



TrafficX Series Camera User Manual

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Chapter 1. Introduction

Thank you for purchasing our product. If there is any question or request, please do not hesitate to contact your dealer.

This manual may contain several technically incorrect places or printing errors, and the content is subject to change without notice. The updates will be added to the new version of this manual. We will readily improve or update the products or procedures described in the manual.

This Manual explains how to use and manage Milesight TrafficX Camera. Please read this manual carefully before the operation and retain it for future reference.

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 Xiamen Milesight IoT Co., Ltd (Hereinafter referred to as Milesight).

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

1.2 Safety Instruction

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

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

- This installation must be conducted by a qualified service person and should strictly comply with the electrical safety regulations of the local region
- To avoid the risk of fire and electric shock, keep the product away from rain and moisture before installation.
- Do not touch components such as heat sinks, power regulators, and processors, which maybe hot
- Source with DC/AC 24V
- 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 the manufacturer
- Do not drop the camera or subject it to physical shock
- To prevent heat accumulation, do not block air circulation around the camera
- Laser beams may damage image sensors. The surface of image sensors should not be exposed to 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 Revision History

Table 1.

Version	Revision Content	Release Date
V1.0	First release	March 2024
V2.0	- Added feature descriptions for DualVision TrafficX Radar Camera. - New features: Driving Direction Alarm, Metadata Transmission, and License Plate Confidence Data. - Added new violation type: False Start. - Expanded algorithm support to new regions (e.g., USA, Denmark). - Added EXT4 SD card formatting and automatic data retransmission feature.	August 2025
V3.0	- Added feature descriptions for SingleVision TrafficX Camera.	March 2026

Chapter 2. Product Introduction

2.1 Product Overview

The Milesight TrafficX Series, including the **SingleVision TrafficX Camera** and **DualVision TrafficX Camera**, represents the next generation of intelligent traffic surveillance. Powered by high-performance AI chips and revolutionary image-processing technology, the series delivers industry-leading traffic monitoring, violation detection, and data analysis capabilities 24/7.

Core Strengths

- **AI-Powered Performance:** Equipped with an AI Chip and AI ISP, the series features Edge AI-based ANPR for high-precision recognition.
- **Superior Accuracy:** Both models guarantee a **99% Capture Rate** and **98% ANPR Accuracy**, ensuring reliable evidence collection.
- **All-Weather Reliability:** Professional-grade **IP67** protection, featuring integrated **Fan and Heater** modules to ensure stable operation in extreme environments.
- **High Compatibility & Connectivity:** Supports CGI/APIs, TCP/HTTP/MQTT protocols, and optional **4G/GPS** modules for seamless system integration and wireless deployment.

Series Specifications & Selection

To meet diverse traffic scenarios, the TrafficX series offers two specialized architectures:

Feature	SingleVision TrafficX	DualVision TrafficX
Sensor System	Single Global Shutter Sensor	Dual 5MP Sensors (ANPR + Evidence)
Max Speed	Up to 250 km/h	Up to 320 km/h (Radar Version)

- **Advanced Imaging & Acquisition**

[SingleVision] Precise Optical Control: The SingleVision model utilizes **P-iris** technology and **Global Shutter** to maintain sharp snapshots and optimal depth of field, even in rapidly changing light conditions.

[DualVision] Dual-Sensor Evidence Collection: Featuring dual 5MP sensors, the DualVision model provides simultaneous close-ups of license plates and wide-angle environment overviews with a unified timeline.

- **High-Speed Recognition**

The series is engineered for high-speed environments. The **DualVision** camera supports speeds up to **320 km/h** (ideal for highways), while the **SingleVision** camera excels in urban and arterial roads with a recognizable speed of up to **250 km/h**.

- **Traffic Violation Detection**

AI-based TrafficX series cameras accurately detect and alert violation events such as Red Light Violation (**TS5511-GH**), Reverse Driving Detection, No-plate Vehicle Detection, Black/White List Detection and Vehicle Event Detection based on recognized vehicle features. (e.g. It can be applied to detect truck violations in restricted city areas, detect the unauthorized usage of emergency lanes/bus lanes, etc.)

- **Ultra-High-Speed Speed Detection (TS5510-GVH)**

Featuring an integrated 24 GHz radar, this camera delivers precise and reliable speed detection for vehicles traveling at speeds of up to 320 km/h. Designed for high-speed traffic enforcement, it ensures accurate license plate recognition and speed measurement even under demanding conditions, providing consistent performance for highways, expressways, and other fast-moving traffic scenarios.

- **Easy Deployment and Management**

Easy camera deployment, professional-grade IP67 protection and reliable construction. Optional 4G LTE allows wireless transmission via SIM card, eliminating the need for complex network cable connections. Built-in GPS facilitates precise location information collection and management, aiding in vehicle tracking, evidence gathering, and crime investigation.

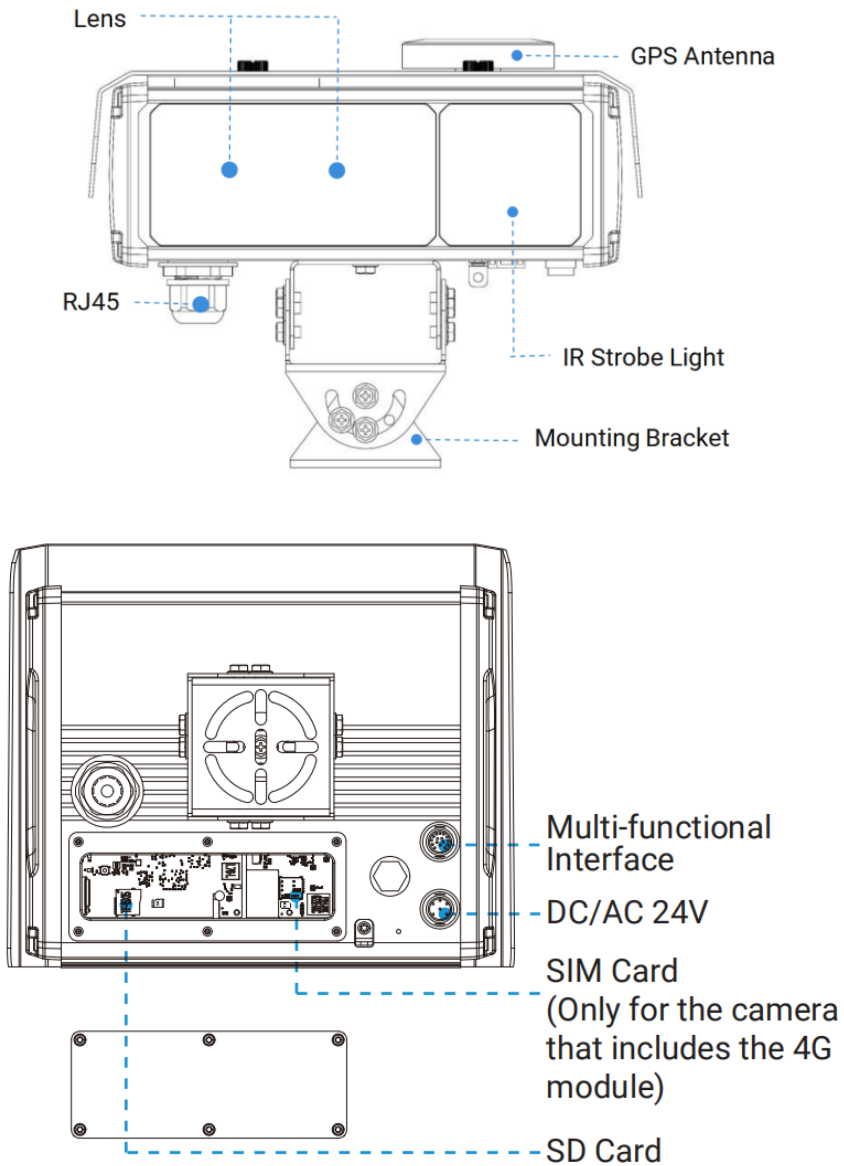
- **High Compatibility**

The high compatibility sets this camera apart. Unlike some conventional cameras that only record the image on an SD card, this device supports CGI/APIs and TCP/HTTP/MQTT protocols for easy integration, allowing you to transmit customizable POST data to any third-party system.

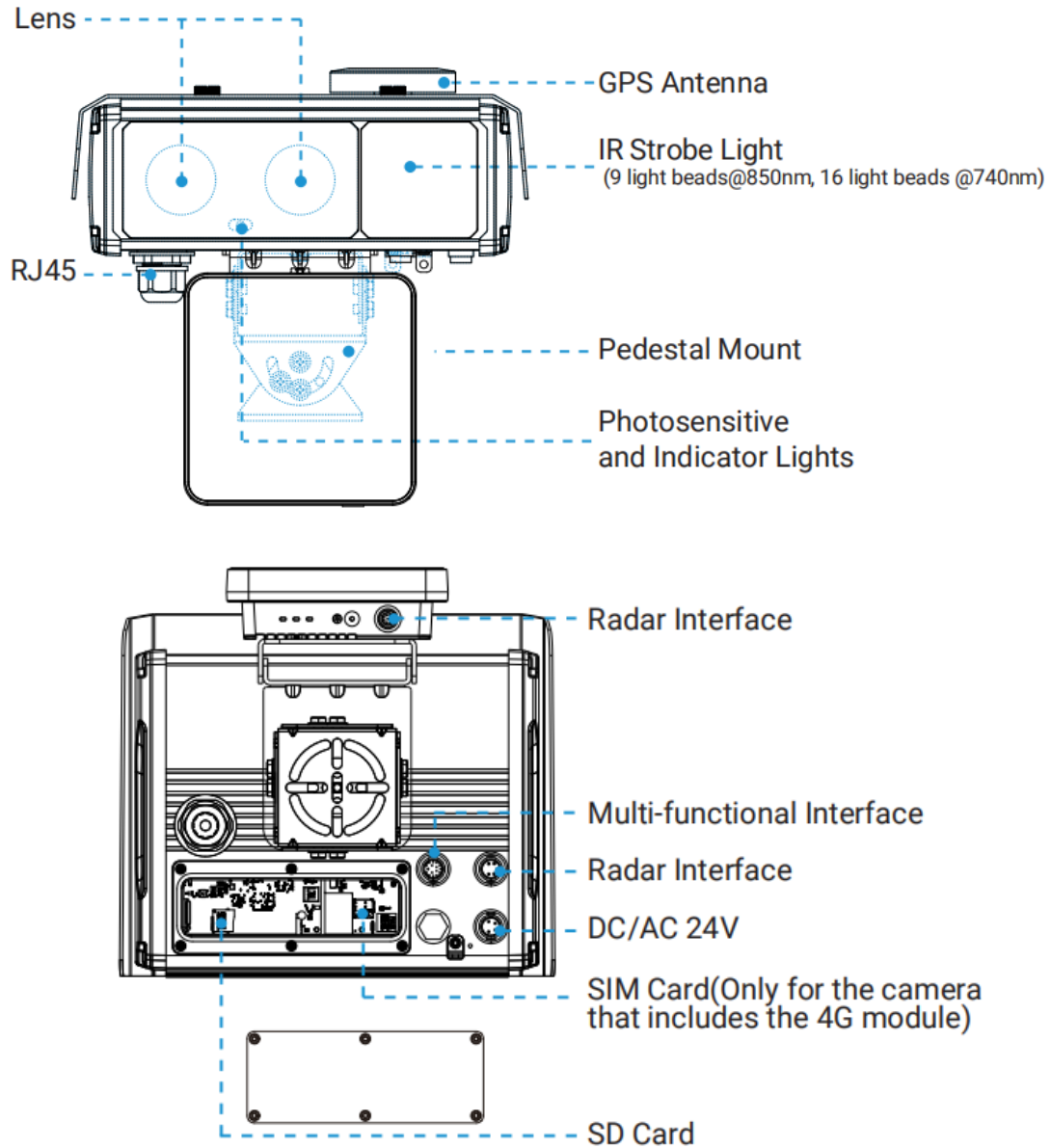
2.2 Hardware Overview

DualVision TrafficX Camera

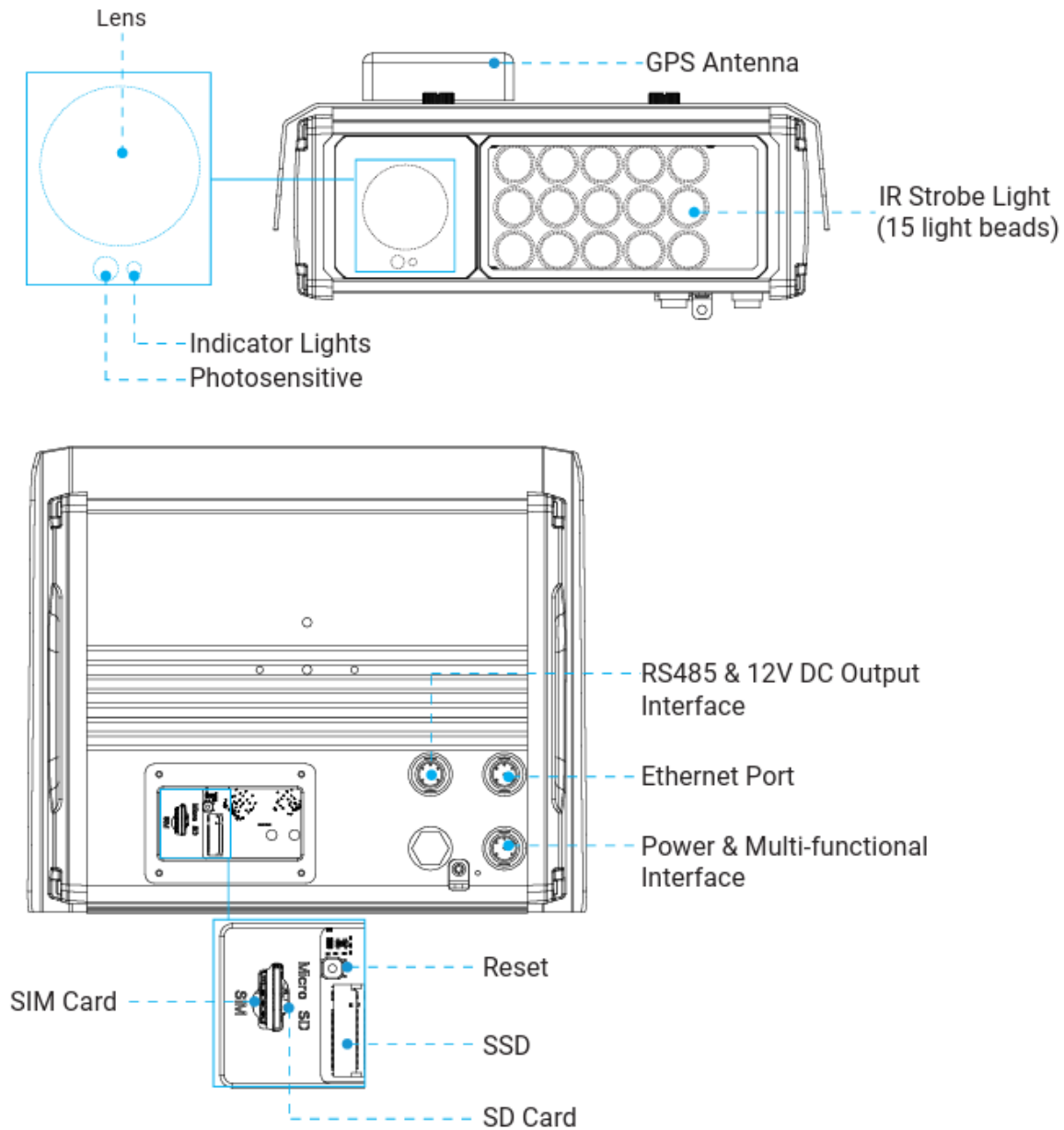
DualVision TrafficX Enforcement Camera



DualVision TrafficX Radar Camera



SingleVision TrafficX Camera



2.3 Related Documents

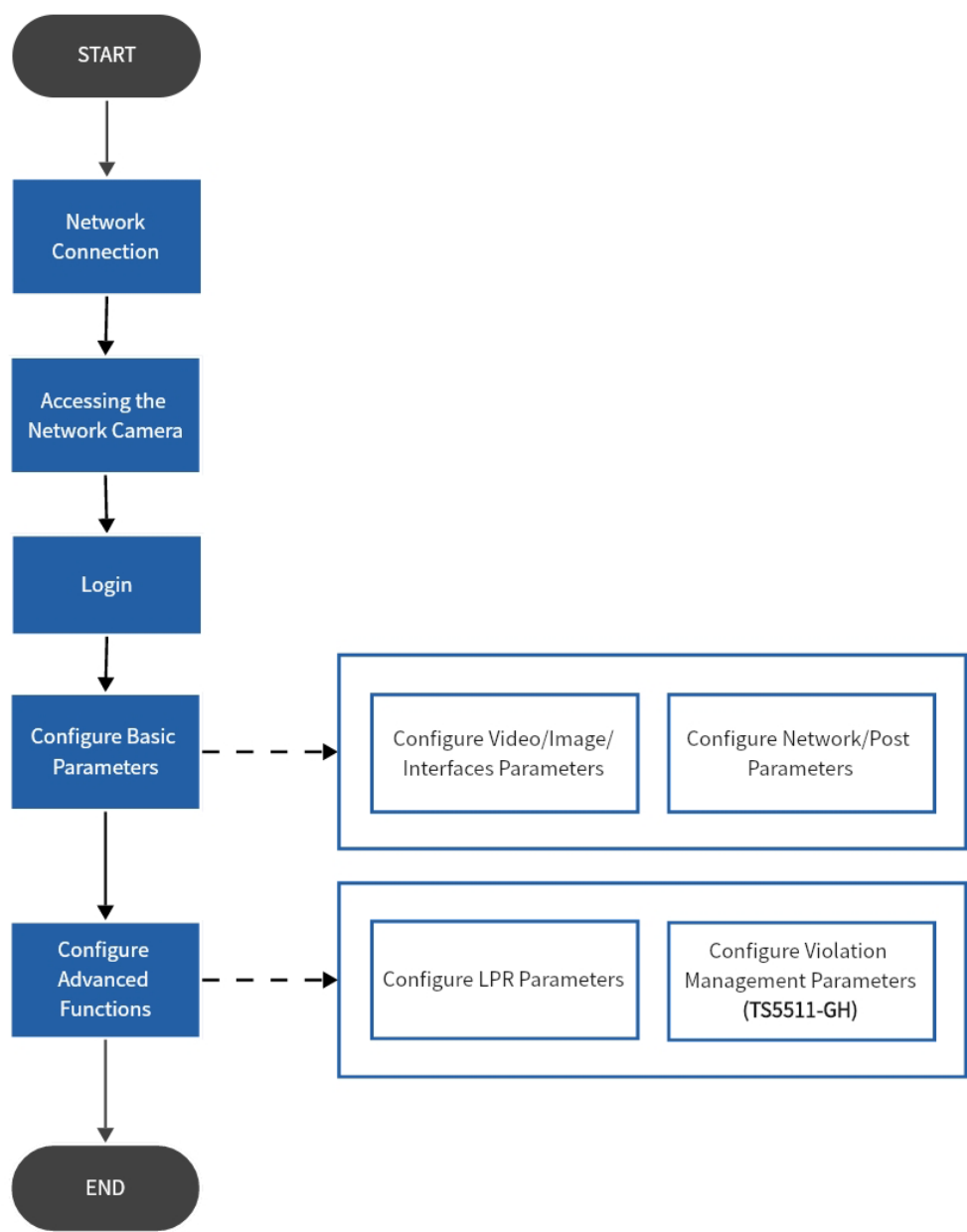
Table 2.

Document Type	Link
	DualVision TrafficX Camera
	DualVision TrafficX Enforcement Camera

Document Type	Link
Datasheet	https://resource.milesight.com/milesight/security/document/datasheet/ipc/traffic/trafficx/milesight-trafficx-series-datasheet-en.pdf
Quick Start Guide	https://resource.milesight.com/milesight/security/document/user-manual/intelligent-traffic/milesight-trafficx-series-quick-start-guide-en-v1.0.pdf
Demo - Detailed AI LPR Attributes	https://www.youtube.com/watch?v=NK1sdRAg-bQ
DualVision TrafficX Radar Camera	
Datasheet	https://resource.milesight.com/milesight/security/document/datasheet/ipc/traffic/trafficx/milesight-dualvision-trafficx-radar-camera-datasheet-en.pdf
Quick Start Guide	https://resource.milesight.com/milesight/security/document/user-manual/intelligent-traffic/milesight-dualvision-trafficx-radar-camera-quick-start-guide-en.pdf
Video	https://www.youtube.com/watch?v=po5zQfzIxeU&t=5s
SingleVision TrafficX Camera	
Datasheet	https://resource.milesight.com/milesight/security/document/datasheet/ipc/traffic/trafficx/milesight-singlevision-trafficx-camera-datasheet-en.pdf
Quick Start Guide	https://resource.milesight.com/milesight/security/document/user-manual/intelligent-traffic/milesight-singlevision-trafficx-camera-quick-start-guide-en.pdf

Chapter 3. Configuration Flow

The configuration flow of TrafficX Camera is shown in the following figure.



More configuration details is shown in the following table.

Table 3. Description of flow

Configuration	Description	Reference
Network Connection	Connect the network camera. You can set the camera over the LAN or dynamic IP connection.	Setting the Camera over the LAN (page 17)
Accessing the Network Camera	Accessing from IP address, web browser and Milesight back-end software is available.	Assigning an IP Address (page 19)
Configure Basic Parameters	After login the camera, you can adjust the video/image/interface/network/post parameters as needed.	Video (page 33) Image (page 37) Interface (page 101) TCP/IP (page 43) Post (page 105)
Configure Advanced Functions	Configure LPR-related settings and other advanced functions.	LPR (page 58) Violation Management (page 92)

Chapter 4. Installation Recommendations

DualVision TrafficX Camera

DualVision TrafficX Enforcement Camera

Please refer to the following link for installation recommendations and precautions:

<https://resource.milesight.com/milesight/security/document/user-manual/intelligent-traffic/milesight-intelligent-traffic-cameras-installation-guide-trafficx-series.pdf>

 **Note:** You can also use the Auxiliary Installation view in the Live Video interface after accessing the camera to determine the installation angle and field of view. For detailed instructions, please refer to the [Live Video \(page 26\)](#) section.

DualVision TrafficX Radar Camera

To ensure optimal detection performance, the installation environment and positioning of the radar camera are critical. Based on field testing and practical experience, the following key points are recommended:

1. Installation Environment

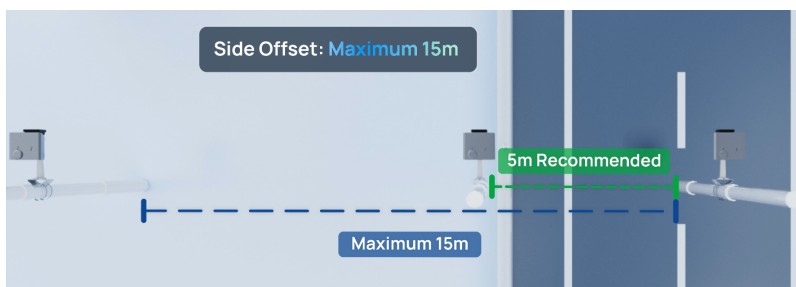
Install the radar camera in open areas whenever possible. Avoid locations where buildings, trees, or other objects may interfere with radar signal transmission.

2. Installation Orientation and Recognition Effectiveness

- When the camera is installed facing directly toward traffic (front-facing), the system performs best in scenarios with 3 traffic lanes.
- When installed from a side angle (side-facing), detection is more effective for the 2 lanes closer to the radar.

Note: Side-Mounted Installation Parameters

- The maximum recommended horizontal offset from a front-facing position is 15 meters.
- Optimal side-mount parameters are a 5-meter horizontal offset with a 5° vertical angle.

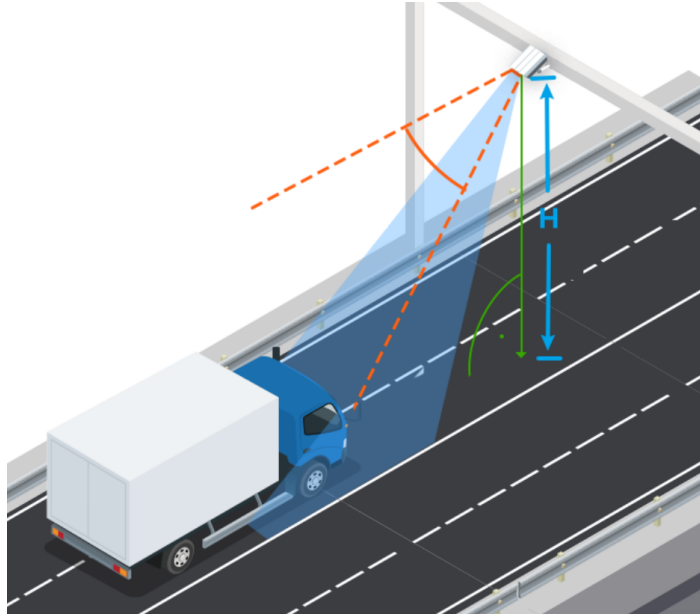


- The vertical angle deviation should not exceed 20°.



3. Installation Height

- The optimal installation height(H) is 6 meters.
- The recommended height(H) range is between 4 and 8 meters.
- Installing the device too high or too low may reduce radar detection efficiency.



4. Radar Board Orientation

- The radar board should face directly toward the lanes as much as possible.
- If a perfect alignment is not feasible, the angle deviation should not exceed 2–3°, to avoid disrupting the radar signal reflection.



5. Detection Range and Blind Spot

- The recommended detection distance for vehicle recognition is within 50 meters.
- The blind spot of this radar model is 10 meters.

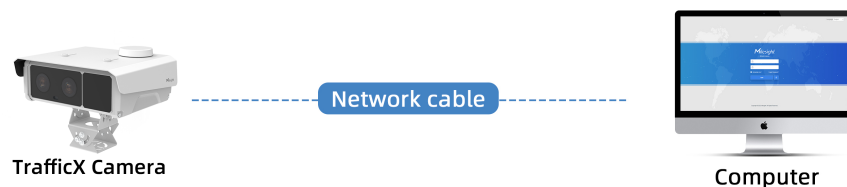
Chapter 5. Network Connection

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.

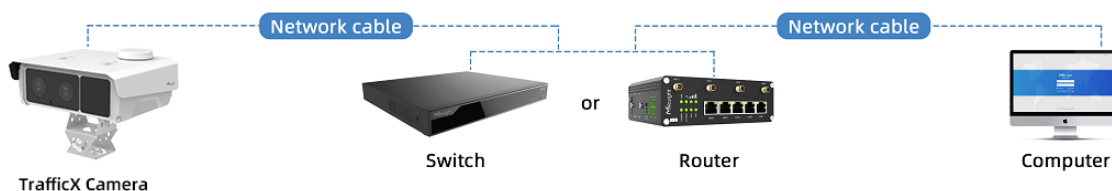
Connect the Camera to the PC Directly

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.



Connect via a Switch or a Router

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



Dynamic IP Connection

Step1: Connect the network camera to a router;

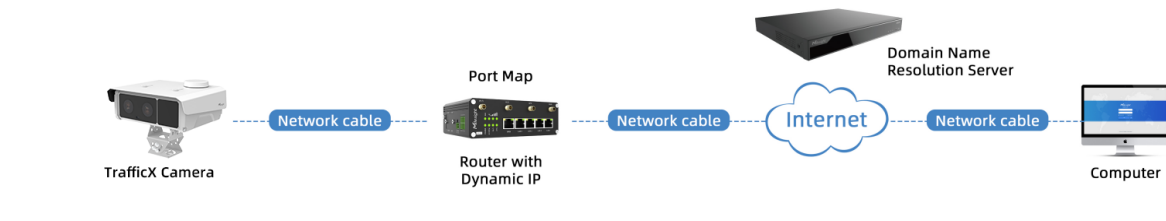
Step2: On the camera, assign a LAN IP address, the Subnet mask and the Gateway;

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 6. Accessing the Camera

Assigning an IP Address

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

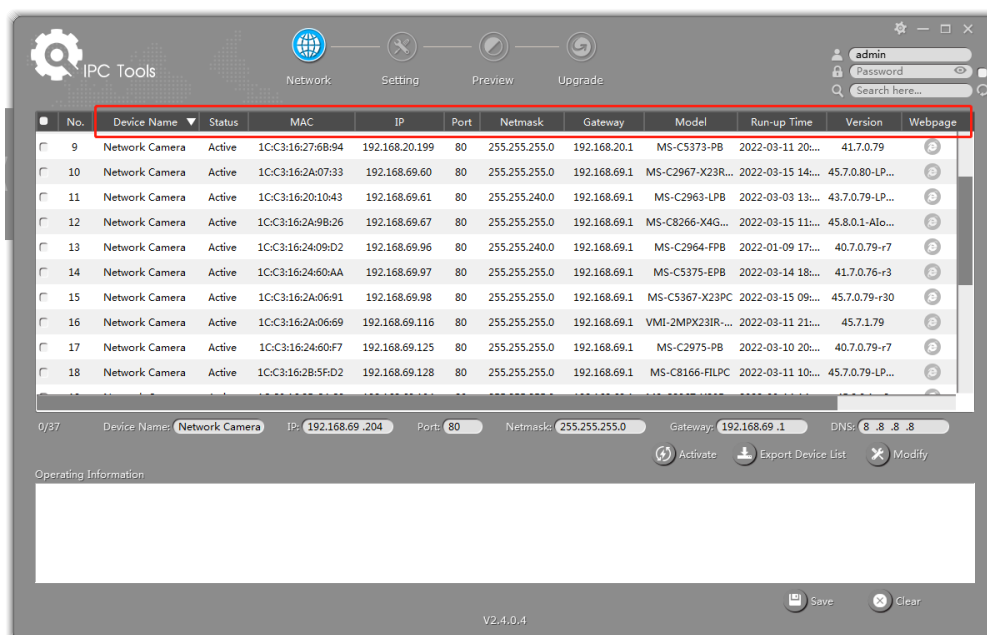
You can also change the IP address of the camera via Smart Tools or browser. Please connect the camera in the same LAN of your computer.

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.

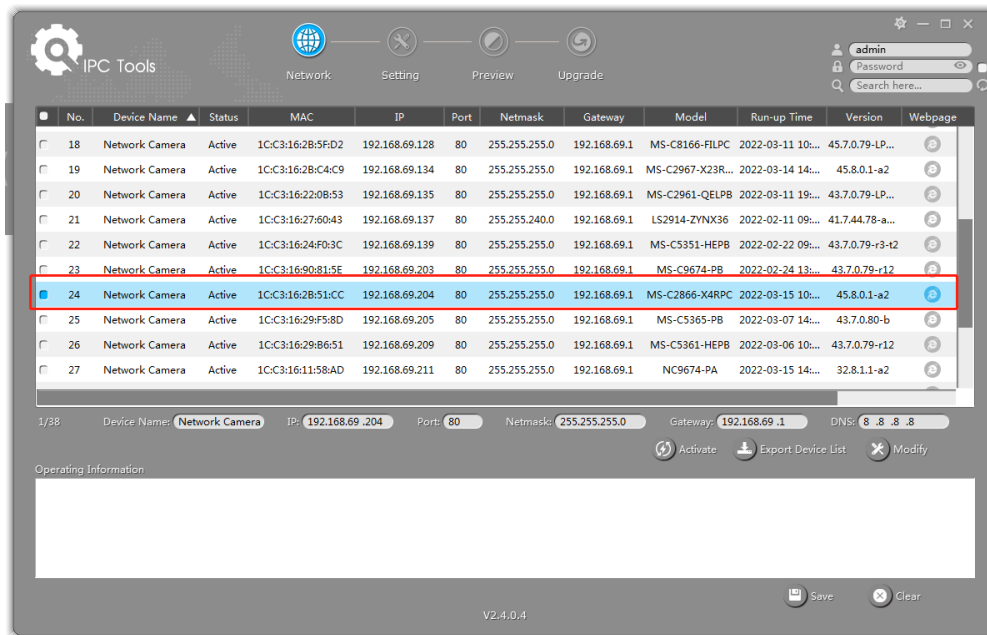
Step1: Install Smart Tools (The software could be downloaded from our website);

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;

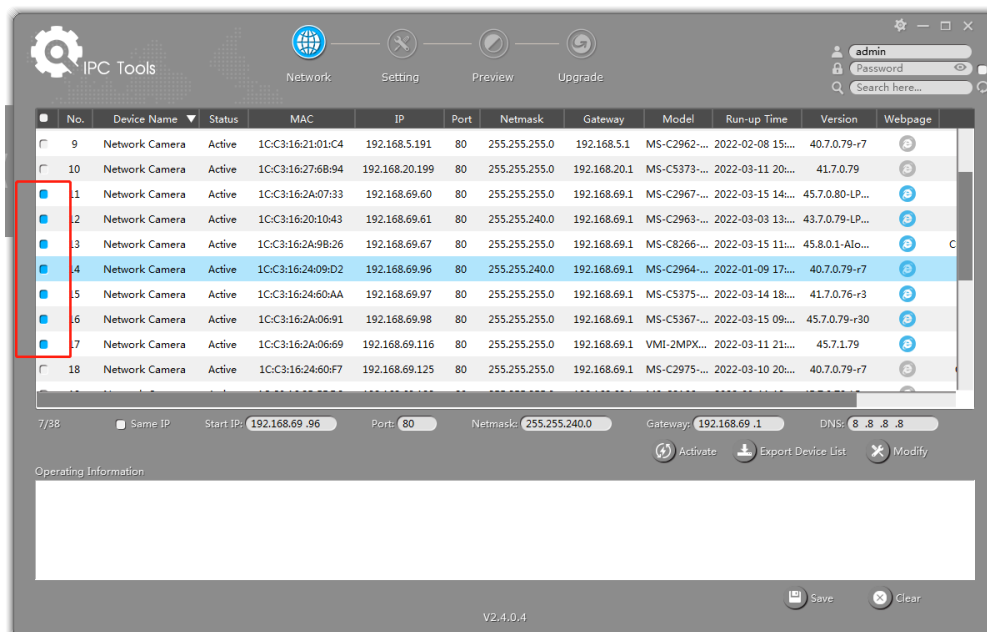


Step3: Select a camera or multiple cameras according to the MAC addresses;

Select single camera:



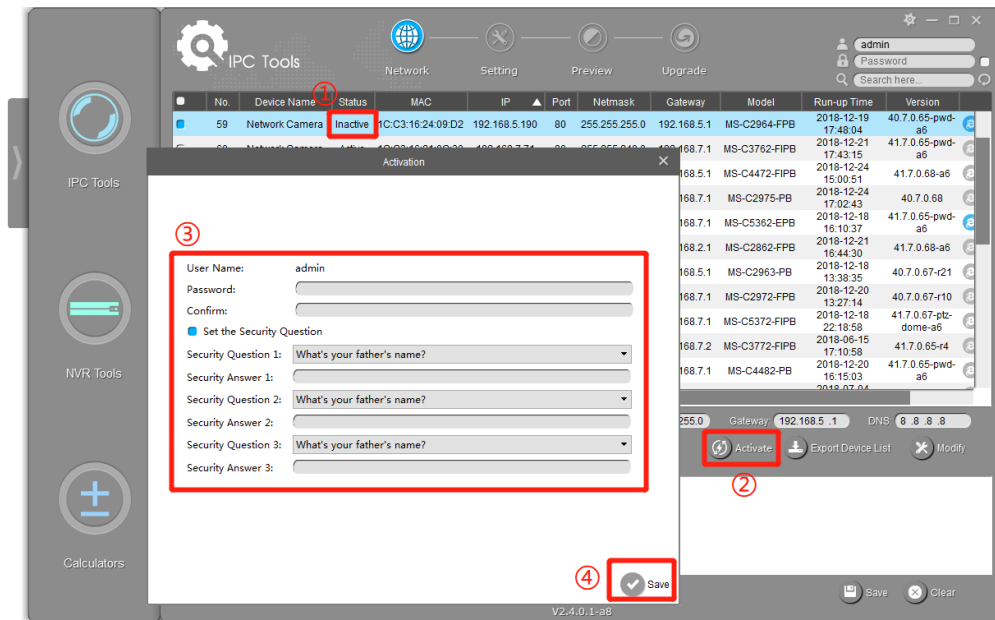
Select multiple cameras:



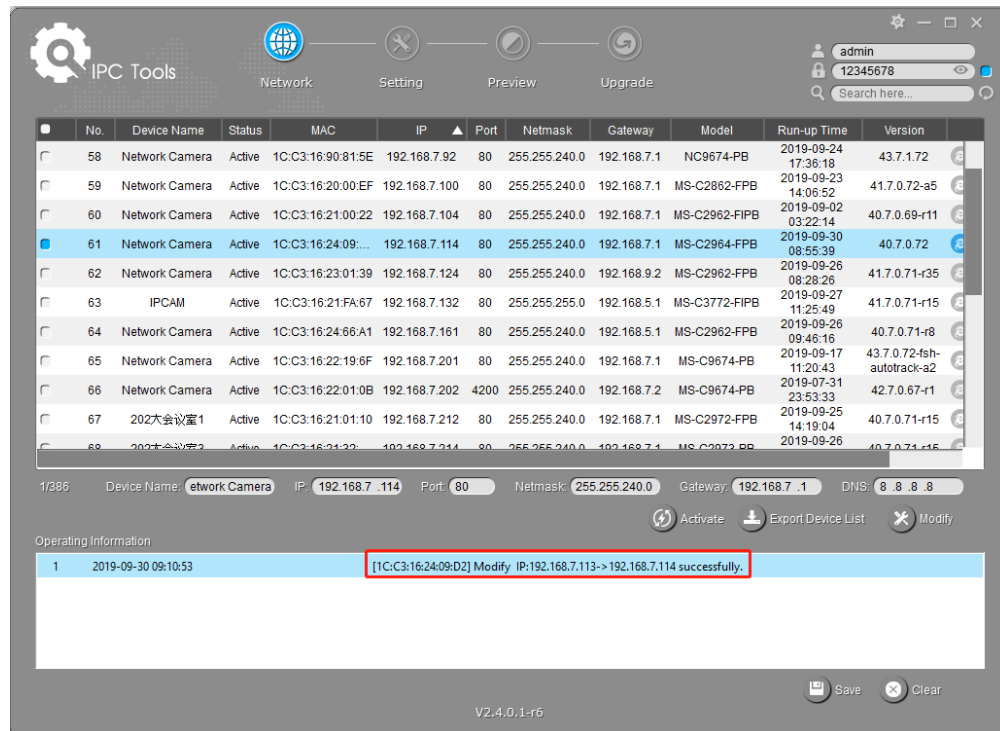
Step4: If the selected camera shows "Inactive" in the status bar, click "Activate" to set the password when using it for the first time. You can also set the security questions when activating the camera in case that you forget the password (You can reset the password by answering three security questions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

 Note:

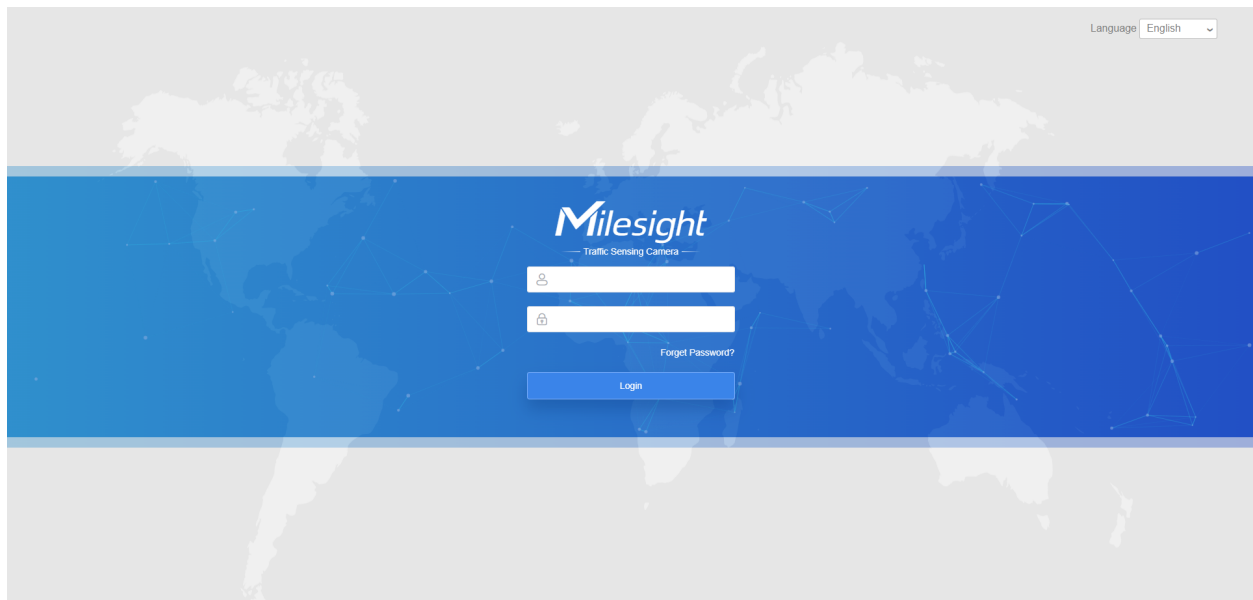
- Password must be 8 to 32 characters long, contain at least one number and one letter.
- You need to upgrade Smart Tools version to V2.4.0.1 or above to activate the camera.



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.



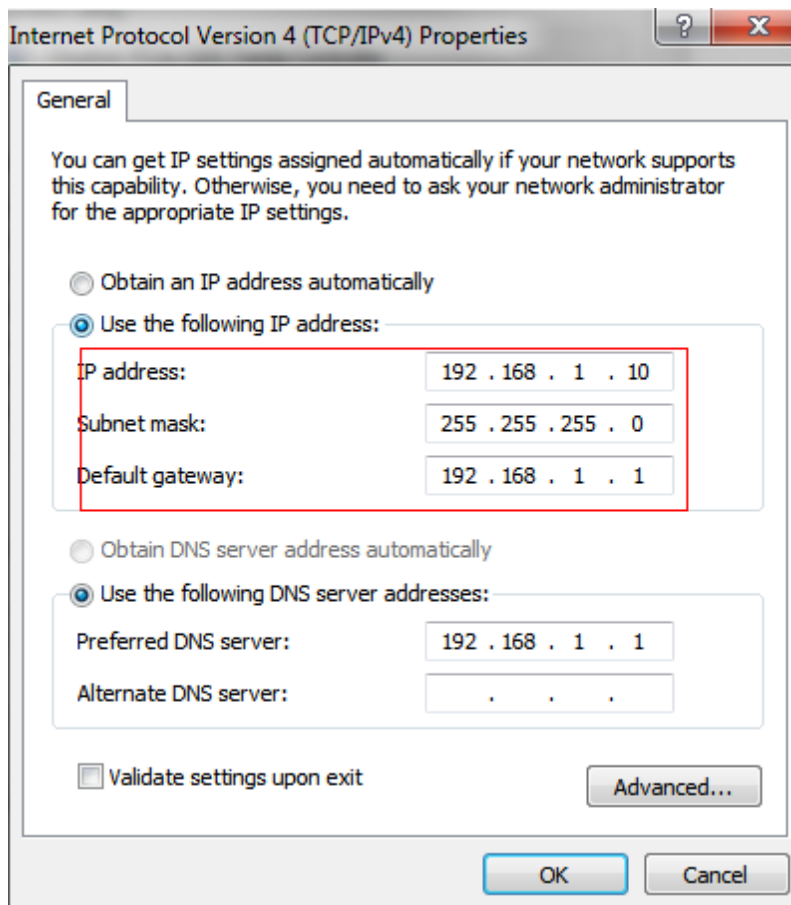
More usage of Smart Tools, please refer to the **Smart Tools User Manual**.

Assigning an IP Address via Browser

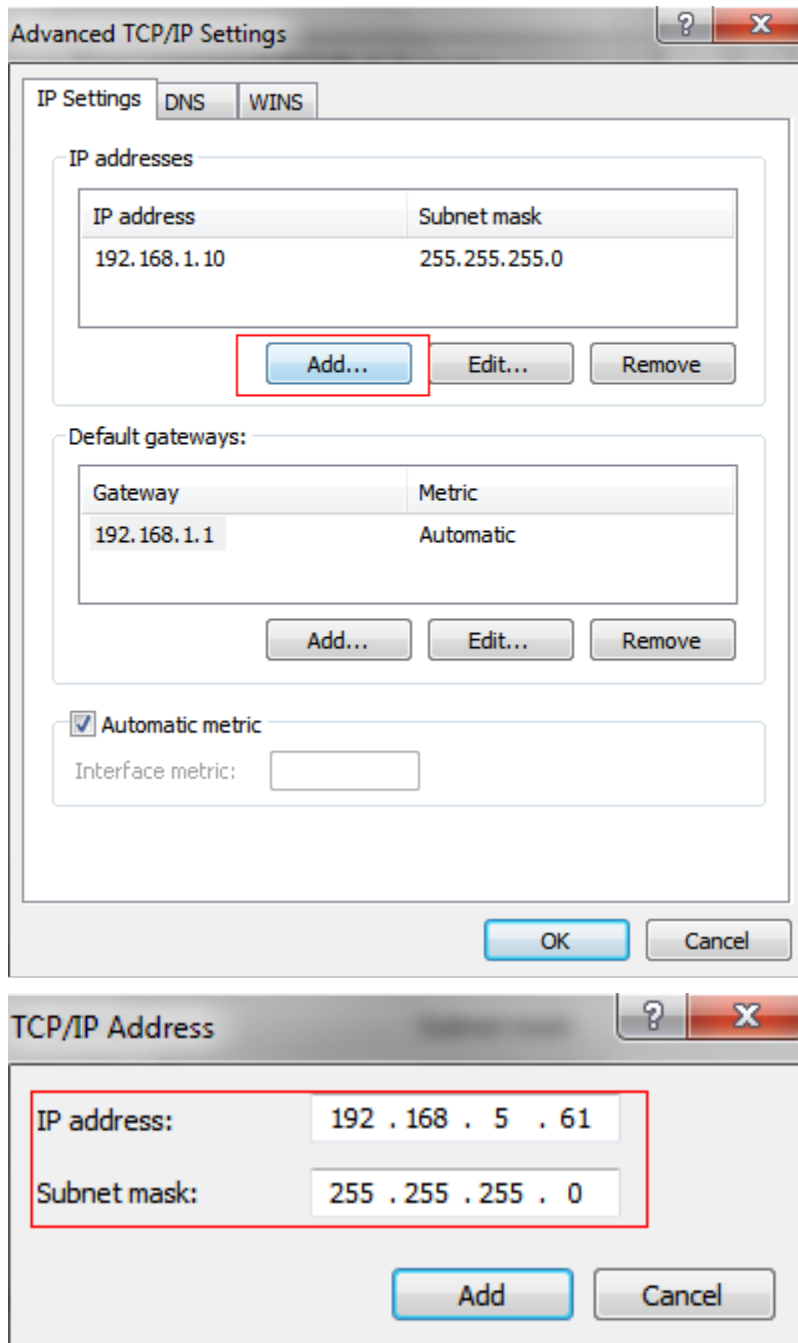
If the network segment of the computer and that of the camera are different, please follow the steps to change the IP address:

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” --> “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.

Accessing from the Web Browser

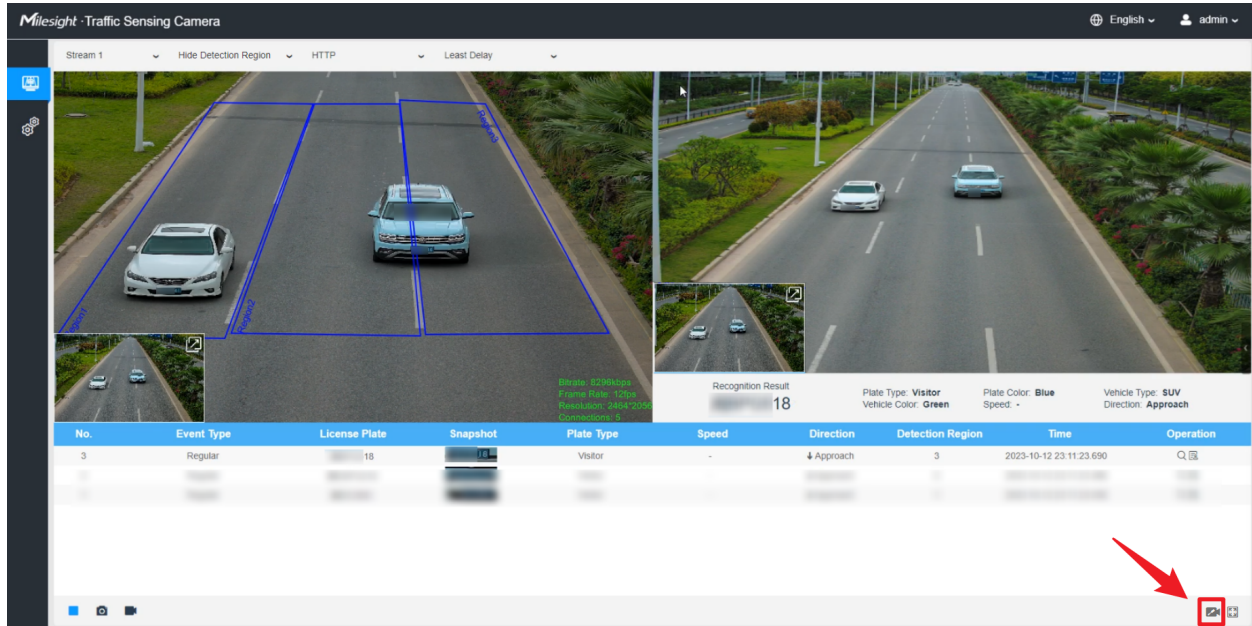
The camera can be used with the most standard operating systems and browsers.

The recommended browsers are Firefox, Chrome, Safari. Additionally, we highly recommend using the Mplayer plugin for optimized browser playing performance, ensuring a smoother and more seamless playing experience.

Chapter 7. Live Video

Welcome to the Live Video interface! In order to make the most of the features in the Live Video interface, please carefully review the relevant instructions and annotations.

Auxiliary Installation View

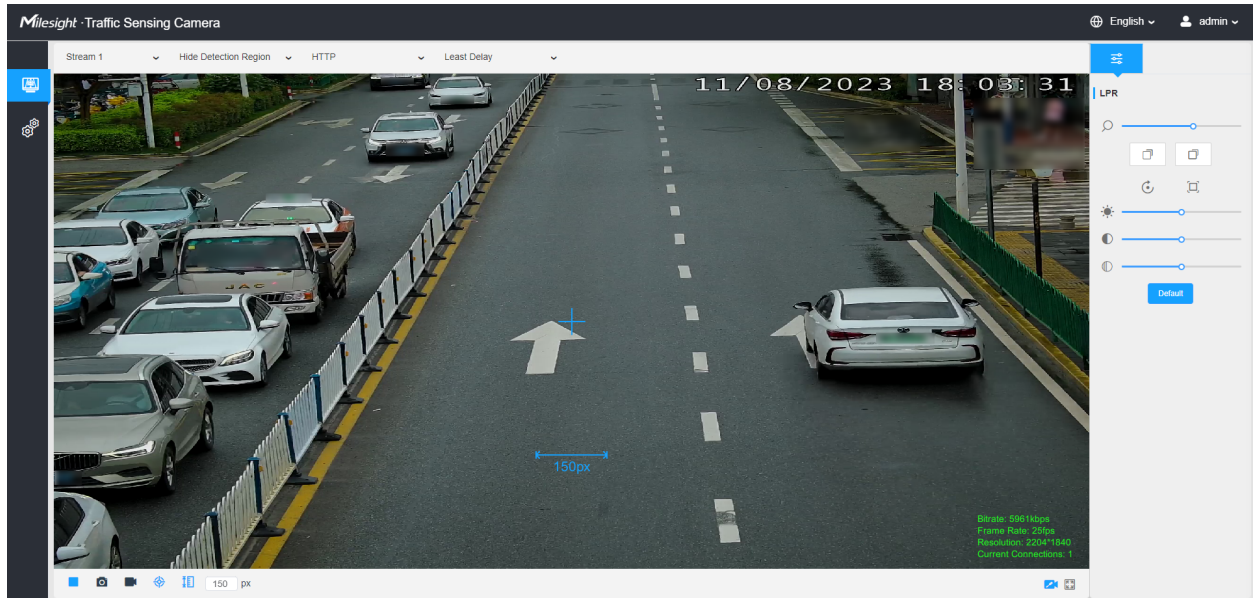


When entering the interface for the first time, we recommend clicking on the Auxiliary

Installation View icon



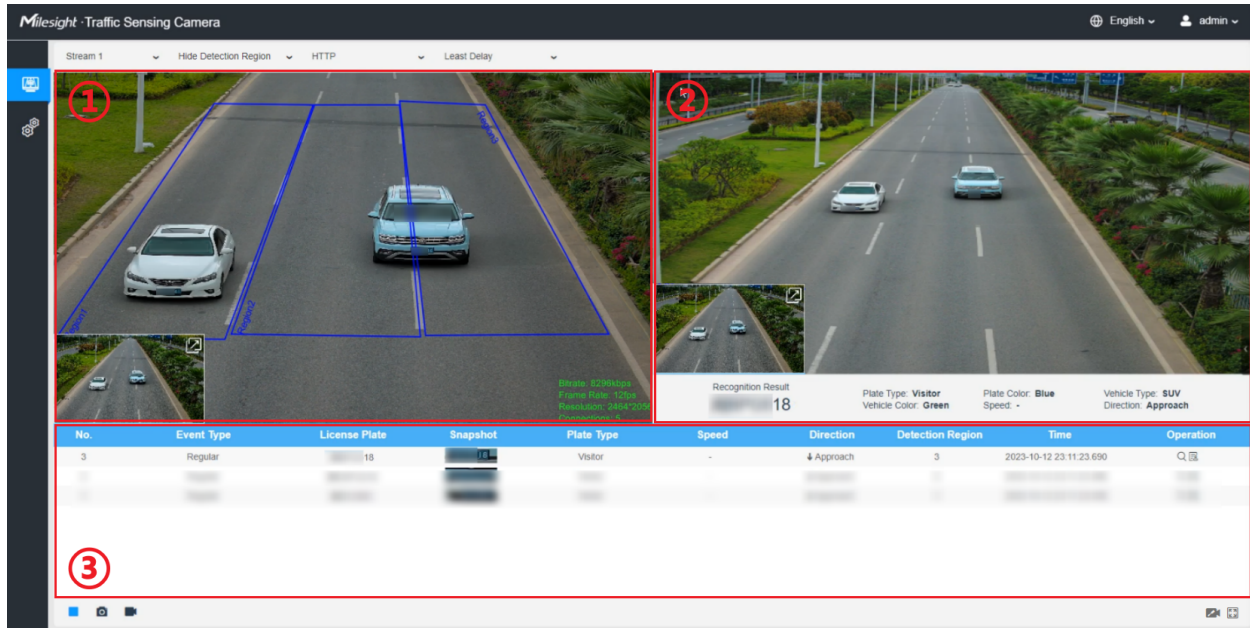
located at the bottom right corner to access the Auxiliary Installation mode.



In Auxiliary Installation mode, there are two auxiliary tools available:

1. You can use the Crosshair  to assist with adjusting the viewing angle. It's better to zoom in to cover 2~3 lanes. (If camera is installed at roadside with some angles, it's better to zoom in to cover 1~2 lanes.)
2. You can use the Ruler  to view and measure the width of the license plate, ensuring it falls within the recommended size range. The recommended display pixel size for the license plate on the screen is 150 to 190 pixels. The width of license plate should be more than 150 pixels for better recognition.

Overview of the Live Video interface



The live video interface is designed for intuitive monitoring and real-time data visualization, divided into three functional blocks:

Module 1: Real-time Video Stream

This module provides a high-definition live view for continuous surveillance.

- **[SingleVision] Integrated AI Stream:** Provides a high-clarity, unified video stream optimized by **AI ISP** and **P-iris** control. It delivers a balanced depth of field, ensuring both the vehicle and its surroundings are sharp and clear in a single, focused view.
- **[DualVision] Dual-Sensor Switching:** Features a primary stream with a floating thumbnail. Users can rapidly switch between the **ANPR sensor** (close-up) and **Evidence sensor** (wide-angle) by clicking the thumbnail or the video frame. The thumbnail position is customizable for optimal monitoring.
- **Universal Controls:** For both models, **Double-click** the image to enter full-screen mode; press **Esc** or double-click again to exit.

Module 2: Real-time Recognition Results

Displays real-time images captured by the sensor(s) along with comprehensive recognition metadata, including:

- **Vehicle Features:** Plate Number, Plate Type, Plate Color, Vehicle Type, and Vehicle Color.
- **Traffic Data:** Direction and Lane Information.
- **Speed Detection:** Supported on specific models equipped with radar (**DualVision TrafficX Radar Camera**).

Module 3: Historical Records & Management

Shows a detailed log of all captured vehicles and supports quick-action management:

- **List Management:** Directly add vehicles to the Black/White List from the live view.
- **Evidence Snapshots:**
[SingleVision]: View high-resolution snapshots including the **Overview** and a cropped **LPR thumbnail**.
[DualVision]: View triple snapshots (Overview from Evidence sensor, LPR close-up, and clear LPR thumbnail).

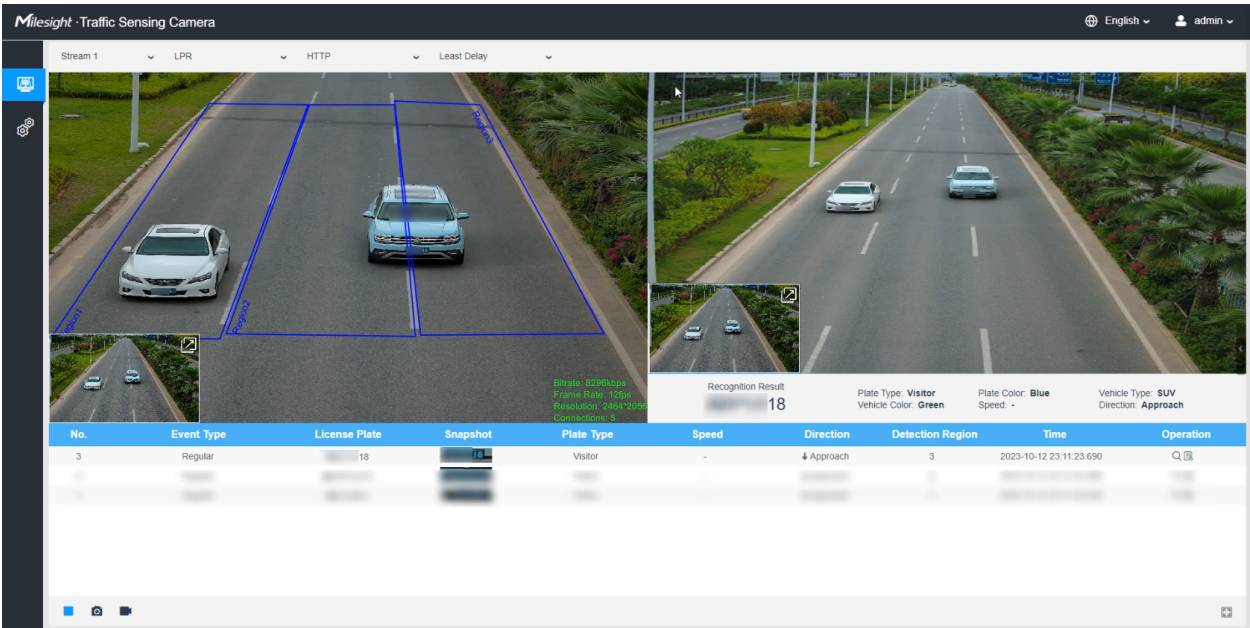
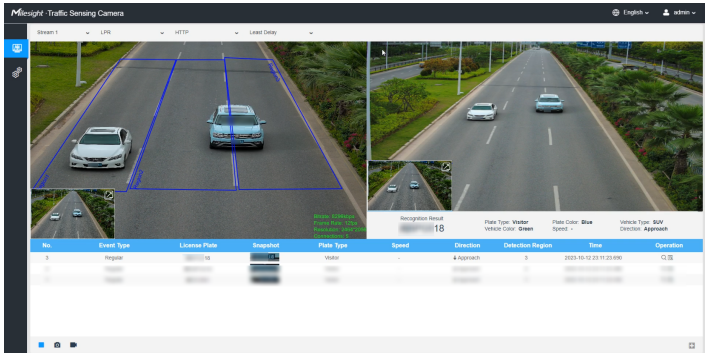
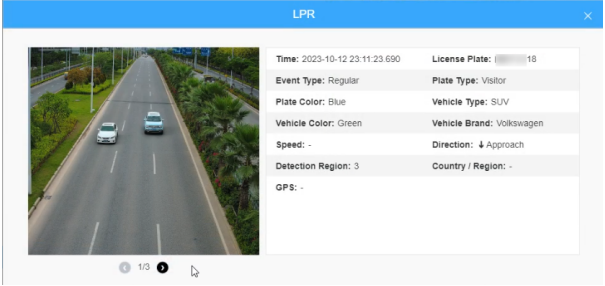


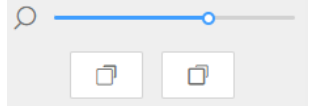
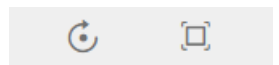
Table 4. Description of the buttons

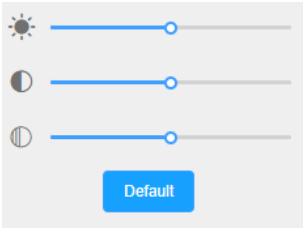
No.	Parameter	Description
1	 Live Video	Click to access the live view page.
2	 Settings	Click to access the configuration page.
3	 English	Click to select system language.
4	 admin	Display the user name and click to logout.
5	Stream 1	Choose the stream (Stream 1/Stream 2) to show on the current video window.
6	Hide Detection Region	Choose the options (Hide Detection Region/LPR/Violation Management) to hide/display detection region on the current video window. 
7	HTTP	The optional streaming transmission methods are UDP/TCP/HTTP.
8	Least Delay	The optional video modes are Least Delay/Balanced/Best Fluency.
9	 Stop/Play	Stop/Play live view.
10	 Snapshot	Click to capture the current image and save to the configured path.

No.	Parameter	Description
11	 Start/Stop Recording	Click to Start Recording video and save to the configured path. Click again to Stop Recording .
12	 Auxiliary Installation View	Click to enter the Auxiliary Installation view. Note: The Auxiliary Installation View button is available only when the "Hide Detection Region" mode is selected.
13	 Full Screen	Click to display images at full-screen.
Operation	 LPR Logs	 Clicking on it will display detailed LPR Logs. On the left side, up to three images can be displayed in the following order: Violation Evidence, Vehicle Snapshot, and Full Snapshot.
	 Add	You can add this LPR record to the Black List/White List.

Click the arrow on the far right to expand the LPR Sensor image adjustment options.

Table 5. Description of the buttons

No.	Parameter	Description
		Zoom: Adjust the Zoom length of the lens.
		Focus-/Focus+: Adjust focus of the lens.
		Lens Initialization, Auxiliary Focus.

No.	Parameter	Description
		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".
		Default: Restore brightness, contrast and saturation to default settings.

Chapter 8. Settings

Media

Video

The TrafficX series offers different streaming architectures based on the camera model. Users can independently configure parameters for each stream to balance image quality, bandwidth, and storage.

[SingleVision] Logical Stream Architecture

The SingleVision camera generates **three independent streams** from its single sensor:

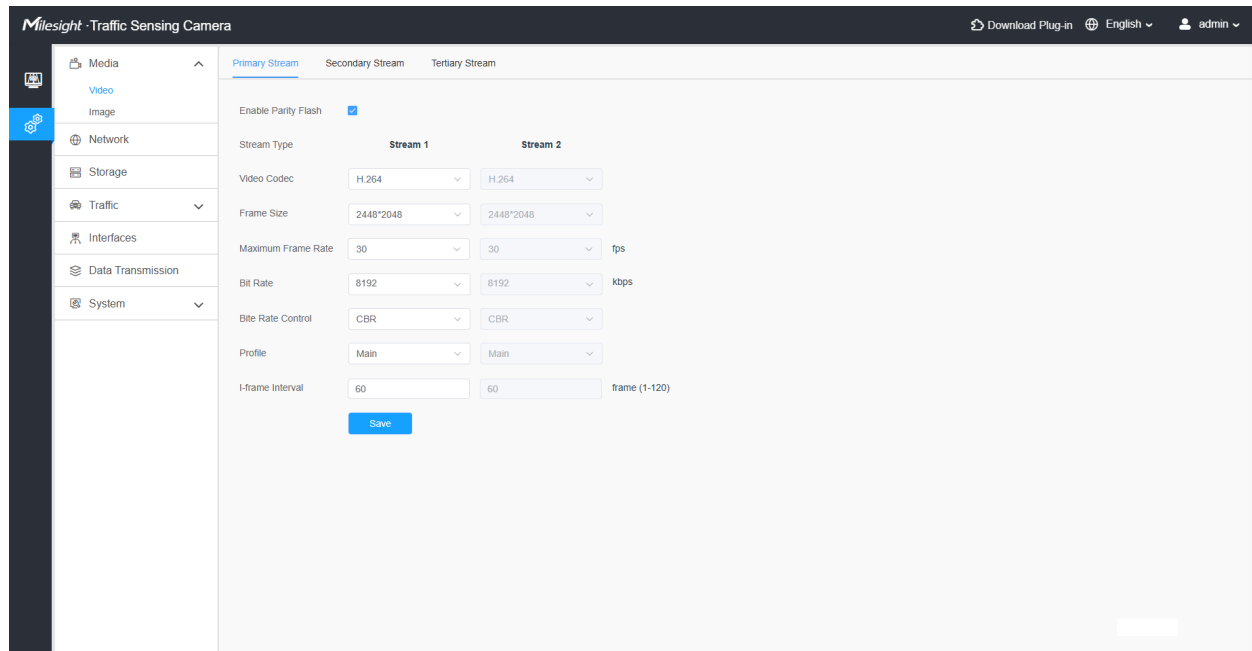
- **Primary Stream:** For high-definition recording and ANPR.
- **Secondary Stream:** For standard real-time monitoring.
- **Tertiary Stream:** For high-versatility integration, supporting up to 1080P resolution.

[DualVision] Dual-Channel Architecture

The DualVision camera manages two physical sensors, each supporting **dual-stream** output (4 streams in total):

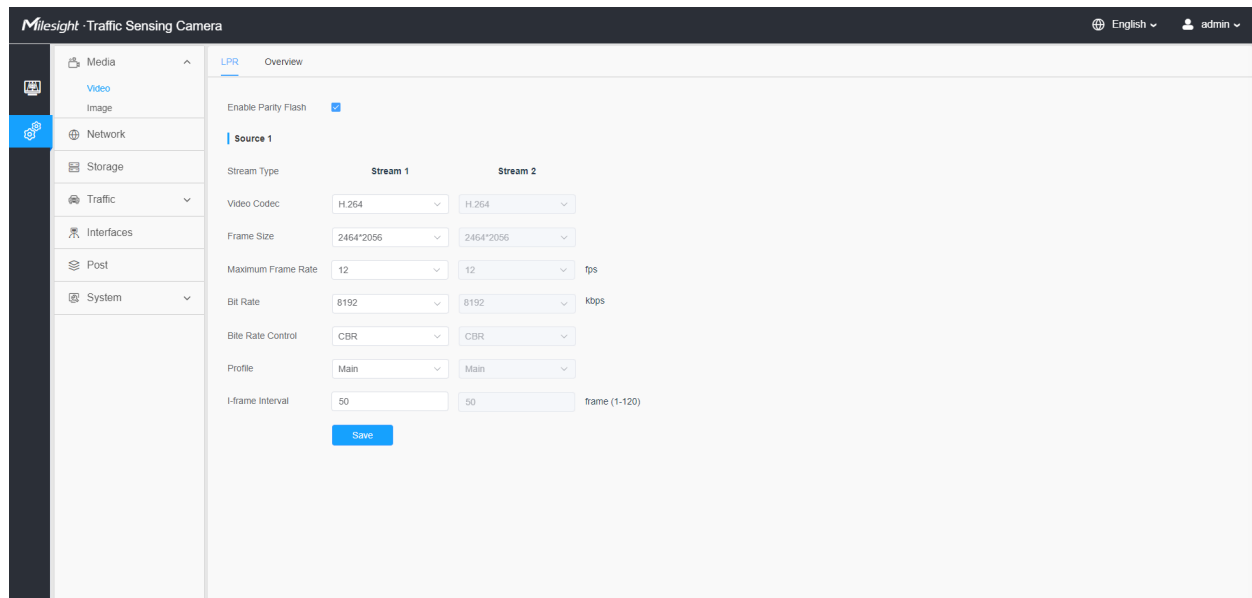
- **LPR Channel:** Focused on license plate recognition.
 - *Stream 1 & Stream 2*
- **Overview Channel:** Focused on wide-angle environmental surveillance.
 - *Stream 1 & Stream 2*

[SingleVision]:



[DualVision]:

- LPR



- Overview

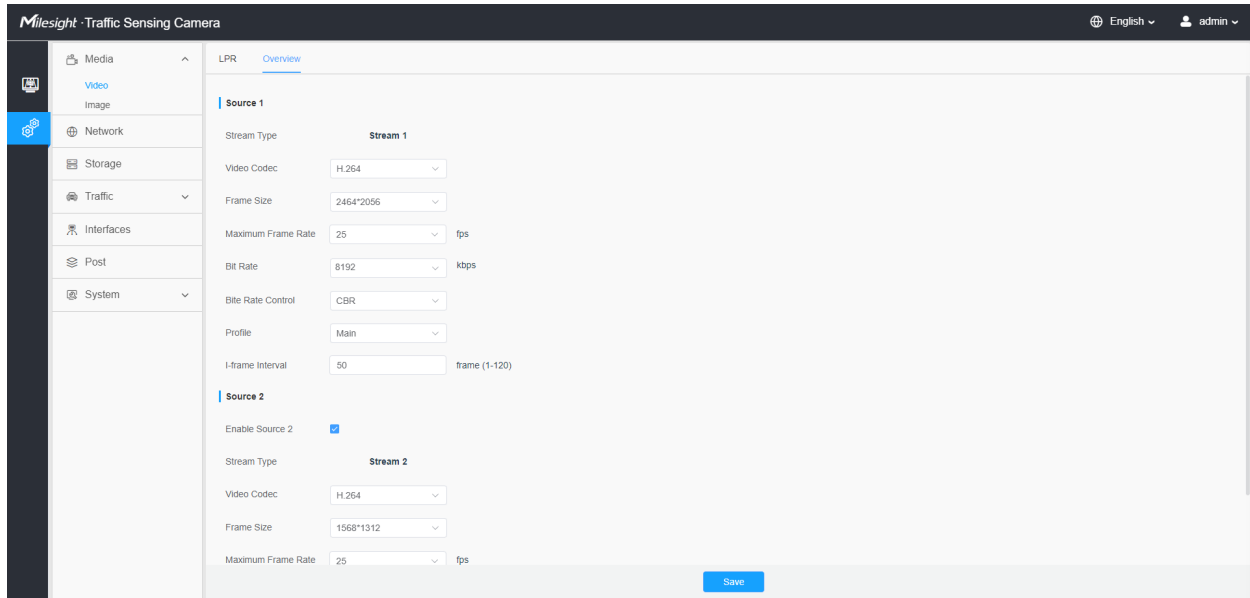


Table 6. Description of the buttons

Parameters		Function Introduction
LPR	Enable Parity Flash	Click on the 'Enable Parity Flash' checkbox to activate Frame Parity Flashing, which enhances the capture of both reflective and non-reflective license plate information. This feature provides the capability to recognize both reflective and non-reflective license plates. For situations involving both reflective and non-reflective plates, two video streams with different illumination intensities are provided using parity flashing and exposure strategies. Stream 1's image is suitable for recognizing non-reflective license plates, while enabling the feature will optimize Stream 2 for recognizing reflective license plates.  Note: This technology is only applicable to the LPR Sensor.
Overview	Enable Source 2	The Overview Sensor supports enabling and configuring two separate video streams, Stream 1 and Stream 2.  Note: Only the Overview option allows for the selection to enable Video Source 2.
Stream Type		After enabling Parity Flash, two streams will be provided. One is for overview purposes, while the other is for automatic license plate recognition. Stream 1 consists of long exposure frames, which better capture the vehicle and its surroundings. On the other hand, Stream 2 consists of short exposure frames, specifically designed to focus on capturing clear images of license plates.  Note: Stream 2 does not allow for customization or settings.

Parameters	Function Introduction	
	Overview	The Overview Sensor supports enabling and configuring two separate video streams, Stream 1 and Stream 2.
Video Codec	H.265/H.264/MJPEG are available.	
Frame Size	[SingleVision]: For Primary Stream, it includes 2448*2048, 2204*1840, 2048*1536, 1920 *1080, 1280*960, 1280*720. For Secondary Stream, it include 704 *576, 640*480, 640*360, 352*288, 320*240. For Tertiary Stream, it include 1920*1080, 1280*720, 704*576, 640*480, 640*360, 352*288, 320*240. [DualVision]: Options include 5M(2464*2056), 4M(2204*1840), 3M(1910*1592), 2M(1568 *1312), 1M(1104*928), 515P(784*656). For Stream 1, it includes 2464*2056, 2204*1840, 1910*1592, 1568 *1312, 1104*928. For Stream 2, it include 1568 *1312, 1104*928, 784*656.	
Maximum Frame Rate	The maximum refresh frame rate per second (fps). [SingleVision]: Selectable from 1 to 60 fps. • <i>Note: Enabling Frame Parity Flash will limit the maximum frame rate to 30 fps.</i> [DualVision]: Selectable from 1 to 25 fps. • <i>Note: Enabling Frame Parity Flash will limit the maximum frame rate for the LPR sensor to 1-12 fps.</i>	
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.	
Bit Rate Control	CBR: Constant Bitrate. The rate of CBR output is constant.	

Parameters	Function Introduction
	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.

Image

In the 'Image' section, you can configure the general settings, OSD (On-Screen Display), and Privacy Mask for both LPR and Overview images.

General

In the general configuration, you can adjust the image settings for both LPR and Overview cameras separately for day and night modes. This includes options such as Maximum Shutter, Limit Gain Level, Strobe Light, and more.

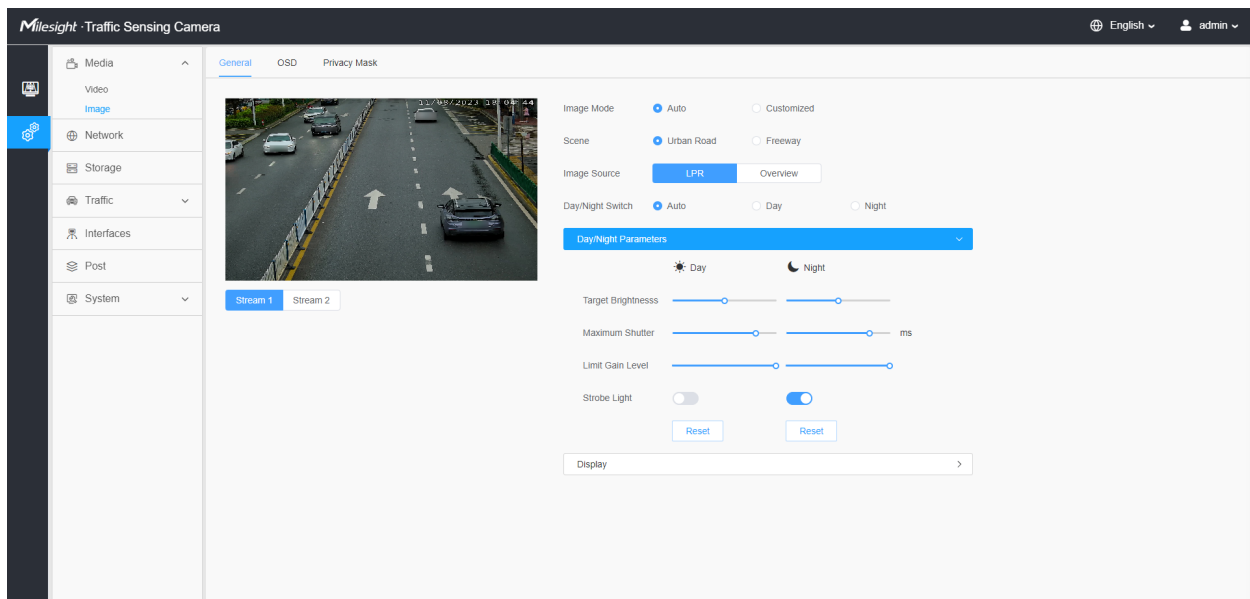


Image Mode	☒ Auto	☐ Customized
Scene	☒ Urban Road	☐ Freeway
Image Source	LPR Overview	
Day/Night Switch	☒ Auto	☐ Day ☐ Night

Table 7. Description of the buttons

Parameters	Function Introduction
Image Mode	Two modes are available: Auto and Customized. Choosing different modes will result in some differences in the exposure parameters below. Auto Mode is suitable for scenes where the surrounding lighting conditions may vary, such as outdoor road scenes. The algorithm provides adaptive adjustments to the exposure time, while also allowing for manual adjustments if desired. Customized Mode is suitable for scenes with relatively stable lighting conditions, such as tunnels. In this mode, you can fine-tune the exposure time and gain level of the two video streams based on the actual scene, to meet specific requirements.
Scene	In the Auto mode, you can select between two scene types based on different vehicle speeds: Urban Road and Freeway. The image processing strategies and algorithmic approaches designed for each scene type aim to better match the corresponding vehicle speeds. The Urban Road scene type provides optimal support within the speed range of 30-80 km/h. The Freeway scene type offers improved support within the speed range of 80-250 km/h.  Note: Please choose the appropriate scene type based on the actual speed range of vehicles in your specific usage scenario.
Image Source	You can configure the desired Day/Night Parameters separately for the LPR and Overview video sources, as per your requirements.
Day/Night Switch	The LPR and Overview video sources can be individually set to three modes: Auto, Day, and Night.

When the Image Mode is set to **Auto**, the Day/Night Parameters are as follows:

Day/Night Parameters
▼

 Day

 Night

Target Brightness

Maximum Shutter

ms

Limit Gain Level

Strobe Light

☐

☒

Reset

Reset

Table 8. Description of the buttons

Parameters	Function Introduction
Target Brightness	When the Image Mode is set to Auto, you can manually adjust the target brightness value to meet your requirements.
Maximum Shutter	In Auto mode, set the Maximum Shutter time. The LPR sensor has a Maximum Shutter time adjustment range of 0.03 to 5 milliseconds, while the Overview sensor has a Maximum Shutter time adjustment range of 0.1 to 40 milliseconds.
Limit Gain Level	In Auto mode, set the Limit Gain Level. The adjustable range is from 1 to 100.
Strobe Light	Set the activation of the strobe light for day and night under LPR Sensor based on your requirements.
Reset	Click the Reset button to restore the Day/Night Parameters to their default settings.

When the Image Mode is set to **Customized**, the Day/Night Parameters are as follows:

Day/Night Parameters
▼

 Day

 Night

Stream 1 Shutterms

Stream 2 Shutter ⓘms

Stream 1 Gain Level

Stream 2 Gain Level

Strobe Light

☐

Reset

Reset

Table 9. Description of the buttons

Parameters	Function Introduction
Stream 1 / Stream 2	If you have enabled 'Enable Parity Flash' in the video settings, you can adjust the shutter time and gain level of the LPR Sensor here. Stream 1 represents the long exposure frame, while Stream 2 represents the short exposure frame.  Note: Please ensure that the shutter of Stream 2 is smaller than the shutter of Stream 1.
Shutter	When the Image Mode is set to Customized, you can manually adjust the shutter time value to meet your requirements.
Gain Level	When the Image Mode is set to Customized, you can manually adjust the Gain Level to meet your requirements.
Strobe Light	Set the activation of the strobe light for day and night under LPR Sensor based on your requirements.
Reset	Click the Reset button to restore the Day/Night Parameters to their default settings.

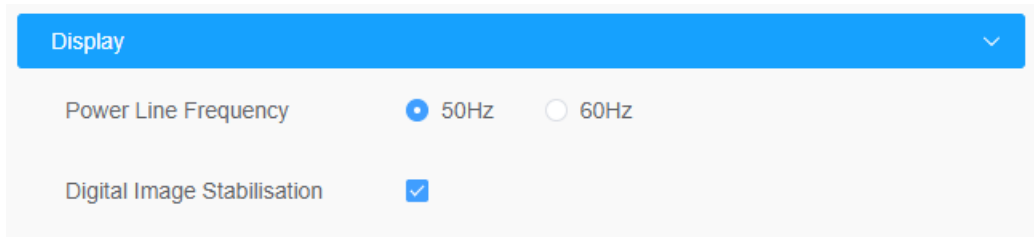


Table 10. Description of the buttons

Parameters	Function Introduction
Power Line Frequency	Set the power line frequency to 50Hz/60Hz.
Digital Image Stabilisation	Click the checkbox to enable DIS (Digital Image Stabilization). It is a feature that helps reduce unwanted camera movements or shakes in the captured video footage by electronically compensating for the motion.

OSD

In the OSD settings, you can configure OSD elements separately for two views, including Video Title and Timestamp.

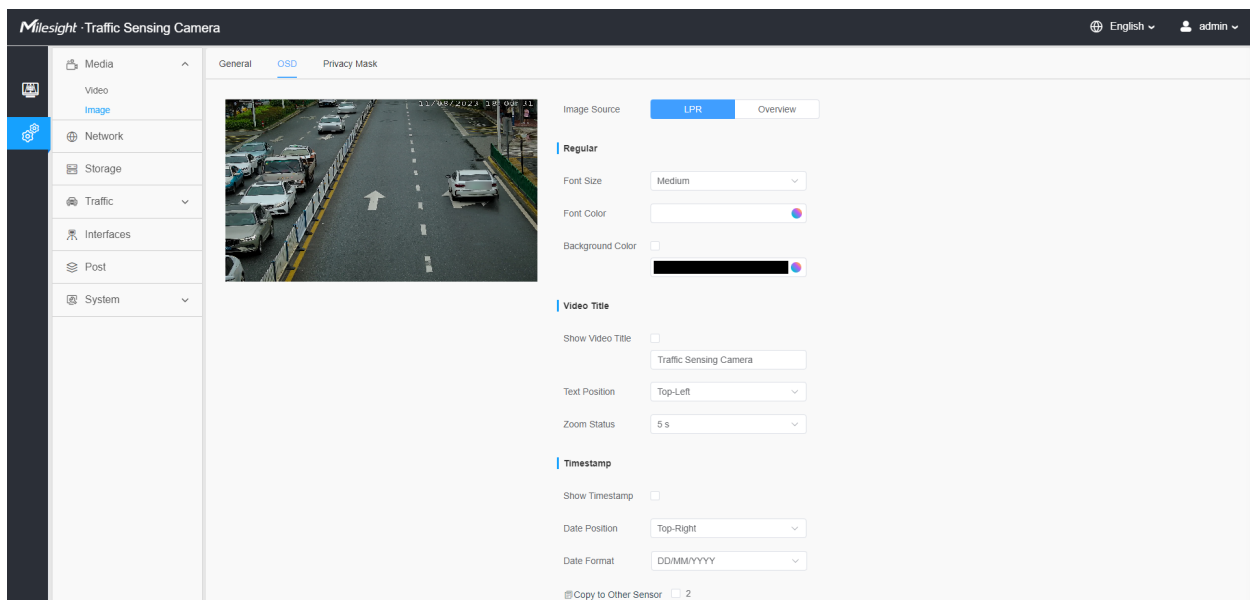
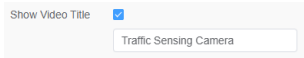


Table 11. Description of the buttons

Parameters		Function Introduction
Image Source		Select LPR and Overview video streams to configure OSD settings.
Regular	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: Traffic Sensing Camera
Video Title	Show Video Title	Check the check box to show video title.
		Customize the OSD content.
	Text Position	OSD display position on the image.
	Zoom Status	2s/ 5s/ 10s/Always Open/ Always Close are available.
Timestamp	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.

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.

You can select the color type to use for covering specific areas on the live video. Each sensor supports a maximum of 24 masking areas, allowing a total of 48 masking areas when using two sensors.

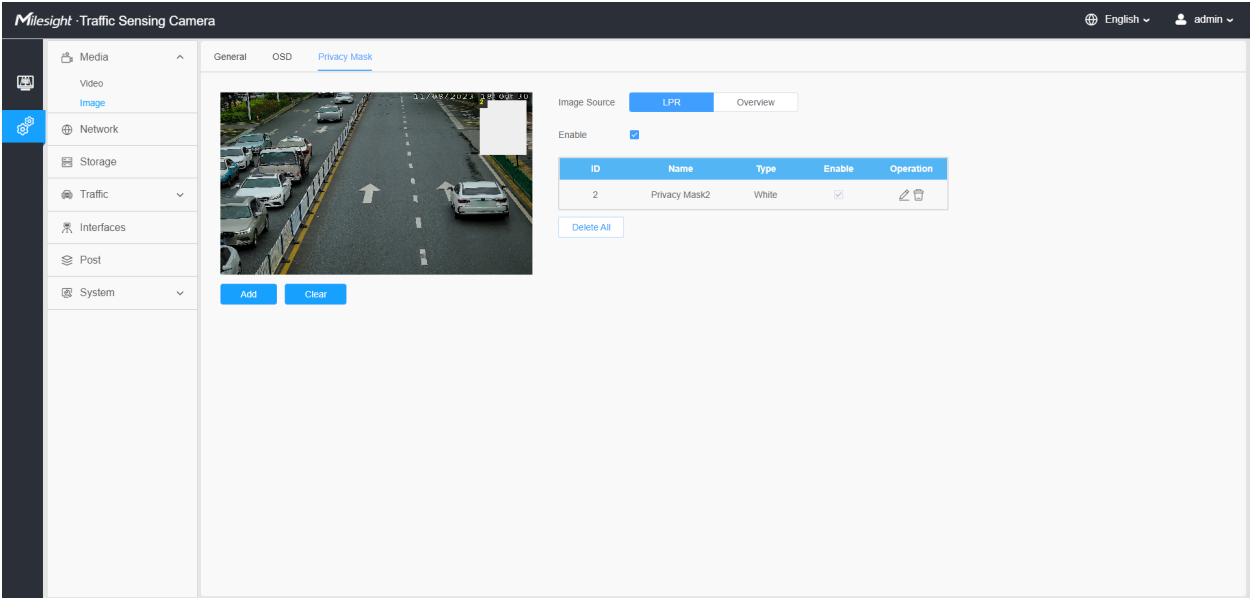


Table 12. Description of the buttons

Parameters	Function Introduction	
Image Source	Select LPR and Overview video streams to configure Privacy Mask settings.	
Enable	Check the check box to enable the Privacy Mask function.	
Add	Drew an privacy area on the live video as needed.	
Clear	Clear the area you drew on the live video.	
Operation	/	Enable/disable the selected privacy mask areas.
		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

Network

TCP/IP

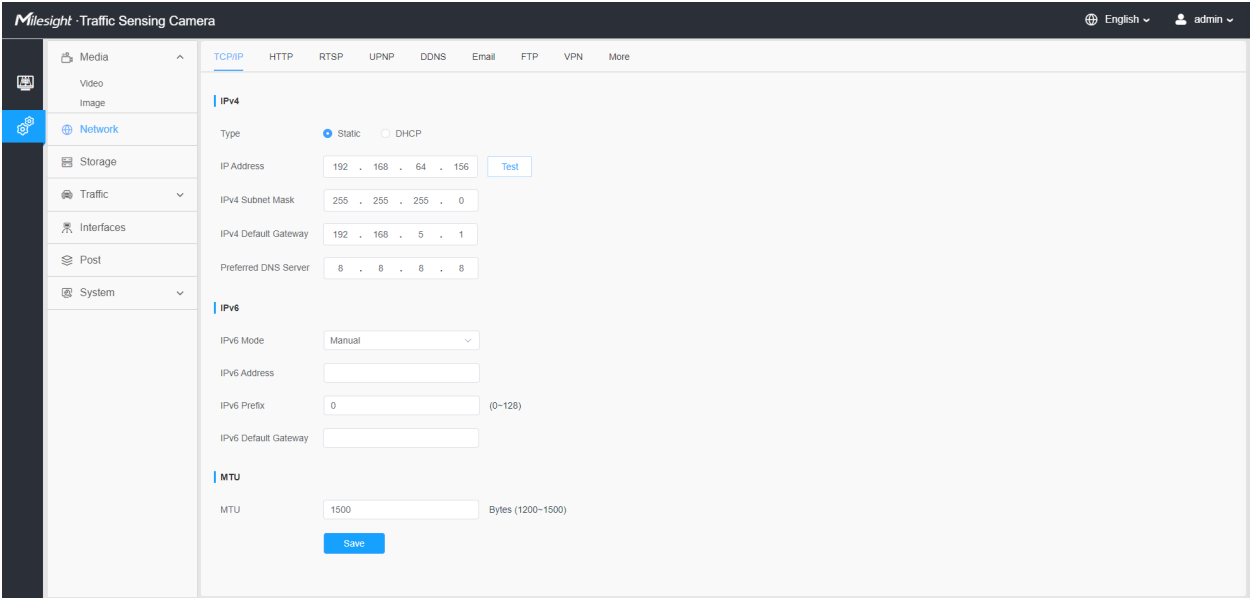
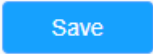


Table 13. Description of the buttons

Parameters	Function Introduction
IPv4	Type: Static Type and DHCP Type are optional for user to get IPv4 address automatically or use fixed IP address. IPv4 Address: An address that used to identify a network camera on the network.  Note: The Test button is used to test if the IP is conflicting. IPv4 Subnet Mask: It is used to identify the subnet where the network camera is located. IPv4 Default Gateway: The default router address. Preferred DNS Server: The DNS Server translates the domain name to IP address.
IPv6	IPv6 Mode: Choose different modes for IPv6: Manual/Route Advertisement/DHCPv6 IPv6 Address: IPv6 Address used to identify a network camera on the network IPv6 Prefix: Define the prefix length of IPv6 address IPv6 Default Gateway: The default router IPv6 address
MTU	Maximum Transmission Unit. The default value is 1500. You can customize the value from 1200 to 1500 as needed.
	Save the configuration.

HTTP

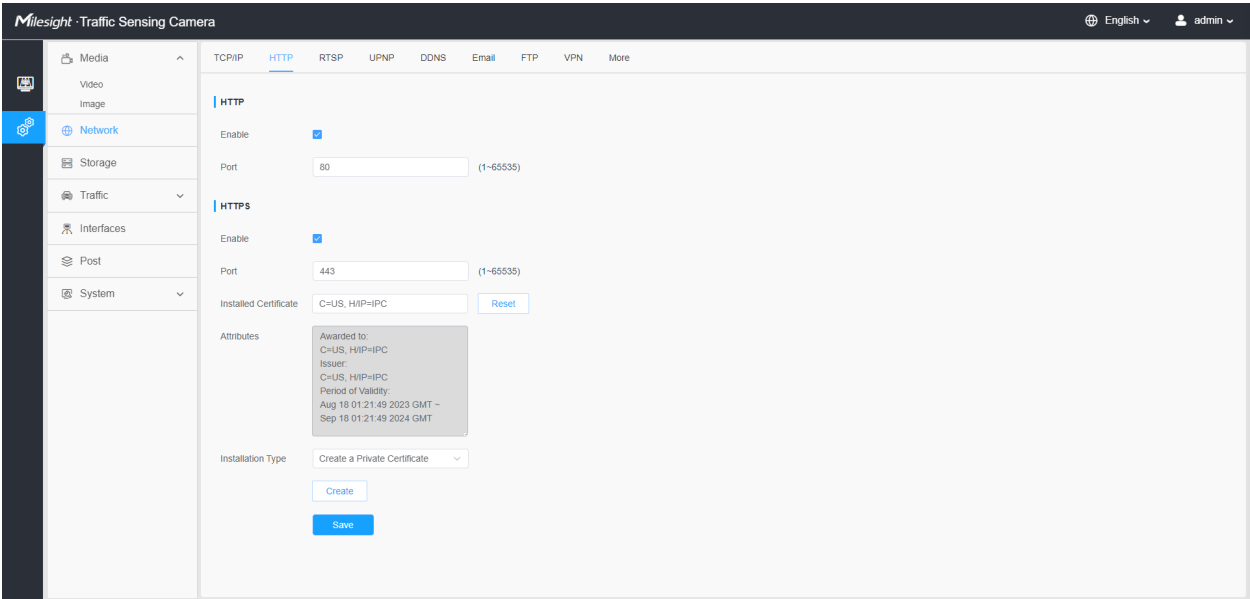


Table 14. Description of the buttons

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

RTSP

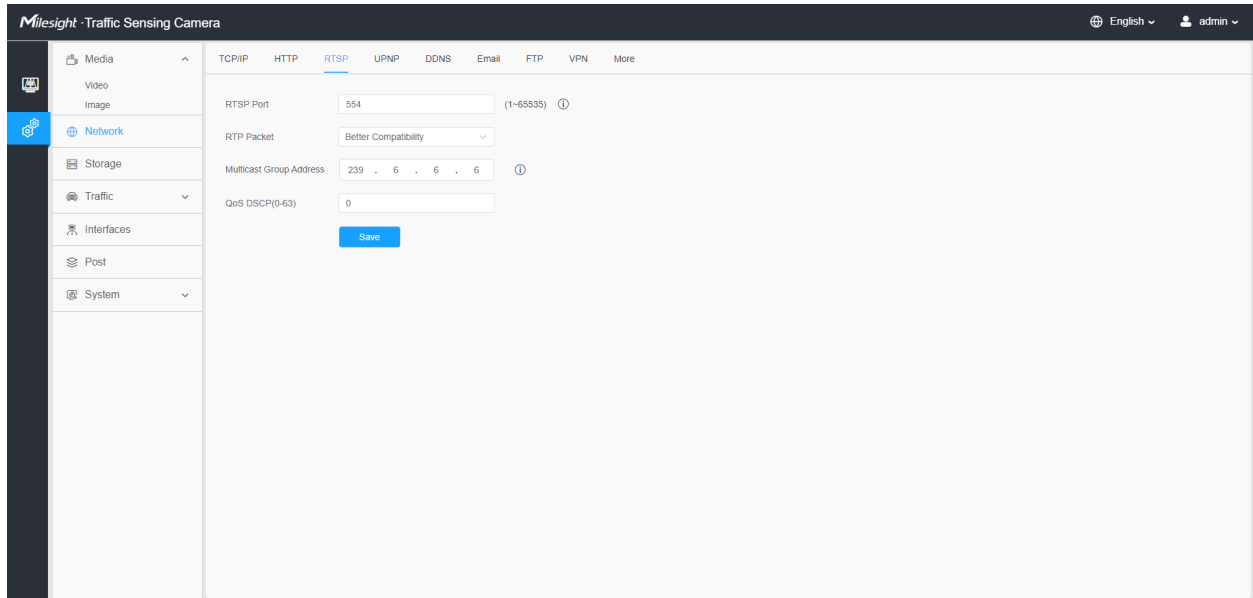


Table 15. Description of the buttons

Parameters	Function Introduction
RTSP Port	The port of RTSP, the default is 554.
RTP Packet	There are Better Compatibility and Better Performance two options, if your camera's image mess up, please switch this option.
Multicast Group Address	Support multicast function.
QoS DSCP	The valid value range of the DSCP is 0-63.
Save	Save the configuration.

Table 16. RTSP URL are as below:

Stream		URL
LPR	Stream 1	rtsp://IP:RTSP Port/lprstream1
	Stream 2	rtsp://IP:RTSP Port/lprstream2 (Enable Parity Flash)
Overview	Stream 1	rtsp://IP:RTSP Port/overviewstream1
	Stream 2	rtsp://IP:RTSP Port/overviewstream2

Table 17. RTSP Multicast URL are as below:

Stream		URL
LPR	Stream 1	rtsp://IP:RTSP Port/mcastlprstream1

Stream		URL
	Stream 2	rtsp://IP:RTSP Port/mcastlprstream2 (Enable Parity Flash)
Overview	Stream 1	rtsp://IP:RTSP Port/mcastoverviewstream1
	Stream 2	rtsp://IP:RTSP Port/mcastoverviewstream2

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.

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.

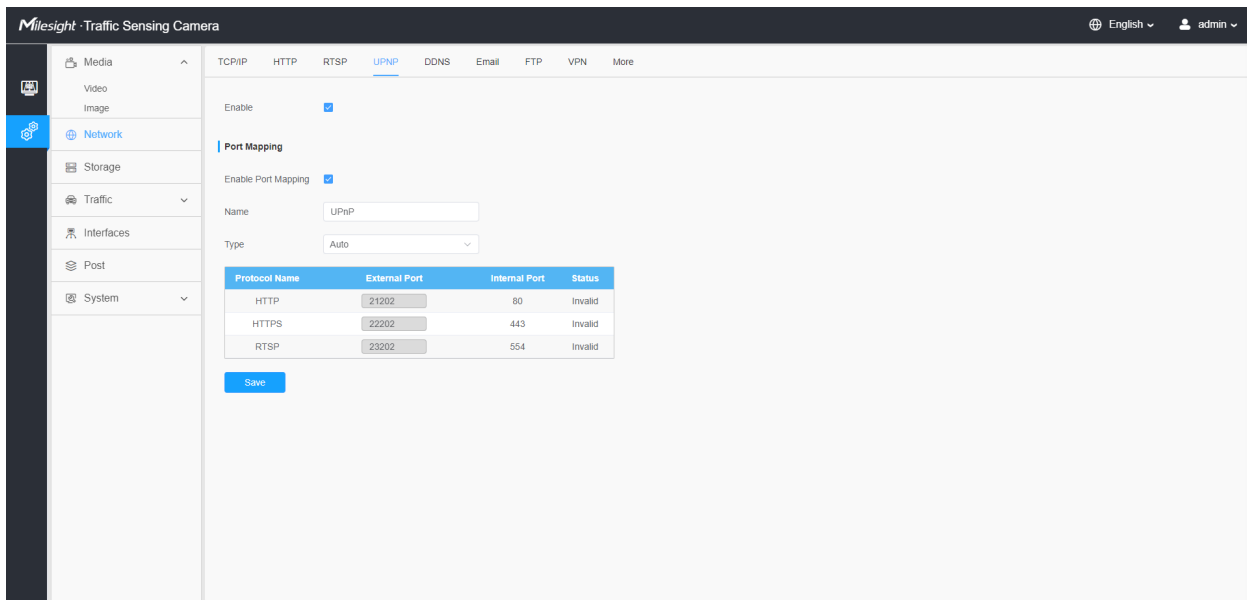


Table 18. Description of the buttons

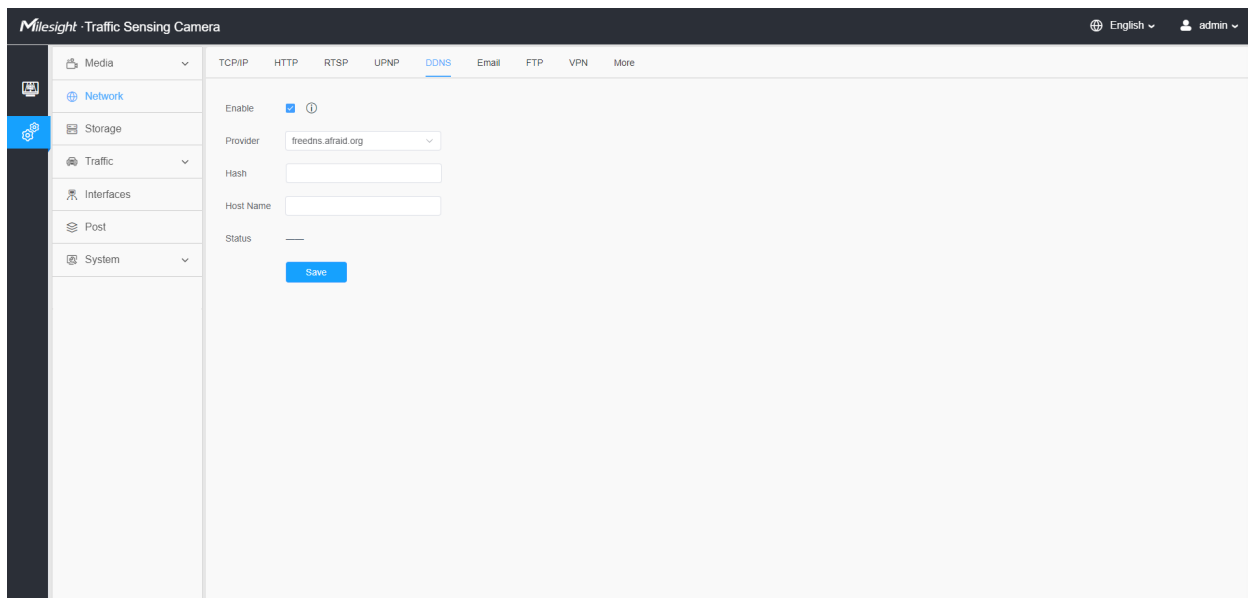
Parameters	Function Introduction
Enable	Check the checkbox to enable the UPNP function.

Parameters	Function Introduction
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 the configuration.

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 19. 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: 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".
Host name	DDNS name enabled in the account.
Status	Display DDNS running status.
	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.

Email

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

Mileight Traffic Sensing Camera

English admin

Media Network Storage Traffic Interfaces Post System

TCP/IP HTTP RTSP UPNP DDNS **Email** FTP VPN More

Enable ☒

User Name

Sender Email Address

Password

Email Server

Email Port (1-65535)

Recipient Email Address1

Recipient Email Address2

Encryption ☒ None ☐ SSL ☐ TLS

Save Test

Table 20. 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.

Parameters	Function Introduction
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

&& - &

FTP

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

The screenshot shows the Milesight Traffic Sensing Camera web interface. The top navigation bar includes 'Media', 'Network', 'Storage', 'Traffic', 'Interfaces', 'Post', and 'System'. The 'Network' tab is selected, and the 'FTP' sub-tab is active. The 'FTP Server Settings' section includes:

- Enable:** A checked checkbox.
- FTP Type:** Radio buttons for 'FTP' (selected) and 'SFTP'.
- Server Address:** A text field containing '192.168.9.51'.
- Server Port:** A text field containing '21', with a range '(1~65535)' indicated to the right.
- User Name:** A text field containing 'admin'.
- Password:** A password field with masked characters '*****'.
- FTP over SSL/TLS(FTPS):** An unchecked checkbox.

 The 'FTP Storage Settings' section includes:

- Storage Path:** A dropdown menu with 'Parent Directory' selected.
- Parent Directory:** A dropdown menu with 'Date' selected.
- Record Format:** A dropdown menu with 'AVI' selected.

 At the bottom of the settings are 'Save' and 'Test' buttons.

Table 21. Description of the buttons

Parameters		Function Introduction
FTP Server Settings	FTP Type	FTP and SFTP are optional.
	Server Address	FTP/SFTP server address.
	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.
	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.

Parameters		Function Introduction
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.
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.

VPN

In this interface, you can configure VPN settings. Once configured, you can access the camera's real-time video stream using a VPN connection.

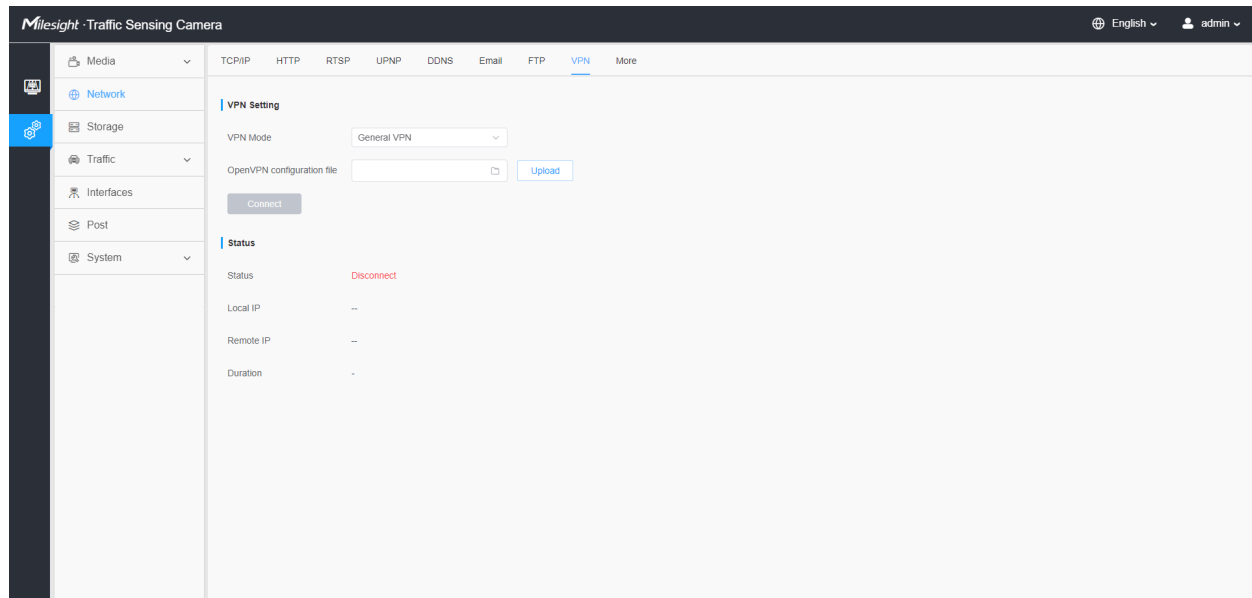


Table 22. Description of the buttons

Parameters	Function Introduction
VPN Settings	You can choose between General VPN import or connect to Milesight VPN. For detailed instructions, please refer to the Support article: https://support.milesight.com/support/solutions/articles/69000829102-how-to-use-vpn-on-milesight-network-camera
Status	Here, you can view the VPN status, Local IP, Remote IP, and Duration of the active connection.

More

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

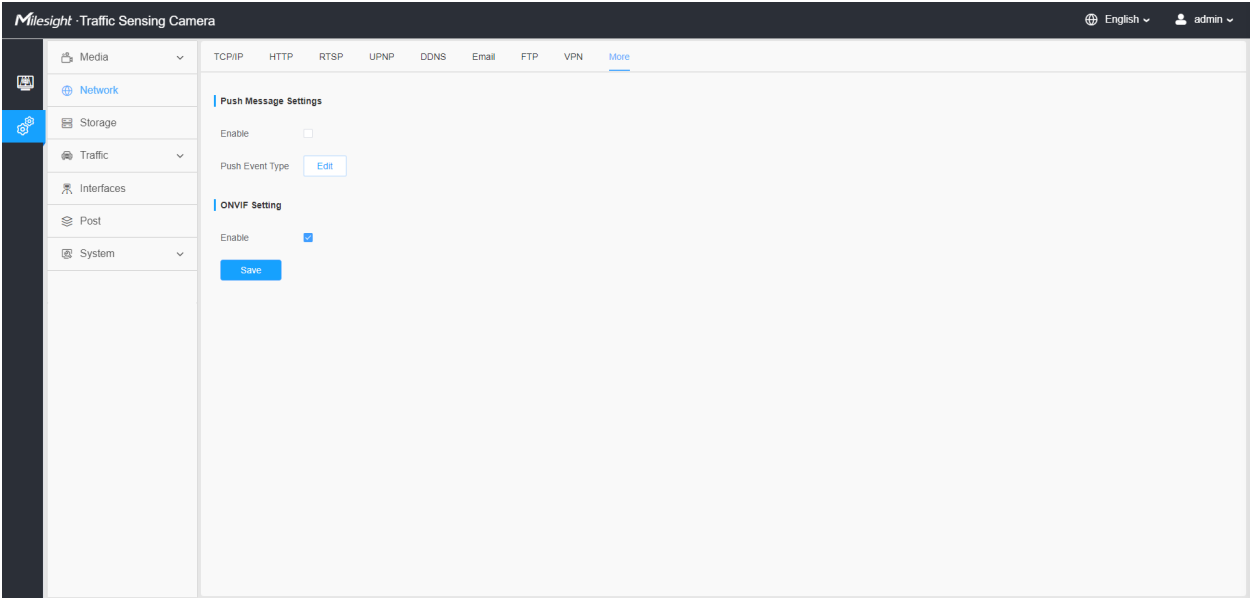
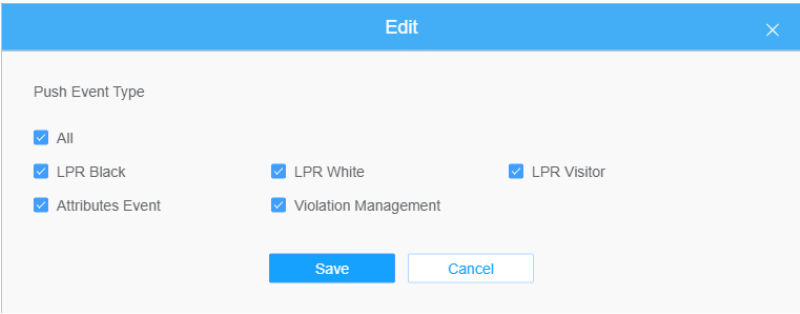
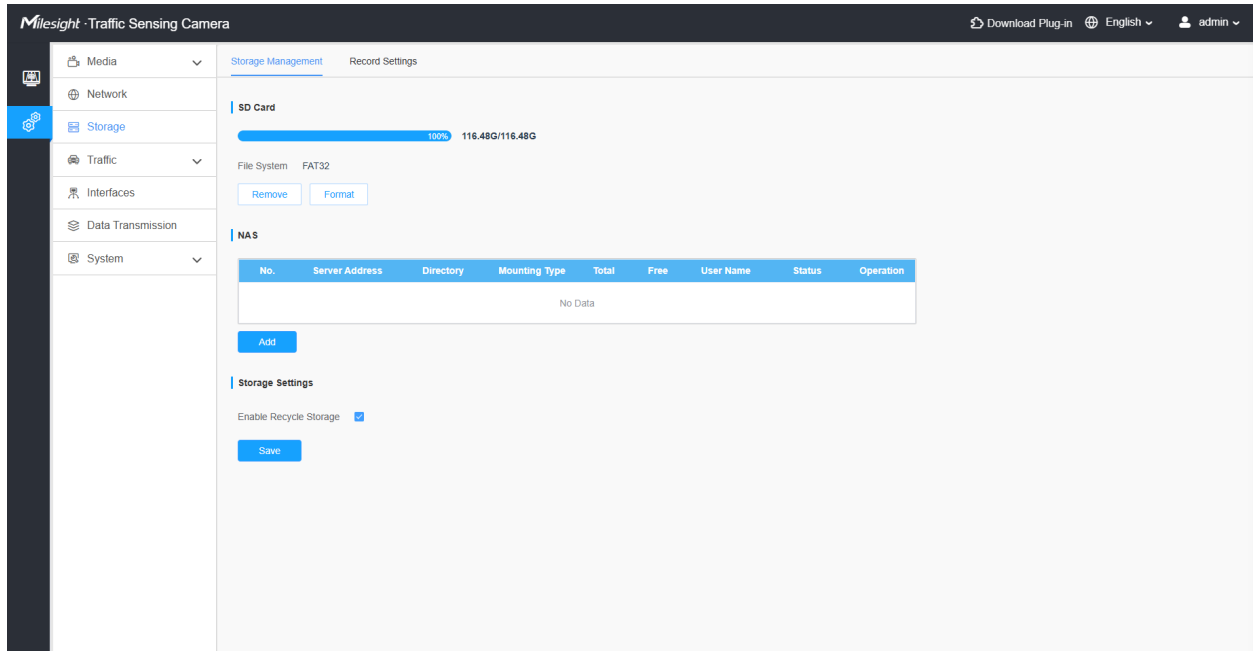


Table 23. Description of the buttons

Parameters	Function Introduction
Push Message Settings	Enable: Enable/disable the Push Message function Push Event Type: You can click  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.

Storage

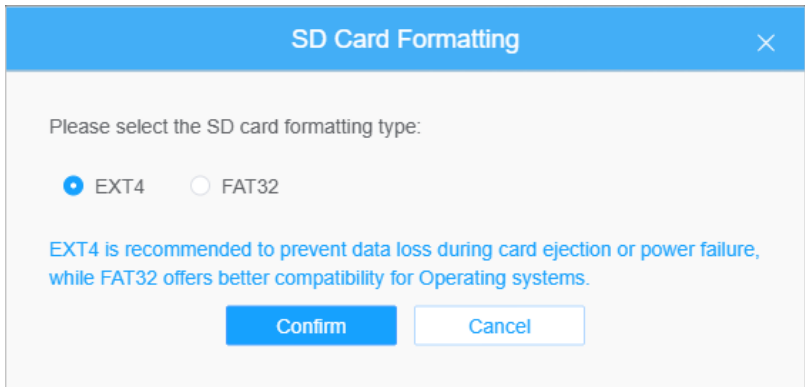
You can manage and configure camera storage information through Storage Management. You can set camera recording settings in Record Settings.

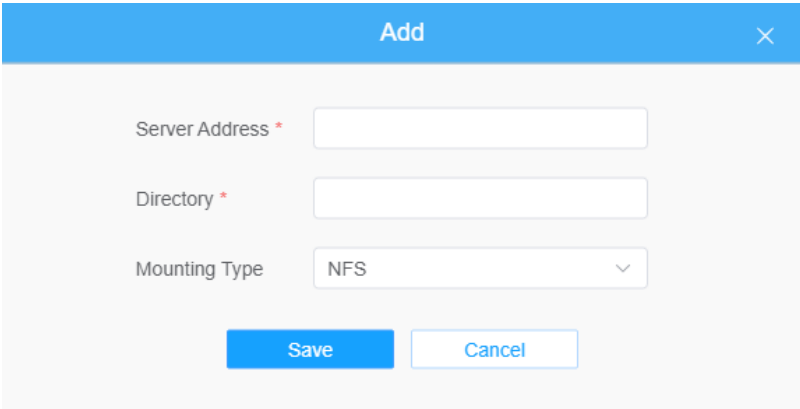


 Note: Before you start:

- To configure record settings, please make sure that you have the network storage device within the network or the SD card inserted in your camera.
- Choose the storage mode according to your needs.

Table 24. Description of the buttons

Parameters	Function Introduction
SD Card	Remove: Safely unmounts the SD card before physical removal to prevent data corruption. Format: Allows users to erase all data on the SD card and select the desired file system format: EXT4 is recommended to prevent data loss during card ejection or power failure, while FAT32 offers better compatibility for Operating systems.  The dialog box titled 'SD Card Formatting' has a close button (X) in the top right corner. It contains the text 'Please select the SD card formatting type:' followed by two radio button options: 'EXT4' (which is selected) and 'FAT32'. Below these options is a blue informational message: 'EXT4 is recommended to prevent data loss during card ejection or power failure, while FAT32 offers better compatibility for Operating systems.' At the bottom of the dialog are two buttons: 'Confirm' and 'Cancel'.

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.
Storage Settings	Enable Recycle Storage: After enabling recycle recording, when the storage space on the device (SD or NAS) is fully utilized, the system will automatically overwrite the oldest recorded data to accommodate new recordings. This allows for continuous recording without the need to manually delete old video files. This feature is enabled by default.

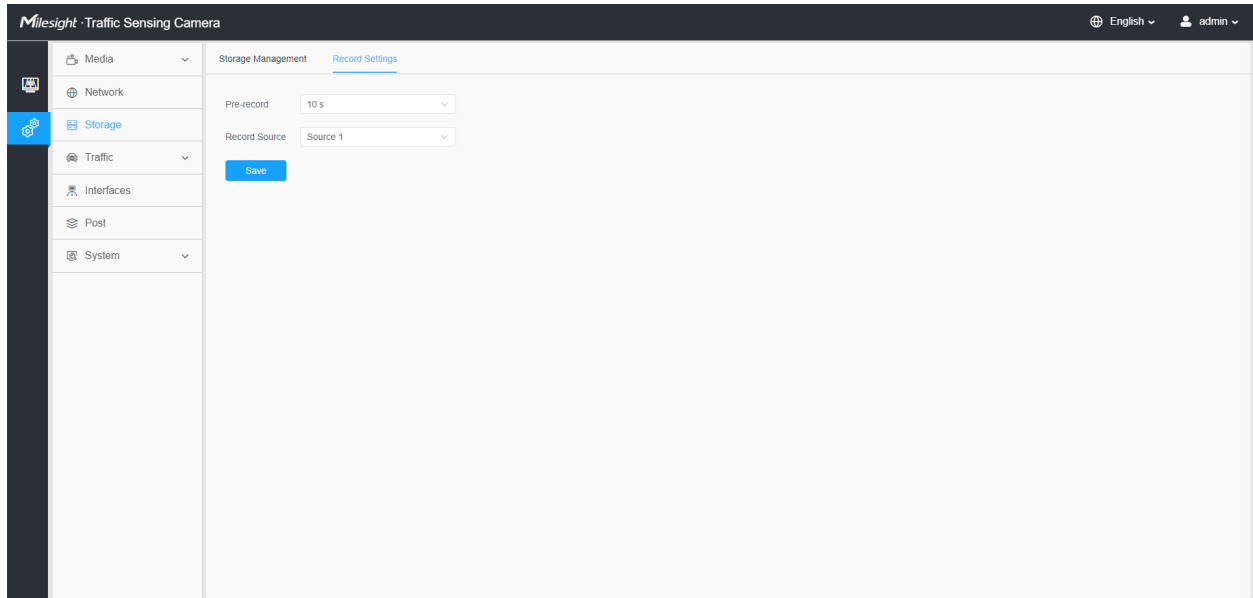


Table 25. Description of the buttons

Parameters	Function Introduction
Pre-record	Record video 1~10 seconds prior to triggering an alarm to capture pre-alarm footage.
Record Source	Select the recording source for video capture.  Note: The recorded video source is provided by the Overview Sensor.

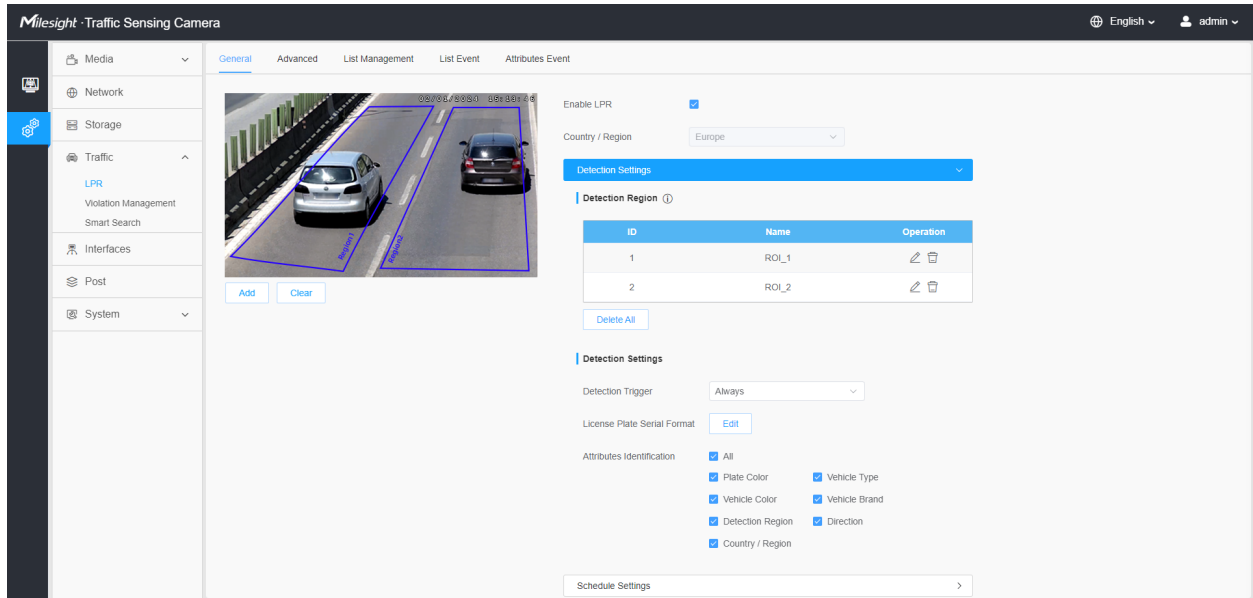
Traffic

LPR

Under the LPR function, you can configure LPR General, Advanced, List Management, List Event, and Attributes Event. You have the flexibility to set LPR rules and manage LPR Black Lists/White Lists. Additionally, you can trigger alarms based on Attributes Event, making it easy to manage LPR and related events.

General

Users can define how the camera monitors the road based on the specific traffic scenario. The TrafficX series supports two detection paradigms: **Lane-based** and **Region-based**.



Detection Mode Selection

- **[SingleVision Only] Detection Mode:**

Lane Mode: Best for structured roads. It allows for precise per-lane configuration (e.g., specific direction).

Region Mode: Best for wide-area monitoring or parking entrances, using customizable shapes to define detection zones.

- **[DualVision] Default Mode:** * Exclusively utilizes **Region Mode** for both LPR and Overview sensors to ensure comprehensive coverage.

Table 26. Description of the buttons

Parameters	Function Introduction
Enable LPR	Enable/disable the LPR detection function.
Country/ Region	Select country/ region to detect the license plate.

The configuration steps for LPR recognition and other general settings are as follows:

Step1: Click the checkbox "Enable LPR" to activate the LPR recognition feature.

[Detection Settings]

Step2: You can draw the LPR recognition area on the left-side screen.



Lane Settings (SingleVision - Lane Mode)

When "Lane Mode" is selected, configure the road structure as follows:

- **Total Lanes:** Define the number of lanes to be monitored.
- **Detection Lane:** Select a specific lane to configure its attributes.
- **Custom Lane Name:** Assign a unique identifier (e.g., "Lane 01", "West-to-East").
- **Lane Direction:** Specify the orientation of the lane.
- **Lane Type:**

Categorize the lane to apply specific AI detection rules:

- **Normal Lane:** General vehicle traffic.
- **Bus Lane:** Dedicated for public transport; used to detect unauthorized usage.
- **Truck Forbidden Lane:** Restricted for heavy vehicles; used for city-limit enforcement.
- **Highway Emergency Lane:** For monitoring illegal driving or parking on shoulders.
- **Non-Motor Lane:** Dedicated for bicycles or electric scooters.

- **Driving Direction:** Set the legal traffic flow direction to enable violation detection (e.g., Reverse Driving).

Lane Settings

Total Lanes

3

Detection Lane

Lane1

Lane2

Lane3

Custom Lane Name

Lane1

Lane Direction

Straight ×

Lane Type

Normal Lane

Driving Direction

↓

Approach

↑

Away

↓ ↑

Mix

Recognition Area (Region Mode)

For **DualVision** models or **SingleVision** cameras set to "Region Mode," configure the detection zones on the live view:

“

Tip: The detection area can be drawn as an irregular quadrilateral for better scene adaptability. For optimal performance, we recommend 2-3 areas.

”

Detection Settings

Detection Region ⓘ

ID	Name	Operation
1	ROI_1	
2	ROI_2	

[Delete All](#)

Detection Settings

Detection Trigger

Always

License Plate Serial Format

Edit

Attributes Identification

☒ All
 ☒ Plate Color
 ☒ Vehicle Color
 ☒ Detection Region
 ☒ Country / Region

☒ Vehicle Type
 ☒ Vehicle Brand
 ☒ Direction

Note: The detection area can be drawn as an irregular quadrilateral, which greatly enhances the scene adaptability.

Table 27. Description of the buttons

Parameters	Function Introduction									
Add	Draw on the screen to select the desired area of interest, then click the "Add" button to add that area. You can add up to four recognition areas, but for optimal performance, we recommend using 2-3 areas. You can edit the name of the area or delete the area in the list below. <table><thead><tr><th>ID</th><th>Name</th><th>Operation</th></tr></thead><tbody><tr><td>1</td><td>ROI_1</td><td> </td></tr><tr><td>2</td><td>ROI_2</td><td> </td></tr></tbody></table>  Note: Only license plates larger than 150 pixels can be recognized.	ID	Name	Operation	1	ROI_1	 	2	ROI_2	 
ID	Name	Operation								
1	ROI_1	 								
2	ROI_2	 								
Clear	Click the "Clear" button to clear the area being drawn.									
Delete All	Click the "Delete All" button to delete all the added areas.									

Step3: Set Detection Settings.

Table 28. Description of the buttons

Parameters	Function Introduction																				
Detection Trigger	Always: in this mode, camera will always detect license plates. Alarm Input: in this mode, camera will only detect license plates during Alarm Input is being triggered.																				
License Plate Serial Format	Edit ☒ Filter out results with incorrect character count <table><thead><tr><th>ID</th><th>License Plate Character Count</th><th>License Plate Serial Format</th><th>Enable</th><th>Operation</th></tr></thead><tbody><tr><td>0</td><td>All</td><td>*</td><td>☐</td><td></td></tr><tr><td>1</td><td>7</td><td>AA111AA</td><td>☒</td><td> </td></tr><tr><td>2</td><td>6</td><td>AAA111</td><td>☒</td><td> </td></tr></tbody></table> Add Delete All A - Letters Only 1 - Numbers Only * - Unrestricted Type Example: AA111* Save Cancel License Plate Serial Format function supports formulating identification rules and can automatically do further processing, filter license plates in non-compliant formats to achieve more intelligent and accurate license plate recognition.  Note: It supports up to 10 license plate characters.	ID	License Plate Character Count	License Plate Serial Format	Enable	Operation	0	All	*	☐		1	7	AA111AA	☒	 	2	6	AAA111	☒	 
ID	License Plate Character Count	License Plate Serial Format	Enable	Operation																	
0	All	*	☐																		
1	7	AA111AA	☒	 																	
2	6	AAA111	☒	 																	

Parameters	Function Introduction																																																																																
Attributes Identification	Check Plate Color, Vehicle Type, Vehicle Color, Vehicle Brand, Detection Region, Direction, Country/Region, orAll to enable Attributes Identification, it will display the corresponding information on the Smart Search interface. • Vehicle Type: Car, SUV, Van, Bus, Truck, Fire engine, Ambulance, Motorbike, Bicycle and Other • Vehicle Color: Black, White, Gray, Red, Yellow, Green and Blue • Plate Color: Black, White, Red, Yellow, Green and Blue • Vehicle Brand: <table><tr><th colspan="5">Vehicle Brand</th></tr><tr><td>Audi</td><td>Aston Martin</td><td>Alfa Romeo</td><td>Acura</td><td>BYD</td></tr><tr><td>Buick</td><td>BMW</td><td>Bentley</td><td>Bugatti</td><td>CUPRA</td></tr><tr><td>Cadillac</td><td>Chrysler</td><td>Chery</td><td>Chevrolet</td><td>Citroen</td></tr><tr><td>Dodge</td><td>Daewoo</td><td>Daihatsu</td><td>DS</td><td>Dacia</td></tr><tr><td>Ford</td><td>Ferrari</td><td>Fiat</td><td>GMC</td><td>Geely</td></tr><tr><td>Honda</td><td>Haval</td><td>Hyundai</td><td>Infinity</td><td>Isuzu</td></tr><tr><td>Jeep</td><td>Jaguar</td><td>Kia</td><td>Koenigsegg</td><td>Lincoln</td></tr><tr><td>Lexus</td><td>Land Rover</td><td>Lamborghini</td><td>LYNK&CO</td><td>Lancia</td></tr><tr><td>McLaren</td><td>Mercedes-Benz</td><td>MITSUOKA</td><td>Mazda</td><td>MINI</td></tr><tr><td>Maserati</td><td>Maybach</td><td>Mitsubishi</td><td>Mercury</td><td>MorrisGarages</td></tr><tr><td>Nissan</td><td>Opel</td><td>Pagani</td><td>Porsche</td><td>Peugeot</td></tr><tr><td>Renault</td><td>Rolls-royce</td><td>Rolls-royce</td><td>Seat</td><td>Suzuki</td></tr><tr><td>Skoda</td><td>Subaru</td><td>Smart</td><td>Ssangyong</td><td>Saturn</td></tr><tr><td>SAAB</td><td>Spyker</td><td>Shelby</td><td>Toyota</td><td>Tesla</td></tr><tr><td>Volkswagen</td><td>Volvo</td><td></td><td></td><td></td></tr></table>	Vehicle Brand					Audi	Aston Martin	Alfa Romeo	Acura	BYD	Buick	BMW	Bentley	Bugatti	CUPRA	Cadillac	Chrysler	Chery	Chevrolet	Citroen	Dodge	Daewoo	Daihatsu	DS	Dacia	Ford	Ferrari	Fiat	GMC	Geely	Honda	Haval	Hyundai	Infinity	Isuzu	Jeep	Jaguar	Kia	Koenigsegg	Lincoln	Lexus	Land Rover	Lamborghini	LYNK&CO	Lancia	McLaren	Mercedes-Benz	MITSUOKA	Mazda	MINI	Maserati	Maybach	Mitsubishi	Mercury	MorrisGarages	Nissan	Opel	Pagani	Porsche	Peugeot	Renault	Rolls-royce	Rolls-royce	Seat	Suzuki	Skoda	Subaru	Smart	Ssangyong	Saturn	SAAB	Spyker	Shelby	Toyota	Tesla	Volkswagen	Volvo			
	Vehicle Brand																																																																																
	Audi	Aston Martin	Alfa Romeo	Acura	BYD																																																																												
	Buick	BMW	Bentley	Bugatti	CUPRA																																																																												
	Cadillac	Chrysler	Chery	Chevrolet	Citroen																																																																												
	Dodge	Daewoo	Daihatsu	DS	Dacia																																																																												
	Ford	Ferrari	Fiat	GMC	Geely																																																																												
	Honda	Haval	Hyundai	Infinity	Isuzu																																																																												
	Jeep	Jaguar	Kia	Koenigsegg	Lincoln																																																																												
	Lexus	Land Rover	Lamborghini	LYNK&CO	Lancia																																																																												
McLaren	Mercedes-Benz	MITSUOKA	Mazda	MINI																																																																													
Maserati	Maybach	Mitsubishi	Mercury	MorrisGarages																																																																													
Nissan	Opel	Pagani	Porsche	Peugeot																																																																													
Renault	Rolls-royce	Rolls-royce	Seat	Suzuki																																																																													
Skoda	Subaru	Smart	Ssangyong	Saturn																																																																													
SAAB	Spyker	Shelby	Toyota	Tesla																																																																													
Volkswagen	Volvo																																																																																

[Schedule Settings]

Step4: Schedule Settings.

Schedule Settings

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

Sun.

Mon.

Tue.

Wed.

Thu.

Fri.

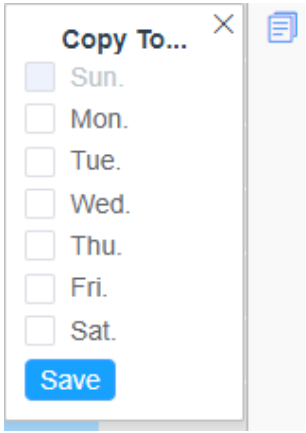
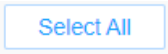
Sat.

Select All

Clear All

Save

Table 29. Description of the buttons

Parameters	Function Introduction
	Copy the schedule area to another date.
	Select all schedule.
	Clear all schedule.

Advanced

In the Advanced interface, you can configure Snapshot-related settings, including the display of Snapshot OSD and the format of Snapshot File Name.

[Snapshot OSD]

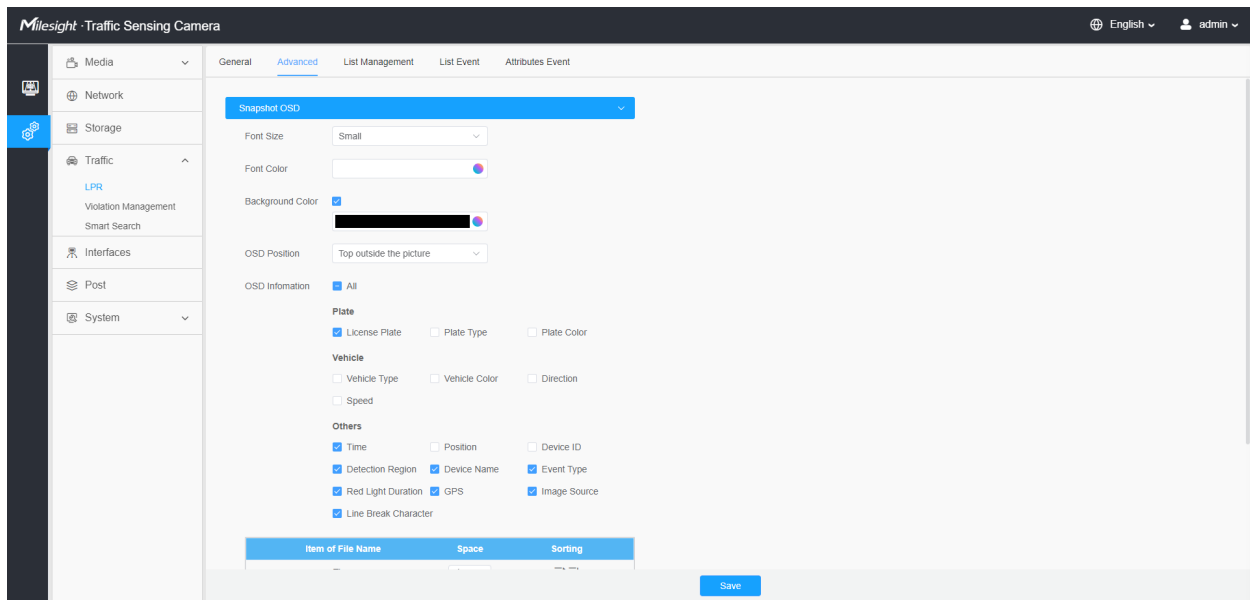


Table 30. Description of the buttons

Parameters	Function Introduction
Font Size	Smallest/Small/Medium/Large/Largest are available for OSD information.  Note: Snapshot OSD font size and Image OSD font size are corresponded.
Font Color	Enable to set different colors for OSD information.  Note: Snapshot OSD font color and Image OSD font color are corresponded.
Background Color	Check the checkbox to select background color of snapshot OSD information.  Note: Background color cannot be the same with font color.
OSD Position	Top/Bottom/Top outside the picture/Bottom outside the picture are available for OSD position.

Parameters	Function Introduction
OSD Information	Customize the OSD content. You can set OSD Information as shown below: OSD Information ☐ All Plate ☐ License Plate ☐ Plate Type ☐ Plate Color Vehicle ☐ Vehicle Type ☐ Vehicle Color ☐ Direction ☐ Speed Others ☐ Time ☐ Position ☐ Device ID ☐ Detection Region ☐ Device Name ☐ Event Type ☐ GPS ☐ Image Source ☐ Line Break Character When license plate is recognized and the alarm is triggered, the snapshot of license plate recognition will show as below: 

[Snapshot File Name]

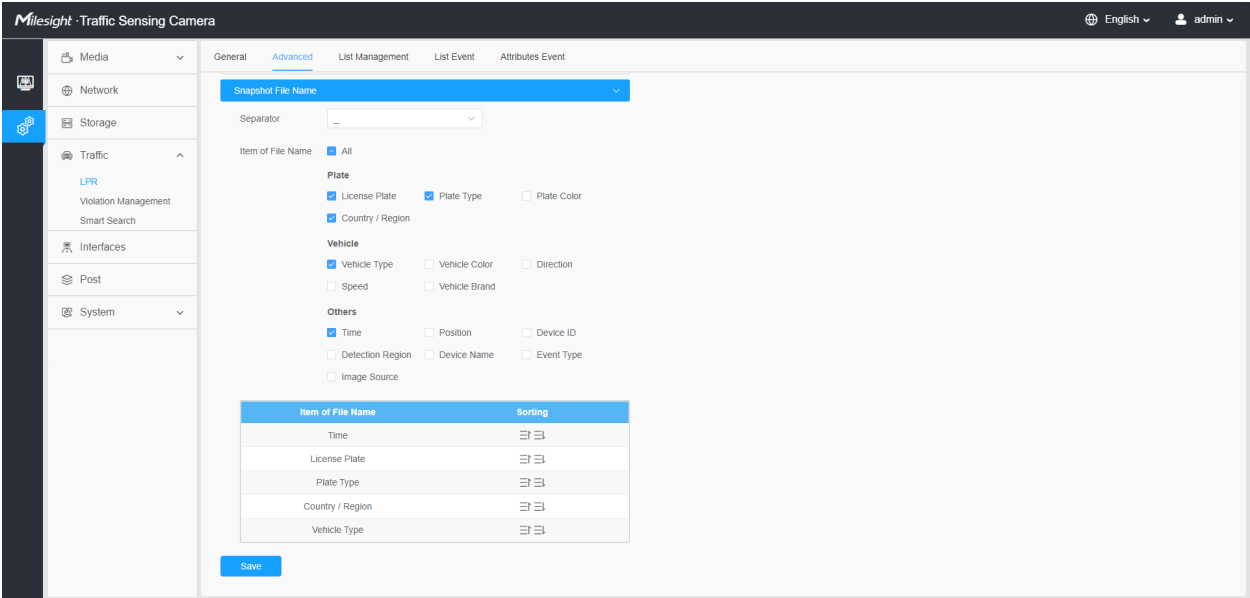


Table 31. Description of the buttons

Parameters	Function Introduction
Separator	“-”, “_” and Space are available for File Name Separator format. The default separator is “-”.
Item of File Name	You can customize the snapshot file name according to items chosen. Item of File Name ☒ All Plate ☒ License Plate ☒ Plate Type ☐ Plate Color ☒ Country / Region Vehicle ☒ Vehicle Type ☐ Vehicle Color ☐ Direction ☐ Speed ☐ Vehicle Brand Others ☒ Time ☐ Position ☐ Device ID ☐ Detection Region ☐ Device Name ☐ Event Type ☐ Image Source

Each time when an item is checked, the list will add the item row, including the item name and sorting operation. You can click  and  button to sort these items, and choose

separator to connect these items name. Also, the content of Position and Device ID items can be customized. When you check all items, the function interface will show as below:

Item of File Name	Sorting
Time	⇅ ⇅
License Plate	⇅ ⇅
Plate Type	⇅ ⇅
Speed	⇅ ⇅
Direction	⇅ ⇅
Detection Region	⇅ ⇅
Position: Position	⇅ ⇅
Device Name	⇅ ⇅
Device ID: Device ID	⇅ ⇅
Plate Color	⇅ ⇅
Vehicle Type	⇅ ⇅
Vehicle Color	⇅ ⇅
Event Type	⇅ ⇅
Country / Region	⇅ ⇅
Vehicle Brand	⇅ ⇅
Image Source	⇅ ⇅

 **Note:** You need to check at least one item.

For example, you can choose items, separator and items sorting as below:

Item of File Name ☒ All

Plate

☒ License Plate ☐ Plate Type ☐ Plate Color

☐ Country / Region

Vehicle

☐ Vehicle Type ☐ Vehicle Color ☐ Direction

☐ Speed ☐ Vehicle Brand

Others

☒ Time ☐ Position ☐ Device ID

☐ Detection Region ☐ Device Name ☐ Event Type

☐ Image Source

Item of File Name	Sorting
Time	⇅ ⇅
License Plate	⇅ ⇅

Once license plate is recognized, and the snapshot will be uploaded via FTP or Email or stored on your local LPR Picture File Path. Then, You can see the snapshot file name which you customize as shown below:

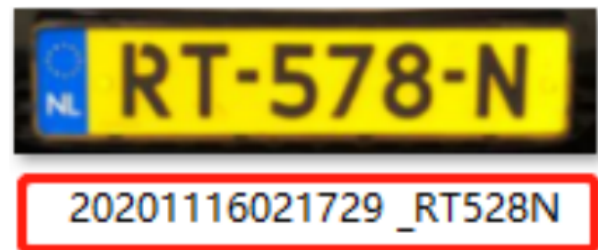
Full-snapshot Recognized successfully



Full-snapshot Recognized failed



License plate snapshot Recognized successfully



License plate snapshot Recognized failed



Note:

- If the item checked is not recognized successfully, then the item will be displayed with the specific symbol “#”.
- The file name of full-snapshot will be preceded by a number of 4.

List Management

Add the license plates to this interface as Black or White type (Black/White List), and then you can set the alarm action for these license plates in the corresponding List Event interface. When these license plates are detected, the camera will respond according to your settings.

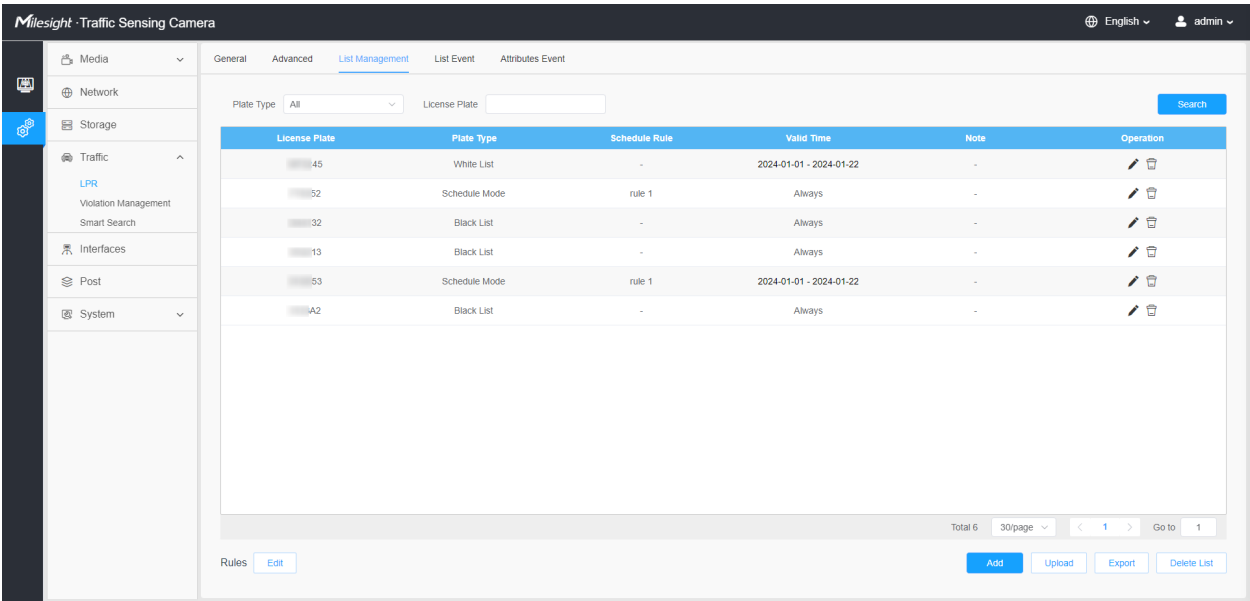
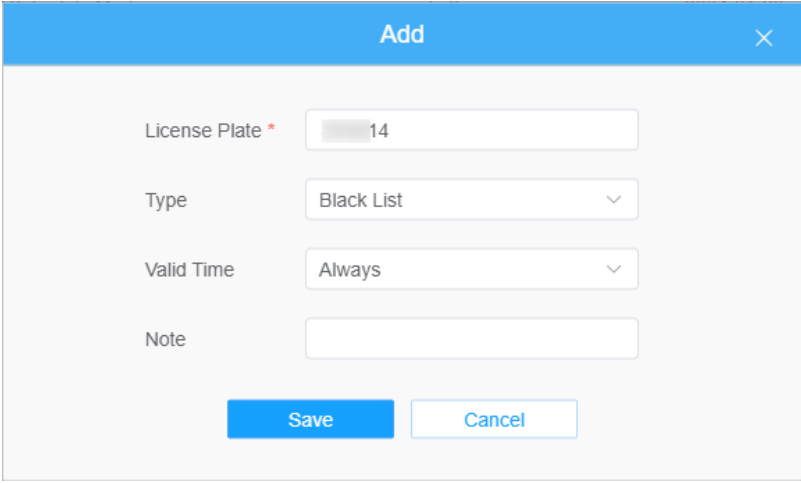
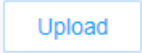
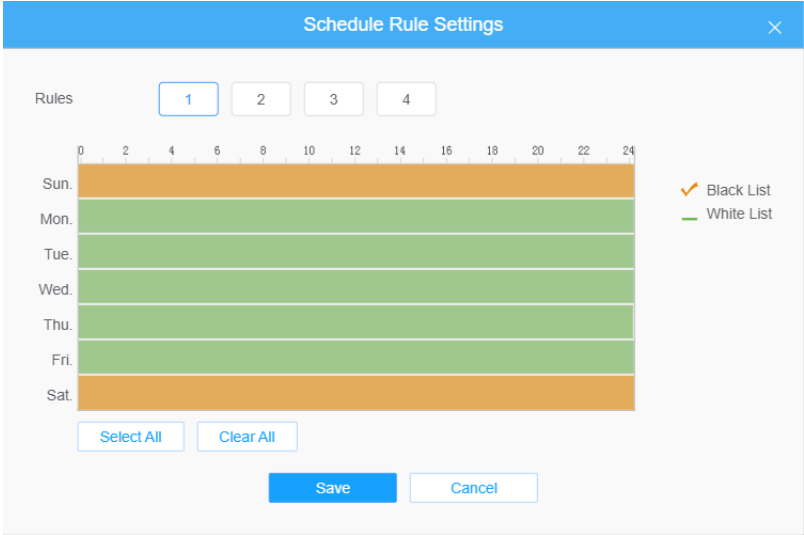
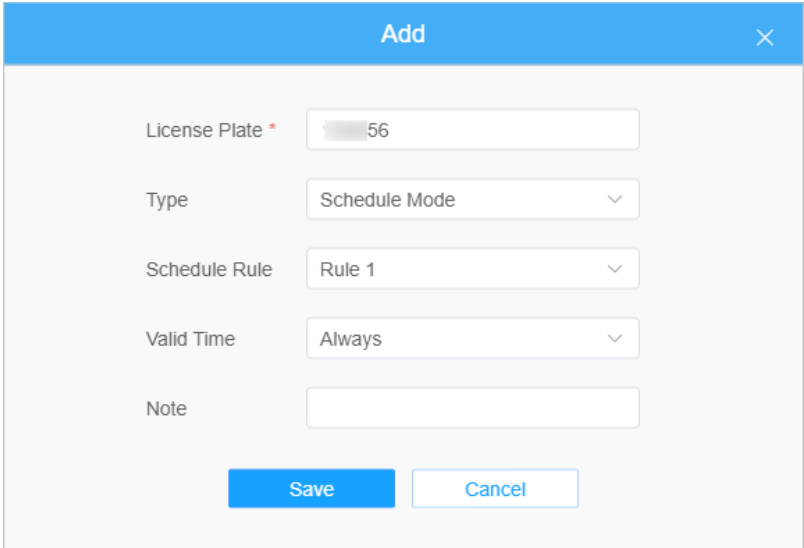


Table 32. Description of the buttons

Parameters	Function Introduction
 Add	Click the Add button to add license plates as either Black or White type to the license plate management. You can select the effective time as 'always' or a specific time period. Click the Save button to save the added license plate list. 
 Upload	Batch Upload: You can add a csv form with the license plate you want to add, click the "Browse" button to import the form to this interface, click the "Upload" button, the license plates will be added successfully.  Note: You can first download the template as a reference in this interface.

Parameters	Function Introduction
Search List Search	Select Plate Type or directly enter the license plate number, click the "Search" button, the corresponding license plate will be displayed in the list below.
Export Export List	Click the "Export List" button to export the license plate in the current list to a csv form locally.
Delete List	Click the "Delete List" button to delete all the license plate in the current list.

Parameters	Function Introduction
Schedule Rules	Click the "Edit"  button to customize a rule.  And then set the license plate to Schedule Mode and choose a custom schedule rule that can configure the license plate as Black List or White List at different times.   Note: Support setting up to 4 Schedule Rules for Schedule Mode.

 **Note:** It supports adding 20,000 Black List and White List.

List Event

In the List Event section, you can select the schedule and alarm action for configuring List Events.

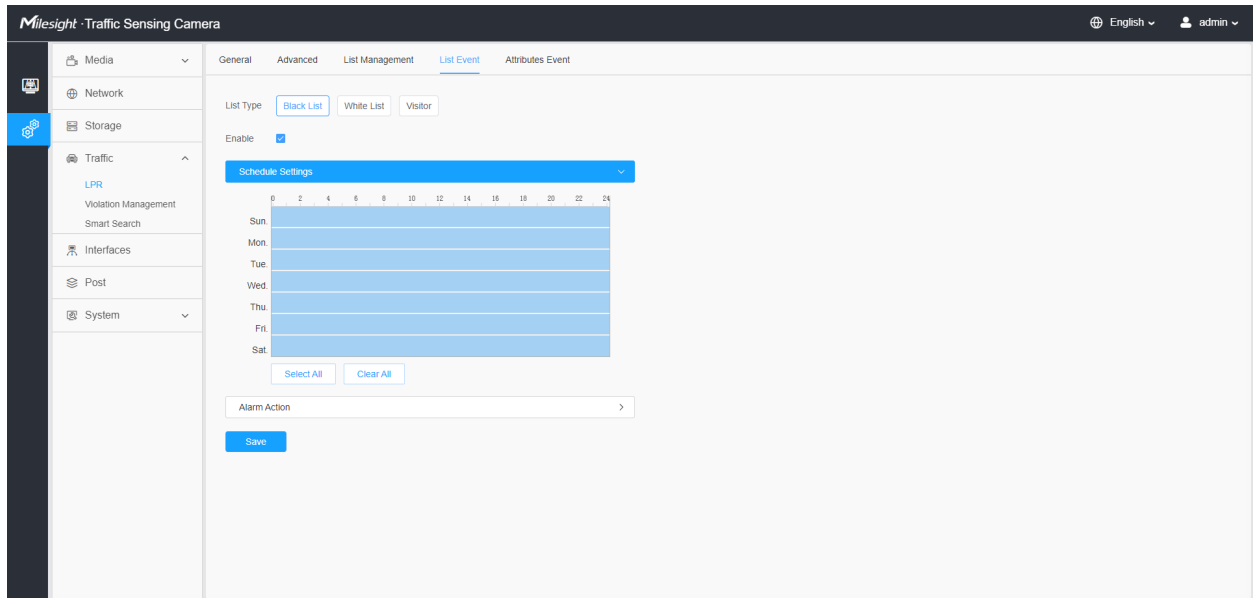


Table 33. Description of the buttons

Parameters	Function Introduction
List Type	Select the type of list you want to configure: Black List/White List/Visitor.
Enable	Select the recording source for video capture.

[Schedule Settings]

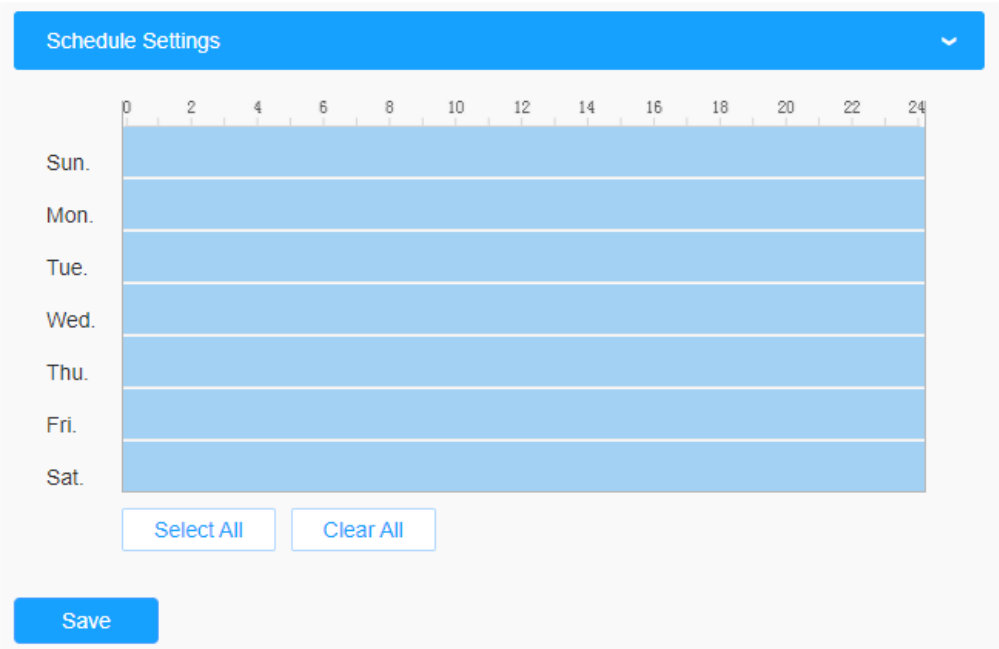


Table 34. Description of the buttons

Parameters	Function Introduction
Copy To... Sun. Mon. Tue. Wed. Thu. Fri. Sat. Save	Copy the schedule area to another date.
Select All	Select all schedule.
Clear All	Clear all schedule.

[Alarm Action]

Alarm Action ▼

☒ **Record**
▼

Duration 5 s

Linkage ☒ Save to Storage

☒ Upload via FTP

☒ **Snapshot**
>

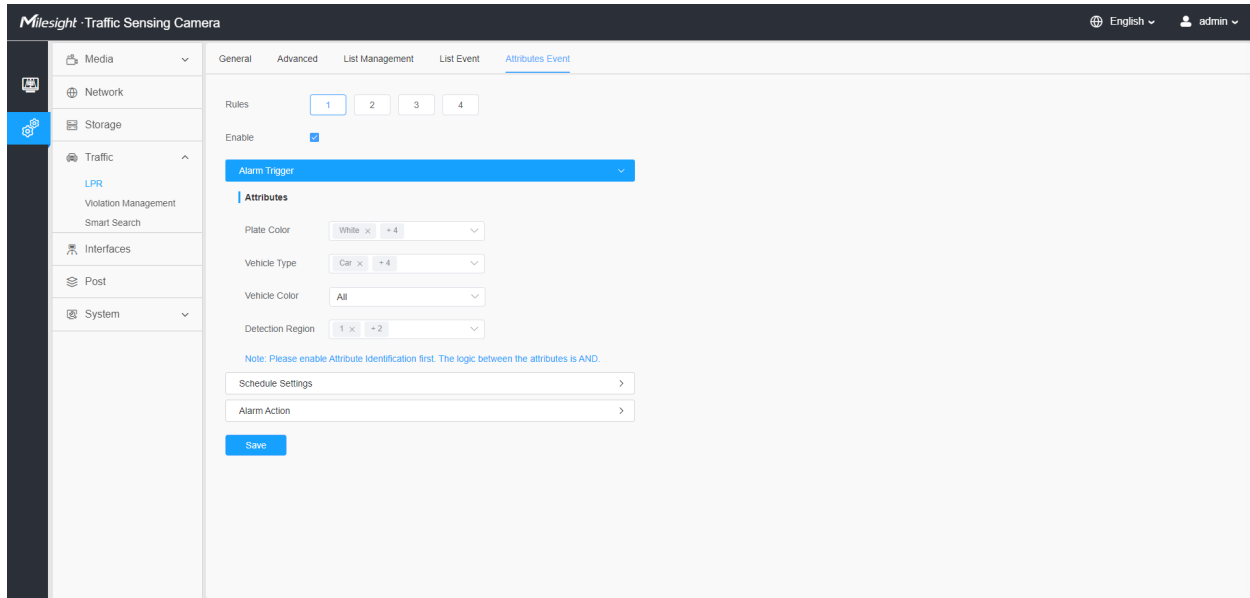
☐ **External Output**
>

Table 35. 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	Snapshot Type: Select the snapshot type you want to send, including License Plate, Vehicle Snapshot, Full Snapshot, and Violation Evidence. 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.

Attributes Event

You can specify up to 4 different rules for Attributes Events. Within the specified schedule, when a specific attribute is detected, it will trigger the pre-configured Alarm Action.



[Alarm Trigger]

You can configure multiple triggered attributes, including Plate Color, Vehicle Type, Vehicle Color, and Detection Region. The following are the available specific options.

Table 36. Description of the buttons

Parameters	Function Introduction
Plate Color	The available options include All, Black, White, Red, Yellow, Green, and Blue.
Vehicle Type	The available options include All, Car, SUV, Van, Bus, Truck, Fire engine, Ambulance, Motorbike, Bicycle, and Other.
Vehicle Color	The available options include All, Black, White, Gray, Red, Yellow, Green, and Blue.
Detection Region	The available options include All, 1, 2, 3, and 4.

[Schedule Settings]

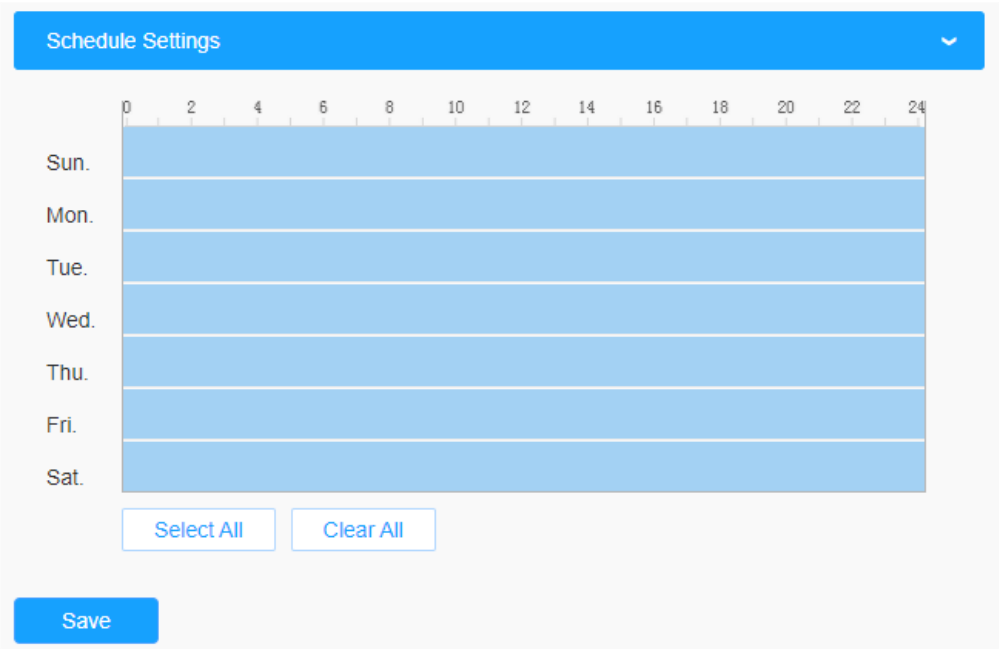


Table 37. Description of the buttons

Parameters	Function Introduction
Copy To... Sun. Mon. Tue. Wed. Thu. Fri. Sat. Save	Copy the schedule area to another date.
Select All	Select all schedule.
Clear All	Clear all schedule.

[Alarm Action]

Alarm Action ▼

☒ **Record**
▼

Duration 5 s

Linkage ☒ Save to Storage
☒ Upload via FTP

☒ **Snapshot**
>

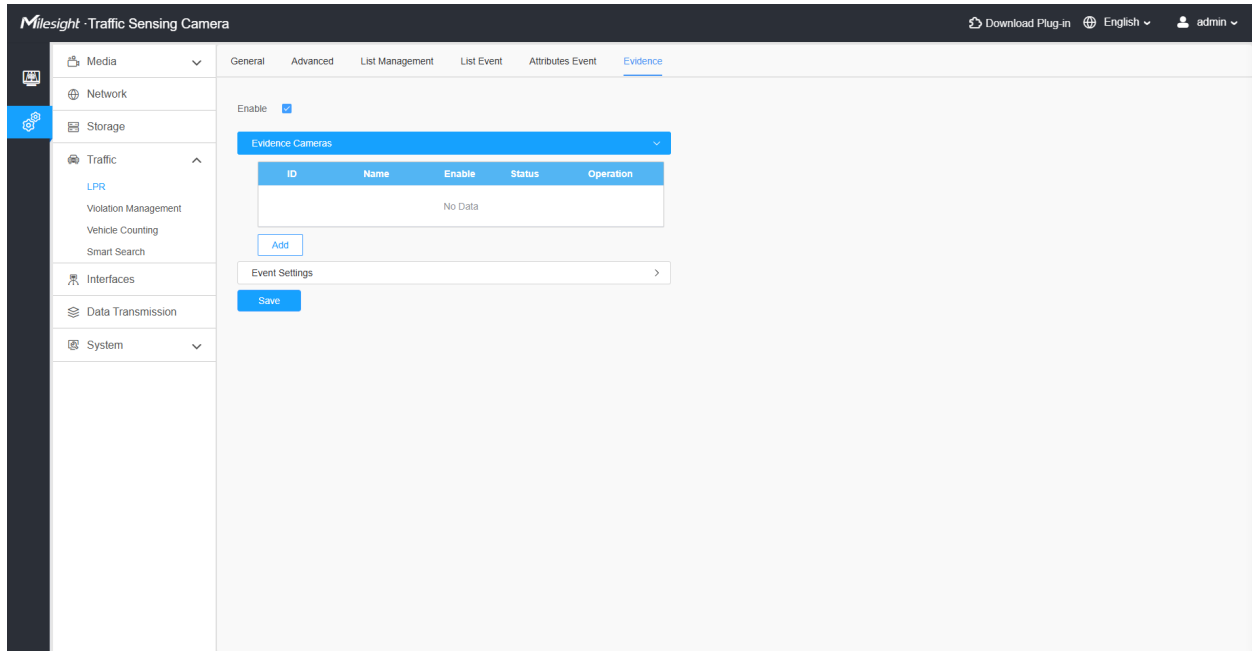
☐ **External Output**
>

Table 38. 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	Snapshot Type: Select the snapshot type you want to send, including License Plate, Vehicle Snapshot, Full Snapshot, and Violation Evidence. 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.

Evidence

Evidence Integration (SingleVision Only)



While the SingleVision camera operates with a high-precision primary sensor, it features an **Evidence Integration** module. This allows the camera to link with an external network camera to capture environmental overview evidence simultaneously with LPR events.

[Connection Settings]

To integrate an external evidence camera, configure the following parameters:

- **Enable Evidence:** Toggle to activate the linkage with an external camera.
- **Camera Name:** Assign a descriptive name for the external device (e.g., "Overview_North_Gate").
- **Authentication:** Enter the **User Name** and **Password** of the external camera.
- **Address:** The network address (IP or Domain) of the external camera.

[Event Settings]

Configure how and when the external camera captures evidence:

- **Capture Conditions:** * **Always:** The external camera will consistently trigger a snapshot or recording whenever an LPR event is detected by the primary sensor.

Radar Configuration

In this page, you can configure the Radar Configuration of Radar model.

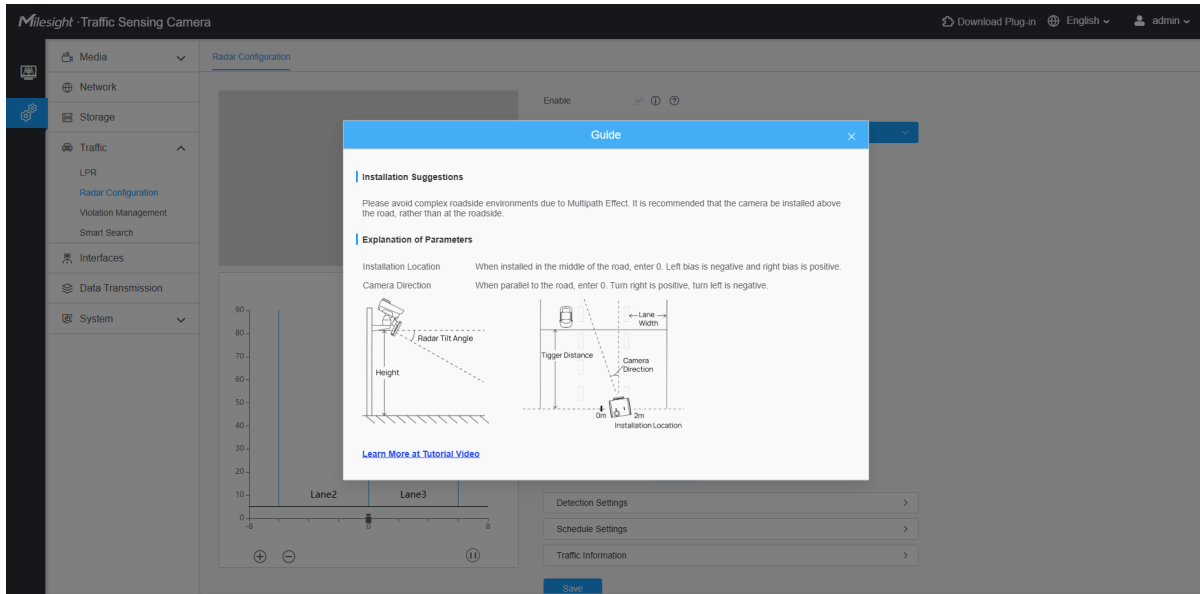
Note:

- Make sure your camera model is Milesight DualVision TrafficX Radar Camera.

Step1: Enable the Radar Configuration.

Go to the “**Settings**”--> “**Traffic**”--> “**Radar Configuration**”, check the checkbox to enable Radar Configuration.

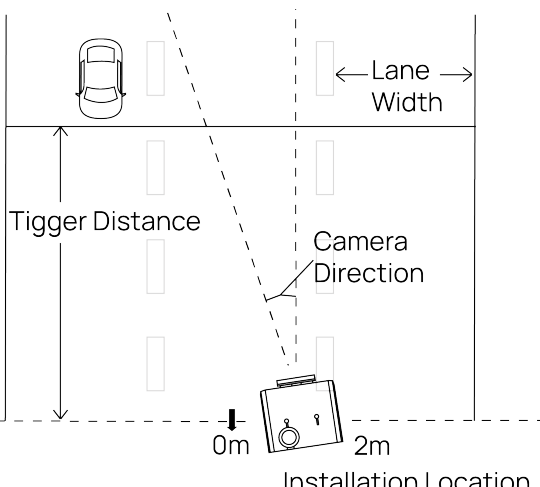
Note: For users who are using the Milesight DualVision TrafficX Radar Camera for the first time, we recommend clicking the icon on the right to get the quick start guide.



Step2: Fill in the road and installation information as shown below.

Table 39. Description of the buttons

Parameters	Function Introduction
Number of Lanes & Width of Each Lane	Please fill in the number of lanes and the width of each lane according to the actual scene. It supports up to 4 lanes, and the width range of each lane is from 3 to 6 meters.  Note: Configuration is recommended for no more than 3 lanes.
Direction of Lanes	Defines which directions of vehicle movement are detected per lane — <i>Approach</i> (toward radar), <i>Away</i> (away from radar), or <i>Both</i>.
Installation Location	Please fill in the installation position of the camera on the road, the range is -12 to 12 meters, and the default is 0. If the camera is installed in the middle of the road, fill in 0, otherwise, fill in the corresponding offset distance. It should be noted that the installation position needs to be confirmed as a positive or negative number. With the center of the road as the zero point, if the camera is installed on the left side of the road, it is defined as a negative number, and if it is on the right side, it is defined as a positive number.
Installation Height	Please fill in the installation height according to the actual installation height of the camera, the range is 2 to 10 meters.
Radar Tilt Angle	Please fill in the Radar Tilt Angle according to the actual installation angle between the camera's field of view and the horizontal.

Parameters	Function Introduction
Camera Direction	Please fill in the angle between the direction of the camera installation and the road, the angle range is $-30^{\circ}\sim 30^{\circ}$, and the default is 0°. When the camera is parallel to the road, enter 0. Turn right is positive, turn left is negative as shown below. 
Radar Test	After completing the above configuration, you can click the test button, then the above configuration will be automatically saved and the radar module will start to test with the maximum detection range, which is not limited by the lane configuration. In this way, the user can flexibly adjust the configuration according to the position of the target in the coordinates to achieve the most matching configuration.  Note: After 30 seconds of testing, the radar test function will be automatically turned off to prevent customers from forgetting to turn off the function.

Step3: Set Detection Settings.

Table 40. Description of the buttons

Parameters	Function Introduction
Speed Unit	Select the speed unit as km/h or mph to meet the needs of customers in different regions.
Radar Message Post Settings	It supports the compatibility of radar data with back-end software via TCP, such as Milesight VMS Enterprise.

After completing the Road&Installation Settings and Detection Settings, these information will be dynamically matched with the coordinate map in the lower left corner, and the detected target will also be dynamically displayed on the coordinate map, which is convenient for users to view the detection results in real time.

Milesight · Traffic Sensing Camera

Download Plug-in English admin

Radar Configuration

Enable ☒ ?

Road and Installation

Road Information

Number of Lanes: 3

Width of Each Lane: 3 m (3~6)

Direction of Lanes: Lane1 Lane2 Lane3

Approach: ×

Installation Information

Installation Location: 0 m (-12~12)

Installation Height: 9 m (2~10)

Radar Tilt Angle: 0 ° (0~15)

Camera Direction: 0 ° (-30~30)

Radar Test: Start

Detection Settings >

Schedule Settings >

Step4: Schedule Settings.

Set the effective time of radar configuration.

Schedule Settings

024681012141618202224

Sun.

Mon.

Tue.

Wed.

Thu.

Fri.

Sat.

Select All

Clear All

Step5: Traffic OSD Settings.

Customers can choose the information that needs to be displayed in Live Video and the display format, such as color, size, etc.

Traffic Information
▼

Video OSD

Show OSD

Font Size

Font Color

Counting Reset

Auto Reset

Day

Time

☐ All
☐ License Plate
☐ Speed
☐ Distance
☐ Vehicle Counting

☐ Detection Region
☐ Direction
☐ Azimuth

Medium ▼

Reset

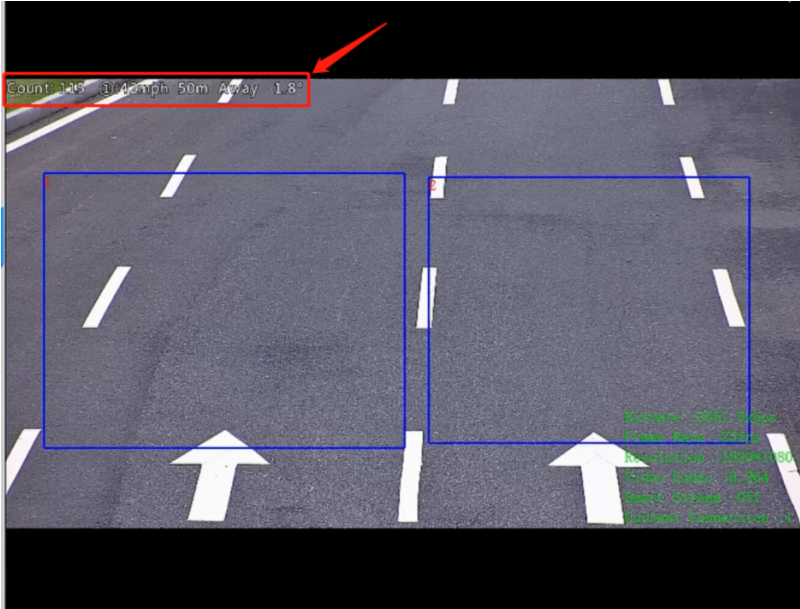
☐

Every Day ▼

🕒 00:00:00

Table 41. Description of the buttons

Parameters	Function Introduction
Show OSD	Users can choose the information they want to display in Live Video, including License Plate, Detection Region, Speed, Direction, Distance, Azimuth and Vehicle Counting.

Parameters	Function Introduction
Font Size&Font Color	The font size and color of the OSD display, the default size is Medium; When Speed, Direction, and Vehicle Counting are checked, the Live View interface is displayed as shown in the figure below: 
Counting Reset	Click the "Reset" button to manually reset the vehicle count.
Auto Reset	Automatically clears the OSD vehicle count on live video at scheduled day and time. • Day: Select the day(s) on which the reset should occur. • Time: Specify the exact time the vehicle count will be reset. Example: If set to Monday at 00:00, the OSD vehicle count will automatically reset every Monday at midnight.

Step6: Log Settings.

Click the "Edit" button, and a pop-up window as shown in the figure below will appear, allowing users to search for various types of logs and supporting the log export function.

Log Settings

Logs

Auto Export Logs ☒

Day

Time

Export Time Range

Export to ☒ FTP ☒ Email ☒ Storage

Radar Logs

Start Time End Time

Time	Speed	Direction	Distance	Azimuth	Vehicle Counting
2022-06-13 14:06:05	3km/h	Approach	34m	-14°	24140
2022-06-13 14:05:18	4km/h	Approach	34m	-10°	24139
2022-06-13 14:04:16	7km/h	Away	35m	-14°	24138
2022-06-13 14:03:09	54km/h	Away	35m	-3°	24137
2022-06-13 14:02:26	20km/h	Approach	34m	-8°	24136
2022-06-13 14:02:05	13km/h	Approach	34m	-7°	24135
2022-06-13 14:02:04	28km/h	Approach	34m	-11°	24134

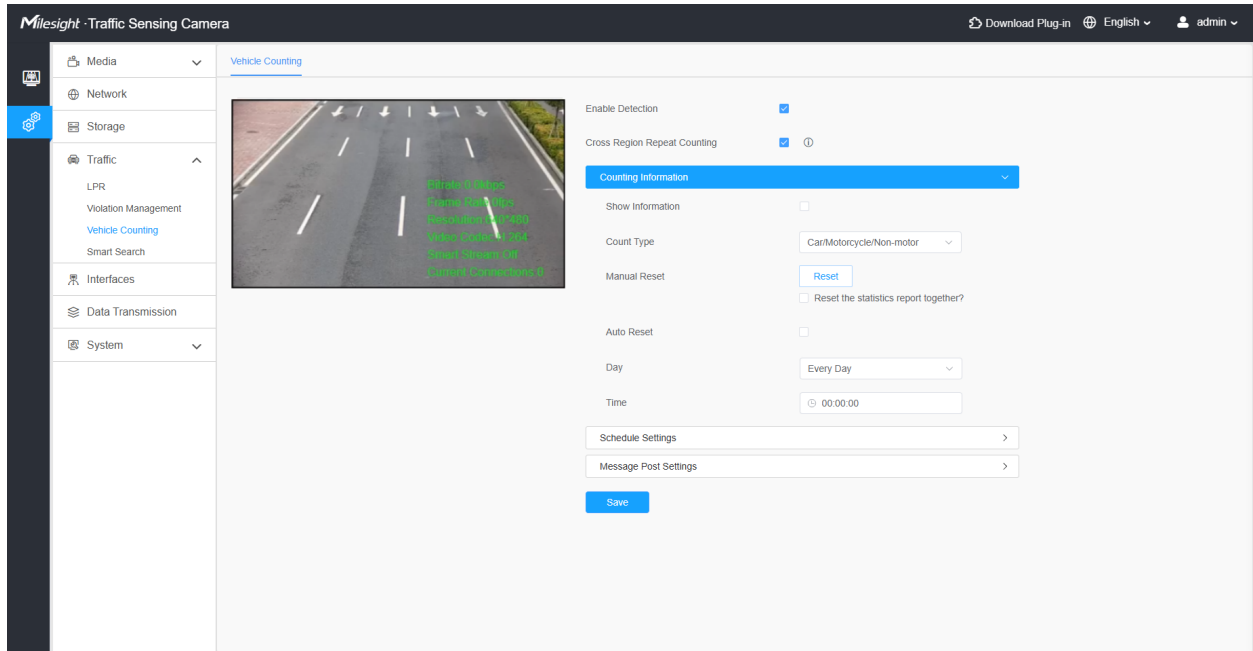
Total 2710 30/page < 1 2 3 4 5 6 ... 91 > Go to 1

[Enable Auto Export Logs]: Support regular automatic export of logs to FTP, Email and Storage.

Vehicle Counting

The Vehicle Counting function can be carried out according to different vehicle types and different lanes. And the statistics report can be displayed on the Live View interface and LPR interface to provide intuitive experience. The vehicle counting data can help to understand the real-time traffic volume, which is very helpful in road guidance and traffic control.

 **Note:** Please make sure your model is TS5020-GIE.



Step 1: Enable LPR function and draw the detection area in preview on Traffic-->LPR-->General interface. Up to 4 detection area supported. Refer to [LPR \(page 58\)](#) for the details of the LPR Settings.

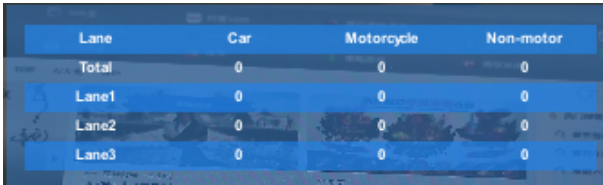
Note: If you have enabled the LPR function before, steps of LPR configuration are not require.

Step 2: Go to the Vehicle Counting interface and click to enable the Vehicle Counting function.

[Counting Information]

Step 3: Configure the counting information.

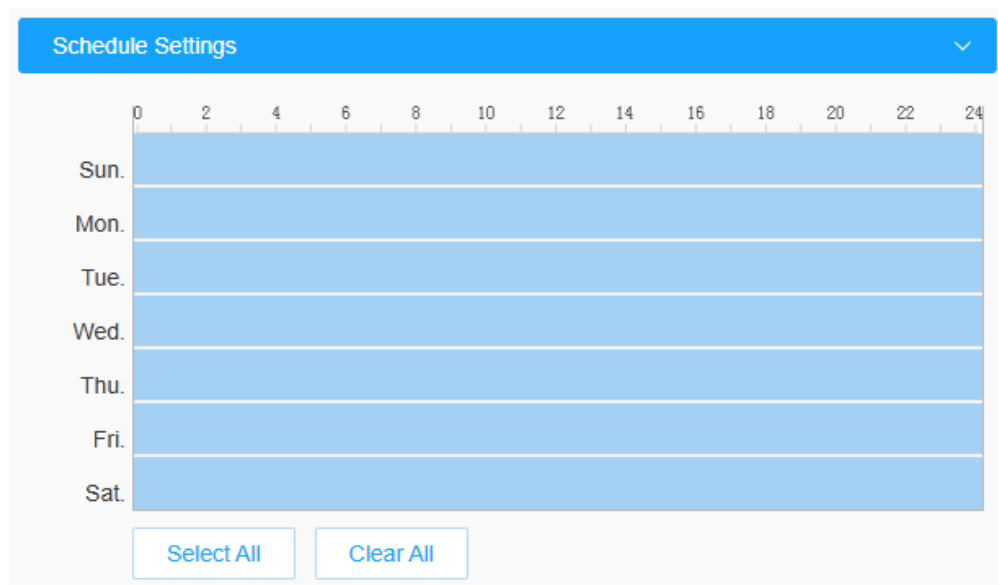
Table 42. Description of the buttons

Parameters	Function Introduction
Show Information	Click to present counting chart on Liveview.  Note: Counting chart can be dragged to different places as needed.

Parameters	Function Introduction
Counting Type	1. There are two ways to count based on vehicle types classification in liveview. Car/Motorcycle/ Non-motor Mode: • Car: Car, SUV, Van, Bus, Truck, Fire engine, Ambulance • Motorcycle: Motorbike • Non-motor: Bicycle, Other Small/Medium/Large Vehicle Mode: • Small Vehicle: Car, Motorbike, Bicycle, Other • Medium Vehicle: SUV, Van, Ambulance • Large Vehicle: Bus, Truck, Fire engine 2. The vehicles can be counted in real time for 3 different vehicle types and up to 4 different lanes, giving users the most effective information.
Manual Reset	You can enable the auto reset if you want to auto counting by day or by week. The statistics report can be reset together.

[Schedule Settings]

Step4: Set the schedule of monitoring;



[Message Post Settings]

Step 5: Enable the message post and set the post mode, content and type as needed.

Table 43. Description of the buttons

Parameters	Function Introduction
Post Mode	Instant: Immediately post the message.
	Customize: Configure the time interval to post the message.

[LPR Interface]

Step6: After completing the above settings, the camera will work to count vehicles, and the statistics report can be displayed on the Live View interface and LPR interface to provide an intuitive experience.

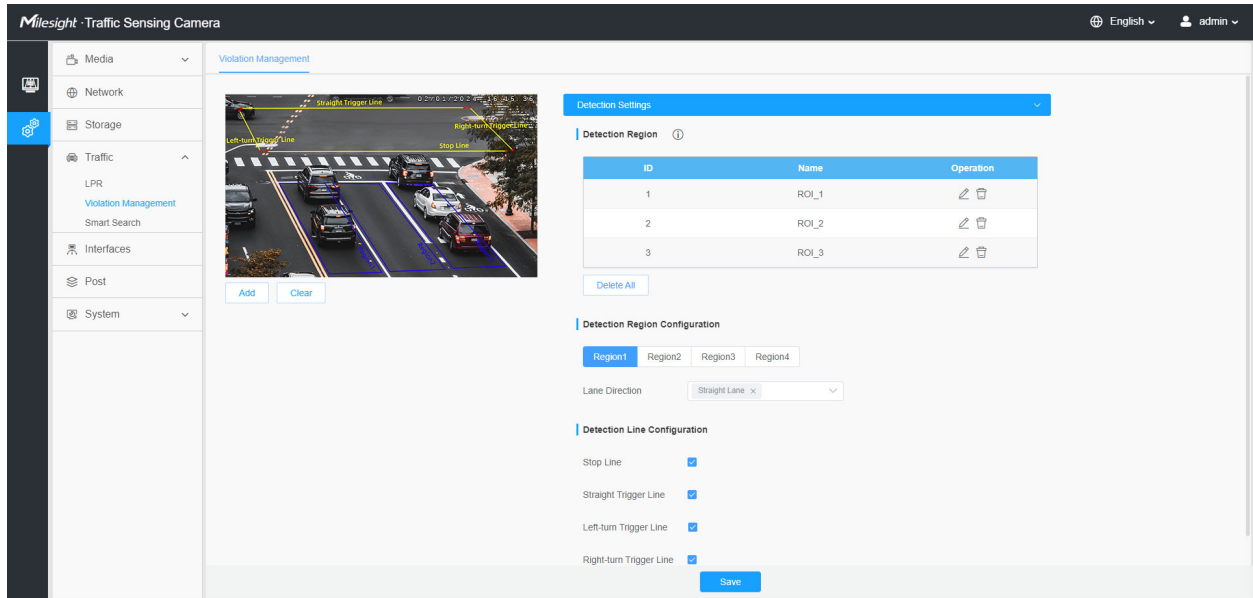
Violation Management

In the Violation Management interface, you can configure the relevant settings and Alarm Action for violation events.

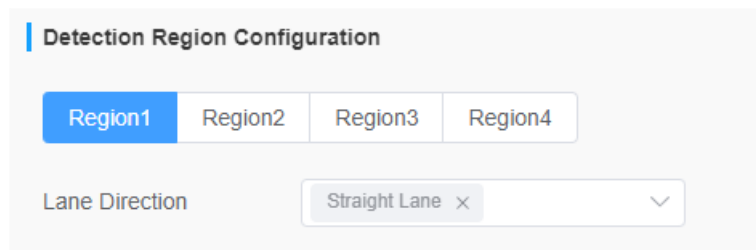
 **Note:** The TrafficX series supports a range of violation detection features, depending on the specific model. Refer to the table below for a summary of supported functionalities.

Table 44. Description of the buttons

Violation Type	Supported Models
No Plates	SingleVision TrafficX Camera (TS5020-GIE)/ DualVision TrafficX Camera (TS5510-GH)/ DualVision TrafficX Enforcement Camera (TS5511-GH)/ DualVision TrafficX Radar Camera (TS5510-GVH)
Reverse Driving	SingleVision TrafficX Camera (TS5020-GIE)/ DualVision TrafficX Camera (TS5510-GH)/ DualVision TrafficX Enforcement Camera (TS5511-GH)/ DualVision TrafficX Radar Camera (TS5510-GVH)
Speed Monitoring	DualVision TrafficX Radar Camera (TS5510-GVH)
Red Light Running	DualVision TrafficX Enforcement Camera (TS5511-GH)
Cross Line at Red Light	DualVision TrafficX Enforcement Camera (TS5511-GH)



Step1: Set Detection Region. The detection region in Violation Management is synchronized with the Detection Region settings in LPR - [General \(page 58\)](#).



Step2: Set Violation Detection Event.

[No Plates]

This feature detects vehicles that pass through the scene without a visible license plate.

Table 45. Description of the buttons

Parameters	Function Introduction
No Plates	Click on the checkbox to enable the detection of vehicles without license plate.

[Reverse Driving]

Table 46. Description of the buttons

Parameters	Function Introduction
Reverse Driving	Set the direction of travel within different regions as either Approach (towards the camera) or Away (moving away from the camera). Different regions can be configured with different conditions for Reverse Driving detection. Configurations such as distance (far/near) can be set, and once the conditions are met, an alarm will be triggered.

[Speed Monitoring]

This feature detects and records vehicles exceeding preset speed thresholds.

Table 47. Description of the buttons

Parameters	Function Introduction
Speed Monitoring	Region
	Rule
	Vehicle Type
	Min. Speed Limit
	Max. Speed Limit
	Define separate speed limit rules for each region. Multiple rules can be created to suit different traffic conditions. Select the type of vehicle the rule applies to. The lowest speed allowed for the selected vehicle type. The highest speed allowed for the selected vehicle type.

[Red Light Running]

Detection Region Configuration

Region1
Region2
Region3
Region4

Lane Direction
Straight Lane x

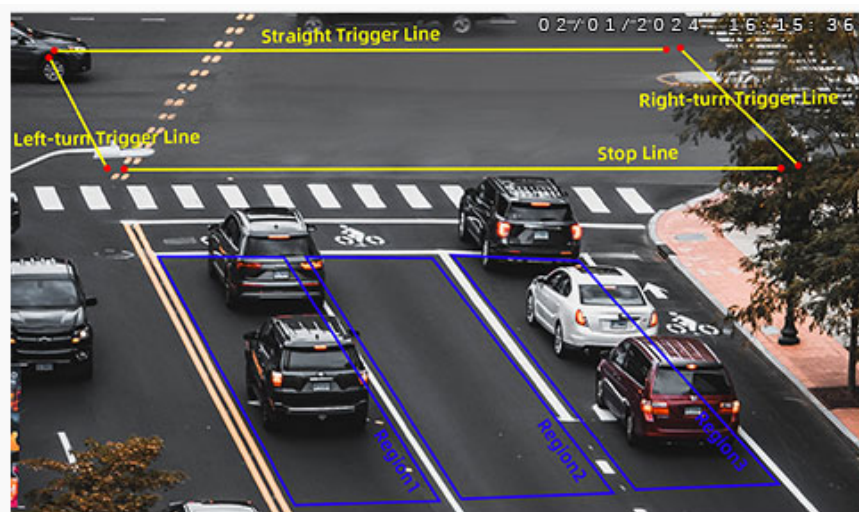
Detection Line Configuration

Stop Line
☒

Straight Trigger Line
☒

Left-turn Trigger Line
☐

Right-turn Trigger Line
☐



Add

Clear

Define the lane direction and set trigger line. For all regions you have configured, please specify the Lane Direction as Straight Lane/Left-turn Lane/Right-turn Lane. Click on the selection box of Detection Line, and the corresponding Detection Line will appear on the left-side screen. You can use the mouse to drag and adjust it according to your needs.

Detection Event
▼

☐ No Plates

☒ **Red Light Running** ⓘ

☐ Cross Line at Red Light ⓘ

☐ Reverse Driving

Trigger Condition In the Lane × + 3 ▼

Delay On Red Light 0 ms (0-3000)

Save the Violation Type of the False Start ☒ ⓘ

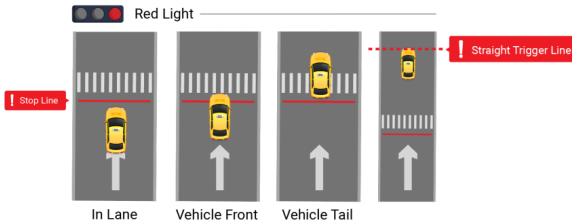
Signal Docking

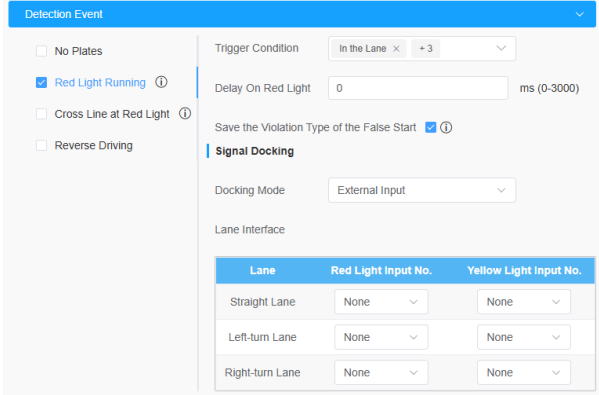
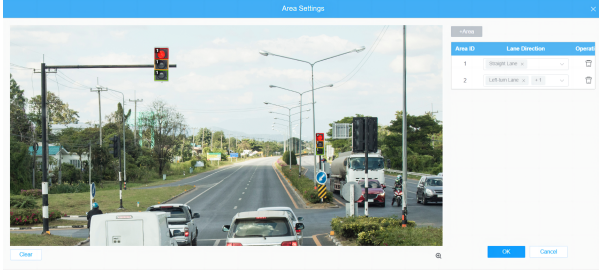
Docking Mode External Input ▼

Lane Interface

Lane	Red Light Input No.	Yellow Light Input No.
Straight Lane	None ▼	None ▼
Left-turn Lane	None ▼	None ▼
Right-turn Lane	None ▼	None ▼

Table 48. Description of the buttons

Parameters		Function Introduction
Red Light Running	Trigger Condition	Trigger Condition: Based on actual traffic requirements, you can select different Trigger Conditions, including In the Lane, Vehicle Front Crossed the Stop Line, Vehicle Tail Crossed the Stop Line, and Reached the Trigger Line. In other words, once the specified conditions are met, an alarm will be triggered if all the selected conditions are satisfied. You can apply multiple rules based on your specific requirements. 
	Delay On Red Light	"Delay on Red Light" is the delay time of red light running detection. Which means the camera will only start to do violation detection after the delay time (tolerance time). The range can be set from 0 to 3000ms.
	Save the Violation Type of the False Start	It happens whenever a stopped vehicle start its run just few instants before the greenlight arrival, crossing the stop line when it is still red. The violation evidence snapshots 3 or 4 will show the green light of the semaphore.

Parameters	Function Introduction
	Select the Signal Docking way. External Inputs: It support 4 inputs for signal docking. (For Red Light Running, you can just connect inputs to Red Light, and no need to connect yellow light.) 
Docking Mode	Video Analysis: It can recognize the traffic is ON or OFF based on the image analysis. # Click “Set” button to enter the Area Settings interface. # Click “+Area” button to set detection area of traffic light (It support two areas). Adjust the detection box to proper position, and define the lane direction of each area.  Note: There is a digital zoom to help user adjust the detection area in an enlarged image easily. Calibrating the detection areas is done to improve the identification of traffic signal states. 

[Cross Line at Red Light]

Detection Event
▼

☐ No Plates

☒ Red Light Running ⓘ

☒ Cross Line at Red Light ⓘ

☐ Reverse Driving

Trigger Condition Vehicle Tail Crossed the Stop Line ▼

Delay On Red Light 500 ms (0-3000)

Signal Docking

Docking Mode Video Analysis ▼

Area Settings Set

Table 49. Description of the buttons

Parameters	Function Introduction
Cross Line at Red Light	Cross Line at Red Light refers to a situation where a vehicle crosses the Stop Line during a red light. There are two options available: Vehicle Front Crossed the Stop Line and Vehicle Tail Crossed the Stop Line. For explanations of other settings, please refer to the functionality description of Red Light Running above.

[Alarm Action]**Step3:** Set Alarm Action.

Alarm Action
▼

☒ **Record** ▼

Duration 5 s ▼

Linkage ☒ Save to Storage

☒ Upload via FTP

☒ **Snapshot** >

☐ **External Output** >

Table 50. 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	Snapshot Type: Select the snapshot type you want to send, including License Plate, Vehicle Snapshot, Full Snapshot, and Violation Evidence. 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.
OSD Blink	And then when an alarm is triggered, the OSD information will flash and alarm, and you can also set the duration of the OSD Blink Time, which supports 1~10s. Note: 1. Make sure your camera model is Milesight DualVision TrafficX Radar Camera. 2. You need to enable the corresponding OSD first.

Smart Search

The real-time detection results will be displayed on the right side of Smart Search page, including detected time, live screenshot, license plate and vehicle attributes.

To access more filtering options, click the **"More"** button to expand.

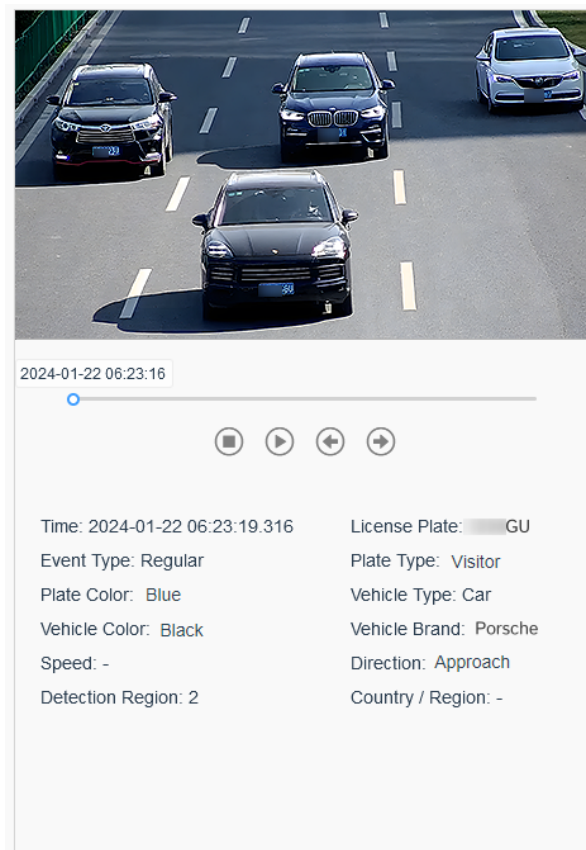
Event Type	Regular	Plate Type	All	License Plate		Start Time	2024-01-24 00:00:00	Fold	Search
End Time	2024-01-24 23:59:59	Plate Color	All	Vehicle Type	All	Vehicle Color	All		
Direction	Approach	Speed	All						

Step1: You can select Event Type/Plate Type/Vehicle Attributes/Direction, or directly enter the license plate number, then choose the start time and end time. Simply click the "Search" button, and the matching license plate information will be displayed below.

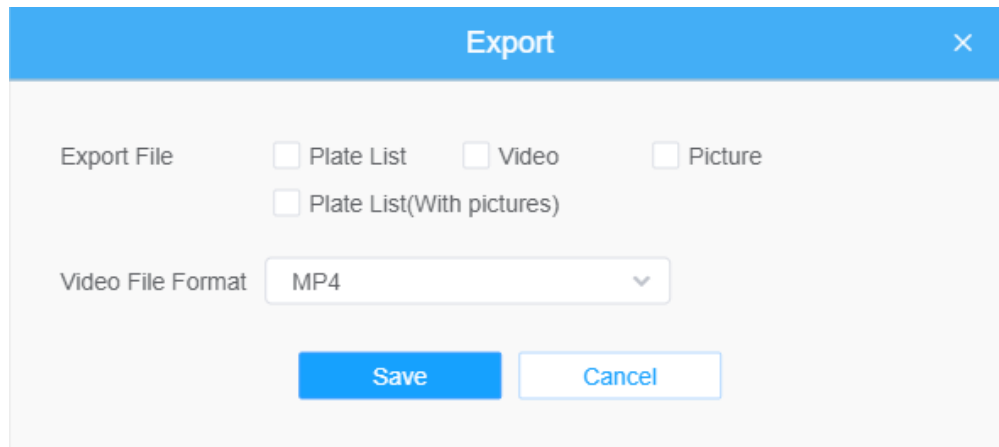
Note:

- It supports displaying 20,000 logs. When no SD card is inserted, the system can store up to 20,000 records. When an SD card is inserted, it allows direct reading from the card without the limitation of 20,000 records. The capacity of the card will primarily determine the available storage space.
- When an SD card or NAS is set in the storage management, the Smart Search records will be displayed up to 8,000 entries.

Step2: Click on the thumbnail photo under the LPR Logs, then the license plate details will be shown as below :



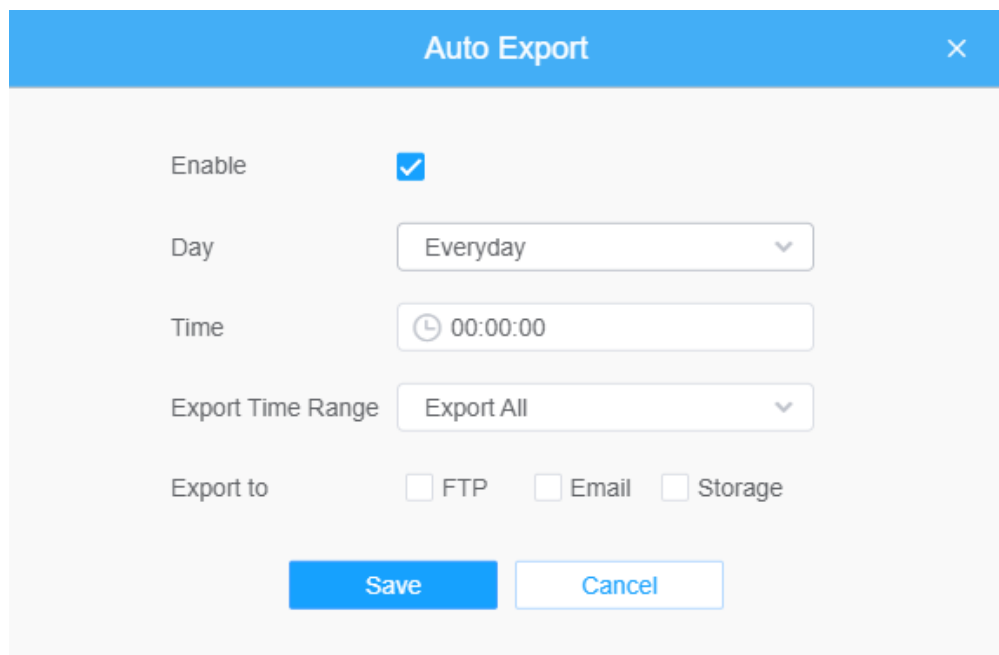
Step3: Click the "**Export**" or "**Export All**" button to export the desired files in the current list to a local folder.



The "Export" dialog box has a blue header with the title "Export" and a close button (X). The main area is light gray and contains the following controls:

- Export File:** A group of four checkboxes: "Plate List", "Video", "Picture", and "Plate List(With pictures)".
- Video File Format:** A dropdown menu currently set to "MP4".
- Buttons:** Two buttons at the bottom, "Save" (blue) and "Cancel" (white with blue border).

Step4: Click the "**Auto Export**" button to automatically export the logs to FTP, Email or Storage.



The "Auto Export" dialog box has a blue header with the title "Auto Export" and a close button (X). The main area is light gray and contains the following controls:

- Enable:** A checkbox that is checked with a blue checkmark.
- Day:** A dropdown menu set to "Everyday".
- Time:** A time picker field showing "00:00:00".
- Export Time Range:** A dropdown menu set to "Export All".
- Export to:** A group of three checkboxes: "FTP", "Email", and "Storage", all of which are currently unchecked.
- Buttons:** Two buttons at the bottom, "Save" (blue) and "Cancel" (white with blue border).

Interface

In the Interface settings, you can configure the interfaces and their related settings, including External Input, External Output, and RS485.

External Input:

This setting allows you to configure the external input interface, which is used to receive signals or data from external devices. You can enable/disable the interface, set the parameters for the active status, and view the current status.

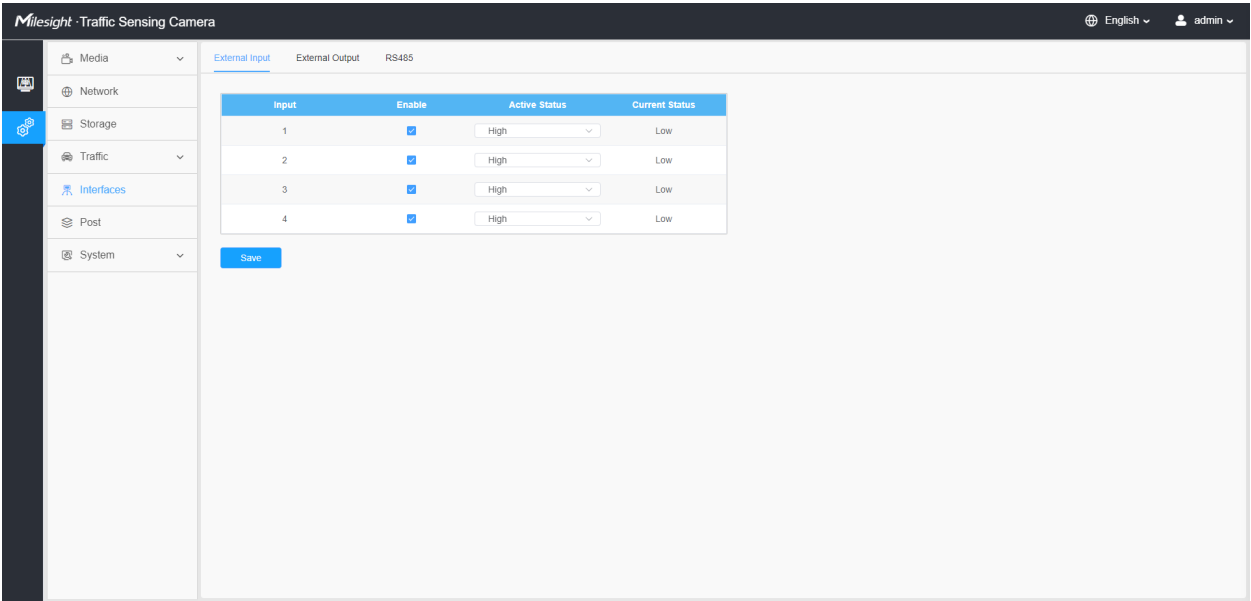


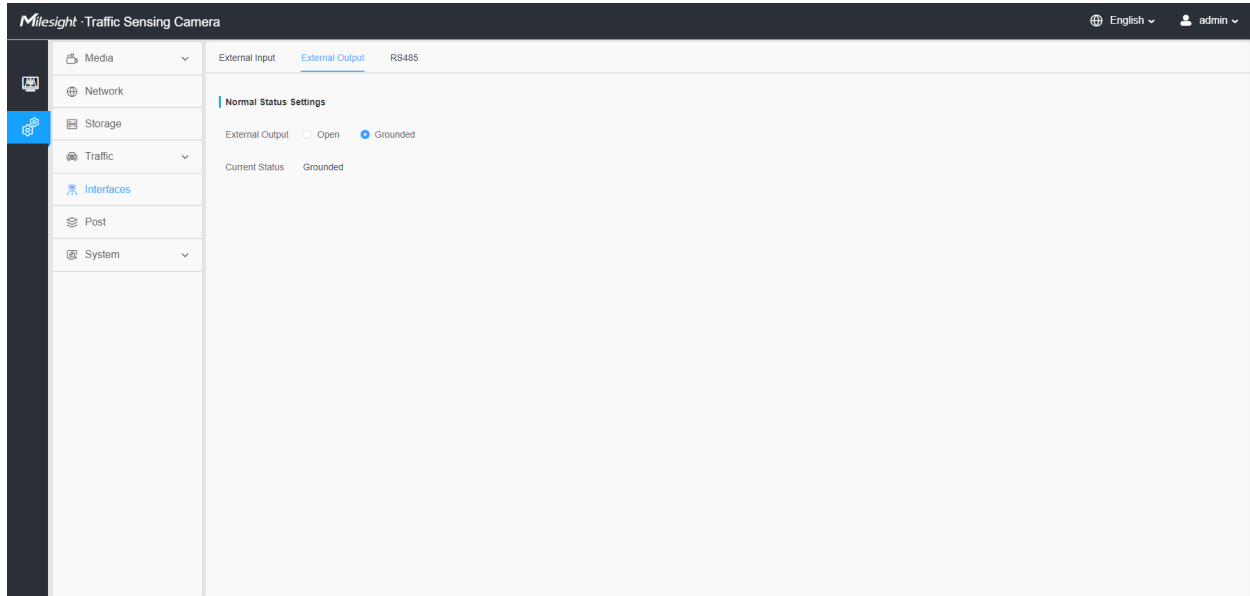
Table 51. Description of the buttons

Parameters	Function Introduction								
Input	<table><tr><td>Yellow</td><td>IN1</td></tr><tr><td>White</td><td>IN2</td></tr><tr><td>Blue</td><td>IN3</td></tr><tr><td>Red</td><td>IN4</td></tr></table>  Note: Four input interface numbers: Please review the labels affixed to the Multi-functional Interface Cable before configuring External Input. The labels indicate the colors of the four Input interfaces as shown above.	Yellow	IN1	White	IN2	Blue	IN3	Red	IN4
Yellow	IN1								
White	IN2								
Blue	IN3								
Red	IN4								
Enable	Click the checkbox to enable the corresponding interface functionality.								
Active Status	When configuring the interface as active, you can set the logic level to either high or low.								
Current Status	The current voltage status of the interface.								

Parameters	Function Introduction
Save	Save the configuration.

External Output:

Configure the normal status of the External Output.



RS485:

You can view and configure the RS485-related information here, such as Baudrate, Data bit, Stop bit, and Parity.

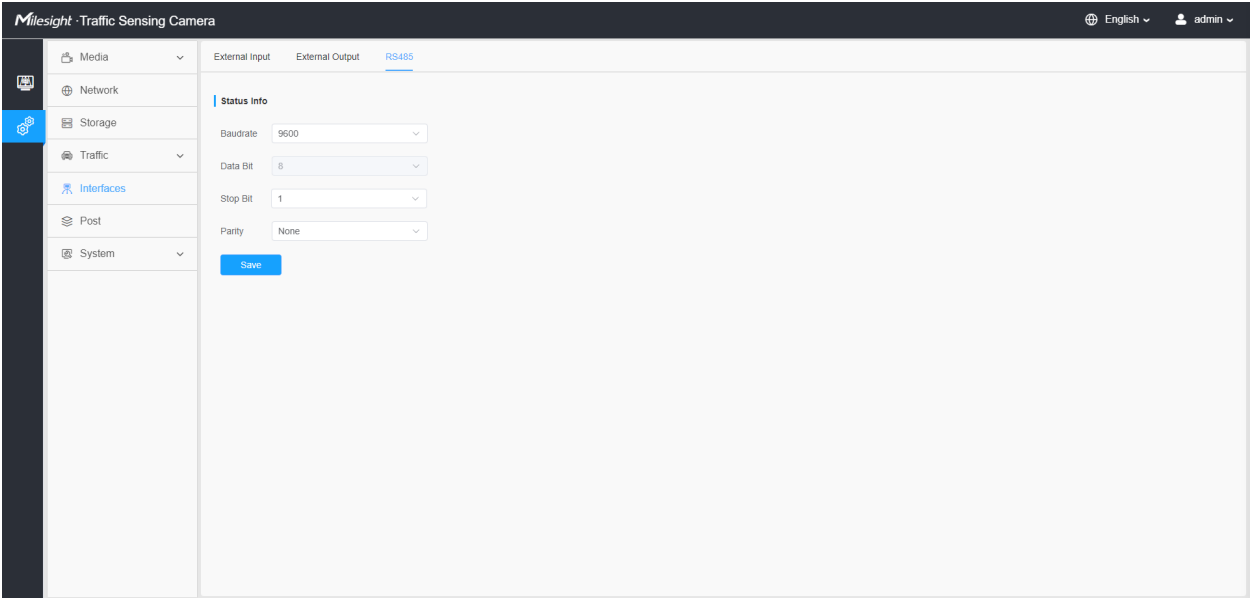


Table 52. Description of the buttons

Parameters	Function Introduction
Baudrate	The transmission rate can be configured in bits per second. Available options include 2400, 4800, 9600, 19200, and 38400. The default setting is 9600.
Data Bit	The data bit defines the number of bits used to transmit data in each data byte. The data bit is set to 8, which allows each byte to transmit 8 bits of information.
Stop Bit	The stop bit is configured to indicate the number of bits that mark the end of a data frame. Available options for the stop bit include 1 bit and 2 bits. The stop bit setting ensures the integrity of data and enables the receiving side to correctly interpret the data.
Parity	The error detection and correction method can be configured. Available options include (None) No Parity, (Odd Parity) Odd Parity, and (Even Parity) Even Parity. The parity bit can be used to validate the integrity of data. The default selection is None.
	Save the configuration.

Data Transmission

Post

You can select the "Post Event" option under "Post Settings" to send data via HTTP/TCP/MQTT Post Type. The elements related to the presentation of data can be configured using the "Data Settings".

[Post Settings]:

The screenshot shows the 'Post Settings' configuration page in the Mileight Traffic Sensing Camera web interface. The sidebar on the left contains navigation links: Media, Network, Storage, Traffic, Interfaces, Data Transmission (highlighted), and System. The main content area has a 'Post Settings' dropdown menu. Below it, there are tabs for 'Post Type' (HTTP, TCP, MQTT), 'Rules' (1, 2, 3), an 'Enable' checkbox, 'Select Events' (LPR, x, +5), 'URL' (https://abc.com), 'User Name', 'Password', 'Retransmission Configuration' (Automatic Retransmission checkbox), and 'Data Settings' (expandable section). A 'Save' button is located at the bottom of the configuration area.

Table 53. Description of the buttons

Parameters		Function Introduction
Select Events		Choose the events you want to push, including LPR, Black List Event, White List Event, Visitor Event, Attributes Event, and Violation Event. When the selected event is triggered, information will be pushed to third-party devices or software compatible with Mileight.
Post Type		Information can be pushed by HTTP , TCP or MQTT .
HTTP	URL	The HTTP URL format can be customized,for example: http://{ip}:{port}/api/ httpEvent?xxxxxx
	Enable	Click the checkbox to enable HTTP Post Type.

Parameters		Function Introduction
	HTTP Method	There are two HTTP push methods, including Post and Get.
	User Name	Receiver name.
	Password	Receiver password.
	Retransmission Configuration	Supports automatic retransmission of failed data when network reconnection occurs.  Note: 1. Only applicable for the HTTP method. 2. Requires an SD card to be inserted. 3. It is recommended that the configuration for posted data and stored snapshots be consistent.
TCP	Enable	Click the checkbox to enable TCP Post Type.
	Camera Port	Enter the camera port, with a range of 1 to 65535.
MQTT	Enable	Click the checkbox to enable MQTT Post Type.
	Topic	Fill in the topic for subscription and publishing.
	Port	MQTT broker port to receive data.
	Host	MQTT broker address to receive data.
	User Name	The username used for connecting to the MQTT broker.
	Password	The password used for connecting to the MQTT broker.

[Data Settings]:

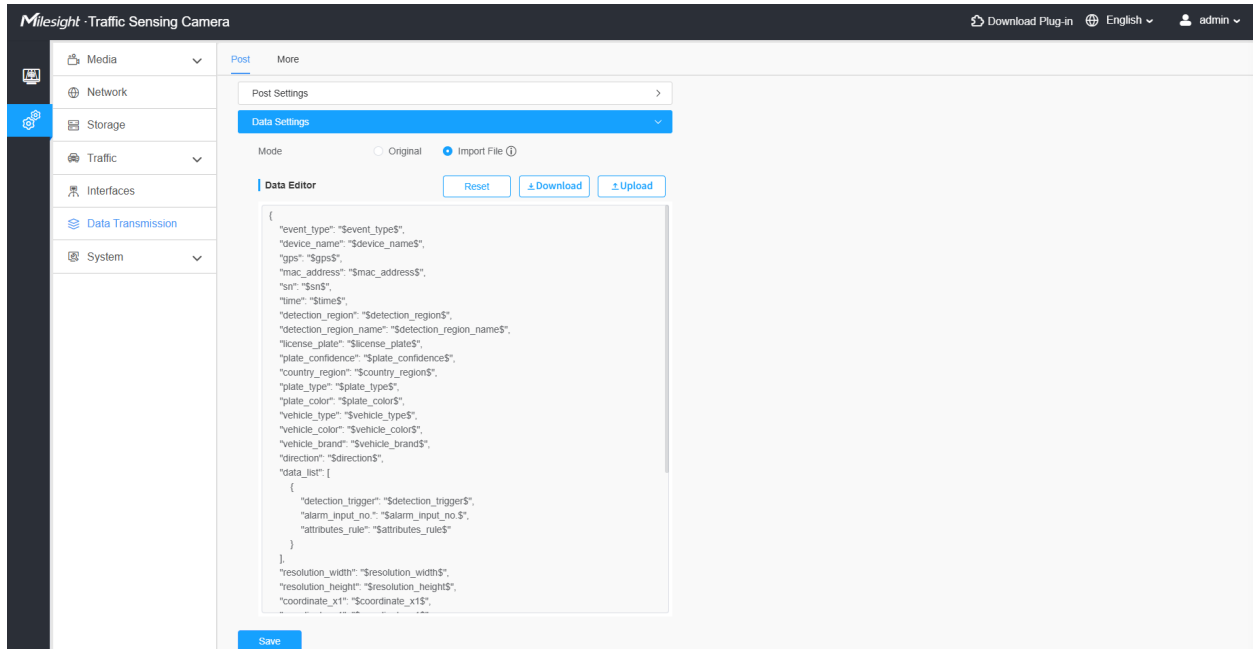


Table 54. Description of the buttons

Parameters		Function Introduction
Mode	Original	Original Mode In this mode, the system uses the default built-in template to generate result data files. The output format and fields are fixed and predefined by the system, without customization options. Import File Mode This mode allows users to upload a custom template file to define the format and content of the result data.

Parameters	Function Introduction
	By importing a template, users can: • Customize which database fields to include in the output • Add fixed or dynamic content as needed After importing the template file, the system will generate result data strictly following the user-defined template. This provides great flexibility for integrating with various downstream applications or meeting specific client requirements without changing system code. Configuration Template File The content of the result data file is customizable using templates. You can edit, change, and save content in the editor. Template file will take effect after saving. The following short example, which will describe a result formatted as an JSON contains all features: 1. { 2. "event_type": "\$event_type\$", 3. "device_name": "\$device_name\$", 4. "license_plate": "\$license_plate\$", 5. "license_plate_snapshot": "\$license_plate_snapshot\$" 6. } In this example we have to adhere to the JSON standard. Lines #2, #3, #4 and #5 is an example of a database field, This template may evaluate to something like: <pre>{ "event_type": "LPR", "device_name": "Network Camera", "license_plate": "KK12345", "license_plate_snapshot": "/9j/4AAQSkZJRgABAQAAAQABA[... a base 64 encoded image...]" }</pre> Database fields The contents of the database can be injected using the following syntax: <code>\$(database field id)\$</code>, represents the data result in string format. <code>#[database field id]#</code>, represents the data result in numeric format. Custom fields When a fixed data result is required, simply enter The content (without the character '\$').

Parameters	Function Introduction
Data Editor	The Data Editor provides a user-friendly interface to directly edit the template content within the system. Users can: • Edit the template text manually to customize the output format and included fields. • Download the current template file to their local device for backup or offline editing. • Upload a previously saved template file to replace or restore the template content. • Reset the template to the original default format, discarding any custom changes. This convenient editor enables quick adjustments and easy management of the template without needing external tools.

More

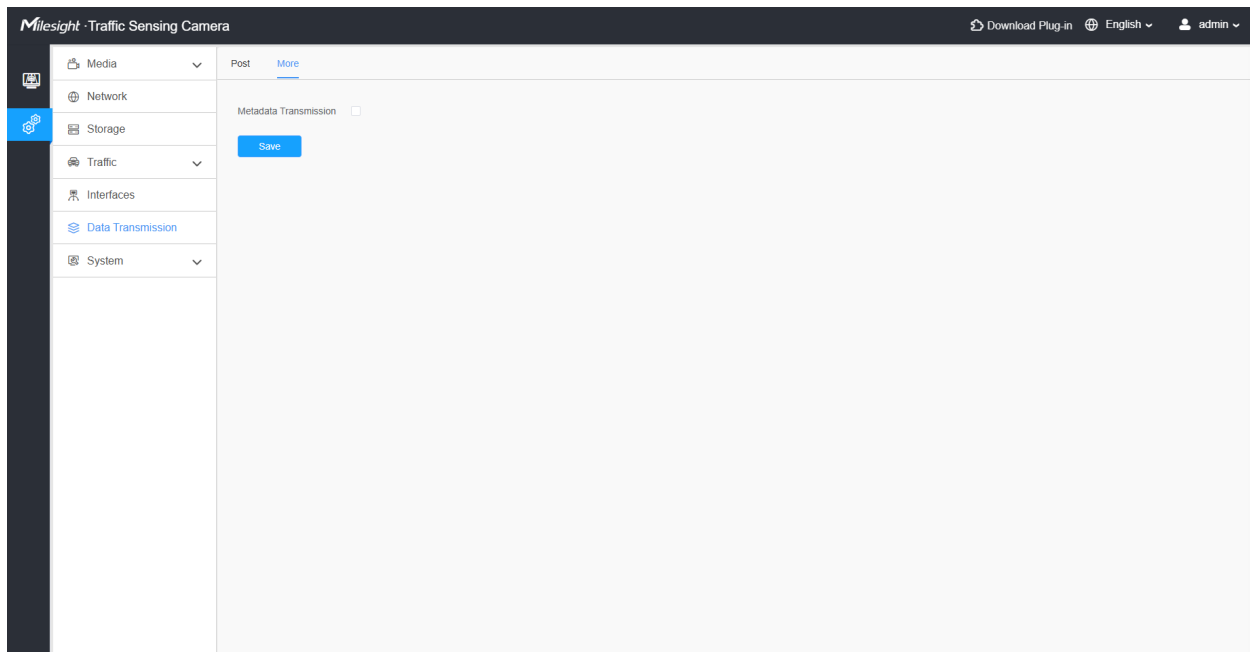


Table 55. Description of the buttons

Parameters	Function Introduction
Metadata Transmission	The Metadata Transmission feature controls whether metadata is included in the data output. - When enabled, the system will transmit detailed metadata along with the main result data. - When disabled, metadata transmission is turned off, and only core result data is sent. Enabling metadata transmission can provide additional context and information useful for advanced data processing or integration.

System

System Setting

You can access the 'System Setting' to configure System Information, Date & Time settings.

System Info

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

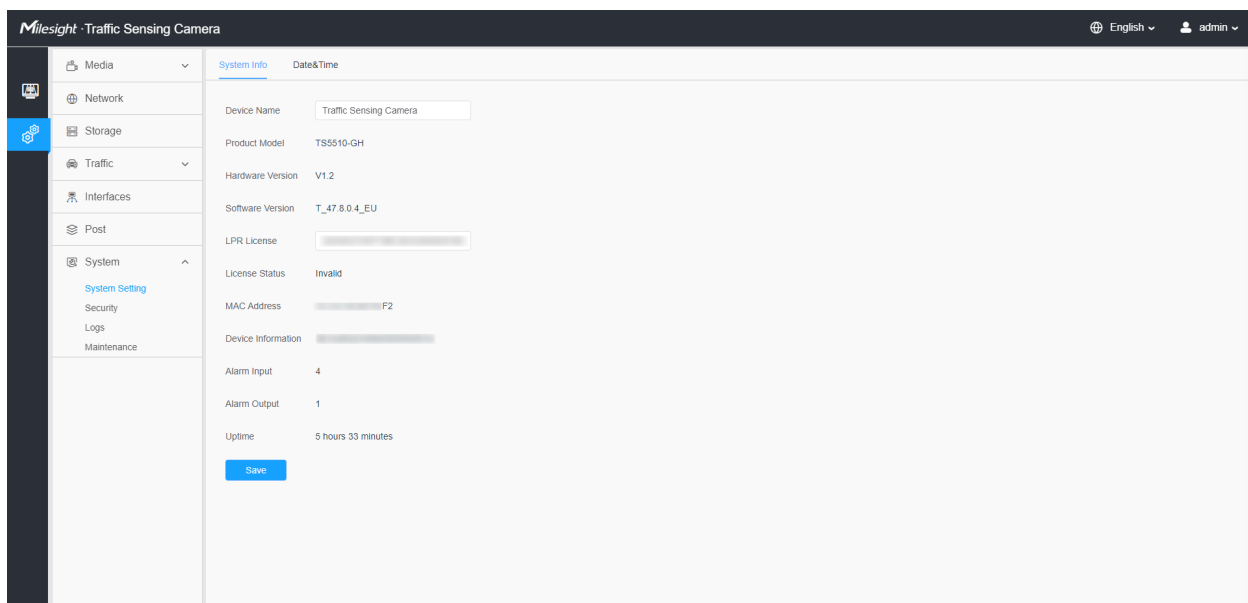


Table 56. Description of the buttons

Parameters	Function Introduction
Device Name	The device name can be customized.
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.
LPR License	Generated by camera's information.
License Status	Show present license status, including Valid and Invalid
MAC Address	Media Access Control address.
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 the configuration.

Date & Time

Milesight Traffic Sensing Camera
English
admin

Media
Network
Storage
Traffic
Interfaces
Post
System
System Setting
Security
Logs
Maintenance

System Info
Date & Time

Current System Time

Date: 18/01/2024

Time: 21:37:42

Set the System Time

Time Zone: (UTC-08:00) United States - Pa

Daylight Saving Time: Automatic

Synchronize Mode: ☐ GPS ☐ NTP server ☐ Manual ☒ Synchronize with computer time

Date: 18/01/2024

Time: 21:37:44



Table 57. 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.
	Synchronize Mode: GPS, NTP server, Manual and Synchronize with computer time are optional.
	GPS: Select the option to utilize GPS signals for accurately determining the current time.
	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 the configuration.

Security

User

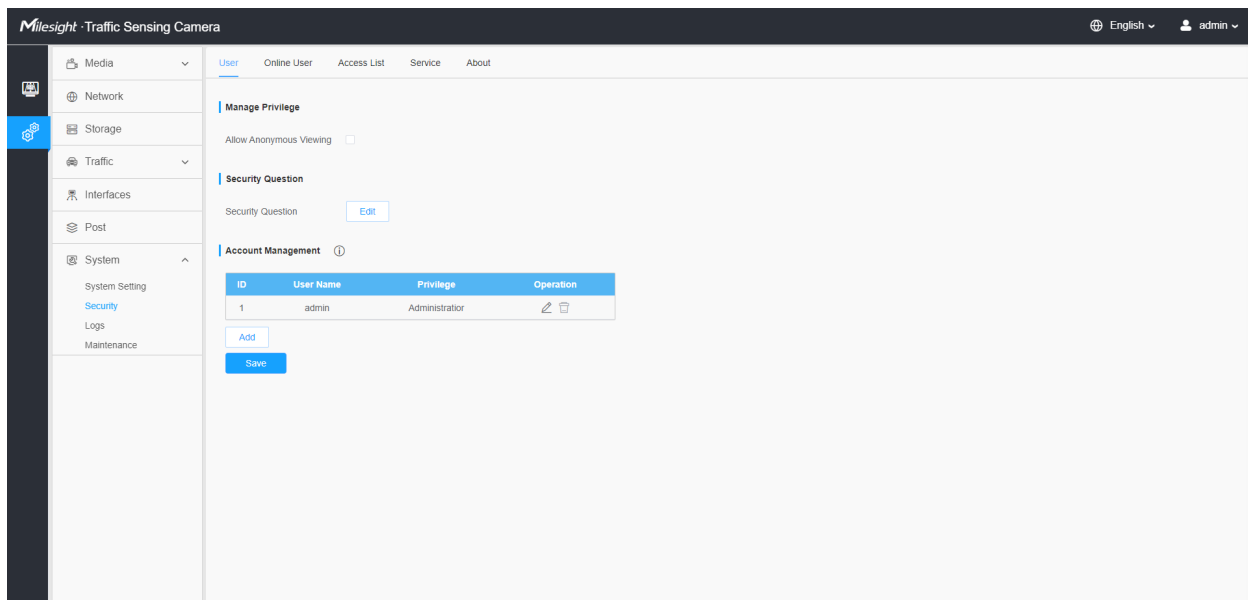
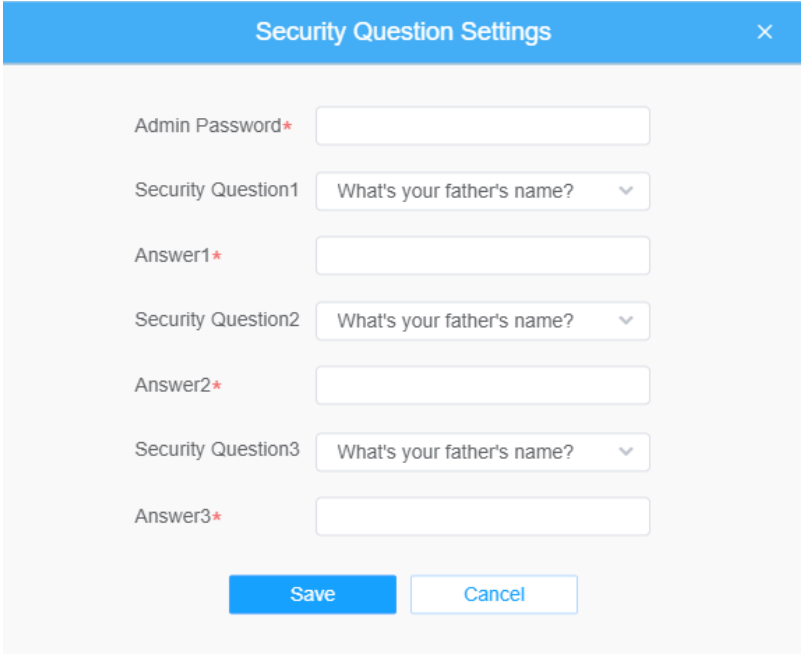
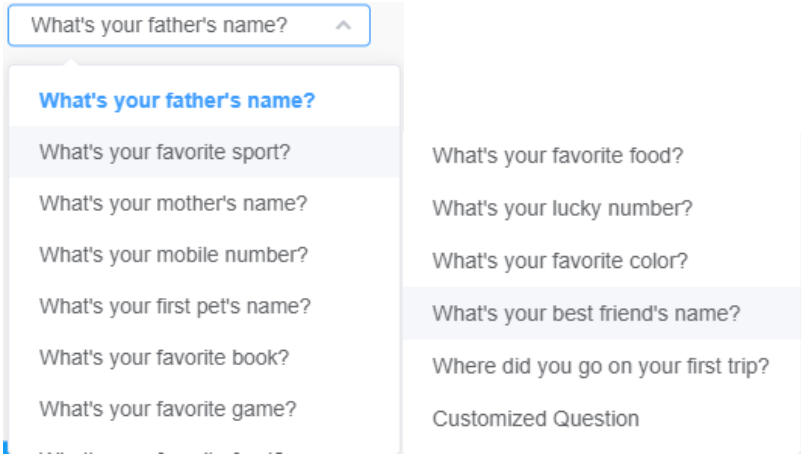


Table 58. Description of the buttons

Parameters	Function Introduction
Manage Privilege	Allow anonymous viewing: Check the checkbox to enable visit from whom doesn't have account of the device.
Security 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.  Note: • Support up to 20 users, including a default user and 19 custom added users. • The operator privilege is all checked by default.

Online User

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

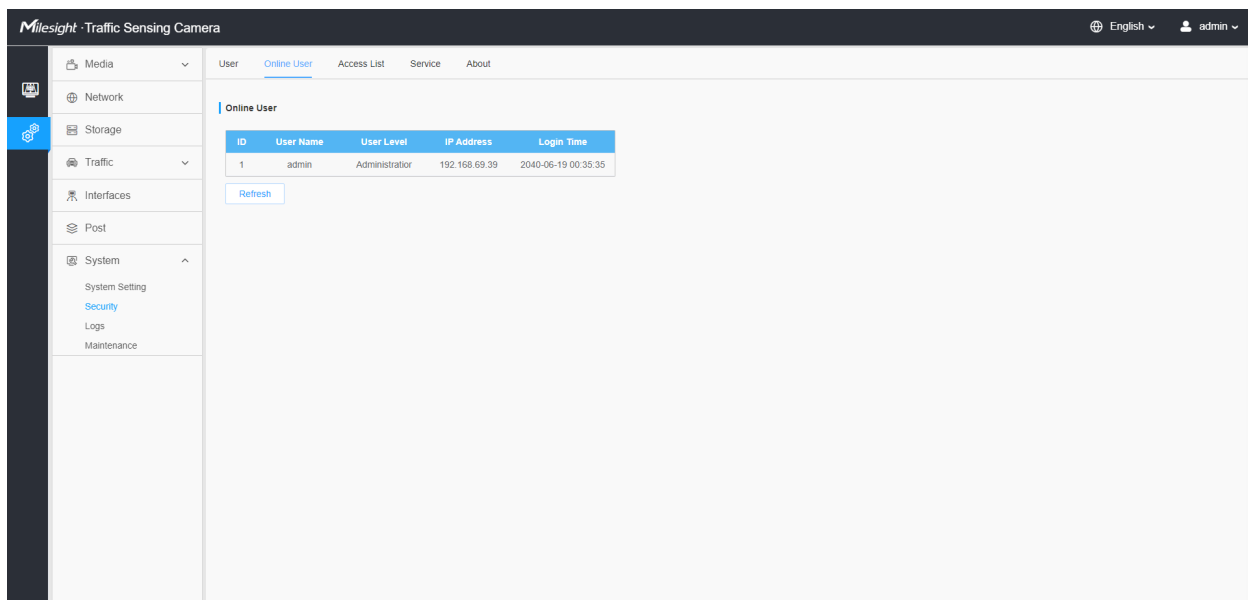


Table 59. Description of the buttons

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 logs in 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.

Access List

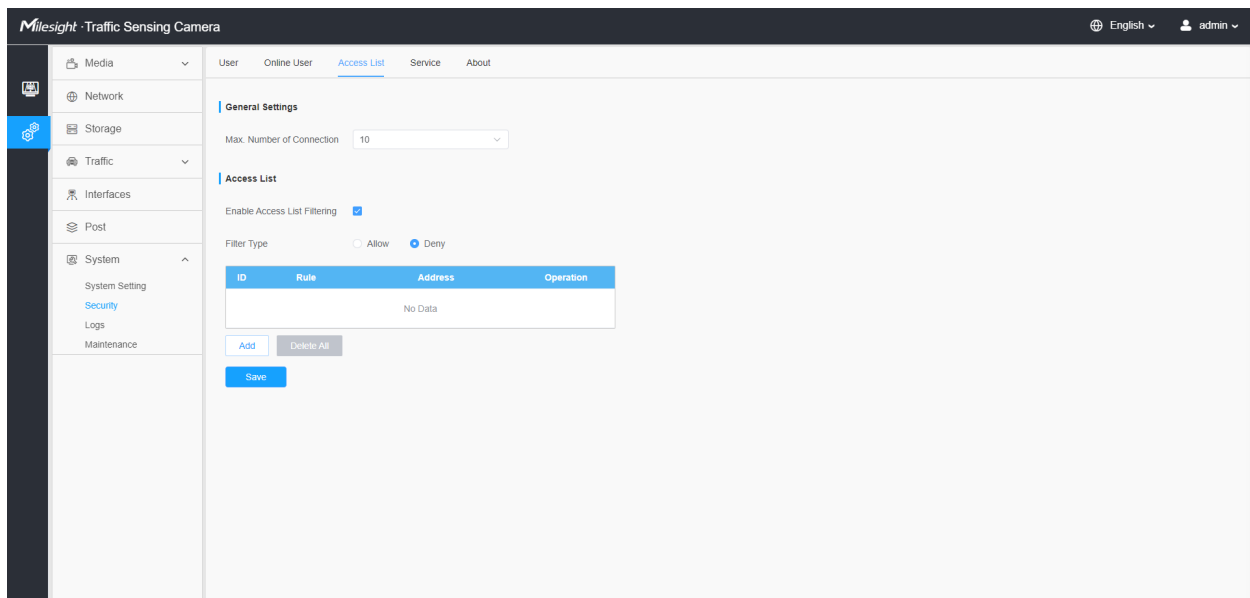
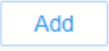
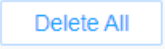
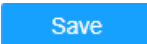


Table 60. Description of the buttons

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.

Parameters	Function Introduction	
		Rule: Single, Network and Range are available. IP address: Input the address to get the access to the device.
		Delete all the access list.
		Edit the selected IP on access list.
		Delete the selected IP on access list.
	Save the configuration.	

Service

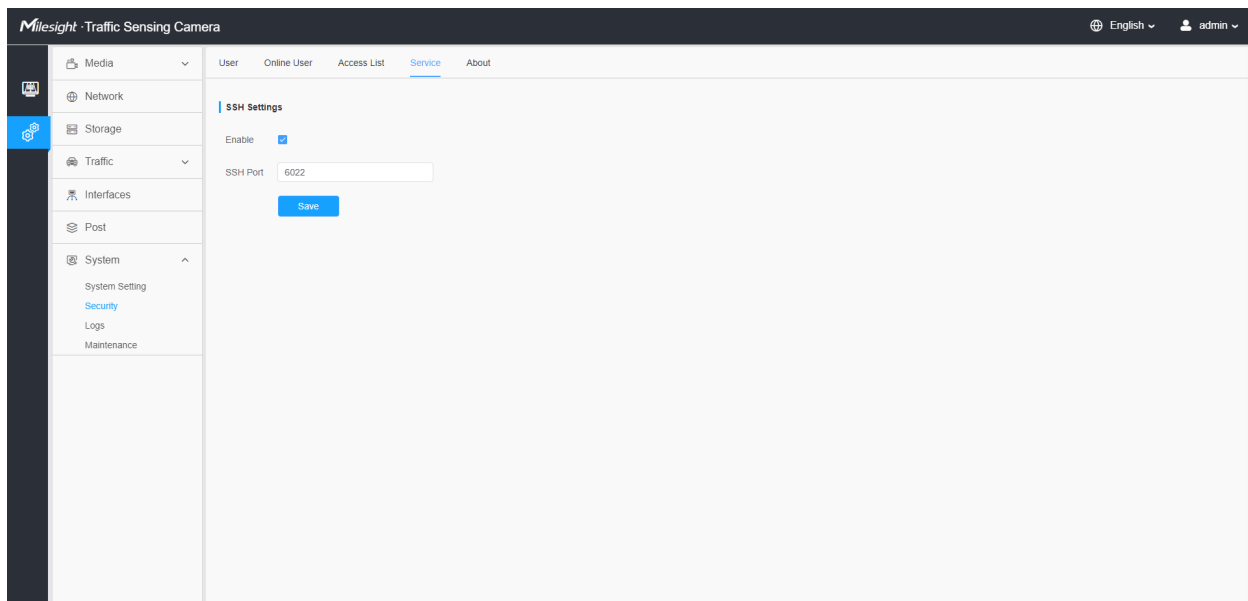
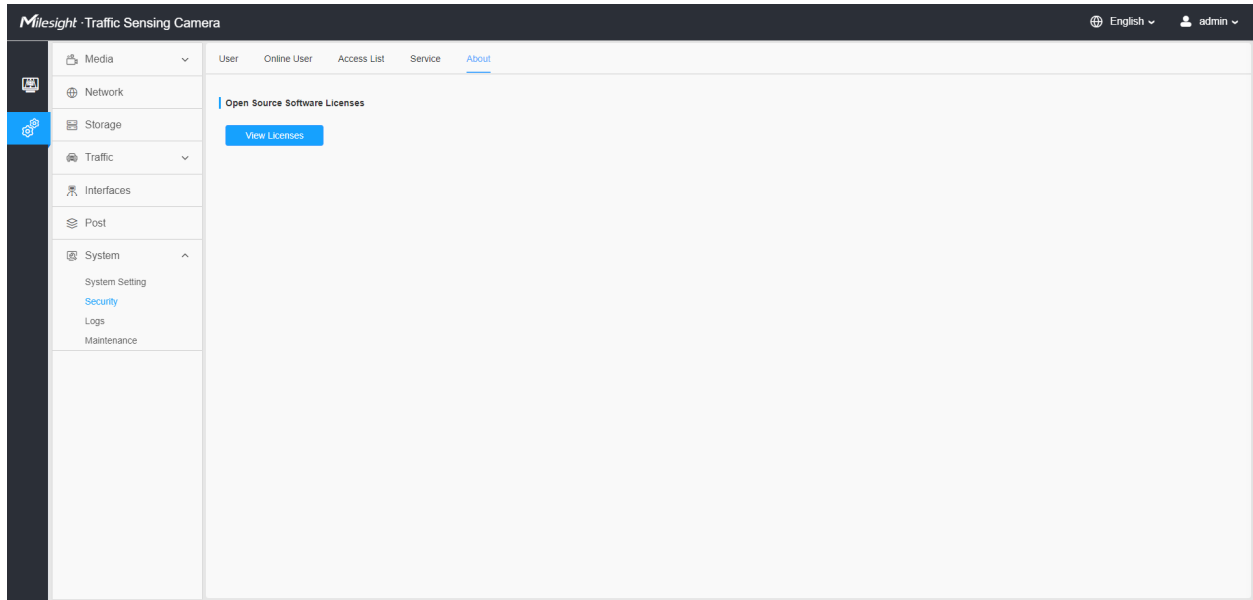


Table 61. Description of the buttons

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.

About



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

Logs

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

The screenshot shows the Milesight Traffic Sensing Camera web interface with the 'Logs' tab selected. The table displays access logs with columns: Time, Main Type, Sub Type, Param, User, IP, and Detail. The table is filtered by 'Main Type: All Types' and 'Sub Type: All Types'. The start time is '2023-12-01 00:00:00' and the end time is '2023-12-24 23:59:59'. The table shows 157 logs, with the current page displaying 15 logs.

Time	Main Type	Sub Type	Param	User	IP	Detail
2023-12-18 22:00:05	Information	Record Start	Alarm Record	-	-	-
2023-12-18 22:00:05	Smart	No Plates	-	-	-	Region:3
2023-12-18 22:00:05	Information	Record Start	Alarm Record	-	-	-
2023-12-18 22:00:05	Smart	Red Light Running	-	-	-	Region:3
2023-12-18 22:00:05	Information	Record Start	Alarm Record	-	-	-
2023-12-18 22:00:04	Smart	No Plates	-	-	-	Region:2
2023-12-18 22:00:04	Information	Record Start	Alarm Record	-	-	-
2023-12-18 22:00:04	Smart	Red Light Running	-	-	-	Region:2
2023-12-18 22:00:04	Information	Record Start	Alarm Record	-	-	-
2023-12-18 22:00:03	Smart	No Plates	-	-	-	Region:3
2023-12-18 22:00:03	Information	Record Start	Alarm Record	-	-	-
2023-12-18 22:00:03	Smart	Reverse Driving	-	-	-	Region:2
2023-12-18 22:00:03	Information	Record Start	Alarm Record	-	-	-
2023-12-18 22:00:03	Smart	No Plates	-	-	-	Region:2
2023-12-18 22:00:03	Information	Record Start	Alarm Record	-	-	-
2023-12-18 22:00:03	Smart	No Plates	-	-	-	Region:2

Total 4918 30/page < 1 ... 155 156 157 158 159 ... 164 > Go to 157 Export

Table 62. Description of the buttons

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

Maintenance

Maintenance

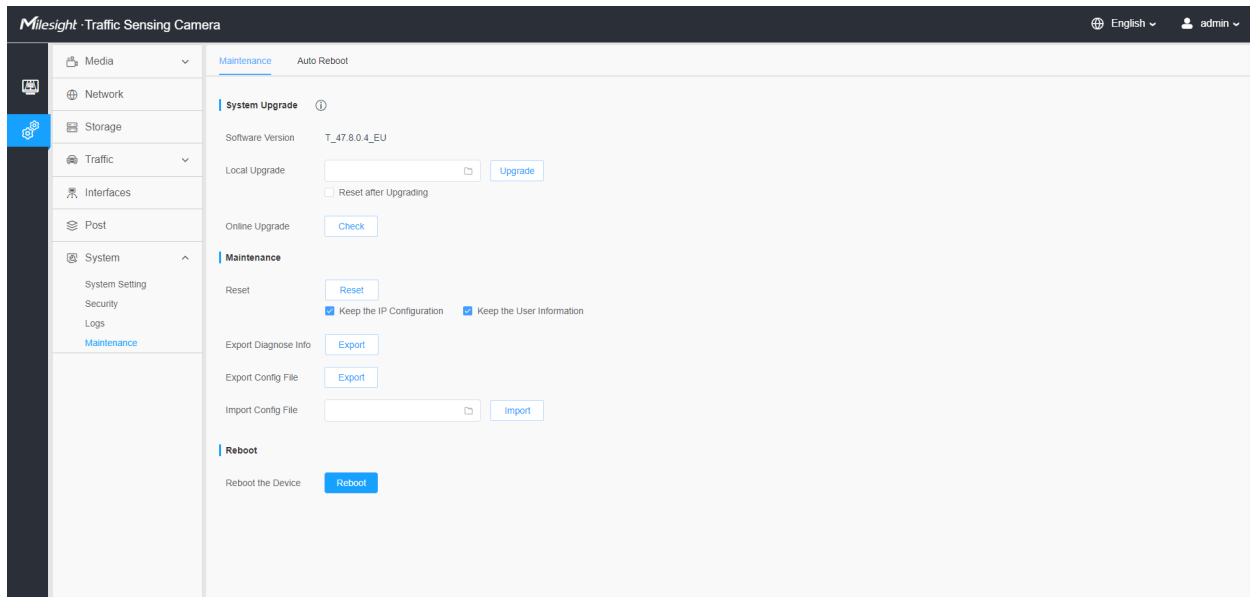
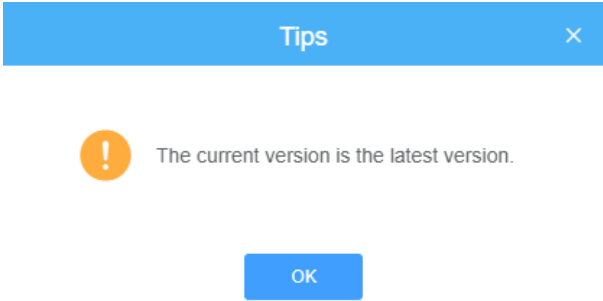
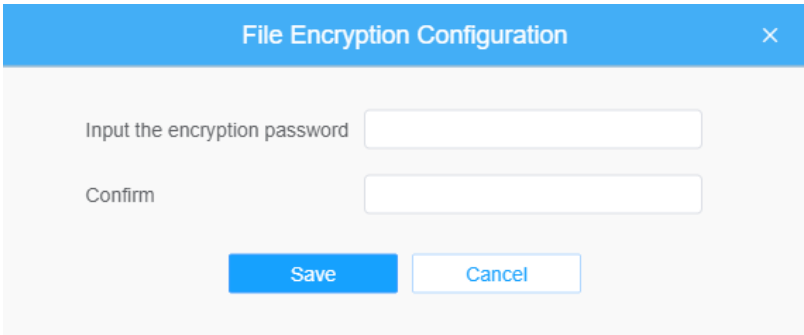
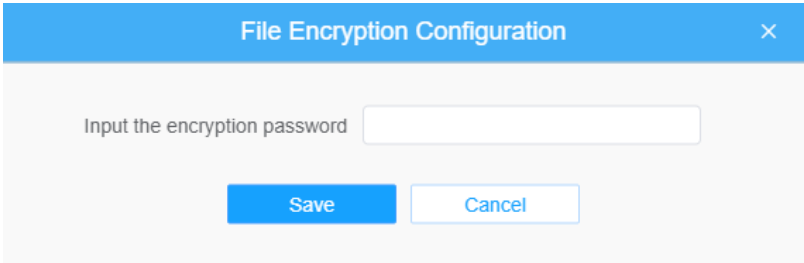
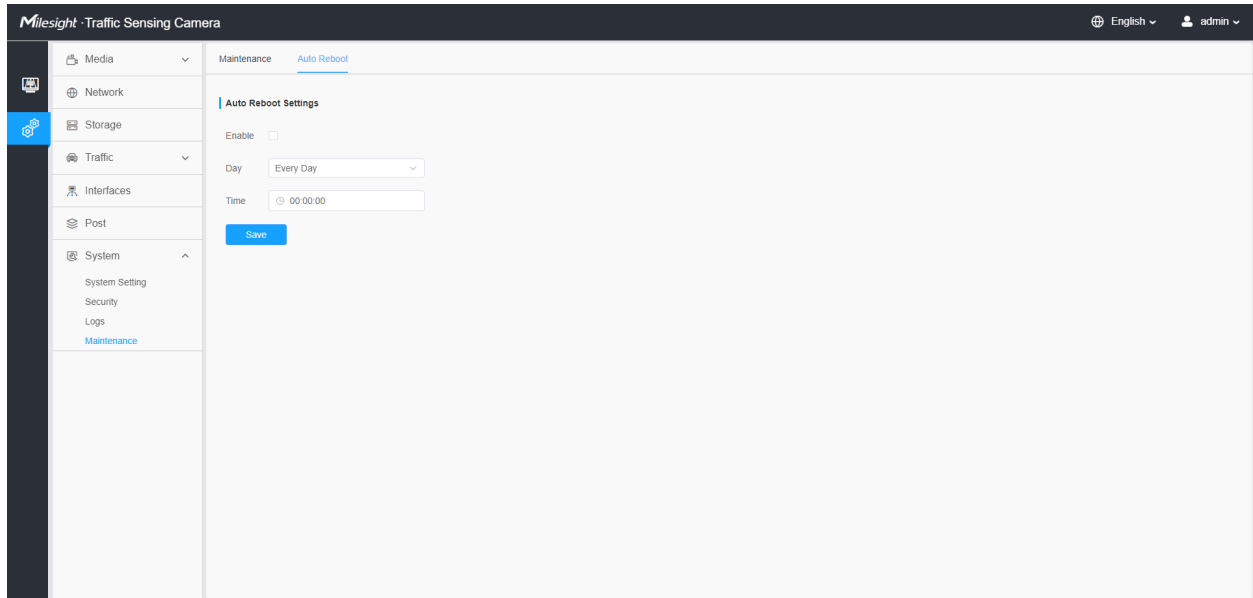


Table 63. Description of the buttons

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.   Note: Do not disconnect the power of the device during the update. The device will be restarted to complete the upgrading.

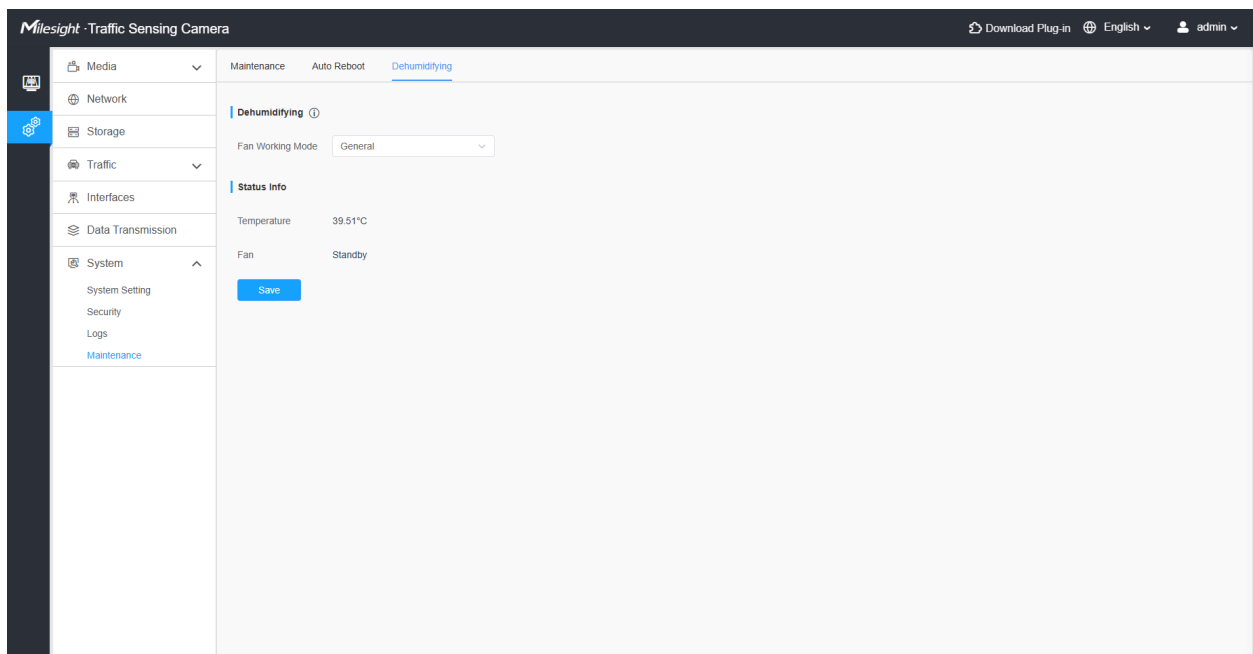
Parameters	Function Introduction
Maintenance	Reset: Click “Reset” button to reset the camera to factory default settings. Keep the IP Configuration: Check this option to keep the IP configuration when resetting the camera. Keep the User information: Check this option to keep the user information when resetting the camera. Export Diagnose Info: Click this button to export logs and system information of the device operation status.  Note: The file format is “.txt”. Export Config File: Click this button and a window will pop up as shown below:  You need to enter and confirm password again, then click save button to export configuration file. Import Config File: Click this button, then a window will pop up and you can click “OK” to update the configuration. It will pop up a window to prompt “Input the password of config file” , then enter password and click save button to import configuration file.   Note: Export and import the same configuration file. Password must be the same.

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.

Dehumidifying



The camera is equipped with an integrated fan and heater system to manage internal humidity and temperature, ensuring stable operation in various environmental conditions.

Fan Working Mode

Users can select the fan's operation schedule based on the local climate and humidity levels:

Working Mode	Operating Schedule	Application Scenario
General Mode	04:00 - 07:00 & 17:00 - 20:00	Standard environments with moderate humidity.
Enhancement Mode	00:00 - 07:00 & 17:00 - 23:59	High-humidity areas or coastal regions.
Constant Mode	24 / 7 (All Day)	Extreme environments requiring continuous airflow.

Status Information

This section provides real-time monitoring of the camera's internal thermal environment:

- **Temperature:** Displays the current internal temperature of the camera (e.g., **39.51°C**).
- **Fan Status:** Shows the current operational state of the fan (e.g., **Running**, **Standby**, or **Off**).

Chapter 9. Services

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

Technical Support Mailbox: support@milesight.com

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

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

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