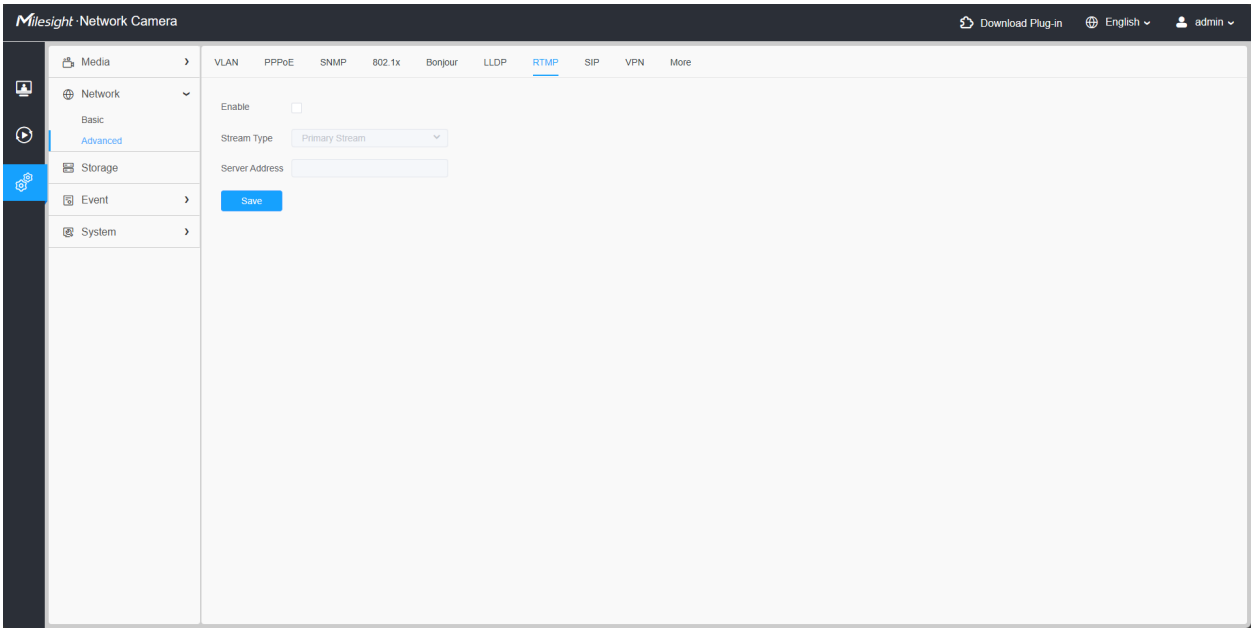
The Link Layer Discovery Protocol (LLDP) is a standardized network discovery protocol used by network devices to advertise their identity, capabilities, and neighbors on a local area network (LAN). It operates at the data link layer (Layer 2) of the OSI model. LLDP is defined by the IEEE 802.1AB standard. 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.



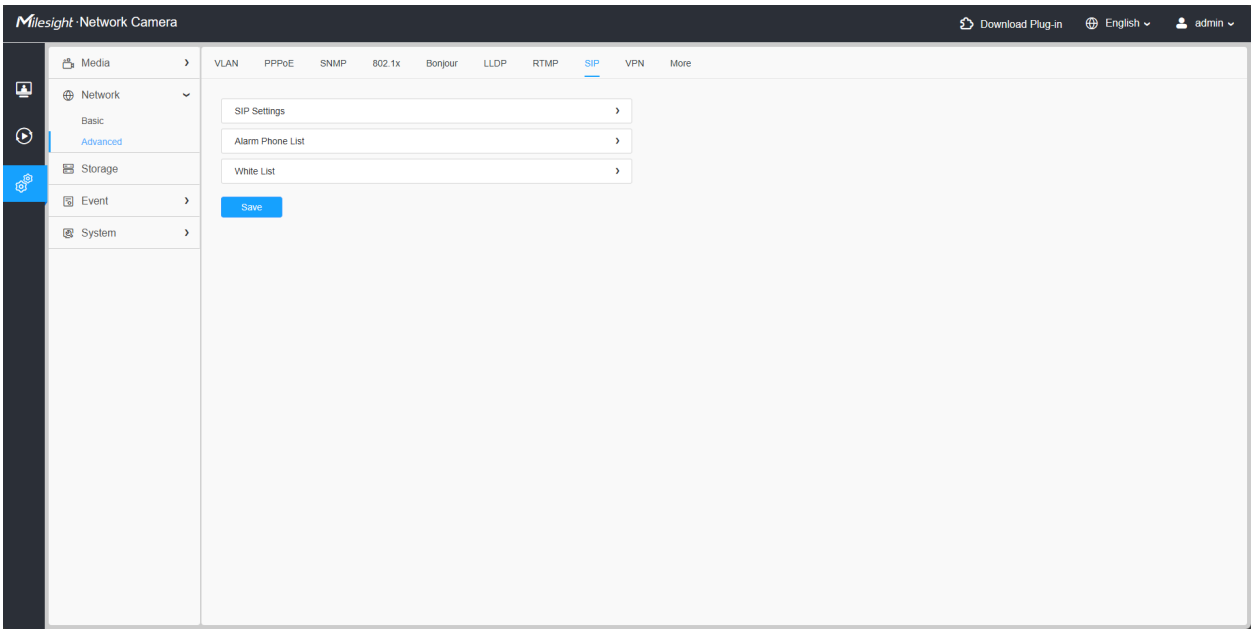
Note:

- 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 >.
- 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 Network cameras 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]

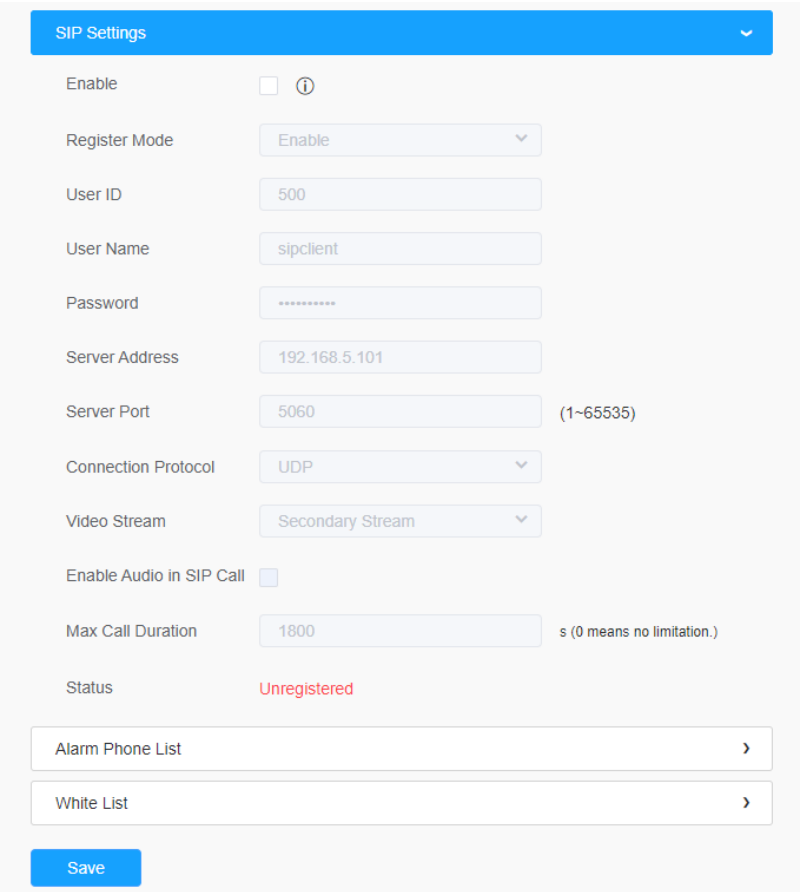


Table 31. Description of the buttons

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.
User ID	SIP ID.
User Name	SIP account name.

Parameters	Function Introduction
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]

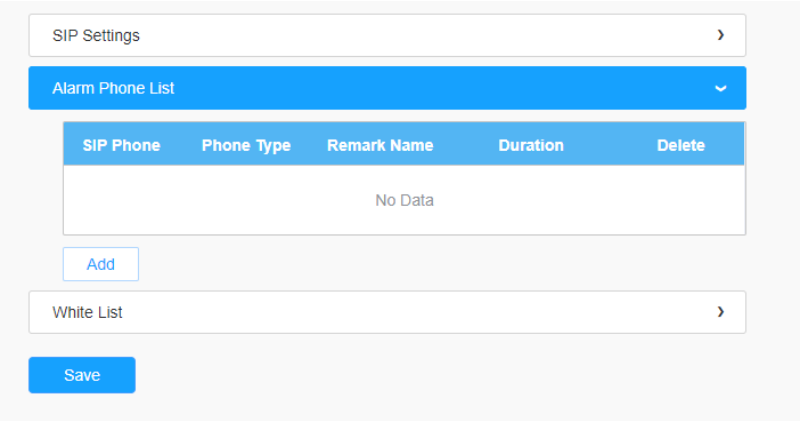


Table 32. Description of the buttons

Parameters	Function Introduction
Add	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	Delete all added alarm phone.

[White List]

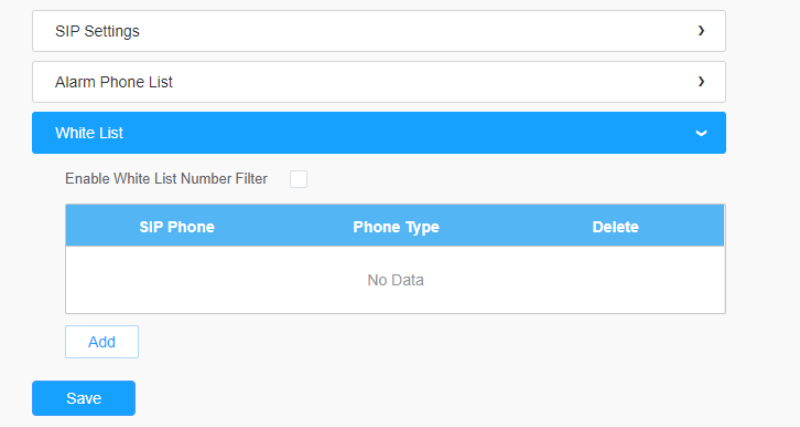


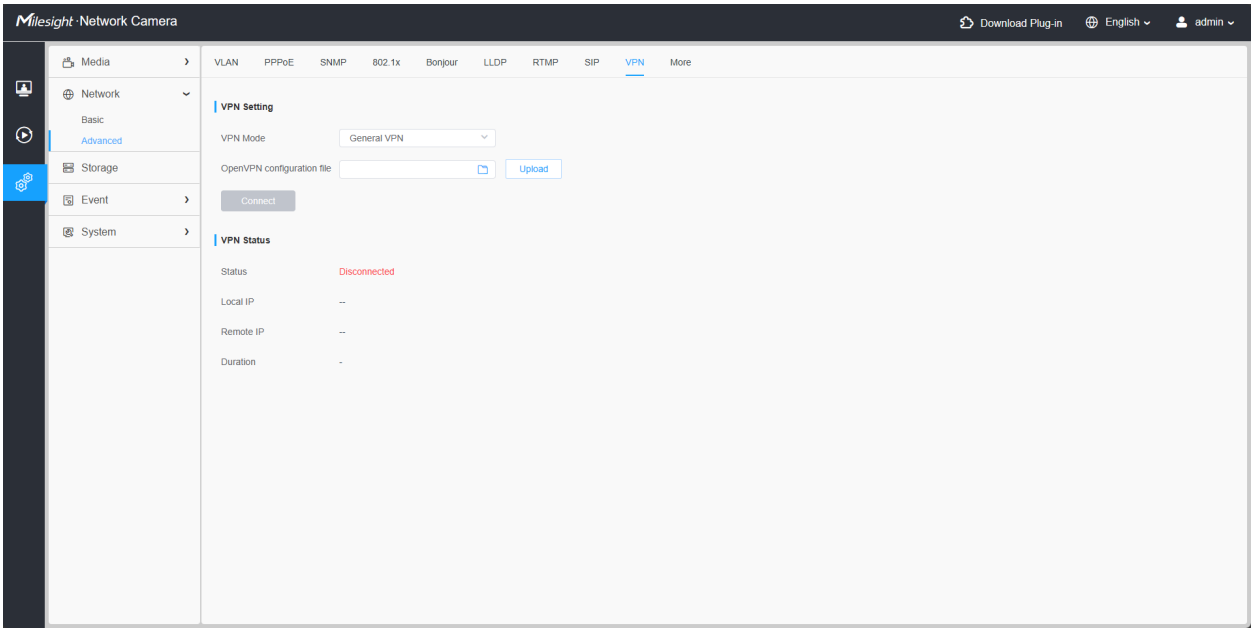
Table 33. Description of the buttons

Parameters	Function Introduction
Enable White List Number Filter	When enabled, only the designated phone number or IP address can visit
Add	**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. 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.

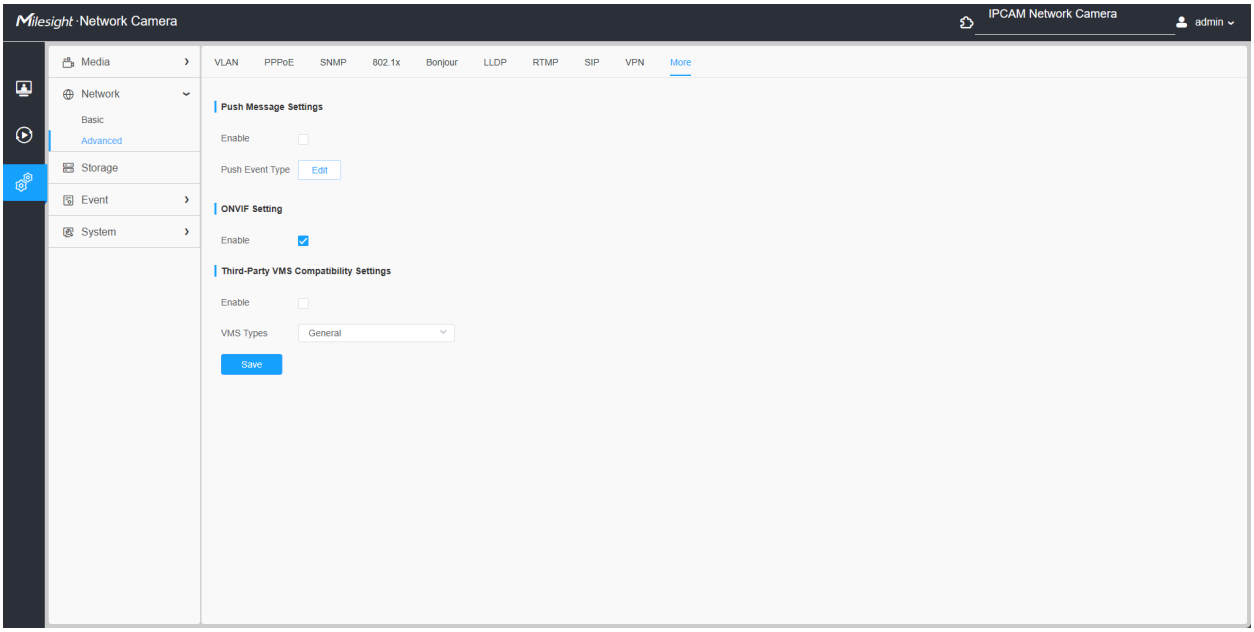
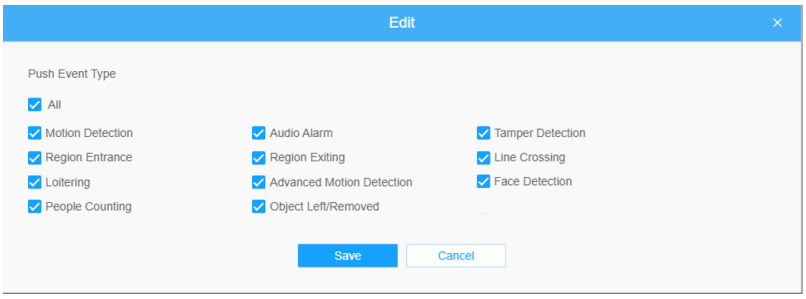
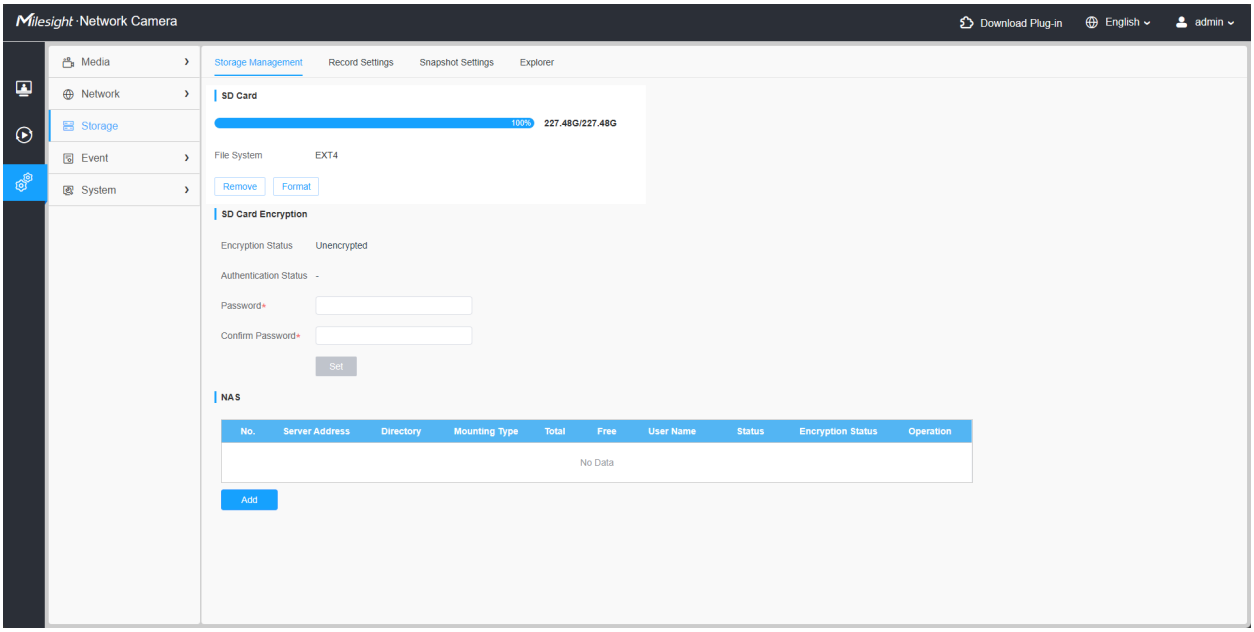


Table 34. Description of the buttons

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 App as shown below: 
ONVIF Setting	Here you can choose whether to enable or disable camera ONVIF function. If camera ONVIF function is enabled, it can be searched out, added and connected by third-party software through ONVIF protocols. Generally, the default status of ONVIF function is enabled.
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.

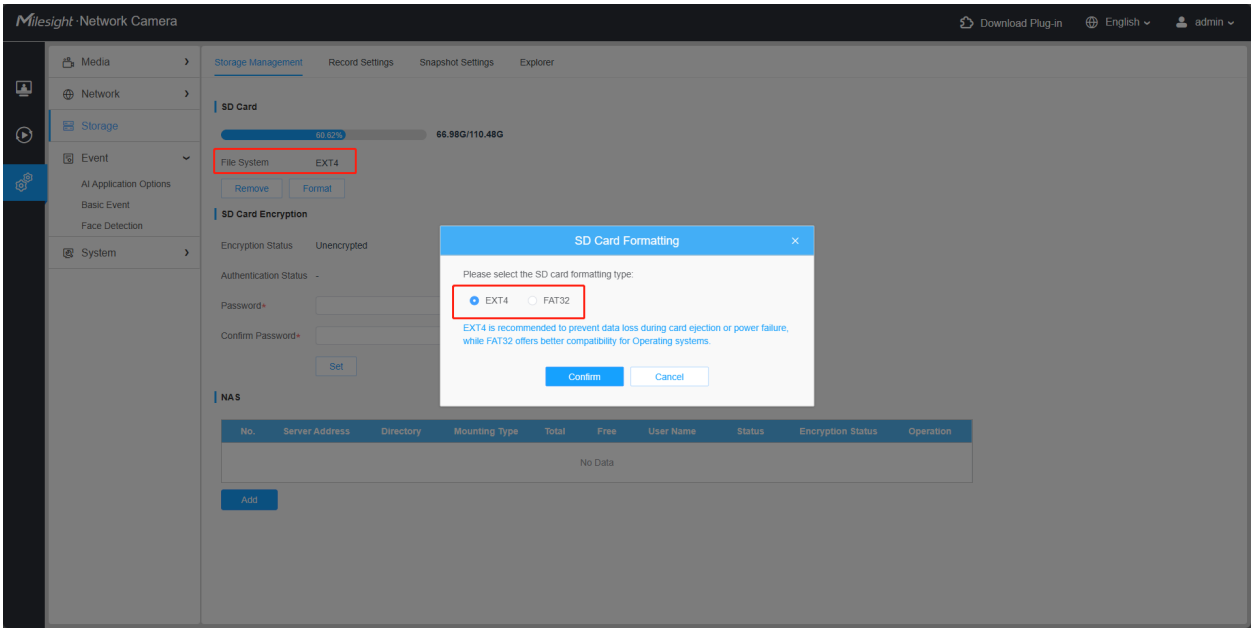
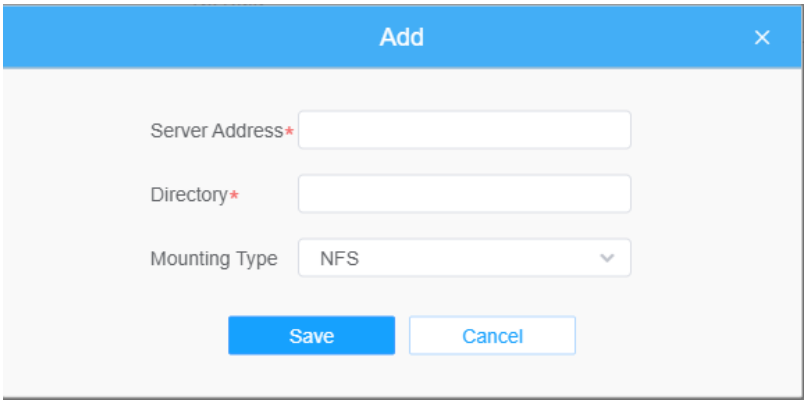


Table 35. Description of the buttons

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**. **Authentication Status:** Display the authentication status. **Password/ Confirm Password:** Enter the password to lock you SD card.

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.  **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

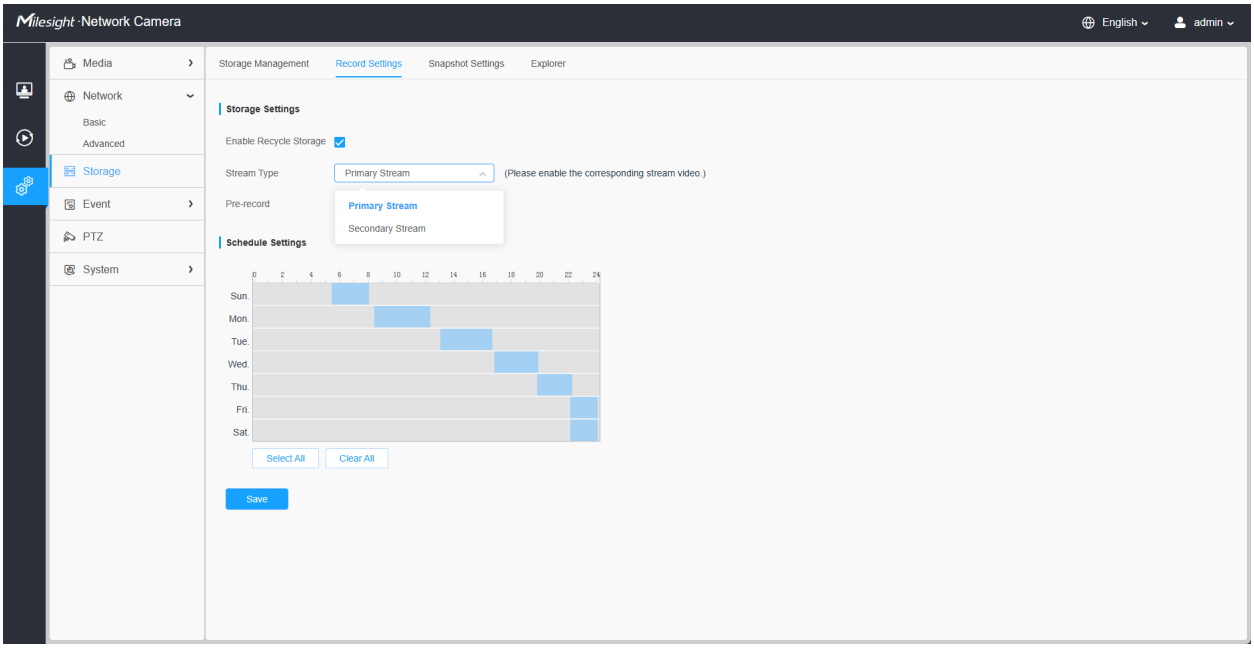
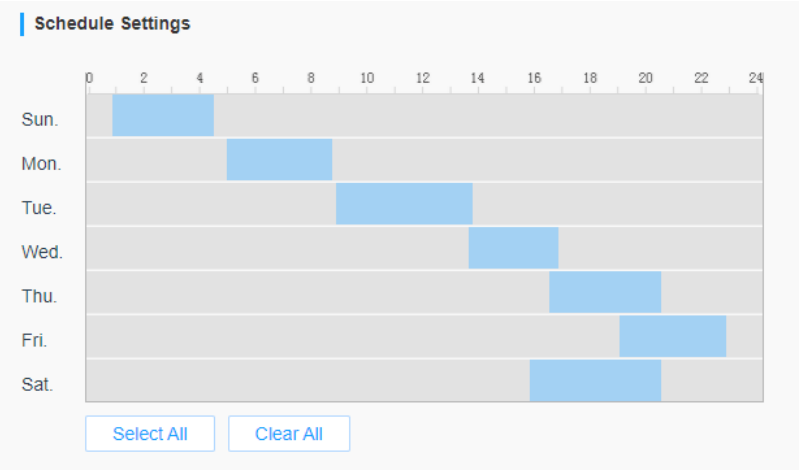
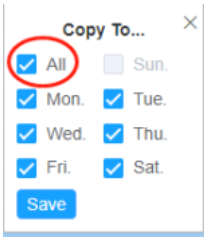
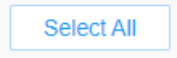
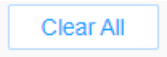
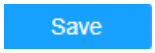


Table 36. Description of the buttons

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 and Secondary Stream. **Note:** please enable the corresponding stream video.
Pre Second	Reserve the record time before alarm, 0~10 sec.

<table>
<tr><th>Parameters</th><th colspan="2">Function Introduction</th></tr>
<tr><td>Schedule Settings</td><td colspan="2">Edit record schedule as needed. Intuitive scheduling by drawing the time bar directly.
 
</td></tr>
<tr><td rowspan="3">Schedule Settings</td><td> 
</td><td>Copy the schedule area to another date.
The "All" button is handy to copy today's schedule to all days.</td></tr>
<tr><td> 
</td><td>Select all schedule.</td></tr>
<tr><td> 
</td><td>Clear all schedule.</td></tr>
<tr><td> 
</td><td colspan="2">Save the configuration.</td></tr>
</table>

Note: SD Card or NAS are available.

8.3.3 Snapshot Settings

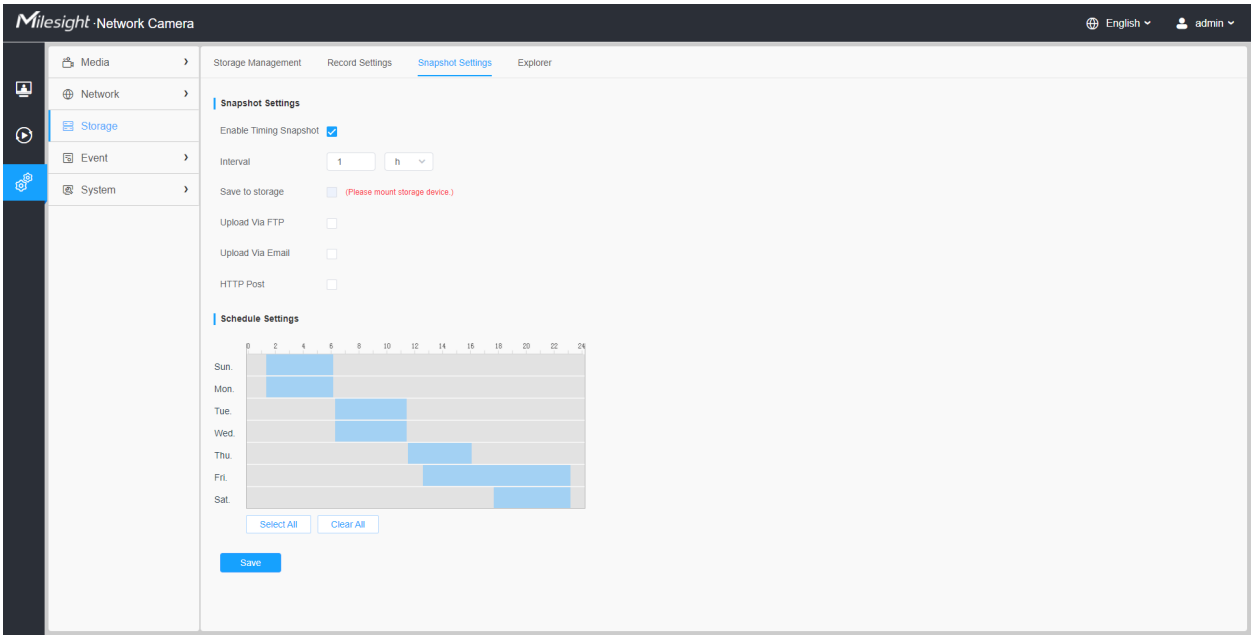
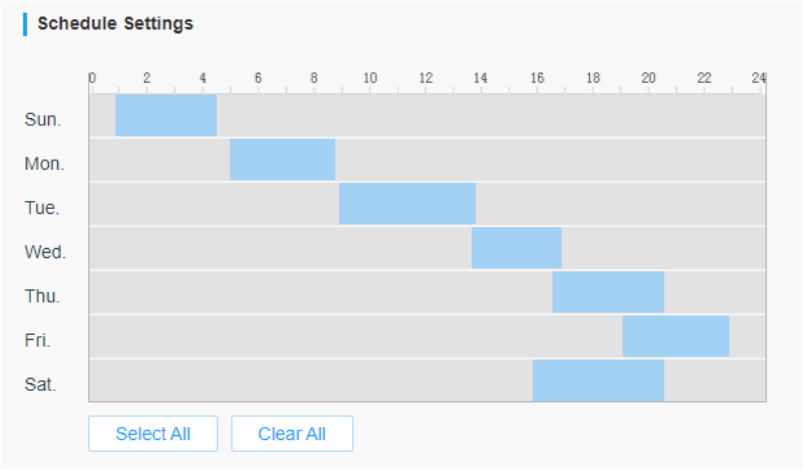
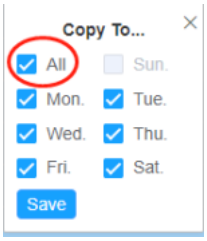
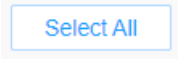
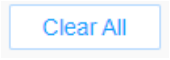
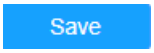


Table 37. Description of the buttons

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.

<table>
<tr><th>Parameters</th><th colspan="2">Function Introduction</th></tr>
<tr><td rowspan="2">Schedule Settings</td><td colspan="2">Edit record schedule as needed. Intuitive scheduling by drawing the time bar directly.
 
</td></tr>
<tr><td> 
</td><td>Copy the schedule area to another date.
The "All" button is handy to copy today’s schedule to all days.</td></tr>
<tr><td>Schedule Settings</td><td> 
</td><td>Select all schedule.</td></tr>
<tr><td>Schedule Settings</td><td> 
</td><td>Clear all schedule.</td></tr>
<tr><td> 
</td><td colspan="2">Save the configuration.</td></tr>
</table>

8.3.4 Explorer

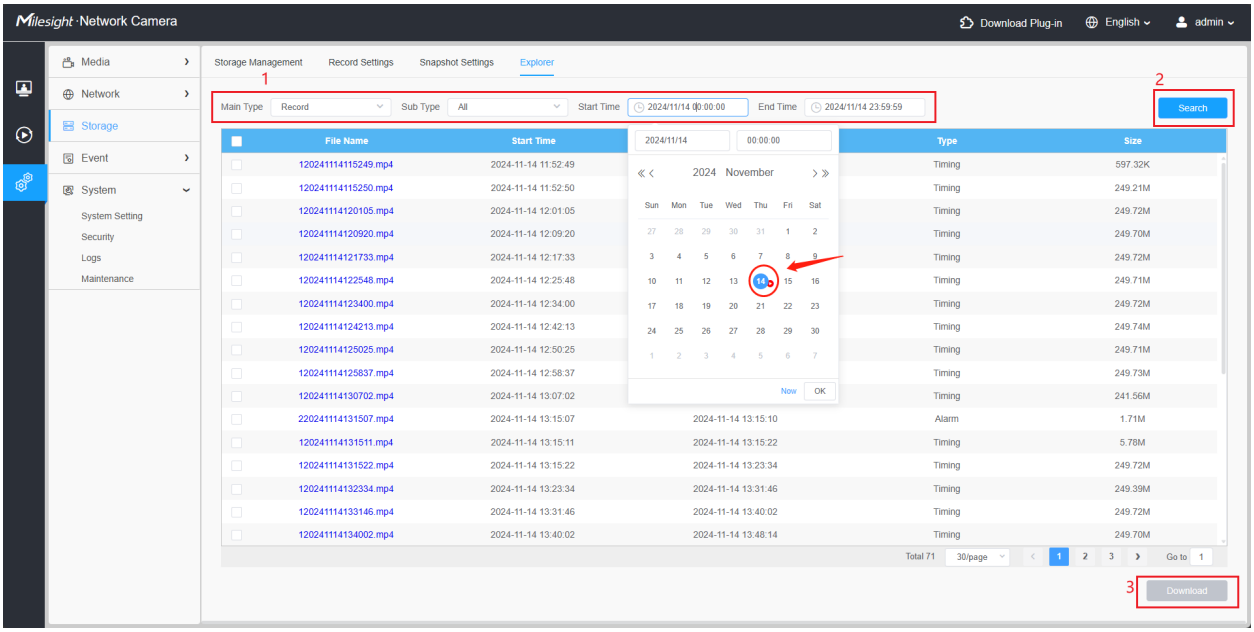
Files will be seen on this page when they are configured to save into SD card or NAS. You can set time schedule every day for recording videos and save video files to your desired location.

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.).

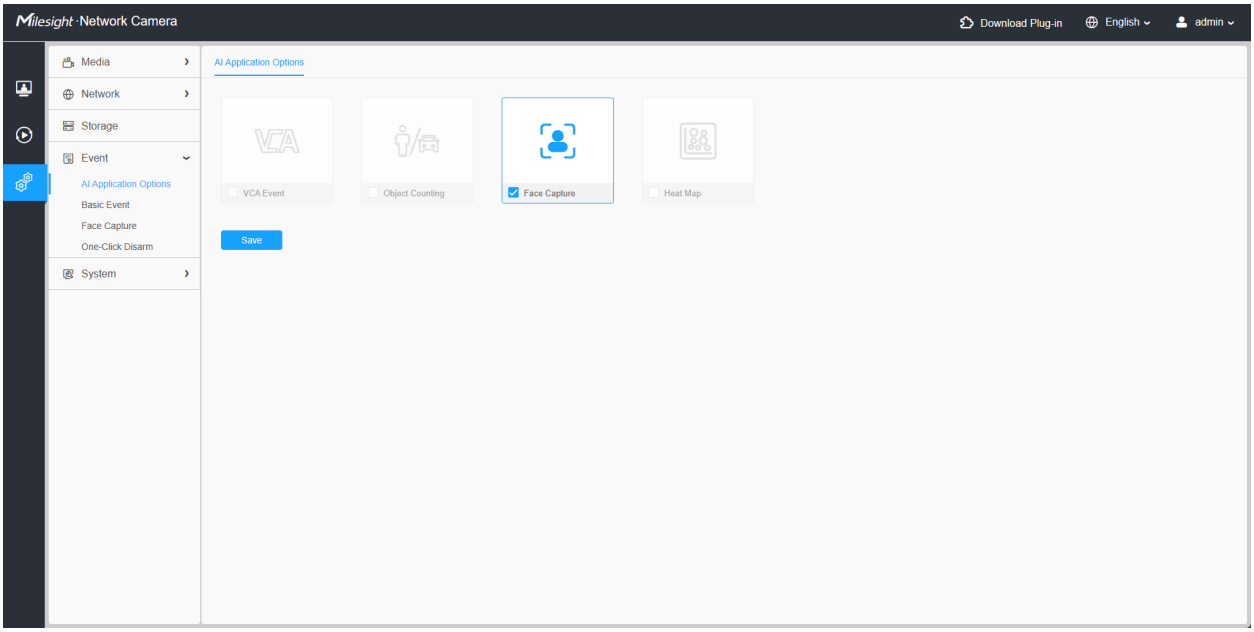


8.4 Event

Milesight 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.

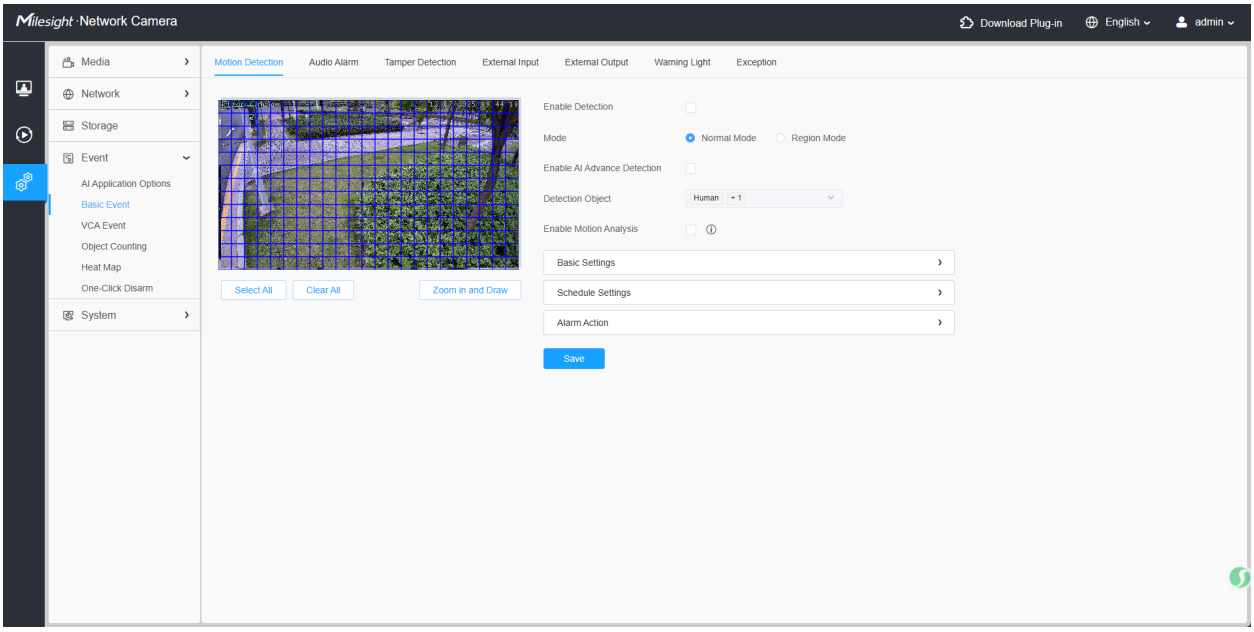
Note:

1. Before you utilizing the corresponding function, please enable it within the AI Application Options interface.
2. Face Capture cannot be used simultaneously with VCA Event, Heat Map and Object Counting.



8.4.1 Basic Event

8.4.1.1 Motion Detection



Note: For more details about how to set motion detection, please refer to https://milesight.freshdesk.com/a/solutions/articles/69000643423.

Settings steps are shown as follows:

Step1: Check the check box to enable the motion detection.

Step2: Select the detection mode. Normal and Region Mode are available.

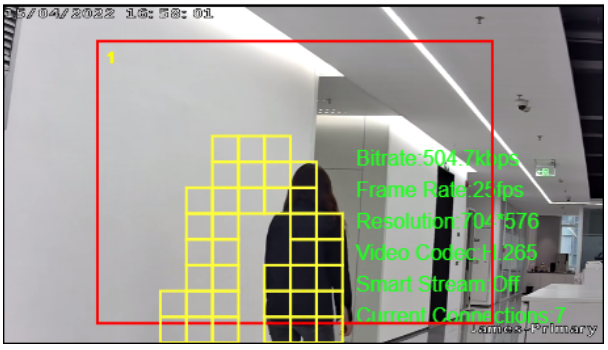
Note: When you enable the **AI Advanced Motion Detection** checkbox, the camera supports detection based on human and vehicle targets, significantly reducing false alarms caused by environmental movements such as insects, mosquitoes, dogs, cats, and other small animals. It is also compatible with third-party systems via ONVIF and Metadata, enabling seamless integration.

Note: AI Advanced Motion Detection cannot be used simultaneously with Face Capture.

Step3: Check the check box to enable the motion analysis.

Step4: Set motion region.

Table 38. Description of the buttons

Parameters	Function Introduction
Enable Detection	Check the checkbox to enable Motion Detection function.
Enable AI Advance Detection	Check this checkbox to enable AI-advanced detection for human or vehicle targets.
Detection Object	Select the Human or Vehicle option, the camera will trigger an alarm when it detects a person or a vehicle.
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. 
Select All	Click the button, the motion in the area will be detected.

Parameters	Function Introduction
Clear All	Click the button, the area drawn before will be removed.
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 region.
Save	Save the configuration.

[Basic Settings]

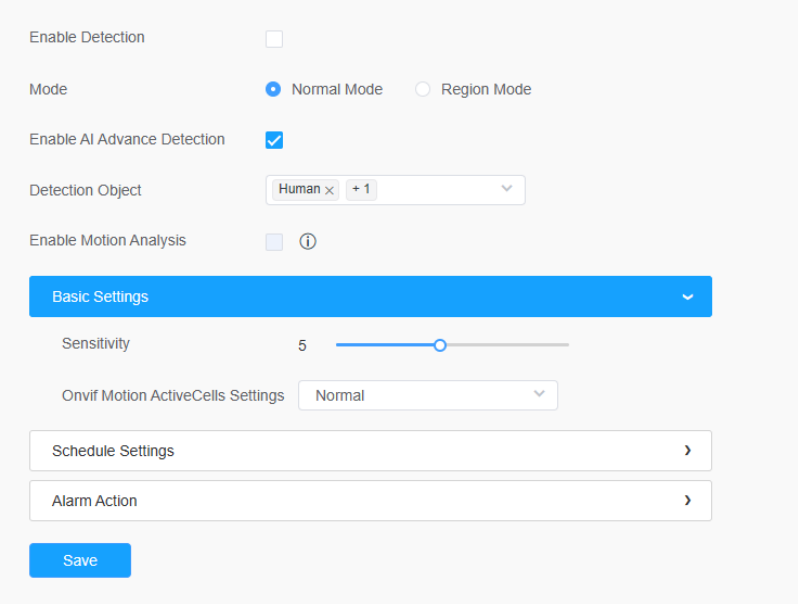


Table 39. Description of the buttons

Parameters	Function Introduction
Sensitivity	Sensitivity level, 1~10
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, please set this option to Compatible

[Schedule Settings]

Step5: Set motion detection schedule.

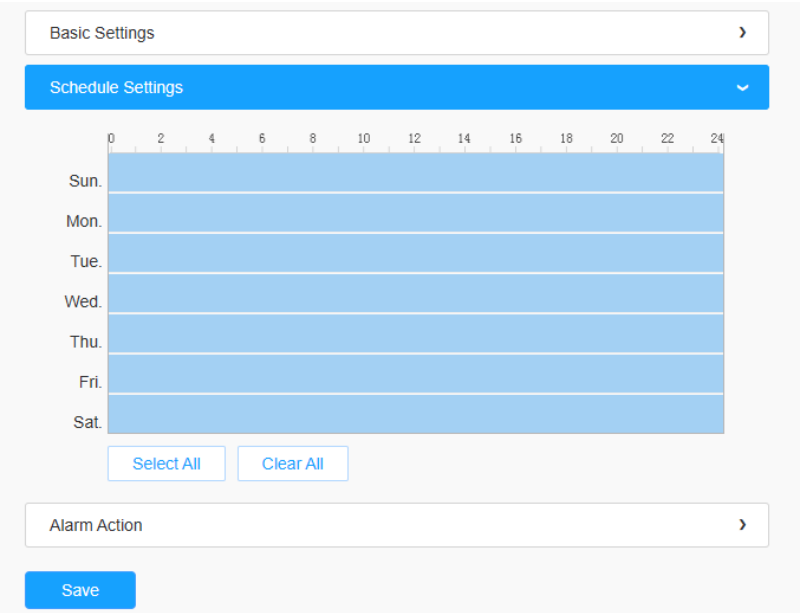
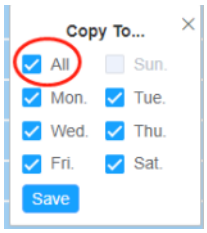
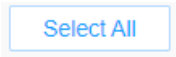
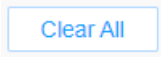


Table 40. Description of the buttons

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.

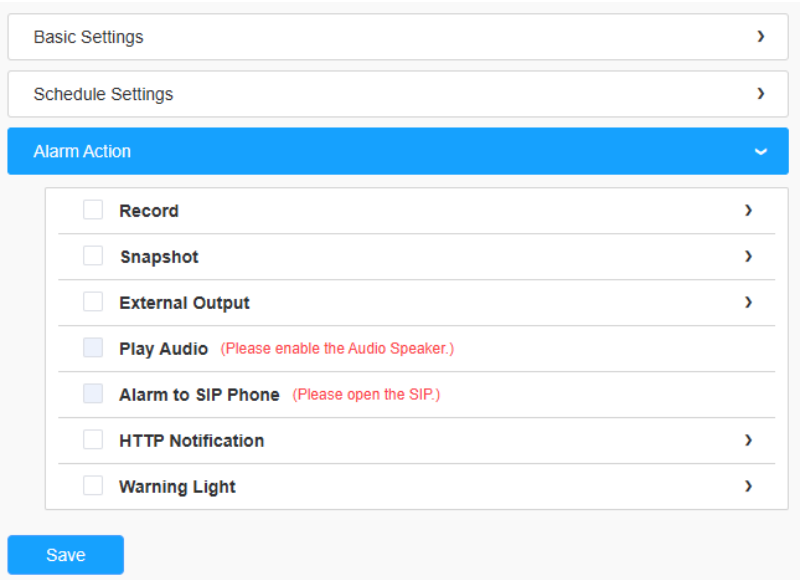


Table 41. Description of the buttons

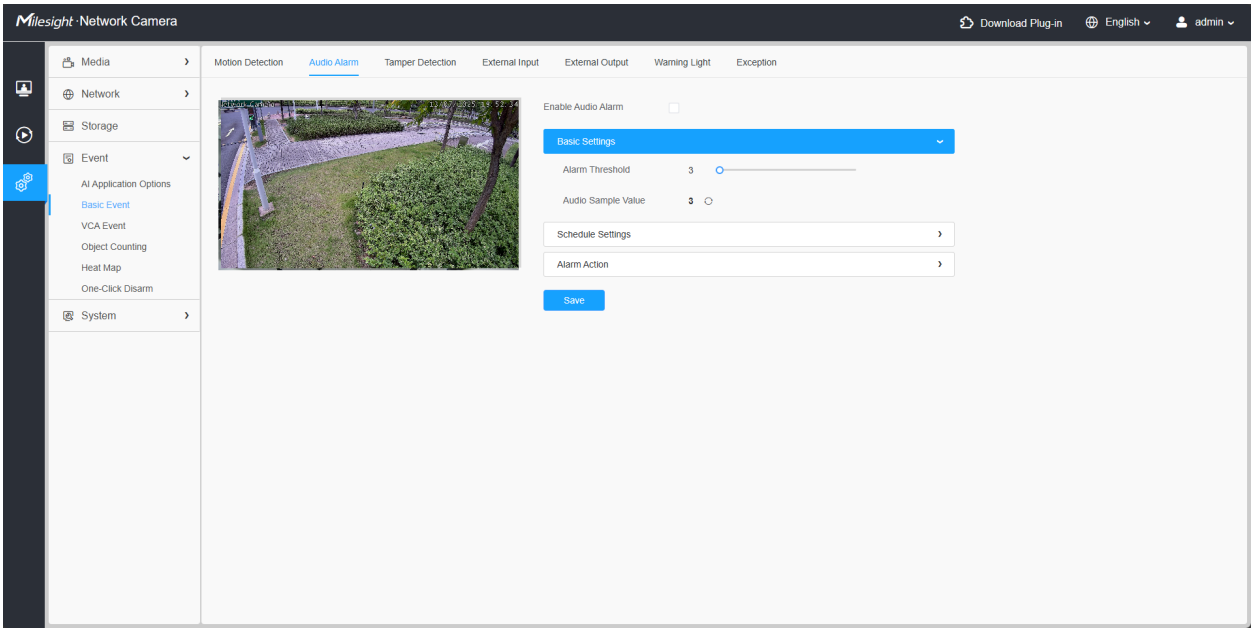
Parameters	Function Introduction
Record	**Duration:** Selected the duration time of alarm. 5s/10s/15s/20s/25s/30s are available. **Linkage:** Save alarm recording files into SD Card or NAS or Upload the recording files via FTP.
Snapshot	**Number:** The number of snapshot, 1~5 are available. **Interval:** 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.
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.

Parameters	Function Introduction
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
Warning Light	When an alarm is triggered, the warning light *(page 104)* will turn on to alert the detected object.

8.4.1.2 Audio Alarm

Check the check box to enable the Audio Alarm function.

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



[Basic Settings]

Table 42. Description of the buttons

Parameters	Function Introduction
Alarm Threshold	Audio Alarm will be triggered when the thresholds reaches to a certain value from 0 to 100.

Parameters	Function Introduction
Audio Sample Value	The current value of the audio sample.

[Schedule Settings]

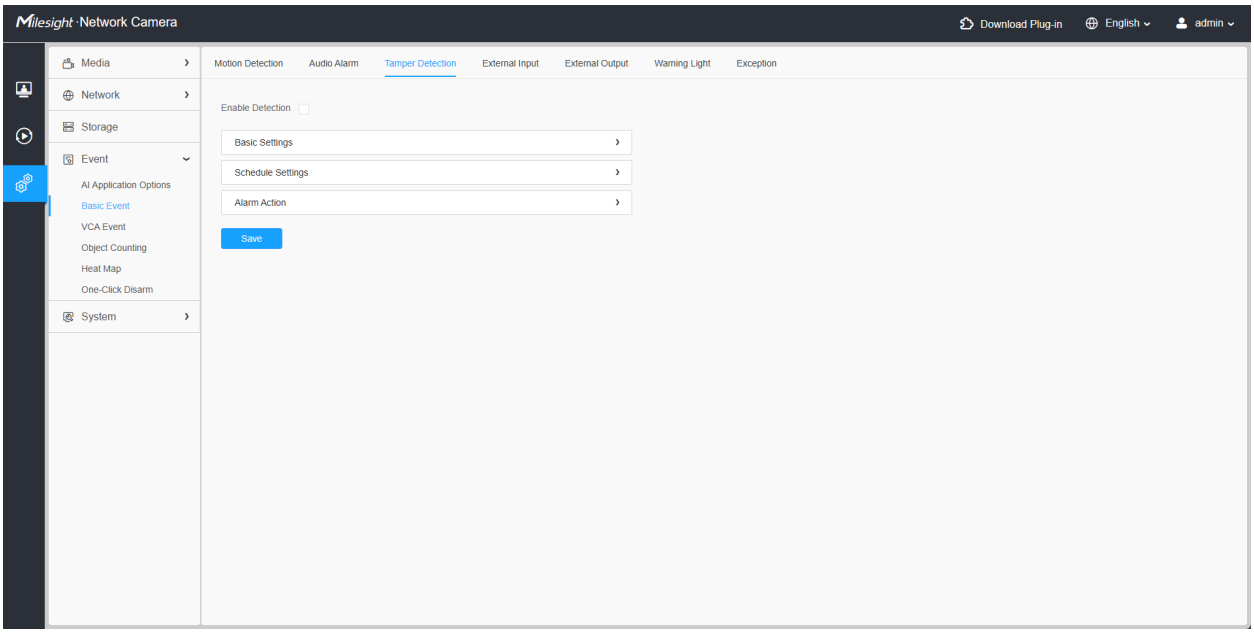
Refer to the table Motion Detection *(page 98)* for the meanings of the items, here will not repeat again.

[Alarm Action]

Refer to the table Motion Detection *(page 99)* for the meanings of the items, here will not repeat again.

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.

[Schedule Settings]

Step2: Set detection schedule.

Note: This part is the same as the regular schedule settings. You can refer to Motion Detection *(page 98)*.

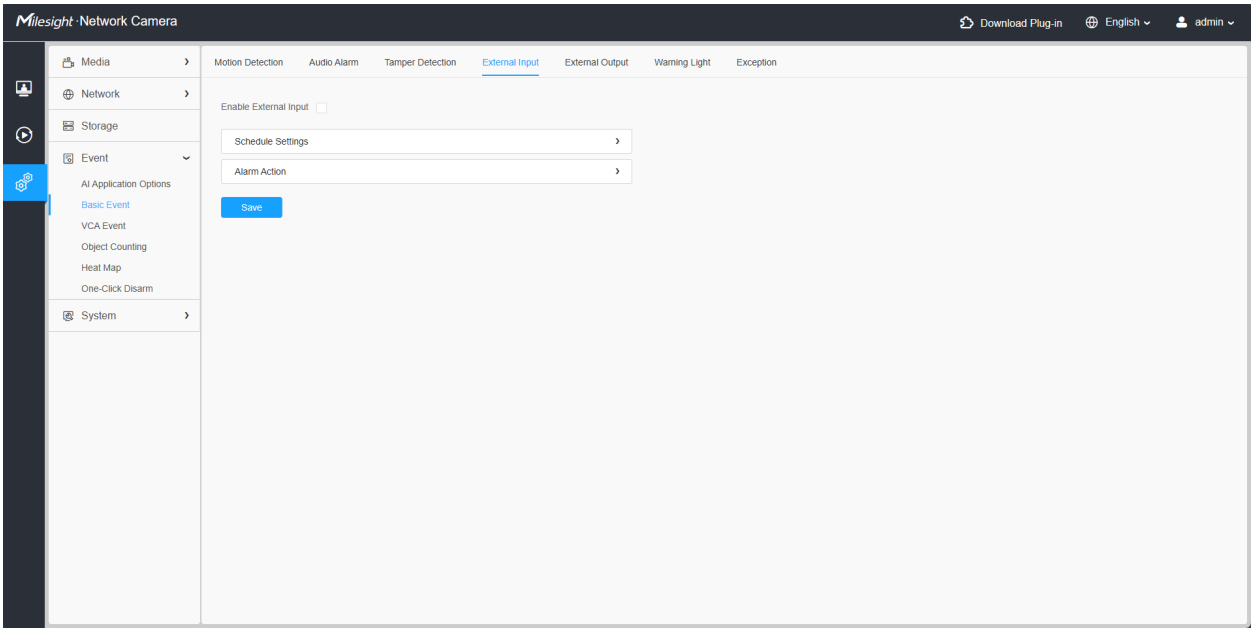
[Alarm Action]

Step3: Set alarm action.

Note:

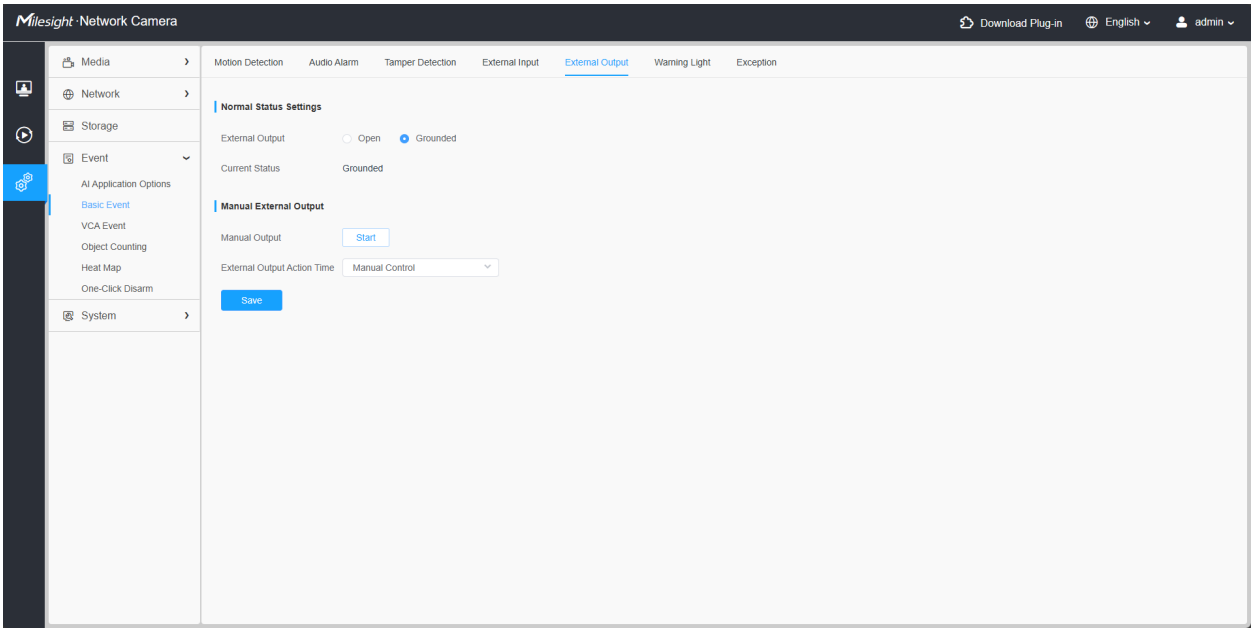
- This part is the same as the regular alarm settings. You can refer to Motion Detection *(page 99)*.
- If you enable External Output and choose Constant External Output Action Time, when possible tampering is detected, External Output Action alarm time will be always constant till the alarm is released.
- The algorithm supports defocus detection in Tamper Detection function.

8.4.1.4 External Input



Refer to the table Table 3 *(page 98)* 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.

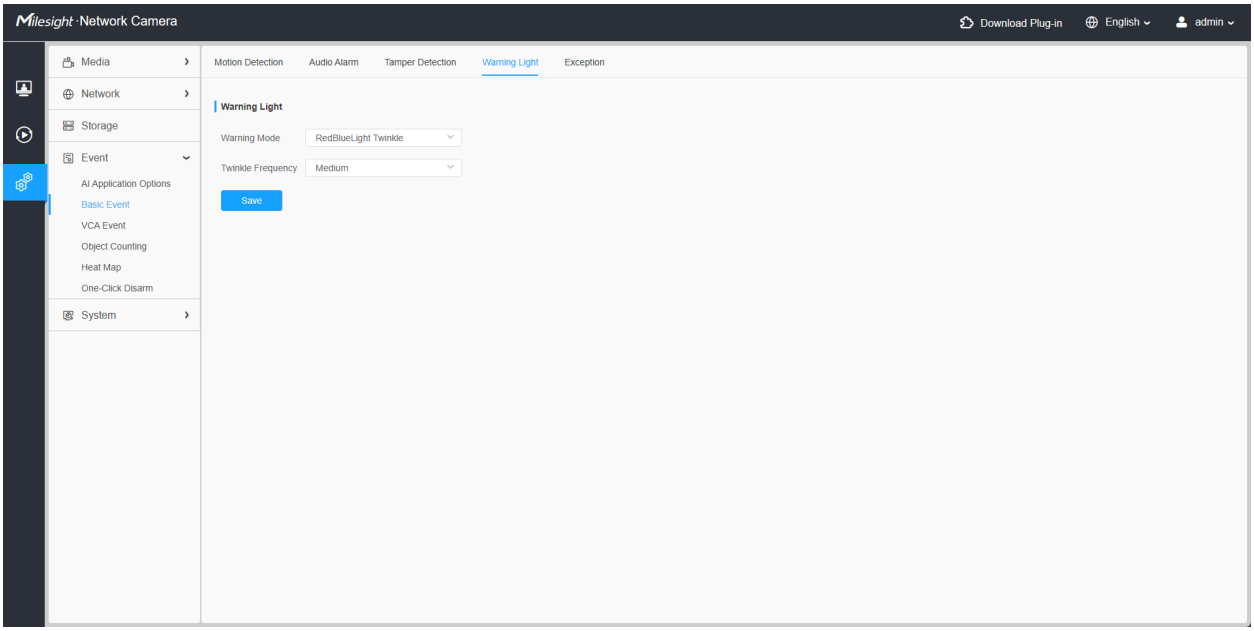
[Manual External Output]

You can set the manual external output.

Table 43. 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 Warning Light



Warning Light function is designed to set the type of warning light in Action settings, enabling a variety of light effects options.

Table 44.

Parameters	Function Introduction
Warning Mode	Configure the warning light behavior when an action is triggered. Available options include **RedBlue Light Twinkle**, **Red Light Twinkle**, and **Blue Light Twinkle**.
Twinkle Frequency	Set the flashing frequency of the warning light. Options include **High**, **Medium**, and **Low**.

Parameters	Function Introduction
Save	Save the configuration.

8.4.1.7 Exception

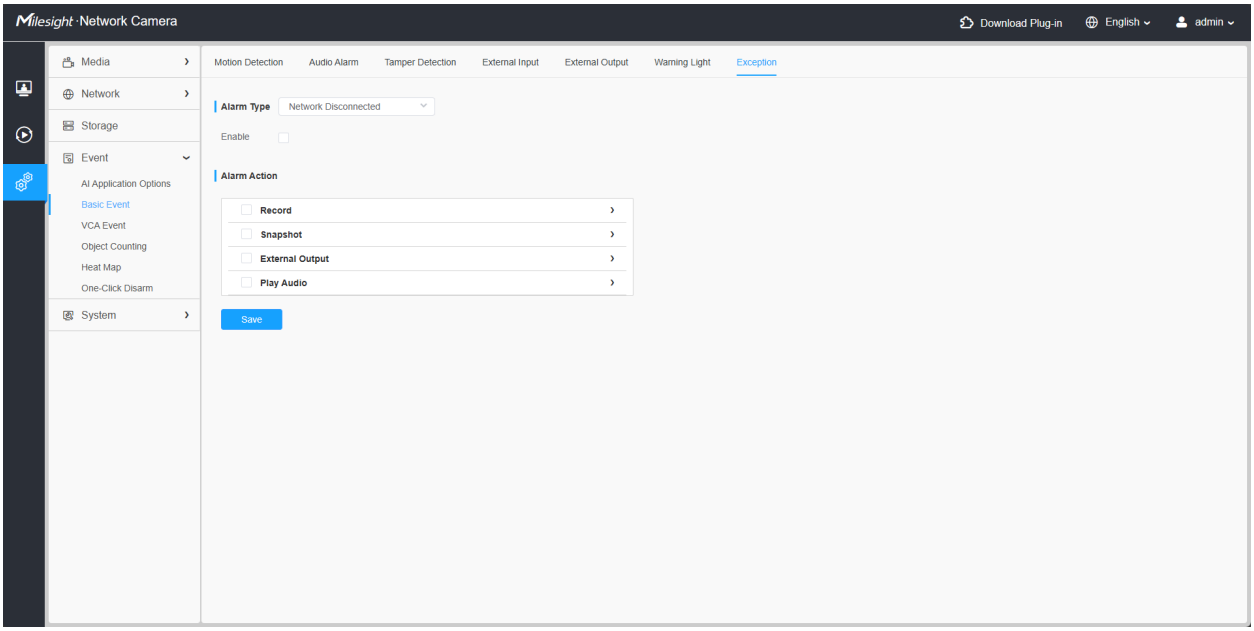


Table 45. Description of the buttons

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 Table 3 *(page 98)* 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

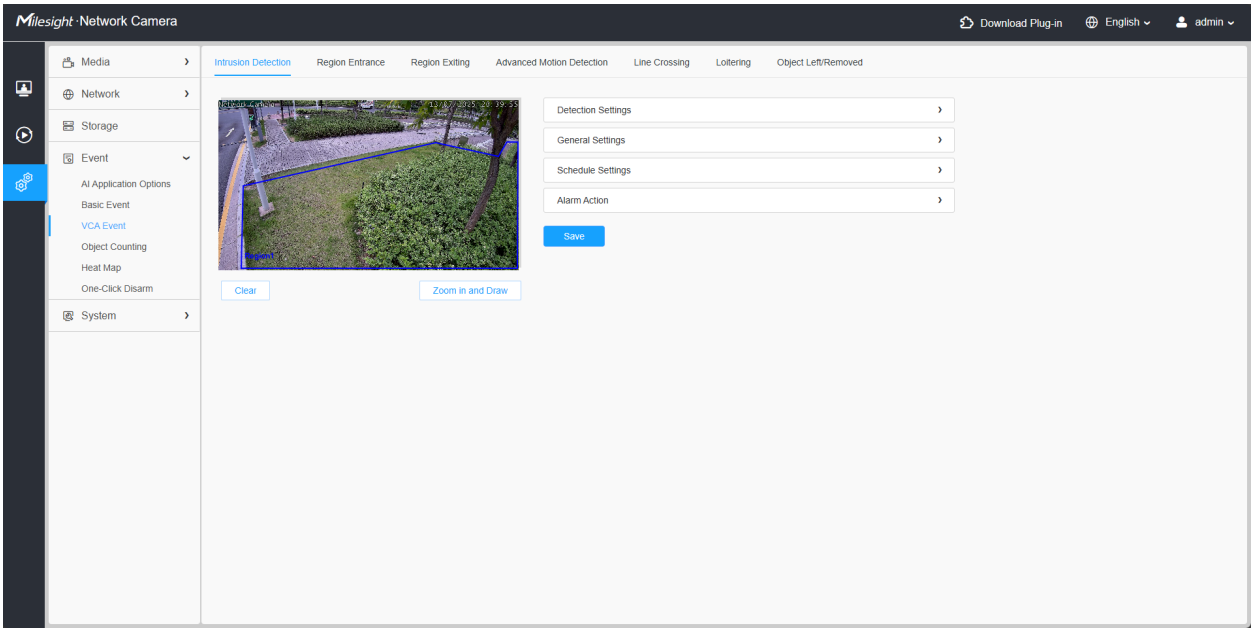
vehicle and human related events are very important in security monitoring, the filtering is supported to better optimize the efficiency.

Note:

- For more details about how to use set 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 Intrusion Detection

Intrusion detection is used to protect a specific area from potential threats of intrusion by suspicious people or other objects. Whether it is an intrusion from outside the region or a sudden appearance within the region, an alarm action will be triggered.



Settings steps are shown as follows:

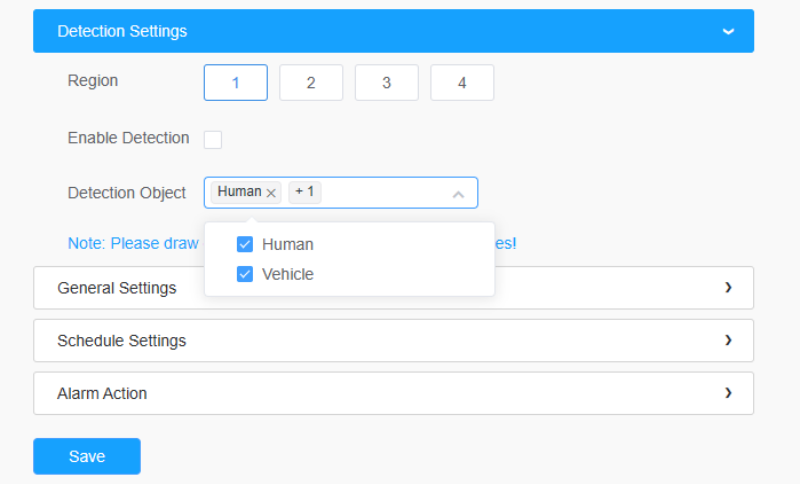
[Detection Settings]

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

Step1: Selected detection region and enable intrusion 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.

Step2: Choose detection object. Check Human or Vehicle attribute, and the camera will alarm once detecting people or vehicle and triggering related events.



[General Settings]

Step3: Set detecting sensitivity and object size limits, and set the trigger mode with General Mode or Bottom Mode.

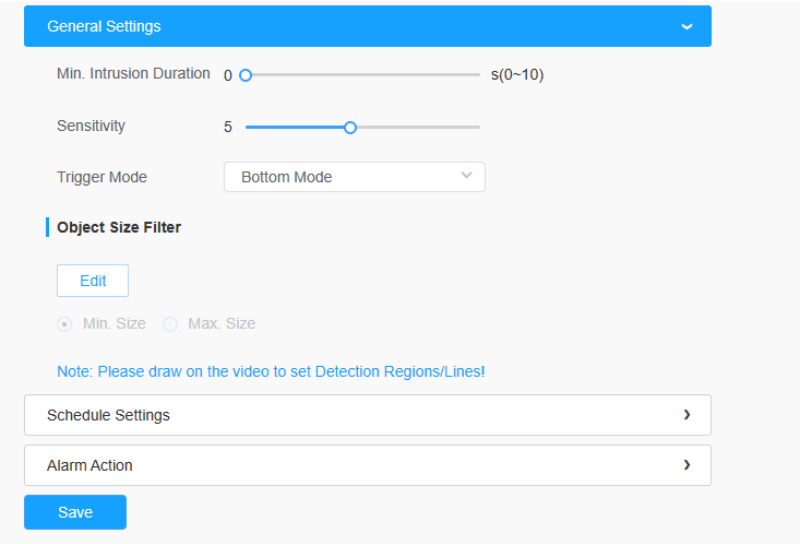
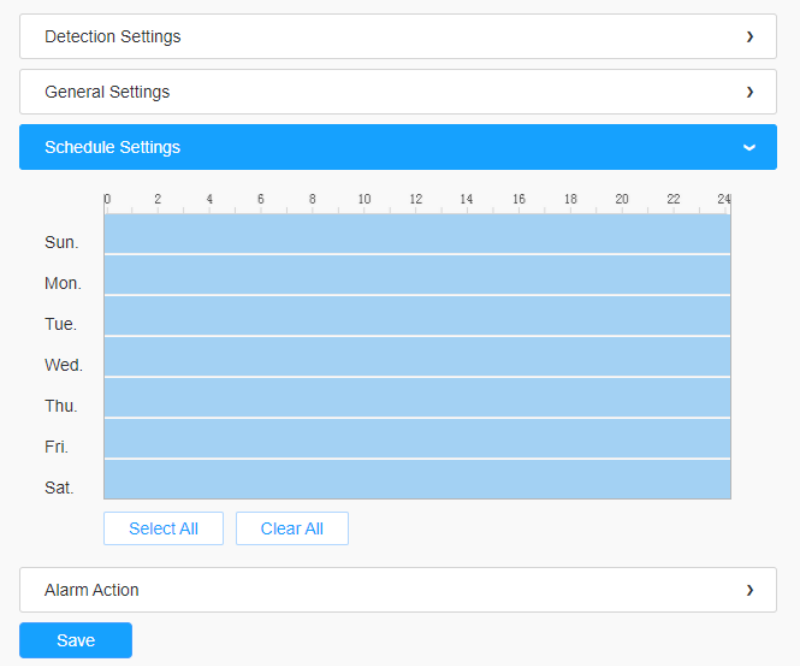


Table 46. Description of the buttons

Parameters	Function Introduction
Min.Intrusion Duration	Set the triggering interval for intrusion.
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 maximum size of the detected object. Objects larger than this size will not be detected. The default maximum size is 320x240.
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]

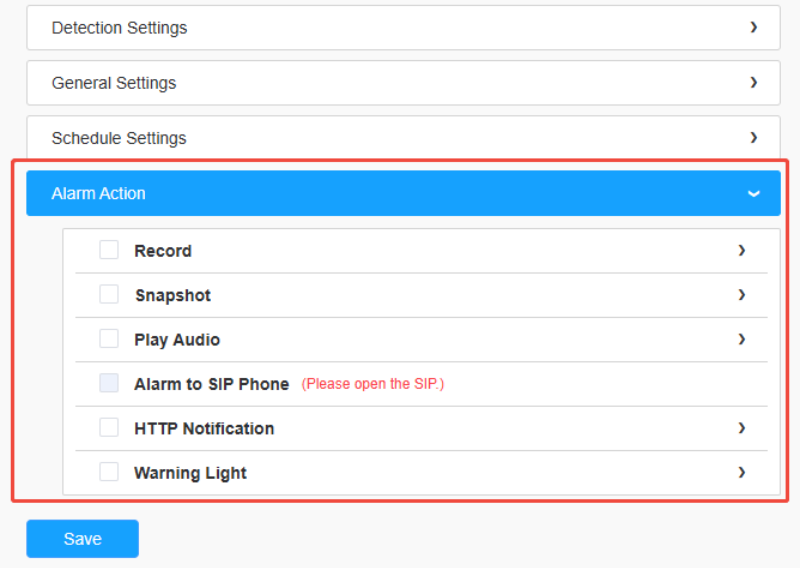
Step5: Set detection schedule.



Note: This part is the same as the regular schedule settings. You can refer to Motion Detection *(page 98)*.

[Alarm Action]

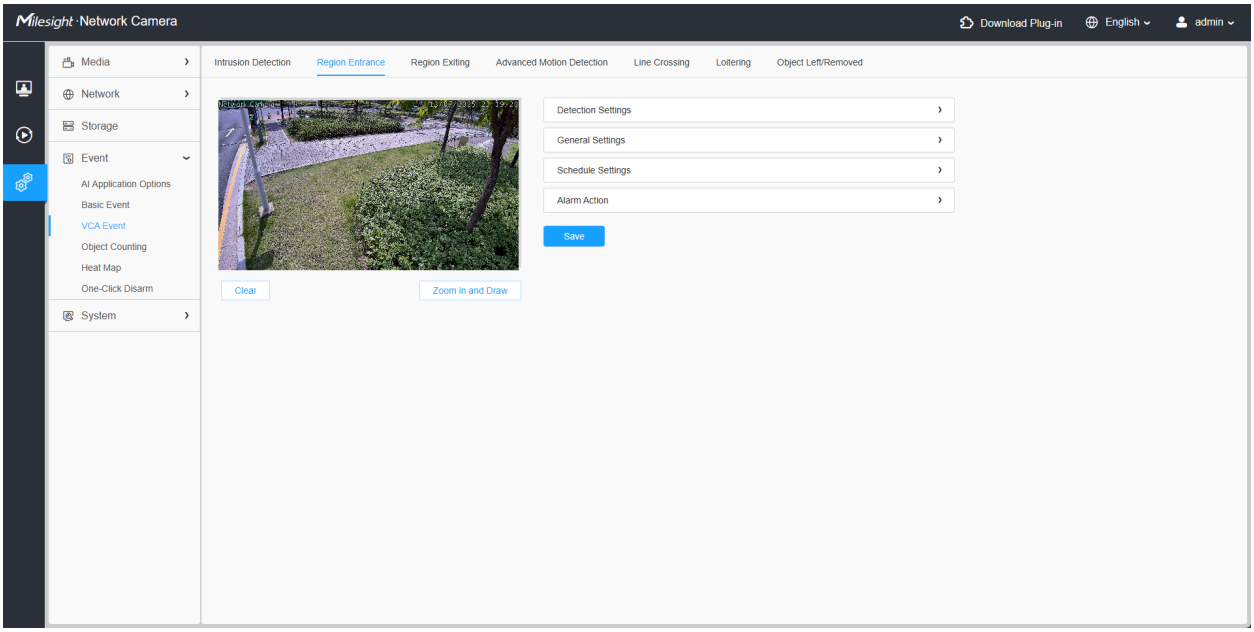
Step6: Set alarm action.



Note: This part is the same as the regular alarm settings. You can refer to Motion Detection *(page 99)*.

8.4.2.2 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.



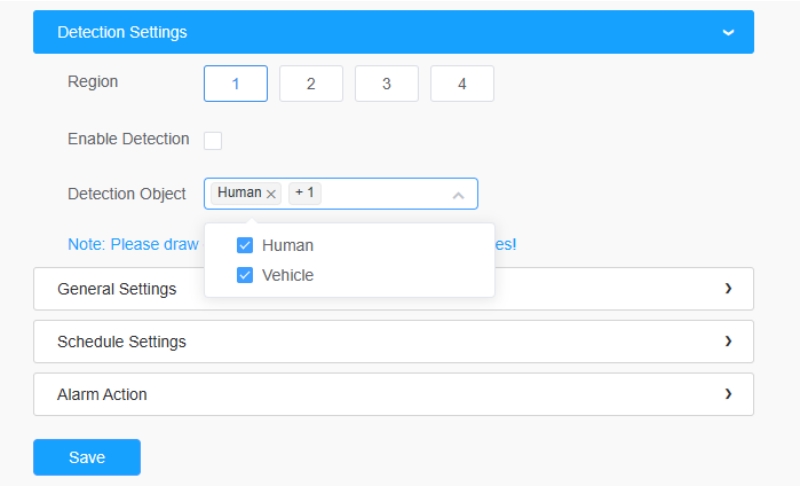
Settings steps are shown as follows:

[Detection Settings]

Step1: Selected detection region and enable region entrance 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 lines.

Step2: Choose detection object. Check Human or Vehicle attribute, and the camera will alarm once detecting people or vehicle and triggering related events.



[General Settings]

Step3: : Set detecting sensitivity, choose Trigger Mode and object size limits.

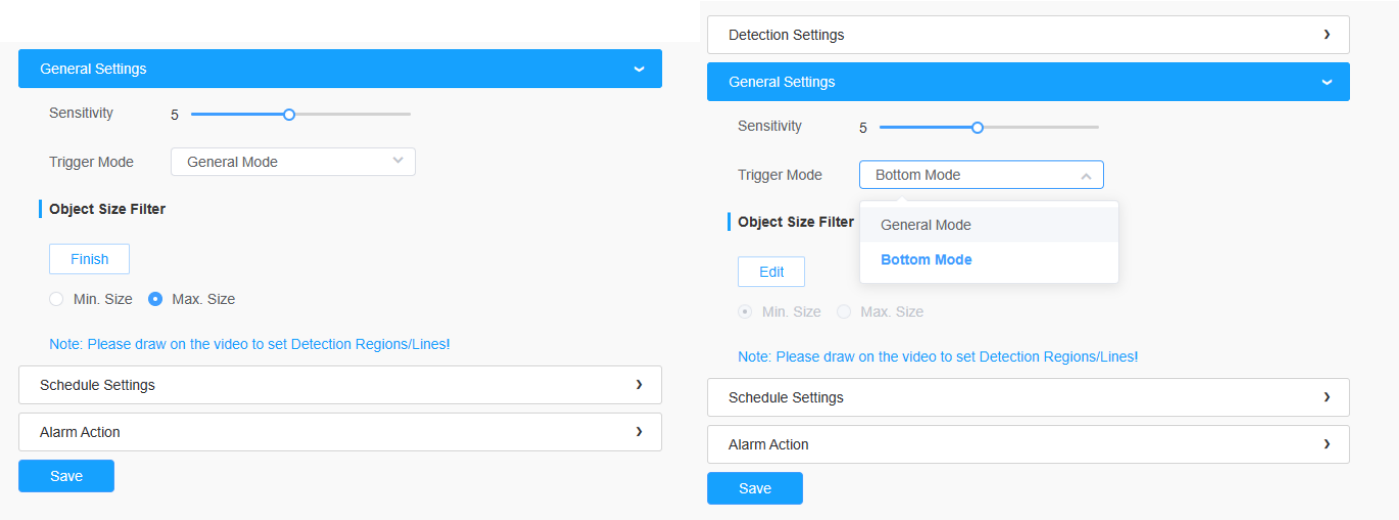
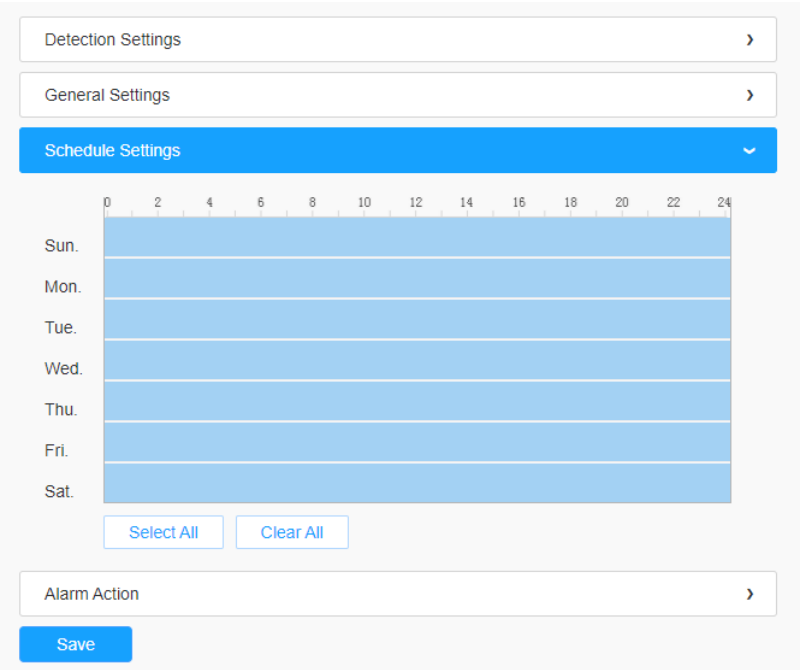


Table 47. Description of the buttons

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]

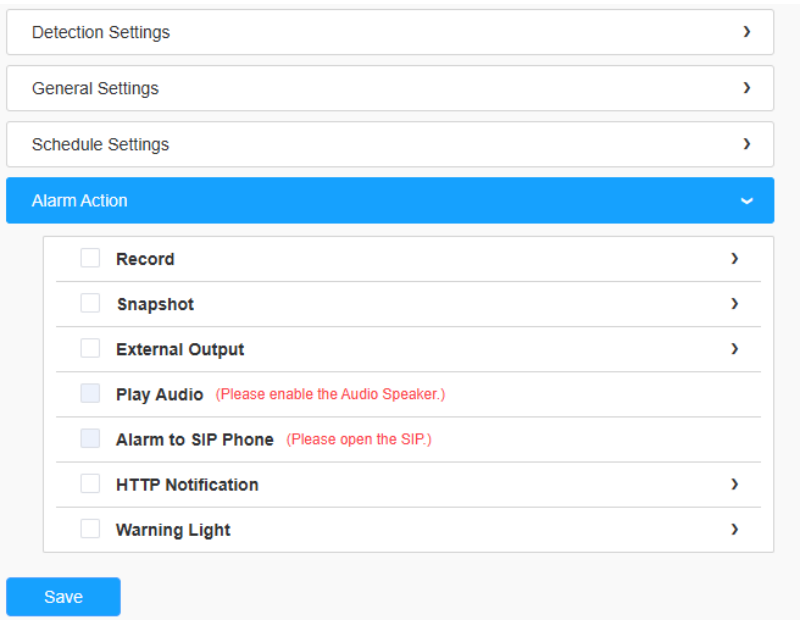
Step4: Set detection schedule.



Note: This part is the same as the regular schedule settings. You can refer to Motion Detection *(page 98)*.

[Alarm Action]

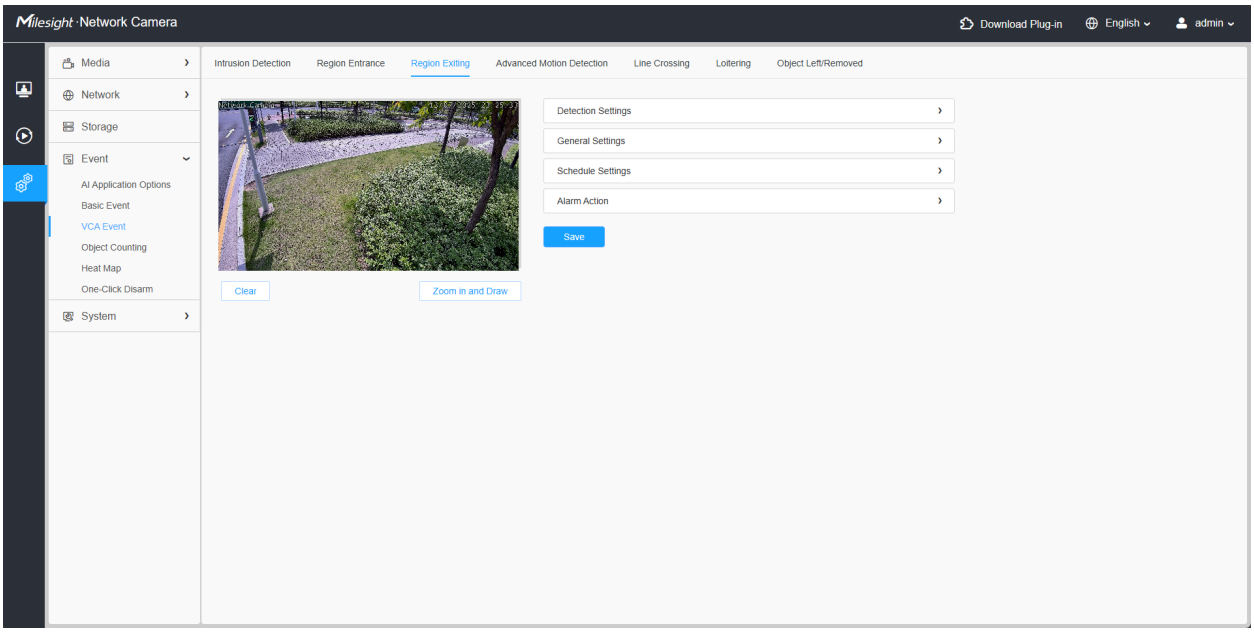
Step5: Set alarm action.



Note: This part is the same as the regular alarm settings. You can refer to Motion Detection *(page 99)*.

8.4.2.3 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.



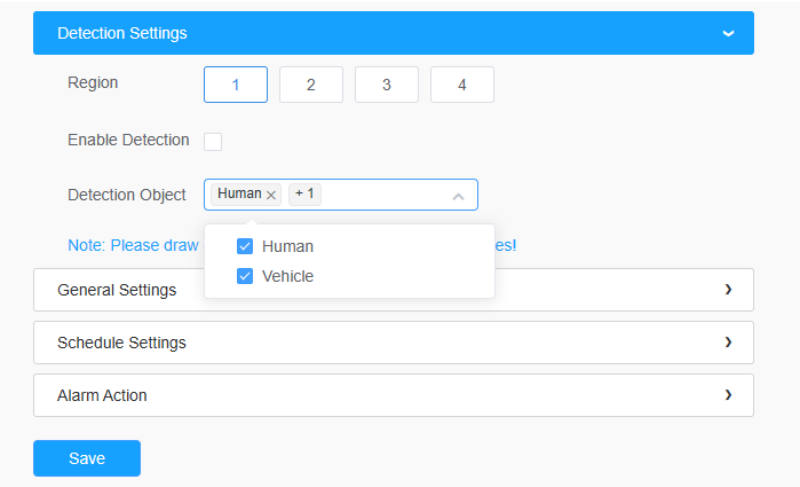
Settings steps are shown as follows:

[Detection Settings]

Step1: Selected detection region and enable region exiting 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 lines.

Step2: Choose detection object. Check Human or Vehicle attribute, and the camera will alarm once detecting people or vehicle and triggering related events.



[General Settings]

Step3: Set detecting sensitivity, choose Trigger Mode and object size limits.

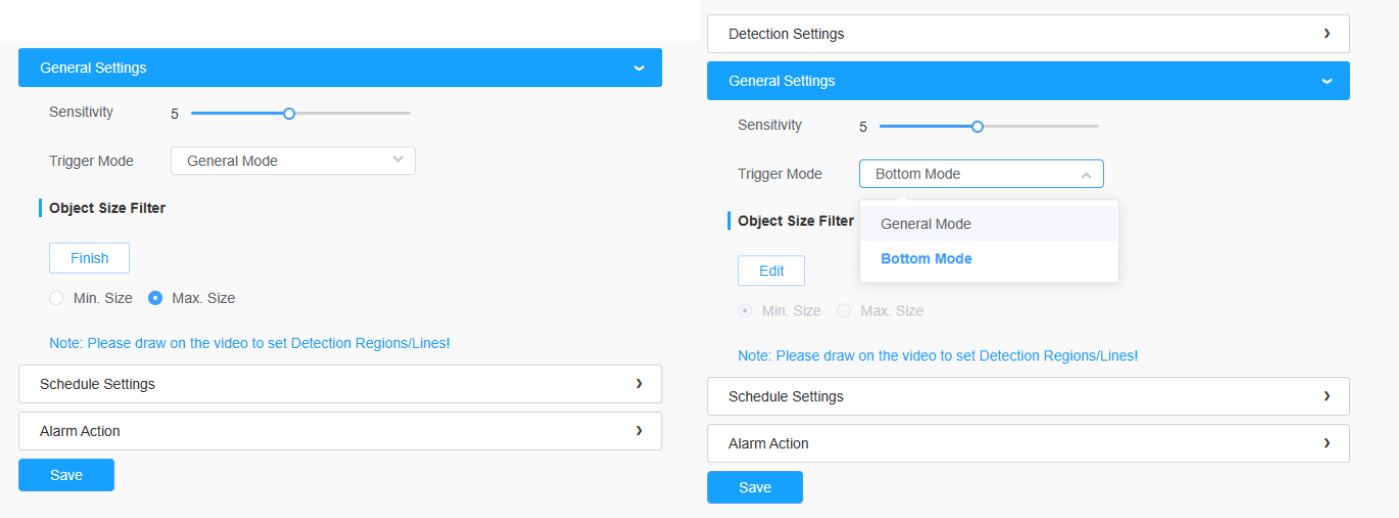


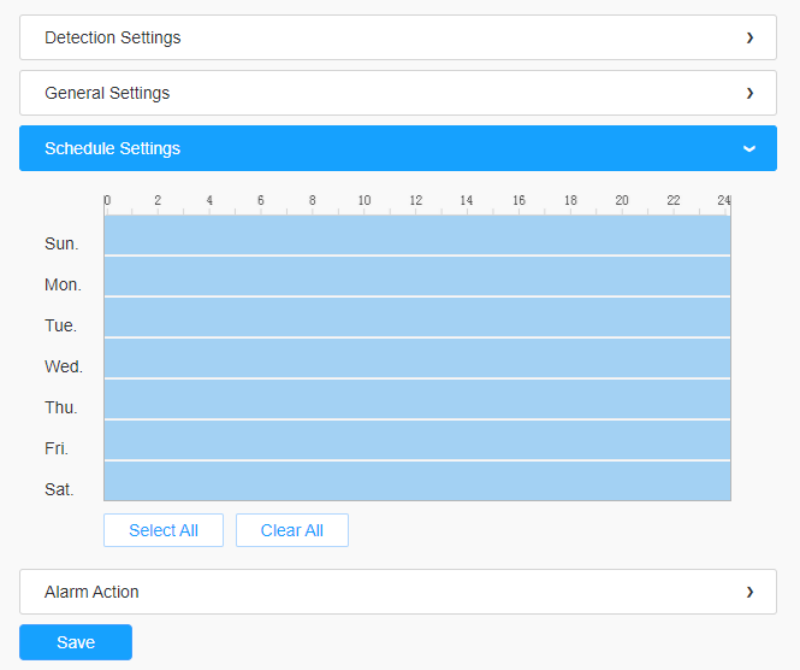
Table 48. Description of the buttons

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.

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]

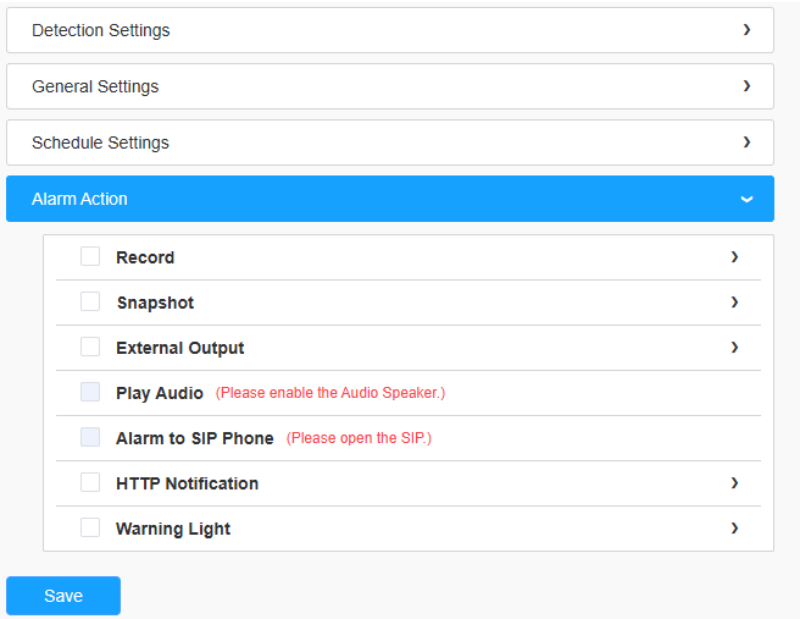
Step4: Set detection schedule.



Note: This part is the same as the regular schedule settings. You can refer to Motion Detection *(page 98)*.

[Alarm Action]

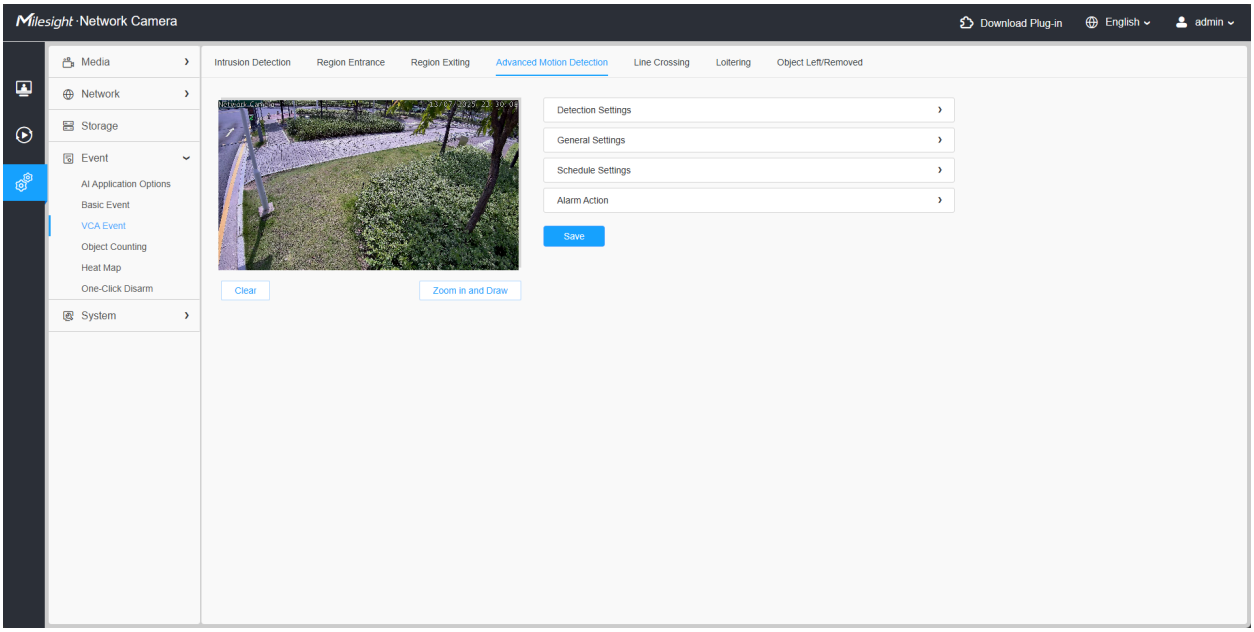
Step5: Set alarm action.



Note: This part is the same as the regular alarm settings. You can refer to Motion Detection *(page 99)*.

8.4.2.4 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.



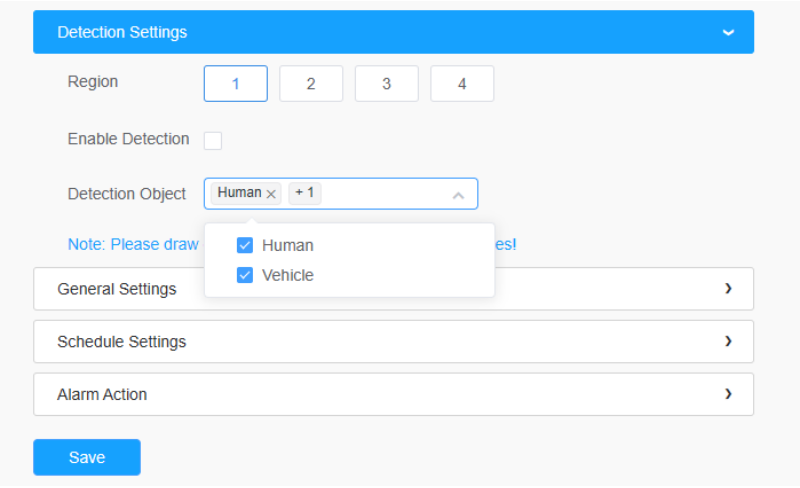
Settings steps are shown as follows:

Normal mode is effective for all detection areas.

Step1: Selected 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.

Step2: Enable region entrance detection. And choose detection object. Check Human or Vehicle attribute, and the camera will alarm once detecting people or vehicle and triggering related events.



[General Settings]

Step3: 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.

Step4: Set detecting sensitivity and object size limits.

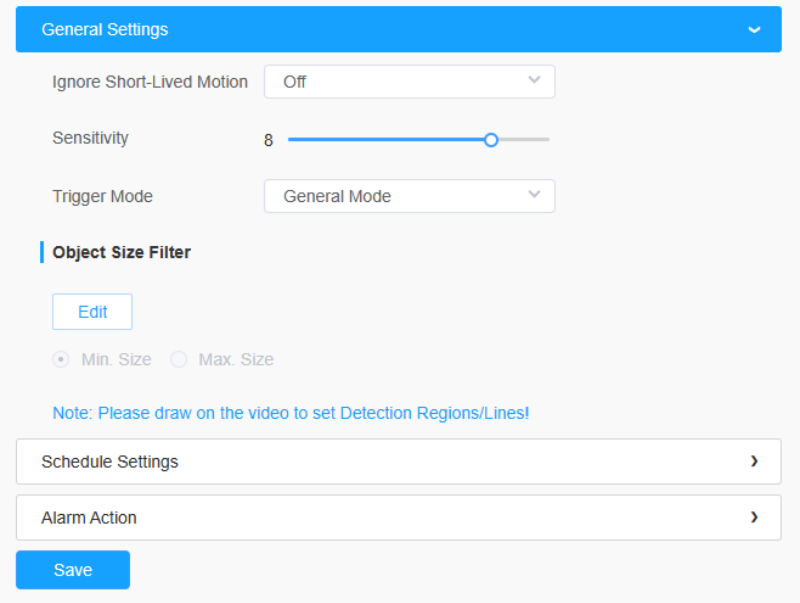


Table 49. Description of the buttons

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.
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.

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 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]

Set detection schedule.

Note: This part is the same as the regular schedule settings. You can refer to Motion Detection *(page 98)*.

[Alarm Action]

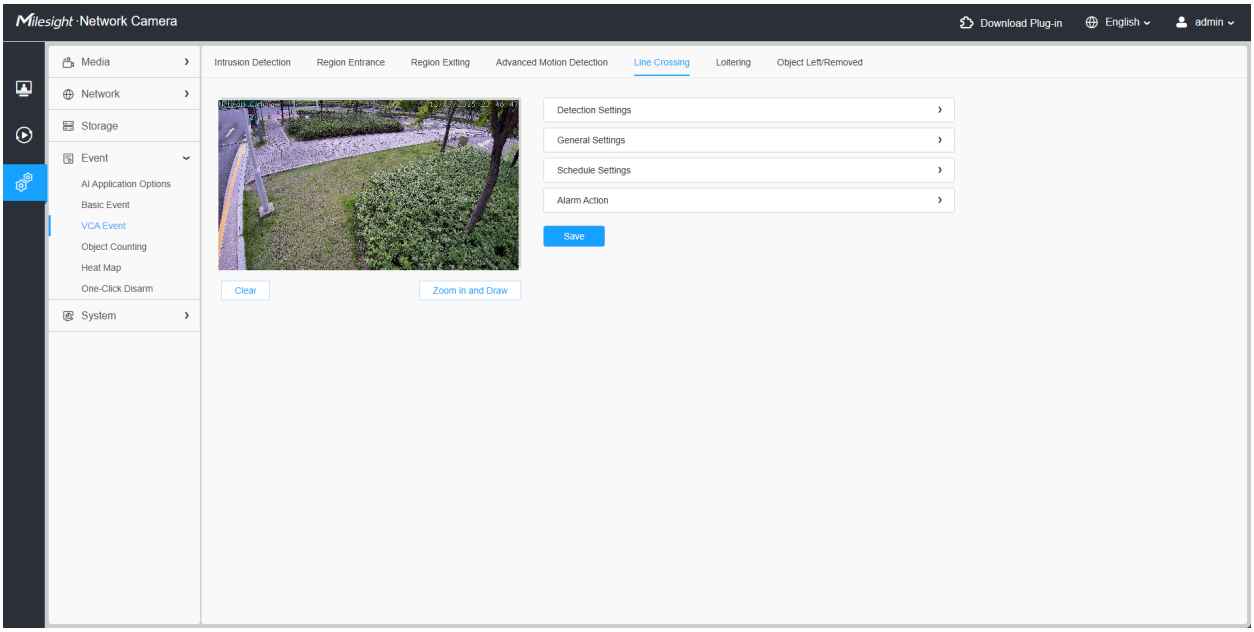
Step7: Set alarm action.

Note:

- This part is the same as the regular alarm settings. You can refer to Motion Detection *(page 99)*.
- 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.

8.4.2.5 Line Crossing

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



Settings steps are shown as follows:

[Detection Settings]

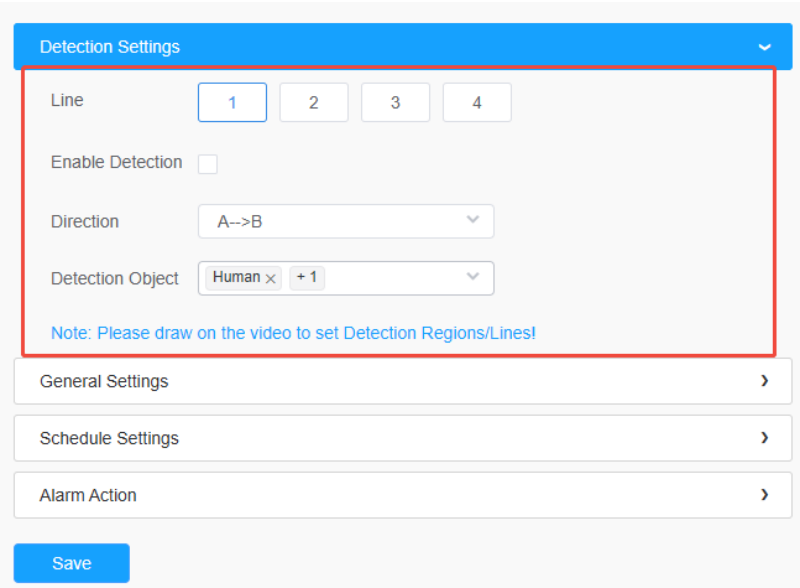
Step1: Select detection line, enable line crossing detection and define its direction.

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.

Step2: Choose detection object. Check Human or Vehicle attribute, and the camera will alarm once detecting people or vehicle and triggering related events.



[General Settings]

Step3: Set detecting sensitivity and object size limits.

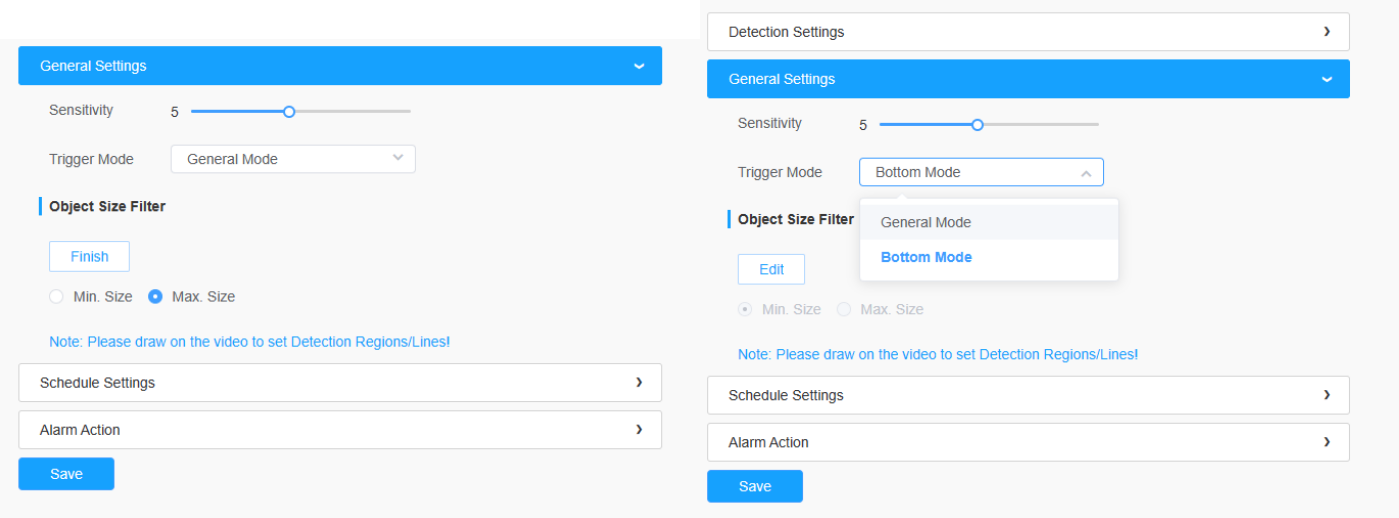


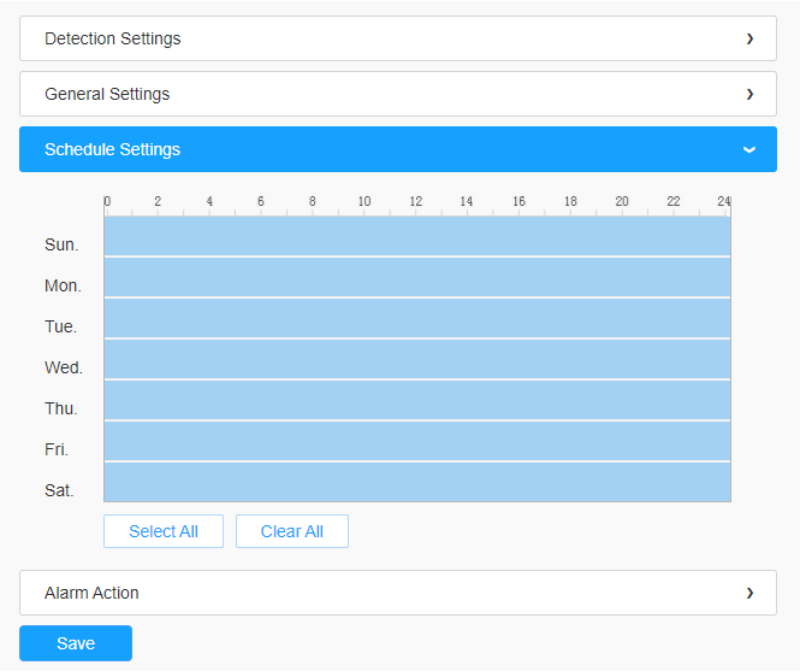
Table 50. Description of the buttons

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]

Step4: Set detection schedule.



Note: This part is the same as the regular schedule settings. You can refer to Motion Detection *(page 98)*.

[Alarm Action]

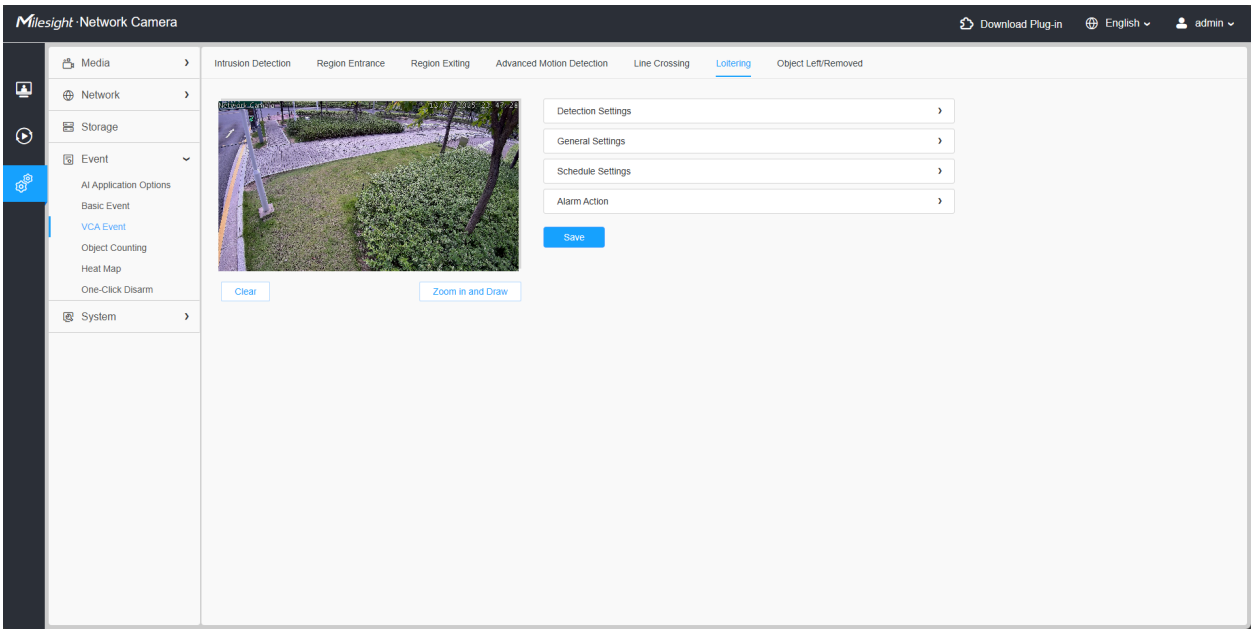
Step5: Set alarm action.

Note:

- This part is the same as the regular alarm settings. You can refer to Motion Detection *(page 99)*.
- 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

8.4.2.6 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:

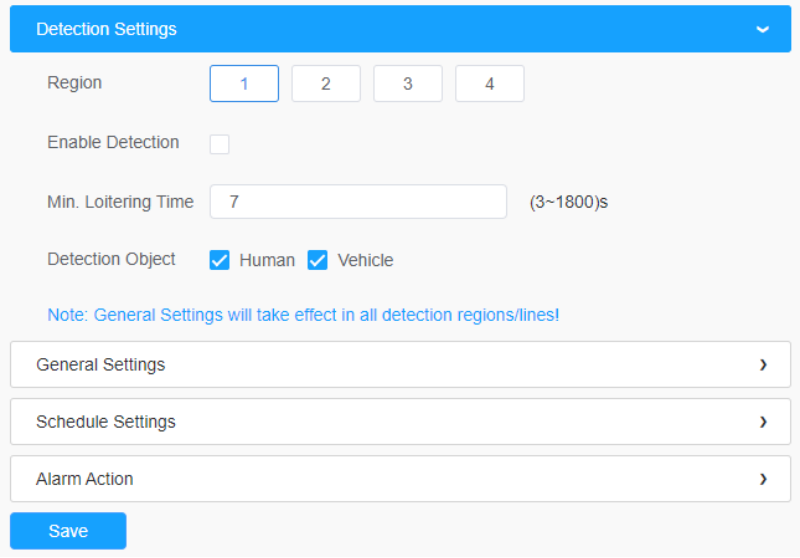
[Detection Settings]

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

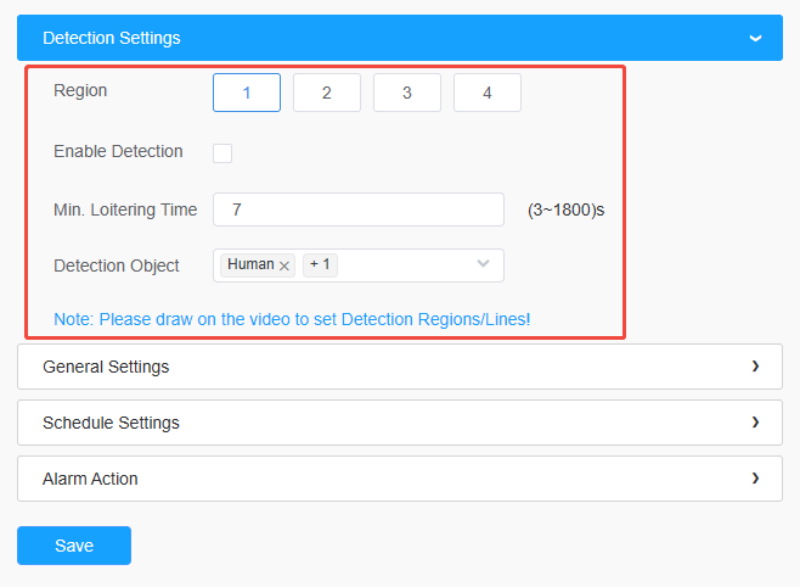
Step1: Select detection region and enable loitering detection.

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.

Step2: 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.



Step3: Choose detection object. Check Human or Vehicle attribute, and the camera will alarm once detecting people or vehicle and triggering related events.



[General Settings]

Step4: Set object size limits.

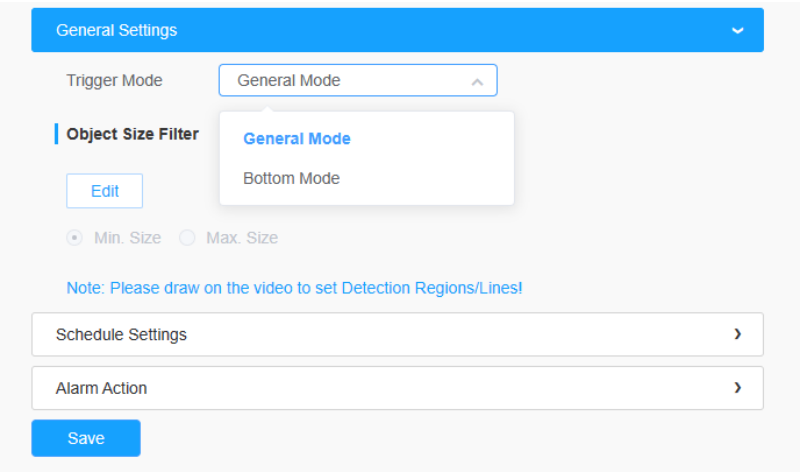


Table 51. Description of the buttons

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.
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 detection schedule.

Note: This part is the same as the regular schedule settings. You can refer to Motion Detection *(page 98)*.

[Alarm Action]

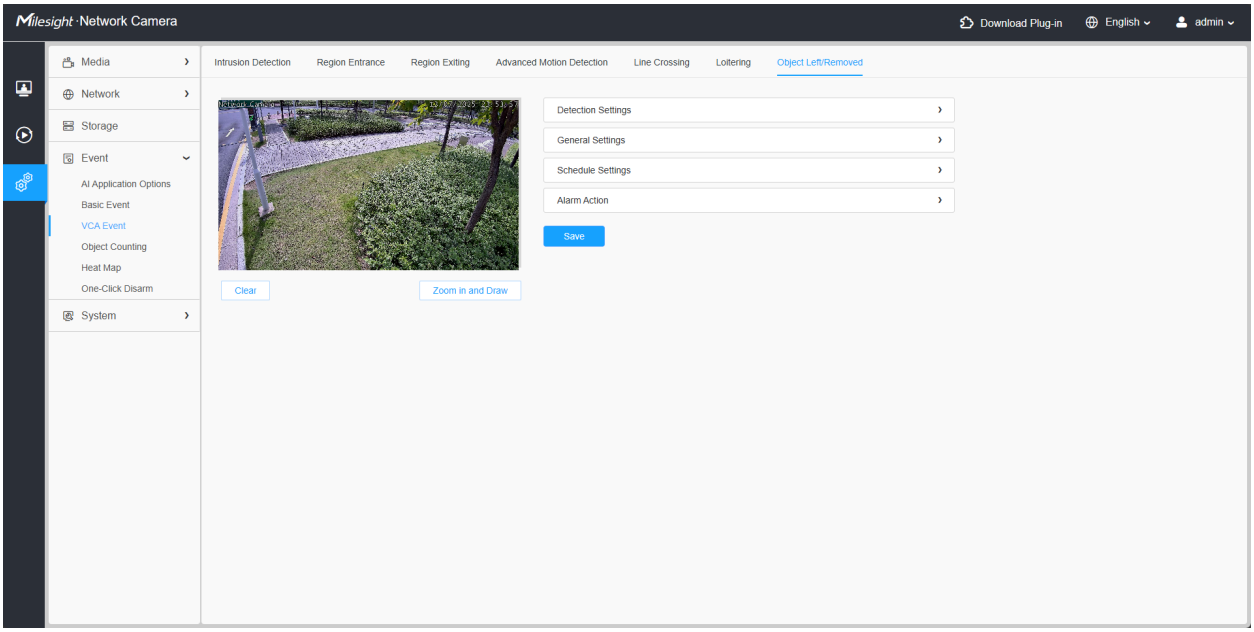
Step6: Set alarm action;

Note:

- This part is the same as the regular alarm settings. You can refer to Motion Detection *(page 99)*.
- 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.

8.4.2.7 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.



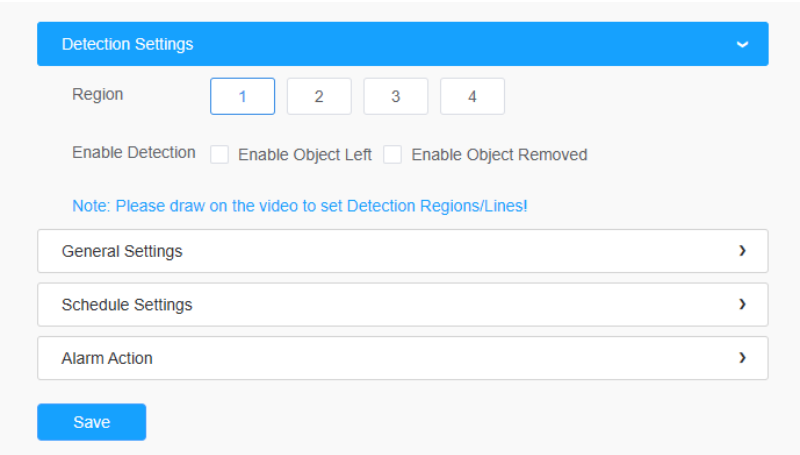
Settings steps are shown as follows:

[Detection Settings]

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

Step1: Selected 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.



[General Settings]

Step2: Set Min. time, detecting sensitivity and object size limits.

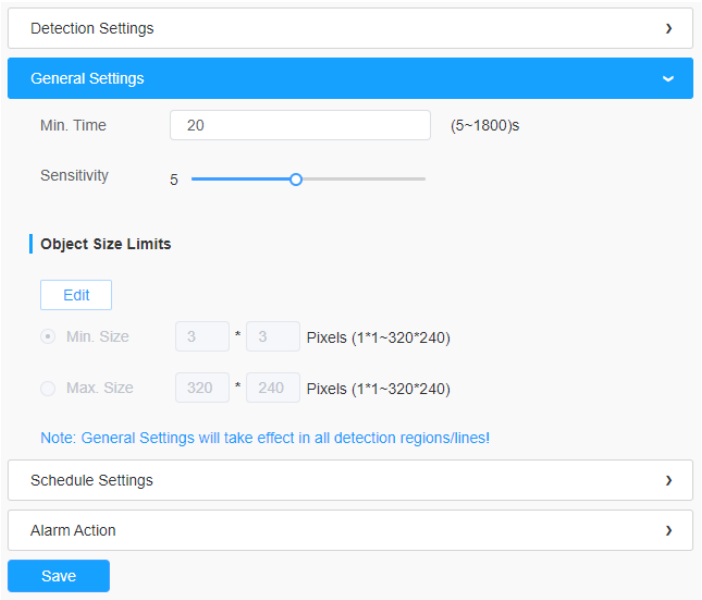


Table 52. Description of the buttons

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.

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.
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]

Step3: Set detection schedule;

Note: This part is the same as the regular schedule settings. You can refer to Motion Detection *(page 98)*.

[Alarm Action]

Step4: Set alarm action;

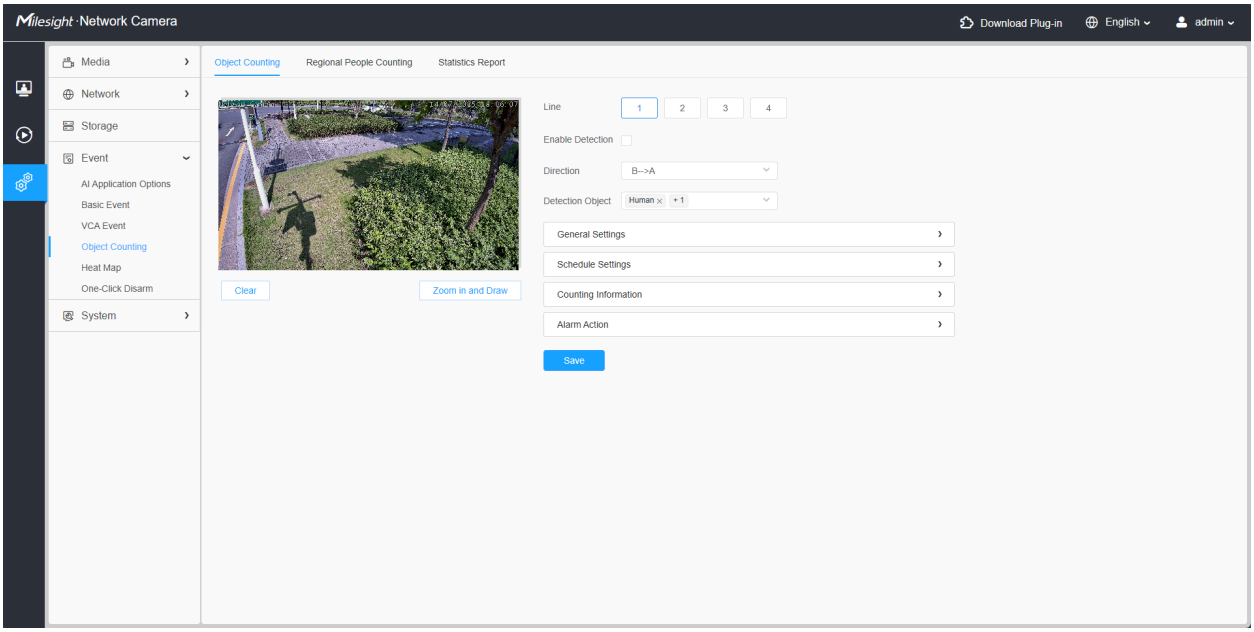
Note:

- This part is the same as the regular alarm settings. You can refer to Motion Detection *(page 99)*.
- 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.



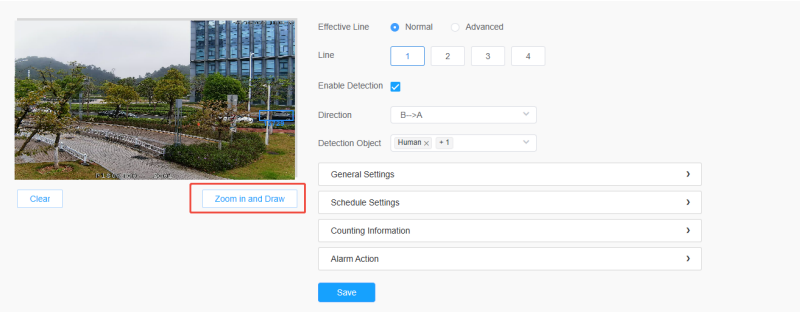
Settings steps are as shown below:

Ste1: Selected detected region, up to 4 regions can be chosen.

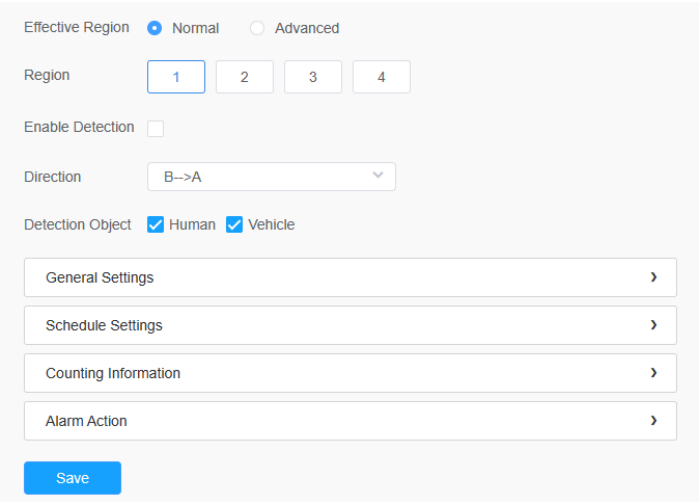
Step2: Enable Object Counting.

Step3: Set 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.

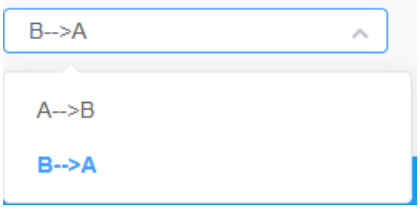


Step4: Selected detection object including human and vehicle.



Note:

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



[General Settings]

Step5: Set sensitivity and object size limits.

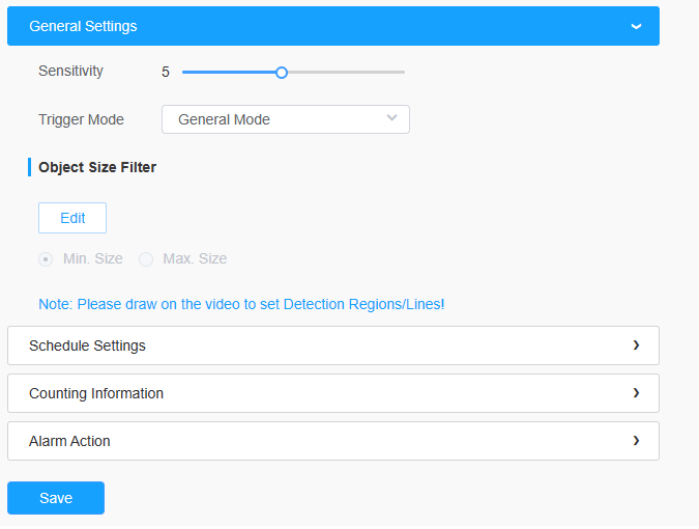


Table 53. Description of the buttons

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]

Set detection schedule.

Note: This part is the same as the regular schedule settings. You can refer to Motion Detection *(page 98)*.

[Counting Information]

Step7: Set counting information.

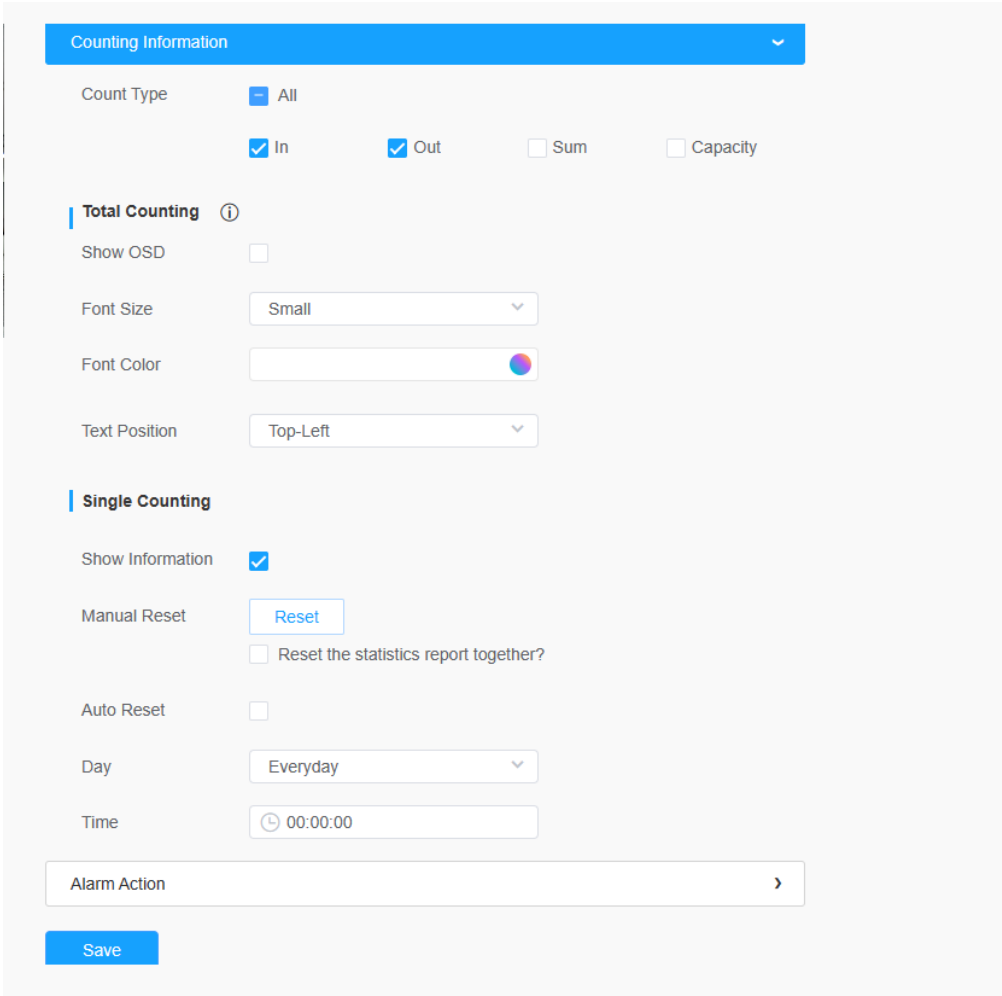
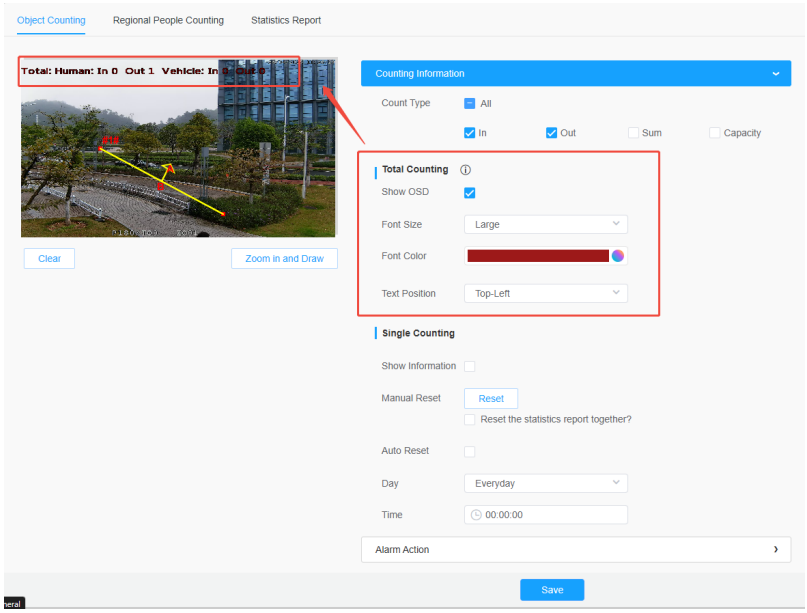


Table 54. Description of the buttons

Parameters	Function Introduction
Count Type	Users can choose the information they want to display in Live Video.

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. 
Single Counting	Set Single Counting. **Note:** The Total Counting OSD configuration is linked in all detection lines. **Show Information:** Click to show the information. **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]

Step8: Set alarm trigger and alarm action.

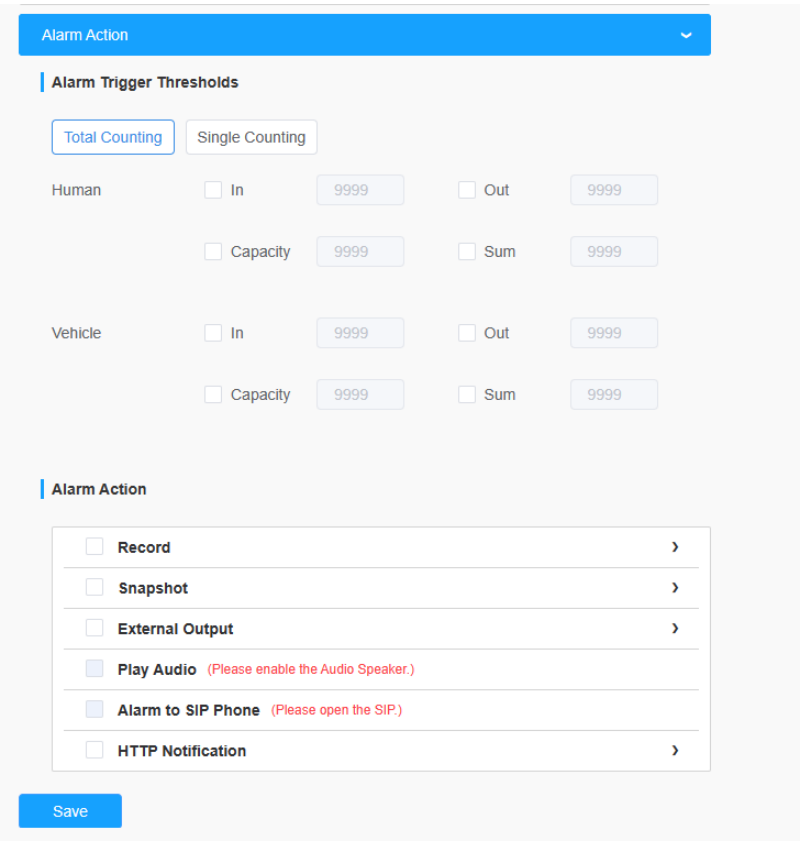


Table 55. Description of the buttons

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.

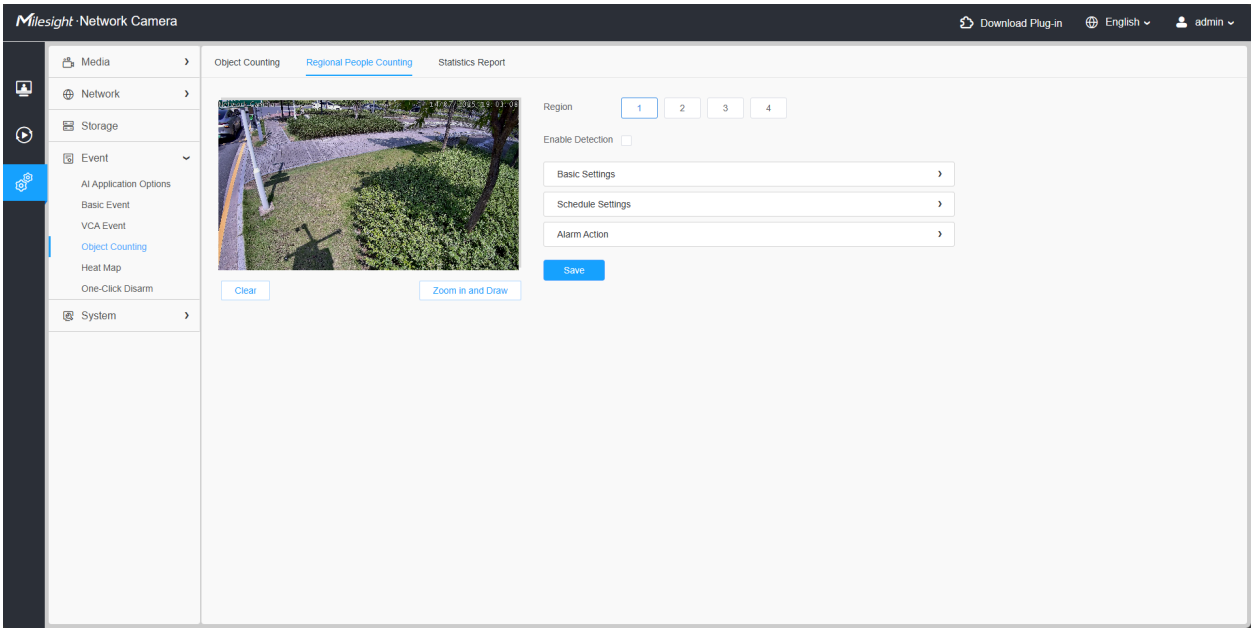
Parameters	Function Introduction
Alarm Action	This part is the same as the regular alarm settings. You can refer to Motion Detection *(page 99)*. **Note:** • The alarm action is effective on 4 detection lines simultaneously. • If you enable External Output and choose Constant External Output Action Time, 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:

- Users 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: Select detection region and enable regional people counting detection.

Note: Support up to 4 detection regions.

[Basic Settings]

Step2: Set sensitivity and object size limits.

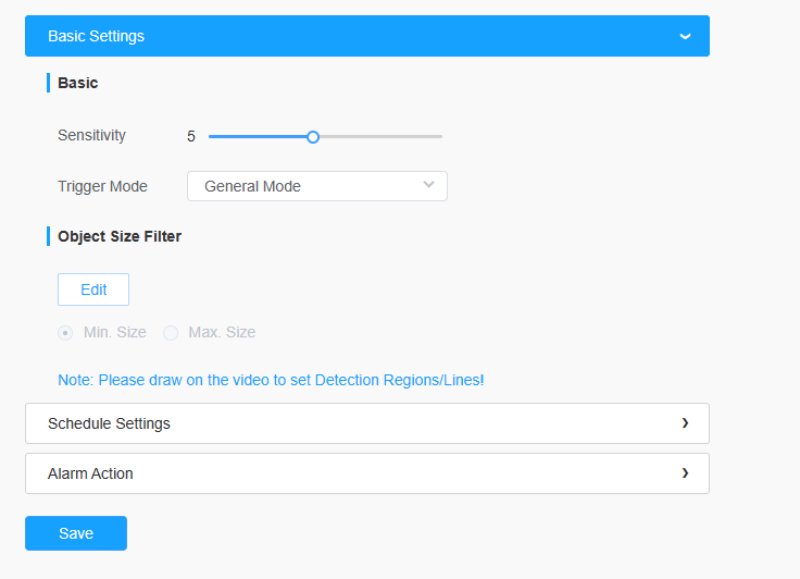


Table 56. Description of the buttons

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.

Parameters	Function Introduction
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]

Step3: Set detection schedule.

Note: This part is the same as the regular schedule settings. You can refer to Motion Detection *(page 98)*.

[Alarm Action]

Step4: Set alarm trigger and alarm action.

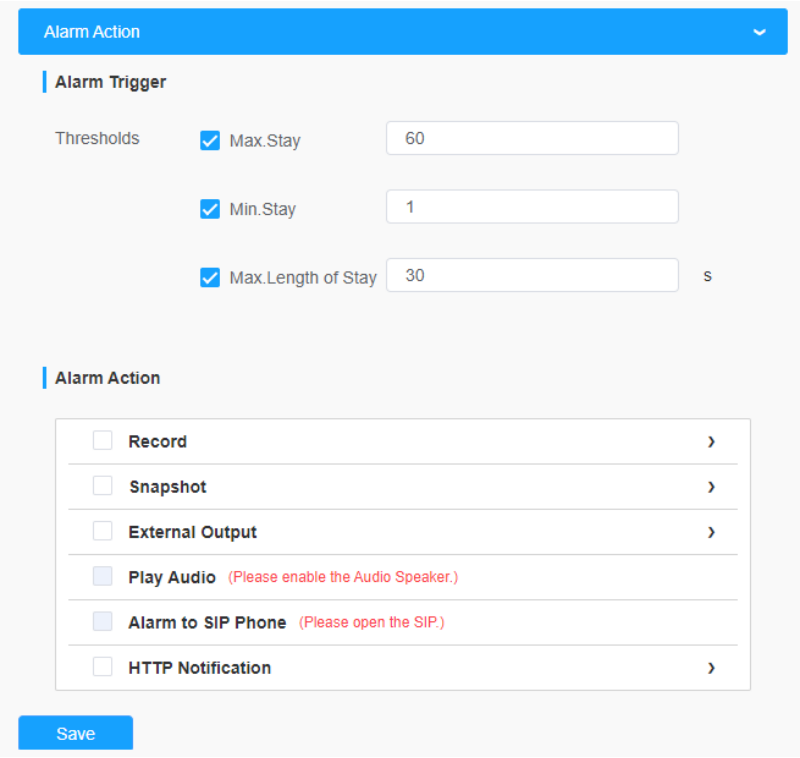
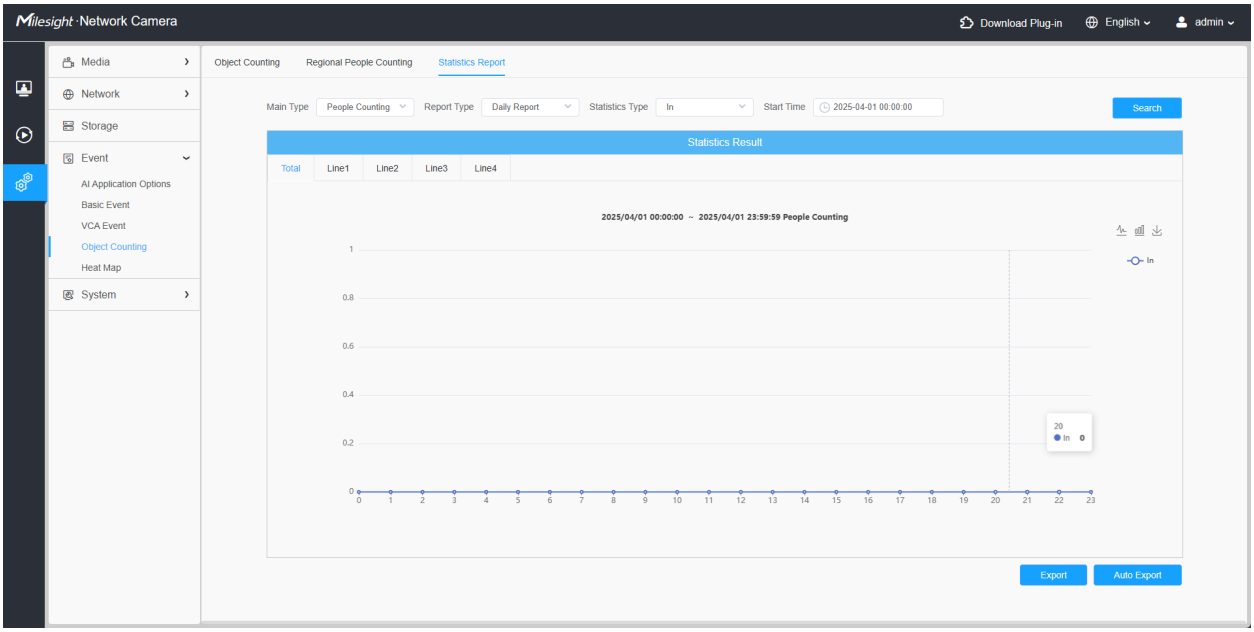


Table 57. Description of the buttons

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 Motion Detection *(page 99)*. **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.

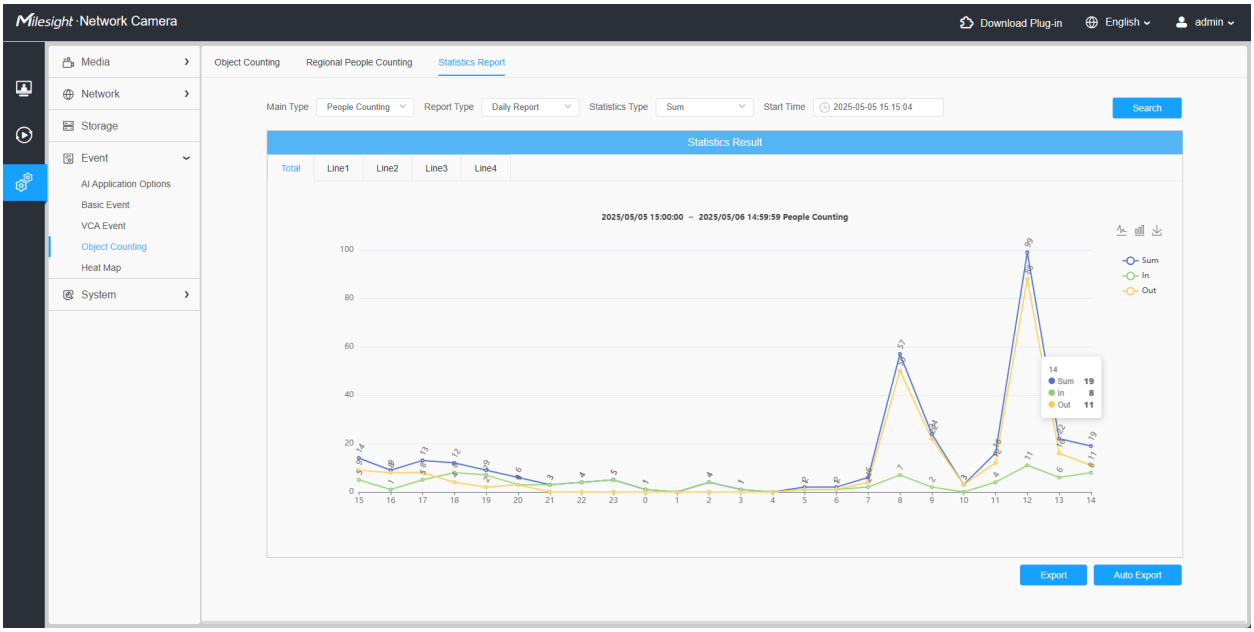
Step3: For people counting, select Statistics Type including In, Out and Sum. For regional people counting, select Length of Stay including All, More Then and Less Then and set the time of more then/ less then.

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

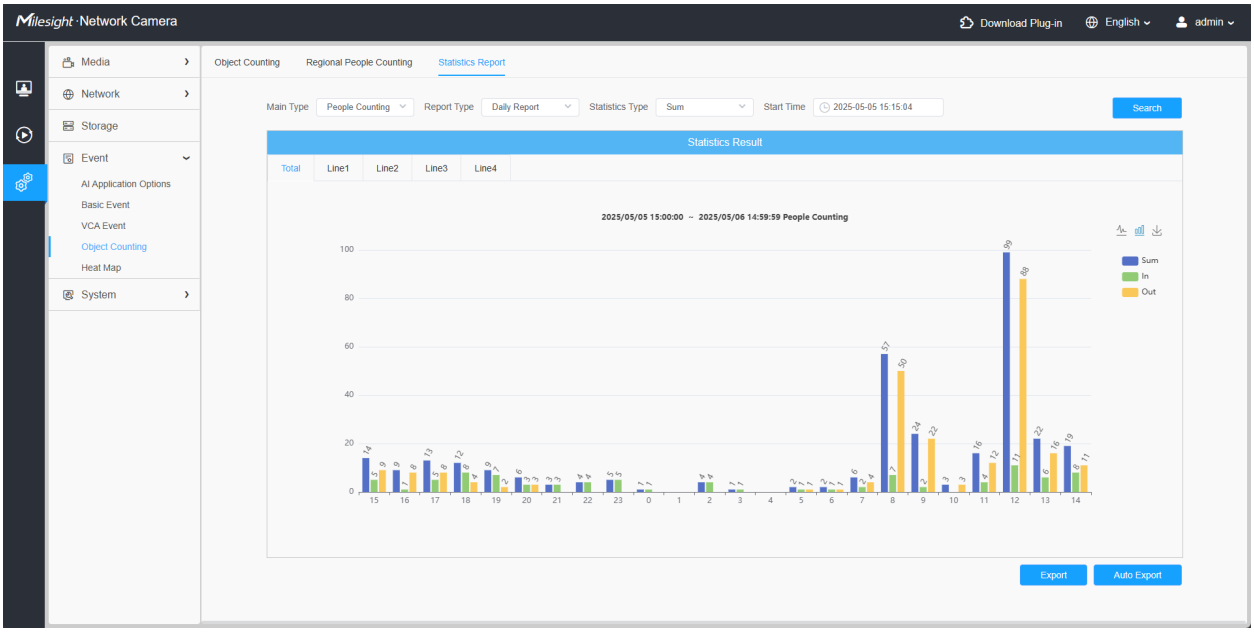
Step4: Select Start Time, then click "Search" button, the camera will automatically count the data for the day/ week/ month/ year (based on the report type selected by the user) from the start time and generate the corresponding report.

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

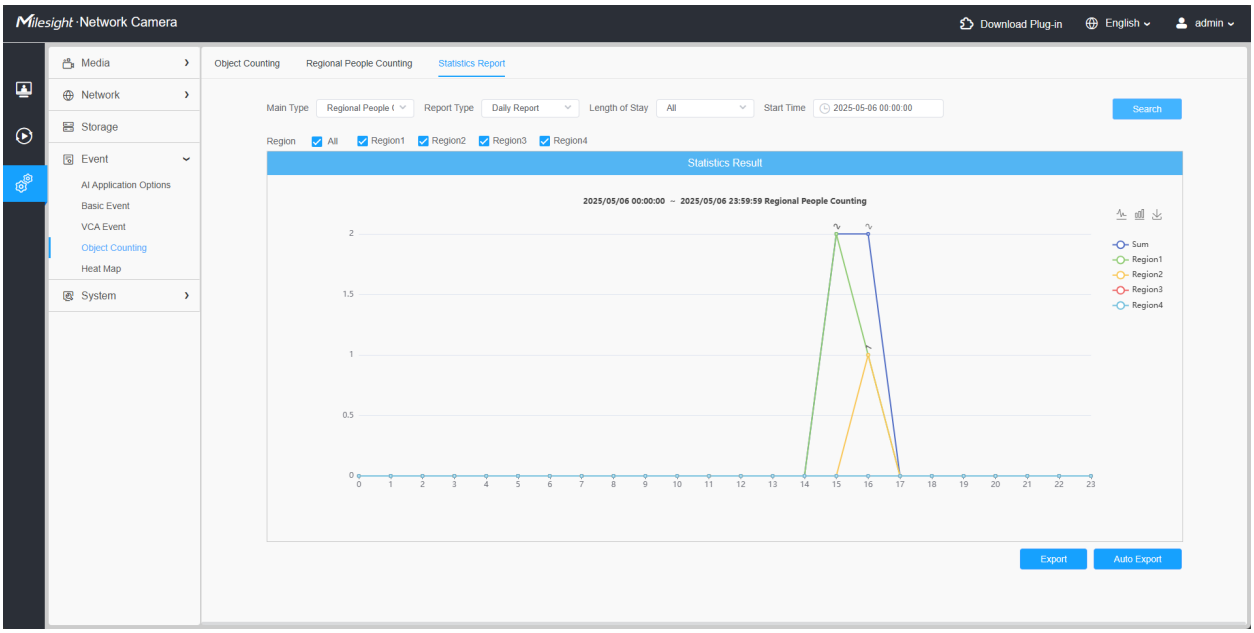
People Counting-Statistics Report (Line Chart)



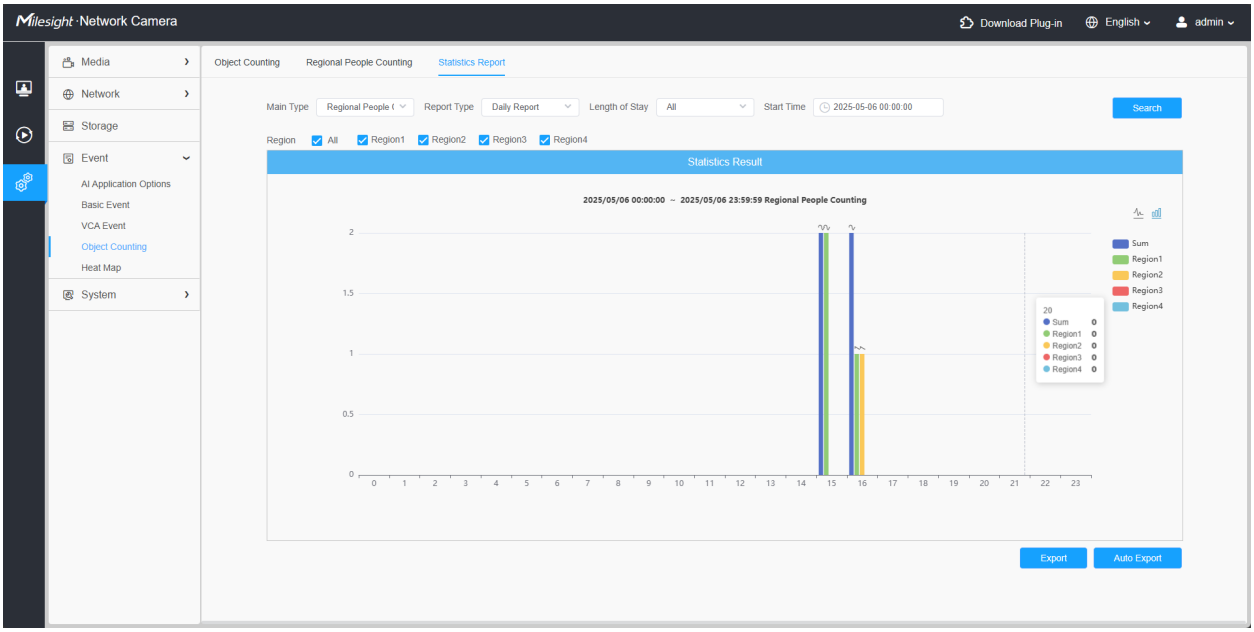
People Counting-Statistics Report (Bar Chart)



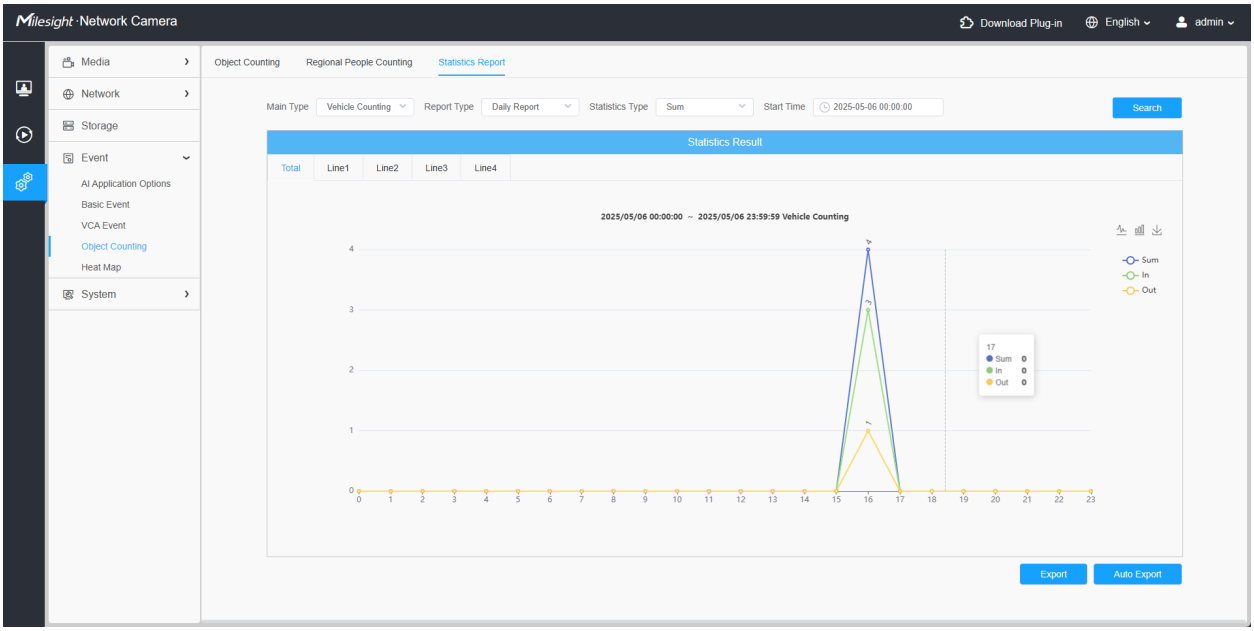
Regional People Counting-Statistics Report (Line Chart)



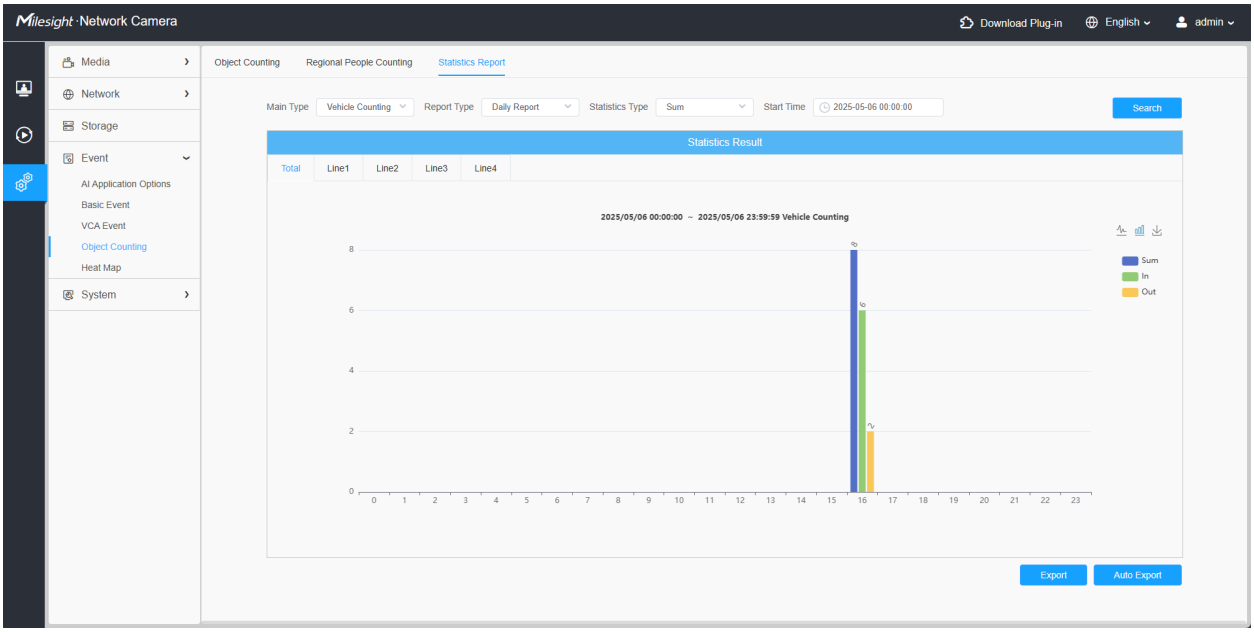
Regional People Counting-Statistics Report (Bar Chart)



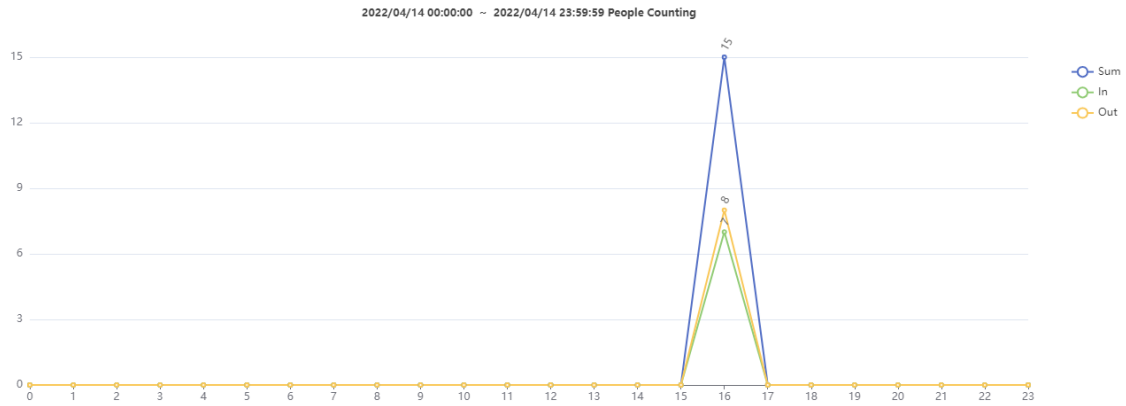
Vehicle Counting-Statistics Report (Line Char)



Vehicle Counting-Statistics Report (Bar Chart)

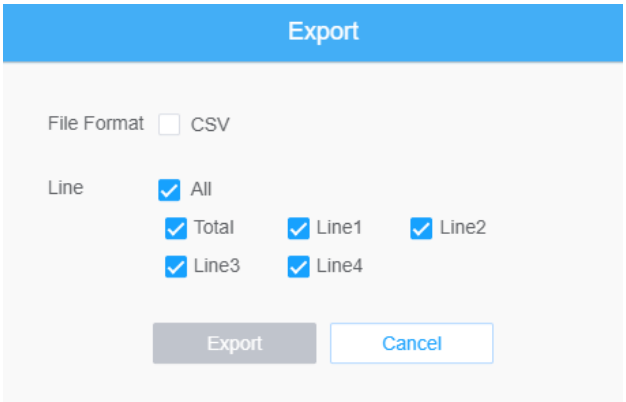


Step6: Click "Download" button to download the screenshot of the statistical report chart.

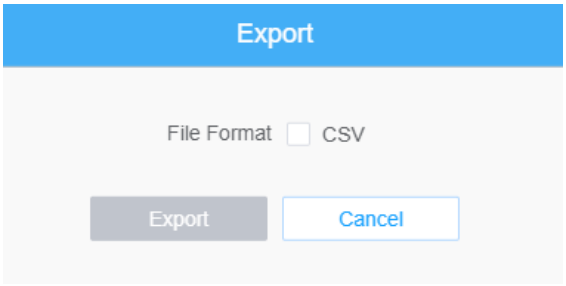


Step7: Click "Export" button to pop up the Export window as shown below, and you can choose File Format to export the report to local. For people counting Statistics Report, you can check the check box to export the report of different lines as needed.

People Counting-Export, *Vehicle Counting-Export*

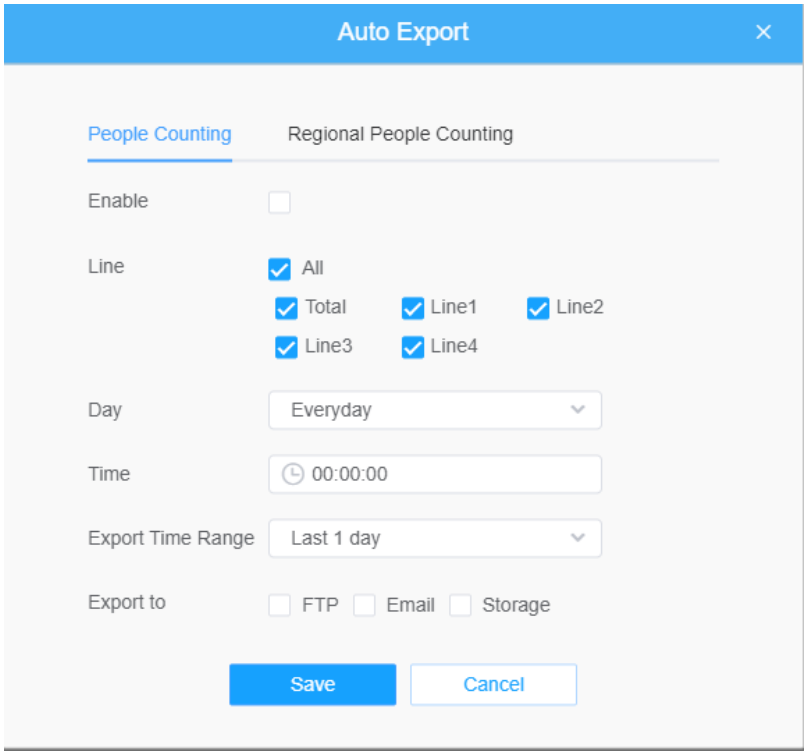


Regional People Counting-Export

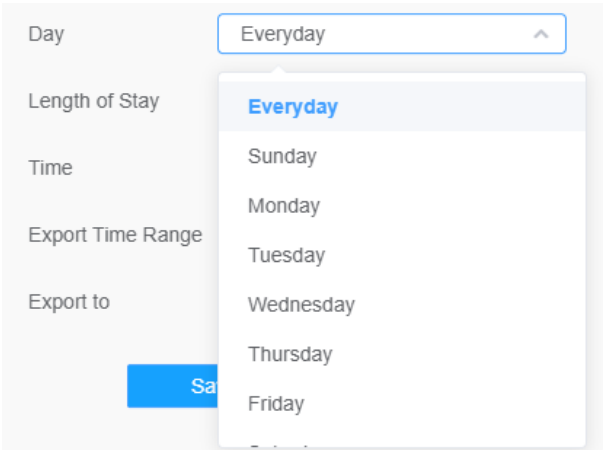


Step8: Click "Auto Export" button to pop up the Statistics Report Settings as shown below.

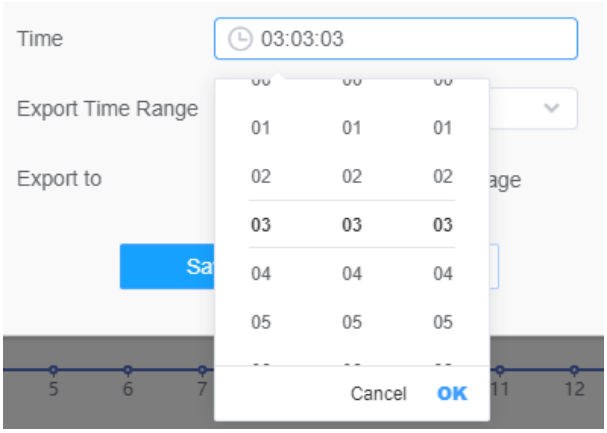
People Counting-Auto Export



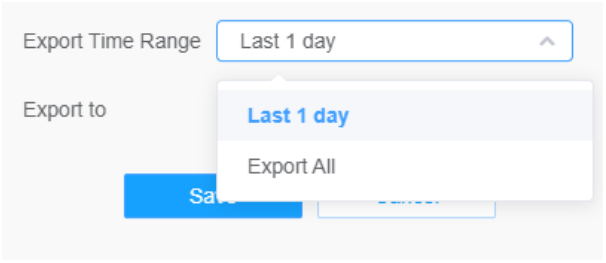
- Check the check box to enable the auto export of people counting, then select the lines as needed.
- Set Day. User can choose Everyday to export daily reports, while choosing others to export reports on a specific day of the week;



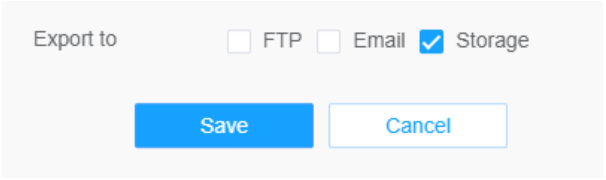
- Set Time. User can choose the time of day to export the Statistics Report automatically, click the calendar icon to pop up the following Quick Selection;



- Set Export Time Range;

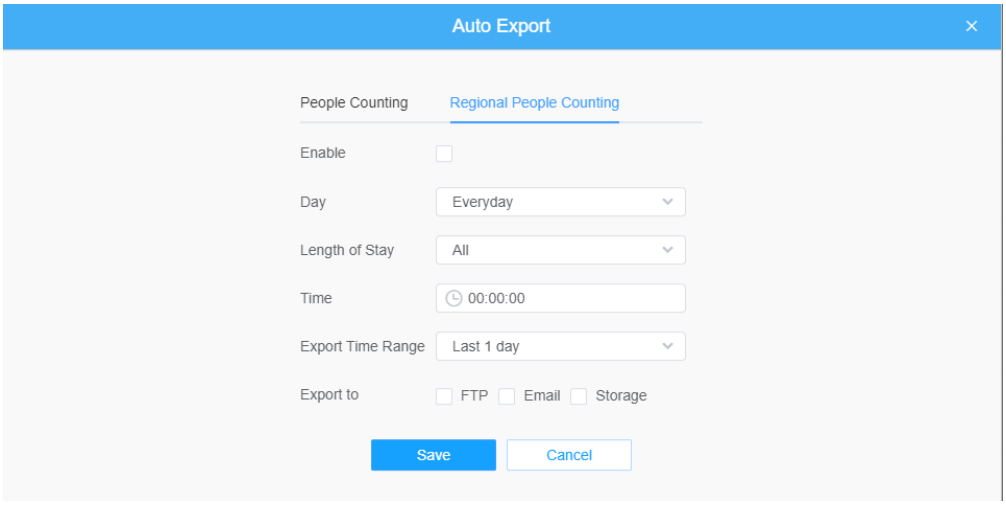


- Set the destination path of the automatically exported report. The report can be exported to FTP/ Email/Storage automatically as the form of an Excel spreadsheet according to the day, time and export time range you set. Then click “Save”.

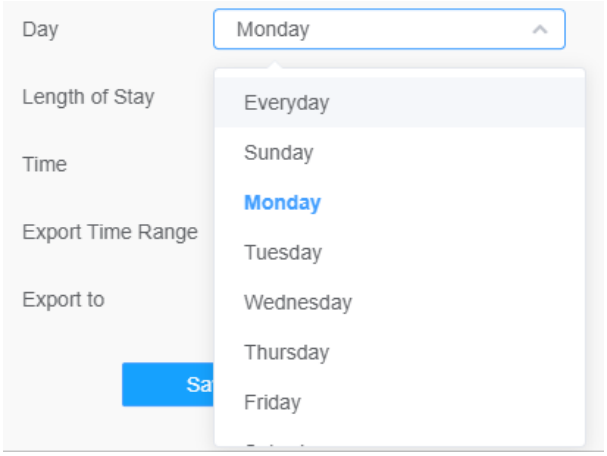


Note: If the current Statistics Report is generated, it will be saved as a csv form.

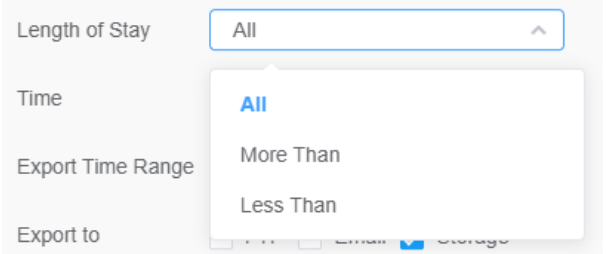
Regional People Counting-Auto Export



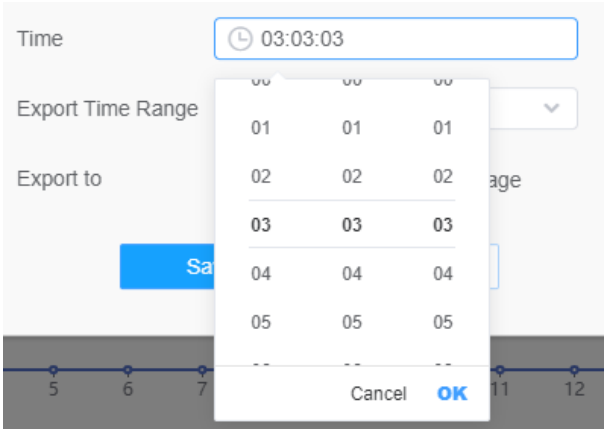
- Check the check box to enable the auto export of regional people counting.
- Set Day. User can choose Everyday to export daily reports, while choosing others to export reports on a specific day of the week;



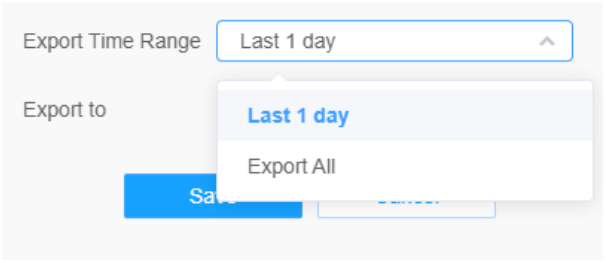
- Set Length of Stay.



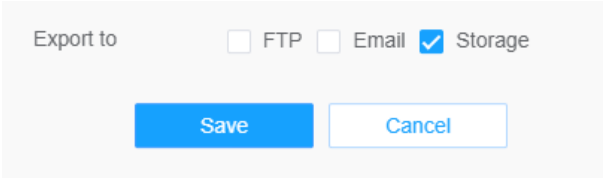
- Set Time. User can choose the time of day to export the Statistics Report automatically, click the calendar icon to pop up the following Quick Selection;



- Set Export Time Range;

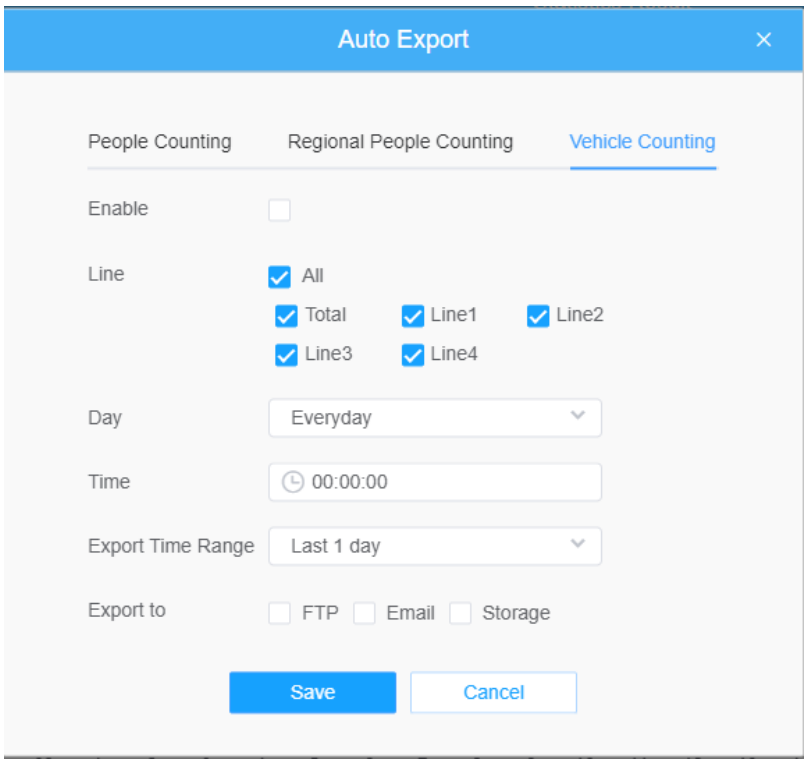


- Set the destination path of the automatically exported report. The report can be exported to FTP/ Email/Storage automatically as the form of an Excel spreadsheet according to the day, time and export time range you set. Then click “Save”.

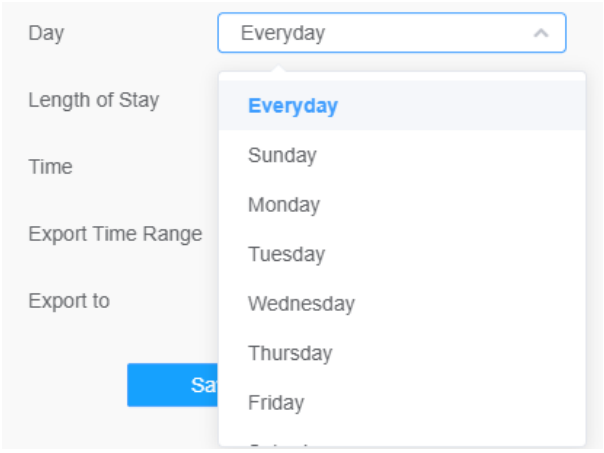


Note: If the current Statistics Report is generated, it will be saved as a csv form.

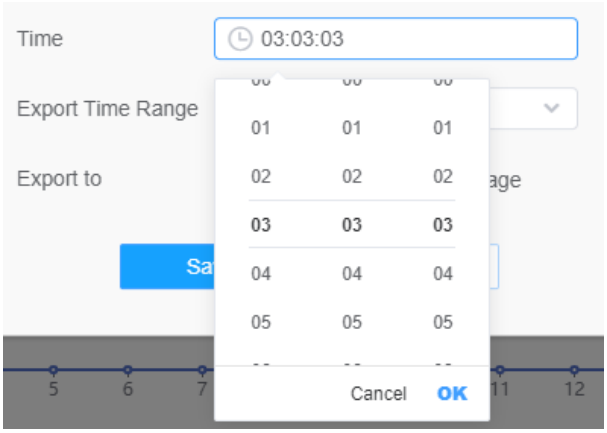
Vehicle Counting-Auto Export



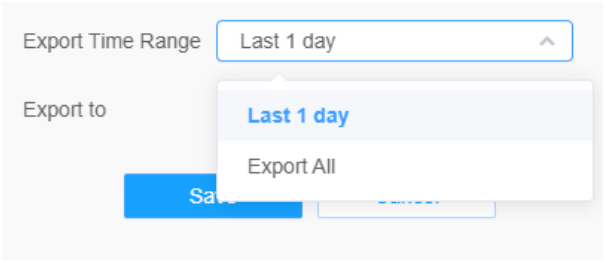
- Check the check box to enable the auto export of people counting, then select the lines as needed.
- Set Day. User can choose Everyday to export daily reports, while choosing others to export reports on a specific day of the week;



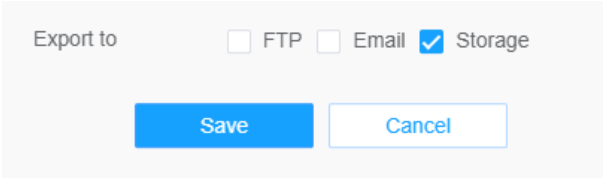
- Set Time. User can choose the time of day to export the Statistics Report automatically, click the calendar icon to pop up the following Quick Selection;



- Set Export Time Range.



- 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”.



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

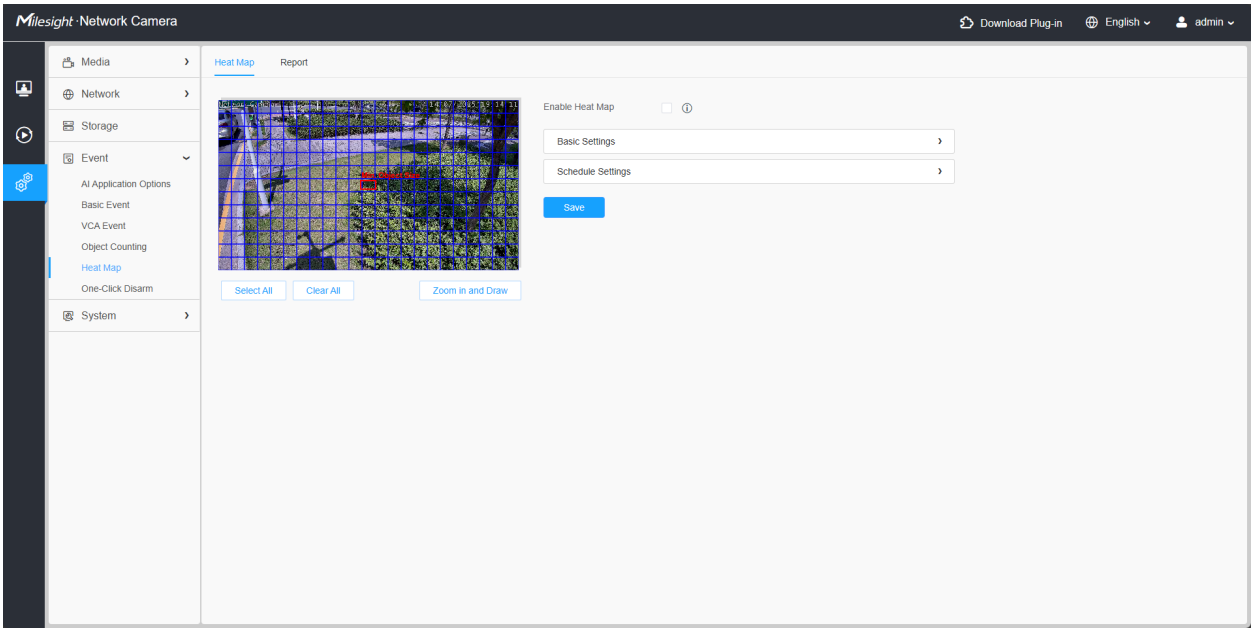
8.4.4 Heat Map

Heat Map function can analyze customers movement to reveal insights for better business management with the intuitive and accurate statistical analysis results in time or space pattern as needed.

8.4.4.1 Heat Map

Note:

- Only allowed to view reports within 7 days without a SD card or NAS.
- For more details about how to set Heat Map, please refer to https://milesight.freshdesk.com/a/solutions/articles/69000643314.



Step1: Enable Heat Map function.

[Basic Settings]

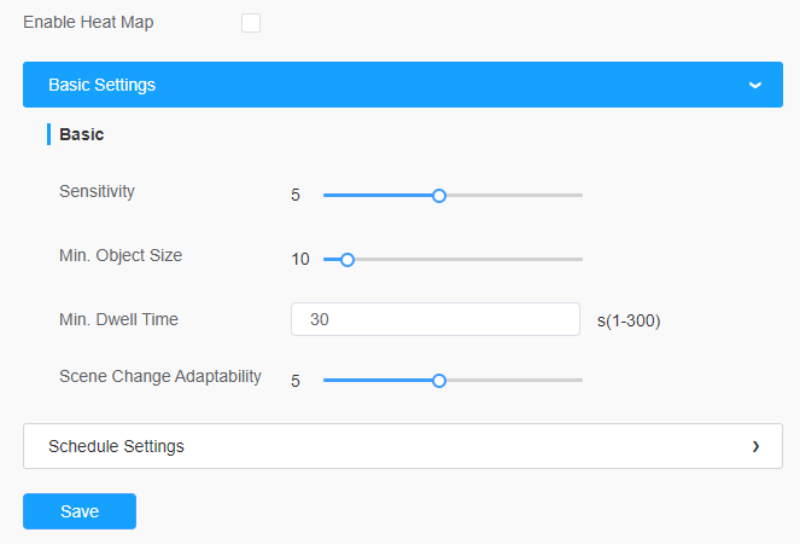
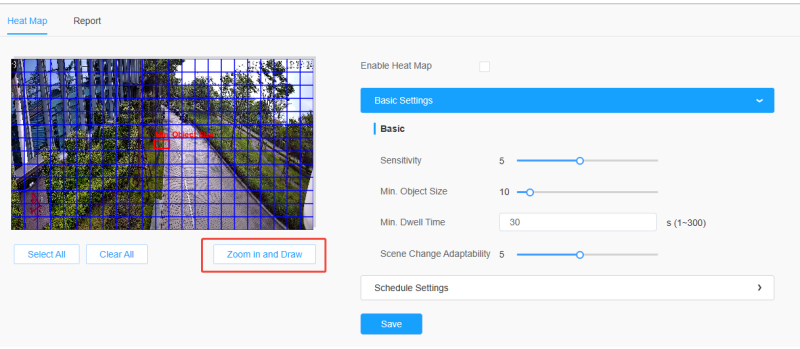


Table 58. Description of the buttons

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.
Min. Object Size	Set the minimum object size from 1 to 100, the default value is 10. Objects smaller than this value will not be recorded in the result.
Min. Dwell Time	Set the minimum dwell time from 1 to 300, the default value is 30. If the object stays in the area longer than the set "Minimum Dwell Time", it will not be recorded in the result.
Scene Change Adaptability	Level 1~10 are available, the default level is 5. Scene Change Adaptability indicates the camera's adaptability to scene changes, which can increase the accuracy of detection. The camera better adapts to faster changing scenes if the value is higher.

Step2: Set Heat Map Region. Draw the screen to set the detection area. You can click “**Select All**” button to select all areas, or "**Clear All**" button to remove the current drawn area.

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



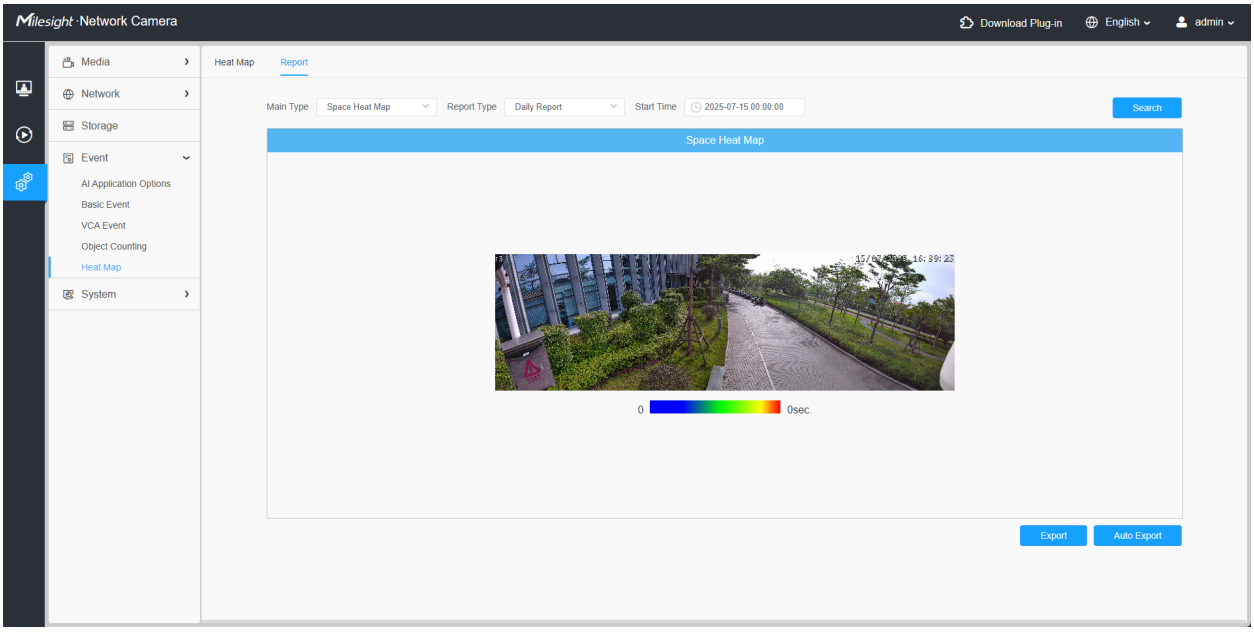
[Schedule Settings]

Step3: Schedule Settings.

Note: This part is the same as the regular schedule settings. You can refer to Motion Detection *(page 98)*.

8.4.4.2 Report

The heat map results will be displayed on this interface.



Step1: Select Main Heat Map Type.

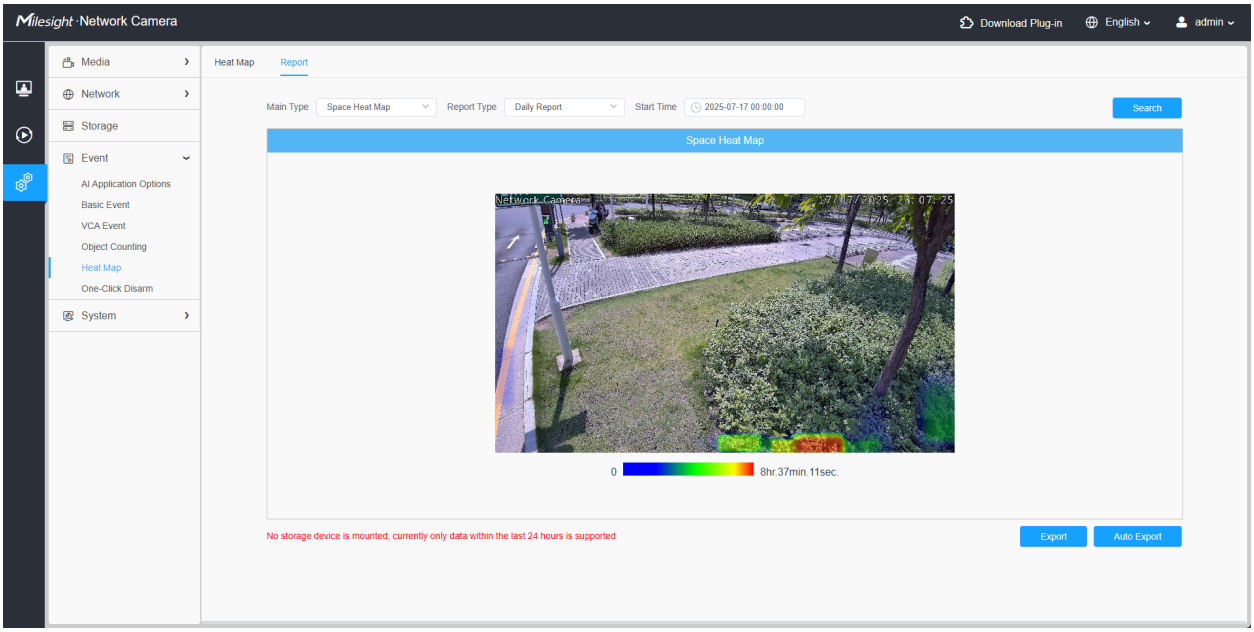
[Space Heat Map]: Space Heat Map will be presented as a picture with different colors. Different colors represent different heat values. Red represents the highest and blue represents the lowest.

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

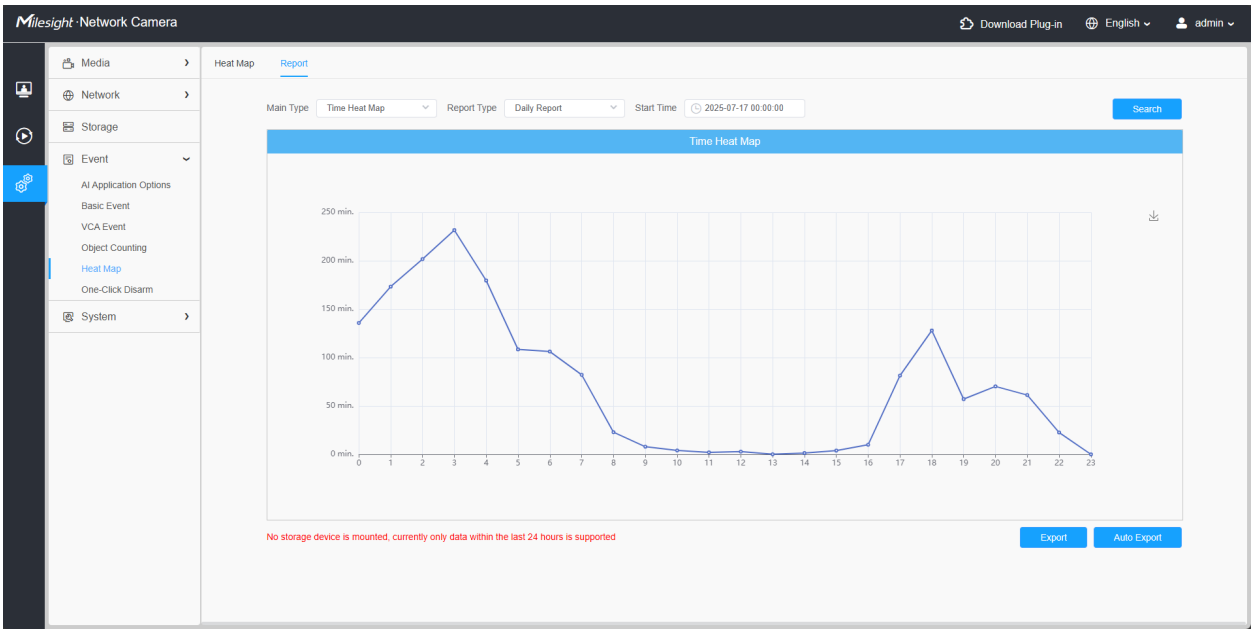
Step2: Select Report Type including Daily Report, Weekly Report, Monthly Report and Annual Report.

Step3: Select Start Time, then click the **"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 as shown below.

Space Heat Map

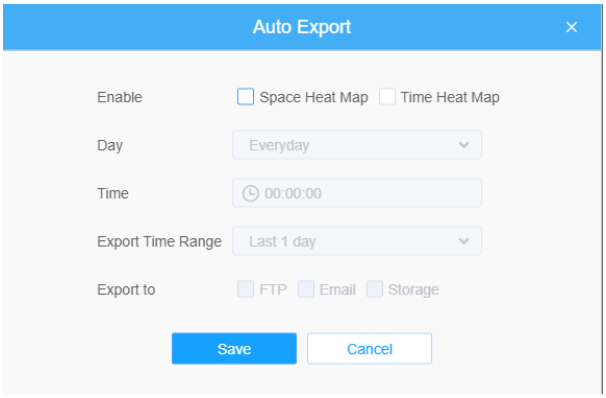


Time Heat Map

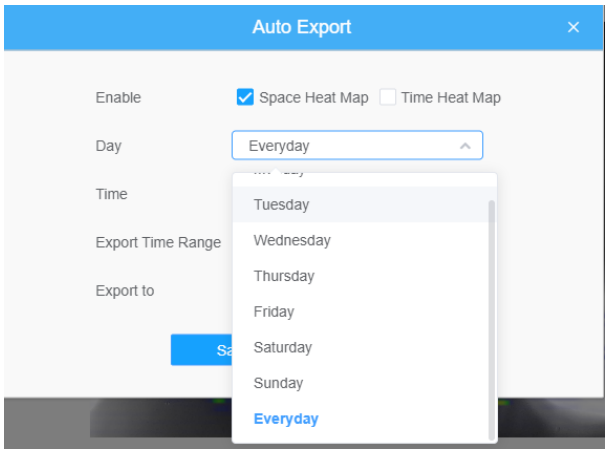


Step4: Click the "**Report Export**" button to export the report to local.

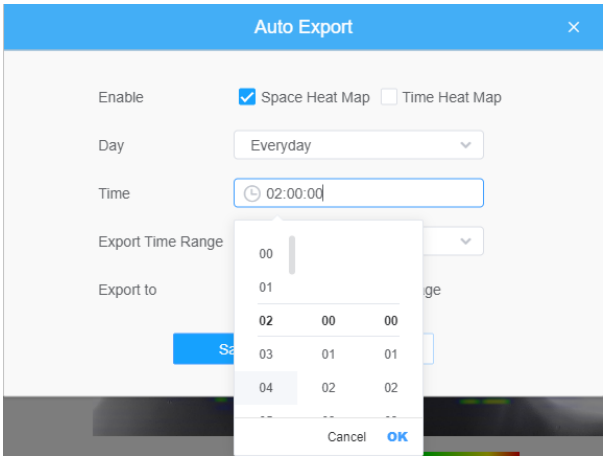
Step5: Click the **"Auto Export"** button to pop up the Heat Map Report Settings as shown below.



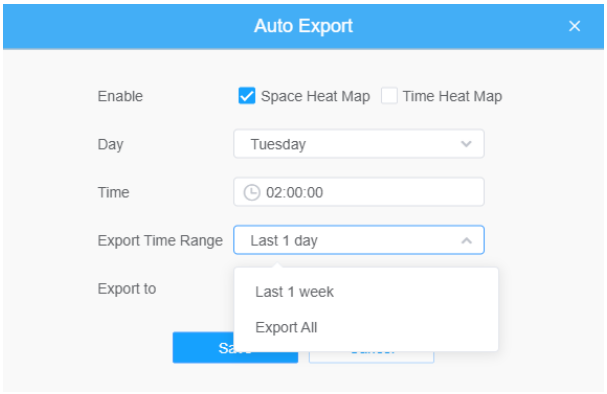
- Set Export Type. User can check Space Heat Map or Time Heat Map or both. When either Space Heat Map or Time Heat Map is checked, the gray item becomes editable as shown below;
- Set Day. User can choose Everyday to export daily reports, while choosing others to export reports on a specific day of the week;



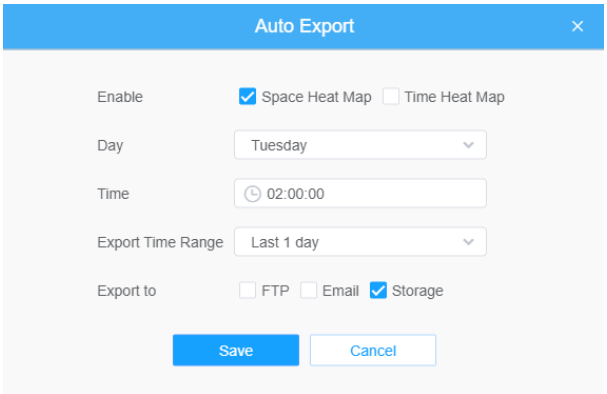
- Set Time. User can choose the time of day to export the heat map automatically, click the calendar icon to pop up the following Quick Selection;



- Set Export Time Range.



- 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 or a picture according to the day, time and export time range you set. Then click “Save”.

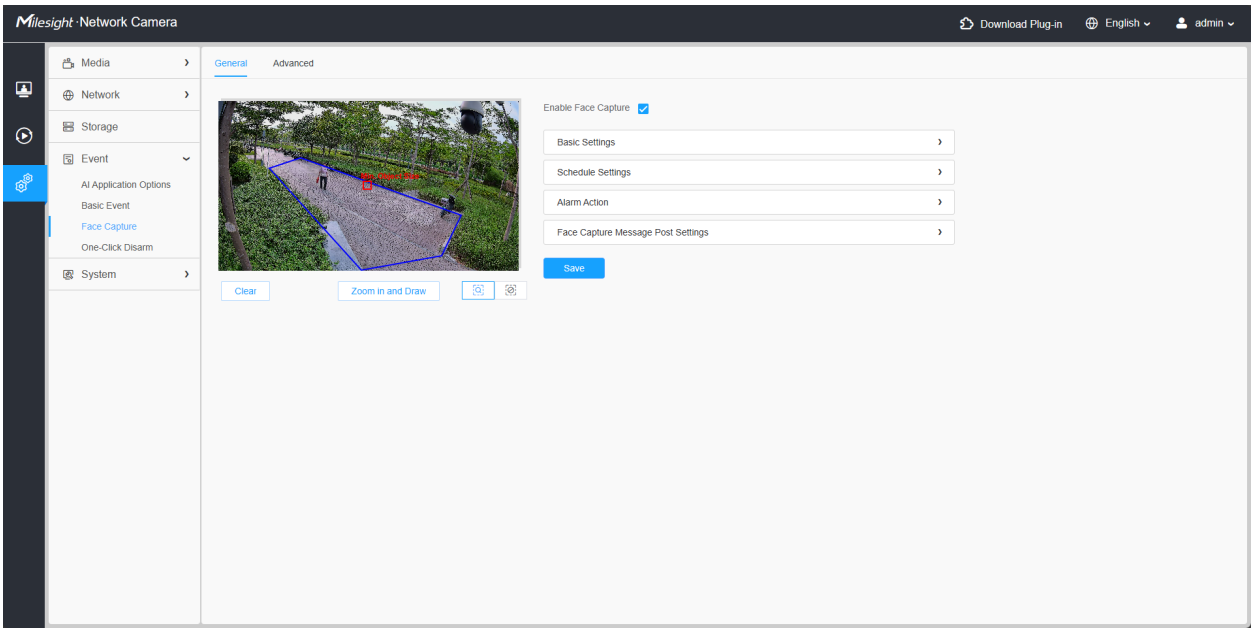


If the current Space Heat Map is generated, it will be saved as a png image. If the current Time Heat Map is generated, it will be saved as a csv form.

8.4.5 Face Capture

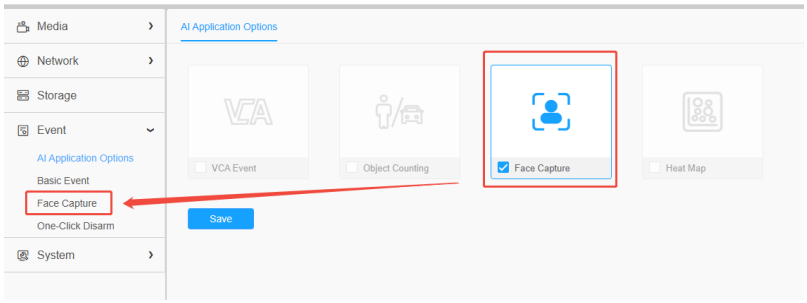
The Face Capture function can capture the face appearing in the drawn area and support saving face snapshots into Storage, upload via FTP or Email, display in Live View. Additionally, the camera supports pushing face images to third-party VMS for centralized management, analysis, and facial attribute recognition.

8.4.5.1 General

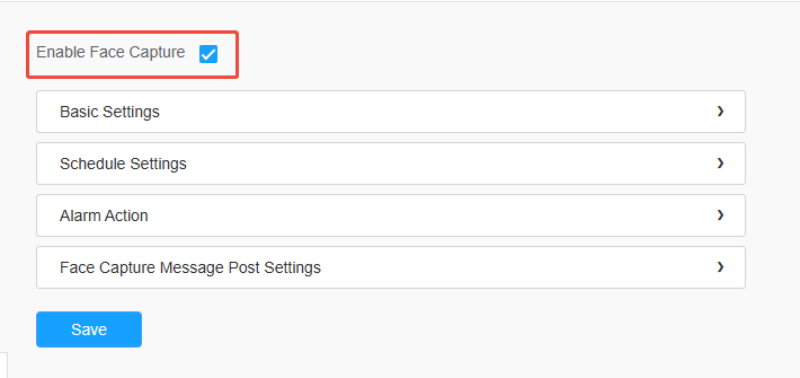


Settings steps are as shown below:

Before utilizing this function, please check the Face Capture box within the AI Application Options interface.



Step1: Enable Face Capture.



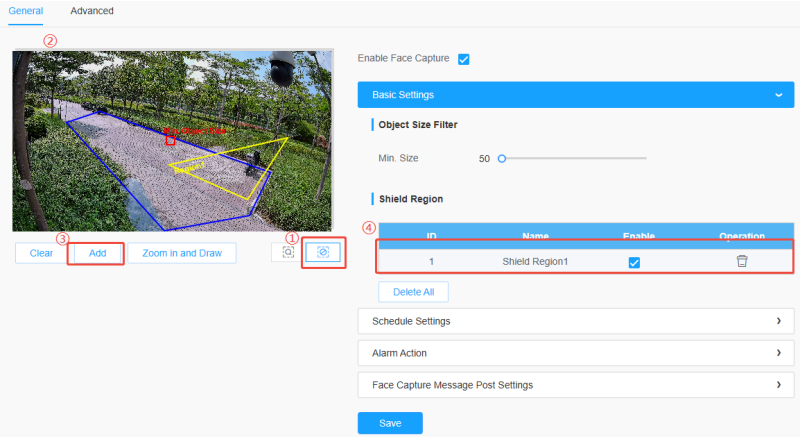
[Basic Settings]

Step2: Set Min. Object Size.

Step3: Set detection region, you can drag the detection region to adjust the size. Only faces in this region will be captured.

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

Step4: Set Shield Region to make faces in some places of detection region be not detected. The faces can be set to be not detected in some places of detection region via setting the Shield Region. You can draw a Shield Region in the preview interface firstly, then click Add button. There are at most four Shield Regions drawn available.



[Schedule Settings]

Step5: Set detection schedule.

Note: This part is the same as the regular schedule settings. You can refer to Motion Detection *(page 98)*.

[Alarm Action]

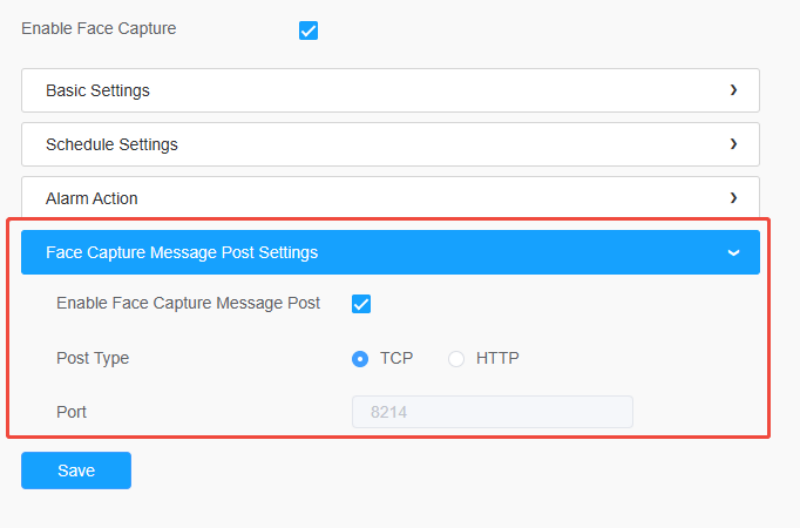
Step6: Set alarm action.

Table 59. Description of the buttons

Parameters	Function Introduction
Record	**Duration:** Select 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.

[Face Detection Message Post Settings]

Step6: Enable face detection Message post.

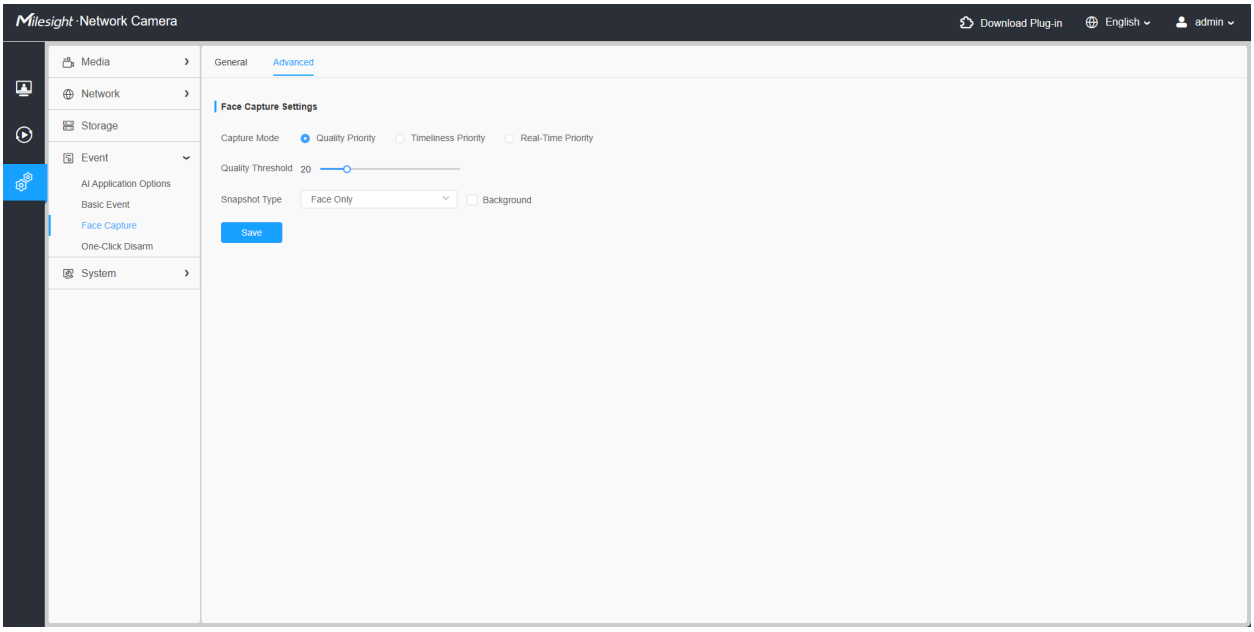


After enabling this function, face snapshots can be sent to a third-party system for further analysis and processing.

Table 60. Description of the buttons

Parameters	Function Introduction
Enable Face Detection Message Post	Check the check box to enable Face Detection Message Post. It will push information to some third-party devices or compatible software. Information can be pushed by TCP or HTTP.
Port Type	Information can be pushed by **TCP** or **HTTP**.

8.4.5.2 Advanced



[Face Capture Settings]

Here you can make configuration for face capture snapshot.

Table 61. Description of the buttons

Parameters	Function Introduction
Capture Mode	Quality Priority, Timeliness Priority and Real-Time Priority are available. **Quality Priority:** In this mode, it will capture the best image of a face from the moment of the face appears until it disappears, provided it exceeds the set threshold. **Timeliness Priority:** In this mode, it will immediately push the image once its quality exceeds the threshold, without considering any subsequent images that may have better quality. **Real-Time Priority:** In this mode, it will continuously push face images that exceed the threshold as they are captured in real time.
Capture Threshold	The default value is 20, once the face image quality exceeds the default capture threshold, the camera will capture the face and upload the image with its attributes to the back end.
Snapshot Number	Configure the Number of Snapshots captured upon face detection. **Note:** Optional for Timeliness Priority mode.
Snapshot Type	**Face Only, Upper Body, Whole Body** are available. **Face Only:** Capture the screenshot of face only. **Upper Body:** Capture the screenshot of upper body. **Whole Body:** Capture the screenshot of whole body. If you check the "Background" option, it will take another screenshot of the entire image.

Camera will capture faces in Live View *(page 26)* according to the region and conditions you set. If you check the "Show Tracks" option, it will display the face screenshot with the ID on the left side of Live View.

8.4.6 One-Click Disarm

Easily control alarm linkage actions with a single click. When the Enable One-Click Disarm option is selected, the specified alarm linkage actions will be disabled.

- **Enable One-Click Disarm:** When this option is selected, the specified alarm linkage actions will be disabled temporary, even if they have been configured under the **Alarm Action** settings of the corresponding event, without deleting the original **Alarm Action** configurations.

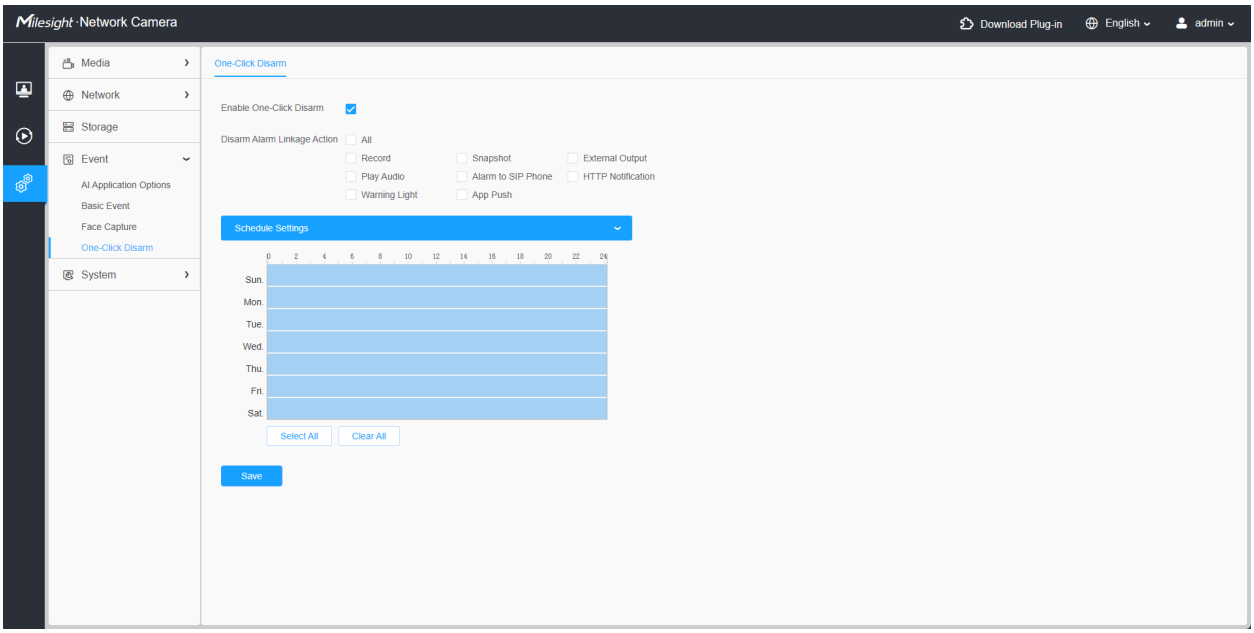
- **Disarm Alarm Linkage Action:** To temporarily disable configured alarm actions, simply check the checkbox and set a disarm schedule.

Table 62. Description of the buttons

Parameters	Function Introduction
Record	Do not record when the event is triggered.
Snapshot	Do not take a snapshot when the event is triggered.
External Output	Do not trigger the external output when the event is triggered.
Play Audio	Do not play the audio file when the event is triggered.
Alarm to SIP Phone	Do not call the SIP phone after enabling the SIP function.
HTTP Notification	Do not send alarm notifications to the specified HTTP URL.
Warning Light	The warning light remains off when the alarm is triggered.
App Push	Do not push the alarm message to the app.

- **Disarm by Schedule**: Alarm linkage actions are disabled during the specified time periods.

For the schedule settings, please refer to Motion Detection *(page 98)*.



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.

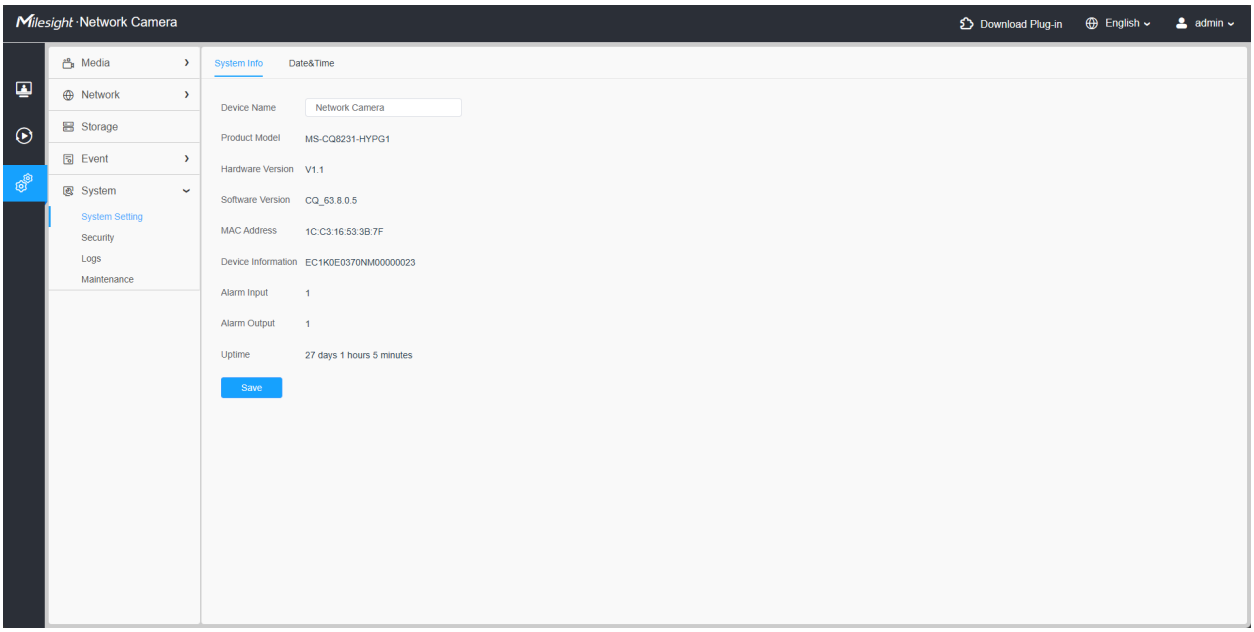


Table 63. Description of the buttons

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.
MAC Address	Media Access Control address.

Parameters	Function Introduction
S/N	Stock 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.
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

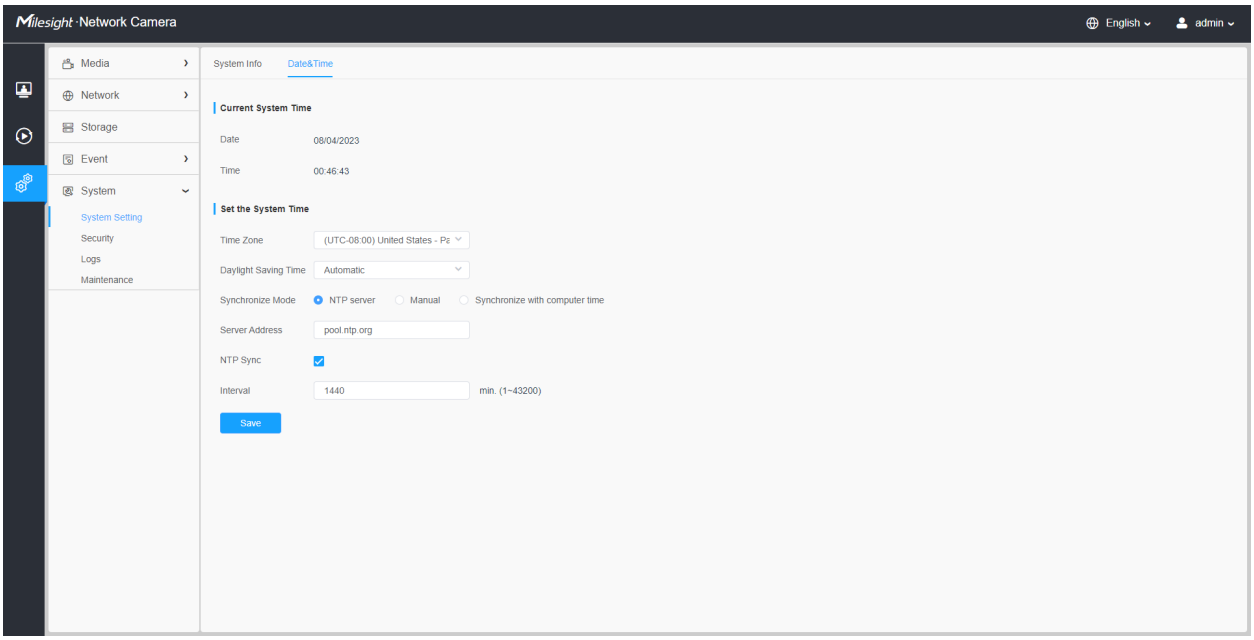


Table 64. Description of the buttons

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: Enable the daylight saving time.
Set the System Time	**Synchronize Mode:** NTP server, Manual and Synchronize with computer time are optional. **NTP server:** Input the address of NTP server. **NTP Sync:** Regularly update your time according to the interval time. **Manual:** Set the system time manually. **Synchronize with computer time:** Synchronize the time with your computer.
Save	Save the configuration.

8.5.2 Security

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

8.5.2.1 User

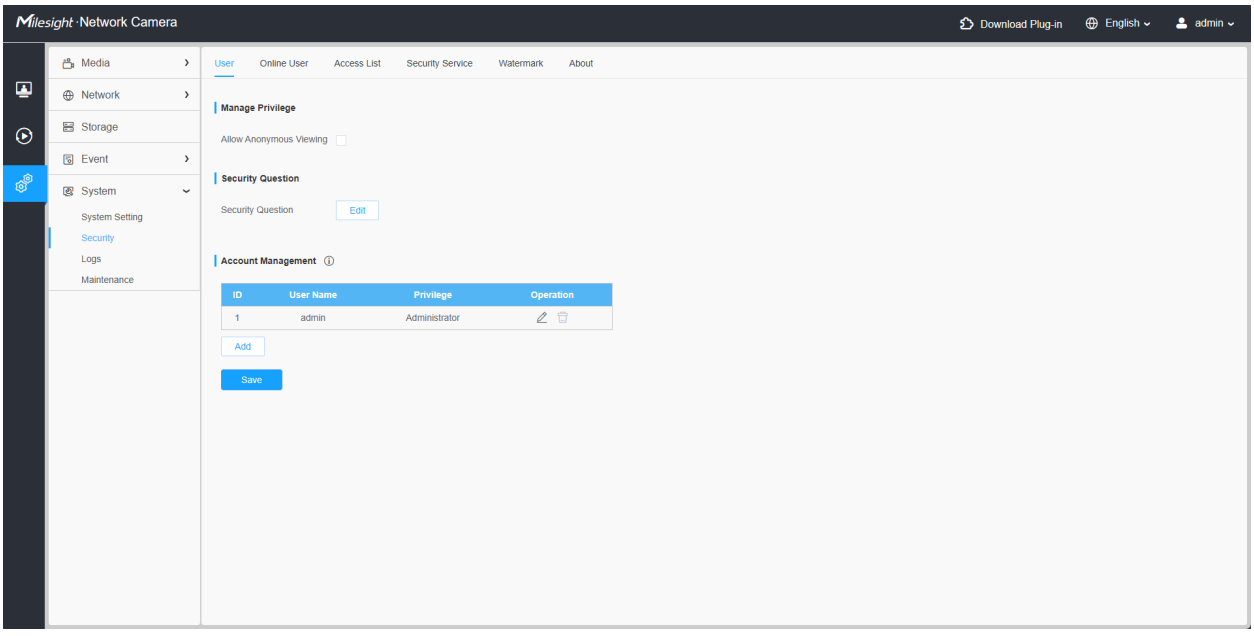
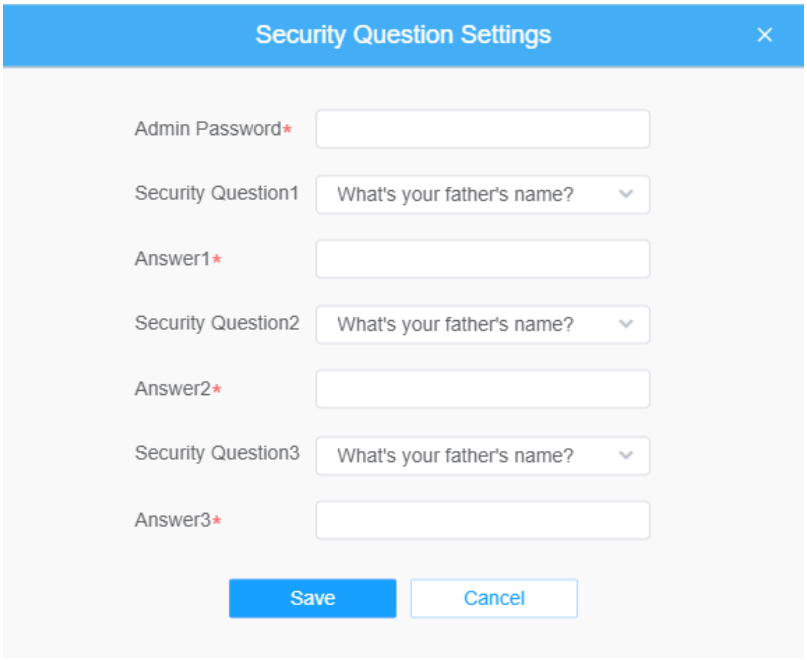
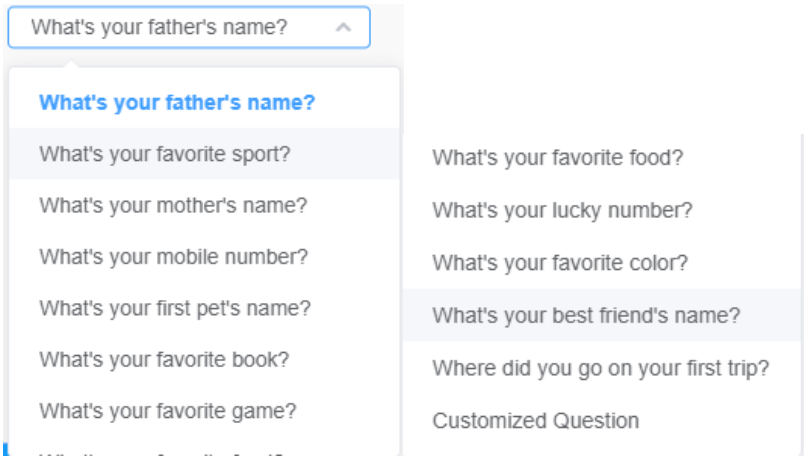
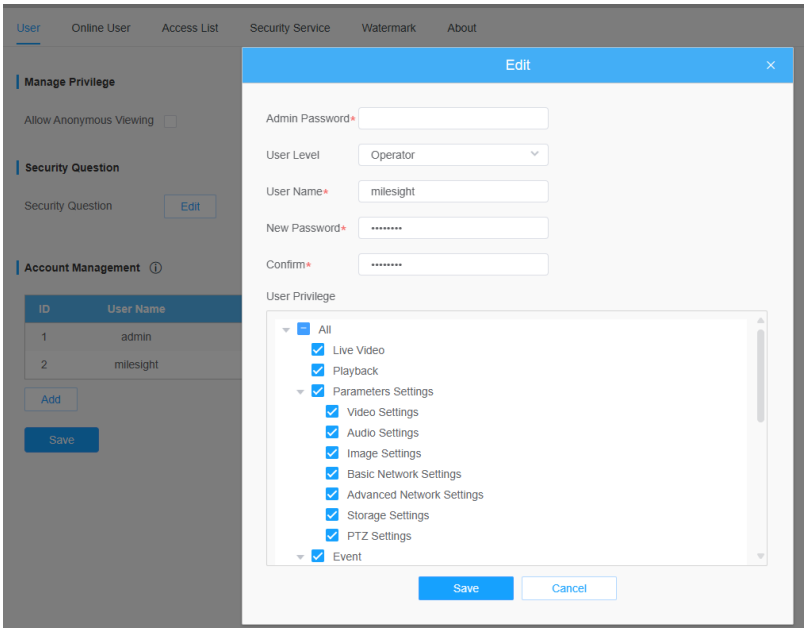


Table 65. Description of the buttons

Parameters	Function Introduction
Manage Privilege	**Allow anonymous viewing:** Check the checkbox to enable visit from whom doesn't have account of the device.

Parameters	Function Introduction
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.  There are twelve default questions below, you can also customize the security questions. 

Parameters	Function Introduction
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. **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. By clicking , you can edit the detailed information of a custom user, including user level, name, password, privileges, and more.  **Note:** • Support up to 20 users, including a default user and 19 custom added users. • The operator privilege is all checked by default.

8.5.2.2 Online User

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

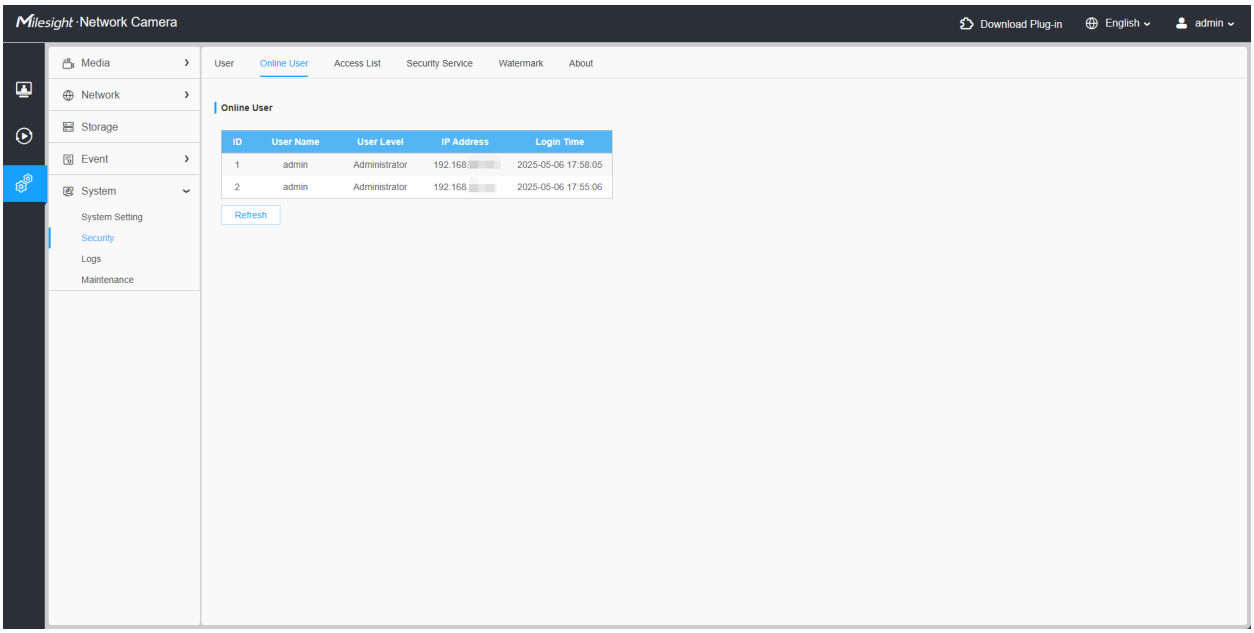


Table 66. Description of the buttons

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

8.5.2.3 Access List

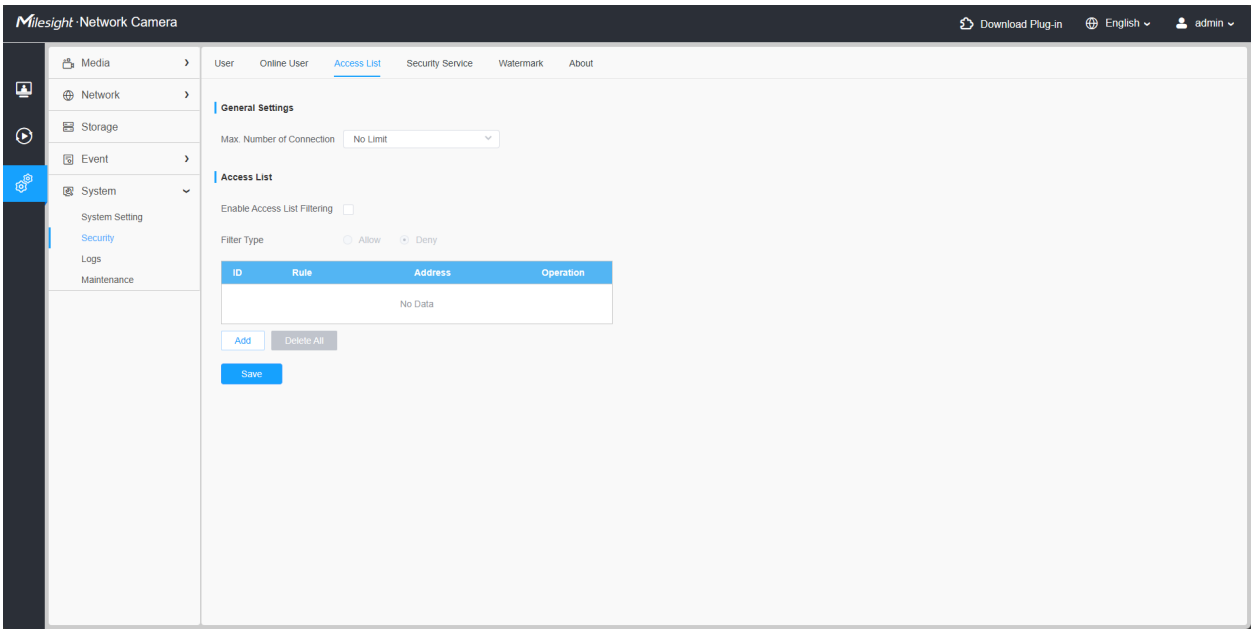


Table 67. Description of the buttons

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.	
Access List	**Filter type:** Allow or deny access.	
	Add	**Rule: Single, Network and Range** are available. **IP address:** Input the address to get the access to the device.
	Delete All	Delete all the access list.
		Edit the selected IP on access list.
		Delete the selected IP on access list.

Parameters	Function Introduction
Save	Save the configuration.

8.5.2.4 Security Service

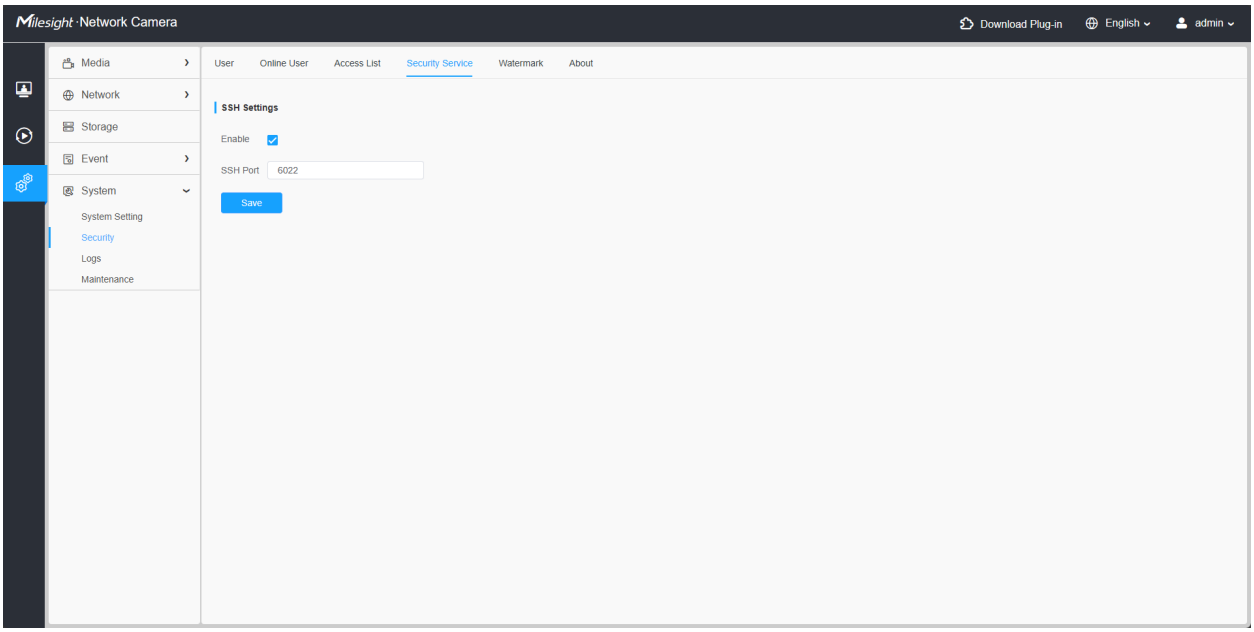
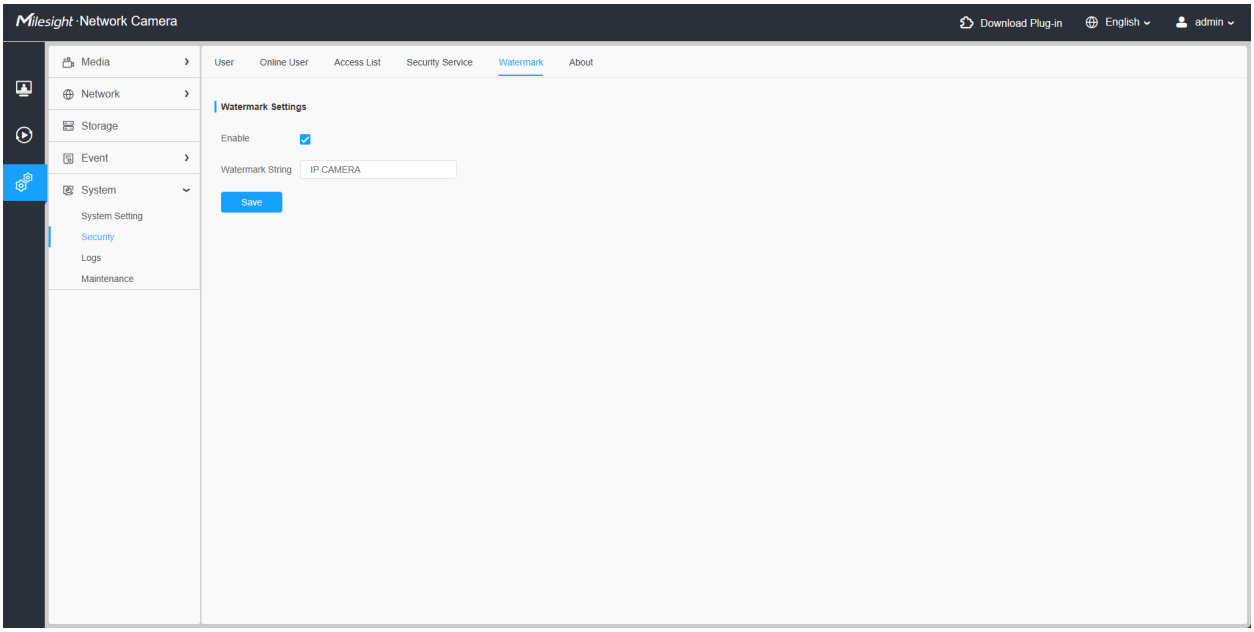


Table 68. Description of the buttons

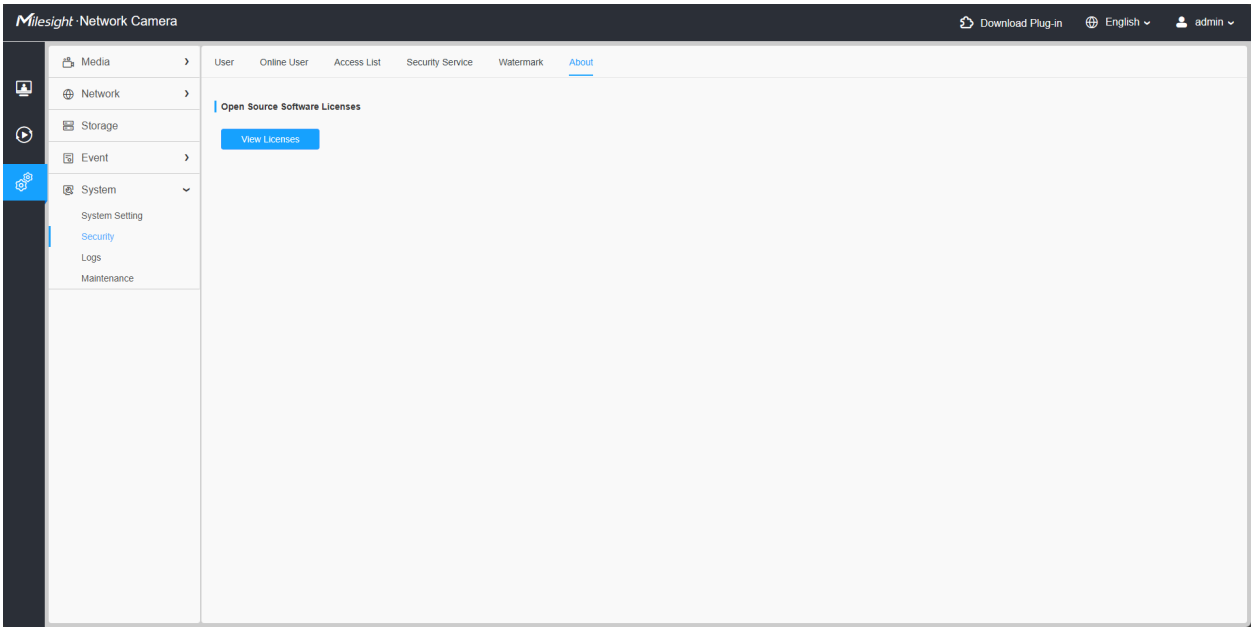
Parameters	Function Introduction
SSH Settings	Secure Shell (SSH) has many functions: it can replace Telnet and also provides a secure channel for FTP, POP, even for PPP.

8.5.2.5 Watermark



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

8.5.2.6 About

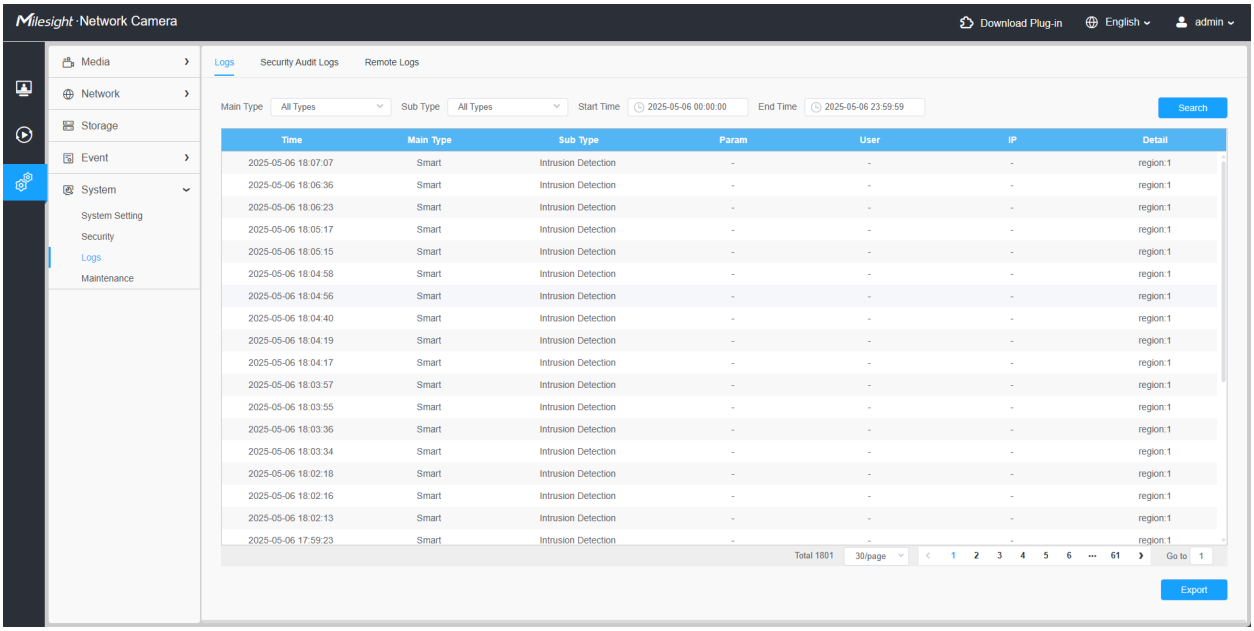


User can view some open source software licenses about the camera by clicking the View Licenses button.

8.5.3 Logs

The logs contain the information about the time and IP that have accessed the camera through the web.

8.5.3.1 Logs



Note:

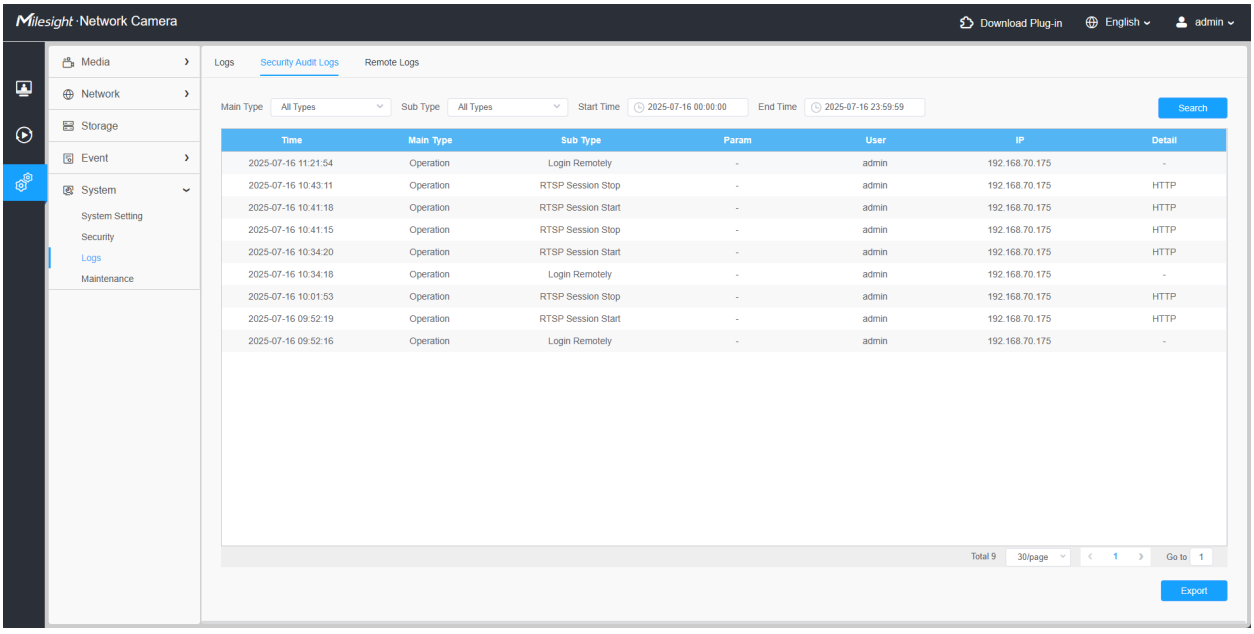
This interface is used to record logs (including All Types, Event, Operation, Information, Exception, and Smart), please ensure a storage device is available. You can insert an SD card or configure a NAS for data storage.

Table 69. Description of the buttons

Parameters	Function Introduction
Main Type	There are five main log types: **All Type, Event, Operation, Information, Exception** and **Smart.**

Parameters	Function Introduction
Sub Type	On the premise that main type has been selected, select the sub type to narrow the range of logs.
Start Time	The time log starts.
End Time	The time log ends.
Search	Search the logs.
Export	Export the logs.
Go to	Input the number of logs' page.

8.5.3.2 Security Audit Logs



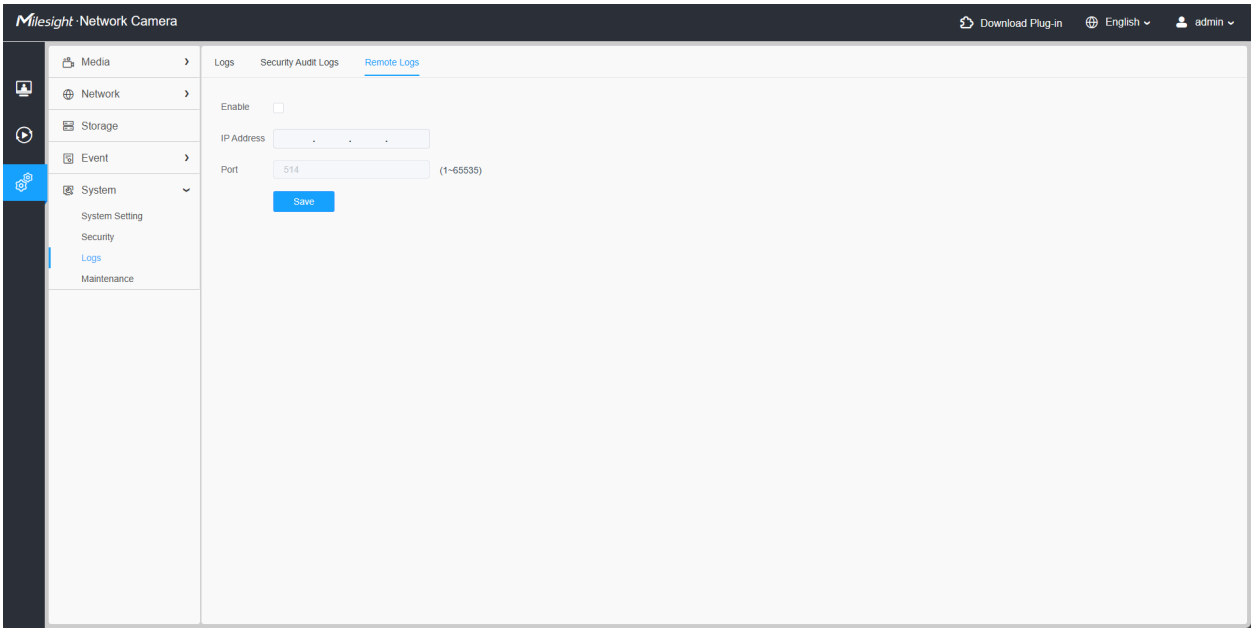
The *Security Audit Logs* interface records critical operations and exception information related to the device. The **Main Type** options include: *All Types, Operation, Information,* and *Exception*. Compared to the standard **Logs** interface, the Information category here excludes **Basic Event ,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

- 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	There are four main log types: **All Type, Operation, Information, and Exception** .
Sub Type	On the premise that main type has been selected, select the sub type to narrow the range of logs.
Start Time	The time log starts.
End Time	The time log ends.
Search	Search the logs.
Export	Export the logs.
Go to	Input the number of logs' page.

8.5.3.3 Remote Logs



You can transfer logs to a third-party server for centralized management.

- **Enable**: Turn on this option to activate log forwarding.
- **IP Address**: Enter the destination IP address of the server that will receive the logs.
- **Port**: Specify the port number used by the receiving server to accept log data.

8.5.4 Maintenance

Here you can configure System Maintenance and Auto Reboot.

8.7.4.1 8.5.4.1 System Maintenance

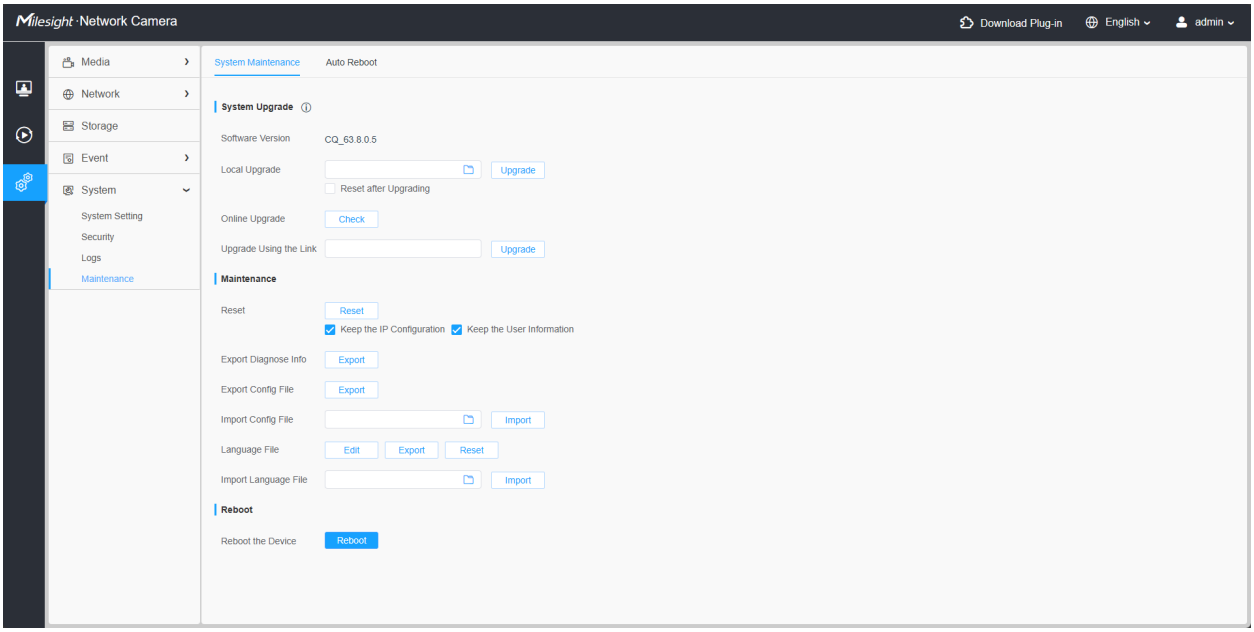
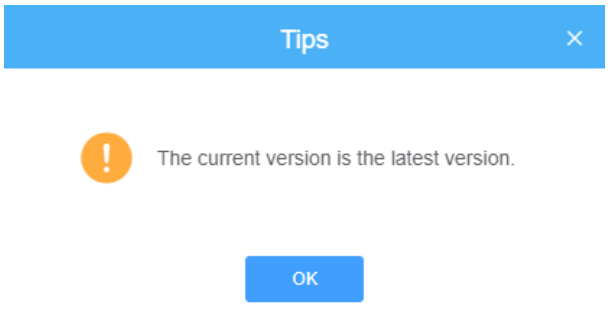
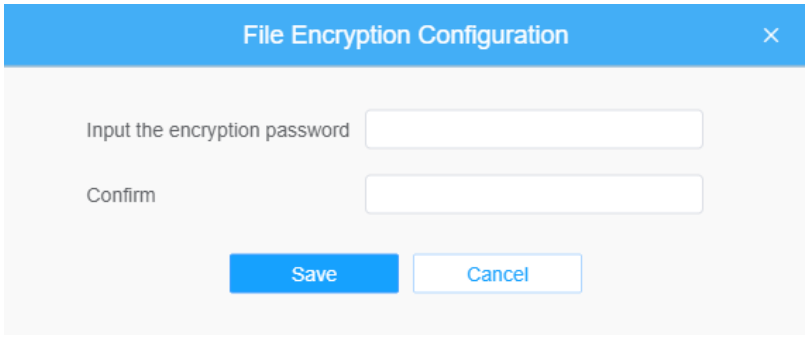
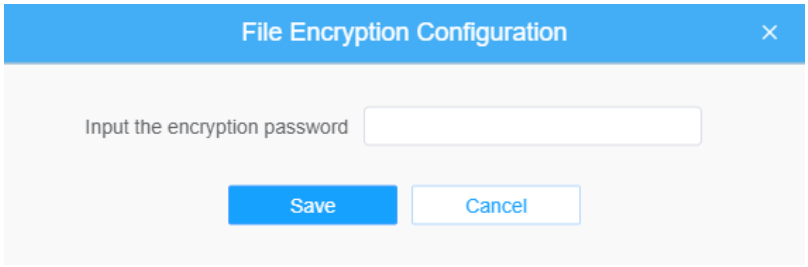


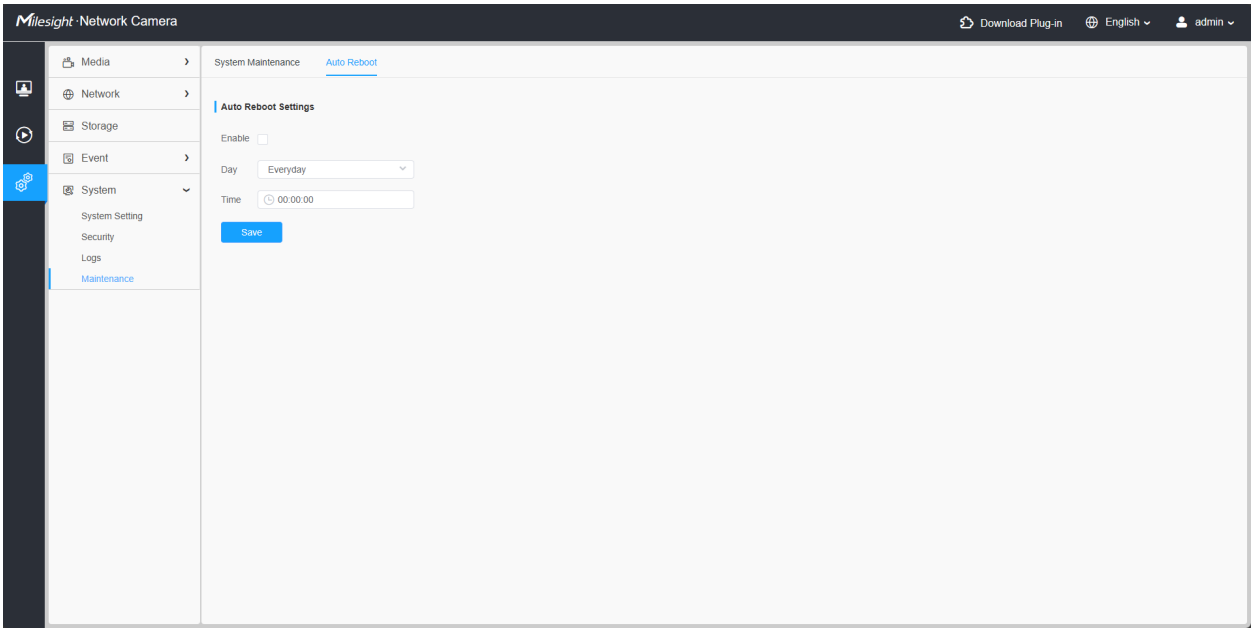
Table 71. Description of the buttons

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. 

Parameters	Function Introduction
System Upgrade	**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.
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.

Parameters	Function Introduction
Maintenance	**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.
Reboot	Click “Reboot” button to restart the device immediately.

8.5.4.2 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

MILESIGHT CHINA

TEL: +86-592-5922772

Add: Building C09, Software Park Phase III, Xiamen 361024, Fujian, China