

AI edge all-in-one machine centralized management platform user manual

V3.1

catalogue

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1 Edge all-in-one product introduction

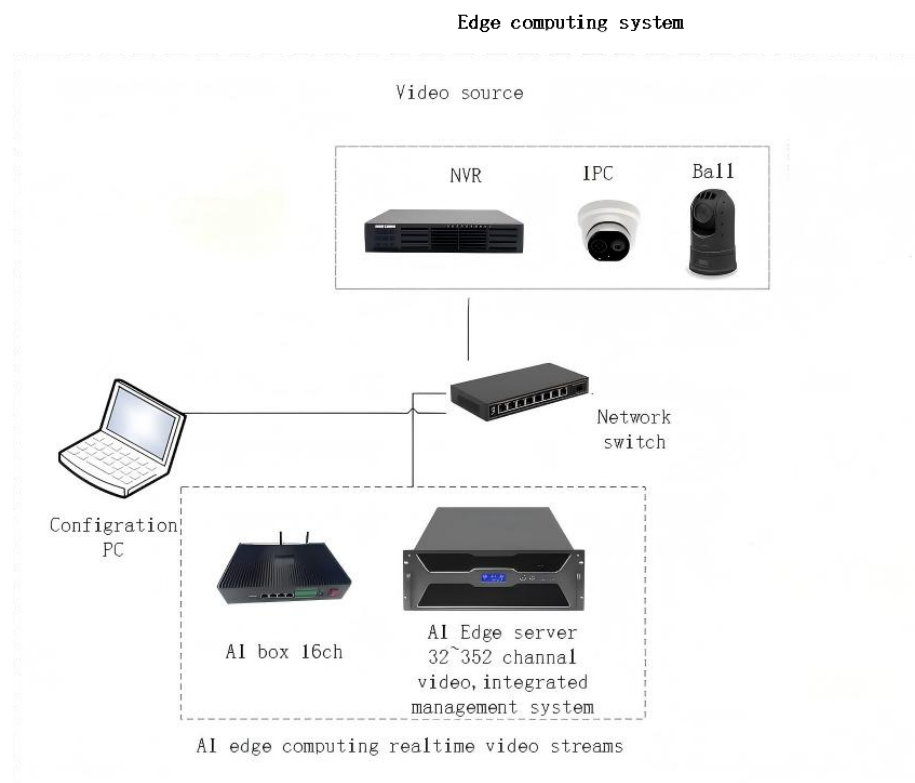
The product integrates 2~22 edge computing server units, can support up to 352-channel 1080P AI video analysis, and a low-power industrial control motherboard, more convenient for multi-channel AI video analysis scenarios.

The product is divided into 1U (maximum 96 channels), 2U (maximum 128 channels), 4U (maximum 352 channels) three versions.

1.1 Product Appearance



2 Hardware connection instructions





1U edge all-in-one machine connection mode



2U edge all-in-one machine connection mode

3 Advantages of centralized management platform

The edge centralized management platform seamlessly connects with the edge computing unit. The distributed design can smoothly manage dozens of edge computing boxes or edge computing units with minimal resource consumption, and each edge computing unit can manage 16-channel video streams, so that the centralized management platform can manage more than 300-channel video streams.

As the system is distributed computing, the internal gigabit network is managed, each functional module has low load, problems can be quickly located, and it is convenient to configure each computing unit, so that the system is more stable and reliable.

4 Instructions for centralized management platform

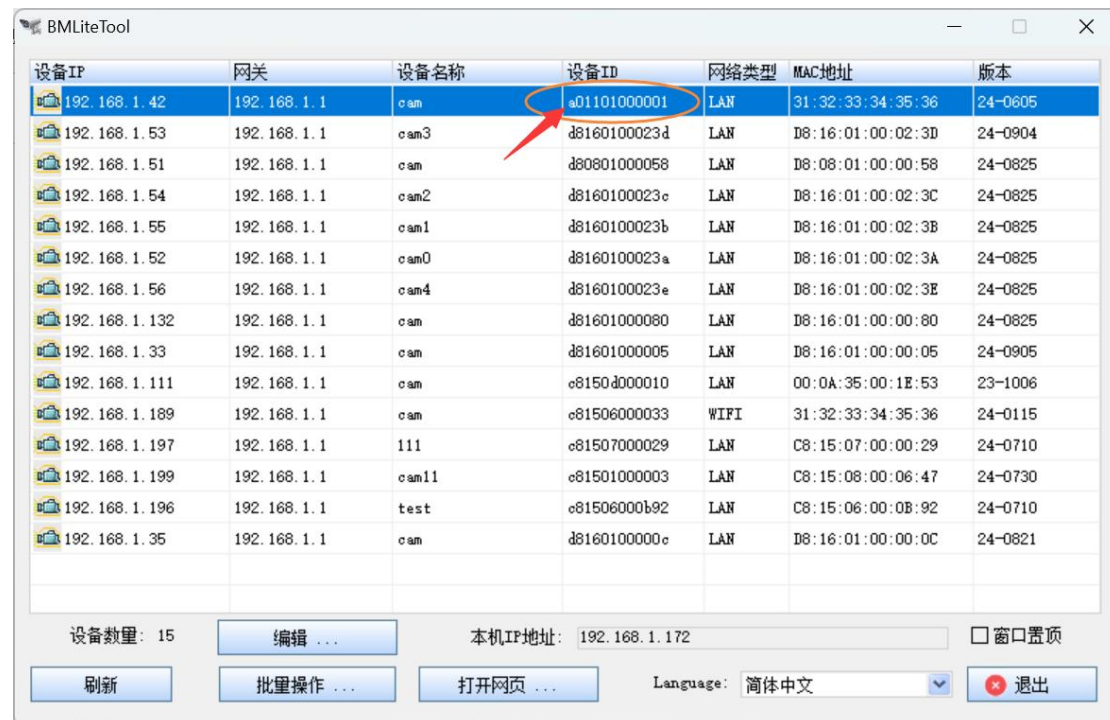
The centralized management platform is designed to manage multiple AI edge computing units or AI boxes in a LAN for use in large projects.

4.1 Server IP address setting

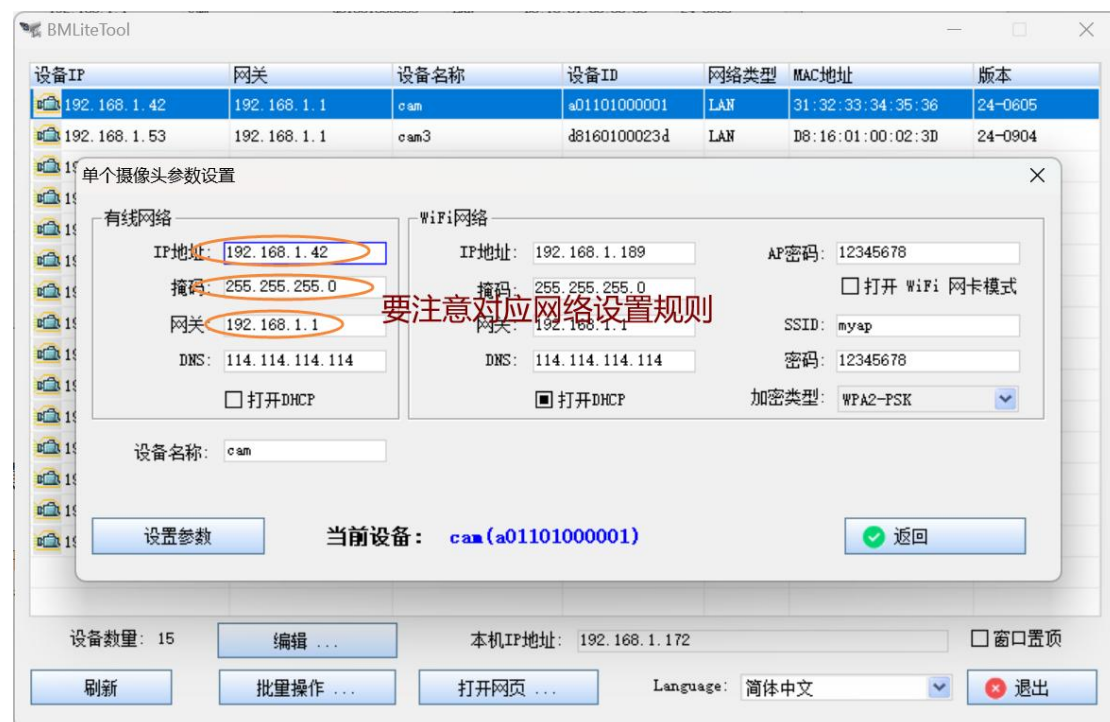
Note that in the current version, in order to facilitate IP configuration, we internally use a software

to manage the network port configuration. The configuration IP is searched through the configuration tool. The specific steps are as follows:

- 1) Find a Windows computer and run the configuration tool, BMLiteTool.exe
- 2) Search for the device starting with a01101 (note that if you can not find it, please disable the Windows firewall)



Change the IP to the desired IP, and make sure to adjust the gateway and subnet masks accordingly.



After setting the network parameters, you can proceed to the following work according to the set

IP.

Note: This tutorial is based on the 192.168.1.X IP segment. In your network environment, you will need to modify the settings according to your specific IP segment.

4.2 Introduction to functional modules

Functions of the local centralized management platform

The local centralized management platform provides large screen data dashboard, map, workbench, alarm management, real-time monitoring, system setting and other functions.

4.3 Instructions for use of interface functions

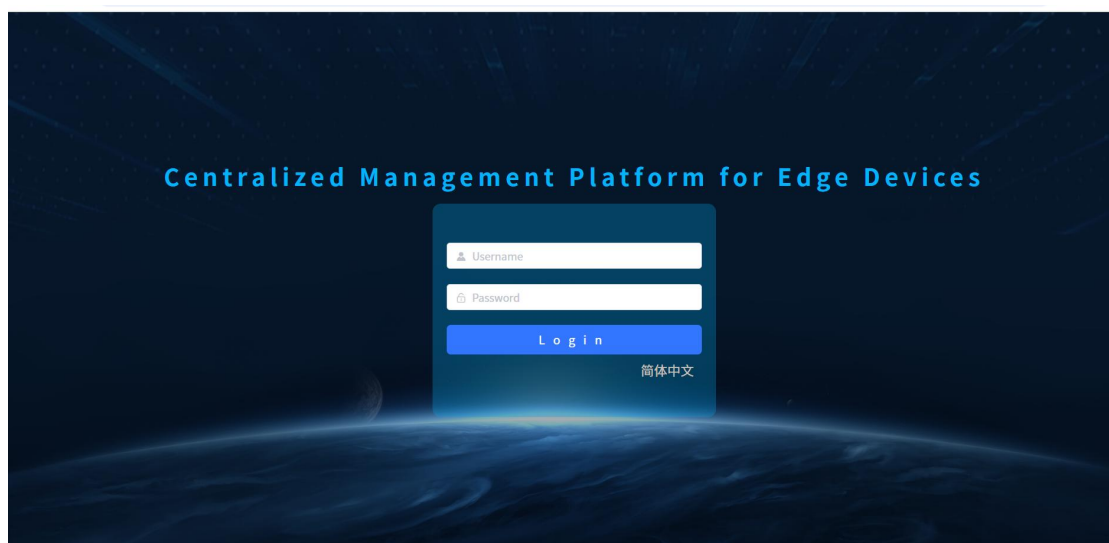
4.3.1 Interface login

Local login:

<http://127.0.0.1:3000/>

Other computer LANs are logged into the edge all-in-one IP, such as

<http://192.168.1.42:3000/>



4.3.2 Large screen display



4.3.3 Workbench

4.3.3.1 Basic functional description

The platform provides comprehensive data visualization, allowing users to intuitively monitor real-time asset status, early warning alerts, statistical reports, and notification updates. Through the workbench, users can swiftly access computing units and configure direct control settings for each channel. The system also supports advanced features including GB28181 video access configuration, AI model management, personnel profile administration, and vehicle registry maintenance. Additionally, it offers OEM customization capabilities for direct modification of logos and platform branding.

Centralized Management Platform for Edge Devices

Large Screen Map Workbench Alarm Monitor Settings | admin | 简体中文 Refresh Logout

Compute Unit

Device: 11 Units, Online: 9 Units

Please select the device

+ Search Add + Manually Add

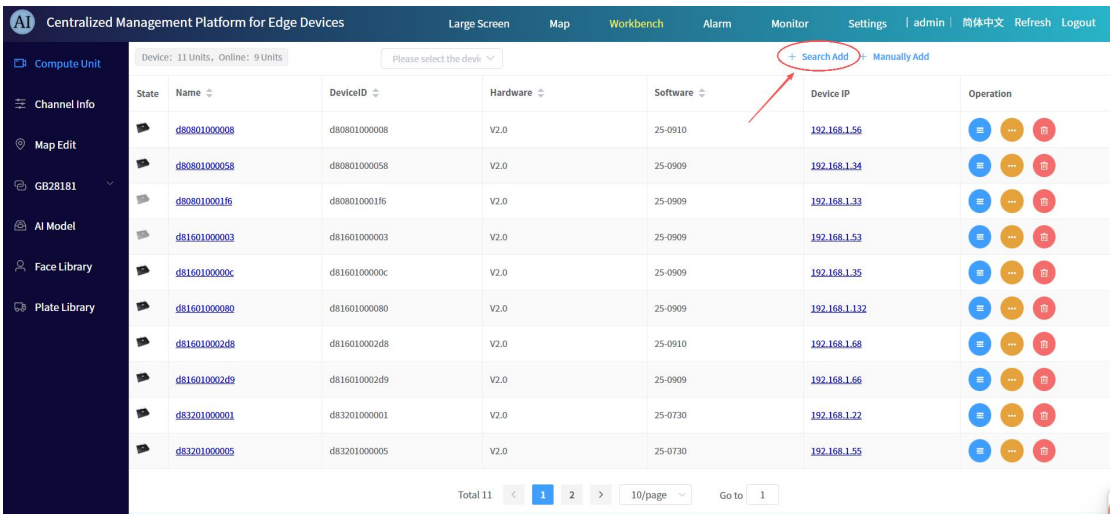
State	Name	DeviceID	Hardware	Software	Device IP	Operation
	d80801000008	d80801000008	V2.0	25-0910	192.168.1.56	
	d80801000008	d80801000008	V2.0	25-0909	192.168.1.34	
	d80801000116	d80801000116	V2.0	25-0909	192.168.1.33	
	d81601000003	d81601000003	V2.0	25-0909	192.168.1.53	
	d8160100000c	d8160100000c	V2.0	25-0909	192.168.1.35	
	d81601000080	d81601000080	V2.0	25-0909	192.168.1.132	
	d816010002d8	d816010002d8	V2.0	25-0910	192.168.1.68	
	d816010002d9	d816010002d9	V2.0	25-0909	192.168.1.66	
	d83201000001	d83201000001	V2.0	25-0730	192.168.1.22	
	d83201000005	d83201000005	V2.0	25-0730	192.168.1.55	

Total 11 < 1 2 > 10/page Go to 1

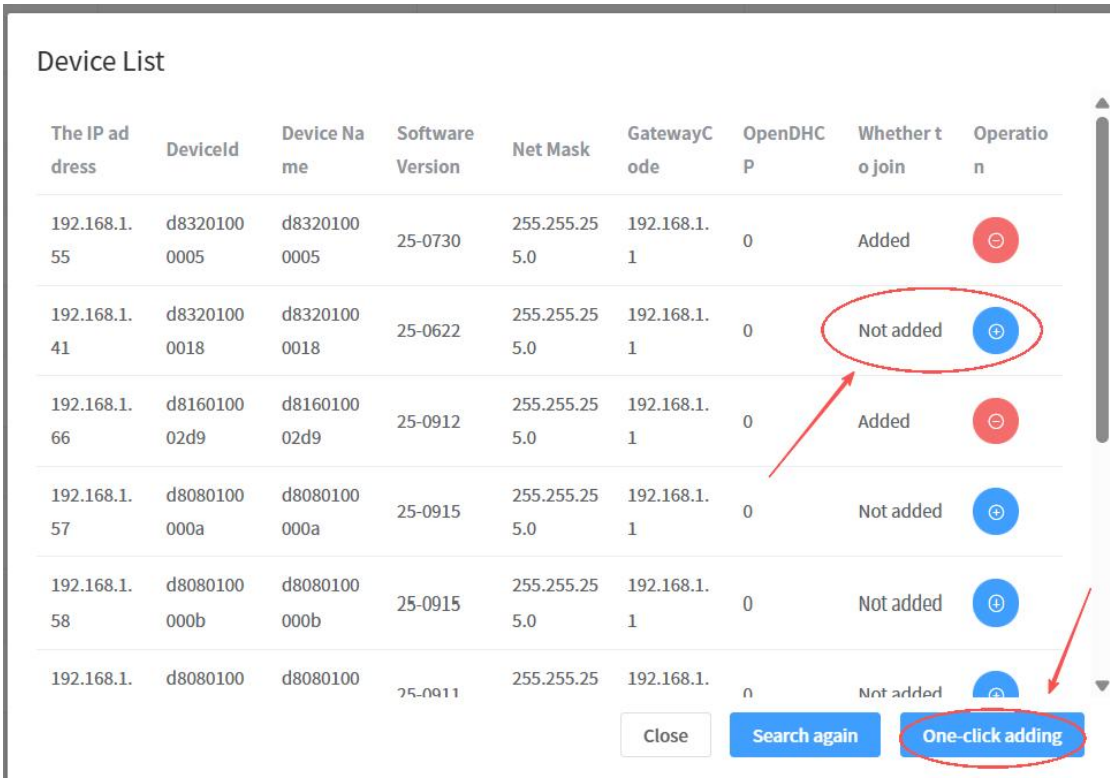
4.3.3.2 Computing unit configuration

Computing units in the LAN can be added by searching, or by manually adding the IP address of

the computing unit to the system.



Click the "Search button" to search for computing units in the LAN and add them to the management system.



After adding, you can click the Settings button to edit the device

Software	Device IP	Operation
25-0910	192.168.1.56	 
25-0916	192.168.1.34	 
25-0909	192.168.1.33	 
25-0909	192.168.1.53	 
25-0911	192.168.1.35	 

Edit device ×

DeviceId: Search device

Hardware:

Software:

Name:

The IP address:

Online Status:

In the editing device, the IP address of the computing unit can be edited directly through the search device button, as shown in the figure:

This allows you to complete the IP setup for each computing unit.

Base Info ×

DeviceId:

IP 1

Net Mask:

Gateway 2

DNS:

Software:

OpenDHCP:

Save 3

This way, the IP settings of all computing units can be completed one by one.

After completing the IP settings of the computing unit, the channels of the computing unit can be configured.

Software	Device IP	Operation
25-0910	192.168.1.56	  
25-0916	192.168.1.34	  
25-0909	192.168.1.33	  
25-0909	192.168.1.53	  
25-0911	192.168.1.35	  
25-0911	192.168.1.132	  
25-0912	192.168.1.68	  
25-0912	192.168.1.66	  

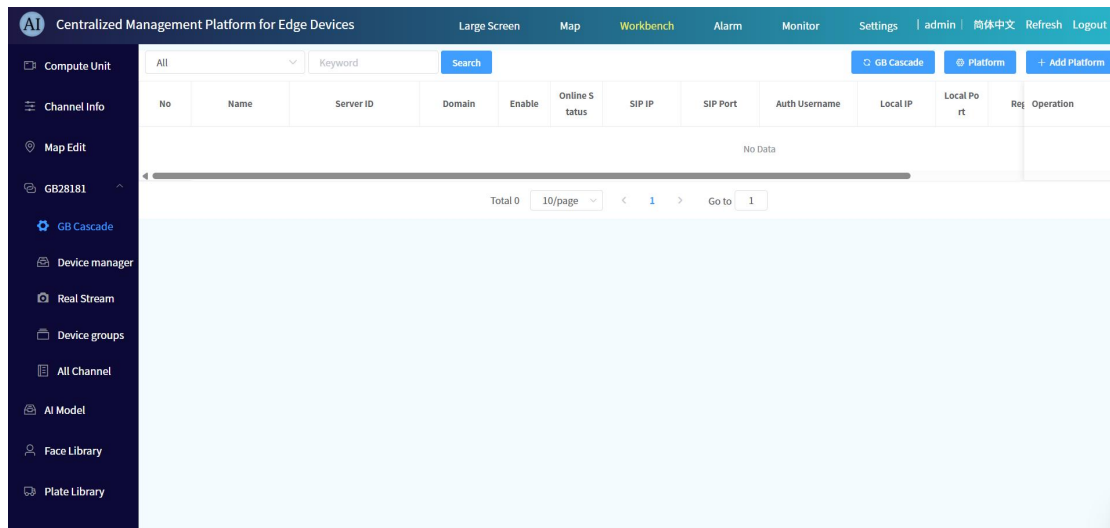
Click to jump to the inside
of the computing unit

Add channels and set alarm rules. After that, all alarms of the system can be pushed to the third-party platform or displayed on the centralized management platform, local and remote do not affect each other.

AI Edge Computing Server										
Large Screen Alarm Monitor Deployment Setting Account: admin Logout English Download										
+ Add Import Chn Bulk Del Note Add channels in sequence and delete channels in reverse order										
No.	Chn Name	Position	Device Id	Format	Type	RTSP	Mode	State	Operation	
0	大门口	定军山电影 科技产业园	-	H264	RTSP	rtsp://admin:bm345345@192.168.1.70:554/Streaming/Channels/101?transportmode=unicast	TCP	Online	Video Preview	Edit Delete
1	会议室1	定军山电影 科技产业园	-	H264	RTSP	rtsp://admin:bm345345@192.168.1.70:554/Streaming/Channels/201?transportmode=unicast	TCP	Online	Video Preview	Edit Delete
2	会议室2	定军山电影 科技产业园	-	H264	RTSP	rtsp://admin:bm345345@192.168.1.70:554/Streaming/Channels/301?transportmode=unicast	TCP	Online	Video Preview	Edit Delete
3	走廊西	定军山电影 科技产业园	-	H264	RTSP	rtsp://admin:bm345345@192.168.1.70:554/Streaming/Channels/401?transportmode=unicast	TCP	Online	Video Preview	Edit Delete
4	洗手间门口	定军山电影 科技产业园	-	H264	RTSP	rtsp://admin:bm345345@192.168.1.70:554/Streaming/Channels/501?transportmode=unicast	TCP	Online	Video Preview	Edit Delete
Total 9 < 1 10/page > Go to 1										

For the detailed configuration of the computing unit, see the AI Edge Computing Server Detailed Specification

4.3.3.3 GB28181 National standard cascade



For large-scale projects that require pulling video streams from the video integration platform, GB28181 access is the most convenient, and the system provides this feature.

For example, a project can be cascaded into the system by configuring national standard parameters.

External domain code: default 3402000002000001

IP address: The IP address of the server

Signaling communication port: 5060

The screenshot shows a configuration form for GB28181. The fields and their values are: '外域名称' (External Domain Name) set to 'AI算力'; '平台厂家' (Platform Manufacturer) set to '其他'; '外域编码' (External Domain Code) with a red circle around the input field and a red text prompt '请输入1-20位外域编码' (Please enter 1-20 digit external domain code); '所属信令服务网域地址' (Belonging to signaling service network domain address) set to '10.179.232.29'; '联网服务地址' (Networking service address) set to '10.179.232.29:7099'; 'IP地址' (IP Address) set to '10.179.202.16' with a red circle around the field; and '信令通信端口' (Signaling communication port) set to '7100' with a red circle around the field. At the bottom, there is a checkbox for '下级域离线通知' (Lower domain offline notification).

AI

Centralized Management Platform for Edge Devices

Large Screen

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Alarm

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Refresh

Logout

Compute Unit

Channel Info

Map Edit

GB28181

GB Cascade

Device manager

Real Stream

Device groups

All Channel

AI Model

Face Library

Plate Library

Pullto

Keyword Of name

Channel Number

Search

Channel alloca

ConfigToChn

Export Data

Get Device

Restart

No	Name	Device Number	Channel Number	IPIP	Devices	Enable	State	Channel	Manufacture	RT	Operation
No Data											

Total 0

10/page

< 1 >

Go to 1

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Device manager

Real Stream

Device groups

All Channel

AI Model

Face Library

Plate Library

Keyword Filter

Gb Group

No Data

Screen: 4Screen

Play the reset Fullscreen

NO VIDEO

NO VIDEO

NO VIDEO

NO VIDEO

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GB28181

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Device manager

Real Stream

Device groups

All Channel

AI Model

Face Library

Plate Library

Group Name

Search

New group

No	Group Name	Superior groupID	Superior group	Number	Time	Operation
10	分组	0	顶级	0	2025-05-16 16:40:05	Add device Edit Delete
11	二分组	10	分组	0	2025-05-17 10:19:09	Add device Edit Delete
14	组	0	顶级	0	2025-08-01 10:49:24	Add device Edit Delete

Total 3

10/page

< 1 >

Go to 1

The screenshot displays the 'Centralized Management Platform for Edge Devices' interface. The top navigation bar includes tabs for 'Large Screen', 'Map', 'Workbench', 'Alarm', 'Monitor', 'Settings', 'admin', '简体中文', 'Refresh', and 'Logout'. A left sidebar contains a 'Compute Unit' menu with options like 'Channel Info', 'Map Edit', 'GB28181', 'GB Cascade', 'Device manager', 'Real Stream', 'Device groups', 'All Channel', 'AI Model', 'Face Library', and 'Plate Library'. The main area shows a table of channel configurations with columns for No., DeviceID, Channel Name, Device IP, Connect Type, Code Mode, Connect State, Enable, RTSP, and Operation. The table lists 9 channels, with the first 7 being online and the last 2 being offline. The bottom of the table shows a pagination bar with 'Total 144' and a 'Go to' field.

No.	DeviceID	Channel Name	Device IP	Connect Type	Code Mode	Connect State	Enable	RTSP	Operation
1	d816010002d9	走廊东 [CH:0]	192.168.1.66	RTSP	H264	Online	On	rtsp://admin:bm345345@192.168.1.70:554/Strg/Channels/901?transportmode=unicast	Look Delete
2	d816010002d9	车间1 [CH:1]	192.168.1.66	RTSP	H264	Online	On	rtsp://admin:bm345345@192.168.1.70:554/Strg/Channels/1001?transportmode=unicast	Look Delete
3	d816010002d9	车间2 [CH:2]	192.168.1.66	RTSP	H264	Online	On	rtsp://admin:bm345345@192.168.1.70:554/Strg/Channels/1101?transportmode=unicast	Look Delete
4	d816010002d9	测试 [CH:3]	192.168.1.66	RTSP	H264	Online	On	rtsp://admin:bm345345@192.168.1.70:554/Strg/Channels/1201?transportmode=unicast	Look Delete
5	d816010002d9	hknvr [CH:4]	192.168.1.66	RTSP	H264	Offline	On	rtsp://admin:123456@192.168.0.103:554/StreamChannels/1301?transportmode=unicast	Look Delete
6	d816010002d9	-- [CH:5]	192.168.1.66	RTSP	H265	Offline	On	rtsp://192.168.1.131:554/stream0	Look Delete
7	d816010002d9	大华机芯 [CH:6]	192.168.1.66	RTSP	H264	Online	On	rtsp://admin:admin123456@192.168.1.108:1081/realmonitor/channel=1&subtype=0	Look Delete
8	d816010002d9	-- [CH:7]	192.168.1.66	--	--	Offline	Off	--	Setting
9	d816010002d9	-- [CH:8]	192.168.1.66	--	--	Offline	Off	--	Setting

4.3.3.4 AI model management (requires special customization)

The associated AI model training platform includes AI model addition generation, AI algorithm automatic annotation, manual annotation, model conversion, model update and other functions.

4.3.4 Alarm management

The alarm management module provides functions such as alert capture, structured capture, face recognition, vehicle recognition and alarm pop-up.

4.3.5 Alerts captured

The alarm capture page provides functions such as query alarm status, processing alarm, etc., according to time, computing unit, channel and alarm type.

Centralized Management Platform for Edge Devices											
Alarm List											
Unhandled 999+ Handling 0 Dealed 3 Save the pictures on the page Batch delete Batch Export Time 2025-09-11 00:00:00 To 2025-09-18 00:00:00 Please enter key info Please Chose De All Alarm type Recheck Query											
No	Alarm Capture	Device	Channel	Recheck Result	Alarm Subtype	Reliability	Alarm Time	Rule	Risk level	Status	Operation
1		d816010002d8	选手间门口 Channel:4	NoCheck	Intrusion	84.900	2025-09-17 18:37:12	Human Alert	LowRisk	Unhandled	  
2		d816010002d8	大门口 Channel:0	NoCheck	Intrusion	84.900	2025-09-17 18:37:05	Human Alert	LowRisk	Unhandled	  
3		d80801000058	走廊东 Channel:0	Pass	安全帽	0	2025-09-17 18:37:00	Unknown		Unhandled	  
4		d816010002d8	大门口 Channel:0	NoCheck	Reflective clothing	84.900	2025-09-17 18:37:00	Human Safe	LowRisk	Unhandled	  
5		d816010002d8	大门口 Channel:0	NoCheck	Safecap	84.900	2025-09-17 18:37:00	Human Safe	LowRisk	Unhandled	  
Total 33791 1 2 3 4 5 6 ... 3380 10/page Go to 1											

4.3.5.1 Structured Capture

Structured capture provides retrieval functions for various capture targets such as face, human shape, motor vehicle, non-motor vehicle and license plate. It supports face search by image and facial emotion recognition.

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Centralized Management Platform for Edge Devices

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Map

Workbench

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Settings

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Refresh

Logout

Statistics

Alarm Capture

Struct Capture

Alarm Handle

Face Recog

Car Recog

Large Model

Structured Snap

Save the pictures on the page

Batch delete

Batch Export

Time

2025-09-11 00:00:00

To

2025-09-18 00:00:00

Please enter key info

Face

Emotion

Query

Search By Image

No	Capture Image	Device	Channel	Gender	Age	Hat	Mask	Glasses	Emotion	Reliability	Capture Time	Operation
5		d816010002d9	Channel:5	male	59	no_hat	no_respirator	no_glasses	neutral	99.600	43:40	
6		d816010002d9	大华机芯 Channel:5	male	57	no_hat	no_respirator	no_glasses	neutral	82.800	2025-09-17 17:42:44	
7		d816010002d9	大华机芯 Channel:5	male	41	unknown	no_respirator	regular_glasses	neutral	71.400	2025-09-17 17:42:32	
8		d816010002d9	大华机芯 Channel:5	male	39	no_hat	no_respirator	regular_glasses	neutral	99.300	2025-09-17 17:42:25	
9		d816010002d9	大华机芯 Channel:5	male	43	no_hat	no_respirator	regular_glasses	neutral	75.600	2025-09-17 17:42:23	
10		d816010002d9	大华机芯 Channel:5	male	39	unknown	no_respirator	no_glasses	neutral	67.500	2025-09-17 17:42:11	

Total 1643

1

2

3

4

5

6

...

165

10/page

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4.3.5.2 face recognition

Record all captured faces and provide retrieval function.

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Refresh

Logout

Statistics

Alarm Capture

Struct Capture

Alarm Handle

Face Recog

Car Recog

Large Model

Face Recog

Save the pictures on the page

Batch delete

Batch Export

Time

2025-09-11 00:00:00

To

2025-09-18 00:00:00

Please enter key info

Query

☐	No	Capture Image	Baselimg	Device	Channel	Reliability	Name	DeptName	Gender	Mobile NO	Capture Time	Operation
☐	6			d816010002d8	公司门口 Channel:8	86.460	赖工	研发部	男	1233444	2025-09-17 13:56:51	
☐	7			d816010002d8	公司门口 Channel:8	73.356	谭绍强	未知	女	3454565655	2025-09-17 13:56:49	
☐	8			d816010002d8	公司门口 Channel:8	82.296	梅总	未知	女	54645655555	2025-09-17 12:56:50	
☐	9			d816010002d8	公司门口 Channel:8	73.351	胡晓军	未知	男	13124567788	2025-09-17 12:26:59	
☐	10			d816010002d8	公司门口 Channel:8	81.640	赖工	技术部	男	13144567832	2025-09-17 12:26:20	

Total 281

1

2

3

4

5

6

...

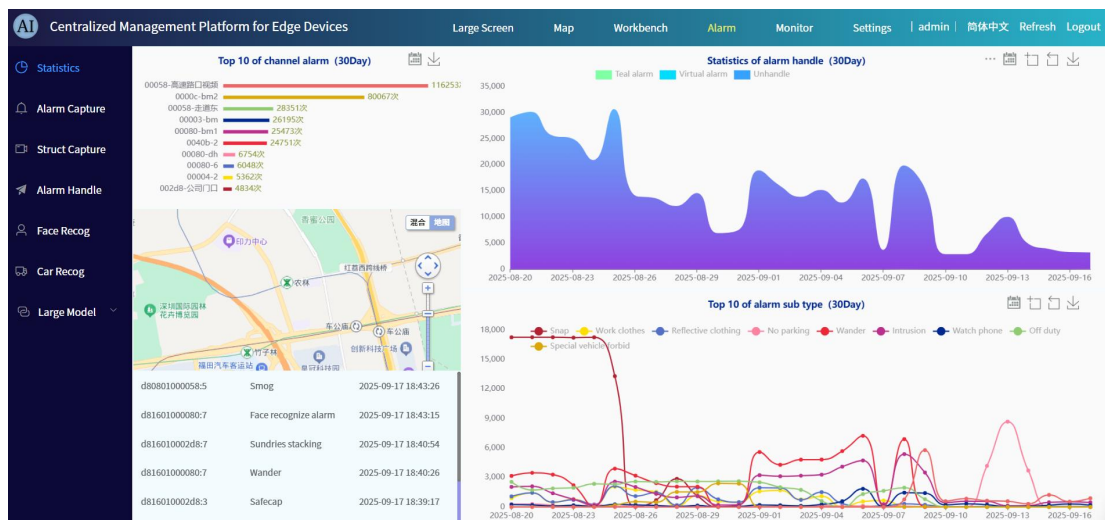
29

10/page

Go to 1

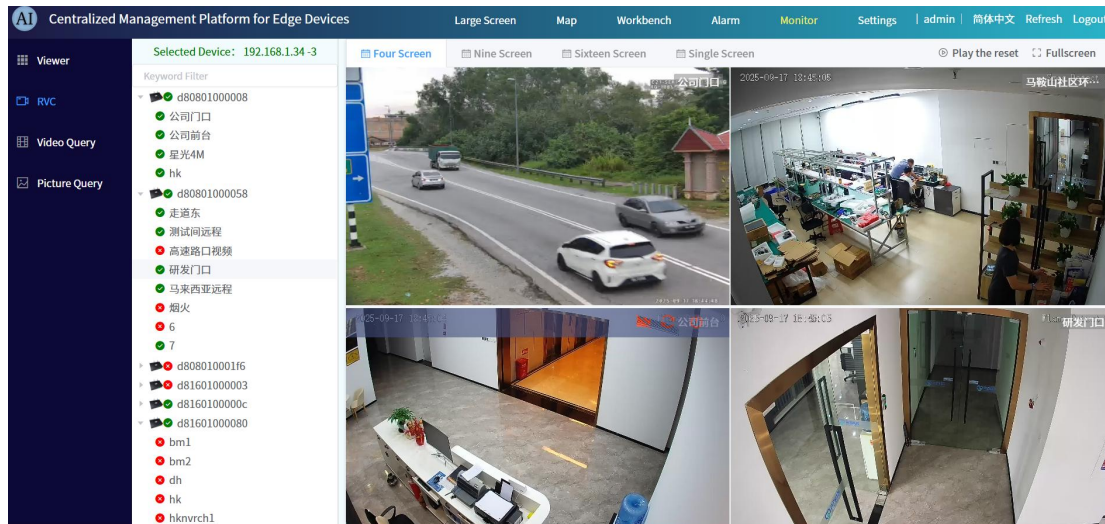
4.3.5.3 statistical analysis

The statistical analysis module provides visual statistics of early warning data, intuitively displays the security operation situation based on different dimensions, highlights key problems, improves supervision efficiency, and supports the selection and summary of results in different time dimensions and export results.



4.3.6 Real time monitoring

The real-time monitoring module is the monitoring interface in the daily production process. It supports scene monitoring through real-time monitoring and single-screen/multi-screen switching. At the same time, it can support AI video pictures and query alarm videos and pictures of all channels.



5 Description of local centralized management platform expansion

The platform will expand the large-scale face recognition comparison function in the future, which can query the person's trajectory according to the face;

Management of the incremental training platform will be integrated into the workbench.

Continuously improve the usability of the platform and more features.

The map function is being optimized to enable editing and visual management of maps.