

Fisheye Network Camera
User Manual
V1.17

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

This manual is applicable to the Milesight Fisheye Network Camera, series are shown as follows, unless otherwise noted.

Milesight Fisheye Network Camera			
Type Megapixel	12MP		
Fisheye Network Camera	MS-C5374-PB	MS-C9674-PB	
Al Fisheye Network Camera	-	MS-C9674-PA	

This Manual explains how to use and manage Milesight Fisheye Network Camera on your network. Previous experience of networking will be of use when using the products. Please read this manual carefully before operation and retain it for future reference.

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 into the new version of this manual. We will readily improve or update the products or procedures described in the manual.

Copyright Statement

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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 www.milesight.com

Industry Canada ICES-003 Compliance:

This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numerique de la classe B est conforme a la norme NMB-003 du Canada.

⚠ Safety Instruction

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

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

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

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



Warnings

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



Cautions

- Make sure that the power supply voltage is correct before using the camera;
- ◆ Do not store or install the device in extremely hot or cold temperatures, as well as dusty or damp locations, and do not expose it to high electromagnetic radiation;
- Only use components and parts recommended by manufacturer;
- Do not drop the camera or subject it to physical shock;
- ◆ To prevent heat accumulation, do not block air circulation around the camera;
- ◆ Laser beams may damage image sensors. The surface of image sensors should not be exposed to where a laser beam equipment is used;
- Use a blower to remove dust from the lens cover;
- Use a soft, dry cloth to clean the surface of the camera. Stubborn stains can be removed using a soft cloth dampened with a small quantity of detergent solution, then wipe dry;
- ◆ Do not use volatile solvents such as alcohol, benzene or thinners as they may damage the surface finishes;
- Save the package to ensure availability of shipping containers for future transportation.

EU Conformity Statement



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



2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or

mercury(Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info.

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Chapter I Product Description

1.1 Product Overview

Milesight provides a consistent range of cost-effective and reliable Fisheye Network Camera to fully meet your requirements. Based on embedded Linux operating system, Milesight Fisheye Network Camera could be easily accessed and managed either locally or remotely with great reliability. With built-in high-performance DSP video processing modules, the cameras pride on low power consumption and high stability. They support state-of-the-art H.265/ H.264/ MJPEG video compression algorithm and industry-leading HD dual-stream technology to achieve the highest level of video image quality under the limited network resources. It is fully functional, supporting for flexible and comprehensive alarm linkage mechanism, and features with advanced technology, bringing panoramic viewing experience. It has the effect of more than 4 regular network cameras. The ultra high resolution and latest design guarantee the detailed images and enjoy-able user-experience.

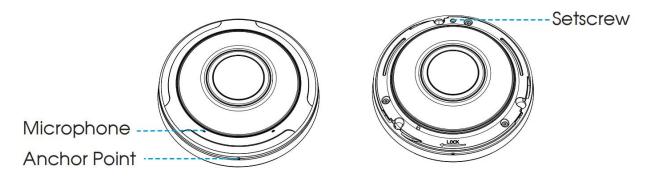
In practical applications, Milesight Fisheye Network Camera could either work independently in the LAN, or be networked to form a powerful safety monitoring system. It is widely used in fields such as finance, education, industrial production, civil defense, health care for security's sake.

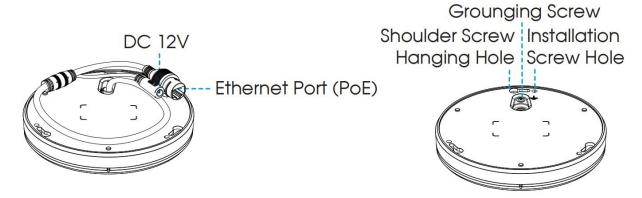
1.2 Key Features

- → 70% ~80% bandwidth saved by 10-level adjustable H.265⁺
- ♦ Up to 25fps@4000×3000
- ♦ Support Al Video Analytics
- ♦ Support Hardware Dewarping and Software Dewarping
- ♦ Support Heat Map function
- ♦ Support Auto Tracking function
- ♦ 11 display modes to meet various needs
- ♦ Equipped with Audio I/O and Alarm I/O
- ♦ IK10-rated vandal-proof metal cover, and IP67-rated weather-proof housing.
- ♦ Streamlined design, exquisite appearance
- ♦ Easy to blend in with the installation environment
- ♦ Based on Linux OS with high reliability
- ♦ Support ONVIF Profile G & Q & S & T
- ♦ Support Plugin-Free mode
- ♦ Support activation and set-up of the security questions for cameras(V4x.7.0.69 or above)
- ♦ ICR filter with auto switch, true day/night
- ♦ UPnP protocol for the easy management of cameras
- ♦ Support Milesight DDNS
- ♦ Motion Detection, Privacy Masking, Network Fault Detection and ROI
- ♦ FTP upload, SMTP upload, SD card record and SIP function
- ♦ G.711/AAC audio compression capability
- ♦ Three-privilege levels of users for flexible management
- Micro SD/SDHC/SDXC card local storage support, expand the edge storage

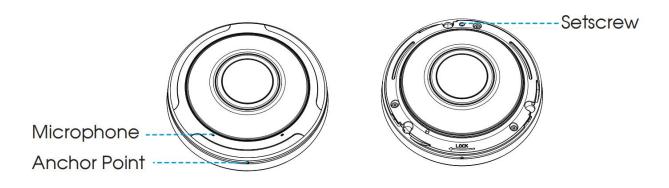
1.3 Hardware Overview

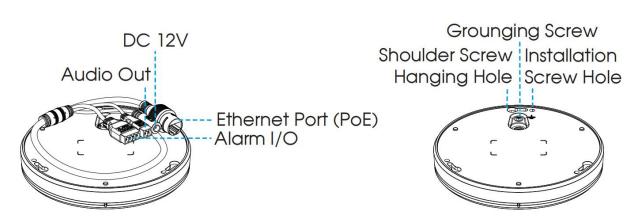
1. 5MP Fisheye Network Camera





2. 12MP (AI) Fisheye Network Camera





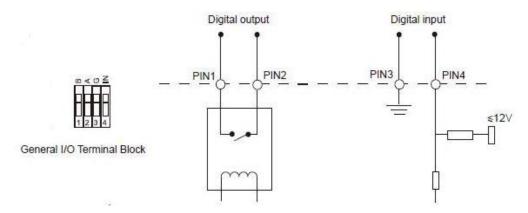


Note:

- 1) DC 12V and PoE are available for power supply.
- 2) Built-in SD card slot can be seen after rotating open the cover, removing the 3 screws and open the front panel.

1.4 How to Connect to Alarm Interface

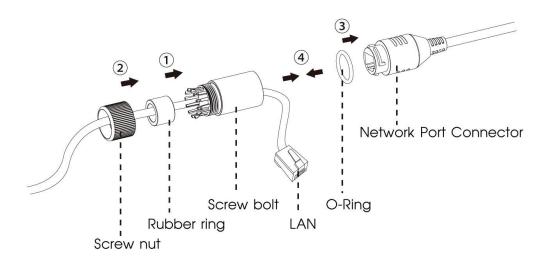
External interface of camera is as the following, you can refer to the picture to install the external alarm device:



PIN1: Alarm Output NC/NO 24V DC 1A PIN2: Alarm Output NC/NO 24V DC 1A

PIN3: Alarm Input NC/NO ≤12V PIN4: Alarm Input NC/NO ≤12V

1.5 How to Connect the Water-proof Connector



Step1: Get the network cable through the screw nut, rubber ring and the screw bolt.

Step2: Insert the rubber ring into the screw bolt.

Step3: Connect the screw nut to the screw bolt.

Step4: Place the O-Ring on the network port connector.

Step5: Connect the RJ45 to the network port connector, and tighten the screw bolt and the connector.

1.6 System Requirements

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

CPU: 1.66GHz or higher **RAM:** 1G or higher

Graphic memory: 128MB or more **Internet protocol:** TCP/IP (IPv4/IPv6)

Web Browsers: Internet Explorer 8.0 and above version, Mozilla

Firefox, Google Chrome and Safari.

Chapter II Network Connection

2.1 Setting the Camera over the LAN

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

2.1.1 Connect the Camera to the PC Directly

In this method, only when the computer connected to a camera, it 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.

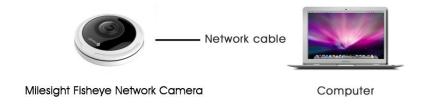


Figure 2-1-1 Connect the camera to the PC directly

2.1.2 Connect via a Switch or a Router

Set network camera over the LAN via the switch or router as figure 2-1-2:



Figure 2-1-2 Connect via a switch or a Router

2.2 Dynamic IP Connection

Connecting the network camera via a router

Step1: Connect the network camera to a router;

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

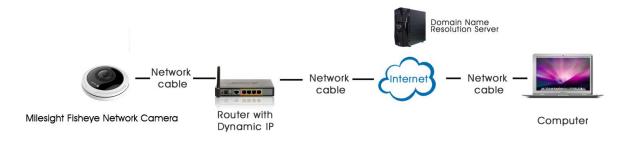


Figure 2-2 Connect the network camera via a router using dynamic IP

Chapter III Accessing the Network Camera

The camera must be assigned an IP address to be accessible.

3.1 Assigning An IP Address

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

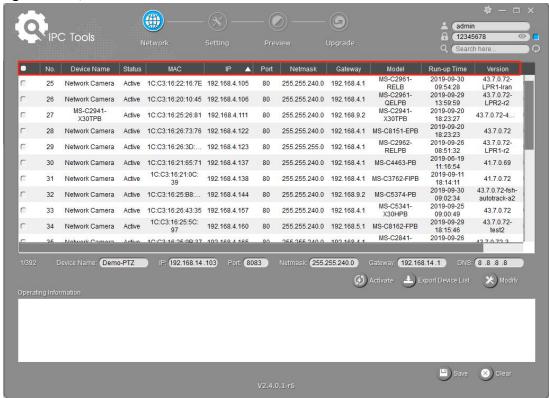
You can either change the IP address of the camera via Smart Tools or browser. Please connect the camera in the same LAN of your computer.

3.1.1 Assigning An IP Address Using Smart Tools

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

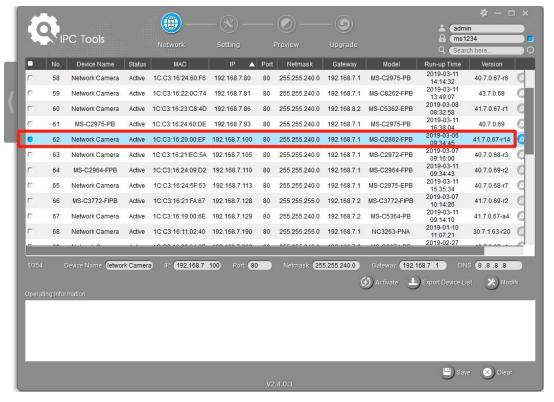
Step1: Install Smart Tools (The software could be downloaded from our website);

Step2: Start Smart Tools, click the IPC Tools page, then enter the device information, such as IP address, MAC address, Status, Port number, Netmask, and Gateway, then all related Milesight network cameras in the same network that will be displayed. Details are shown as Figure 3-1-1;

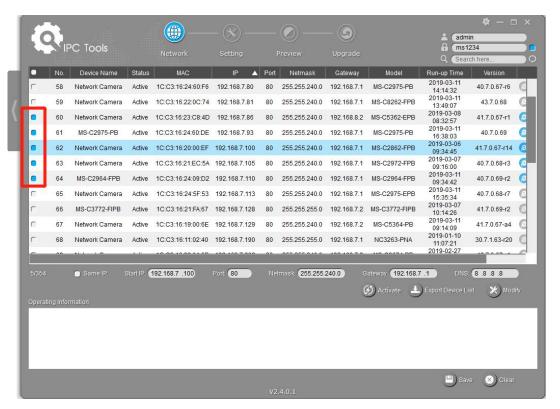




Step3: Select a camera or multiple cameras according to the MAC addresses;



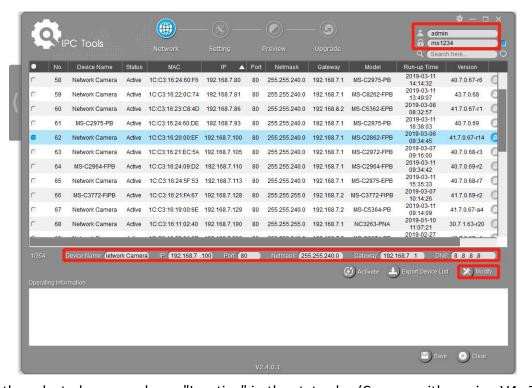
Select single camera



Select multiple cameras

Step4: If the selected camera shows "Active" in the status bar, you can directly type the User Name and Password (Camera with version lower than 4x.7.0.69 is using admin/ms1234 by default), change the IP address or other network values, and then click "Modify" button;

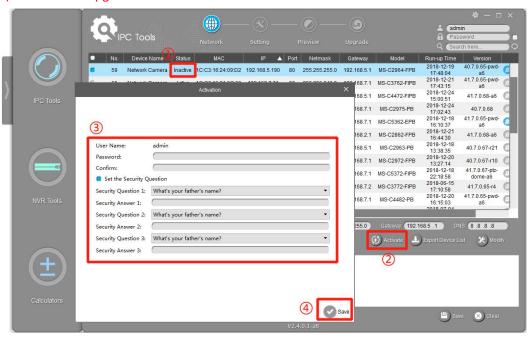




If the selected camera shows "Inactive" in the status bar(Camera with version V4x.7.0.69 or above), click to set the password when using it for the first time. You can also set the security questions when activating the camera in case that you forget the password(You can reset the password by answering three security questions correctly). Click 'Save' and it will show that the activation was successful.

Note:

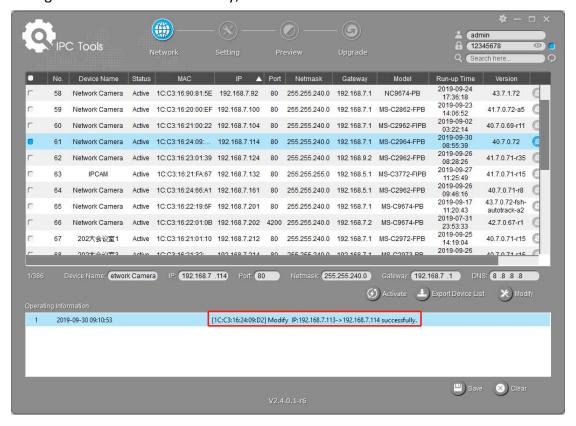
- (1) Password must be 8 to 32 characters long, contain at least one number and one letter.
- (2) You need to upgrade Smart Tools version to V2.4.0.1 or above to activate the camera.



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



Step5: Change the IP address successfully;



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.

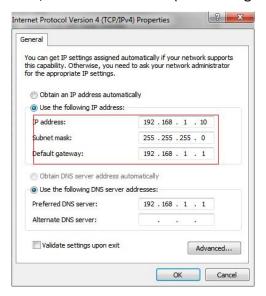
3.1.2 Assign An IP Address via Browser

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

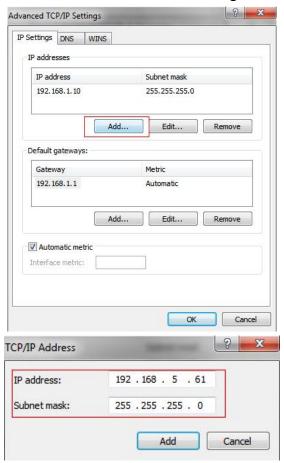
Step1: Change the IP address of computer to 192.168.5.0 segment, here are two ways as below:



a. Start→ Control Panel→ Network and Internet Connection→ Network Connection→ Local Area Connection, and double click it. (Refer to Figure 3-1-8);



b. Click "Advanced", and then click "IP settings" → "IP address" → "Add" (See Figure 3-1-9). 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: If the camera's firmware version is lower than V4x.7.0.69, it will directly display the login

page, enter the user name and password when the LOGIN page appears;

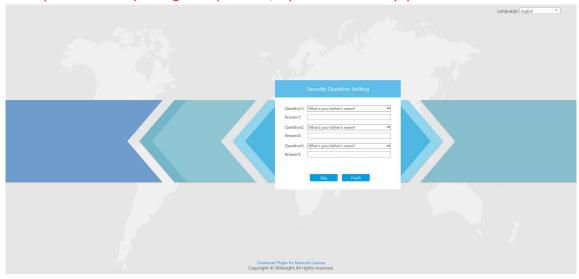
Default user name: admin Default password: ms1234



If the camera's firmware version is V4x.7.0.69 or above, 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 the device with You can log in to the camera with the username(admin) and a custom password.

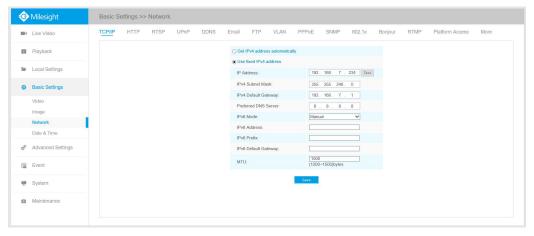
Note:

- (1) Password must be 8 to 32 characters long, contain at least one number and one letter.
- (2) 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 "Configuration" → "Basic 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.

3.2 Accessing from the Web Browser

The camera can be used with the most standard operating systems and browsers. The recommended browsers are Internet Explorer, Firefox, Chrome, Microsoft Edge, Safari.

3.2.1 Access with Plugin

Currently you can only access the camera with plugin via Internet Explorer.

Access over IE Browser

Before using the browser to get access to your camera, you need to install the MsActiveX firstly. You can refer the steps as follows:

Step1: Launch the IE browser and enter the IP address of the camera;

Step2: Enter the User Name and Password and click "Login";

Step3: At the first time to log in the device, the browser will prompt to install Controls, please click "Click here to download and install controls manually" as Figure 3-2-1;

Click here to download and install controls manually

Note:

1) During installing the controls, please keep the browsers close.

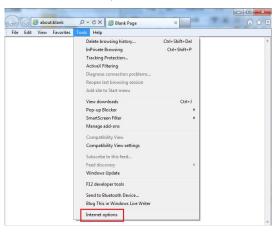
Step4: Follow the prompts to install the Controls, when it's finished, it will pop out a window as shown below. Please click "Finish" and refresh the browser, then you will see the video.



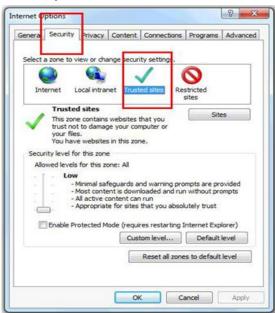


If IE9 or higher version browser is used, it is suggested that the Milesight camera web link should be added as a trusted site. See the instructions as follows:

Step1: Start the IE9 or higher version browser, and select "Tools" \rightarrow "Internet Options";

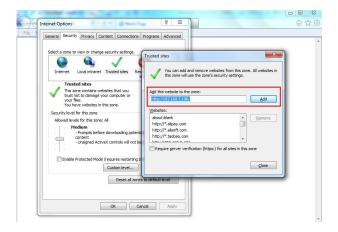


Step2: Select "Security" to "Trusted";

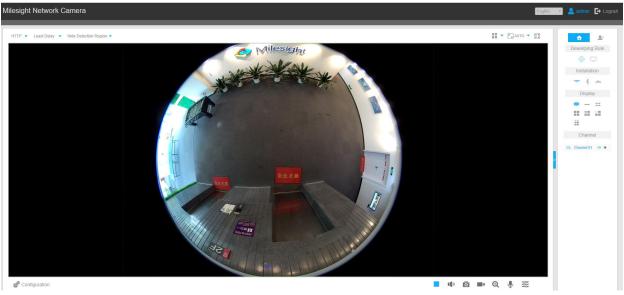


Step3: Enter the IP address of the camera in the blank and click "Add";

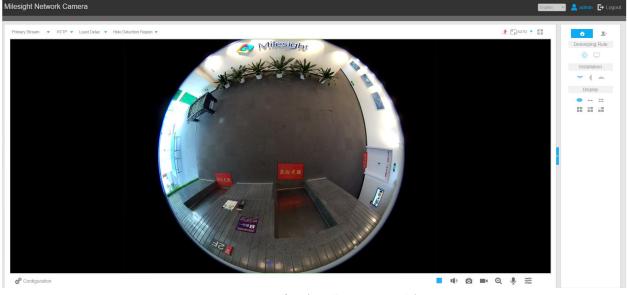




Step4: Enter the IP address. After logging on network camera's web GUI successfully, user is allowed to view live video as follows.



Live View Interface (Multi-Channel Mode)



Live View Interface (Bundle-Stream Mode)



3.2.2 Access without Plugin

As browser security becomes more and more important, some browsers don't support installing plugin. In order to normally preview the video on the browser, Milesight upgraded the camera to support Plugin-Free Mode. In Plugin-Free Mode, you can preview the video on the browser without plugin. Currently Plugin-Free Mode is supported in Firefox & Google Chrome & Safari & Edge browser for Windows system, MAC system, iOS system and Android system. Both H.265&H.264 video codec are supported in Plugin-Free Mode for camera, and it will play the secondary stream by default.

Note:

- 1) You need to upgrade camera to V4x.7.0.70 or above to use Plugin-Free Mode.
- 2) For the firmware which below V4x.7.0.74, please upgrade the Network Camera to V4x.7.0.74 or above (Please upgrade the browser to the latest version).
- 3) For V4x.7.0.74 or above, you can enjoy Plugin-Free Mode without any configuration about the browser (Please upgrade the browser to the latest version).





It supports previewing the video in Live View and other setting interfaces.

3.3 Accessing from Milesight VMS (Video Management Software)

Milesight VMS(ONVIF compatible) is a handy and reliable application designed to work with network cameras in order to provide video surveillance, recording settings and event management functions. The interface of Milesight VMS is very easy to use, intuitive, with easy access to the most common activities, such as viewing live video, searching through recordings and exporting videos and snapshots. It's able to be integrated with other devices through ONVIF. It is designed to work on Windows XP/ 7/ 8/ Vista/ Server 2000/ Server 2008. The software could be downloaded from our website www.milesight.com.

Please install Milesight VMS; then launch the program to add the camera to the channel list. For detailed information about how to use the software, please refer to user manual of Milesight VMS.

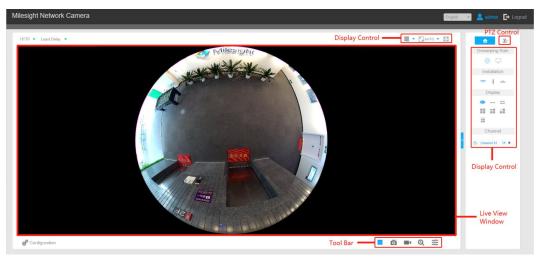




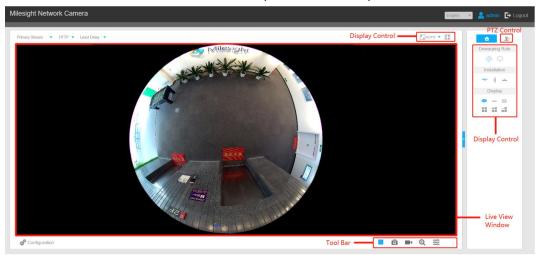
Chapter IV System Operation Guide

4.1 Live Video

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



Live view interface (Multi-Channel Mode)



Live view interface (Bundle-Stream Mode)

4.1.1 Operations on Live View Page

Display Control

Display Control allows you to select install type, display mode, window screen and channel of live view.

Table 4-1-1 Description of Display Control buttons

Table 4-1-1 Description of Display Control buttons				
Item	Parameter	Description		
Dewarping Rule	On-board Dewarping	Click to select on-board dewarping mode.		
Dewarping Rule	Client-side Dewarping	Click to select client-side dewarping mode.		
	Ceiling Mounting	Click to select ceiling mounting.		
Installation	Wall Mounting	Click to select wall mounting.		
	Flat Mounting	Click to select flat mounting.		
	10	Select live view of original fisheye view.		
	1P	Select live view of 360° panoramic view.		
Display	= 2P	Select live view of two 180° panoramic views.		
Display	4R	Select live view of four regional views.		
	103R	Select live view of one original fisheye view and three regional views.		
	1P3R	Select live view of one 360° panoramic view and three regional views.		

	(Only for Hardware Dewarping)	
	101P3R (Only for Multi-Channel Mode of Hardware Dewarping)	Select live view of one original fisheye view, one 360° panoramic view and three regional views.
	1P1R (Only for Software Dewarping)	Select live view of one 360° panoramic view and one regional view.
	1P4R (Only for Software Dewarping)	Select live view of one 360° panoramic view and four regional views.
	1P6R (Only for Software Dewarping)	Select live view of one 360° panoramic view and six regional views.
	108R (Only for Software Dewarping)	Select live view of one original fisheye view and eight regional views.
Channel	(Only for Multi-Channel Mode)	Click to play this channel on any window of live view.
	Window Layout (Only for Multi-Channel Mode)	Click to set window layout to "1*1"/ "2*2"/ "1+4".
Window	AUTO Window Size	Click to display images at a window size.
	100% Real Size	Click to display images at a real size.
	Full Screen	Click to display images at full-screen.

Note:

- A. Original fisheye view: the whole wide-angle view of the fisheye camera is displayed.
- B. Panoramic view: the round fisheye image is transformed to rectangular image by certain calibration methods.



- C. Regional view: the close-up view of defined area in the original fisheye view or panoramic view.
- D. Select the Installation, Display mode and the most appropriate Window Layout in sequence.

Live View Window

Display live video on the window.

Tool Bar

Table 4-1-2 Description of Tool Bar buttons

	Table 4 1 2 Des	icription of Tool Bar buttons		
No.	Parameter Description			
1	> , =	Start/Stop all live view		
2	C apture	Click to capture the current image and save to the configured path. The default path is C:VMS\+-1\ IMAGE-MANUAL		
3	Start Recording	Click to start recording video and save to the configured path. The default path is C:VMS\+-1\MS_Record. Click again to stop recording		
4	Saving Path Settings	Set the saving path for captured images and video recordings of operating on the live view		
5	Q Enable Digital Zoom	When it is enabled, you can zoom in in a specific area of video image with your mouse wheel Note: For the -PA model in the AI series, Enable Digital Zoom is not supported for the panoramic view of 1P3R mode.		
	50	Brightness: Adjust the Brightness of the scene		
	© 50	Contrast: Adjust the color and light contrast		
6	© 50 50 1 50 1 50 50	Saturation: Adjust the Saturation of the image.Higher Saturation makes colors appear more "pure" while lower one appears more "wash-out" Sharpness: Adjust the Sharpness of image. Higher Sharpness sharps the pixel boundary and makes the image looks "more clear"		
	Image Config	2D DNR/3D DNR: Adjust the noise reduction level		

		Default:	Restore	brightness,	contrast	and	saturation	to
	!		_					
		default s	ettings					

Note:

It will capture images and record videos of first channel by default, you can also capture images and record videos of specified channel manually.

PTZ Control

PTZ Control allows you to use pan/tilt/zoom/preset/patrol function of PTZ, and set PTZ speed.

Table 4-1-3 Description of PTZ Control buttons

Table 4-1-3 Description of PTZ Control buttons				
No.	Parameter	Description		
1	PTZ Control	Navigation key is used to control the direction. The rotation key is used for auto-rotation.		
	PTZ Speed	To adjust the speed of pan/tilt movements, from 1 to 10		
2	44 4	Click to zoom in and zoom out		
3	o o	Click to focus near or far of the lens.		
		Lighting For 30s: Click to open/ close the White LED for lighting 30s.		
		3D Positioning: Click to enable/ disable 3D positioning.		
4	· • • • • • • • • • • • • • • • • • • •	One-touch Patrol: Click to carry out the patrol.		
4	9 👼	Auto Home: Click to enable Auto Home.		
		Auto Tracking: With this option enabled, the camera can perform the digital Pan/Tilt/Zoom to track the moving objects automatically. Note: ①Auto Tracking is only supported in regional views.		

	i i	②Auto Tracking is only supported in ceiling mounting mode of on-board dewarping mode.
5	Preset	Enable to set 300 preset positions for each regional view channel
6	Patrol	Enable to set 8 patrol paths for each regional view channel

Other

Table 4-1-4 Description of other buttons/icons

lable 4-1-4 Description of other buttons/icons				
No.	Parameter Description			
1	Primary Stream (Only for Bundle-Stream Mode)	Choose Primary Stream/Secondary Stream to show on the current video window		
2	UDP 🕶	TCP: More reliable connection; UDP: More instantaneous connection, but if you cannot get the live view successfully, please turn into TCP connection. HTTP: Faster and safer connection especially in Internet environment.		
3	Least Delay 🕶	Least Delay: The most instantaneous mode in the three modes; Balanced: A balanced mode between Least Delay and Best Fluency, maintains the fluency while keeps an acceptable delay; Best Fluency: The most fluent mode in the three modes.		
4	ල් Configuration	Configuration: Click to access the configuration page.		
5	Recording	When recording, the icon will turn red.		
6	() Alarm	When an alarm of Smart Event was triggered, the icon appears		
7	- ≸ Alarm	When an alarm of Motion Detection was triggered, the icon appears		
8	<mark>ক্র</mark> Alarm	Except for the two kinds of alarms above, when other alarms were triggered, the icon appears		

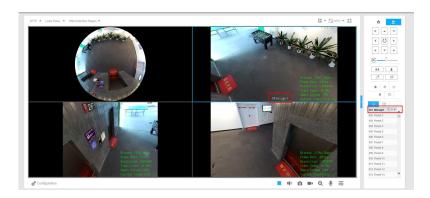




4.1.2 Set / Call a preset / Patrol

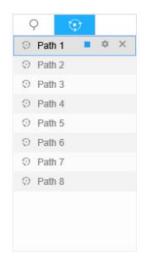
A preset is a predefined image position. You can click the call button from the preset list to quickly go to the desired image position.

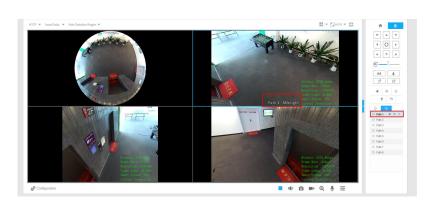




Set a preset:

Step1: In the PTZ control panel, select a preset number from the preset list, and you can also customize the preset name displayed on the screen. The patrol name displayed on the screen will also be customized if you customize preset name and set a patrol as shown below;





Step2: Use the PTZ control buttons to move the lens to the interested position;

Step3: Click do save the setting of the current preset;

Step4: Click to delete the chosen preset.

Note:

Up to 300 presets can be configured (for each regional view channel).

Calling a preset:

Select a defined preset form the preset list and click en to call the preset.



Set / Call a patrol

A patrol is a memorized series of preset function. It can be configured and called on the patrol setting list. You can customize up to 8 patrols and it can be configured with 48 presets. Before configuring the patrol, you should make sure that the presets you want to add to the patrol have been defined.

Set a patrol:

Step1: In the PTZ control panel, click to enter the patrol settings interface;

Step2: Select a patrol number, the setting icon will appear ______, click it;

Step3: Click to add presets to this patrol, as shown below;



Step4: Configure the preset number, patrol speed and patrol time;

Table 4-1-5 Description of Patrol Settings

Name	Description	
Patrol Speed	The speed of moving from one preset to another.	
Patrol Time	The duration staying on one patrol point.	

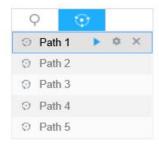
Step5: Click Save to save the patrol settings.

Note:

- A. Patrol Speed only works in Patrol mode.
- B. Patrol Time should be 0~120s.

Call a patrol:

In the PTZ control panel, select a defined patrol from the patrol list, and click to call the patrol, as shown below.



Note:

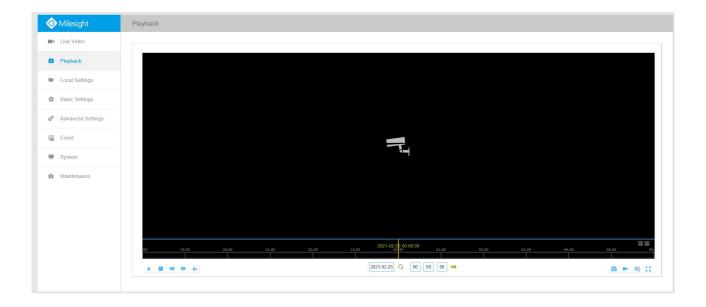
The three buttons behind the Patrol list means: Play, Set and Delete.

4.2 Playback

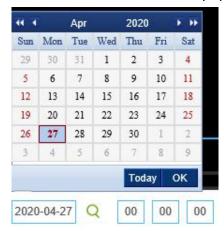
This section explains how to view the recorded video files stored in SD cards or NAS.

Step1: Click on the menu bar to enter playback interface;





Step2: Click the date button, choose the date when date window pops up;



Note:

- 1) The date with bright red means current date; one with a dark red number and white background means weekend day; one with a dark red number and blue background means that the date is selected now.
- 2) It supports Plugin-free Playback function which allows to preview the playback without installin g plugin in Firefox (Version 65 and above) & Google Chrome (Version 69 and above); You need to configure the browser properties before using this function. Please refer to 3.2.2 Access without Plugin for more browser configuration.

Step3: Click to play the video files found on this date.

The toolbar on the button of playback interface can be used to control playing progress.





Table 4-2-1 Description of the buttons

Button	Operation
	Play
II	Pause
	Stop
«	Speed Down
>>	Speed Up
• , •	Audio On/Off
Q	Search
-	Go To
O / O	Time Narrow/Expand
	Start/Stop Recording
<u></u>	Snapshot
Q / Q	Zoom On/Off
X	Full Screen

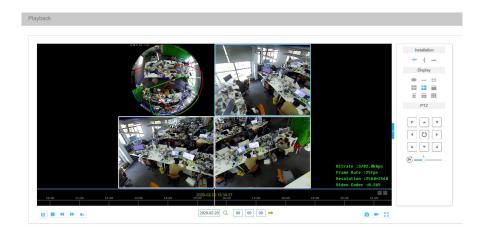
Note:

Drag the progress bar with the mouse to locate the exact playback point. You can also input the time and click to locate the playback point in the *Set Playback Time* filed. You can also click to zoom out/in the progress bar.



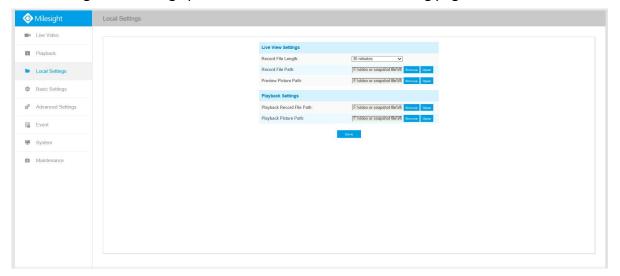
Step4: If the recording contains the original fisheye view(10), it supports client-side dewarping based on the original view in the playback interface. Click to play the video files, then you can select different installation modes and display modes as shown below. It also supports PTZ function for panoramic view and regional views.





4.3 Local Settings

Record File Length and storage path can be customized in this setting page.

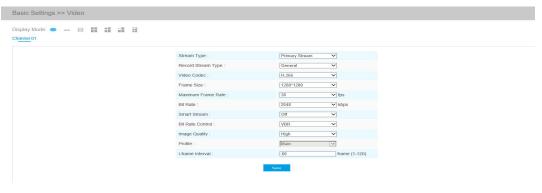


4.4 Basic Settings

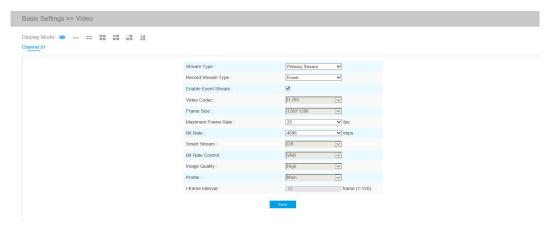
4.4.1 Video

Stream parameters can be set in this module, adapting to different network environments and demands. You can set the stream parameters separately for different channels base on display mode in live view (up to 5 channels).

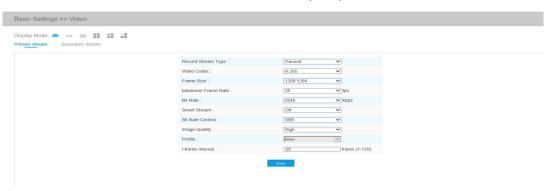




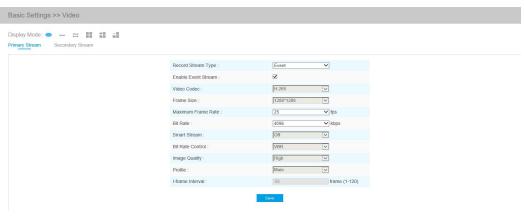
Multi-Channel Mode (General)



Multi-Channel Mode (Event)



Bundle-Stream Mode (General)



Bundle-Stream Mode (Event)

Table 4-4-1 Description of the buttons

Table 4-4-1 Description of the buttons		
Parameters	Function Introduction	
Channel (Only for Multi-Channel Mode)	The number of channels are variable according to the selected display mode. 10 and 1P display one channel. 2P displays two channels. 4R, 103R and 1P3R display four channels. 101P3R displays five channels.	
Display Mode	10/1P/2P/4R/103R/1P3R are available.	
Stream Type (Only for Multi-Channel Mode)	Primary Stream/Secondary Stream are available.	
Record Stream Type	General & Event are available only for Primary Stream of Bundle-Stream Mode and Channel 01 of Multi-Channel Mode. General refers to continuously recording video, while Event includes events that can trigger alarms, such as Motion, Exception, Audio Alarm and so on. This item can set different bit rate and frame rate separately for different Recording Stream Types. If user chooses Event, video will be recorded according to the configuration of video stream type when an event happens, thereby greatly reducing the recording storage space.	
Video Codec	H.265/H.264 are available.	
Frame Size	For Multi-Channel Mode: 4000*3000, 3000*3000, 2560*2560, 1920*1920, 1280*1280,1280*960, 1024*1024, 720*720, 320*320, are available frame size for original fisheye view in 10. 2560*2560, 2560*640, 1920*1920, 1920*480, 1280*1280 are available frame size for original fisheye view in 103R and 101P3R. 3000*752, 2560*, 2560*640, 1920*480, 1280*320, 960*240 are available frame size for 360° panoramic view in 1P, 1P3R and 101P3R. 2560*640, 1920*480 are available frame size for 360° panoramic view in 101P3R 3000*1680, 2688*1520, 2592*1460, 1920*1080, 1280*720 are available frame size for two 180° panoramic views in 2P. 1920*1080, 1280*720, 640*480 are available frame size for regional view. For Bundle Stream Mode: 4000*3000, 3000*3000, 2560*2560, 2592*1944, 1944*1944, 1920*1920, 1536*1536, 1280*1280 are available frame size for 10. 3000*752, 2592*648, 2560*640, 1920*480, 1280*320 are available frame size for 1P. 3000*1680, 2688*1520, 2592*1460, 1920*1080, 1280*720 are available frame size for 2P. 4000*3000, 3840*2160, 3072*1728,2592*1944, 2304*1296 are available	

	frame size for 4R, 1O3R and 1P3R.
	Note: For the -PA model in the AI series, it supports up to 3000*3000 of Frame
	Size.
	Maximum Frame Rate means maximum refresh frame rate of per second, it is
Maximum Frame Rate	variable according to the display mode selected.
Bit Rate	Set the bitrate to 16~16384 Kbps. The higher value corresponds to the
Dit Nate	higher video quality, and the higher bandwidth is required as well.
	Smart Stream mode remarkably reduces the bandwidth and the data storage
	requirements for network cameras while ensuring the high quality of images
Smart Stream	and it is a 10-level adjustable codec.
	There is an option to turn On/Off Smart Stream mode.
	Level: Level 0~10 are available to meet your need.
	CBR: Constant Bitrate. The rate of CBR output is constant.
Bit Rate Control	VBR: Variable Bitrate. VBR files vary the amount of output date per time
	segment.
Image Quality	Low/Medium/High are available, this item is optional only if you select VBR.
	The option is for H.264. Main/High/Base can be selected according to your
Profile	needs.
	Set the I-frame interval to $1^{\sim}120$, 50 for the default. The number must be a
I-frame Interval	multiple of the number of frames

4.4.2 Image

Display information, enhancement of image and Day/Night setting can be set in this module. OSD (On Screen Display) content and video time can be displayed to rich the image information.

Display

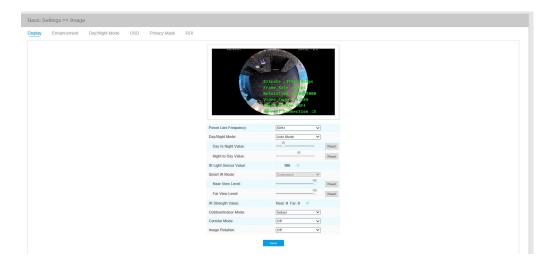


Table 4-4-2 Description of the buttons

Parameters	Function Introduction
Power Line Frequency	60HZ flicker for NTSC mode and 50HZ flicker for PAL mode
Day/Night Mode	There are several parameters such as Exposure Level, Maximum Exposure Time and IR-CUT Interval, etc, associated with this mode. Night Mode: Show in live view based on Night Mode settings Day Mode: Show in live view based on Day Mode settings Auto Mode: Show in live view based on environment, set the sensitivity for switching Day Mode to Night Mode, or Night Mode to Day Mode Customize: Show in live view based on your own settings' time to start/end Night Mode
Day To Night Value	This is the sensitivity for switching Day Mode to Night Mode . When IR Light Sensor Current Value is lower than this value, it will switch Day Mode to Night Mode.
Night To Day Value	This is the sensitivity for switching Night Mode to Day Mode . When IR Light Sensor Current Value is higher than this value, it will switch Night Mode to Day Mode.
IR Light Sensor Value	The current value of the IR light sensor
Smart IR Mode	With the combination of the High Beam and Low Beam, The IR LEDs technology has been upgraded to provide better image clarity and quality regardless of the object distance. Customize mode is available.
IR Strength Value	The current value of Low-Beams LED and High-Beams LED light value
Near view level	Adjust the light strength of Low-Beams LED light level from 0 to 100.
Far view level	Adjust the light strength of High-Beams LED light level from 0 to 100.
Outdoor/Indoor Mode	Select indoor or outdoor mode to meet your needs.
Corridor Mode	There are three options available, you can select one to meet your need Off: Keep the image in normal direction Clockwise 90°: Rotate the image by 90° clockwise Anticlockwise 90°: Rotate the image by 90° anticlockwise Note: Corridor Mode is not supported for the -PA model in the AI series.
Image Rotation	There are four options available, you can select one to meet your need Off: Keep the image in normal direction Rotating 180°: Upside down the image Flip Horizontal: Flip the image horizontally Flip vertical: Flip the image vertically Note: Image Rotation is not supported for the -PA model in the AI series.

Enhancement

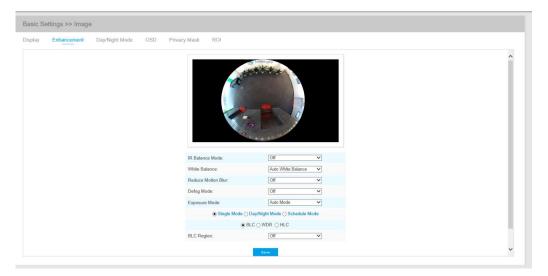


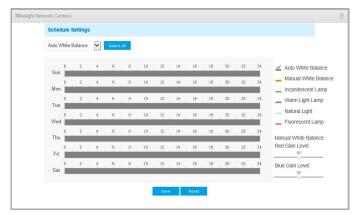
Table 4-4-3 Description of the buttons

Parameters	Function Introduction
IR Balance Mode	There is an option to turn On/Off the IR LED. Turn IR Balance Mode on, and the IR LED will change according to the actual illumination.
White Balance	To restore white objects and remove color distortion cause by the light of the environment Auto White Balance: This option will automatically enable the White Balance function; Manual White Balance: Set Red Gain Level and Blue Gain Level manually; Incandescent Lamp: Select this option when light is similar with incandescent lamp; Warm Light Lamp: Select this option when light is similar with warm light lamp; Natural Light: Select this option when there is no other light but natural light; Fluorescent Lamp: Select this option when light is similar with Fluorescent Lamp.
Reduce Motion Blur	Enable this function to reduce the motion blur of objects effectively. You can adjust the deblur level from 1 to 100.
Defog Mode	This function is only for H.265 series. Better image effect in foggy weather, refers to Figure 4-4-8 Note: Defog Mode is not supported for the -PA model in the AI series.
Exposure Mode	Auto Mode, Manual Mode and Schedule Mode are available. Auto Mode: The camera will adjust the brightness according to the light environment automatically; Manual Mode: The camera will adjust the brightness according to the value you set, you can set the exposure time from 1~1/100000s, the higher the value is, the brighter the image is;

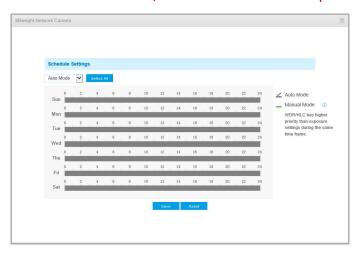
	Schedule Mode: You can customize the schedule to enable/disable Auto Mode
	and Manual Mode.
Single Mode	Set single mode for BLC/WDR/HLC.
Day/Night Mode	Support BLC/WDR/HLC on Day Enhancement Mode/Night Enhancement Mode separately.
Schedule Mode	Set schedule mode for BLC/WDR/HLC.
BLC Region	Off, Customize, and Centre are available (in single mode, only enable when WDR is disable) Off: Calculate the full range of view and offer appropriate light compensation Customize: This option enables you to customize inclusive or exclusive region manually Centre: This option will automatically add an inclusive region in the middle of the window and give the necessary light compensation
Wide Dynamic Range	This function which can capture and display both bright and dark areas in the same frame enables details of objects in both bright and dark areas to be visible. Off: Disable WDR function On: Enable the WDR, there are Low/High/Auto three levels Customize: Customize the schedule to enable/disable the WDR function and set the levels with Low/High/Auto
Wide Dynamic Level	Set WDR with Low/High/Auto level
Anti-flicker Level	Reduce flickers that appear on screen in some lighting conditions and there are 10 levels of anti-flicker adjustments
High Light Compensation	This function is only for H.265 series to adjust the brightness to a normal range when the light is strong, refers to Figure 4-4-9 Off: Disable HLC function General Mode: Enable the general mode of HLC, and there is a setting for HLC Level Enhanced Mode: Enable the enhanced mode of HLC, and there is a setting for HLC Level
HLC Level	Select level for HLC
Day Enhancement Mode	BLC/WDR/HLC are available.
Night Enhancement Mode	BLC/WDR/HLC are available.
Schedule Setting	Customize the schedule to enable/disable BLC/WDR/HLC mode

1) You can customize the schedule to enable/disable the difference White Balance modes.

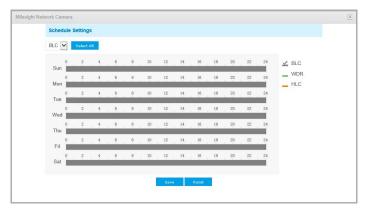




2) You can customize the schedule to enable/disable the difference exposure modes.



3) You can customize the schedule to enable/disable BLC/WDR/HLC mode.



- 4) WDR/HLC has higher priority than exposure settings at the same time frame.
- 5) Defog Image.





6) HLC Image.



Day/Night Mode

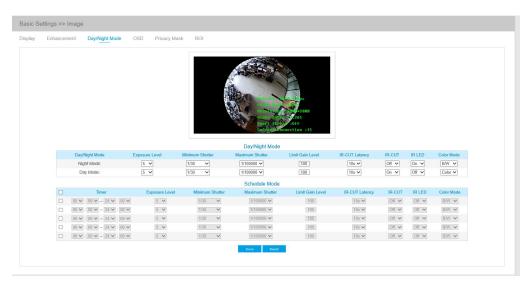


Table 4-4-4 Description of the buttons

Parameters	Function Introduction
Exposure Level	Level 0~10 are available to meet your need.
Minimum Shutter	Minimum Shutter is the same as Maximum Exposure Time. Set the minimum Shutter to $1^{-1}/100000s$
Maximum Shutter	Maximum Shutter is the same as Maximum Exposure Time. Set the maximum Shutter to $1^{\sim}1/100000$ s
IR-CUT Latency	The interval time of switching one mode to another.
IR-CUT	Turn on or turn off IR-CUT.
IR LED	Choose to turn on or turn off under this mode. LED off: Turn off all the LEDs on the device; IR LED on: Turn on the IR LED;
Color Mode	Select B/W or Color mode under Day/Night mode.
Schedule Mode	By this you can customize your special demands for different time, then the Day mode and Night mode will switch automatically according to your settings.

OSD(On Screen Display)

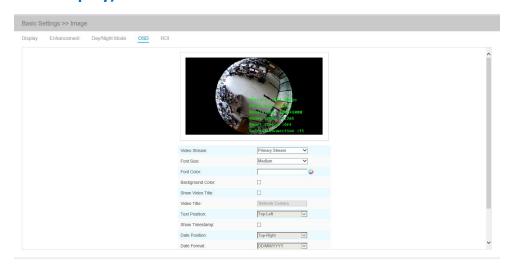
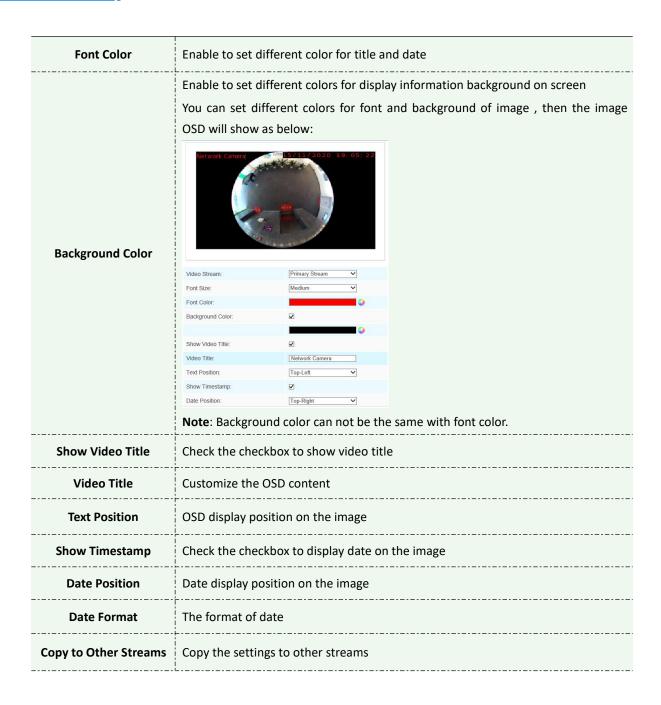


Table 4-4-5 Description of the buttons

Parameters	Function Introduction
Video Stream	Enable to set OSD for primary stream and secondary stream
Font Size	Smallest/Small/Medium/Large/Largest/Auto are available for title and date



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 set 24 mask areas at most.

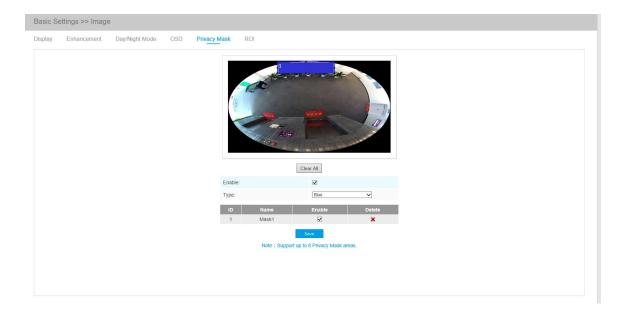


Table 4-4-6 Description of the buttons

Parameters	Function Introduction
Enable	Check the checkbox to enable the Privacy Mask function
Clear All	Clear all areas you drew before
Туре	Select the color to use for the privacy areas, there are eight colors available: White, Black, Blue, Yellow, Green, Brown, Red and Violet

- 1) You can only set the Privacy Mask area on Fisheye View channel.
- 2) For the -PA model in the AI series, it only supports black color for Privacy Mask.

ROI

Region of interest(often abbreviate ROI), is a selected subset of samples within a dataset identified for a particular purpose. Users can select up to 8 key regions of a scene to transmit through separate streams for targeted preview and recording.

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

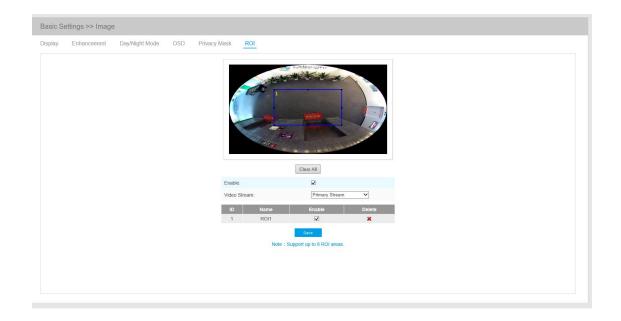


Table 4-4-7 Description of the buttons

Parameters	Function Introduction
Enable	Check the checkbox to enable the ROI function
Clear All	Clear all areas you drew before
Video Stream	Choose the Video Stream

- 1) You can set a low bit rate. For example, you can set a bit rate of 512Kbps and a resolution of 1080P, then you can see the image quality of ROI is more clear and fluent than the other region.
- 2) You can set the ROI area separately for different channels base on display mode in live view.
- 3) For the -PA model in the AI series, ROI function cannot be enabled when the resolution is higher than 8MP.

4.4.3 Audio

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



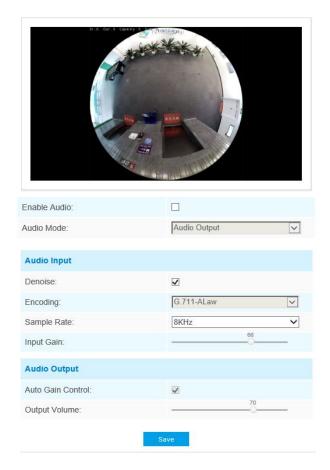


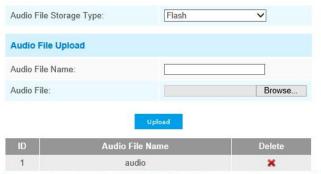
Table 4-4-8 Description of the buttons

Parameters	Function Introduction
Enable Audio	Check on the checkbox to enable audio feature.
Audio Input	Denoise: Set it as On/Off. When you set the function on, the noise detected can be filtered. Encoding: G.711-ULaw, G.711-ALaw, AAC LC, G.722 and G.726 are available; Audio Bit Rate: The function is available only for AAC LC, and supports up to 256kbps Sample Rate: 8KHz, 16KHz, 32KHz, 44.1KHz, and 48KHz are available Sample Rate: There are 8KHz/16KHz two options; Input Gain: Input audio gain level, 0-100.
Audio Output	Auto Gain Control: Improve the quality of audio; Output Volume: Adjust volume of output.

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

www.milesight.com





Note:Only support '.wav' audio files with codec type PCM/PCMU/PCMA, 64kbps or 128kbps bitrate and no more than 500kl

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

4.4.4 Network

TCP/IP

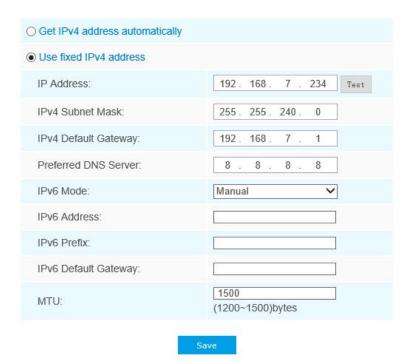


Table 4-4-9 Description of the buttons

Parameters	Function Introduction
Get IPv4 Address	Get an IP address from the DHCP server automatically.
Automatically	

	IPv4 Address: An address that used to identify a network camera on the
	network
	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
Hea fixed ID address	address
Use fixed IP address	IPv6 Mode: Choose different mode 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

The **Test** button is used to test if the IP is conflicting.

HTTP

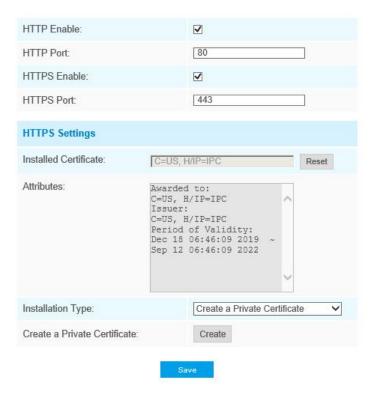


Table 4-4-10 Description of the buttons

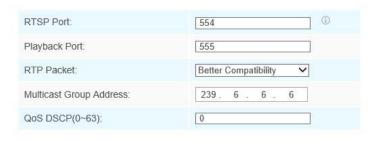
Parameters	Function Introduction
HTTP Enable	Start or stop using HTTP.
HTTP Port	Web GUI login port, the default is 80, the same with ONVIF port.

HTTPS Enable	Start or stop using HTTPS.
HTTPS Port	Web GUI login port via HTTPS. the default is 443.
HTTP Settings	Upload and set the SSL certificate .

HTTP URL are as below:

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

RTSP



Save

Table 4-4-11 Description of the buttons

Parameters	Function Introduction
RTSP Port	The port of RTSP, the default is 554.
Playback Port	The port of playback, the default is 555.
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.

RTSP URL for Bundle-Stream Mode are as below:

Stream	URL
Primary Stream	rtsp://IP:RTSP Port/main

Secondary Stream	rtsp://IP:RTSP Port/sub

RTSP URL for Multi-Channel Mode are as below:

Stream	URL
Channel 01	rtsp://IP:RTSP Port/main
Channel 02	rtsp://IP:RTSP Port/sub
Channel 03	rtsp://IP:RTSP Port/third
Channel 04	rtsp://IP:RTSP Port/fourth
Channel 05	rtsp://IP:RTSP Port/fifth

Note:

- 1) Get the format of RTSP URL by clicking " on the right side of RTSP Port.
- 2) 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.
- 3) 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.

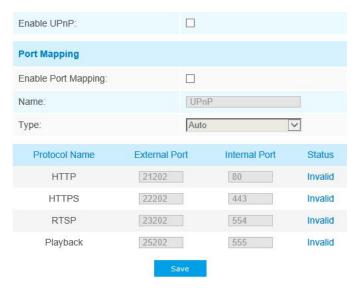


Table 4-4-12 Description of the buttons

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

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: Recommend to enable and configure UPnP ports which can be used directly in DDNS.

Save

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

Table 4-4-13 Description of the buttons

Parameters	Function Introduction
Enable DDNS	Check the checkbox to enable DDNS service
Provider	Get support from DDNS provider: ddns.milesight.com, freedns.afraid.org, dyndns.org, www.no-ip.com, www.zoneedit.com. You can also customize the provider for DDNS.
Hash	A string used for verifying, only for "freedns.afraid.org"
User name	Account name from the DDNS provider, unavailable for "freedns.afraid.org"

Password	Account password, unavailable for "freedns.afraid.org"
Host name	DDNS name enabled in the account

- 1) Please do the Port Forwarding of HTTP Port and RTSP Port before you use Milesight DDNS.
- 2) 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.

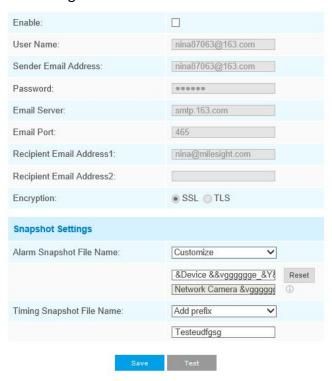
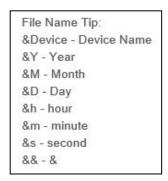


Table 4-4-14 Description of the buttons

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
SMTP Server	The SMTP server IP address or host name(e.g. smtp.gmail.com)

SMTP Port	The port of SMTP server. The default TCP/IP port for SMTP is 25(not secured). For
	SSL/TLS port, it depends on the mail you use
Recipient Email	Franklandson to market side of the
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.
Alarm Snapshot File	Default(YYYY-MM-DD) /MM-DD-YYYY/ DD-MM-YYYY/ Add prefix/ Overwrite with
Name	the base file name/ Customize are available.
Timing Snapshot File	Default(YYYY-MM-DD) /MM-DD-YYYY/ DD-MM-YYYY/ Add prefix/ Overwrite with
Name	the base file name/ Customize are available.

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



FTP

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

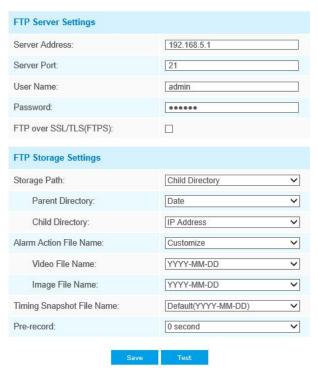


Table 4-4-15 Description of the buttons

Parameters	Function Introduction		
Server Address	FTP server address		
Server Port	The port of the FTP server. Generally it is 21		
User Name	User name used to log in to the FTP sever		
Password	User password		
Storage Path	Storage Path where video and image will be uploaded to on 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.		
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 video file name, YYYY-MM-DD/ MM-DD-YYYY/DD-MM-YYYY/ Add prefix/ Customize are available.		
Image File Name	If you choose to customize image file name, YYYY-MM-DD/ MM-DD-YYYY/DD-MM-YYYY/ Add prefix/ Customize are available.		
Timing Snapshot File Name	Default(YYYY-MM-DD) /MM-DD-YYYY/ DD-MM-YYYY/ Add prefix/ Overwrite with the base file name/ Customize are available.		

- 1) Parent Directory will be under Root Directory, and Child Directory will be under Parent Directory.
- 2) 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

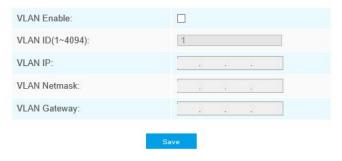
&m - minute

&s - second

&& - &

VLAN

A virtual LAN (VLAN) is any broadcast domain that is partitioned and isolated in a computer network at the data link layer (OSI layer 2). LAN is an abbreviation of local area network. VLANs allow network administrators to group hosts together even if the hosts are not on the same network switch. This can greatly simplify network design and deployment, because VLAN membership can be configured through software. Without VLANs, grouping hosts according to their resource needs necessitates the labour of relocating nodes or rewiring data links.

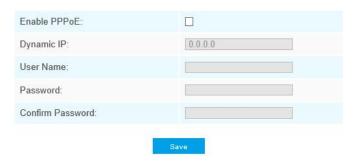


Note:

How to set up VLAN in switches, please refers to your switches user manual.

PPPoE

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



Note:

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

SNMP

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

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

exception messages to the surveillance center.

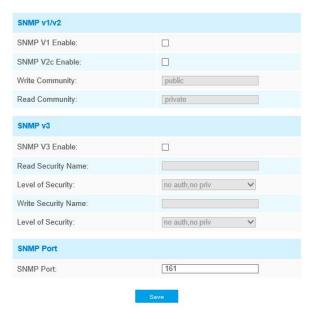


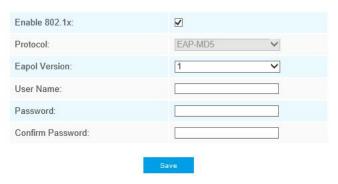
Table 4-4-16 Description of the buttons

Parameters	Function Introduction	
SNMP v1/2/3	The version of SNMP, please select the version of your SNMP software. SNMP v1: Provide no security SNMP v2: Require password for access SNMP v3: Provide encryption and the HTTPS protocol must be enabled	
Write Community	Input the name of Write Community	
Read Community	Input the name of Read Community	
Trap Address	ess Set the trap address	
Trap Port	Set the trap port, the default is 162	
Trap Community Name	Input the trap community name	
Read Security Name	Input the name of Read Security Community	
Level of Security	There are three levels available: (auth, priv), (auth, no priv) and (no auth, no priv)	
Write Security Name	Input the name of Write Security Community	
Level of Security	There are three levels available: (auth, priv), (auth, no priv) and (no auth, no priv)	
SNMP Port	The port of SNMP, the default is 161	

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

802.1x

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



Bonjour

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

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



RTMP

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



For more information, please refer to *Milesight-Troubleshooting-How to Use RTMP for Live Broadcast*

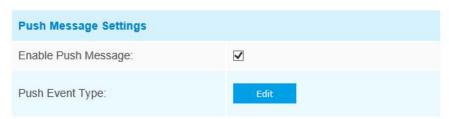
Note:

- 1) For YouTube live broadcast, if you use a newly created account to live broadcast, you need to wait for 24hrs to activate the account for using live function.
- 2) For RTMP, since G.711 is not available for YouTube, so you can only play video from Milesight Network Camera with H.264 video coding and AAC audio coding on YouTube.
- 3) Server Address in Network Camera RTMP interface needs to be filled with the format: rtmp://<
 Server URL >/< Stream key >, remember it needs '/' to connect between < Server URL > and <
 Stream key >.

More

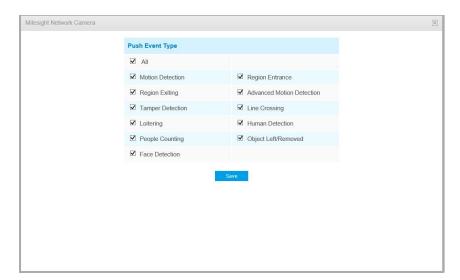
Here you can set more functions, like Push Message Settings and ONVIF Settings.

Push Message Settings:



When enabling the Push Message function, you can click to choose the types of Events' message which will be pushed to M-Sight Pro App as shown below:

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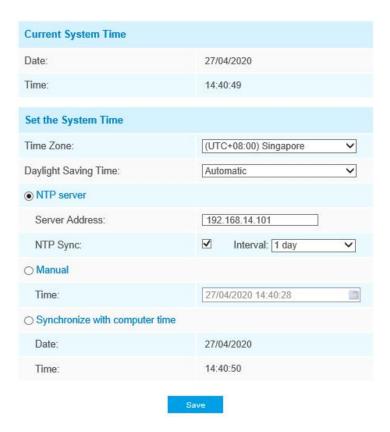
Note: There must be Opened Alarm Push of corresponding cameras in M-Sight Pro-APP. For more information, please refer to *Alarm Message of Milesight_M-Sight Pro-APP User Manual.*

ONVIF Settings:

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.



4.4.5 Date&Time



Current System Time

Current date&time of the system

Set the System Time

Table 4-4-17 Description of the buttons

Parameters	Function Introduction
Time Zone Choose a time zone for your location.	
Daylight Saving time	Enable the daylight saving 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.

4.5 Advanced Settings

4.5.1 Storage

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.

Storage Management

SD Card:



Note: Please insert SD card.

Table 4-5-1 Description of the buttons

Parameters	Function Introduction
Format	Format SD card, the files in SD card will be removed
Mount/UnMount	Mount/Dismount SD card
Delete	Enable cyclic storage, when the free disk space reach at a certain value, it will automatically delete the files at certain percentage according to your settings

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.

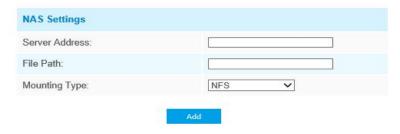


Table 4-5-2 Description of the buttons

Parameters	Function Introduction		
Server Address	IP address of NAS server		
File Path	Input the NAS file path, 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		

Up to 5 NAS disks can be connected to the camera.

Record Settings

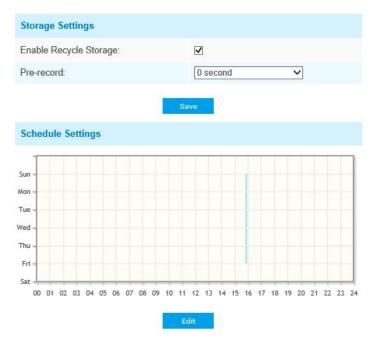


Table 4-5-3 Description of the buttons

Parameters	Function Introduction
Enable Recycle Storage	Enable/Disable Recycle Storage, if you enable this option, it will delete the files when the free disk space reach a certain value.
Pre-record Reserve the record time before alarm, 0~10 sec	
Schedule Settings	Click the Edit button to edit record schedule

Note:

SD Card or NAS are available.

Snapshot Settings

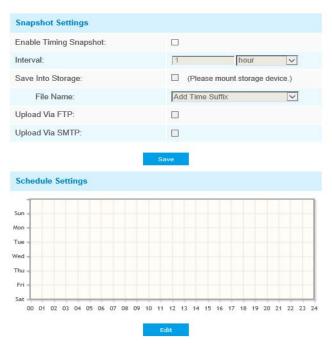


Table 4-5-4 Description of the buttons

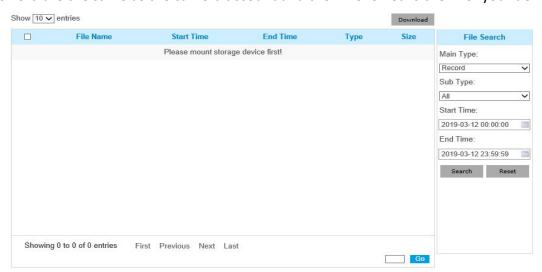
Parameters	Function Introduction
Snapshot Settings	Enable Timing Snapshot: Check the checkbox to enable the Timing Snapshot function Interval: Set the snapshots interval, input the number and choose the unit(millisecond, second, minute, hour, day) Save Into Storage: Save the snapshots into SD card or NAS, and choose the file name to add time suffix or overwrite the base file name. Save Into NAS: Save the snapshots into NAS, and choose the file name to add time suffix or overwrite the base file name Upload Via FTP: Upload the snapshots via FTP Upload Via SMTP: Upload the snapshots via SMTP Please note: If you choose to add time suffix, every snapshot picture will be saved, but if you choose to overwrite the base file name, only one latest picture will be saved. When you choose add overwrite the base file name to SD Card or NAS, it will create a file named "Snapshot" to place the snapshot.
Schedule Settings	Click the Edit button to edit record schedule

Explorer

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

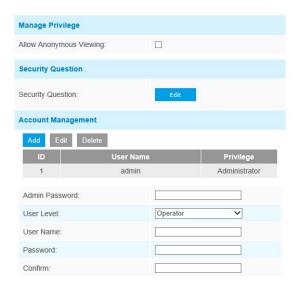
(Note: Files are visible once SD card is inserted. Don't insert or pull out SD card when power on.)

Video files are arranged by date. Set file type and start/end time to search out files. Each day files will be displayed under the corresponding date, from here you can copy and delete files etc. You can visit the files in SD card by ftp, for example, ftp://username:password@192.168.5.190(user name and password are the same as the camera account and the IP followed is the IP of your device.).



4.5.2 Security

User





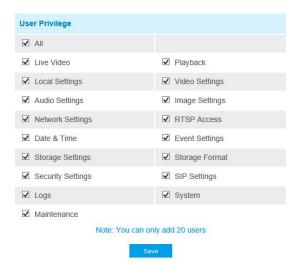


Table 4-5-5 Description of the buttons

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. Milesight Network Camera Security Question Settings Admin Password: Security Question1: What's your father's name? Answer1: Security Question2: What's your father's name? Answer2: Security Question3: What's your father's name? Answer3:		
	There are twelve default questions below, you can also customize the security questions.		

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What's your father's name?	
What's your favorite sport?	
What's your mother's name?	
What's your mobile number?	
What's your first pet's name?	
What's your favorite book? What's your favorite game?	
What's your favorite game?	
What's your lucky number?	
What's your favorite color?	
What's your best friend's name?	
Where did you go on your first trip?	
Customized Question	
*	a
Click "Add" button, it will display Account Management page. You can	add an
account to the camera by entering Admin Password, User Level, User Nar	ne, New
Password, Confirm, and edit user privilege by clicking $\ \Box$. The added according	ount will
be displayed in the account list.	
Admin Password: You can add an account only after you enter the correct	admin
password.	

Account Management

User Level: Set the privilege for the account.

User Name: Input user name for creating an account.

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:

- 1) You can only add 20 users.
- 2) The operator privilege is all checked by default.

3) For camera firmware version 4X.7.0.69 or above, it removes the default admin password and allows to set a password when logging in for the first time. It also supports set-up of the security questions for the devices. Users can reset the password by answering the correct security questions in case of forgetting the password, which is more convenient for users.

Online User

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

Online User				
Refresh				
No.	User Name	User Level	IP Address	User Login Time
1	admin	Administrator	192.168.7.110	2021-02-20 10:12:29
2	admin	Administrator	192.168.7.79	2021-02-20 09:16:06
3	admin	Administrator	192.168.7.25	2021-02-19 17:12:02

Table 4-5-6 Description of the buttons

Parameters	Function Introduction		
Refresh	Click to get latest status of user accessing to camera.		
No.	Record serial number of user logging in camera. Note: 1) There are at most 30 records shown on the list. 2) There is only one record if the same user logging 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.		
User Login Time	Camera system time of user logging in camera.		

Access List

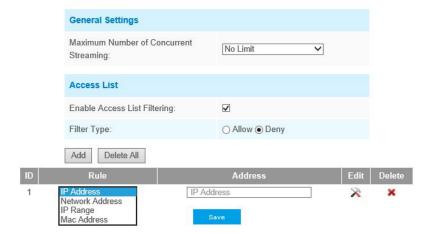


Table 4-5-7 Description of the buttons

Parameters	Function Introduction	
General Settings	Maximum number of concurrent streaming: Select the maximum number of	
General Settings	concurrent streaming. Options include Number Limit, 1~20.	
	Check the checkbox to enable Access List Filtering. Users can set Filter Type to	
Access List	Allow or Deny, set the rule to IP Address, Network Address, IP Range or MAC	
	Address, then input the address to access or restrict access to this camera.	

Security Service

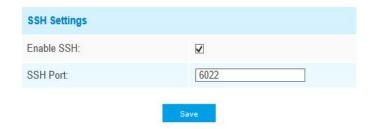


Table 4-5-8 Description of the buttons

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.

Watermark



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

About



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

4.5.3 SIP

The Session Initiation Protocol(SIP) is a signaling communications protocol, widely used for controlling multimedia communication sessions such as voice and video calls over Internet Protocol(IP) networks. This page allows user to configure SIP related parameters. Milesight cameras can be configured as SIP endpoint to call out when alarm triggered; or allow permitted number to call in to check the video if the video IP phone is used. To use this function, the settings in SIP page must be configured properly. There are two ways to get video through SIP, one is to dial the IP address directly, the other is account registration mode. the details are as follows:

Method 1: IP Direct mode

Dial on the camera's IP address directly through SIP phone, so you can see the video.

Note:

SIP phone and the camera should in the same network segment.

Method2: Account registration mode

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

SIP Settings



Note:SIP supports Direct IP call.

Save

Table 4-5-9 Description of the buttons

Parameters	Function Introduction
Unregistered/ Registered	SIP registration status. Display "Unregistered" or "Registered"
Enable	Start or stop using SIP
Register Mode	Choose to use Enable mode or Disable mode. Enable mode means to use SIP with register account. Disable mode refers to use SIP without register account, just use the IP address to call.
User ID	SIP ID
User Name	SIP account name
Password	SIP account password
Server Address	Sever IP address

Server Port	Sever port
Connection Protocol	UDP/TCP
Video Stream	Choose the video stream
Max Call Duration	The max call duration when use SIP

Note: SIP supports Directly IP call.

Alarm Phone List

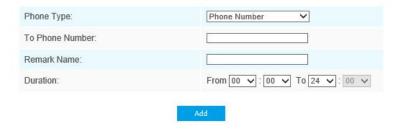


Table 4-5-10 Description of the buttons

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

White List



Table 4-5-11 Description of the buttons

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

4.5.4 Fisheye

PTZ



Table 4-5-12 Description of the buttons

Parameters	Function Introduction	
Zoom Status	Support to set display time of Zoom Status OSD. 2 seconds/5 seconds/10 seconds/Always Open/Always Close are available.	
Preset Status	Support to set display time of Preset Status OSD. 2 seconds/5 seconds/10 seconds/Always Open/Always Close are available.	
Patrol Status	Support to set display time of Patrol Status OSD. Always Open/Always Close are available.	
Auto Scan Status	Support to set display time of Auto Scan Status OSD. Always Open/Always Close are available.	

General



Table 4-5-13 Description of the buttons

Parameters	Function Introduction	
Field of View	Support optional Field of View on fisheye camera. Normal: With this option enabled, all views will maintain the original viewing angle. Original View Larger: With this option enabled, the original view(10) will have a larger viewing angle, and the other views will maintain the original viewing angle. All View Larger: With this option enabled, all views will have a larger viewing angle.	
Transfer Mode	Support to choose Bundle-Stream Mode or Multi-Channel Mode to meet different needs. Bundle-Stream Mode: the Bundle-Stream Mode combines all the channels into one and sends to NVR or VMS, which is easy for compatibility. Multi-Channel Mode: the Multi-Channel Mode sends all the original channels to NVR or VMS, so the channels can be modified separately.	

Note:

We recommend Bundle-Stream mode with Milesight NVR.

4.5.5 Logs

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

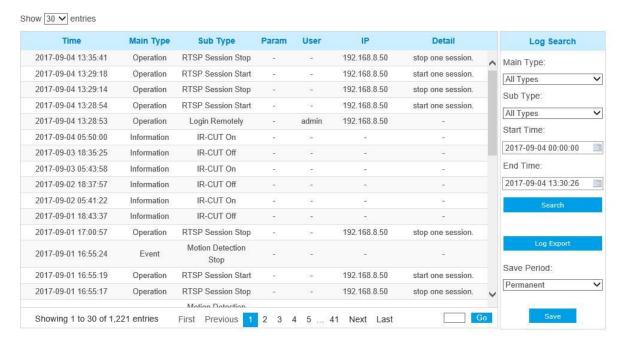


Table 4-5-14 Description of the buttons

Parameters	Function Introduction		
Main Type	There are five main log types: All Type, Event, Operation, Information, Exception.		
Sub Type	On the premise that main type has been selected, select the sub type to narrow the range of logs.		
Start Time	The time log starts		
End Time	The time log ends		
Log Export	Export the logs		
Save Period	Set the period of log saving. There are eight options to choose: Permanent and 30/60/120/180/240/300/360 Days.		
Go	Input the number of logs' page.		

4.6 Event

4.6.1 Basic Event

Motion Detection

Step1: Check the checkbox to enable the motion detection;

Note: Currently, the motion detection is only supported in 10, 1P, and 4R of bundle-stream mode.

Step2: Set motion region;

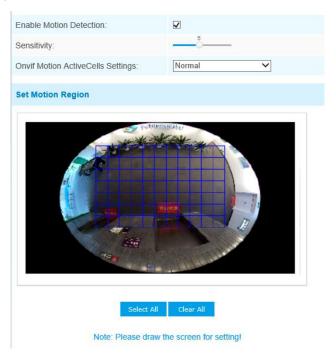
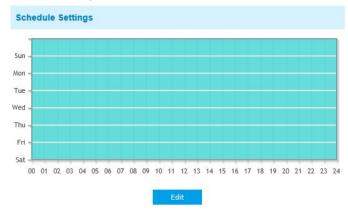


Table 4-6-1 Description of the buttons

Parameters	Function Introduction
Enable Motion Detection	Check the checkbox to enable Motion Detection function.
Sensitivity	Sensitivity level, 1~10
Onvif Motion ActiveCells Settings	Normal and Compatible are available for the option. If the setting of motion region of the third-party software is different from ours, please set this option to Compatible.
Select All	Click the button, and the motion in the area will be detected.
Clear All	Click the button, and the area drawn before will be removed.

Step3: Set motion detection schedule;



Step4: Set alarm action;

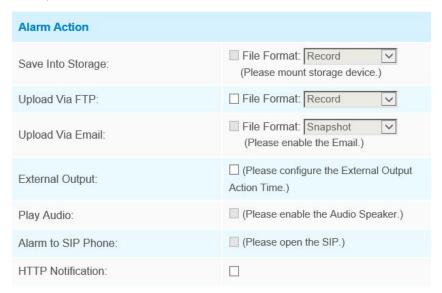


Table 4-6-2 Description of the buttons

Parameters	Function Introduction	
Save Into Storage	Save alarm recording files into SD Card or NAS	
Upload Via FTP	Upload the recording files via FTP.	
Upload Via Email	Upload the files via Email.	
External Output	If the camera equips with External Output, you can enable the action after configuring the trigger duration.	
Play Audio	If the camera equips with Speaker, you can enable the action after configuring the audio speaker.	
Alarm to SIP Phone	Support to call the SIP phone after enable the SIP function.	
HTTP Notification	Support to pop up the alarm news to specified HTTP URL. Note: 1) Three HTTP notifications at most can be added to the same event.	

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- 2) HTTP Notification supports Basic & Digest authentication.
- 3) It supports HTTPS for HTTP Notification.

NOTE:

1) The HTTP notification function is just one way for camera to send messages to VMS Software.

And it's the VMS that defines what the messages mean and decides what to do after receiving this kind of messages. So, we can use the **HTTP Notification** function of our cameras only if the VMS supports this kind of message format.

Here the Digifort will be taken as an example to introduce the HTTP Notification function.

The following are the detail steps of setting for HTTP Notification in Digifort VMS and our cameras.

Step1: Enable Alarm; set Motion Region and Detection Schedule;

Step2: Confirm the HTTP Notification as Alarm Action, and fill the fields. Then save the alarm setting. You can add up to three HTTP notifications to the same event;



HTTP User Name: admin (the user name of your camera)

HTTP Password: ms1234 (the password of your camera)

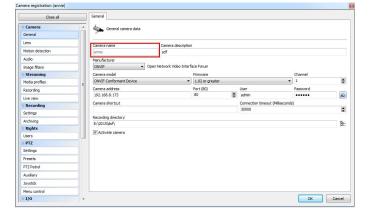
HTTP Notification URL:

http://IP:8601/Interface/Cameras/MotionDetection/Notify?Camera=CameraName

IP refers to the PC's IP where the Digifort installed.

8601 is the port for Motion signal in Digifort.

CameraName is the camera name you set in Digifort VMS, like the picture shown below.

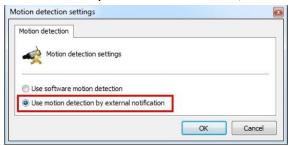


Example:

http://192.168.8.75:8601/Interface/Cameras/MotionDetection/Notify?Camera=annie,

this url format is exactly supported by Digifort VMS, so we can set as above to our cameras and get it work well.

Step3: Choose use motion detection by external notification;



Step4: If successful, you can see the device icon turn yellow in the Surveillance when the camera is under Motion Detection Alarm;



So, it's the VMS Software which decides whether we can use this function successfully. Step5: Set alarm settings.



Table 4-6-3 Description of the buttons

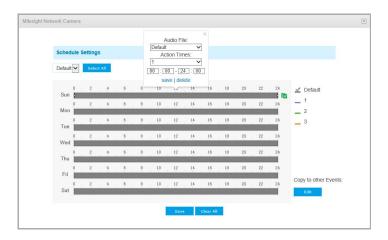
Parameters	Function Introduction	
Record Video Sections	Six different periods are available(5, 10, 15, 20, 25, 30 sec).	
Snapshot	The number of snapshot, from 1 to 5.	
Snapshot Interval	It cannot be edited unless you choose more than 1 to Snapshot.	
Email Triggered Interval	Auto / 10 seconds / 20 seconds / 40 seconds / 60 seconds / 100 seconds / 5 minutes / 15 minutes / 30 minutes / 1 hour / 8 hours / 12 hours / 24 hours are	



	available.	
External Output Action Time	Length of time an alarm lasts, this cannot be edited unless when you enable the External Output on the Alarm Action firstly.	
Audio Action Settings	Set the audio schedule to trigger different audio files and action times in different time, which is corresponded to alarm action.	
Play Audio Interval	Auto/ 10 seconds/ 30 seconds/ 1 minute/ 5 minutes/ 10 minutes are available.	

Note:

You can customize the schedule of Audio Action.



Audio Alarm

Enable the Audio before using Audio Alarm function.







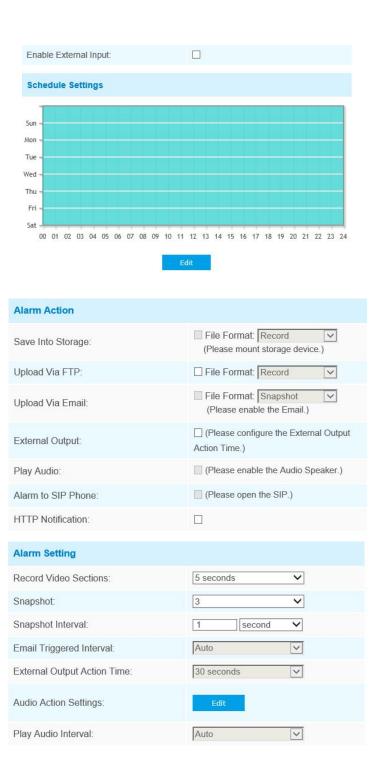


Please refer to table 4-6-2 and 4-6-3 to get the meaning of items.

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External Input



The meaning of items please refer to table 4-6-2 and 4-6-3, here will not repeat again.

External Output



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

Exception

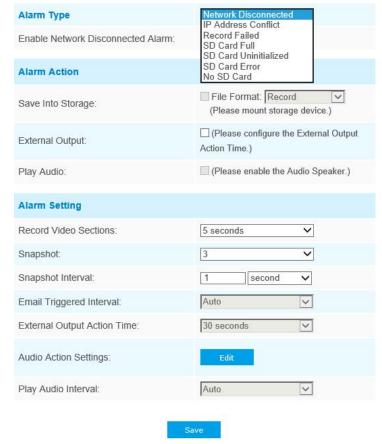


Table 4-6-4 Description of the buttons

Parameters	Function Introduction	
Network Disconnected, IP Address Conflicted, Record Failed, SD Card For Alarm Type Card Uninitialized, SD Card Error and No SD Card are available		

	Save Into Storage: Save alarm recording files into SD Card
	Upload Via Email: Upload alarm recording files via email. This option is available
	for Record Failed, SD Card Full, SD Card Uninitialized, SD Card Error and No SD
Alarm Action	Card
Alai III Action	External Output: If the camera equips with External Output, you can enable the
	action after configuring the trigger duration
	Play Audio: If the camera equips with Speaker, you can enable the action after
	configuring the audio speaker
	Record Video Sections: Six different periods are available(5, 10, 15, 20, 25, 30
	sec)
	Snapshot: The number of snapshot, 1~5
	Snapshot Interval: This cannot be edited unless you choose more than 1 to
	Snapshot
	Email Triggered Interval: Auto / 10 seconds / 20 seconds / 40 seconds / 60
	seconds / 100 seconds / 5 minutes / 15 minutes / 30 minutes / 1 hour / 8 hours /
Alarm Setting	12 hours / 24 hours are available. This cannot be set unless when you choose
Alarm Setting	Record Failed, SD Card Full, SD Card Uninitialized, SD Card Error or No SD Card
	and check the Upload via Email checkbox of related Alarm type
	External Output Action Time: Length of time an alarm lasts, this cannot be edited
	unless when you enable the External Output on the Alarm Action firstly
	Audio Action Settings: Set the audio schedule to trigger different audio files and
	action times in different time, which is corresponded to alarm action
	Play Audio Interval: Auto/ 10 seconds/ 30 seconds/ 1 minute/ 5 minutes/ 10
	minutes are available

Note:

1) Make sure to set up your email information in advance.

4.6.2 VCA Event

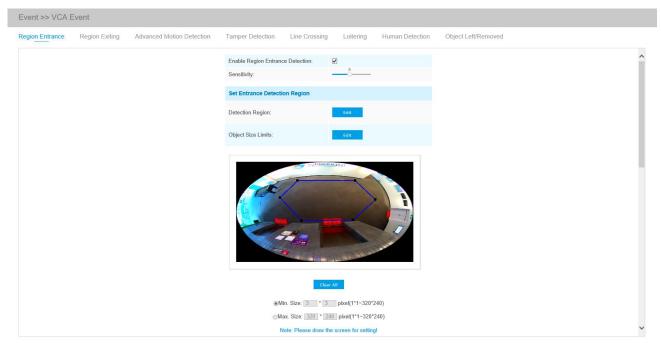
Smart Event uses Milesight Video Content Analysis technology. This technical capability is used in a wide range of domains including entertainment, health-care, retail, automotive, transport, home automation, safety and security. Milesight VCA provides advanced, accurate smart video analysis for Milesight network cameras. It enhances the performance of network cameras through 10 detection modes which are divided into basic function and advanced function, enabling a comprehensive surveillance system and quicker response of cameras to different monitoring scenes.

Note:

- 1) Smart Event of fisheye camera only supports in 10 mode of Bundle-Stream mode and 10, 103R, 101P3R mode of Multi-Channel mode.
- 2) Image Rotation function is not supported for the -PA model in the AI series. When installing the camera, please make sure the image is displayed in a forward-facing position after dewarping.

Region Entrance

Region entrance helps to protect a special area from potential threat of suspicious person's or object's entrance. An alarm will be triggered when objects enter the selected regions by enabling region entrance.



Step1: Enable Region Entrance Detection and set detecting sensitivity;

Step2: Set entrance detection region and object size limits;

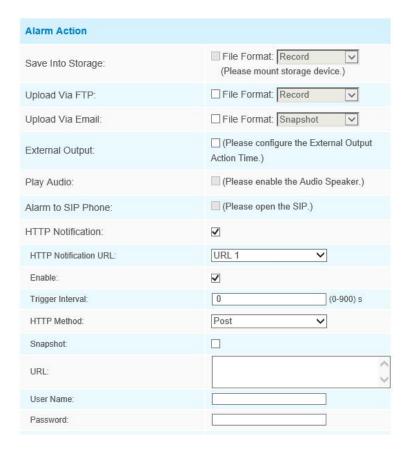
Table 4-6-5 Description of the buttons

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

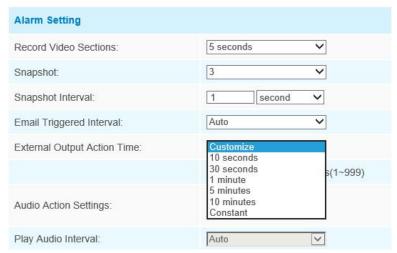
Step3: Set detection schedule;

Step4: Set alarm action;





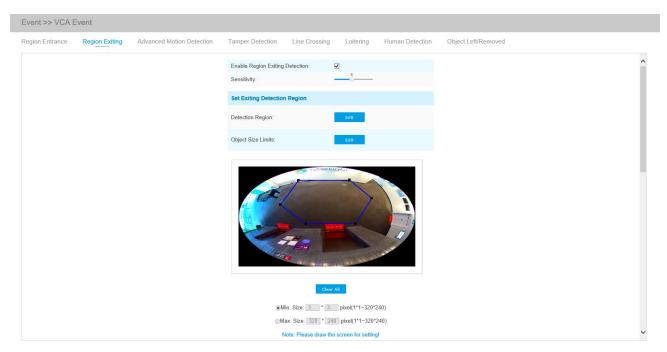
Step5: Set alarm settings. If you enable External Output and choose Constant External Output Action Time, when objects enter the selected regions, External Output Action alarm time will be always constant till the alarm is released.



Region Exiting

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

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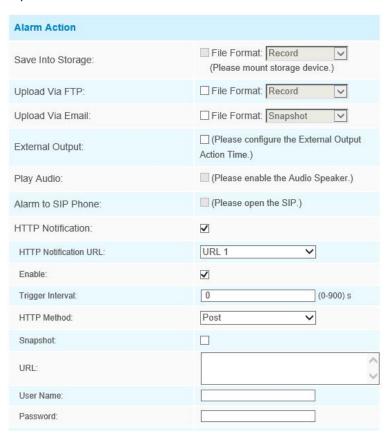
Step1: Enable region exiting detection and set detecting sensitivity;

Step2: Set exiting detection region and object size limits. The object size limits can refer to Table

4-6-5;

Step3: Set detection schedule;

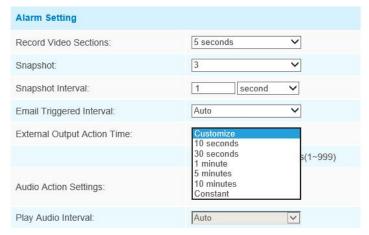
Step4: Set alarm action;



Step5: Set alarm settings. If you enable External Output and choose Constant External Output Action Time, when hen objects exit the selected regions, External Output Action alarm time will be

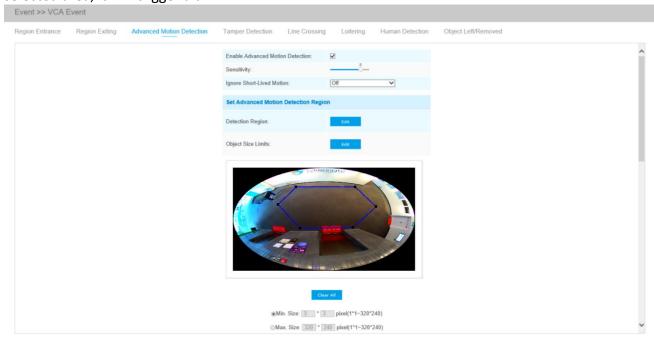
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always constant till the alarm is released.



Advanced Motion Detection

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



Step1: Enable region detection and set detecting sensitivity;

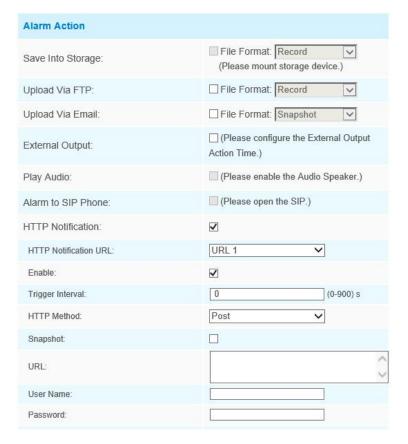
Step2: Set Ignore Short-Lived Motion time. If you set the time, when the moving duration of an object is within the setting time, it will not trigger alarm;

Step3: Set Advanced Motion Detection region and object size limits. The object size limits can refer to Table 4-6-5;

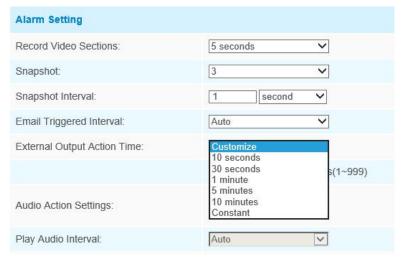
Step4: Set detection schedule;

Step5: Set alarm action;





Step6: Set alarm settings. If you enable External Output and choose Constant External Output Action Time, when hen object motion time is longer than the Ignore Short-Lived Motion time which you set in the selected regions, External Output Action alarm time will be always constant till the alarm is released.



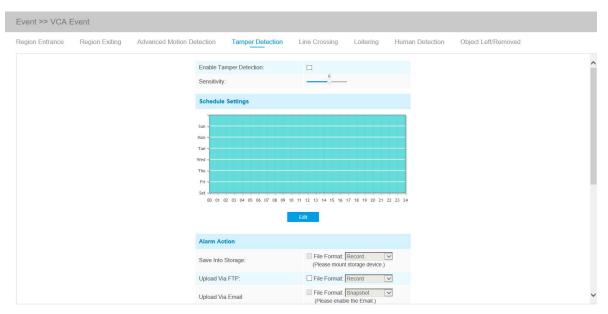
Note:

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

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Tamper Detection

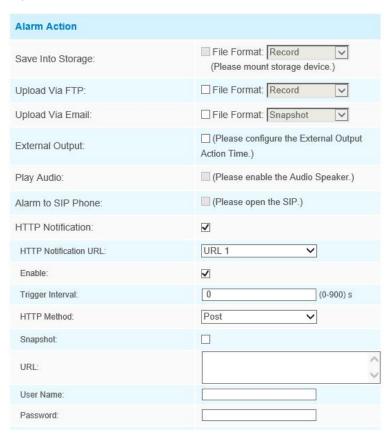
Tamper Detection is used to detect possible tampering like the camera being unfocused, obstructed or moved. This functionality alerts security staff immediately when any above-mentioned actions occur.



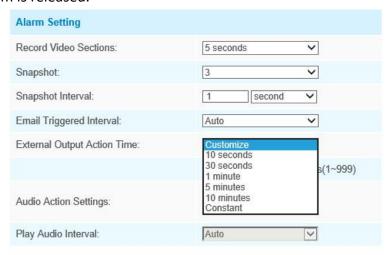
Step1: Enable tamper detection and set detecting sensitivity;

Step2: Set detection schedule;

Step3: Set alarm action;



Step4: Set alarm settings. If you enable External Output and choose Constant External Output Action Time, when possible tampering is detected, External Output Action alarm time will be always constant till the alarm is released.

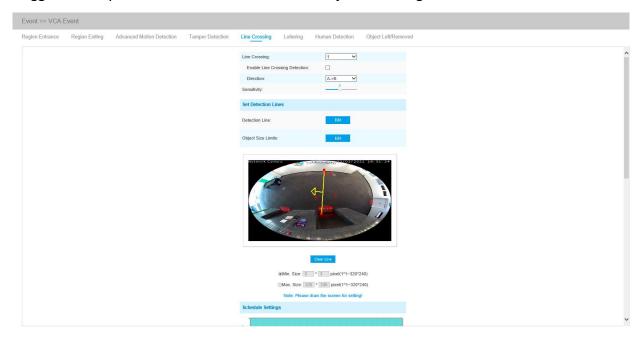


Note:

The algorithm supports defocus detection in Tamper Detection function.

Line Crossing

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



Settings steps are shown as follows:

Step1: Choose a line number;



Line Crossing:	1 2
Enable Line Crossing Detection:	3 4
Direction:	A->B
Sensitivity:	5

Step2: Enable Line Crossing Detection and define its direction;

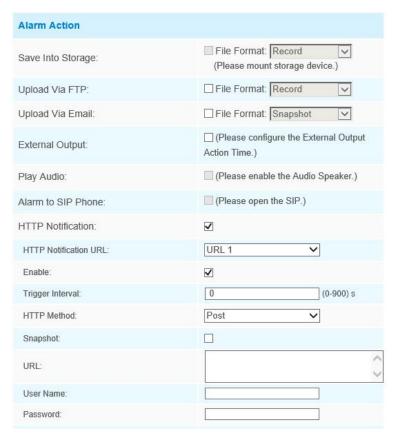
Line Crossing:	1 🗸
Enable Line Crossing Detection:	
Direction:	A->B B->A
Sensitivity:	A<->B

Step3: Set detecting sensitivity;

Step4: Draw detection lines and set object size limits. The object size limits can refer to Table 4-6-5;

Step5: Set detection schedule;

Step6: Set alarm action;



Step7: Set alarm settings. If you enable External Output and choose Constant External Output Action Time, when objects cross a defined virtual line, External Output Action alarm time will be always constant till the alarm is released.



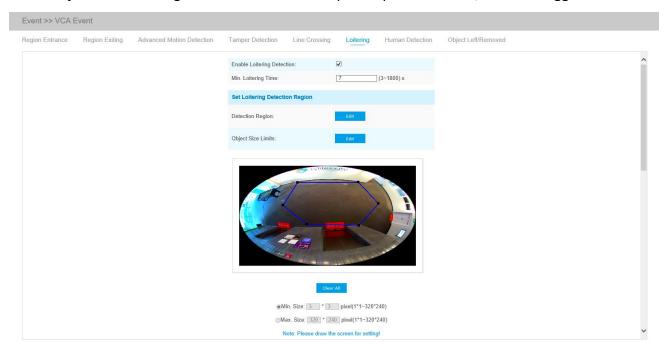
Alarm Setting	
Record Video Sections:	5 seconds
Snapshot:	3
Snapshot Interval:	1 second V
Email Triggered Interval:	Auto
External Output Action Time:	Customize 10 seconds 30 seconds 1 minute
Audio Action Settings:	5 minutes 10 minutes Constant
Play Audio Interval:	Auto

Note:

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

Loitering

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



Step1: Enable loitering detection and set minimum loitering time;

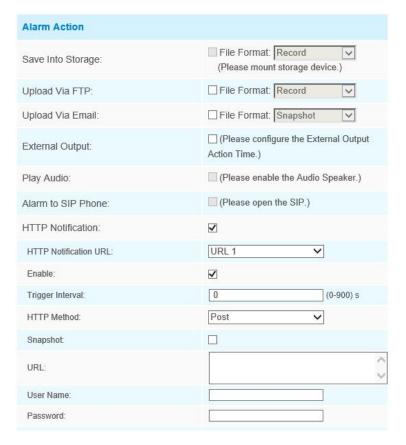
Step2: Set Loitering detection region and object size limits. The object size limits can refer to Table

4-6-5;

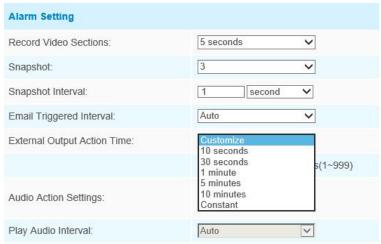
Step3: Set detection schedule;

Step4: Set alarm action;





Step5: Set alarm settings. If you enable External Output and choose Constant External Output Action Time, when objects loiter in the selected regions, External Output Action alarm time will be always constant till the alarm is released.



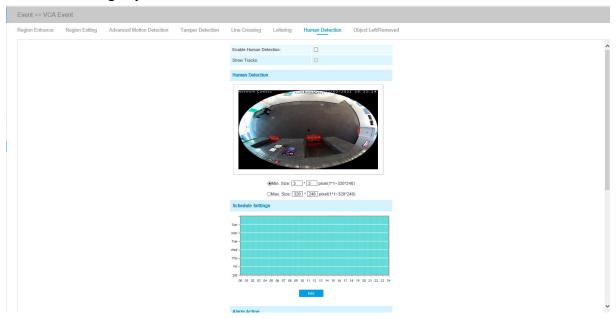
Note:

After setting minimum loitering time from 3s to 1800s, any objects loitering in the selected area over the minimum loitering time will trigger the alarm. Also Milesight loitering allows to set "Object Size". Only the object bigger than the set size will trigger the alarm.

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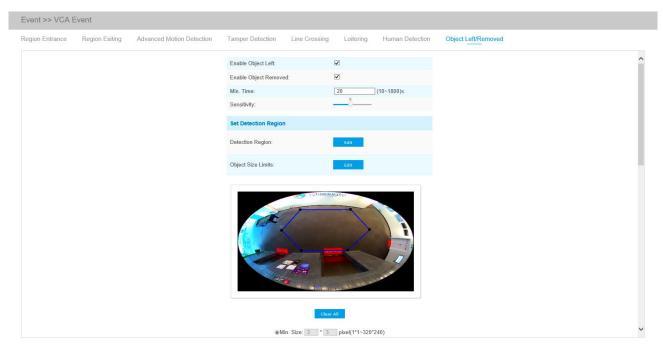
Human Detection

Human detection is used for figuring out whether an object is a human or not. Once human detection is enabled, when there is an object appearing in the detecting area, an ID will show on the frame. If the object is a person, it will mark as "person". When the Show Tracks is enabled, the tracks of the moving object will show on the screen.



Object Left/Removed

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



Step1: Enable Object Left or Object Removed(Or you can enable both features at the same time);

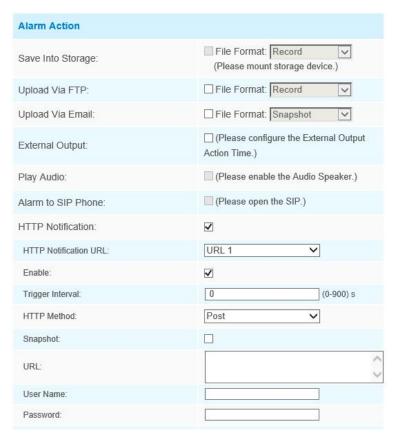
Step2: Set minimum time;

Step3: Set detecting sensitivity;

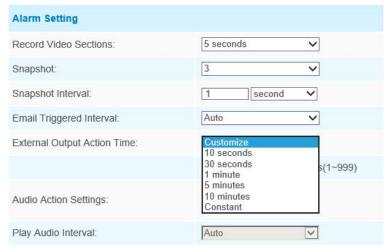
Step4: Set detection region and object size limits. The object size limits can refer to Table 4-6-5;

Step5: Set detection schedule;

Step6: Set alarm action;



Step7: Set alarm settings. If you enable External Output and choose Constant External Output Action Time, when an object is left/removed from the selected regions, External Output Action alarm time will be always constant till the alarm is released.



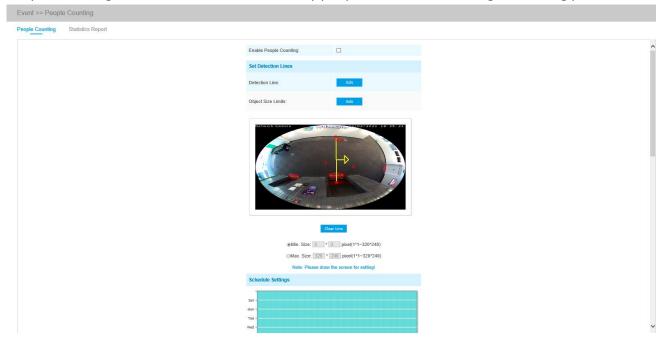
Note:

- 1. After setting minimum time from 3s to 1800s, any objects are left in the selected area or removed from the selected area over the minimum time will trigger the alarm.
- 2. When Object Left/Removed is triggered, the frame of target object will turn red.

4.6.3 People Counting

People Counting

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



Settings steps are as shown below:

Step1: Enable People Counting;

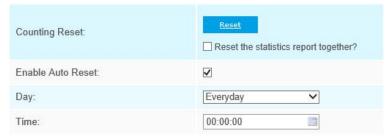
Step2: Set detection line and object size limits. The object size limits can refer to Table 4-6-5;

Step3: Set detection schedule;

Step4: Set counting OSD;



The OSD of the people counting support manual reset and automatic zeroing;



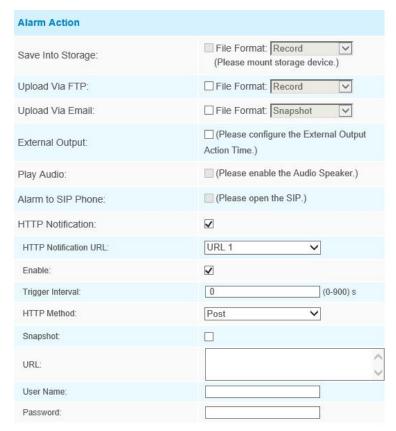
Step5: Set alarm trigger. Alarm will be triggered when the thresholds reaches to a certain value from 1 to 9999.

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Alarm Trigger		
Enable Alarm	v	
Thresholds:	☐ In: ☐ Out: ☐ Capacity: ☐ Sum:	9999 9999 9999

Step6: Set alarm action;



Step7: Set alarm settings. If you enable External Output and choose Constant External Output Action Time, when the thresholds reach to a certain value you set, External Output Action alarm time will be always constant till the alarm is released.



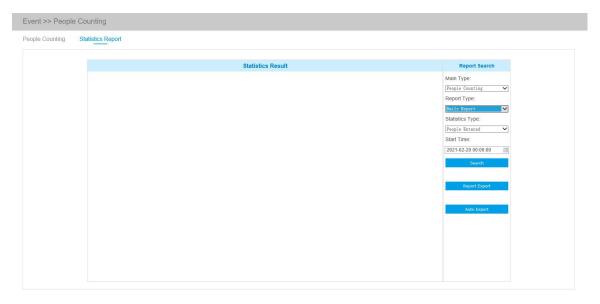
Alarm Setting	
Record Video Sections:	5 seconds
Snapshot:	3
Snapshot Interval:	1 second V
Email Triggered Interval:	Auto
External Output Action Time:	Customize 10 seconds 30 seconds 1 minute
Audio Action Settings:	5 minutes 10 minutes Constant
Play Audio Interval:	Auto

Note:

Crossing along the direction of the arrow will record as "In", opposite as "Out".

Statistics Report

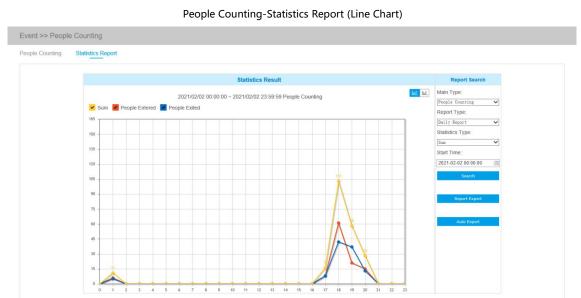
The results during the enabling period will be displayed on "Statistics Report" interface.



- **Step 1:** Select Main Type;
- **Step 2:** Select Report Type including Daily Report, Weekly Report, Monthly Report and Annual Report;
- **Step 3:** Select Statistics Type including People Entered, People Exited and Sum;
- **Step 4:** Select Start Time, then click button, the camera will automatically

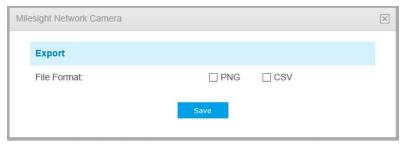
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count the data for the day / week / month / year (based on the report type selected by the user) from the start time and generate the corresponding report. Moreover, you can also click or use to switch display mode of Statistics Report as shown below.



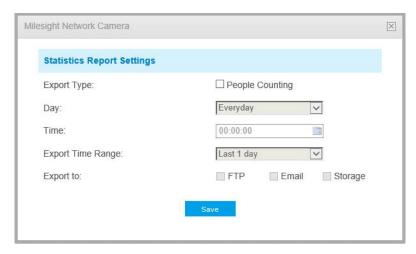


Step 5: Click Report Export button to pop up the Export window as shown below, and you can choose File Format to export the report to local.

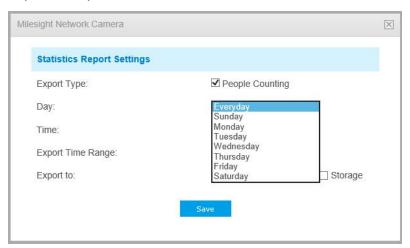




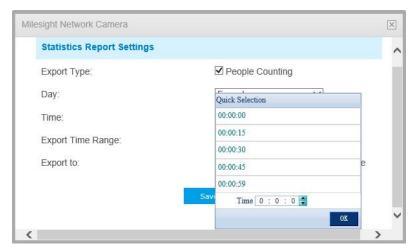
Step 6: Click Auto Export button to pop up the Statistics Report Settings as shown below.



- ① Set Export Type. User can check People Counting. When People Counting is checked, the gray item becomes editable as shown below;
- 2 Set Day. User can choose Everyday to export daily reports, while choosing others to export reports on a specific day of the week;

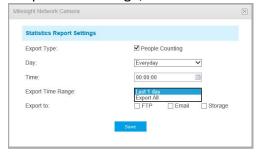


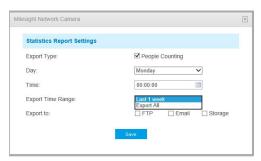
3 Set Time. User can choose the time of day to export the Statistics Report automatically, click the calendar icon to pop up the following Quick Selection;





(4) Set Export Time Range;

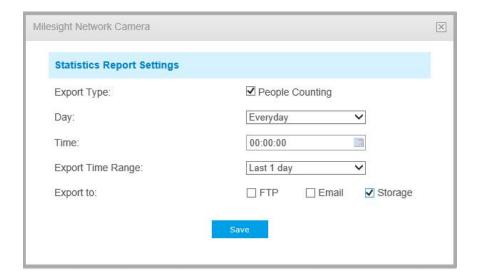




Day (Choose Everyday)

Day (Choose Week)

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



Note:

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

4.6.4 Heat Map

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

Note:

- (1) Heat Map is optional for 360° Panoramic Fisheye Network Camera, 180° Panoramic Mini Bullet Network Camera, 180° Panoramic Mini Dome Network Camera and AI cameras except for PTZ models.
- (1) Please upgrade the camera to V43.7.0.72-r7 or above to use Heat Map function.
- (2) Only allowed to view reports within 7 days without a SD card or NAS.

Heat Map

Step 1: After log in the web, go to "Advanced Settings"→ "Heat Map". Check the checkbox "Enable Heat Map", then set the Heat Map settings as shown below.

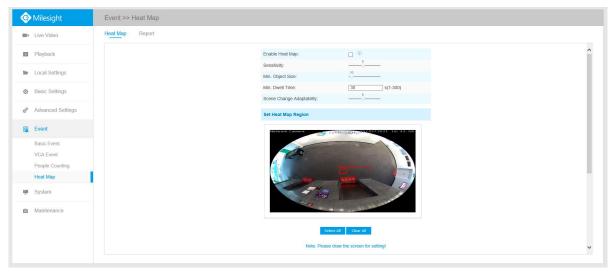


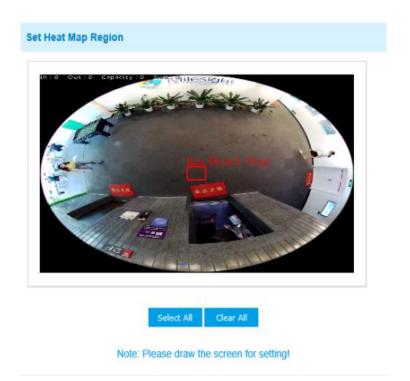
Table 4-6-6 Description of the buttons

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

Step 2: Set Heat Map Region. Draw the screen to set the detection area. You can click "Select All"

button to select all areas, or "Clear All" button to remove the current drawn area.

Step 3: Schedule Settings. You can draw the schedule by clicking "Edit" button. And then click



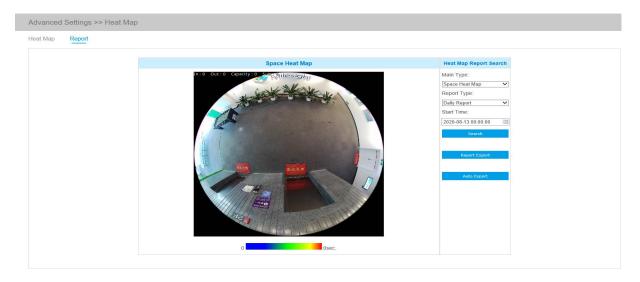
"Save" or "Reset" after finishing setting.





Report

The results will be displayed on "Report" interface.



Step 1: Select Main Heat Map Type.

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

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

Step 2: Select Report Type including Hourly Report, Daily Report, Weekly Report, Monthly Report and Annual Report.

Step 3: Select Start Time, then click the **"Search"** button, the camera will automatically count the data for the day/ week/ month/ year (based on the report type selected by the user) from the start time and generate the corresponding report as shown below.



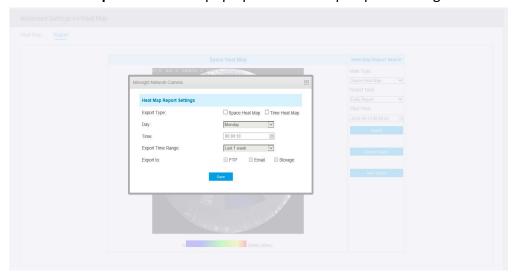
Space Heat Map





Step 4: Click the "Report Export" button to export the report to local.

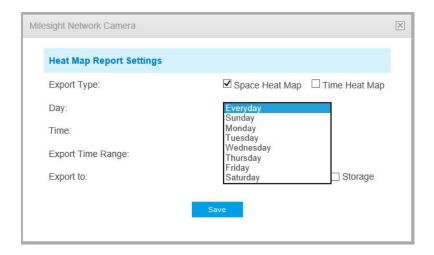
Step 5: Click the "Auto Export" button to pop up the Heat Map Report Settings as shown below.



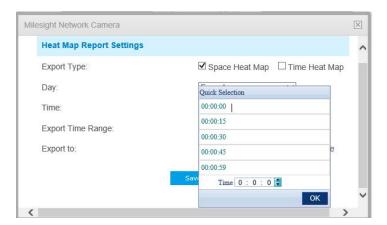
- ① Set Export Type. User can check Space Heat Map or Time Heat Map or both. When either Space Heat Map or Time Heat Map is checked, the gray item becomes editable as shown below;
- 2 Set Day. User can choose Everyday to export daily reports, while choosing others to export reports on a specific day of the week;

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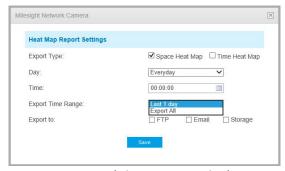




3 Set Time. User can choose the time of day to export the heat map automatically, click the calendar icon to pop up the following Quick Selection;



4 Set Export Time Range.



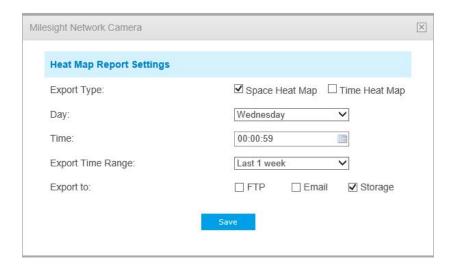
Day (Choose Everyday)



Day (Choose Week)

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





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

4.7 System

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



Table 4-7-1 Description of the parameters

|--|

Device Name	The device name can be customized. It will be seen in file names of video files.
Product Model	The product model of the camera
Hardware Version	The hardware version of the camera
Software Version	The software version of the camera can be upgraded
MAC Address	Media Access Control address
Device Information	The device information, including information about alarm I/O and clipper chip
Alarm Input	The number of Alarm Input interface
Alarm Output	The number of Alarm Output interface
Uptime	The elapsed time since the last restarted of the device

4.8 Maintenance

4.8.1 System Maintenance

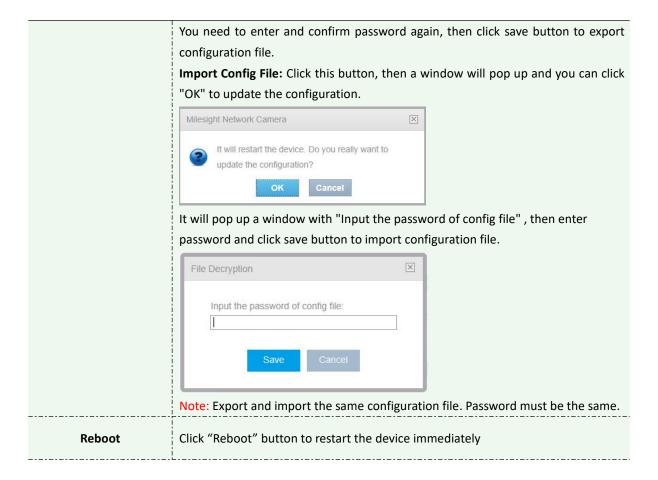


Table 4-8-1 Description of the buttons



Function Introduction Parameters 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. Milesight Network Camera X Newer version 43.7.0.77-r3 detected, upgrade? **System Upgrade** It will prompt "The current version is the latest version" if your camera is already the latest version. Milesight Network Camera The current version is the latest version. OK Note: Do not disconnect the power of the device during the update. The device will be restarted to complete the upgrading. Reset settings: 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 Information: Click this button to export logs and system information of the device operation status. Note: The file format is ".txt". Maintenance **Export Config File:** Click this button and a window will pop up as shown below: X File Encryption Configuration Input the encryption password: Confirm:

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4.8.2 Auto Reboot

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



Chapter V Services

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

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

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