



Milesight AI Box User Manual

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Preface

The purpose of this section is to ensure that the user can use the product correctly through this manual to avoid danger or property damage during operation. Before using this product, please read the product manual carefully and keep it for future reference.

Overview

This manual is applicable to Milesight-BX108-A series intelligent analysis box products. It describes all the functions of Milesight-BX108-A, and guides you to complete the startup configuration and operation of various functions of Milesight-BX108-A intelligent analysis box.

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Chapter 1 Introduction

1.1 Overview

Equipped with numerous algorithms for deep learning and analysis, the AI Box is a cost-effective AI computing product, which is able to recognize detected objects precisely and immediately. Therefore, the AI Box is a solution platform for the creation of deep learning capable of realizing AI applications, such as Face Recognition, Human-Vehicle Control and Perimeter Alert, etc.



Features

Built-in more than 30 AI algorithms: built-in Face-human Recognition, Structure Analysis, Perimeter_alarm and other more than 30 kinds of algorithms, call on demand, flexible response to various scenarios.

Built-in Milesight AI algorithm engine: computing power up to 32T, 8-channel video stream analysis, 300,000 faces super large base library.

Lightweight deployment: Lightweight body, supports desktop placement and wall-mounted installation, supports standardized protocols such as RTSP, and can make full use of the original camera to quickly complete intelligent upgrades.

Application Scenarios

It provides the ability of Face-human Recognition and full-target(Face/Human Body/Motor Vehicle/Non-

motor Vehicle) Structure Analysis, and with the upper-layer platform software, it can realize the closed-loop of face capture recognition and video structured scene. It is applied to places that require face recognition, such as the entrances and exits of smart communities/office buildings, POI surveillance and alarms, people and vehicles surveillance, etc.

Chapter 2 Basic Configuration

The configuration process is mainly used for the basic configuration process of the BX108-A intelligent video analysis system. Please refer to the following steps for configuration.

The network environment is built according to the minimum system, with all devices in the same network segment and using the default IP of the intelligent analysis box.

WAN IP: 192.168.1.100

LAN IP: 192.168.2.100

Step 1 Open the browser and connect the device. It is recommended to use the Chrome 7.1 browser and enter the login address. Example: HTTPS://192.168.1.100.

Note:

If the device is connected to LAN port, the login address is HTTPS://192.168.2.100; if the device is connected to WAN port, the login address is HTTPS://192.168.1.100. After activating the device, login and enter the intelligent video analysis system.

Step 2 System Setting

Step 3 Face Management > Face Group Configuration

Step 4 Face Management > Face Enrollment Configuration

Step 5 Video Setting

Step 6 After the setting is completed, you can view the real-time video, snapshot and recognition results in the intelligent video analysis system

Chapter 3 Web Platform Instructions

3.1 Device activation and login

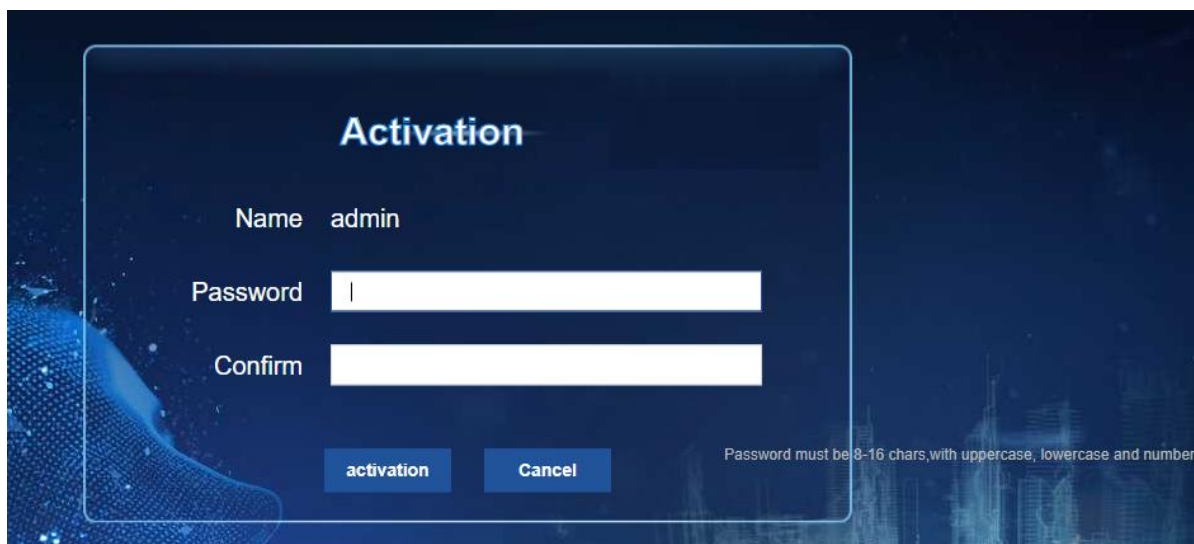
In order to strengthen the security of the system and data, some devices no longer provide a fixed initial password and complete the device initialization needs through an activation mechanism. After adding the activation mechanism, please set a password to activate the device when used for the first time before it can be used commonly.

Note:

This function requires device support and is not activated online.

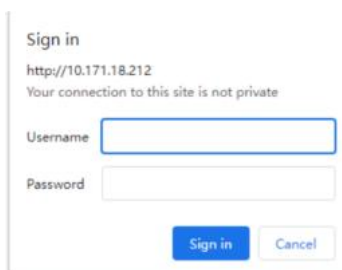
Operations

Step 1 Open the browser, enter "HTTPS:// + IP address" in the address bar, and click [Enter], the system displays the "Device Activation" page. When logging in for the first time, the device must be activated before logging in to the web.



Step 2 Set a new password and confirm the password (factory default account admin).

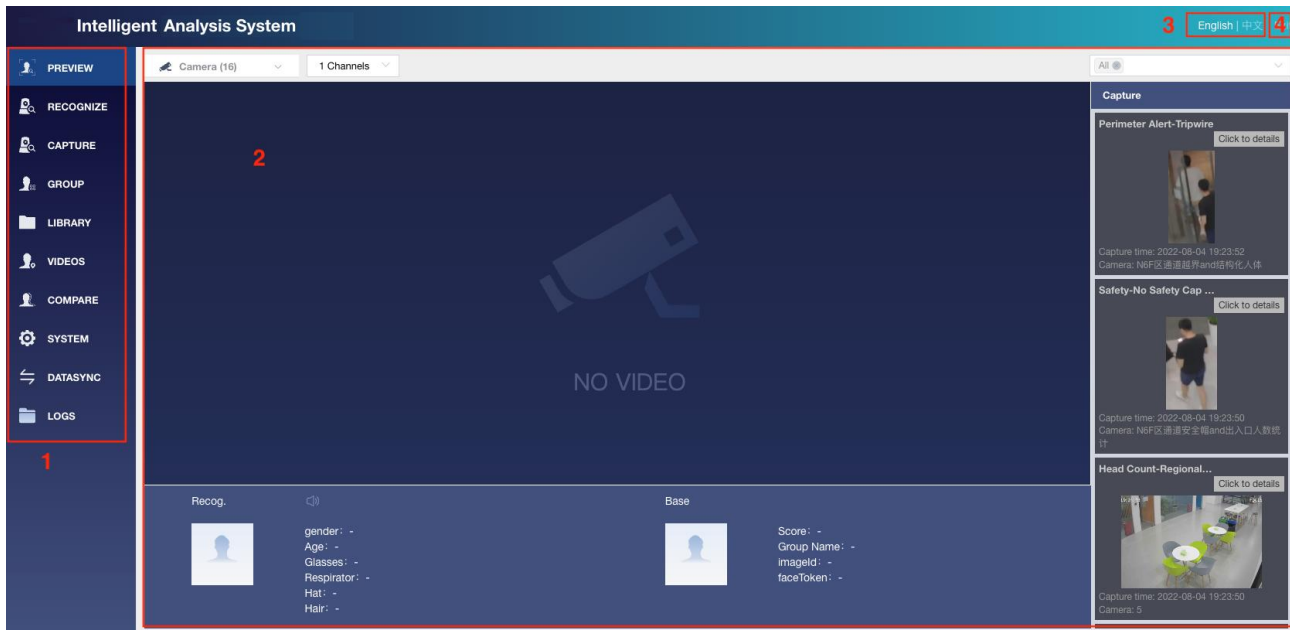
Step 3 Click "OK", the device is activated, the system pops up prompting "Login" if the device is activated.



Step 4 Enter the user name and password, then click "Login", and the system will popup the " Preview" page. For details, please refer to Video Structure.

Note:

If you need to change the login password, please refer to the chapter "System Settings > System Parameters" to access the relevant content of authentication.



BX108-A UI description

ID	Description
1	<p>Menu Bar. The system supports the following functions. There are some basic operations during preview, including channel selection, ROI configuration, etc.</p> <p>Recognition: Users can query the historical identification records, including the identification records of the registered personnel and non-registered personnel.</p> <p>Captures: Users can query historical capture records.</p> <p>Face Group: The aim of creating face groups is to accessibly manage a large number of people by dividing people into different groups. For example, a company's employees can be divided into different departmental groupings.</p> <p>Face Library: It is used for face enrollment. Users can perform single face enrollment or batch enrollment operations, support initialization of face database, and view failure list.</p> <p>Surveillance Settings: Users can setup video streaming cameras and capture cameras, configure relay specifications and configure access permissions.</p> <p>Application: The system supports 1:1 face comparison, 1:N search or analysis of a face image.</p> <p>System Setting: System parameter configuration, hardware settings and file management, including audio file management and algorithm package file management.</p> <p>Data Integration: The system supports setting the FTP push image setting and active reporting of setting information.</p>

	Log: It is used to record the operation log of the system. It can be used to record the information of hardware, software and system problems, improve the log function, and provide query and retrieval of abnormal, configuration, system and other logs.
2	Function display area, switch with the menu on the left.
3	Language switching area, can switch the system language, support Chinese and English switching.
4	Exit. Click "Exit System".

3.2 Preview

The preview can remotely view the real-time monitoring screen corresponding to each channel, which is convenient for users to understand the on-site information in time. After adding the device to the system, you can preview the real-time picture of the monitoring point to know the situation of the monitoring area in time.

Preconditions

The device has been under surveillance, please refer to the video settings for details.

The system has enrolled the face, please refer to the face group for details.

Preview Screen

Image 1 Preview Screen

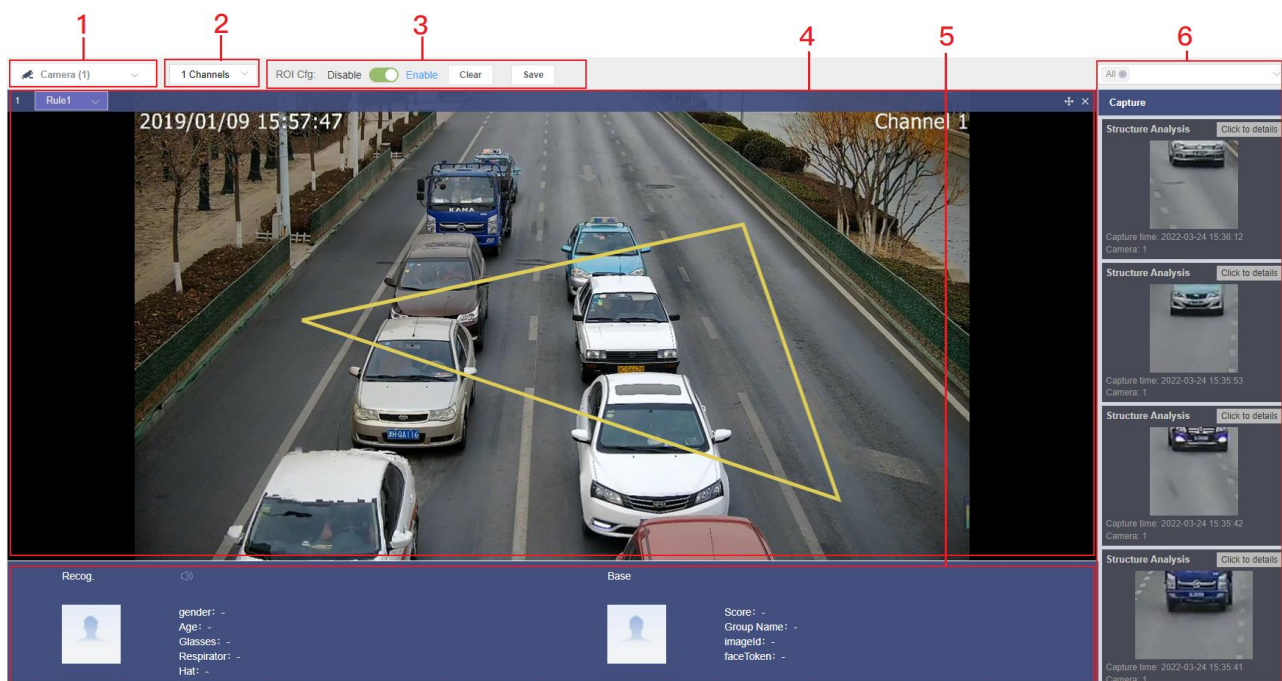

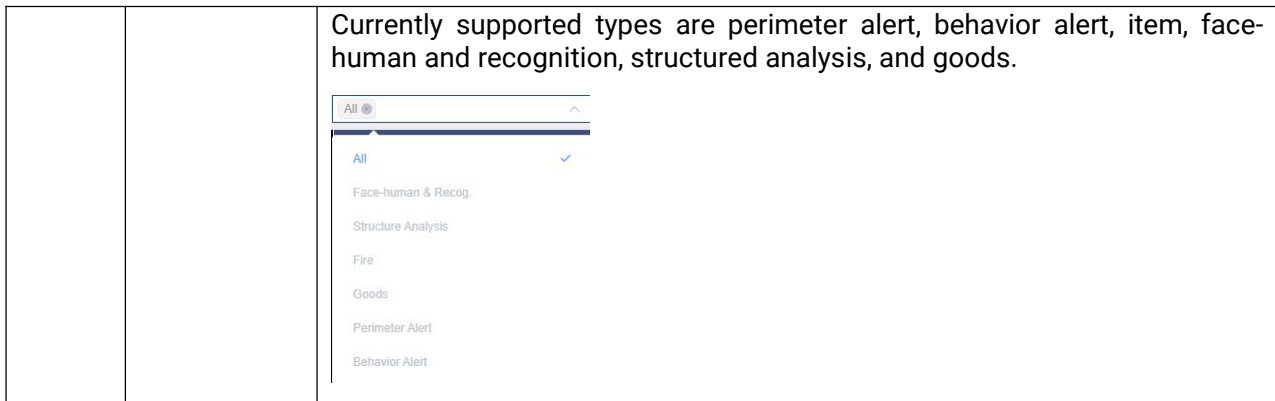


Table 1 Preview Screen Description

ID	Area	Description
1	Video Channel	 <p>Indicates the configured channel. Users can select the channel to preview the real-time monitoring screen and view the total number of currently connected channels, including common video and capture channels.</p> <p>For Example:</p> <p>Video channel (4): Indicates that the total number of currently connected channels is 4, and the specific channel can be viewed through the drop-down menu.</p>
2	Video Screen Split Mode	Used to set the split mode of the screen. The system supports the display of 1, 4, and 9 video surveillance screens.
3	ROI	<p>It is used to draw lines. When the video channel is used for the functions of "Face -Human and Recognition." and "Structure Analysis", you can monitor key areas by drawing lines.</p> <p>Enable: After clicking "Enable", you can draw a line to monitor the key area, click "Draw", and click "Save" after the drawing is completed.</p> <p>Disable: Disable means that the ROI function is not enabled. Disable by default.</p> <p>Drawing: After the ROI function is enabled, click "Draw" to draw the key area.</p> <p>Save: After the ROI function is enabled and the drawing is completed, click "Save" to save the drawing area.</p>
4	Video Screen	<p>The real-time monitoring content is displayed on the video screen.</p> <p>The video screen can display the channel name, surveillance rules, full-screen or close the video preview.</p> <p>To exit "full screen", you can double-click the video window or press the Esc key or right-click to select "exit full screen".</p>
5	Recognition Result	<p>Recognition result display area. Display identification information and base library information.</p> <p>Compare the captured face with the face in the base library, and get a person with the highest similarity. If the similarity exceeds the threshold, it can be considered that the person in the video and the person in the base library are the same people.</p>
6	Surveillance Type	Displays the channel surveillance type and supports single selection and multiple selections.



3.3 Recognition

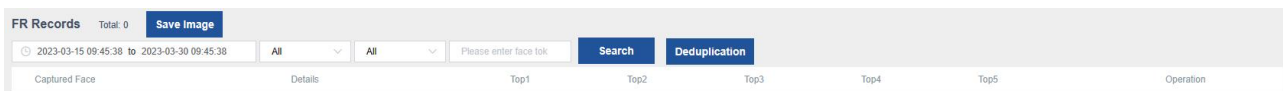
The system provides query for video stream recognition data whose channel type is set to "Face-Human & Recognition" and "Structure Analysis". Due to the limitation of the internal storage size of the device, the data can only be stored for a period of time (by uploading the data to the remote server and transmitting it to the user storage server).

Preconditions

The device has been under surveillance. For details, please refer to "Video > Camera".

Operations

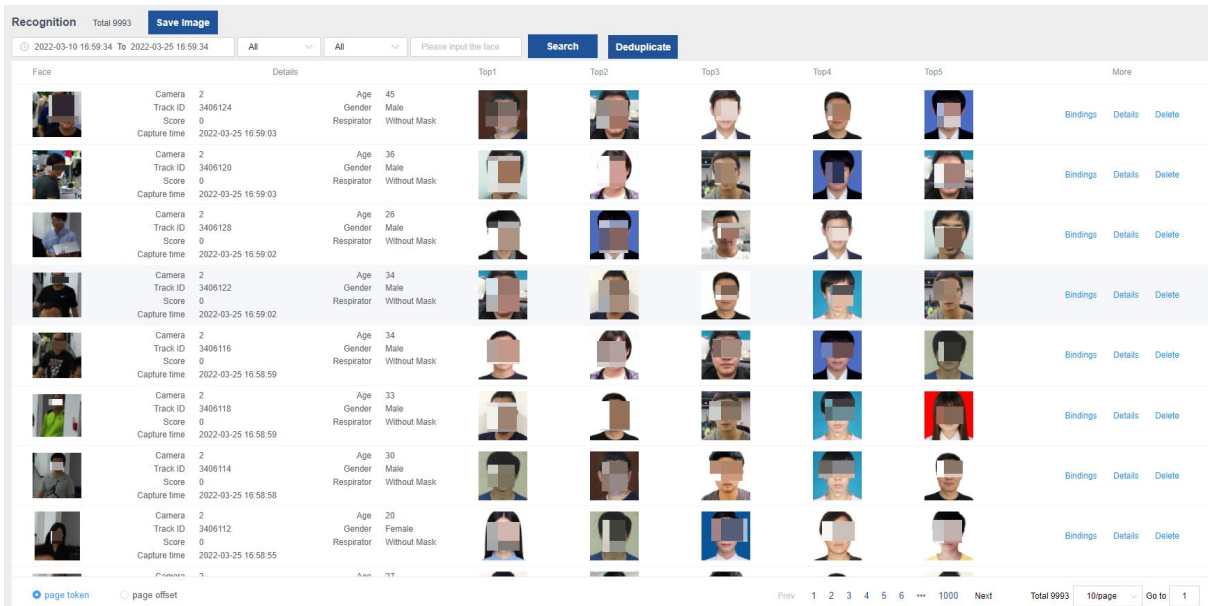
Step 1 Click "Recognize" on the left menu bar, the system displays the recognition query screen. You can select filter conditions to query the recognition results.



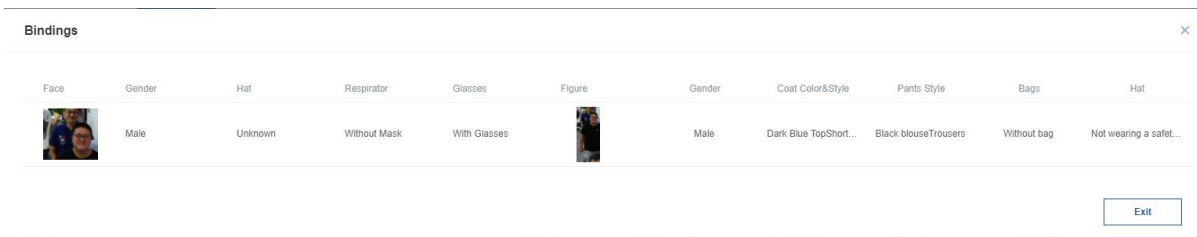
Note:

The Recognize module provides detailed information of the captured face, including age, gender, whether to wear a mask, etc.

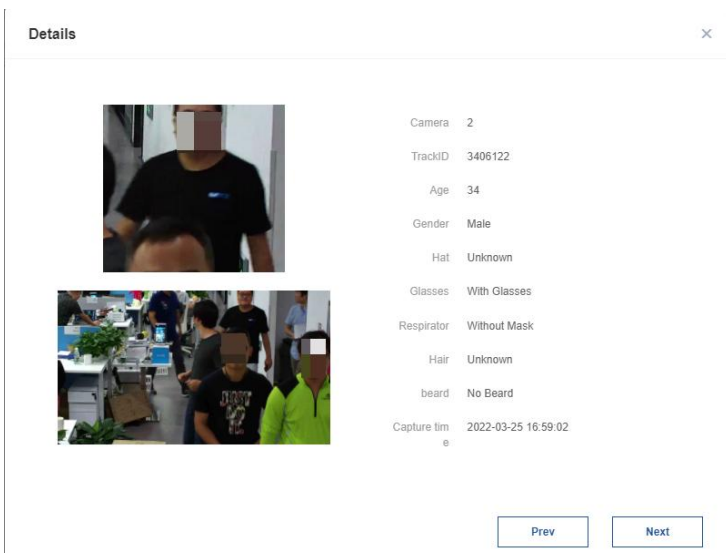
The system supports displaying 1-5 faces in the face database with the highest similarity. Supports "page" and "offset" two browsing modes.



Step 2 The system supports querying the face-body binding relationship. Click "Bind Query" to query related information, including face attribute analysis and humanoid snapshots.



Step 3 Optional Action – Check face details. Click "Details" to view the snapshot details, such as "Capture Face", "Location Name", "track ID", "Capture Time", "Person Properties".



Step 4 Optional - Delete. Clicking "Delete" will delete the captured face image, which cannot be recovered after deletion.

Step 5 Optional action - Save the picture. If you need to save the face image, click "Save Image" in the upper right corner, and all the images in "Capture Face" will be downloaded.

Step 6 Optional - Deduplication. The system supports deduplication of identification records. Click "Deduplicate", and the identification results will remove the duplicate snapshot records identified as the same person, only the identification records of the most recent date will be retained, and the identification result list will display the frequency of identification records.

3.4 Capture

Capture provides historical capture information for a certain period of time, including "Face", "Channel No.", "track ID", "Capture Time", "Age", "Gender", "Hat", etc. The capture information can only be stored for a period of time, and the remote server upload interface is provided to transmit it to the remote user server. The system supports query of face & structured snapshot results and alert capture results. The capture module provides detailed information of the captured face, and supports "browse by page".

Preconditions

The device has been under surveillance, please refer to the video settings for details.

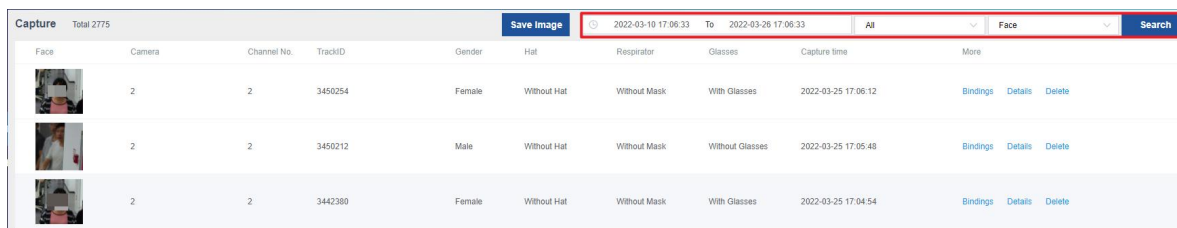
3.4.1 Structure Capture

The face and structured capture module displays the snapshot results in the face and structured capture mode.

Operations

Step 1 Choose Capture > Structure Capture, and the system displays the Snapshot Query Page.

Step 2 If you need to retrieve records, set filter conditions, such as time, channel, capture type (capture type supports face, figure, motor vehicle, non-motor vehicle and license plate), then click "Search", the query result will be in the capture list displayed in.



Face	Camera	Channel No.	TrackID	Gender	Hat	Respirator	Glasses	Capture time	More
	2	2	3450254	Female	Without Hat	Without Mask	With Glasses	2022-03-25 17:06:12	Bindings Details Delete
	2	2	3450212	Male	Without Hat	Without Mask	Without Glasses	2022-03-25 17:05:48	Bindings Details Delete
	2	2	3442380	Female	Without Hat	Without Mask	With Glasses	2022-03-25 17:04:54	Bindings Details Delete

Step 3 Click on the face image to view a larger image of the face.



Face	Camera	Channel No.	TrackID	Gender	Hat	Respirator	Glasses	Capture time	More
	2	2	3450254	Female	Without Hat	Without Mask	With Glasses	2022-03-25 17:06:12	Bindings Details Delete

Step 4 If you need to save the face photo, click "Save Image".

Step 5 The system supports inquiring about the binding relationship between the face and the non-brand. Click "Binding" to inquire about the relevant information.

Note:

The system supports viewing the relationship between face-human body, human body-non-motor vehicle, and vehicle-license plate.

Step 6 Click "Details" to view the detailed information of the base library of the capture, such as: "Face", "track ID", "Capture Time", "Person Attributes".

Step 7 Clicking "Delete" will delete the captured face image, and it cannot be recovered after deletion.

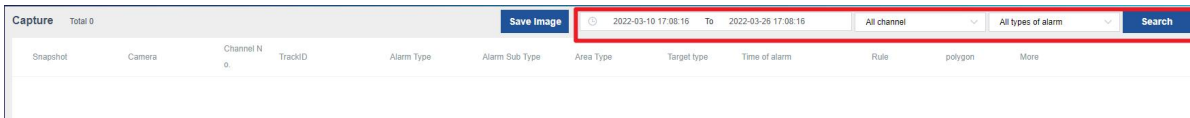
3.4.2 Alert Capture

The alert capture module displays the capture results in alert mode. Supported alert types are:
Standard Algorithm Package Type: Perimeter, Behavior, Goods, Headcount, Diagnosis.

Operations

Step 1 Choose Capture > Alert Capture, and the system displays the Alert Capture page.

Step 2 If you need to retrieve records, set filter conditions, such as time, select channel and alarm type, and click "Search", the query results will be displayed in the snapshot list.



Step 3 Click on the snapshot to view a larger capture.



Step 4 If you need to save the snapshot, click "Save Image".

Step 5 Optional action - delete. Click "Delete", the snapshot will be deleted and cannot be recovered after deletion.


3.4.3 People Count

After the camera is used for people counting and the rules are enabled, you can view real-time statistics, statistical reports, and people statistics at various stages.

Operations

Step 1 Choose "Capture > People Count" to enter the people counting record page.

Step 2 View real-time statistics. The system supports displaying real-time statistics, as shown in the following figure.

- Support to display the real-time data of the number of people entering and leaving each channel, you click  to refresh manually.
- Support data clearing, click "Clear" to start re-statistical data.

Real-time Statistics

Refresh

Channel	Regional People Count					Enter-exit People Count		Operation
	Area1	Area2	Area3	Area4	总计	In	Out	
No Data								

Step 3 View the statistics report, set the filter conditions, click **Search**.

- Supports viewing reports by channel and data type (regional people count, entrance and exit people count).
- Support viewing daily reports, monthly reports, and annual reports.
- Support line graph to display the number of people entering and leaving statistics and the number of regional statistics.

Statistics Report

Step 4 View statistical data. After setting the filter criteria, click **Search**.

- Support query statistical data by time period, channel, and data type (regional people count, entrance and exit people count).

Statistics

to

Capture	Channel Name	Channel No.	TrackID	Alarm Type	Alarm Subtype	ROI Type	Target Type	Alarm Time	Number of Person in Area	Rule	Area
---------	--------------	-------------	---------	------------	---------------	----------	-------------	------------	--------------------------	------	------

3.5 Face Group

Set face group to establish a binding relationship between face and face database, which is convenient for subsequent unified management of faces. Support adding face groups one by one by customizing the group name.

Operations

Step 1 Select "Group" to enter the operation page.

Group	Group Size	More
EBG1SSUE-953	2	Details Delete
C2	27	Details Delete



Step 2 Click New Group in the upper right corner.

Step 3 Enter the group name and click "✓".

The newly added group will be displayed in the group list.

Step 4 Optional Action: After adding a group, perform the following actions if necessary.

View group details: Click "Details" to view group details.

Face Image	Image ID	Face Token	Description	Operation
	stqN-mjQh733TYKSBIRag==	N9d2qK2-4DlwTImCRPKQ==	99.jpg	Face image Remove Binding
	NT_UW68M0m3xcFzE1hUw==	Z8qgTV7HN9v8YQHTKzq==	98.jpg	Face image Remove Binding

Depending on your needs, you can do the following:

1. Click "Face" to view the large image and detailed information of the face.
2. Click "Unbind" to remove the face information from this group.

Note:

To view the details of the organization, you need to add people before you can perform this operation, otherwise it will be invalid. For details, please refer to the face database.

A maximum of 64 face groups are supported.

Delete the group: Select an added group and click "Delete" to delete the group.

3.6 Face Library

Supports operations such as single face enrollment, batch face enrollment, initialization of face database, and search failure list.

3.6.1 Import

Operations

Step 1 Enter "Library" Page.

Step 2 Click "Import" in the upper right corner.

Step 3 If a face group has been created, check the group under "Group List".

Step 4 Add a portrait. Drag or click to upload the portrait according to the UI tips.

Step 5 Add relevant descriptions according to user needs.

Step 6 Click "Import"

The newly added face information will be displayed in the face library list.

Face photo standard:

Format: JPG, JPEG, PNG and BMP

Size ≤ 4MB

Max Res. ≤ 4096*4096

Min Res. ≥ 100*100

There can only be one face in each picture. If there are multiple faces, take the maximum pixel face photo.

3.6.2 Batch Import

Operations

Step 7 Enter "Library" Page.

Step 8 Click "Batch Import" in the upper right corner.

Step 9 Select the folder of prepared face photos.

Step 10 If a face group has been created, check the group name under "Group List".

Step 11 Click "Import".

The newly added face image will be displayed in the face library list after the batch import is completed.

Face photo standard:

Format: JPG, JPEG, PNG and BMP

Size ≤ 4MB

Max Res. ≤ 4096*4096

Min Res. ≥ 100*100

There can only be one face in each picture. If there are multiple faces, take the maximum pixel face photo.

3.6.3 Other Operations

Init Library

Click "Init Library" in the upper right corner of the face library interface, all original photos and face photos in the library will be deleted, and all associations will be deleted, and historical records cannot be viewed.

Failure List

Click the "Failure List" in the upper right corner of the Library page, and the system displays the "Failure List" page. Users can view related information.

Face

Click "Face", and the large image and detailed information of the face will be displayed.

Bind

Click "Bind" to re-select the face group.

Delete Origin

Click "Delete Origin", the face picture will be deleted and cannot be recovered.

3.7 Surveillance Settings

The video module mainly includes four parts: camera setting, relay configuration and privilege (access permission) setting.

Note:

One device can create up to 8 image stream channels.

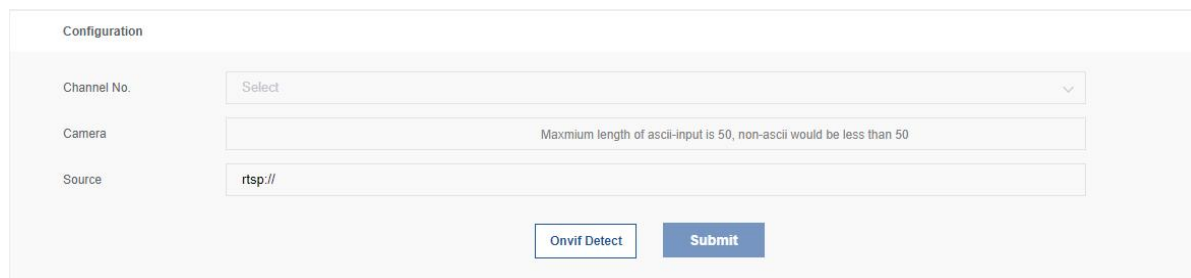
3.7.1 Camera

The camera module is used to add and maintain surveillance points.

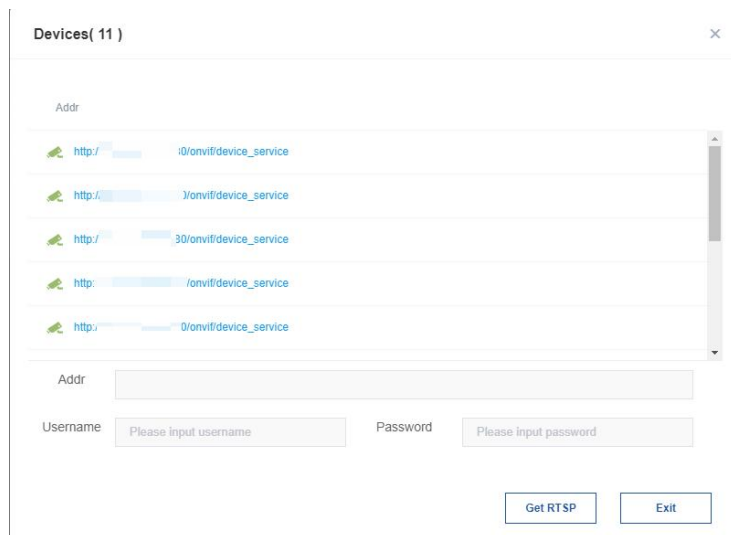
Operations:

Step 1 Go to the "Videos > Camera" page.

Step 2 Click "New" in the upper right corner, and the system displays the new camera page.



Step 3 Click "ONVIF Detect" to search for available RTSP video streams in the same local area network. If there are available video streams, the system displays the "Device List" interface.



Step 4 Select the video stream, enter the user name and password, and click "Get RTSP". After the video stream is successfully obtained, the interface is as shown below.

Description: The username and password are the username and password for logging in to the web of the video streaming camera.

Configuration

Channel No.

Camera Maximum length of ascii-input is 50, non-ascii would be less than 50

Source

Step 5 According to the prompt, select the channel number and set the surveillance name.

Parameter	Description
Channel No.	The number of connected devices. If 8 devices can be connected, the channel number shall be 1 to 8. Taking a 8-channel device as an example, different channels can be configured with face & structured functions or alert functions.
Camera	User defined channel Name
Channel Type	RTSP
RTSP	RTSP video stream URL
ONVIF Detect	Click "ONVIF Detect" to search for RTSP video streams available in the same local area network through ONVIF.

Step 6 Once setup is complete, click Submit. The system pops up the configuration rules page, as shown in the following figure. Start to configure the rules. For details of the rules configuration, please refer to Setting the Rules.

Rule1 Enable

Rule2 Disable

Face-human & Recon

Rule 1

Channel Type

Detect Face Figure Vehicle non-Vehicle plate

Structure Analysis

Push Mode

Max. Push(1~10)

Capture Mode

Step 7 Optional. To configure audio linkage, please refer to Audio linkage configuration for the operation method. Only perimeter alert and behavior alert algorithm support linked audio alarms.

Step 8 After the configuration is complete, click "Submit". Return to the main page, the newly added rule will be displayed in the list.

No.	Camera	Channel Type	Source	Connect state	Surveillance Enable	More
1	1	Structure Analysis(Enable) / message.station.channelType14(Dis...	rtsp://10.171.19.189:554/V4jldongche.264	Connected	<input checked="" type="checkbox"/>	Edit Delete
2	2	Face-human & Recon.(Enable) / message.station.channelType14...	rtsp://10.171.19.109:554/C2.264	Connected	<input checked="" type="checkbox"/>	Edit Delete

Step 9 Optional operation: After creating a new surveillance, you can view/edit or delete the surveillance if necessary.

Edit: Select the added surveillance and click "View/Edit".

Delete: Select the added surveillance, and click "Delete".

Surveillance Enable: If the user needs to activate the current surveillance, set the surveillance enable to "On".

Note:

Currently, only RTSP streams are supported. If there is no special requirement, it is recommended to use the default configuration.

3.7.1.1 Rule Configuration

The algorithm types supported by the system are standard algorithm package.

Table Algorithm Package

	Algorithm Pockets Management						
Algorithm Pocket	Face-Human	Diagnosis	Structure	Perimeter	Behavior	Goods	Headcount
BX108-A	8*1	8*1	8*1	8*4 sub-rules	8*4 sub-rules	8*2 sub-rules	8*2 sub-rules
Sub-rules	-	-	-	Park, Exit, Wander, Over_Wall, Intrusion, Tripwire, Climb	Fall, Smoke, Call, Watch Phone, Run, Sleep, On/Off Duty, Gather, Fight, Person_Over, Person_Less, Hold_Weapon	Sundry_Stack, Goods_Guard, Goods_Forget	Head_Count, Cross_Line

Note:

Alerting algorithms and Goods algorithms support adding audio files to link audio alarms. For details, please refer to Audio Linkage Configuration.

Table Standard Algorithm Package – Surveillance Rules

Rule 1	Rule 2	Remark

Face-Human & Recon.	Able to mix with: Face-Human & Recognition. Perimeter Alert Behavior Alert	Max 8 channel (That is, when only the Face-Human & Recon algorithm is set, the maximum support for 8 video streams)
Structure Analysis	Able to mix with: Structure Analysis Perimeter Alert Behavior Alert	Max 8 channel (That is, when only the structure analysis algorithm is set, the maximum support for 8 video streams)
Perimeter Alert 【Support 2 sub rules】	Able to mix with: Face-Human & Recognition Structure Analysis Perimeter Alert Behavior Alert	Max 16 channel (That is, when only the perimeter alert algorithm is set, the maximum support for 8 video streams) 【A single channel supports up to 2 sub rules】
Behavior Alert 【Support 2 sub rules】	Able to mix with: Face-Human & Recognition Structure Analysis Perimeter Alert Behavior Alert	Max 8 channel (That is, when only the behavior alert algorithm is set, the maximum support for 8 video streams) 【A single channel supports up to 2 sub rules】

3.7.1.1.1 Face-Human & Recognition

Face-human & Recon

Rule 1

Channel Type: Face-human & Recon.

Detect: Face Figure Structure Analysis

Push Mode: Interval

Report Optimal stranger: Disable Enable

Recognition Retry(0-5000): 5

Retry Interval(0-60s): 5

Stranger Recog. Retry(0-5): 2

Interval(500-10000ms): 500

Capture Mode: High Quality

Roll (0-180): 45 Yaw (0-100): 35 Pitch (0-100): 45

Blurriness: 60 Minimum face (5-380): 50 Figure Min. (20-380): 80

Liveness Enabled: Enable Liveness: 50

Group:

Submit

Parameter Description:

Name	Description
Channel Type	Face-Human & Recognition
Detect	Supports multiple selections, the detection target can choose to detect the face, human figure or structure analysis. The system supports the binding of the recognized face and the human figure.
Push Mode	Best: Choose the best image to push Fastest: <ul style="list-style-type: none"> ● Push best quality of stranger ● Recognition Retry (0-5000) ● Retry Interval (0-60)

	<ul style="list-style-type: none"> ● Stranger Recognition Retry (0-5) ● Interval (500-10000)
Capture Mode	<p>All: Capture all detect target.</p> <p>High Quality: Capture detect target of high quality.</p> <p>Custom Mode: Support custom face/figure comprehensive quality score, the higher the score the higher quality. value: 0-100</p>
Roll (0-180)	Customize
Yaw (0-100)	Customize
Pitch (0-100)	Customize
Blurness	Customize
Minimum Face (5-380)	Customize
Figure Min. (20-380)	Customize
Liveness Enable	After the switch is turned on, the liveness threshold can be customized.
Group	Select the face group.

Note:

When previewing the video, you can set the ROI in the "Smart Preview" module to customize the control area.

3.7.1.1.2 Structure Analysis

Face-human & Recon Rule 1

Channel Type: Structure Analysis

Detect: Face Body Vehicle non-Vehicle

Structure Analysis

Push Mode: Fastest

Max. Push(1~10): 1

Capture Mode: All

Submit

Parameter Description:

Parameter	Description
Channel Type	Structure Analysis
Detect	Supports multiple selection, the detection target can choose to detect the face, human body, motor vehicle, non-motor vehicle or parse the target attribute. The system supports the association and binding of the recognized face, human figure and vehicle.
Push Mode	The system supports Best, Fastest, Interval push strategy.
Interval (500-10000ms)	Push Interval
Max. Push (1~10)	Customize max push
Capture Mode	System supports All, High Quality, Customize.

Note:

When previewing the live video, you can set the ROI in the "Smart Preview" module to customize the control area.

3.7.1.1.3 Perimeter Alert

Perimeter Alert Rules Time Span(00:00:00-00:00:00 for a whole day)

Setting1

Channel Type: Perimeter Alert

Sub Rule1-Park x Sub Rule2-Park x

Alarm Type: Park Draw/Display ignored area Tip: Sub rules shared ignored area, ignored areas no more than 2 and cannot be overlapped

Area Type: polygon


Target: Car Cycle

Object Size:

Arming Schedule: To

Delayed Alarm Time(s): m s
Range: 0m0s - 29m59s

Alarm Interval(s): h m s
Range: 0h0m0s - 23h59m59s

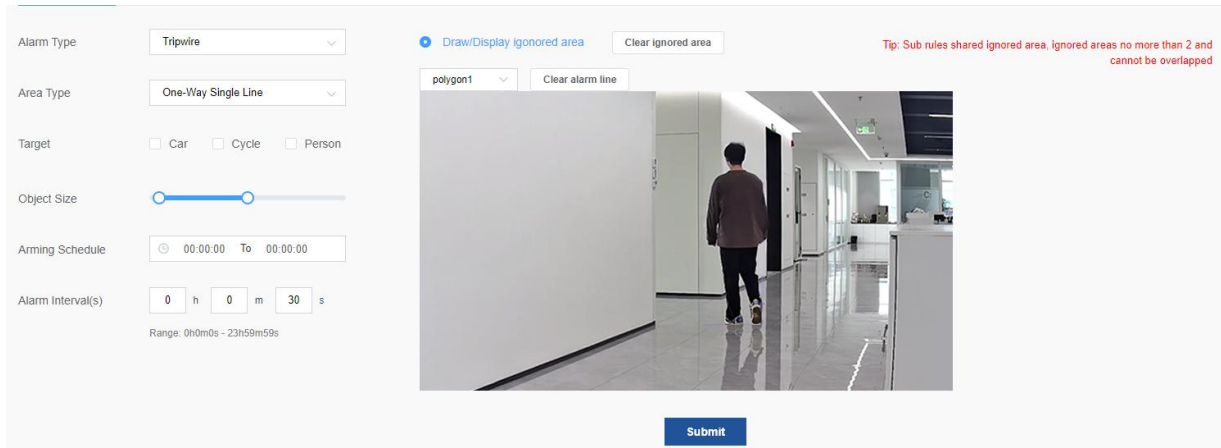


Parameter Description:

Parameter	Description
Channel Type	Perimeter Alert
Alarm Type	<p>Rule Setting: Two sub-rules can be set for one rule, and 4 algorithms can be parallelized at the same time, such as supporting two algorithms of parallel vehicle parking prohibition and vehicle leaving. Click ' ⊕ ' to add sub-rules.—</p> <p>Alarm Types Supported:</p> <ul style="list-style-type: none"> ● Tripwire ● Intrusion ● Park ● Exit ● Wander ● Over_Wall ● Climb

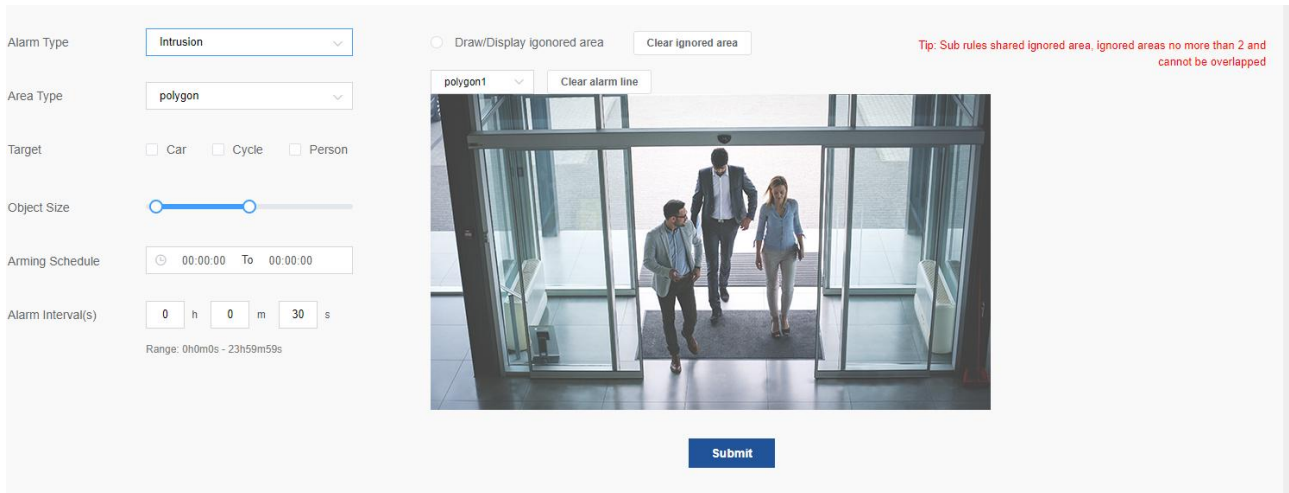
Different alarm types have different parameter items. The detailed configuration is as follows:

- Tripwire



Parameter	Description
Alarm Type	Tripwire
Area Type	<ul style="list-style-type: none"> ● One-Way Single Lines ● Two-Way Single Lines
Detect Target	Multiple choices, supported detection targets are: motor vehicle, non-motor vehicle, human body
Target Size	0-100%, default 50%
Time Schedule	Time period for detection
Intervals	Range: 0 h 0 m 0 s – 23 h 59 h 59 h
Drawing Rule	<ul style="list-style-type: none"> ● Setting Lines <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ Detection direction: The direction of the arrow indicates the direction of the alarm. People walking in the direction of the arrow will generate an alarm, and vice versa. Support up to 8 anchor points and 7 poly lines. ● Masked Area <ul style="list-style-type: none"> ■ Support to draw two masked area.

- Intrusion



Parameter	Description
Alarm Type	Intrusion
Area Type	Polygon
Detect Target	Multiple choices, supported detection targets are: motor vehicles, non-motor vehicles, human body
Target Size	0-100%, default 50%
Time Schedule	Time period for detection
Intervals	Range: 0 h 0 m 0 s – 23 h 59 h 59 h
Drawing Rule	<ul style="list-style-type: none"> ● Set Alarm Area <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alert area is a closed area (polygon with 3-8 sides), and supports setting up 4 intrusion areas. an alarm event will be triggered When a person/vehicle intrusion is detected, and the intrusion time is met. ● Masked Area <ul style="list-style-type: none"> ■ Masked Area is closed area (polygon with 3-8 sides) ■ Support to draw two masked area.

- Park

Alarm Type:

Area Type:

Target: Car Cycle


Object Size:

Arming Schedule: To

Delayed Alarm Time(s): m s
Range: 0m0s - 29m59s

Alarm Interval(s): h m s
Range: 0h0m0s - 23h59m59s

Draw/Display ignored area



Tip: Sub rules shared ignored area, ignored areas no more than 2 and cannot be overlapped

Parameter	Description
Alarm Type	Park
Area Type	Polygon
Detect Target	Multiple choices, supported detection targets are: motor vehicle, non-motor vehicle
Object Size	0-100%, default 50%
Time Schedule	Time period for detection
Delayed Alarm Time	Range: 0 m 0 s – 29 m 59s
Alarm Interval	Range: 0 h 0 m 0 s – 23 h 59 m 59 s
Drawing Rule	<ul style="list-style-type: none"> ● Set Alarm Area <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alarm area is a closed area (polygon with 3-8 sides), and supports setting up 4 intrusion areas. When a vehicle is detected, and the alarm condition is met, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ Masked Area is closed area (polygon with 3-8 sides) ● Support to draw two masked area.

- Exit

Alarm Type:

Area Type:

Target: Car Cycle


Object Size:

Arming Schedule: To

Delayed Alarm Time(s): m s
Range: 0m0s - 29m59s

Alarm Interval(s): h m s
Range: 0h0m0s - 23h59m59s

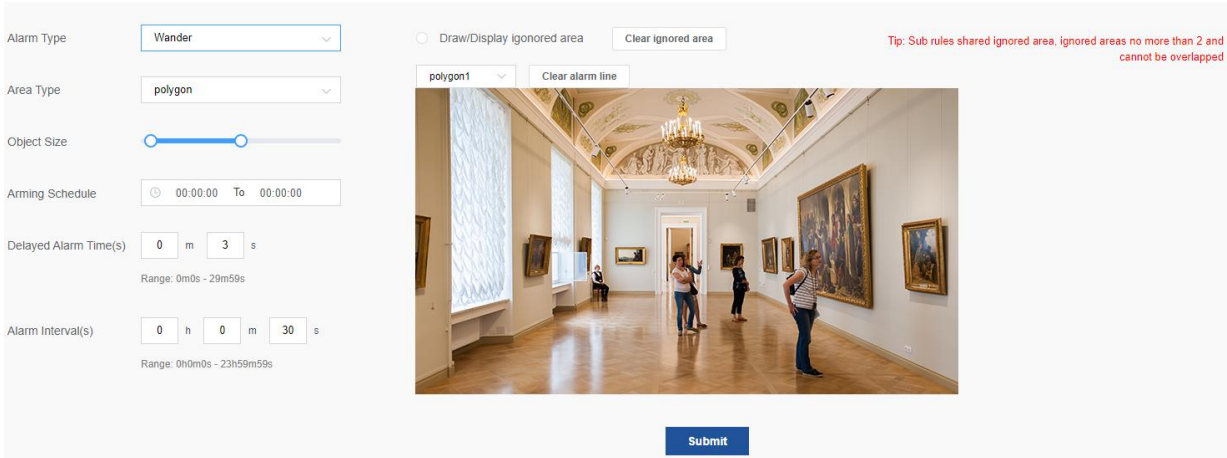
Draw/Display Ignored area



Tip: Sub rules shared ignored area, ignored areas no more than 2 and cannot be overlapped

Parameter	Description
Alarm Type	Exit (Vehicle leaving)
Area Type	Polygon
Detect Target	Multiple choices, supported detection targets are: motor vehicles, non-motor vehicles
Object Size	0-100%, default 50%
Time Schedule	Time period for surveillance
Delayed Alarm Time	Time that trigger alarm after detection
Alarm Interval	range: 0 h 0 m 0 s – 23 h 59 m 59 s
Drawing Rule	<ul style="list-style-type: none"> ● Set Alarm Area <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alarm area is a closed area (polygon with 3-8 sides), and supports setting up 4 areas. When a vehicle leaving is detected, and the alarm condition is met, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ Masked Area is closed area (polygon with 3-8 sides) <p>Support to draw two masked area.</p>

- Wander



Parameter	Description
Alarm Type	Wander
Area Type	Polygon
Object Size	0-100%, default 50%
Time Schedule	Time period for surveillance
Delayed Alarm Time	Range: 0 m 0 s – 29 m 59s
Alarm Intervals	Range: 0 h 0 m 0 s – 23 h 59 m 59s
Drawing Rules	<ul style="list-style-type: none"> ● Set Alert Area <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alert area is a closed area (polygon with 3-8 sides), and supports setting up 4 areas. When a wander is detected, and the alarm condition is met, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ Masked Area is closed area (polygon with 3-8 sides) <p>Support to draw two masked area.</p>

- Climb

Sub Rule1-Climbing Detection

Alarm Type: Climbing Detection

Area Type: One-Way Double Lines

Detection Pre-Warning: Disable Enable

Object Size:


Arming Schedule: 00:00:00 - 00:00:00

Alarm Interval(s): 0 h 10 m 0 s
Range: 0h0m0s - 23h59m59s

Draw/Display ignored area

polygon1 Tip: For drawing rules, please refer to the site survey guidance document

Number of masked areas supported: 2



Parameter	Description
Alarm Type	Climb
Area Type	<ul style="list-style-type: none"> ● One-Way Single Lines ● Two-Way Single Lines
Detect Target	Multiple choices, supported detection targets are: motor vehicle, non-motor vehicle, human body
Target Size	0-100%, default 50%
Time Schedule	Time period for detection
Intervals	Range: 0 h 0 m 0 s – 23 h 59 h 59 h
Drawing Rule	<ul style="list-style-type: none"> ● Setting Lines <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ Detection direction: The direction of the arrow indicates the direction of the alarm. People walking in the direction of the arrow will generate an alarm, and vice versa. Support up to 8 anchor points and 7 poly lines. ● Masked Area <ul style="list-style-type: none"> ■ Support to draw two masked area.

● Over_Wall

Alarm Type: Over Wall Detection

Area Type: One-Way Double Line

Climb-Over Detection: Disable Enable

Pre-Warning: 0 3 s

Object Size: 0 100 %


Arming Schedule: 00:00:00 To 00:00:00

Delayed Alarm Time(s): 0 m 3 s
Range: 0m0s - 29m59s

Alarm Interval(s): 0 h 0 m 30 s
Range: 0h0m0s - 23h59m59s

Draw/Display ignored area Clear ignored area

polygon1 Clear alarm line



Tip: Sub rules shared ignored area, ignored areas no more than 2 and cannot be overlapped

Parameter	Description
Alarm Type	Over_Wall
Area Type	<ul style="list-style-type: none"> ● One way tripwire ● Two way tripwire
Detection Prewarn	The early warning function is used after it is turned on, otherwise it is not used.
Target Size	0-100%, default 50%
Time Schedule	Set as needed.
Delay Alarm	Set as needed.
Alarm Interval	Set as needed. Range: 0 h 0 m 0 s – 23 h 59 m 59s.

Drawing Rule

- Setting the alert area

- Draw a line with the left mouse button, add an anchor point every time you click the left mouse button, and complete the line drawing with the right mouse button.

- ◆ Example 1: Draw two tripwires on both sides of the wall (the default is bidirectional). Draw the first line first, and then draw the second line. Please keep the drawing directions of the two lines the same, for example, from left to right. Or from top to bottom.



- ◆ Example 2: At a suitable position between the upper and lower edges of the wall, draw two tripwire (the default is bidirectional), first draw the first line, and then draw the second line. Please keep the drawing directions of the two lines the same. For example, all from left to right, or from top to bottom.



- ◆ Example 3: Draw two tripwires on the upper edge and the lower edge of the wall respectively (the default is two-way), first draw the first line, and then draw the second line, please keep the drawing directions of the two lines basically the same Left to right, or top to bottom.



- Support setting up a warning area, and when someone is detected to climb over the wall and meets the alarm conditions, an alarm event will be triggered.

● Hold_Weapon

Sub Rule1-Weapons detection

Alarm Type: Weapons detection

Area Type: polygon


Object Size: [Slider]

Arming Schedule: 00:00:00 - 00:00:00

Delayed Alarm Time(s): 0 m 3 s

Alarm Interval(s): 0 h 10 m 0 s

Trigger the alarm when the target person has the following behaviors:
 Recommended Scenario 1: The video frame of a person holding a dangerous equipment is clear, and the dangerous equipment includes a kitchen knife and a stick;
 Not recommended Scenario 1: The equipment held by the



Number of masked areas supported: 2

Tip: For drawing rules, please refer to the site survey guidance document

Submit

Parameter	Description
Alarm type	Hold_Weapon
Area Type	Polygon
Target size	Set as needed. Range: 0-100%
Time schedule	Set as needed
Area ratio	0-100%
Delay alarm(s)	Set as needed
Alarm Interval(s)	Set as needed. Range: 0:00:00 - 23:59:59.
Drawing rules	<ul style="list-style-type: none"> ● Setting the alert area ■ Draw a line with the left mouse button, add an anchor point every time you click the left mouse button, and complete the line drawing with the right mouse button. ■ The alarm area is a closed area (3~8 polygons), and it supports setting 4 warning areas. When it detects that there are objects left in the area and meets the alarm conditions, an alarm event will be triggered. ● Masked Area ■ The masked area is a closed area (3~8 polygons). ■ Support drawing 2 masked areas.

3.7.1.1.4 Behavior Alert Algorithm

Channel Type

Behavior Alert

Sub Rule1-Fall Detection

Alarm Type: Fall Detection

Area Type: polygon

Object Size:

Arming Schedule: 00:00:00 To 00:00:00


Delayed Alarm Time(s): 0 m 3 s
Range: 0m0s - 29m59s

Alarm Interval(s): 0 h 0 m 30 s
Range: 0h0m0s - 23h59m59s

Draw/Display ignored area
Clear ignored area

Tip: Sub rules shared ignored area, ignored areas no more than 2 and cannot be overlapped

polygon3
Clear alarm line



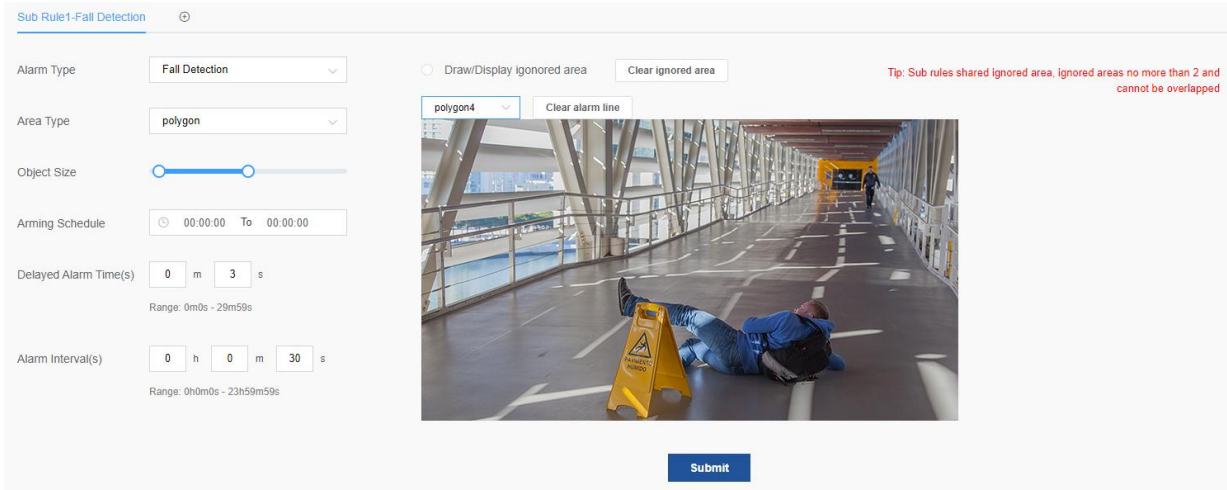
Submit

Parameter Description:

Parameter	Description
Channel Type	Behavioral_Alarm
Alert Type	<p>Four sub-rules can be set for one rule, and two algorithm cards can be parallelized at the same time, such as supporting four algorithms of falling and smoking, watching mobile and calling in parallel. Click '⊕' to add sub-rules.</p> <p>The supported types of alarms are: fall, smoke, call, watch phone, personnel run, sleep, on/off duty, gather, fight, person_over, person_less and hold_weapon.</p>

Different alarm types have different parameter items. The detailed configuration is as follows:

- Fall



Parameter	Description
Alarm Type	Fall
Area Type	Polygon
Object Size	0-100%, default 50%
Arming Schedule	Time period for monitoring
Delay Alarm Time	Range: 0 m 0 s – 29 m 59 s
Alarm Intervals	Range: 0 h 0 m 0 s – 23 h 59 m 59s
Drawing Rules	<ul style="list-style-type: none"> ● Set Alarm Area <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alarm area is a closed area (polygon with 3-8 sides), and supports setting up 4 areas. When a fall is detected, and the alarm condition is met, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ Masked Area is closed area (polygon with 3-8 sides) ■ Support to draw two masked area.

- Smoke

Alarm Type:

Area Type:


Object Size:

Arming Schedule:

Delayed Alarm Time(s): m s
Range: 0m0s - 29m59s

Alarm Interval(s): h m s
Range: 0h0m0s - 23h59m59s

Draw/Display Ignored area



Tip: Sub rules shared ignored area, ignored areas no more than 2 and cannot be overlapped

Parameter	Description
Alarm Type	Smoke
Area Type	Polygon
Object Size	0-100%, default 50%
Arming Schedule	Time period for monitoring
Delay Alarm Time	Range: 0 m 0 s – 29 m 59 s
Alarm Intervals	Range: 0 h 0 m 0 s – 23 h 59 m 59s
Drawing Rules	<ul style="list-style-type: none"> ● Set Alarm Area <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alarm area is a closed area (polygon with 3-8 sides), and supports setting up 4 areas. When a smoking is detected, and the alarm condition is met, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ Masked Area is closed area (polygon with 3-8 sides) ■ Support to draw two masked area.

- Call

Alarm Type:

Area Type:

Object Size:


Arming Schedule: To

Delayed Alarm Time(s): m s
Range: 0m0s - 29m59s

Alarm Interval(s): h m s
Range: 0h0m0s - 23h59m59s

Draw/Display Ignored area

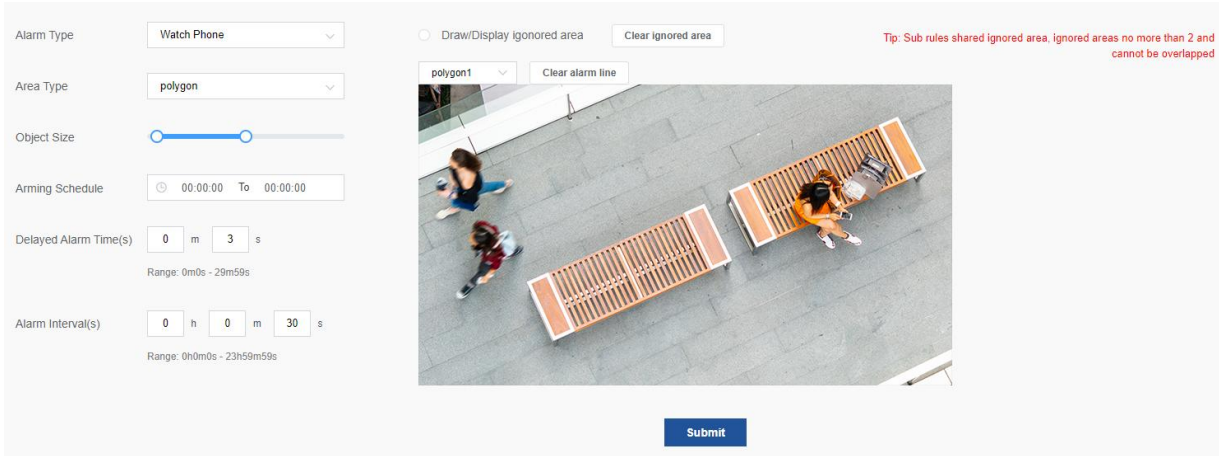
polygon1



Tip: Sub rules shared ignored area, ignored areas no more than 2 and cannot be overlapped

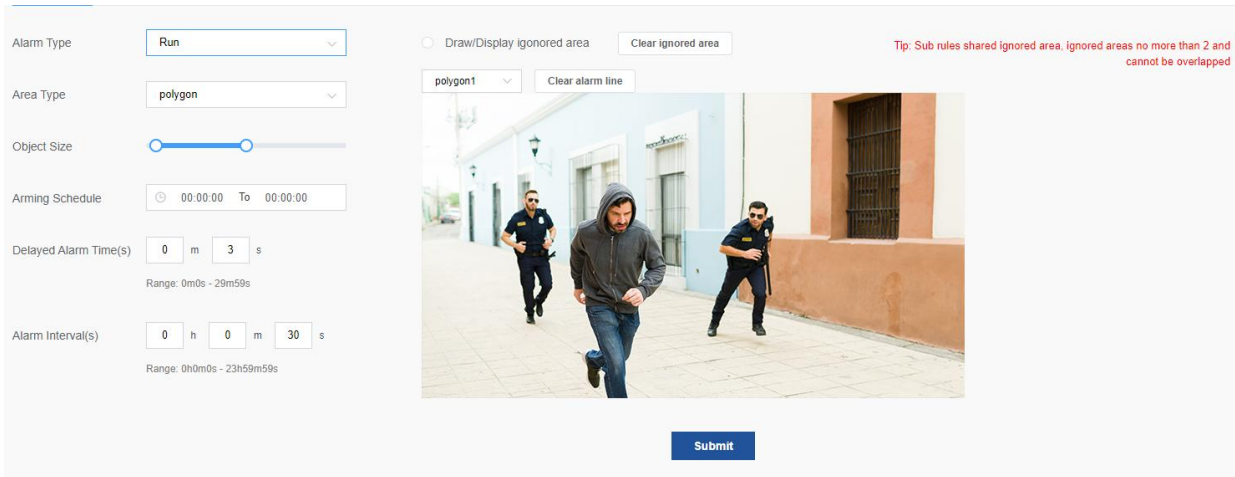
Parameter	Description
Alarm Type	Call
Area Type	Polygon
Object Size	0-100%, default 50%
Arming Schedule	Time period for monitoring
Delay Alarm Time	Range: 0 m 0 s – 29 m 59 s
Alarm Intervals	Range: 0 h 0 m 0 s – 23 h 59 m 59s
Drawing Rules	<ul style="list-style-type: none"> ● Set Alarm Area <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alarm area is a closed area (polygon with 3-8 sides), and supports setting up 4 areas. When a calling is detected, and the alarm condition is met, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ Masked Area is closed area (polygon with 3-8 sides) ■ Support to draw two masked area.

- Watch Phone



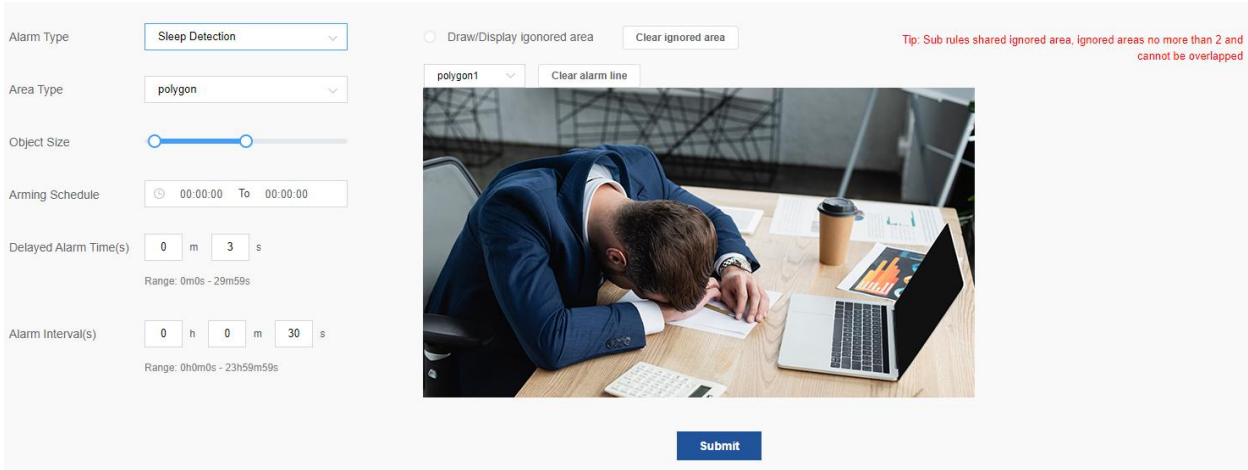
Parameter	Description
Alarm Type	Watch phone
Area Type	Polygon
Object Size	0-100%, default 50%
Arming Schedule	Time period for monitoring
Delay Alarm Time	Range: 0 m 0 s – 29 m 59 s
Alarm Intervals	Range: 0 h 0 m 0 s – 23 h 59 m 59s
Drawing Rules	<ul style="list-style-type: none"> ● Set Alarm Area <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alarm area is a closed area (polygon with 3-8 sides), and supports setting up 4 areas. When a watching mobile phone is detected, and the alarm condition is met, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ Masked Area is closed area (polygon with 3-8 sides) ■ Support to draw two masked area.

- Run



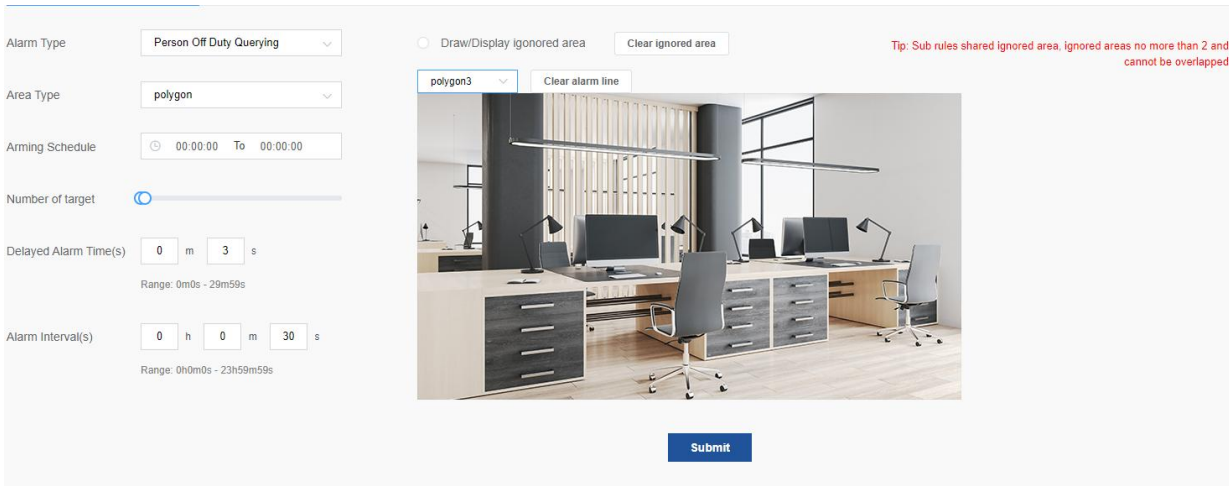
Parameter	Description
Alarm Type	Run
Area Type	Polygon
Object Size	0-100%, default 50%
Arming Schedule	Time period for monitoring
Delay Alarm Time	Range: 0 m 0 s – 29 m 59 s
Alarm Intervals	Range: 0 h 0 m 0 s – 23 h 59 m 59s
Drawing Rules	<ul style="list-style-type: none"> ● Set Alarm Area <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alarm area is a closed area (polygon with 3-8 sides), and supports setting up 4 areas. When personnel running is detected, and the alarm condition is met, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ Masked Area is closed area (polygon with 3-8 sides) ■ Support to draw two masked area.

- Sleep



Parameter	Description
Alarm Type	Sleep
Area Type	Polygon
Object Size	0-100%, default 50%
Arming Schedule	Time period for monitoring
Delay Alarm Time	Range: 0 m 0 s – 29 m 59 s
Alarm Intervals	Range: 0 h 0 m 0 s – 23 h 59 m 59s
Drawing Rules	<ul style="list-style-type: none"> ● Set Alarm Area <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alarm area is a closed area (polygon with 3-8 sides), and supports setting up 4 areas. When someone sleeping on the duty is detected, and the alarm condition is met, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ Masked Area is closed area (polygon with 3-8 sides) ■ Support to draw two masked area.

- On/Off-duty Detection



Parameter	Description
Alarm Type	On/Off Duty
Area Type	Polygon
Object Size	0-100%, default 50%
Arming Schedule	Time period for monitoring
Delay Alarm Time	Range: 0 m 0 s – 29 m 59 s
Alarm Intervals	Range: 0 h 0 m 0 s – 23 h 59 m 59s
Drawing Rules	<ul style="list-style-type: none"> ● Set Alarm Area <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alarm area is a closed area (polygon with 3-8 sides), and supports setting up 4 areas. When someone is leaving the post is detected, and the alarm condition is met, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ Masked Area is closed area (polygon with 3-8 sides) ■ Support to draw two masked area.

- Fight


Alarm Type:

Area Type:

Arming Schedule: To

Alarm Interval(s): h m s
Range: 0h0m0s - 23h59m59s

polygon1



Parameter	Description
Alarm Type	Fight
Area Type	Polygon
Arming Schedule	Time period for monitoring
Alarm Intervals	Range: 0 h 0 m 0 s – 23 h 59 m 59s
Drawing Rules	<ul style="list-style-type: none"> ● Set Alarm Area <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alarm area is a closed area (polygon with 3-8 sides), and supports setting up 4 areas. When fighting is detected, and the alarm condition is met, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ Masked Area is closed area (polygon with 3-8 sides) ■ Support to draw two masked area.

- Gather

Alarm Type:

Area Type:

Number of people gathered: (Range: 3-20)


Arming Schedule: To

Delayed Alarm Time(s): m s
Range: 0m0s - 29m59s

Alarm Interval(s): h m s
Range: 0h0m0s - 23h59m59s

Draw/Display Ignored area

polygon1



Tip: Sub rules shared ignored area, ignored areas no more than 2 and cannot be overlapped

Parameter	Description
Alarm Type	Gather
Area Type	Polygon
Number of people gathered	Range: 3-20
Arming Schedule	Time period for monitoring
Delay Alarm Time	Range: 0 m 0 s – 29 m 59 s
Alarm Intervals	Range: 0 h 0 m 0 s – 23 h 59 m 59s
Drawing Rules	<ul style="list-style-type: none"> ● Set Alarm Area <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alarm area is a closed area (polygon with 3-8 sides), and supports setting up 4 areas. When personnel gathering is detected, and the alarm condition is met, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ Masked Area is closed area (polygon with 3-8 sides) ■ Support to draw two masked area.

- Person-over

Alarm Type:

Area Type:

Overstaffed Upper Limit:

Arming Schedule: -


Delayed Alarm Time(s): m s
Range: 0m0s - 29m59s

Alarm Interval(s): h m s
Range: 0h0m0s - 23h59m59s

Draw/Display ignored area

Tip: For drawing rules, please refer to the site survey guidance document

Number of masked areas supported: 2



Parameter	Description
Alarm Type	Person_over
Area Type	Polygon
Overstaffed Upper Limit	Range: 1-10
Arming Schedule	Time period for monitoring
Delay Alarm Time	Range: 0 m 0 s – 29 m 59 s
Alarm Intervals	Range: 0 h 0 m 0 s – 23 h 59 m 59s
Drawing Rules	<ul style="list-style-type: none"> ● Set Alarm Area <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alarm area is a closed area (polygon with 3-8 sides), and supports setting up 4 areas. When overstaffed is detected, and the alarm condition is met, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ Masked Area is closed area (polygon with 3-8 sides) ■ Support to draw two masked area.

- Person_less

Sub Rule1-Understaffed

Alarm Type: Understaffed

Area Type: polygon

Understaffed Lower Limit: [Slider]

Arming Schedule: 00:00:00 - 00:00:00

Delayed Alarm Time(s): 0 m 3 s
Range: 0m0s - 29m59s


Alarm Interval(s): 0 h 0 m 30 s
Range: 0h0m0s - 23h59m59s

Draw/Display ignored area | Clear ignored area

Drawing dialog | polygon1 | Clear alarm line

Tip: For drawing rules, please refer to the site survey guidance document

Number of masked areas supported: 2



Submit

Parameter	Description
Alarm Type	Person_less
Area Type	Polygon
Understaffed Lower Limit	Range: 2-10
Arming Schedule	Time period for monitoring
Delay Alarm Time	Range: 0 m 0 s – 29 m 59 s
Alarm Intervals	Range: 0 h 0 m 0 s – 23 h 59 m 59s
Drawing Rules	<ul style="list-style-type: none"> ● Set Alarm Area <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alarm area is a closed area (polygon with 3-8 sides), and supports setting up 4 areas. When understaffed is detected, and the alarm condition is met, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ Masked Area is closed area (polygon with 3-8 sides) ■ Support to draw two masked area.

3.7.1.1.5 Goods Algorithm

Channel Type Goods

Sub Rule1-Sundry Detect ⊕

Alarm Type ▼
Sundry Detect

Area Type ▼
polygon

Object Size ▬


Arming Schedule 🕒
00:00:00 To 00:00:00

Duty ratio ▬

Delayed Alarm Time(s) 🕒
0 m 3 s
Range: 0m0s - 29m59s

Alarm Interval(s) 🕒
0 h 0 m 30 s
Range: 0h0m0s - 23h59m59s

polygon1 ▼ Clear alarm line



Submit

Parameter Description:

Parameter	Description
Channel Type	Goods
Alarm Type	<p>Rule: A rule can be set with 2 sub-rules, so that 2 algorithm cards can be parallelized at the same time, such as supporting 2 algorithms for parallel unattended objects and objects left behind. Click ' ⊕ ' to add sub-rules.</p> <p>Alarm type supported:</p> <ul style="list-style-type: none"> ● Sundry_Stack ● Objects_Guard ● Objects_Forget

Different alarm types have different parameter items to be set. The detailed configuration is introduced as follows:

- Goods_Guard


Alarm Type: Tip: For drawing rules, please refer to the site survey guidance document

Area Type:

Arming Schedule: -

Delayed Alarm Time(s): m s
Range: 0m0s - 29m59s

Alarm Interval(s): h m s
Range: 0h0m0s - 23h59m59s



Parameter	Description
Alarm type	Goods_Guard
Area Type	Polygon
Target size	0-100%, default 50%
Time schedule	Set as needed.
Area ratio	0-100%, default 50%
Delay alarm(s)	Set as needed
Alarm Interval(s)	Set as needed. Range: 0:00:00 - 23:59:59.
line drawing rules	<ul style="list-style-type: none"> ● Setting the alert area <ul style="list-style-type: none"> ■ Draw a line with the left mouse button, add an anchor point every time you click the left mouse button, and complete the line drawing with the right mouse button. ■ The warning area is a closed area (3~8 polygons), and it supports setting 4 warning areas. After detecting that the objects in the area are moved and disappeared, and the alarm conditions are met, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ The masking area is a closed area (3~8 polygons). ■ Support drawing 2 masked areas.

● Goods_Forget

Alarm Type: Goods Forget

Area Type: polygon

message.station.detectTarget: Phone Bag

Sensitivity: 50

Object Size:

Arming Schedule: 00:00:00 - 00:00:00


Delayed Alarm Time(s): 0 m 3 s
Range: 0m0s - 29m59s

Alarm Interval(s): 0 h 10 m 0 s
Range: 0h0m0s - 23h59m59s

Submit

Drawing dialog: polygon1 Clear alarm line

Tip: For drawing rules, please refer to the site survey guidance document.



Parameter	Description
Alarm type	Goods_Forget
Area Type	Polygon
Target size	0-100%, default 50%
Time schedule	Set as needed
Area ratio	0-100%, default 50%
Delay alarm(s)	Set as needed
Alarm Interval(s)	Set as needed. Range: 0:00:00 - 23:59:59.
Drawing rules	<ul style="list-style-type: none"> ● Setting the alert area <ul style="list-style-type: none"> ■ Draw a line with the left mouse button, add an anchor point every time you click the left mouse button, and complete the line drawing with the right mouse button. ■ The alarm area is a closed area (3~8 polygons), and it supports setting 4 warning areas. When it detects that there are objects left in the area and meets the alarm conditions, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ The masked area is a closed area (3~8 polygons). ■ Support drawing 2 masked areas.

● Sundry_Stack

Sub Rule1-Sundry Detect

Alarm Type: Sundry Detect

Area Type: polygon

Object Size: [Slider]

Arming Schedule: 00:00:00 - 00:00:00

Duty ratio: [Slider]


Delayed Alarm Time(s): 0 m 3 s
Range: 0m0s - 29m59s

Alarm Interval(s): 0 h 10 m 0 s
Range: 0h0m0s - 23h59m59s

Drawing dialog: polygon1

Clear alarm line

Tip: For drawing rules, please refer to the site survey guidance document



Submit

Parameter	Description
Alarm type	Sundry_Stack
Area Type	Polygon
Target size	0-100%, default 50%
Time schedule	Set as needed
Area ratio	0-100%, default 50%
Delay alarm(s)	Set as needed
Alarm Interval(s)	Set as needed. Range: 0:00:00 - 23:59:59.
Drawing rules	<ul style="list-style-type: none"> ● Setting the alert area <ul style="list-style-type: none"> ■ Draw a line with the left mouse button, add an anchor point every time you click the left mouse button, and complete the line drawing with the right mouse button. ■ The alarm area is a closed area (3~8 polygons), and it supports setting 4 warning areas. When it detects that there are objects left in the area and meets the alarm conditions, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ The masked area is a closed area (3~8 polygons). ■ Support drawing 2 masked areas.

3.7.1.1.6 Head Count Algorithm

Channel Type: Head Count [Site Survey Guidance Document Download](#)


Sub Rule1-Regional People Count +

Alarm Type: Regional People Count Drawing dialog polygon1 Clear alarm line Tip: For drawing rules, please refer to the site survey guidance document.

Area Type: polygon

Arming Schedule: 00:00:00 - 00:00:00

Statistical interval(s): 0 m 3 s
Range: 0m0s - 29m59s



Submit

Parameter	Description
Channel Type	Head Count
Alarm Type	<p>Rule setting: Two sub-rules can be set for one rule, and two algorithm (Regional People Count and Entry-Exit People Count) can be parallelized at the same time. click ' + ' to add rule.</p> <p>Supported alarm types are</p> <ul style="list-style-type: none"> ● Head_Count ● Cross_Line

Different alarm types have different parameter items. The detailed configuration is as follows:


- Regional People Count

Alarm Type: Drawing dialog: Clear alarm line Tip: For drawing rules, please refer to the site survey guidance document

Area Type:

Arming Schedule: -

Statistical interval(s): m s
Range: 0m0s - 29m59s



Parameter	Description
Alarm Type	Head_Count
Area Type	Polygon
Arming Schedule	Time period for monitoring
Delayed Alarm Time	Range: 0 m 0 s – 29 m 59 s
Drawing Rules	<ul style="list-style-type: none"> ● Set Alarm Area ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alarm area is a closed area (3-8 sides), and one alarm area can be set.

- Cross_Line


Alarm Type: Enter-exit People Count

Area Type: One-Way Multi Lines

Arming Schedule: 00:00:00 - 00:00:00

Drawing dialog Clear All Clear Line Clear Area Draw Line Draw Area

Supported number of lines: 1 ~ 5, Supported number of areas: 0 ~ 1
Tip: For drawing rules, please refer to the site survey guidance document



Submit

Parameter	Description
Alarm Type	Cross_Line
Area Type	One Way Multi Lines
Arming Schedule	Time period for monitoring
Drawing Rules	<ul style="list-style-type: none"> ● Set Alarm Area ■ Drawing area: draw a line with the left mouse button, add an anchor point each time you click the left mouse button, and complete the line drawing with the right mouse button. ■ Drawing dialog : Select " Drawing dialog ", The left mouse button draws the line, and the right mouse button completes the line drawing. ■ The number of trip lines supported: 1 ~ 5, the number of supported regions: 0 ~ 1.

3.7.1.1.7 Video Inspection Algorithm

The Video Inspection Algorithm is used to diagnose the quality of the video screen. When there is an occlusion situation and the duration exceeds the set time (hereinafter referred to as t), a warning is triggered once. Every time the duration exceeds t , another warning is triggered.

Channel Type

[Sub Rule1-Video Occlusion](#) +

Alarm Type


Area Type

Arming Schedule -

Delayed Alarm Time(s) m s
Range: 0m0s - 29m59s

Alarm Interval(s) h m s
Range: 0h0m0s - 23h59m59s

Tip: For drawing rules, please refer to the site survey guidance document



Parameter Description

Parameter	Description
Alarm Type	Video Occlusion
Area Type	Polygon
Object Size	0-100%, default 50%
Arming Schedule	Time period for monitoring
Delay Alarm Time	Range: 0 m 0 s – 29 m 59 s
Alarm Intervals	Range: 0 h 0 m 0 s – 23 h 59 m 59s

Drawing Rules	<ul style="list-style-type: none"> ● Set Alarm Area <ul style="list-style-type: none"> ■ The left mouse button draws a line, and each time the left mouse button is clicked, an anchor point is added, and the right mouse button completes the line drawing. ■ The alarm area is a closed area (polygon with 3-8 sides), and supports setting up 4 areas. When a fall is detected, and the alarm condition is met, an alarm event will be triggered. ● Masked Area <ul style="list-style-type: none"> ■ Masked Area is closed area (polygon with 3-8 sides) ■ Support to draw two masked area.
---------------	---

3.7.1.2 Audio Configuration

When setting up rules, after the Perimeter_Alarm, Behavioral_Alarm, Goods_Alert, Diagnosis_Alarm and Headcount_Alarm rules are configured, audio linkage can be configured as needed. When the audio linkage is configured, after the alarm is triggered, the audio alarm can be linked through the audio output interface, and the playback device can be connected for voice broadcast.

Precondition

Audio files have been added to the system, please refer to File Management for details.

Audio Configuration

Whether to link voice Disable Enable

binding

Audio File

Number of alarms (times) - 3 + (Range: 1-1000)

Continuous trigger interval - 1000 + (Range: 500-50000)
(ms)

Priority

Parameter Description:

Parameter	Description
Whether to link voice bind	Enable: Enable linked voice broadcast alarm. Disable: Not enabled.
Audio File	Select from the drop-down menu, add audio please refer to File Management.

Number of alarms(times)	of	1-1000
Continuous interval(ms)	trigger	500-50000
Priority		High, medium and low are available.

3.7.2 Relay

According to the needs of different scenarios, it can be used with network relays to realize the door opening function. Milesight BX108-A supports configuration of 48 network relays by default. Among them, in the relay configuration interface, channels 1-8 are video stream configuration channels, and each channel supports access and alarm Function. Select the configuration relay by setting the network mode, trigger duration and communication password.

Note:

Each channel can be bound to 1 relay. You can browse the current relay working status and the trigger condition for opening the door of the corresponding channel through the relay configuration page.

Preconditions

1. The device has been setup. For details, please refer to the camera settings.
2. Access rights are configured. For details, see Configuring Privilege.

Operations

Step 1 Enter "Video > Relay" Screen.

Step 2 Click "Work Mode" in the upper right corner to configure the network mode, trigger duration and communication password.

Note:

For the first use, it is necessary to configure the working parameters of the relay. The device supports UDP/TCP two network modes; the trigger duration supports 100ms/1s. The network mode of the relay itself must be consistent with the network mode of the system relay configuration.

Work Mode
×

Net Mode

UDP

TriggerTime Uint

100 ms

Time uint change work mode of relay

AES Key

16 char of password

Submit

Step 3 After the configuration is complete, click "Submit".

Step 4 In the relay configuration interface, select the channel, and click "Add" in the operation column to start configuring the relay for the channel.

Add Relay
×

Video No. 4

Relay Type Access

IP

Condition Recognition ▾

Default Mode Open ▾

Channel OUT1 ▾

Trigger(ms) (100-50000 ms)

Delay(s) (0-10 s)

Interval(ms) (0-50000 ms)

Submit

Step 5 Fill in the information according to the prompts, and then click "Submit" to complete the channel relay configuration.

Parameter	Description
Relay IP	Indicates the IP address of the relay.
Condition	Indicates the trigger condition that triggers the relay to work. Values: Capture, Recognition, Cap.&Recog.
Default Mode	Indicates the working mode of the relay. Value: normally open, normally closed.
Channel	Indicates the channel on which the relay operates. Note: If the relay channel settings conflict, it will return the error "Relay working mode conflict, please check the video channel N!"
Trigger (ms)	The time to keep the trigger state. Value: 100-50000/ms
Delay(s)	The delay time after the trigger condition is met to the start of the trigger.

Parameter	Description
	Value: 0-10/s
Interval(ms)	The same person is under the same channel, the interval of triggering the relay. Value 0~50000/ms

Step 6 After the relay configuration is completed, if you need to enable the channel relay, set the channel relay configuration to "enable".

3.7.3 Access Permission

The privileges module is used to control the access authority of the relay. By configuring the access rules for controlling relays, the flexibility of the access management is enhanced. On the privileges interface, you can view the details of access rules, set time periods, set holidays, create new rules, and create, view, edit, and delete access rules.

Operations

- Setting the time period means setting the access time period.

Step 1 Enter "Surveillance Settings > Access Permission" Screen

Step 2 Click "Timespan Setting" in the upper right corner, the system displays the time period setting interface.

Step 3 Click "New Date" in the upper right corner to enter the new period interface, start setting "period name", "remarks", select start/end date, and set period period. After the setting is complete, click "OK" to complete the setting of the traffic time period.

Note:

6 time spans can be configured every day. The time interval adopts the principle of merging, and it is passable within this time interval. (For example, the first time period is set to 9:00-19:00, the second time period is set to 18:00-20:00, the time zone of the day is 9:00-20:00), click the same as above to copy the time interval configuration of the previous day, that is, the general rules are consistent.

New Time Range (Time Span: 00:00-00:00 for a whole day) ×

Timespan: Remarks:

Time	Time Range 1		Time Range 2		Time Range 3		Time Range 4		Time Range 5		Time Range 6		
	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	
Mon.	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	
Tue.	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	<input type="checkbox"/> As above
Wed.	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	<input type="checkbox"/> As above
Thur.	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	<input type="checkbox"/> As above
Fri.	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	<input type="checkbox"/> As above
Sat.	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	<input type="checkbox"/> As above
Sun.	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	<input type="checkbox"/> As above

- Holiday setting: that is, to set the holiday period.

Note:

During holidays, the access permission rules do not take effect.

"Yearly" means that this day is a holiday every year, such as May 1 every year.

"Monthly" means that this day of each month is a holiday, for example, the 29th and 30th of each month are holidays.

"Unrepeatable" requires specifying a specific date and will not be repeated.

Step 4 On the "Privileges" interface, click "Holiday Settings" to enter the holiday setting interface.

Step 5 Click "New Holiday" to enter the New Holiday interface to set the holiday.

Step 6 After the setting is complete, click "OK" to complete the holiday setting.

New Holiday
✕

Holidays

Remarks

Yearly
 Monthly
 Unrepeat

Chosen:

< March >

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2
3	4	5	6	7	8	9

OK

Cancel

New rule: Set the access permissions of different scenarios according to the video channel, personnel group, time period setting, and holiday setting conditions.

Prerequisite: Time period setting and holiday setting must be done before creating a new rule.

Step 7 On the Access Permission interface, click “New Rule” to enter the new rule setting interface.

Enabled

Rules

Channel

Group

Date Range

Holiday Setting

Remarks

Submit

Parameter Description:

Parameter	Description
Enabled	On: Indicates that the rule is activated. Off: Indicates that the rule is closed.
Rules	Access permission rule name.

Parameter	Description
Channel	Refers to the channel name.
Group	Groups who can pass under the current rules.
Date Range	The effective period for which the current rule is in effect.
Holiday Setting	The date on which the current rule will not take effect.
Remark	

Step 8 After the new rule is created, you can perform the following operations on the access permission:

Enable: On means the rule is in effect, and off means the rule is not used.

View/Edit: Click "View/Edit" under the operation bar to view or edit the passing rules.

Delete: Click "Delete" under the operation bar to delete the general rule.

3.8 Application

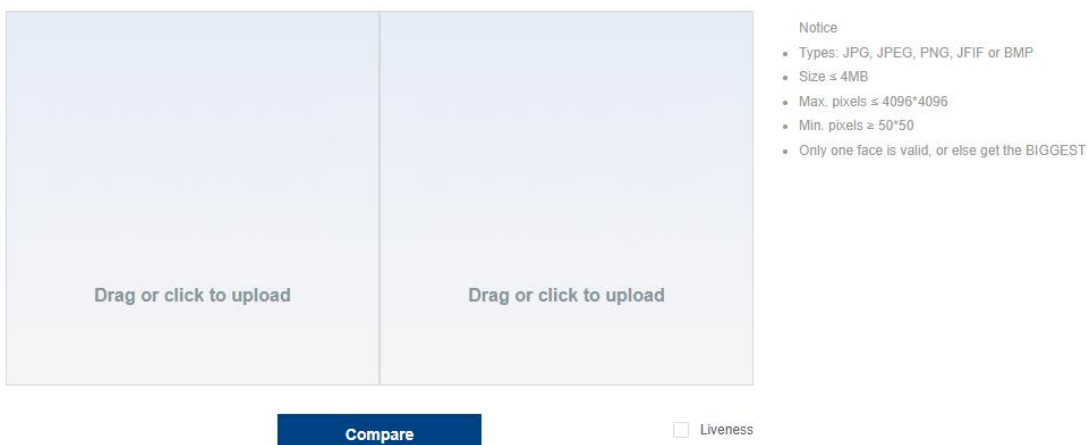
The Compare provides a 1:1 face similarity scores and provides a search comparison between a person and face database.

3.8.1 1:1


This function is used to determine the possibility of whether two faces are the same person. Typical application scenarios: such as user authentication, etc.

Operations

Step 1 Click " Application > 1:1 " on the left menu bar to enter the "1:1 " interface.



Step 2 Select two pictures and send them to the comparison area.



Compare Liveness

28.65

Facial Analysis

Face	Left	Right	Top	Bottom	Roll	Yaw	Pitch	Bluriness	Liveness	resolution
Left Face	270	414	191	335	0	0	6	16	0	144 x 144
Right Face	276	521	236	490	0	1	4	23	0	245 x 254

Photo description:

Image type: JPG, JPEG, PNG or BMP

Image size ≤ 4MB

Maximum image res ≤ 4096*4096

Minimum image res ≥ 50*50

There can only be one face in each picture, if there are multiple faces, the largest one will be taken.

Step 3 Click "Start matching", and if you need a liveness score, check "Liveness".

Step 4 After the comparison is completed, the comparison result will be displayed below, and the higher the score, the higher the similarity.



开始匹配 活体评分

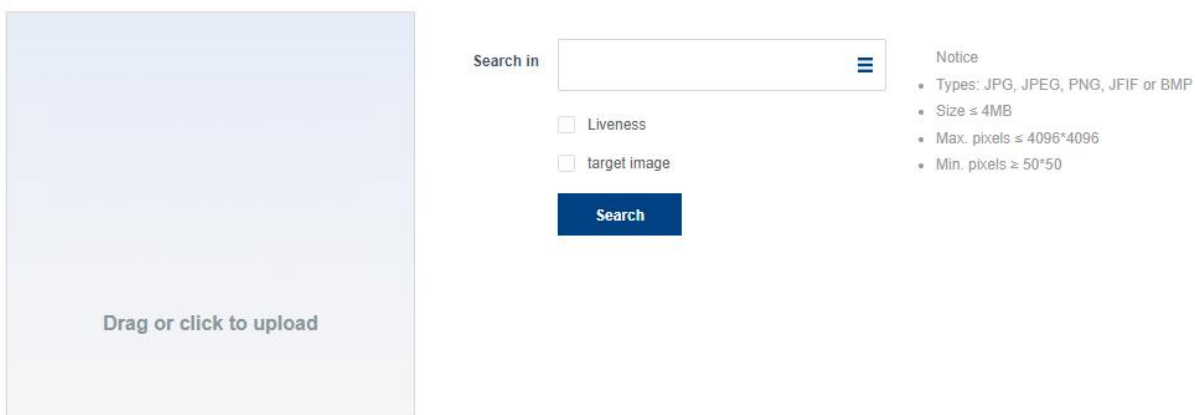
14.01

人脸分析参数

人脸	左边坐标	右边坐标	上边坐标	下边坐标	Roll	Yaw	Pitch	模糊度	活体评分	分辨率
左脸	153	477	231	559	0	3	1	20	94.97	324 x 328
右脸	277	511	239	477	0	0	4	27	91.92	234 x 238

3.8.2 1:N

1:N search, also called face search, is to find the most similar face in the specified face set. It refers to the comparison between the face captured by the monitoring point and the face in the base library, and whether it is the same person by calculating the similarity of the face. When the similarity between the two reaches the set threshold, the comparison is successful, otherwise it fails.



Prerequisite

Faces have been entered into the system. For details, refer to Library.

Operations

Step 1 Choose " Application > 1:N " to enter the "1:N " interface.

Step 2 Drag or click to upload a portrait.

Photo description:

Image type: JPG, JPEG, PNG or BMP

Image size ≤ 4MB

Maximum image res ≤ 4096*4096

Minimum image res ≥ 50*50

There can only be one face in each picture, if there are multiple faces, take the largest one

Step 3 Click "Search In", and select the face group to be searched and compared from the drop-down menu.

Step 4 (Optional) Check "Liveness" and "Target Image".

Step 5 After the above operations are completed, click "Search".

Step 6 View face search results.

3.8.3 Image Analysis

The system supports analysis a single photo and outputs the analysis result.

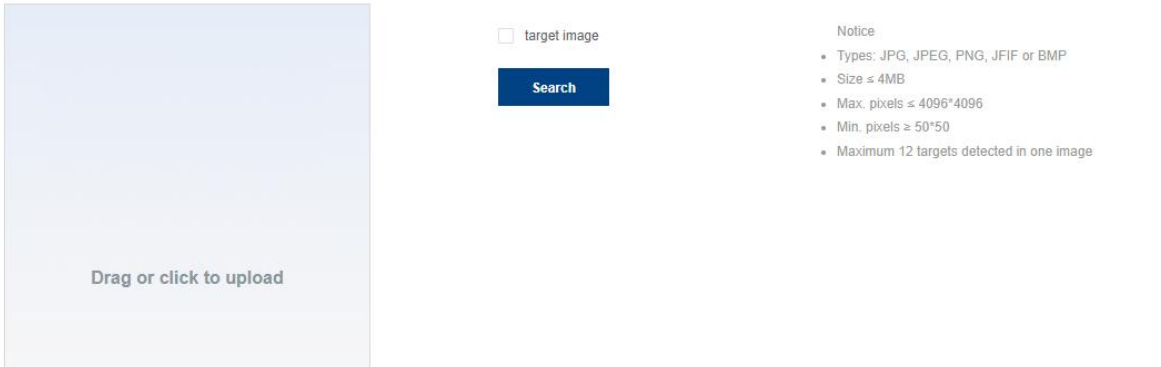
The supported algorithm pockets are: Face-human&Recognition and Structure Analysis.

When the input image is a face or a human image, the parsing results include face information (such as face attribute analysis: whether to wear a hat, mask, etc.) and human body information (such as human attribute analysis: shirt style and color, etc.).

When the input image is a motor vehicle/non-motor vehicle, the parsing result includes the license plate recognition result.

Operations

Step 1 Choose "Application > Image Analysis".



Step 2 Upload Image

Step 3 According to actual needs, check "Target Image" and click "Search" to view the analysis results.

Face information

ID	target image	Left	Right	Top	Bottom	resolution	Hat	Mask	Glasses
1		278	519	236	481	241 x 245	Without Hat	Without Mask	Without Glasses

Body information

ID	target image	Left	Right	Top	Bottom	resolution	Gender	style and color of upper cloth	style and color of lower cloth	Bags	Safety helmet
1		13	713	92	799	700 x 707	Male	Long Sleeve, Black top	Trousers, Black Pants	Without bag	Without Hat

Image 1 Upload Face Image

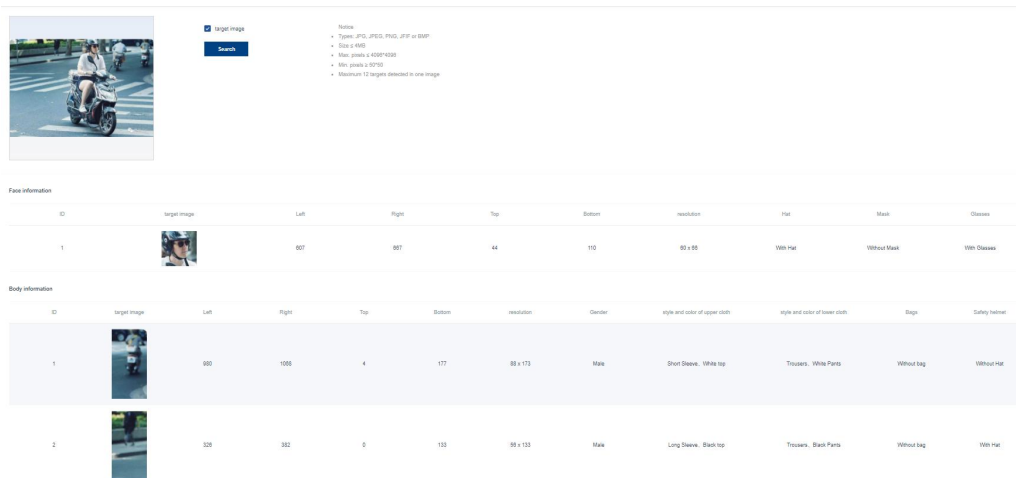
Vehicle

ID	target image	Left	Right	Top	Bottom	resolution	Category	Color	Orientation	Brand
1		462	1313	351	968	851 x 617	Car	Blue	Back	Cheery_FUWVN_2_15/16

License plate info

ID	target image	Left	Right	Top	Bottom	resolution	License plate number	Plate	Color
1		783	1004	729	794	221 x 85	Z1W0	One-Way	Blue

Image 2 Upload motor vehicle/non-motor vehicle




target image

Notes

- Types: JPG, JPEG, PNG, GIF or BMP
- Size: 4 MB
- Max. pixels: 4096*4096
- Min. pixels: 32*32
- Maximum 12 targets detected in one image

Face Information

ID	target image	Left	Right	Top	Bottom	Resolution	Sex	Mask	Glasses
1		807	887	44	110	83 x 88	With Hat	Without Mask	With Glasses

Body Information



ID	target image	Left	Right	Top	Bottom	Resolution	Gender	Sleeve and color of upper cloth	Sleeve and color of lower cloth	Bag	Safety helmet
1		660	1088	4	177	88 x 173	Male	Short Sleeve, White top	Trousers, White Pants	Without bag	Without Hat
2		328	382	0	138	88 x 133	Male	Long Sleeve, Black top	Trousers, Black Pants	Without bag	With Hat

Image 3 Upload motor vehicle/non-motor vehicle and portrait images

3.9 System Setting

The system settings are divided into system parameter settings and hardware settings according to the business and the interaction between device and external data.

3.9.1 Settings

The main configuration of system parameters includes system configuration, global algorithm settings, access authentication settings, and login settings.

System Parameter Settings

Choose "System > System Parameter Settings"

System Config

Security HTTPS HTTP

Storage Disable Enable

Captured Storage Disable Enable If enabled, uploading data would be enormous

Enable Capture Landmark Disable Enable

Compress Level(10-100)
value of [10-100] stands for [compressed, original]

Recog. Cached(0-10000)

Capture Cached(0-100000)

RTSP Server Disable Enable

rtsp://<username>:<password>@<ip>:<port>/<channel>
port: RTSP port, default 554; channel: from 1 to N; After disabling the access authentication, there is no need to enter the user name and password
example:
Enable Access Auth: rtsp://admin:admin123@192.168.1.100:554/1
Disable Access Auth: rtsp://192.168.1.100:554/1
Note: The single-channel distribution only supports one client to connect to the rtsp stream at the same time

Submit

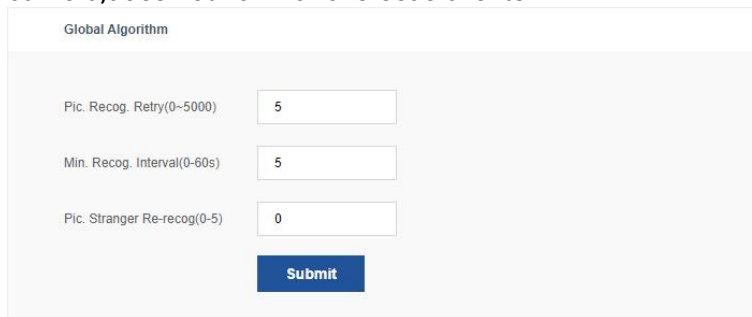
Parameter Description:

Parameter	Description
Security	<p>HTTPS: Encrypted transmission of data.</p> <p>HTTP: (default) Unencrypted transmission of data.</p> <p>Note:</p> <p>Turning on HTTPS will increase the load of the device (ssl encryption will be performed on the pushed video stream, which will cause the 4-channel 1080P video web page playback to be stuck). Therefore, web client using web API is recommended to use "HTTP". Otherwise, HTTPS is recommended.</p>
Storage	<p>On: The capture storage function takes effect.</p> <p>Off: Off by default. The capture storage function does not take effect.</p> <p>Note:</p> <p>When you log in to the system for the first time, you need to turn this switch on. If you do not turn on "Storage", it will prompt that the function is unavailable in the recognize query and capture query interfaces.</p>
Captured Storage	<p>Whether to capture the background image.</p> <p>On: Enable this function to take effect.</p>

Parameter	Description
	<p>Off: Turning on this function does not take effect.</p> <p>Note:</p> <p>Capturing and storing background images while capturing faces will increase the amount of data reported.</p>
Enable Capture Landmark	<p>On: Enable to frame the target background image captured with a red rectangle.</p> <p>Off: The red rectangle will not be displayed when off.</p>
Compress Level(10-100)	Affects the clarity of the background image, mainly compressing the image storage space. Set [100] as the original image with the highest quality and the largest storage space occupied, and set [10] as the maximum compression with the lowest quality and the smallest storage space occupied.
Recognition Records. Cached (0-10000)	The recognize storage list is the query list displayed on the "Recognize " interface.
Capture Cached(0-100000)	Capture storage list, that is, the list displayed on the "Capture " interface.
RTSP Server	After turning on the switch, you can obtain the video stream through the VLC media player open source tool and preview the monitoring screen.
Dynamic Library	<p>It is used to enable or disable the dynamic base library.</p> <p>On: Enable this function to take effect.</p> <p>Off: Turning on this function does not take effect.</p> <p>Note:</p> <p>The original database (group + facet) will be deleted and restarted at the same time when dynamic library is enabled or disabled,</p> <p>When the dynamic library is enabled, all face/body channels must be enabled to analyze target attributes.</p> <p>When the dynamic library is enabled, the upper limit of the library will be reduced from 30W to 15W, but the number of groups will not be affected.</p>

Global Algorithm Settings

The global algorithm setting is used to configure the secondary recognition times of the capture camera, does network for overseas clients.



Global Algorithm

Pic. Recog. Retry(0-5000)

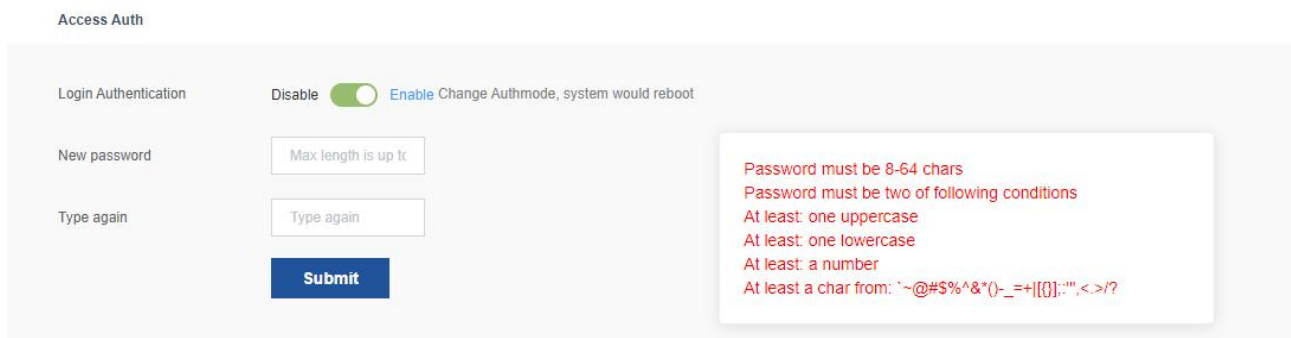
Min. Recog. Interval(0-60s)

Pic. Stranger Re-recog(0-5)

Access Authentication

The access page authentication function is used for the user to choose whether to enable the access authentication and password modification functions. Among them, the user can modify the password according to their own needs.

Initial username: admin (cannot be changed).



Access Auth

Login Authentication Disable Enable Change Authmode, system would reboot

New password

Type again

Password must be 8-64 chars
 Password must be two of following conditions
 At least: one uppercase
 At least: one lowercase
 At least: a number
 At least a char from: `~@#%*&*()-_=[{}:~"'.<>/?

Note:

The access page authentication function is disabled by default, and users can log in to the system directly.

When changing the authentication state of the access page (i.e., changing the authentication enable state), the device will restart.

Login Options

The login function is used for users to set the limit of login and unlock times.

Login Option

Login limit(3-10)

Unlock time(5-30mins)

Submit

Local GUI Config

Local GUI Config

On/Off No Yes

No. of Window

Video channel corresponding window

Window1

Submit

GUI Settings

After enabling, you can connect the display device through the HTML interface, and customize the number of preview windows and video channels. The system supports the simultaneous display of 1, 4, and 9 video surveillance images.

GUI Settings

Enable No Yes

Number of window

Window Related Channel

Window1	Window2	Window3
<input type="text" value="None"/>	<input type="text" value="None"/>	<input type="text" value="None"/>
Window4	Window5	Window6
<input type="text" value="None"/>	<input type="text" value="None"/>	<input type="text" value="None"/>
Window7	Window8	Window9
<input type="text" value="None"/>	<input type="text" value="None"/>	<input type="text" value="None"/>

3.9.2 Hardware Setting

Device information, online upgrade settings, network configuration and docking server settings are displayed in the hardware settings. On the hardware setting page, you can check the last upgrade status, perform firmware upgrade, restart the device and restore factory settings.

Hardware Information

The hardware information module displays current system status information.

Hardware Info			
HW Ver.	000_01_000	Total RAM	4096 MB
FW Ver.	V1.3.1.RC01	Used RAM	2776 MB
Serial	M030201202105000004	Storage	25689 MB
CPU Usage	0%	Used Storage	1392 MB
CPU Temp.	48 °C	System Time	2022-03-28 17:03:54
Board Temp.	37 °C	Web Version	v1.3.1_202202091410
Serial	M0141006321050000023	Device Model	MegCube-B4H16-311-N0
MegConnect Version	V2.1.2.B06	Device Authorization Code	fire_V1.0

OAT Settings

The system supports online upgrade. After turning on the "Auto Upgrade" switch, related configurations can be performed.

Online upgrade methods are:

OAT Auto: After configuring the online upgrade information, turn on the automatic upgrade switch, click "Submit", and the device will be automatically upgraded according to the settings.

OAT Manual: After configuring the upgrade server address, upgrade path, user name and password, click "Submit" or "Upgrade".

Note:

OAT automatic upgrade: The upgrade date defaults to Sunday (multiple selections can be made from Monday to Sunday, every day), and the default upgrade time is 22:00-24:00 (the time to download the upgrade package, the minimum time interval is 1 hour).

The "Upgrade" button is to manually trigger the OAT active upgrade immediately;

During the OAT upgrade process, the web page cannot be operated, and calling the function to trigger the upgrade immediately or to deliver the firmware on the web side returns an error: "Upgrade is in progress, please wait";

As the algorithm may be upgraded, it is recommended to restore the factory settings after the upgrade and re-store it.

OTA Settings

Auto Upgrade	<input checked="" type="checkbox"/>
Date	Mon <input type="button" value="⊗"/>
Time	0:00 <input type="button" value="⊗"/> 24:00 <input type="button" value="⊗"/>
Server IP	<input type="text"/>
Server Path	<input type="text"/>
Username	<input type="text"/>
Password	<input type="text"/>
<input type="button" value="Submit"/> <input type="button" value="Upgrade Now"/>	

- During the upgrade process, the progress of the upgrade can be observed.

Network Settings

The network used to set up the device. The device supports the access of the LAN and the WAN. For security reasons, try to use the intranet as much as possible, and push the data to the WAN server through the reporting server to complete the business after the alarm.

Using the latest UI, Ethernet port 1 is modified to WAN, and Ethernet port 2 is modified to LAN

WAN	LAN
DHCP <input type="checkbox"/>	DHCP <input type="checkbox"/>
IP Address: 192.168.213.67	IP Address: 192.168.2.100
Subnet Mask: 255.255.240.0	Subnet Mask: 255.255.255.0
Gateway: 192.168.210.1	Gateway: <input type="text"/>
DNS: 192.168.210.1	DNS: 0.0.0.0
MAC: 78:ca:83:46:09:ed	MAC: 78:ca:83:46:09:ee
	Bond Mode: Dual NIC independent

Note:

When Bond mode is configured as active/standby mode and balanced mode, the IP addresses must be in the same LAN, and only Ethernet port 1 can be accessed.

Remote Server

Remote Server	NTP Server
HeartBeat Server	NTP Enable <input type="checkbox"/>
Server Address: ws://domain(ip):port/ws	Domain/IP: <input type="text"/>
HB Interval(1-3600sec.): 0	Retry Count: 0
	Interval(1-65535 Min.): 1
	Custom Time: 2022-03-28 17:03:44
	Time Zone: (UTC+8:00)
<input type="button" value="Submit"/>	

- 3rd Server Setting

Through the interaction with the server, let the remote server know the online status of the device.

The server address uses the websocket protocol, and the address format is ws://ip:port/.

Heartbeat Server	NTP Server
Server address (separate ports with ":")	NTP On/Off <input type="checkbox"/>
Heartbeat interval (1-3600s): 5	Domain name or IP: <input type="text"/>
	The number of retries for verification time failure: 0
	NTP Interval (1-65535 m): 1
	Manual Set Time: 2023-03-30 19:26:15
	Set Timezone: (UTC+8:00)
<input type="button" value="Submit"/>	

Used for equipment timing. If the device time and camera time are inconsistent, there may be no snapshot data. When the device is on the intranet, you can manually set the time. The web page obtains the time of the computer where the current browser is located as the current input parameter. After clicking the input box, click "Now" and confirm.

Note:

When logging in for the first time, you need to manually adjust the time. Click the "Custom time" parameter, select "Now", and adjust the time. It will not be available if the time is not set.

Last Upgrade

Click "Last Upgrade" in the upper right corner of the page to view the last upgrade status and information.

Upgrade

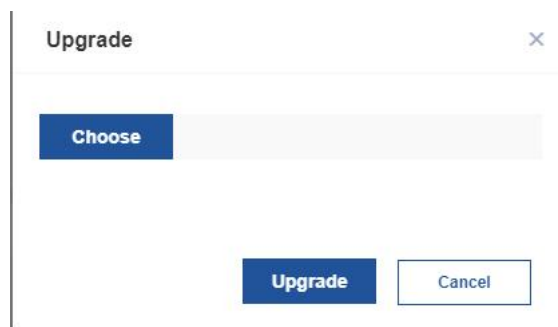
The device provides web firmware upgrades in addition to USB upgrades.

Click " Upgrade" to enter the firmware upgrade interface, upload the files to be upgraded through "Choose", and click "Upgrade" to upgrade the firmware after selection is complete. The upgrade process takes about 10 minutes.

After successful upgrade via web page, you need to manually refresh the browser page to see the updated version number and page layout.

Note:

Since the algorithm may be upgraded, it is recommended to restore the factory settings and re-import the faces after the upgrade.



Reboot

The device restart is a simple system restart, and it takes about 30 seconds from the confirmation of the restart to the completion of the startup.

Click "Reboot" in the upper right corner to restart the device.

Reset

Factory reset is usually performed after firmware upgrade. Due to the upgrade of the algorithm and the calculation model, it is necessary to re-extract the stored images. Click on "Reset" in the upper right corner.

3.9.3 File Management

You can manage audio files and algorithm bin files in the file management module.

3.9.3.1 Audio File

Audio file: used to trigger the alarm by linking the alert rule. When the video channel is under surveillance and alerted to the rules, if the preset event alarm is triggered, the alarm will be linked through the audio output interface, and the playback device will be connected for voice broadcast. The system supports uploading, modifying or deleting audio files.

Operations

Step 1 Choose "System Setting> File Management> Audio File". The system supports uploading a maximum of 10 audio files.

Audio file No.	Audio file name	More
1	No	Add Delete Alarm
2	No	Add Delete Alarm
3	No	Add Delete Alarm
4	No	Add Delete Alarm
5	No	Add Delete Alarm
6	No	Add Delete Alarm
7	No	Add Delete Alarm
8	No	Add Delete Alarm
9	No	Add Delete Alarm
10	No	Add Delete Alarm

Audio file type support: PCM, MP3
 Audio file size limit: PCM file <= 5M, MP3 file <= 1M
 Audio file name suffix: .pcm .mp3 .MP3

Step 2 Select the audio file number, click "Add", and select the audio file to upload.

Note:

Audio file type support: PCM, MP3;

Audio file size limit: PCM file <= 5M, MP3 file <= 1M;

Audio file name suffix limit: .pcm .mp3 .MP3

Step 3 Optional

Edit: To make changes to the audio file, click "Edit".

Delete: To delete the file, click "Delete".

Alarm: To enable the audio file linkage alarm, click "Alarm".

3.9.3.2 Algorithm Pack Management

Algorithm file: It is used to configure the algorithm package. The system supports users to upload the algorithm package file by themselves. After uploading the algorithm package file, the related algorithm can be setup and working. The system supports uploading, deleting, installing and uninstalling algorithm packages.

Note:

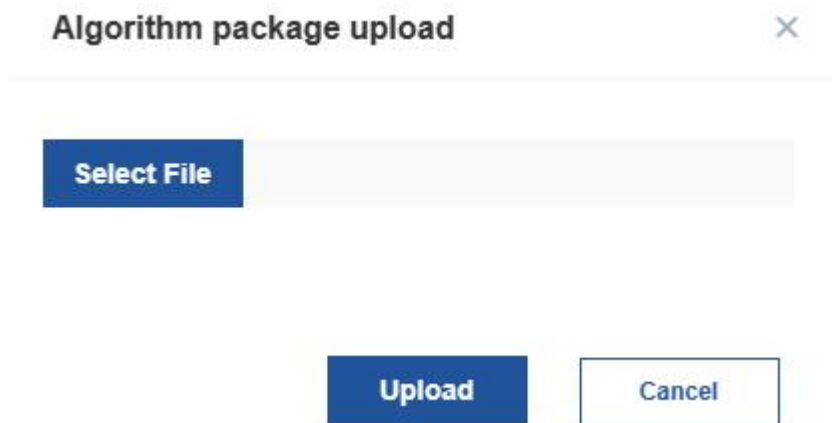
Algorithm packages supported are: Face-Human Recognition, Structure Analysis, Perimeter_Alarm, Behavioral_Alarm, Goods_Alarm, Headcount_Alarm, Diagnosis_Alarm.

Operations

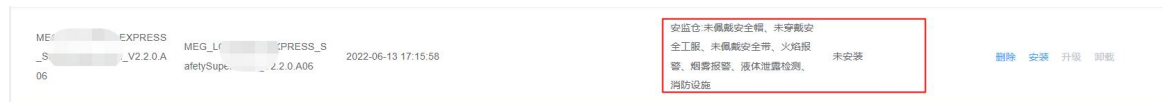
Step 1 Choose "System Setting > File Management > Authorize", Check device authorization code.

Upload instructions: Supports importing algorithm packages into the box through USB, WEB client or 3rd platform through API.

Step 2 Choose "System Setting > File Management > Algorithm Pack Management", Click "Upload".



Step 3 Select the prepared algorithm file and click "Upload". If you want to cancel the upload, click "Cancel". After the file is uploaded successfully, the status bar prompts "Not installed".



Step 4 Optional

Install: After uploading the algorithm package file, if you need to make algorithm working, you need to install the algorithm package.

Note:

The algorithm package that is "not installed" can be installed. After the installation is successful, the status of the algorithm package will be switched from "not installed" to "installed".

It is worth noting that the type of the industry algorithm package must conform to the authorization type, otherwise it can only be uploaded but not installed. During installation, it will prompt "Error not activated".

Optional operation: After the algorithm package file is installed, you can perform upgrade and uninstall operations.

■ **Upgrade:** This is required to upgrade an "installed" algorithm package file. After clicking "Upgrade", upload the upgrade file, and then click "Upgrade". After the algorithm package file is upgraded, you can continue to perform the "upgrade" or "uninstall" operation as required.

■ **Uninstall:** It supports uninstalling the "installed" algorithm package. After uninstalling, the algorithm will not take effect, and the configuration cannot be selected for this type of algorithm.

■ **Restore:** Support to restore the "installed" algorithm package, after restoration, the algorithm version will restore the original version of the firmware.

Delete: Support to delete the "not installed" algorithm package. After deletion, the algorithm package will be removed from the system.

Restore factory algorithm: Support factory reset of all algorithm packages, and restore all algorithm package versions after factory restoration to restore the version that comes with the firmware.

3.9.3.3 Container Management

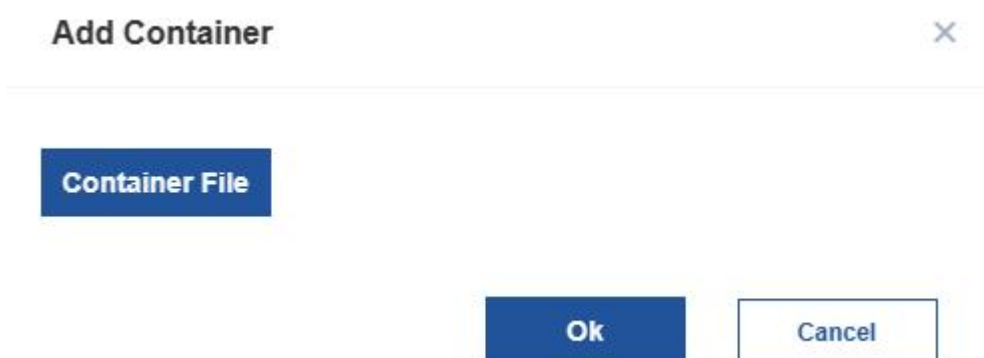
It is suitable for customers with development capabilities, and supports users to run programs after business development based on actual scenarios in containers, solving business closed-loop problems in various scenarios.

Note:

For specific container debugging and installation, please contact technical support to obtain the "BX108-A Container Debugging Environment Installation" and "Open Platform Development Instructions" documents.

Steps

Step 1 Select "System Setting> File Management> Container Management" and click "Upload".



Step 2 Select the prepared container file and click "Upload"

Step 3 Optional

Setting: After uploading the container, click the Settings button to configure CPU usage, memory, and storage space. All containers share 20% CPU, 500MB memory, and 1024MB storage.

Install: After uploading the container, you need to complete the installation operation before starting the program in the container.

Instruction:

Supports the installation of "uninstalled" containers. After the installation is successful, the status of the container will be switched from "not installed" to "installed".

Optional: After the container file is installed, you can perform upgrade, start, and stop operations.

- **Upgrade:** When you need to update the program in the container, you can repackage it, change the version number in the second half of the image name, and it will be decompressed into the original container file system and overwrite the file with the same name. It is recommended that all operations to modify files in the container be completed in this way, otherwise the accuracy of resource usage in the container cannot be guaranteed.

- **Start:** It supports starting the "installed" container. After starting, the packaged startup script will be automatically executed inside the container, and then the third-party program will be run, and the running state will be more "normal running".

- **Stop:** Supports stopping the "normal running" container. After stopping, the system will kill all programs in the container, and the running status will be changed to "stopped running".

Delete: It supports deleting the container before and after installation and when it stops running. After the deletion, the container is removed from the system.

Exception pop-up windows and countermeasures

Exception: Error receiving upgrade file

Measure: Check whether the image name is irregular, length, suffix, Chinese symbols, special symbols, etc.

Exception: Insufficient resources can be allocated by the container

Measure: Reduce the resources allocated by other containers, such as cpu usage, memory, and storage, and share them with all containers.

Exception: Container setup failed

Measure: Resources cannot be set when the container is running. It needs to be stopped first, then set and then started.

Exception: The container image name is illegal

Measure: Check whether the image name is irregular, length, suffix, Chinese symbols, special symbols, etc.

Exception: Container hypervisor exception

Measure: This error is an internal program exception. It is recommended to keep the environment and contact technical support as soon as possible to export the log for analysis.

3.10 Data Integration

3.10.1 FTP Push

According to the prompts, set the FTP push rules. After the configuration is complete, click "Submit" or "Testing".

Note:

When storing data to the FTP server or as a data backup, you need to configure the FTP.

FTP Push Settings

On/Off Off On

Upload Background Off On

Server IP

Port

Username

password

remote directory

First-level directory

Secondary directory

third-level directory

Custom Directory

Parameter Description:

Parameter	Description
Enabled	On: Use FTP Off: Not use FTP

Parameter	Description
Upload Image	On: Upload captured image background. Off: Not to upload captured image background.
Server	FTP Server IP Address
Port	FTP Server Port
User	FTP server login username
Password	FTP server login password
Remote Dir	Customize
1 st Dir	Select a directory type from the drop-down menu as required.
2 nd Dir	Select a directory type from the drop-down menu as required.
3 rd Dir	Select a directory type from the drop-down menu as required.
Custom	User-defined directory.

3.10.2 Active Push

Note: According to user needs, if you need to push data to the 3rd platform, you need to configure Websocket mode or HTTP mode.

Websocket Mode

The two servers of capture and alarm can use the same server port in the provided intelligent video analysis system.

It should be noted that if the option to upload image is not enabled, no pictures will be uploaded.

Websocket Mode

<p>Recognition Upload <input checked="" type="checkbox"/></p> <p>Recognition Server <input type="text" value="ws://domain(ip):port/ws"/></p> <p>Recog. Interval <input type="text" value="0"/></p> <p>Retry Count(0-2) <input type="text" value="0"/></p> <p>Upload Image <input checked="" type="checkbox"/></p> <p>Upload Small Capture Image <input type="checkbox"/></p> <p>Upload Big Full Image <input checked="" type="checkbox"/></p> <p style="text-align: center;">Submit</p>	<p>Capture Upload <input checked="" type="checkbox"/></p> <p>Capture Server <input type="text" value="ws://domain(ip):port/ws"/></p> <p>Upload Image <input checked="" type="checkbox"/></p> <p>Upload Small Capture Image <input checked="" type="checkbox"/></p> <p>Upload Big Full Image <input checked="" type="checkbox"/></p>
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HTTP Mode

Information is actively reported through the HTTP protocol. There are two modes of master and slave servers. The reported data types can be selected from three types of capture data, recognition data, and capture + recognition data. Among them, the master server reports priority over the slave server, and provides the function of retransmitting the failed data. For the data that fails to be reported, retransmission is attempted every 30 minutes until the transmission is successful.

HTTP Mode

Data Sync	<input checked="" type="checkbox"/>	SubSidiary Server	<input type="text" value="http://slave(ip):port/"/>
Main Server	<input type="text" value="http://main(ip):port/"/>	Retry counts	<input type="text" value="0"/>
Retry counts	<input type="text" value="0"/>	Retry Interval	<input type="text" value="1"/>
Retry Interval	<input type="text" value="1"/>	Data Type	<input type="text" value="Capture"/>
Data Type	<input type="text" value="Capture"/>	Upload Feature Data	<input type="checkbox"/>
Upload Feature Data	<input type="checkbox"/>	Upload Image	<input checked="" type="checkbox"/>
Upload Image	<input checked="" type="checkbox"/>	Upload Small Capture Image	<input checked="" type="checkbox"/>
Upload Small Capture Image	<input checked="" type="checkbox"/>	Upload Big Full Image	<input checked="" type="checkbox"/>
Upload Big Full Image	<input checked="" type="checkbox"/>	Failure Retry	<input checked="" type="checkbox"/>
Failure Retry	<input checked="" type="checkbox"/>		

Active Integration Mode

Support the use of box on the public network.

After successful registration, you can query the IP and port corresponding to the external network through <http://39.107.105.159:16789/pdns?sn=CN00YXS7WGQV18080000&port=80>.

Spontaneous

Spontaneous

Server	<input type="text"/>
Port	<input type="text" value="0"/>
APP_ID	<input type="text"/>
APP_KEY	<input type="text"/>
Device	<input type="text"/>
Serial	<input type="text" value="M030201202105000004"/>
Connected	False

3.11 Logs

It is used to record the operation log of the system. It can be used to record the information of hardware, software and system problems in the system, improve the log function, and provide query and retrieval of abnormal, configuration, system and other logs.

The following types of log queries are supported:

Exception: No video streaming (RTSP disconnected), no image push (ws connection failure, ftp upload failure, http upload failure), etc.

Operation: log of restful API

System: When the database is repaired or the storage space is insufficient (less than 3G), a log is generated when the old file is deleted; when the system time is modified, a system log is generated.

Custom: for debugging.

Operations

- Query:

Step 1 (Optional) Select the log type (Operation, Alarm, System, Custom) in the drop-down menu.

Step 2 (Optional) Select a time period.

Step 3 Click "Search" to query the logs under this condition.

- Export Page:

Click "Export Page" to export the current page log.

- Export Query:

Click "Export Query" to export all logs.

Chapter 4 Service

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

Technical Support Mailbox: support@milesight.com

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

MILESIGHT USA

TEL: +1-800-561-0485

Add: 220 NE 51st Street, Oakland Park, Florida 33334, USA

MILESIGHT KOREA

TEL: +82-31-990-7732

Add: 925, Anyang SK V1 Center, LS-ro 116beon-gil, Dongan-gu, Anvang-si, Korea

MILESIGHT CHINA

TEL: +86-592-5922772

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