

Central Management System

WCAM MANAGER 2.0

User Guide

User Guide

WCAM MANAGER

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NOTE!

This content may be outdated! To access the most recent version of the documentation, please refer to the following link: <https://guides.weg.net/dds/sds/wcam/manager-help/en/>

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1. PLATFORM DESCRIPTION

The **WEG WCAM Manager** is a video management solution designed to meet different monitoring scales. The platform offers:

- **Centralized Management:** Complete control of all devices from a single location.
- **Distributed Deployment:** Flexibility to organize and monitor devices in different locations.
- **Multi-user Remote Access:** Enables multiple users to securely access the system simultaneously.

Key Features:

- User, device, and server management.
- Camera configuration and control, including real-time video and video playback.
- Alarm management and interactive maps.
- Data statistics and facial recognition.
- Management of personal files and recording history.

1.1. WEG WCAM MANAGER FEATURES

WEG WCAM Manager offers several features that simplify device management and video monitoring. Below are the key functionalities:

- **Multi-user Connections:** Allows simultaneous connection of multiple clients.
- **Device Compatibility:** Supports IP cameras, NVRs, DVRs, facial capture cameras, among others.
- **Centralized Management and Distributed Deployment:**
 - Unified management of resources such as users and devices.
 - Distributed server deployment for greater flexibility.
- **Access Management:** Different users can receive specific permissions according to their profiles.
- **Device Management:**
 - Supports automatic search, manual addition, and batch import of devices.
- **User Management and Classification:**
 - Supports hierarchical organizational structures, allowing higher-level users to manage subordinates.
- **Organizational Management:** Restricts users within an organization to exclusively access cameras belonging to the same organization.
- **Real-Time Monitoring:**
 - Supports multi-screen layout preview and full tour display.
- **Video Playback:** Supports synchronous playback of videos with multiple images.
- **Video Download:** Allows downloading of NVR and DVR recordings to local devices.

- **Map Management:** Video viewing based on electronic maps.
- **Real-Time Alarms:** Displays device alerts and alarms directly on the client interface.
- **Data Statistics:** Generates reports on alarms, device connectivity rates, and other relevant data.
- **Facial Recognition:**
 - Face library for multi-level management and batch data import.
 - Real-time comparison of captured faces with the face library.
 - Image search to find similar faces within the face library.
- **Event Linking:** Automates actions like sending alarms, emails, triggering I/O of cameras and recorders when specific conditions are met.

1.2. SYSTEM COMPONENTS

Acronym	Full Name	Description
CMU	Central Management Unit	The central management unit centralizes user management, authority management, and device management.
MDU	Media Distribution Unit	The media distribution unit forwards audio and video streams from the device to the requesting user.
IAU	Intelligent Analysis Unit	The intelligent analysis unit is used for facial recognition applications.

1.2.1. CMU - Central Management Unit

The Central Management Unit (CMU) centralizes the management of users, devices, alarms, maps, face databases, and more. As a service, it can be installed exclusively on a server or together with other components. Users must first connect to the CMU to authenticate themselves. Subsequently, they can connect to the Media Distribution Unit (MDU) and Intelligent Analysis Unit (IAU) to use the relevant functionalities.

1.2.2. MDU - Media Distribution Unit

The Media Distribution Unit forwards audio and video streams from the device to the requesting user, ensuring high performance with low end-to-end latency. It supports running as a service and can be installed on a standalone server or together with other components.

When the MDU is installed separately on a server, the IP address of its CMU must be configured so that it can be managed by the CMU. The performance requirements for the Media Distribution Unit are as follows: Gigabit NIC (Network Interface Card).

Media Distribution Unit Performance Requirements:

Channel	Camera Bitrate	Input Bitrate	Output Bitrate
200	4 Mbps	800 Mbps	800 Mbps
400	2 Mbps	800 Mbps	800 Mbps
500	1.5 Mbps	800 Mbps	800 Mbps

1.2.3. IAU - Intelligent Analysis Unit

The Intelligent Analysis Unit is used for facial recognition applications. It exclusively supports cameras with face detection functionality and operates as a service. The server can be installed

on a dedicated server or shared with other components. For high-performance requirements, it is recommended to install the Intelligent Analysis Unit in a separate environment.

Recommended Requirements for the IAU

Type	Processor	RAM Memory	Facial Detection Channels
CPU	Intel® Core i5-7500	8 GB	1-3
CPU	Intel® Core i7-8700	8 GB	2-8
CPU	Intel® Xeon E5-2630 v4	16 GB	4-10

NOTE!

With the presented configuration, performance may vary under conditions of low camera access, despite high-quality real-time video and intense human flow. Requirements can be adjusted based on specific usage needs.

1.2.4. Database

The Central Management Unit (CMU) and the Intelligent Analysis Unit (IAU) utilize system configuration and information stored in a MySQL database.

1.2.5. Server Management Tools

The server management tool is used to manage server services; it displays the running status of the service and can also control the startup, stop, and removal of the service. You can manually add the service. If the service component does not start normally, the system will display a reminder, allowing the problem to be detected in a timely manner. The tool launches automatically once the installation is complete, as shown in Figure 1-1:

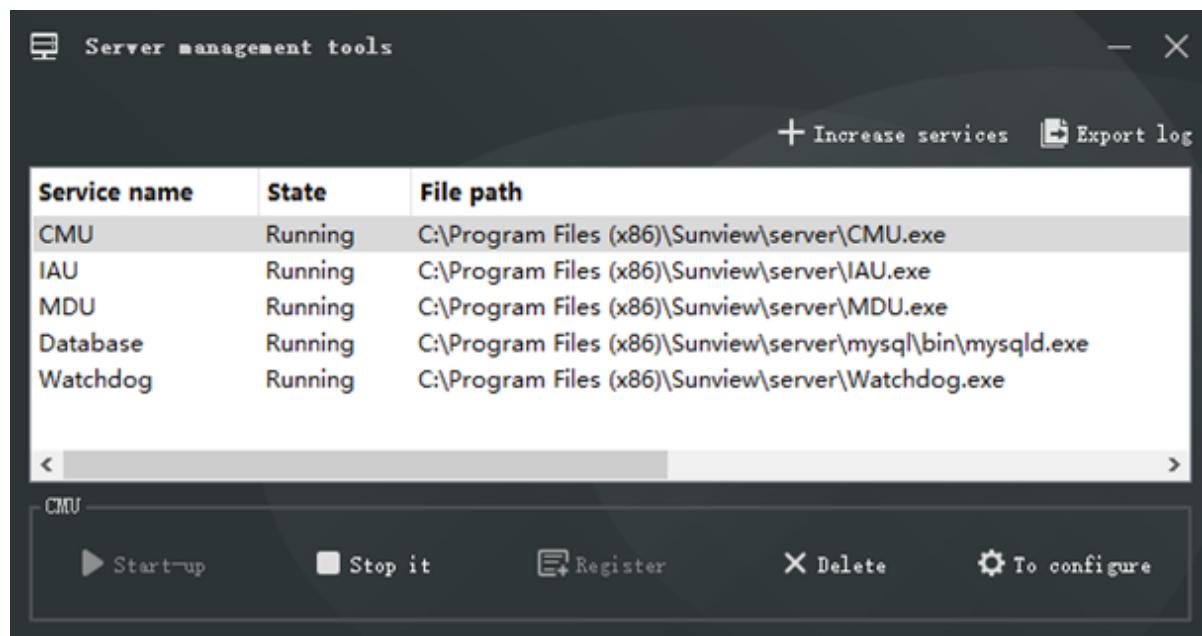


Figure 1-1: Server Management Tools Interface

1.2.6. Desktop Client

Currently, the Desktop Client only supports the Windows operating system. It is a software specifically developed for video management. Users can remotely access real-time videos and

video recordings, manage users, devices, servers, alarms, etc., and simultaneously control devices. The interface is shown in Figure 1-2.

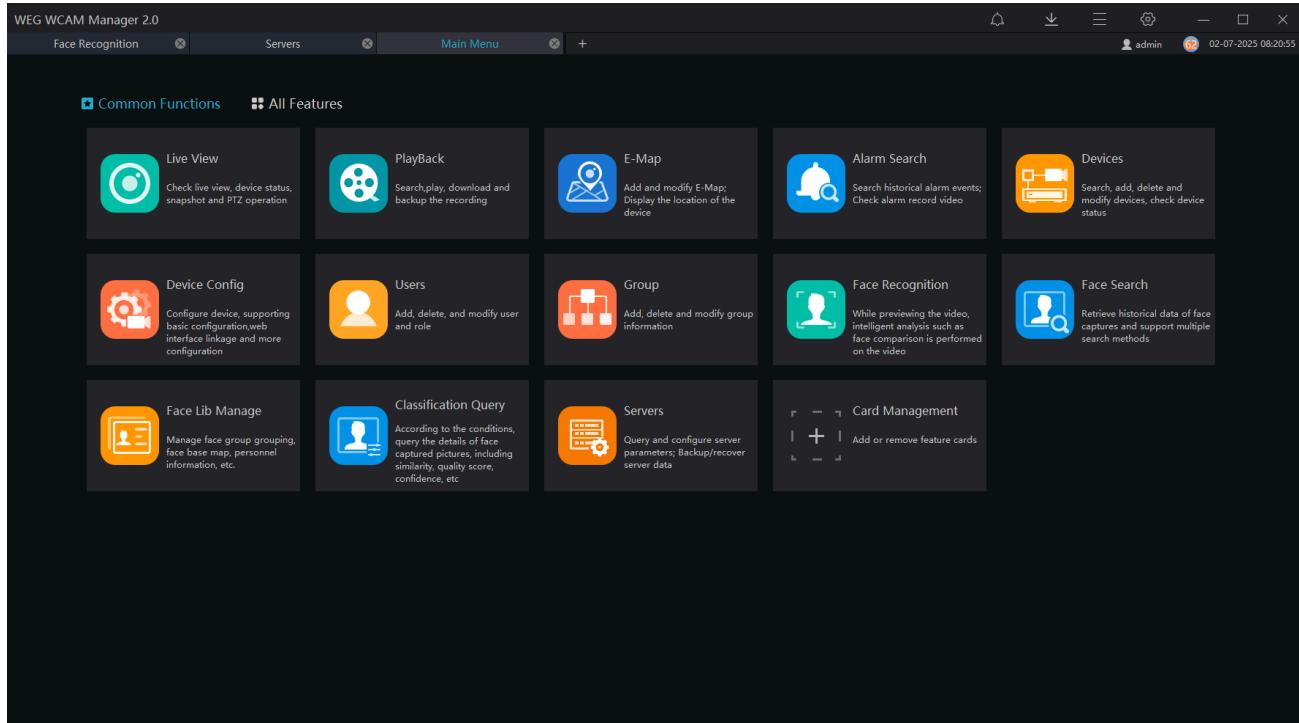


Figure 1-2: Desktop Client Interface

WARNING!

After logging in, the system verifies the versions of the client and server. If they do not match, an alert message will appear: "Client and server versions do not match". It is recommended to use the same versions for both components.

1.3. SYSTEM REQUIREMENTS

The table below presents a reference for defining the recommended requirements for the solution.

	Desktop Client	CMU	MDU	IAU	IAU (GPU)
CPU	Intel® Core™ i5 -7500 ou superior	Intel® Core™ i5 -7500 ou superior	Intel® Core™ i5 -7500 ou superior	Intel® Core™ i7 ou superior	Intel® Core™ i7 ou superior
RAM	8 GB ou mais				
Network	1 Gbps				
Storage	50 GB ou mais				
Operational System	Microsoft® Windows® 7 Pro (64 bits)				
	Microsoft® Windows® 10 Pro (64 bits)				
	Microsoft® Windows® 10				

	Enterprise (64 bits)	Enterprise (64 bits)	Enterprise (64 bits)	Enterprise (64 bits)	Enterprise (64 bits)
	Microsoft® Windows® Server 2012	Microsoft® Windows® Server 2012	Microsoft® Windows® Server 2012	Microsoft® Windows® Server 2012	Microsoft® Windows® Server 2012
	Microsoft® Windows® Server 2016	Microsoft® Windows® Server 2016	Microsoft® Windows® Server 2016	Microsoft® Windows® Server 2016	Microsoft® Windows® Server 2016
Software	DirectX 11 ou superior				
Resolution	1600x960 ou superior; padrão 1920x1080				
GPU					NVIDIA GTX 1050 ou superior

WARNING!

The software is not compatible with 32-bit architectures.

1.3.1. Ports and functions

The table below presents the ports used by the solution.

Port	Protocol	Function
3303	TCP	MySQL Database
8080	TCP	CMU
10024	TCP	Watchdog service
10086	TCP	CMU service, client connection
10100	TCP	IAU service, client connection
10200	TCP	MDU service, client connection
15680	TCP	SSL registry port on CMU
15681	TCP	SSL registry port on MDU
15682	TCP	SSL registry port on IAU
17886	TCP	Device registration port on IAU
17888	TCP	Device registration port on CMU
17988	TCP	Device registration port on MDU
20085	TCP	Listening port for IAU
20087	TCP	Listening port for IAU
61002	TCP	Monitoring port for P2P device discovery protocol

1.3.2. Firewall

For the solution to work properly, it is recommended to open the following ports on the firewall.

Port	Protocol	Function
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3303	TCP	MySQL Database
10024	TCP	Watchdog service
10086	TCP	CMU service, client connection
10100	TCP	IAU service, client connection
10200	TCP	MDU service, client connection

1.4. DEPLOYMENT PLANNING

The platform has good scalability and can support three deployment methods:

1.4.1 Standalone Deployment

All platform components, including server components and Desktop client components, are deployed on the same computer to facilitate the deployment of small-scale monitoring applications.



Figure 1-3: Standalone Deployment

1.4.2 Client-Server Deployment (Small and Medium-Sized Businesses)

In this architecture, all services are installed on a single server, while the Desktop clients are distributed across operators' computers. This scenario is recommended for most applications, supporting a range of 50 to 500 video channels and some facial recognition channels.



Figure 1-4: Client-Server Deployment (middle size)

1.4.3 Distributed Deployment (Large Enterprises)

The distributed architecture is recommended for managing a large number of video channels or when many facial recognition channels are required. In this scenario, each server component can be installed on a dedicated server, and multiple servers with MDU and IAU services can be deployed as needed for processing, making the solution scalable to support 500 to 10,000 video channels.



Figure 1-5: Distributed Deployment

2. INSTALLATION

2.1 STANDARD INSTALLATION

The recommended standard installation for standalone deployments, where all components are installed on the same computer, does not require any configuration. The platform is quickly installed on a single machine and, by default, is installed in the directory C:\Program Files (x86)\WEG WCAM Manager 2.0. After installation, the server component and the client program are automatically started.

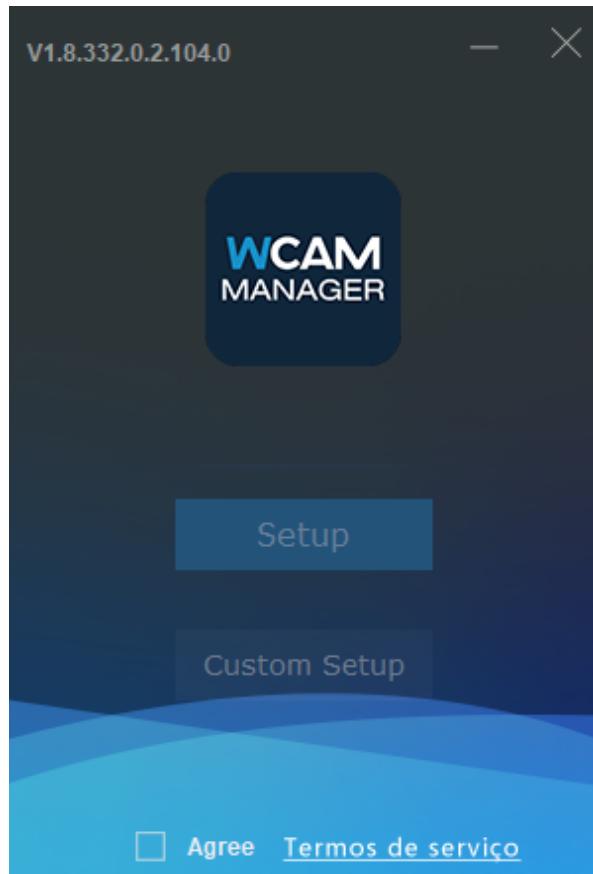


Figure 2-1: One-click Installation

2.2 CUSTOM SETUP

The custom setup supports flexible installation. You can choose the services and the directory where they will be installed. This allows the installation of the platform for all three deployment methods:

Step 1: Read and accept the terms of service;

Step 2: Click the custom setup button;

Step 3: Select which services will be installed on the specific machine and the location for installation;

Step 4: Click Install to begin the installation.

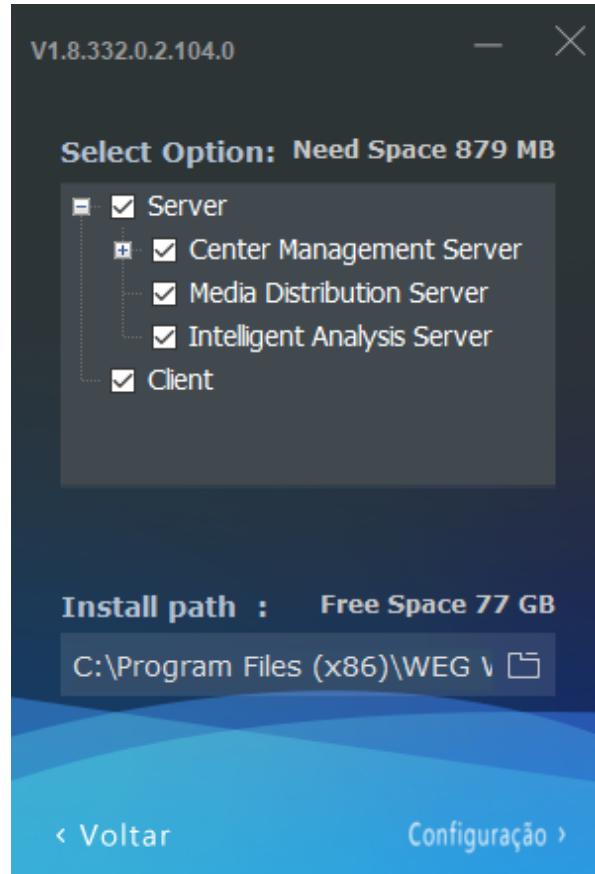


Figure 2-2: Custom Setup

NOTE!

When the Desktop client is not on the same computer as the CMU, you must perform the necessary firewall configurations on the server. Otherwise, when attempting to log in remotely from the operator's computer, data packets may be intercepted by the firewall, resulting in a login failure.

For distributed installations, after completing the server installation, you need to use the server management tool to configure the IP and Port of the CMU, MDU, and IAU servers. This facilitates unified management via the central management unit. The tool is automatically displayed in the system tray after the system installation.

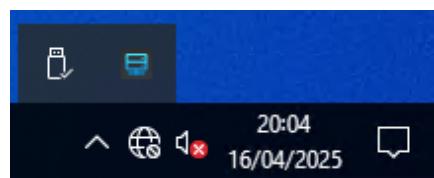


Figure 2-3: Server management tool icon

After displaying the main interface, select the corresponding service and click "To configure," as shown in Figure 2-4.

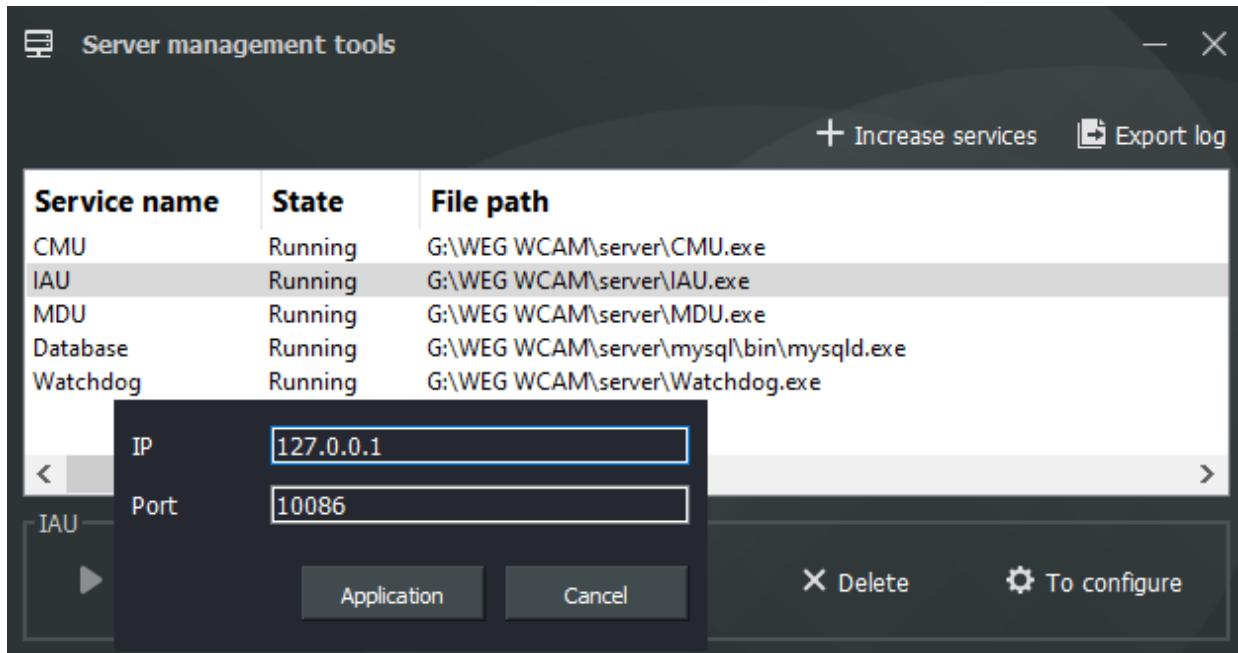


Figure 2-4: Configure the IP address of the IAU server

3. ACCESS TO THE SYSTEM

3.1 ACCESS TO THE SYSTEM

If the server installation is complete, double-click the Desktop Client icon.



Figure 3-1: Desktop Client Icon

Enter the username, password, and IP address of the Central Management Server, then click "Login." The login interface is shown in Figure 3-2.

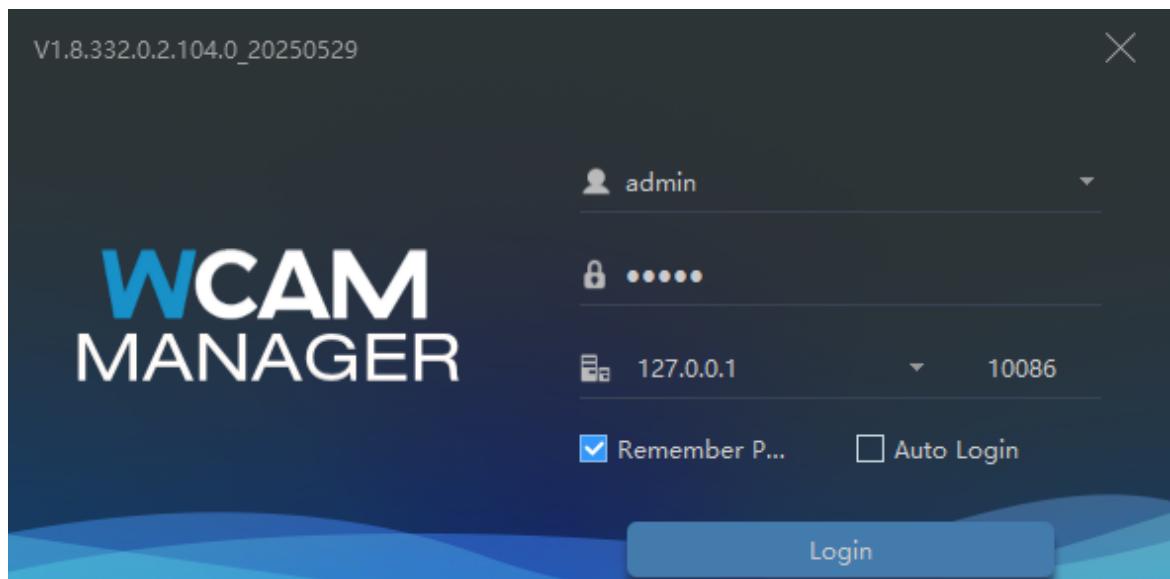


Figure 3-2: WEG WCAM Manager Login Interface

WARNING!

The default username and password are both set to "admin." You must change them after the first login to ensure system security. Using default credentials leaves the solution vulnerable to unauthorized access.

Upon successful authentication, you will be redirected to the Main Menu, where your favorite default applications are displayed. You will also have access to all applications by click "All Features", as shown in Figure 3-3.

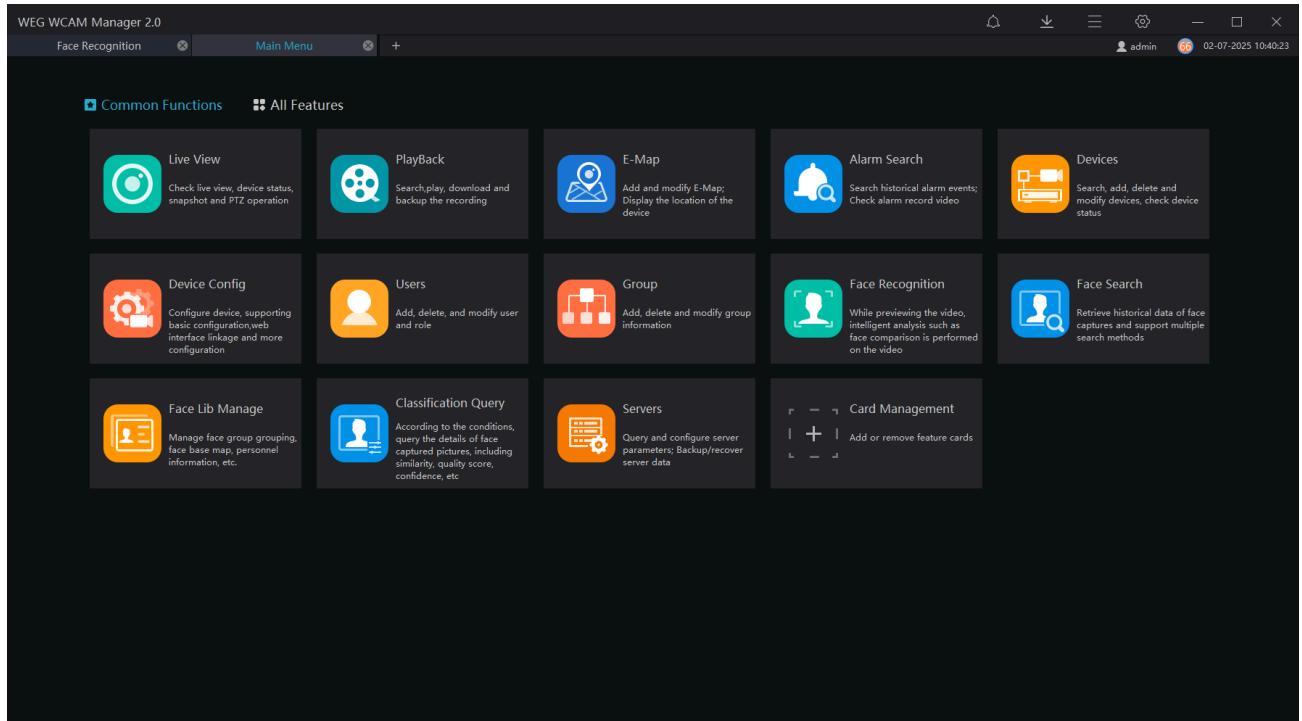


Figure 3-3: Main Menu of the Client Interface

3.2. Changing the Administrator Password

To change the password of the main system Administrator user, click on the user options menu, select Administrator, and then choose Modify Password, as shown in Figure 3-4.

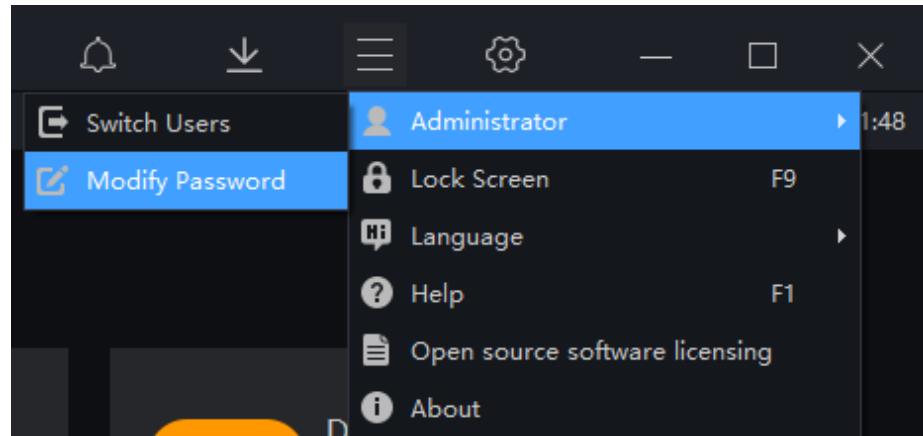


Figure 3-4: Modify Administrator Password

In the Modify Password window, enter the current Administrator password and then a new strong password to be used by the system Administrator.

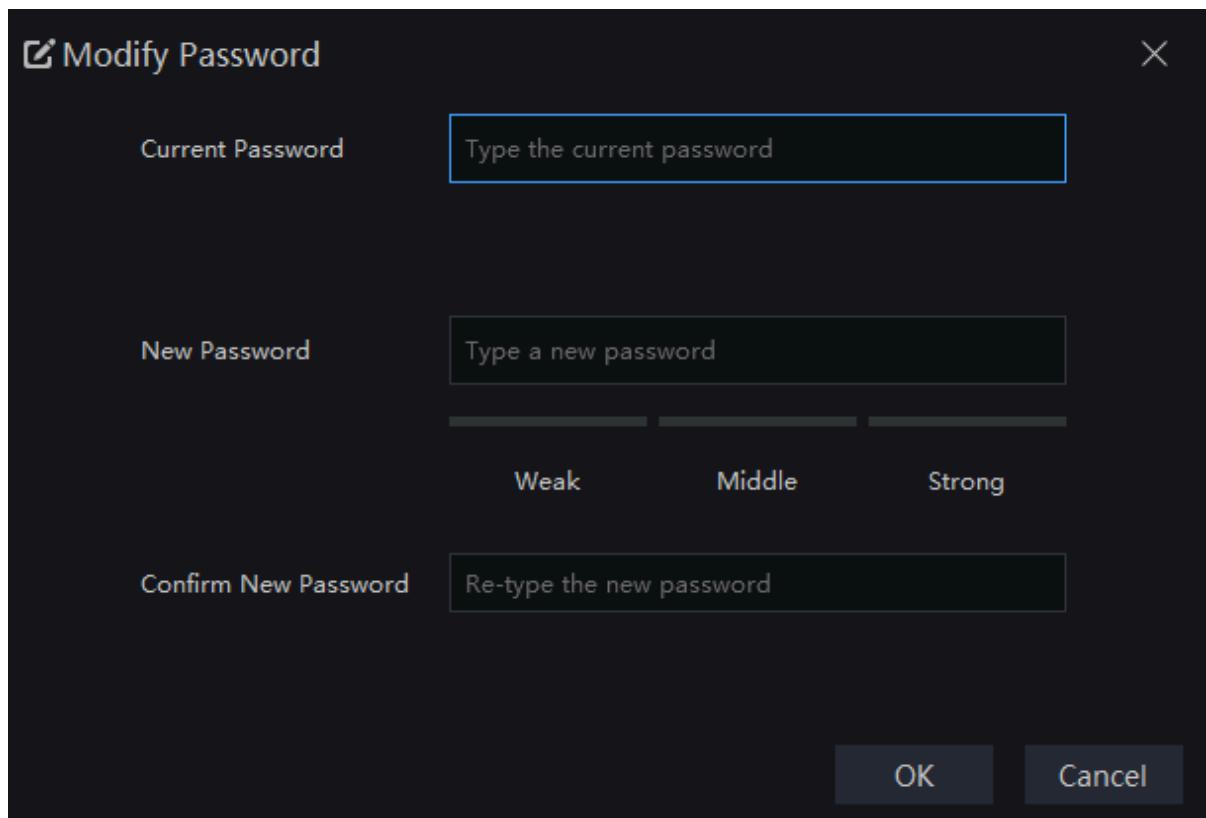


Figure 3-5: Modify Password Window

4. MAIN MENU

The user enters the Main Menu directly after logging in. Figure 4-1 and the table below present the main features of the Main Menu.

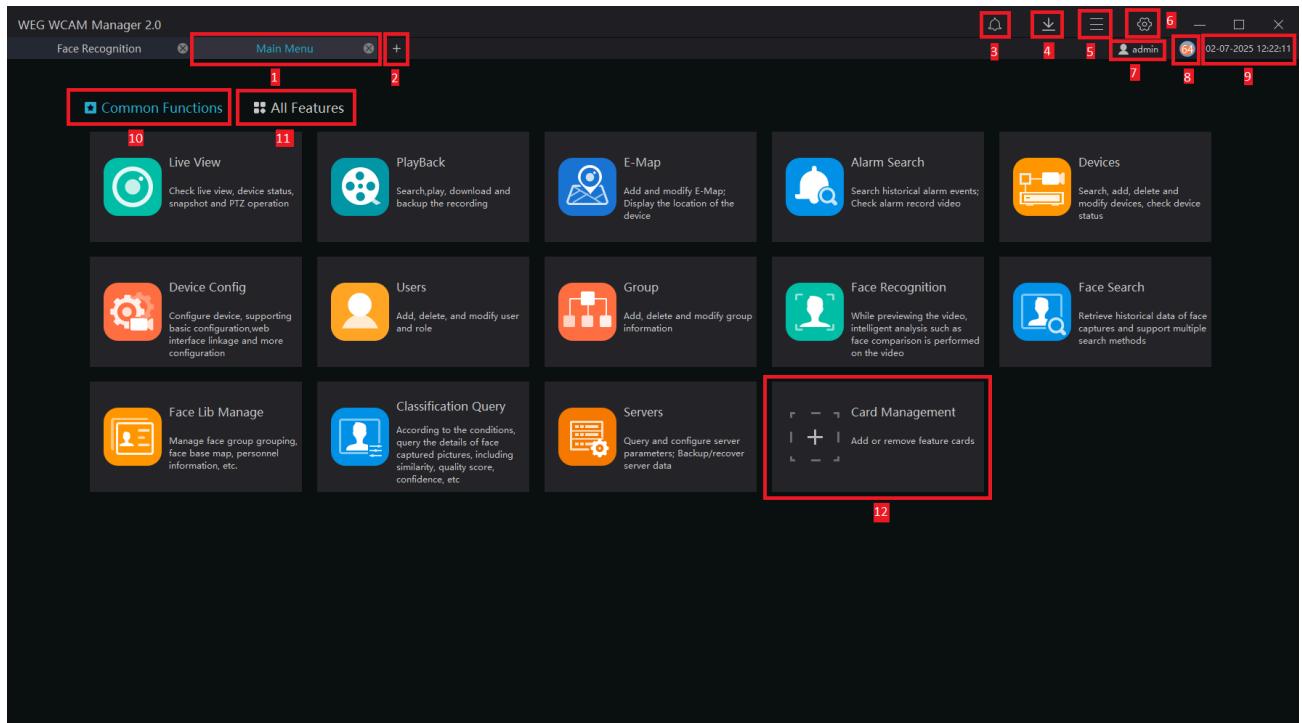


Figure 4-1: Main Menu

TIP!

Click a displayed function to view the corresponding module separately. If necessary, click and drag outward: the function page can be displayed on multiple screens, allowing simultaneous viewing of various pages or windows. This feature facilitates detailed analysis of the presented information.

Number	Function	Description
1	Main Menu Tab	Main page where the user can choose all the functions.
2	New	Click to create a new main menu tab.
3	Alarm Message	Alarm message reminder, click to directly access the real-time alarm interface.
4	Backup	Task Backup, click to display the list of backup tasks and backup history.
5	User Options	<ul style="list-style-type: none"> - User: Switch users and modify passwords. - Lock Screen: Click to lock the screen, enter the password to unlock it (the unlock password is the login password). - Language: Change the user interface language. - Help: Click to access the help page and get instructions. - About: Information about the platform version.
6	System Settings	Click to access system settings, including basic settings, alarm notification, file storage, shortcut configuration, snapshot settings, log export, as shown in Figure 4-

		2.
7	User	Displays the current user.
8	Computer Status	Shows CPU and memory consumption of the user's computer.
9	Date and Time	Displays the current date and time.
10	Common Features	Tab for accessing favorite functions.
11	All Features	Displays all function modules. You can drag and drop the function module to change its position.
12	Card Management	Add or remove a favorite function.

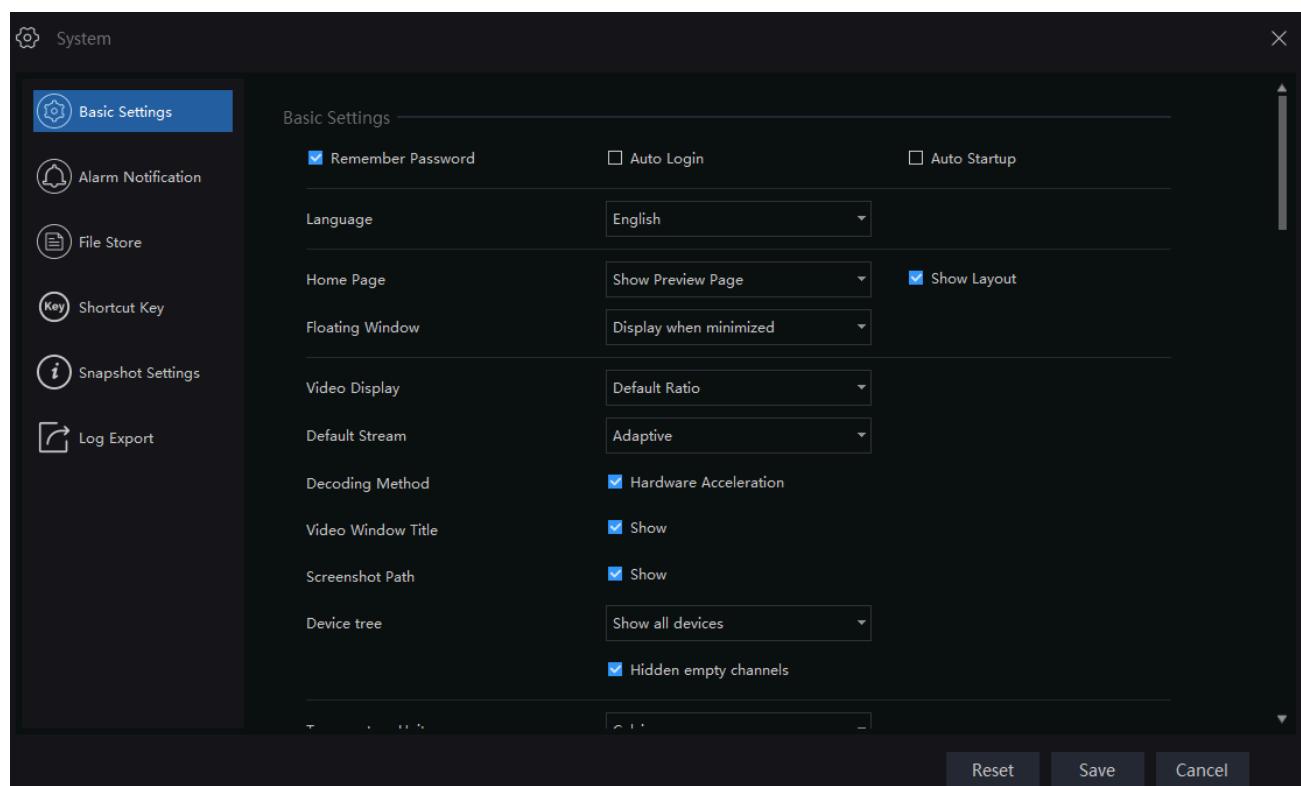


Figure 4-2: System Settings

Figure 4-3 shows the configurations for alarm display modes on the client screen. Additionally, it allows customization of sounds and operating times. In the audio settings section, you can import audio files to be played during alarm notifications.

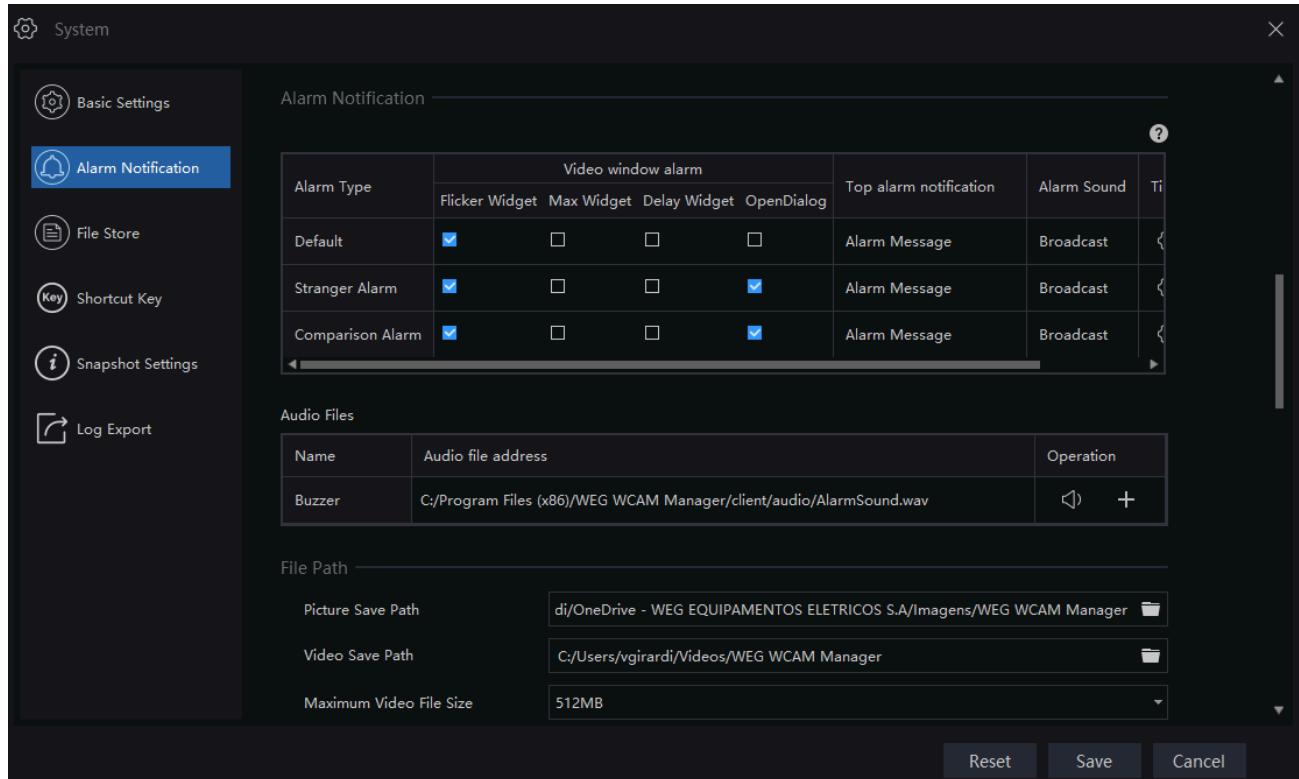


Figure 4-3: Alarm Notification

Figure 4-4 presents the directory selection for saving images or videos and the configuration of shortcut keys for various functions of the WCAM Manager.

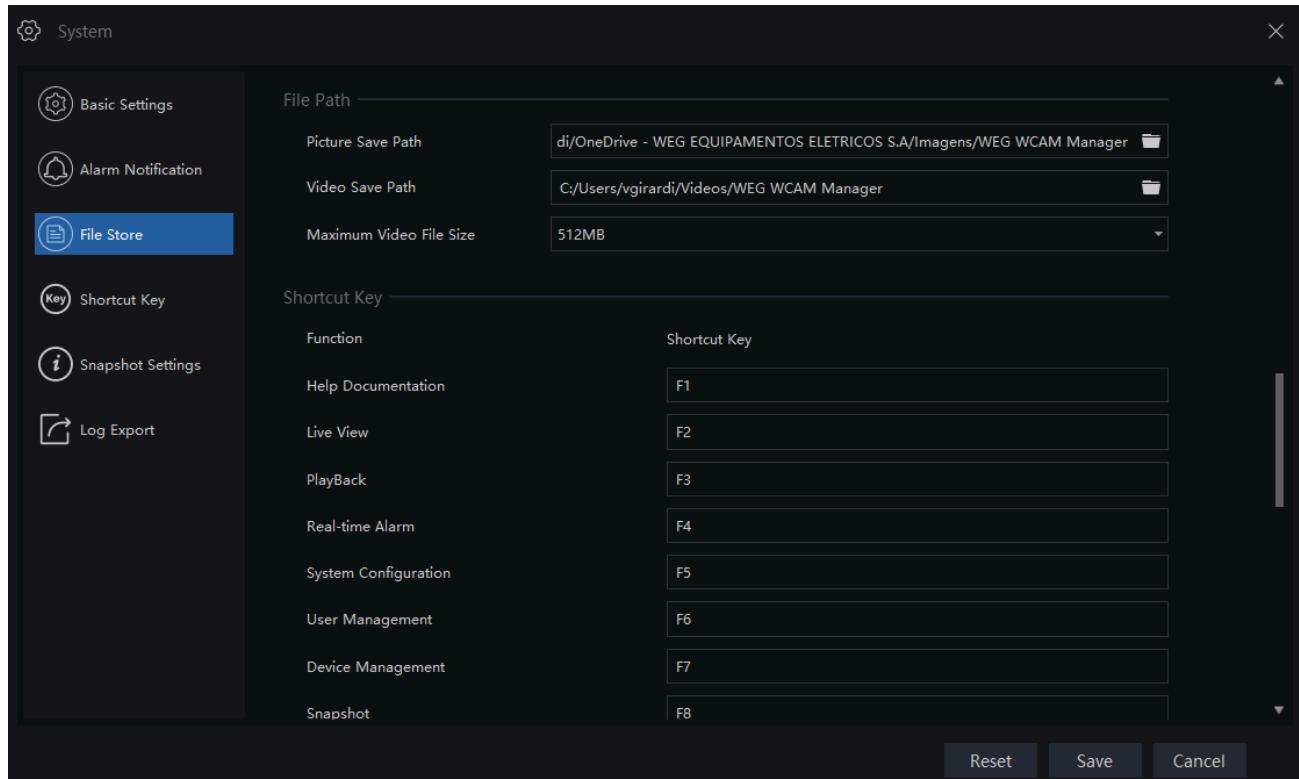


Figure 4-4: File Storage and Shortcut Keys

In Figure 4-5, the configurations for continuous snapshot intervals in seconds are shown as well as options for log export.

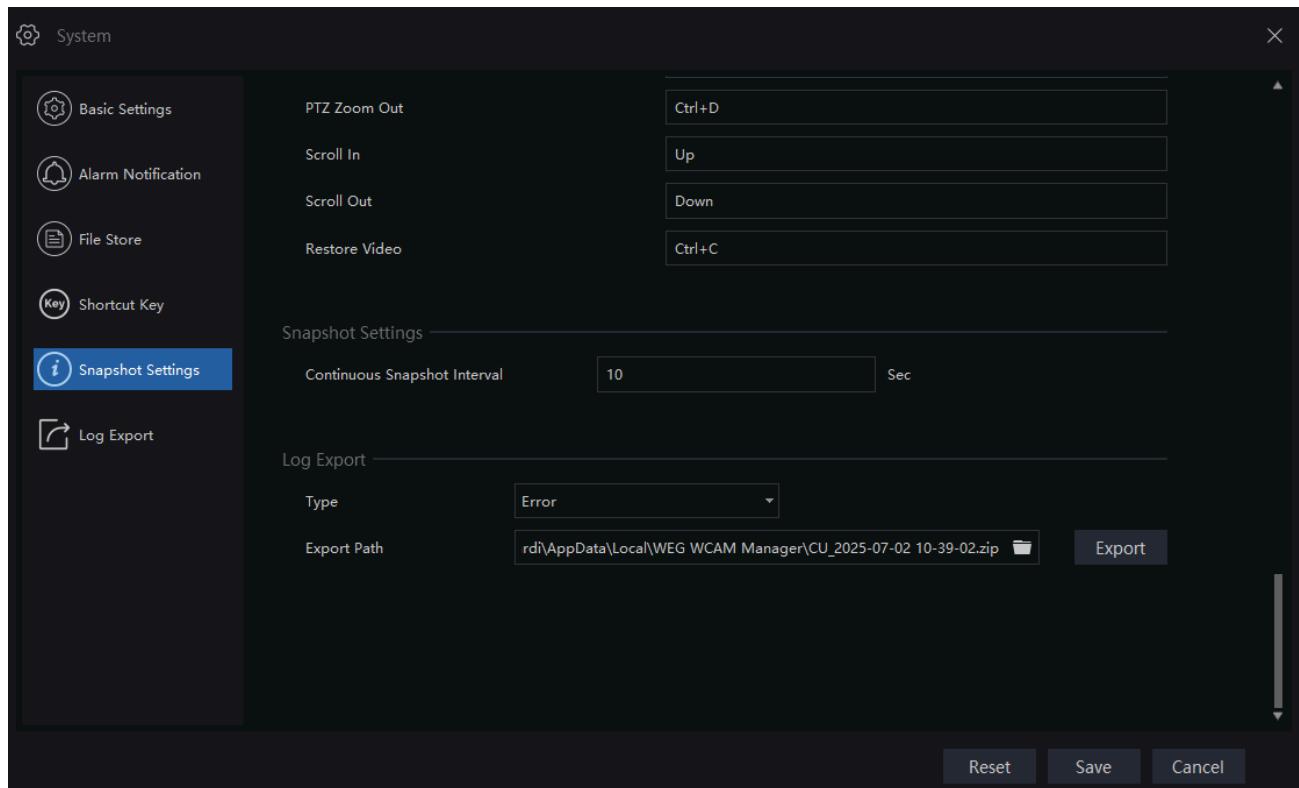


Figure 4-5: Capture and Log Export Configuration

When the software is minimized, a component with alarm notifications is displayed. By clicking on the component, detailed information is shown.

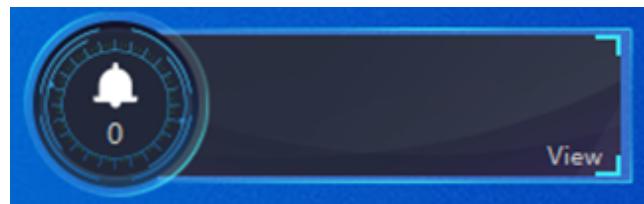


Figure 4-6: Alarm Notification Component

5. BASIC FUNCTIONS

5.1 LIVE VIEW

In the Live View interface, the following actions can be performed:

- Watch real-time video;
- Execute a real-time video tour;
- View local videos;
- Capture images (screenshots);
- Enable or disable audio;
- Start the voice intercom;
- Zoom in on the video;
- Change the video stream;
- Save custom layouts;
- Use the 3D Positioning feature;
- Control the PTZ (Pan-Tilt-Zoom) function.

Additionally, right-clicking the live video displays a context menu, allowing quick configuration of video parameters.

To access the detailed page, simply click **Live View** in the main menu. The full interface can be viewed as shown in Figure 5-1.

TIP!

Supports opening up to 4 Live View windows simultaneously and allows the use of a mouse to drag them, making it convenient for synchronized display across multiple screens.

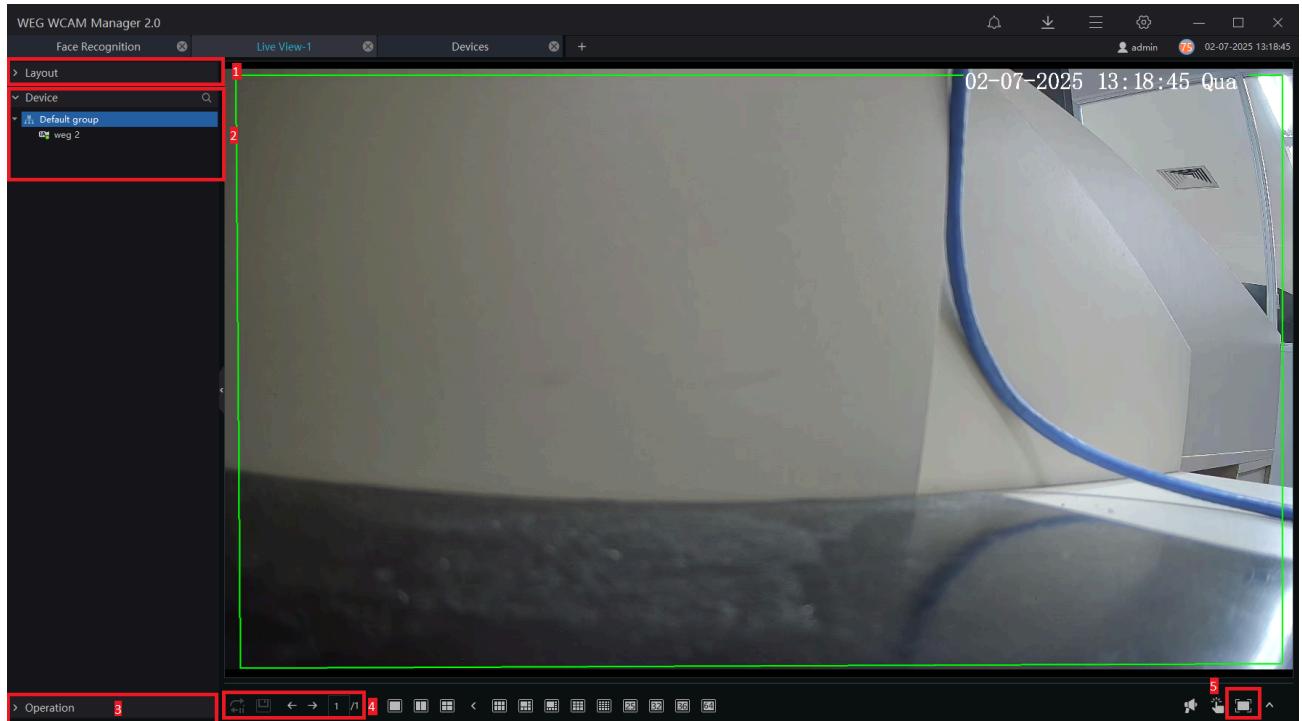


Figure 5-1: Live View.

Functions and Descriptions

Number	Function	Description
1	Layout	Video display format, adds the layout.
2	Device List	Shows the device list. In the blank space, right-click to choose online-only or show all. Select the device, right-click, and from the menu, you can rename the device, configure it, change the video stream, and view recordings, as shown in Figure 5-2.
3	Operation	Controls a PTZ camera/Image parameters.
4	Video Display Layout	Start the tour, save the current layout, single screen, four screens, maximum support for 64 screens.
5	Full Screen	Displays the live video in full screen. Right-click and click "Full Screen" to exit.

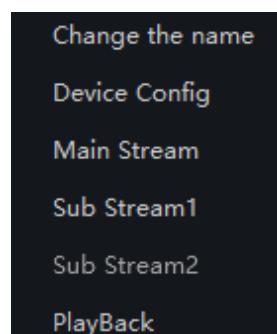


Figure 5-2: Device Options.

5.1.1 Layout

In the layout function interface, previously saved layouts are displayed, in addition to being able to select a default layout, as shown in Figure 5-3.

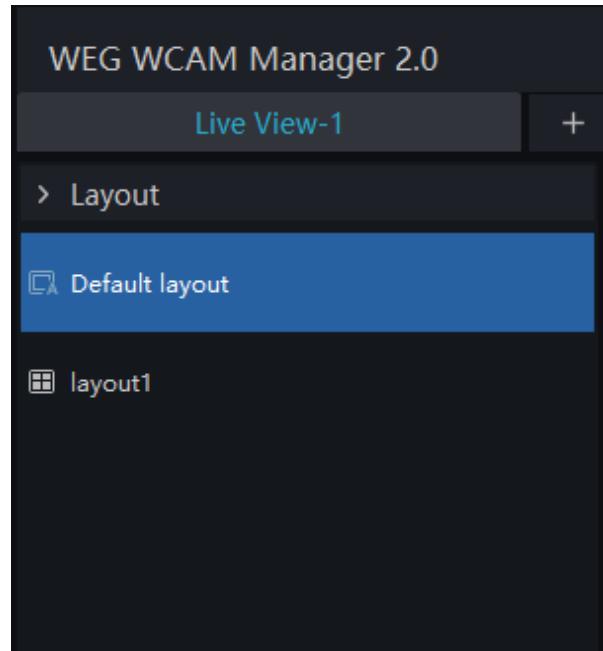


Figure 5-3: Layout.

5.1.2 Device

Displays the list of devices associated with the current user account, as shown in Figure 5-4. Users can watch real-time videos by double-clicking or dragging and dropping the mouse onto the desired channel.

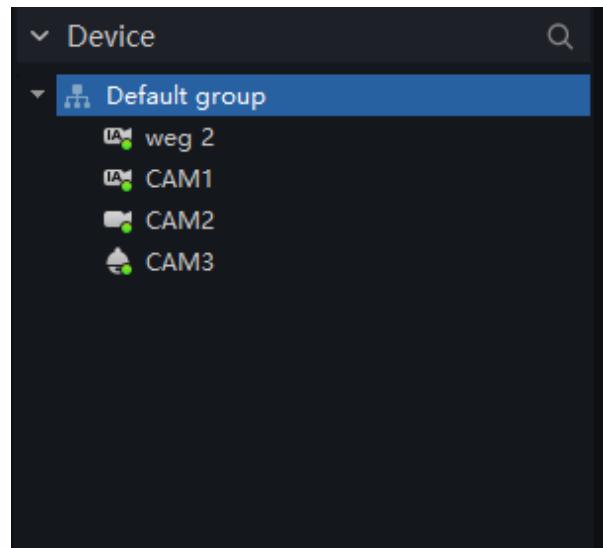


Figure 5-4: Devices.

5.1.3 Operation

NOTE!

This function is only available for PTZ cameras and supports direction control, positioning operation, and tour operation.

PTZ Operation: Adjusts the full-scale movement of the PTZ, lens zoom, editing and control, zoom in, zoom out, iris opening and closing, near focus, distant focus, focus, start, orientation, wiper, and turning on the light. Shown in Figure 5-5.

Preset: Sets the name and current position as a preset position to facilitate tour operation, as shown in Figure 5-6.

Tour: You can configure the tour to allow the camera to rotate repeatedly based on the tours. Each tour includes presets, and the waiting time must be defined, as shown in Figure 5-7.

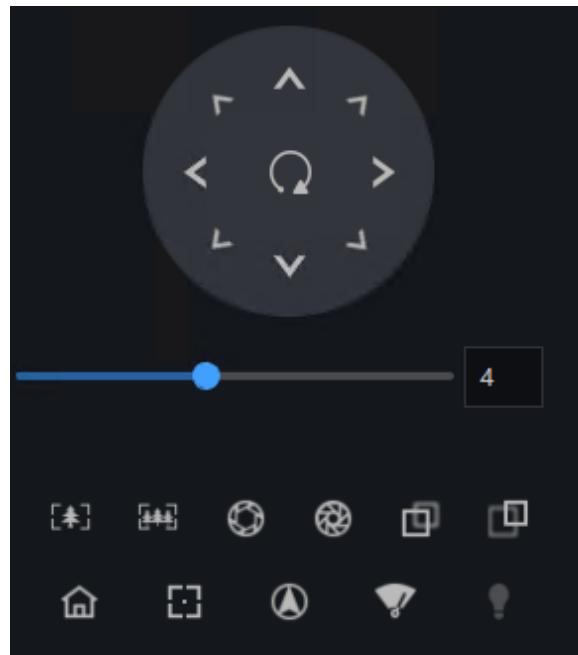


Figure 5-5: PTZ Operation

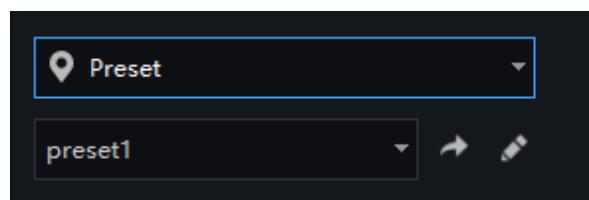


Figure 5-6: Preset

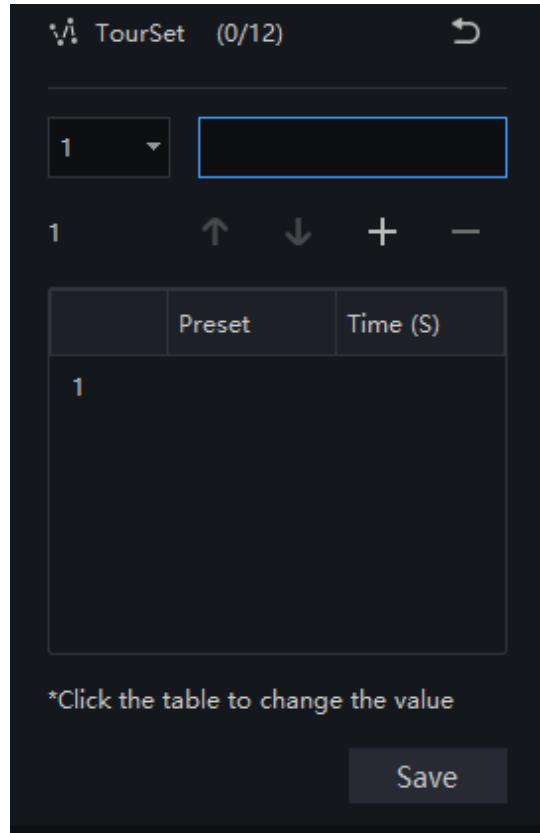


Figure 5-7: Tour

Scan: You can configure a start point and an end point to allow the camera to rotate repeatedly from the start point to the end point. Select the scan to be set, click on + to add the scan, choose the scan number, set the name and dwell time, as shown in Figure 5-8.

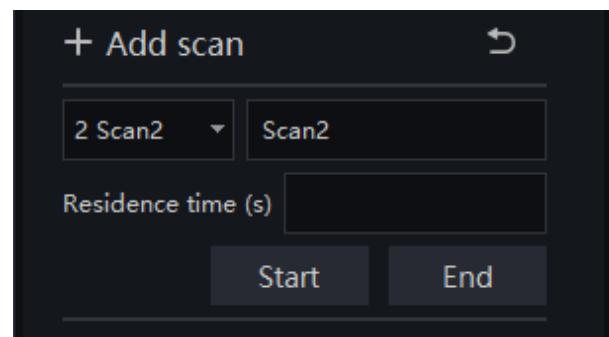


Figure 5-8: Scan

Track: You can record a track to allow the camera to rotate repeatedly based on the predefined track, as shown in Figure 5-9. Select the track to be set, click on + to add the track, choose the track number and set the name, adjust the camera lens, click on "Start Recording" to begin the configuration, adjust the camera lens, and click on "Finish Recording" to complete the track.

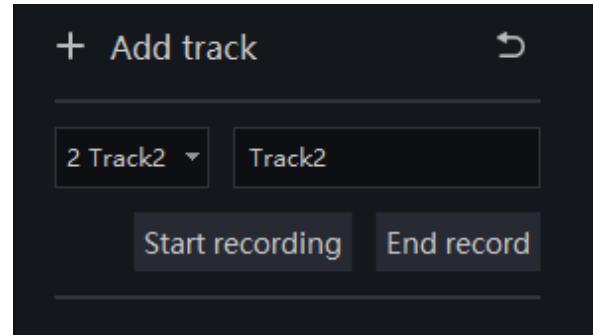


Figure 5-9: Track

Idle: You can enable the idle feature to allow the camera to automatically execute the preset, track, scan, and tour after the waiting time (1 minute ~ 240 minutes). Select the “idle” option, activate the “idle” option, choose the type, name, and waiting time, as shown in Figure 5-10. Click on “Save” to save the settings.

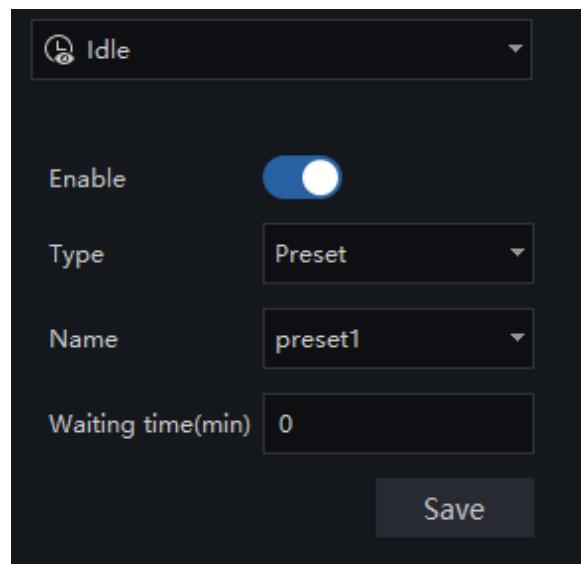


Figure 5-10: Idle

Timer: You can set the PTZ timer to allow the camera to trigger the preset, track, scan, and tour automatically at the defined time. The camera will restore the operation and position after completion. Click on “Set Timer” to go to the timer page, set the start time and end time, as shown in Figure 5-11. Click on “Confirm” to save the settings.

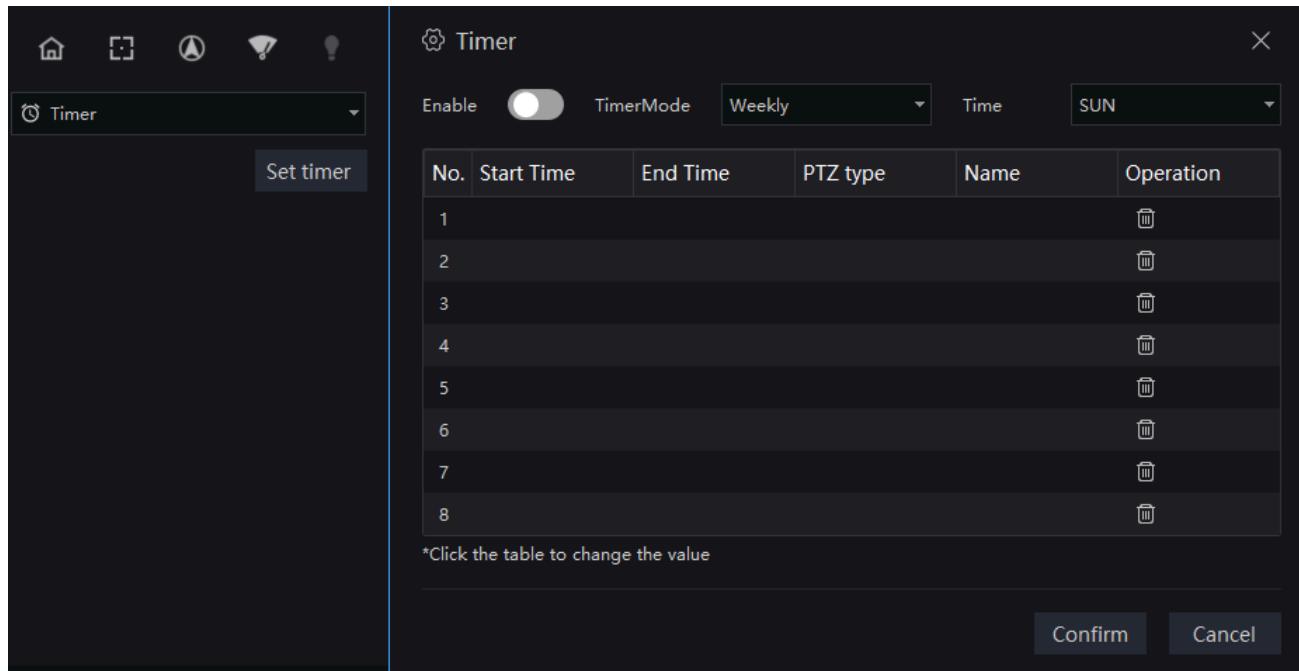


Figure 5-11: Timer

Image Adjustment: Adjust the brightness, sharpness, saturation, and contrast of the image. The default values are 50. The focus can be changed by dragging the right side of the slider or clicking on the left and right axes to change the value. The range is from 0 to 100.



Figure 5-12: Image Adjustment

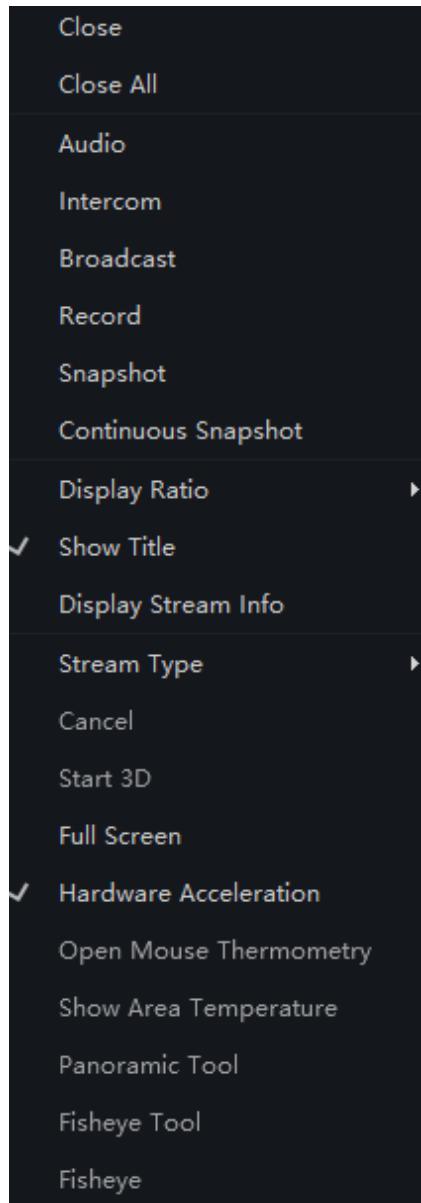


Figure 5-13: Right-click Menu

NOTE!

Devices have different functions, and the user can operate the corresponding function in practice.

For cameras with a speaker or connected to an audio output device, they can play radio broadcasts. The computer where the platform is installed must be connected to a microphone for audio collection. Click on "Broadcast Management" to enter the settings page. Choose the channel to play, click on "Start," and the selected camera will play the platform's audio. Click on "Stop" to turn off the playback.

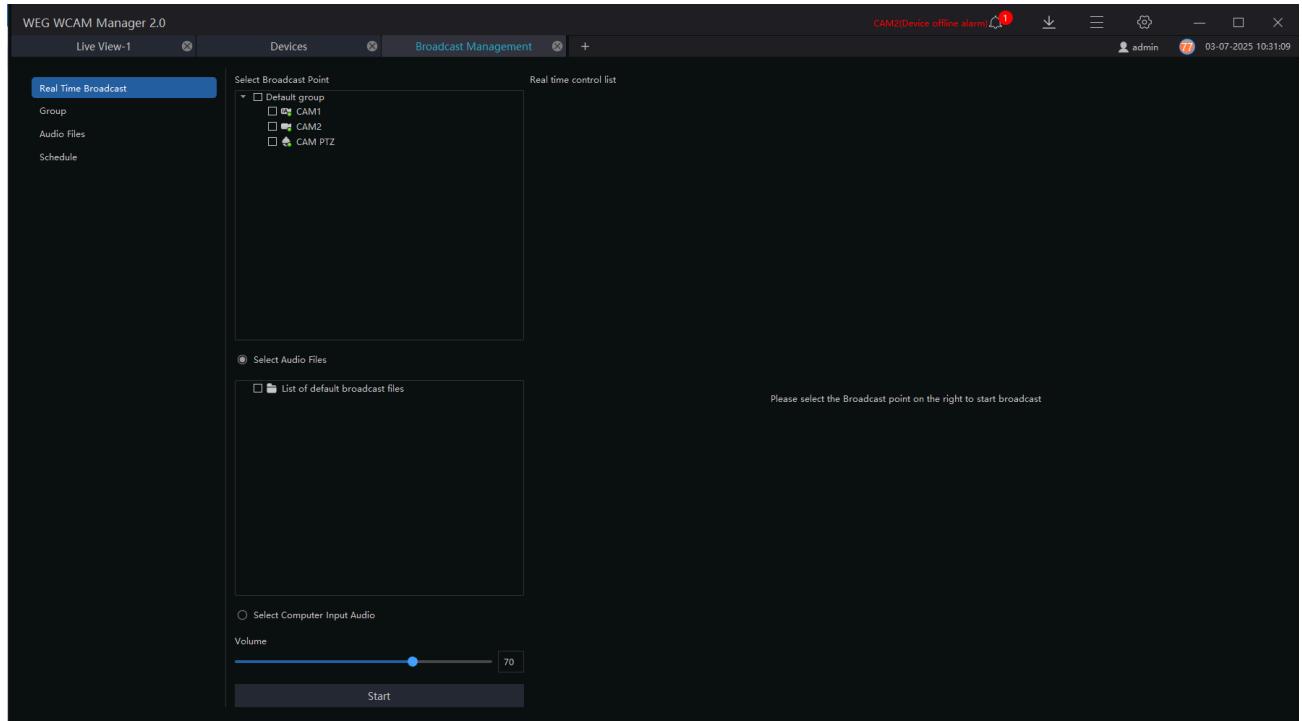


Figure 5-14: Broadcast Management

5.2 PLAYBACK

5.2.1 Playback

In the "Playback" interface, the front-end device video can be played and downloaded, in addition to supporting synchronous playback of multiple channels and playback control operations. On the main menu page, click on "Playback" to enter the detailed page, as shown in Figure 5-15.

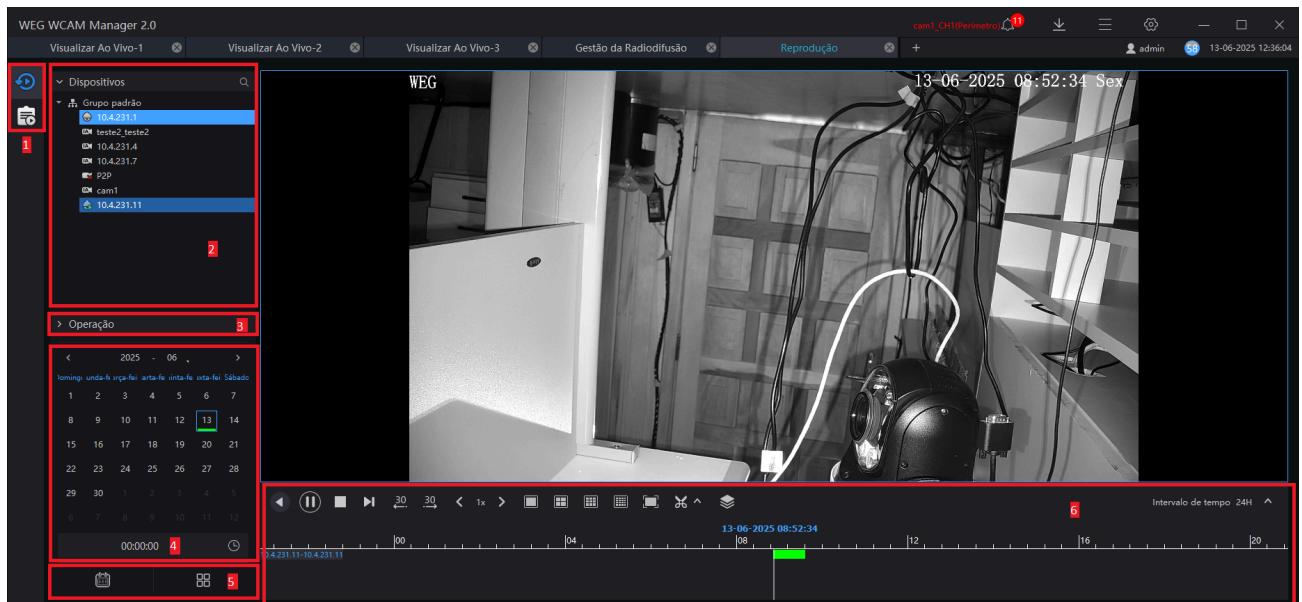


Figure 5-15: Playback Interface

Number	Function	Description
--------	----------	-------------

1	Playback/Event Playback	Select playback or event playback (when devices with SD cards are connected to the platform, the user can view event playback)
2	Device	Displays the devices configured on the platform
3	Operation	<ul style="list-style-type: none"> - Configure and control PTZ cameras - Configure image parameters
4	Calendar	<p>Displays dates, with a green bar below the date indicating that there is a recording</p> <p>Time can be manually entered on the clock</p>
5	Show or Hide Calendar/Grid	Open or close the calendar/video grid
6	Operation Bar	<p>Video operations: operation, timeline, display</p> <p> , Rewind</p> <p> , Pause / Play</p> <p> , Stop</p> <p> , Next frame</p> <p> , 30s backward/30s forward</p> <p> , Change playback speed</p> <p> , Display Layout</p> <p> , Full Screen</p> <p> , Download video from backup device</p>

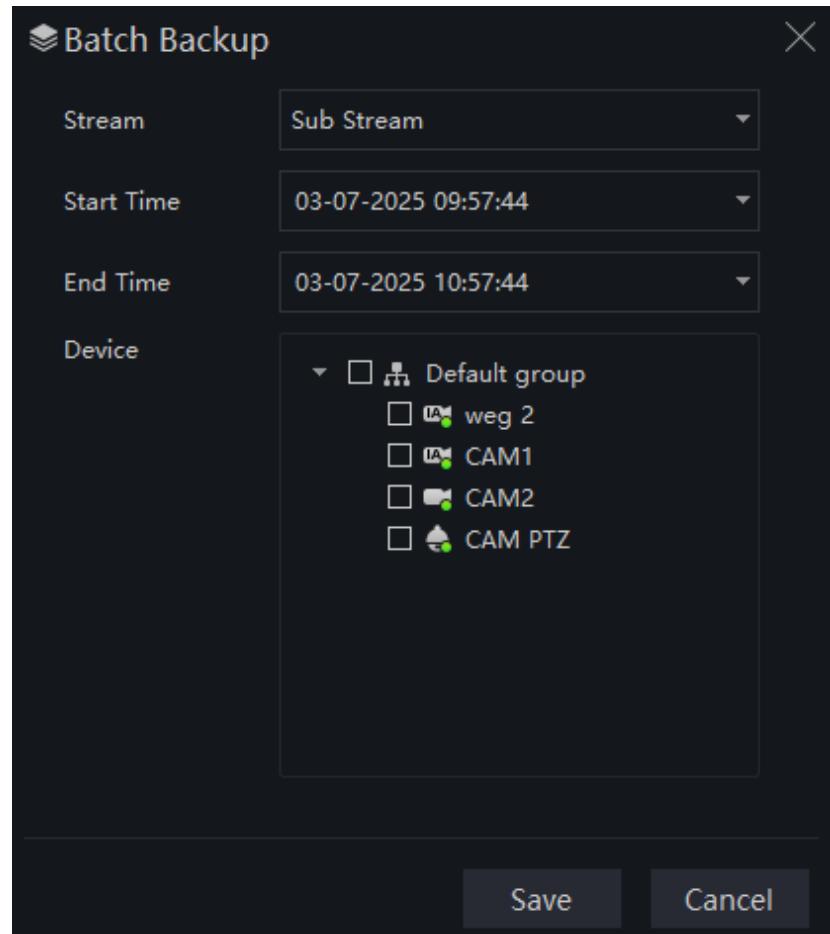
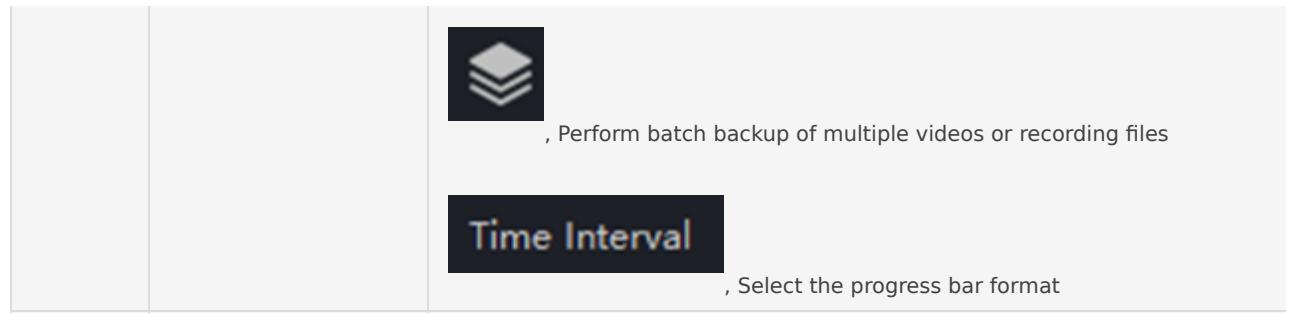


Figure 5-16: Batch Backup

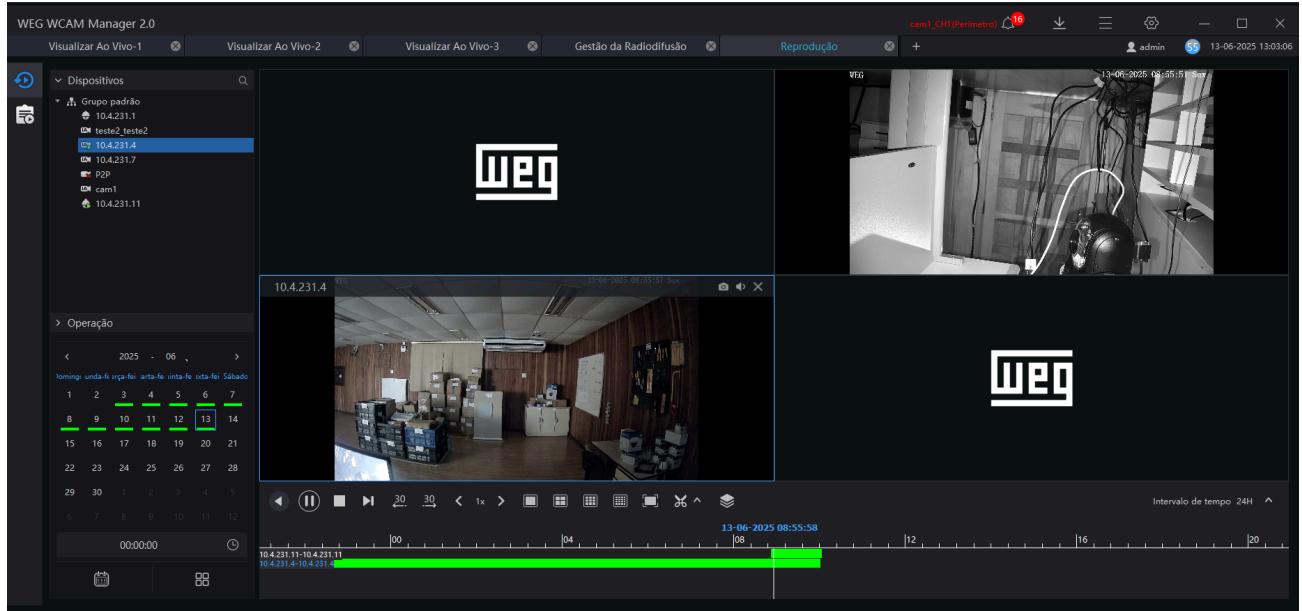


Figure 5-17: Video Grid

5.2.3 Play the Device's Video

Procedure

Step 1: Select the display layout mode (supports synchronous playback of multiple devices).

Step 2: Select the device from the device list to play the recording. The video will automatically start from the current time.

Step 3: Select the desired interval as shown in the image below:



Step 4: Select the operation tool in the toolbar to watch the video playback according to your needs.

5.2.4 Backup the Device's Video

Procedure



Step 1: Click on , the video will start playing, and the icon  will be displayed. Drag the timeline to quickly copy the video and download it in MP4 format.

Step 2: Click the checkmark to complete the selection and copying of the video. A download interface will then be displayed, as shown in Figure 5-19.

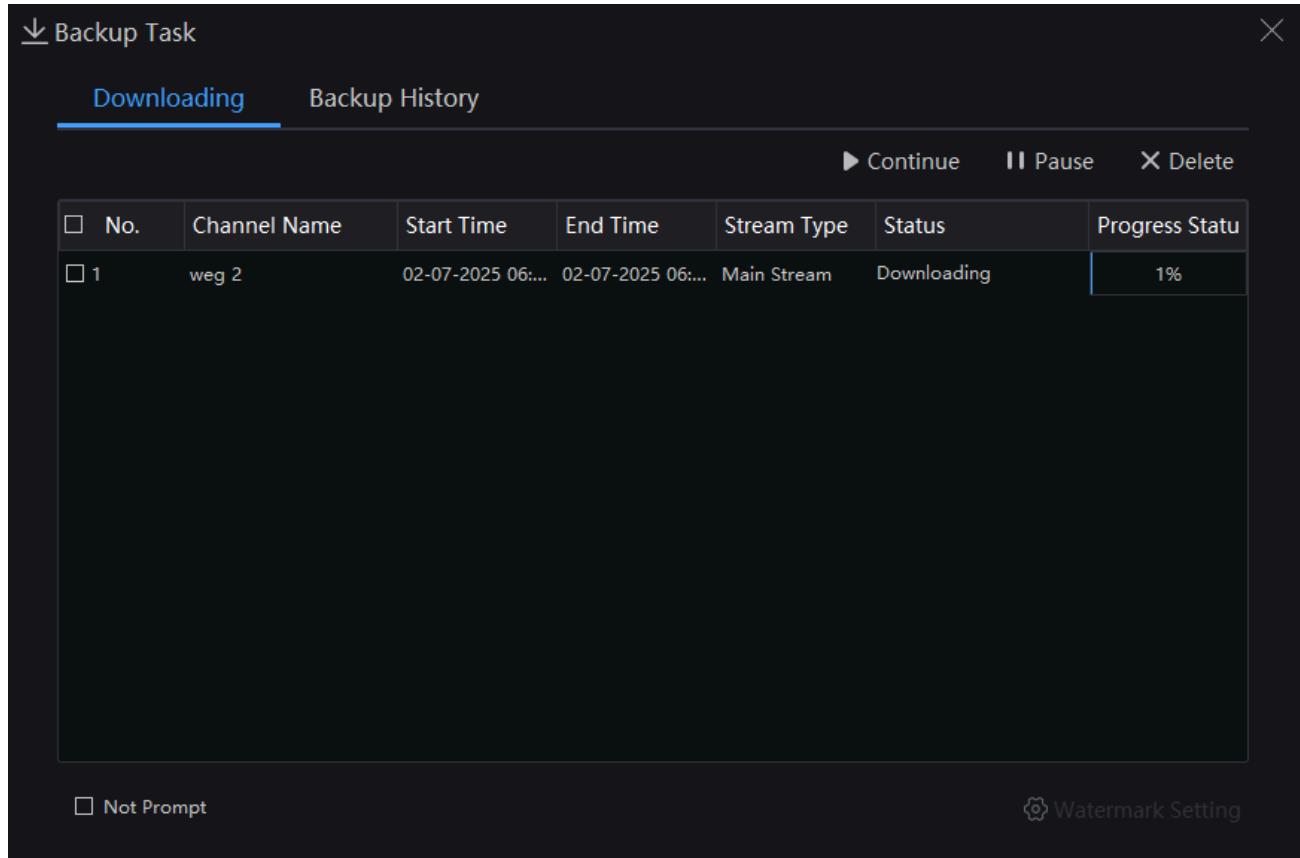


Figure 5-19: Download Interface

Users can set the watermark for the download recording. Click on "Watermark Settings" to access the configuration page. Watermark (Overlay Watermark or Not Overlay Watermark), set the font color, set the transparency, enter the watermark content, click "Confirm" to save, and click "Apply" to apply all settings to the download recording.

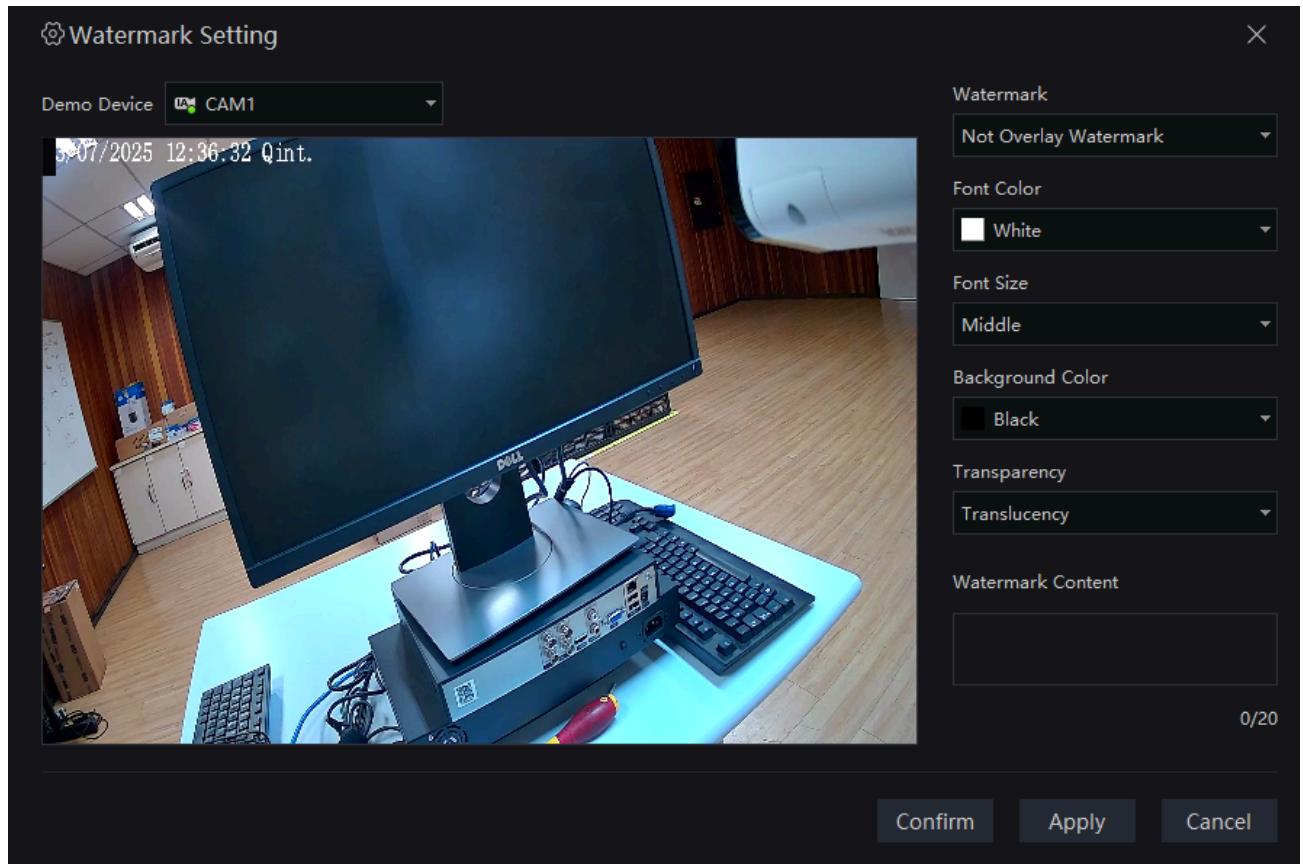
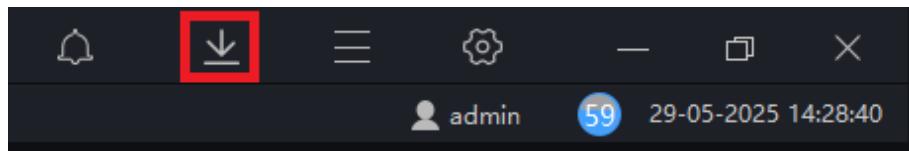


Figure 5-20: Set Watermark

Users can click the download icon at the top of the interface.



Step 3: Click on "Backup" in the top right corner of the interface to view the start and end time of the downloaded video and the path where it was saved.

Backup Task				
Downloading		Backup History		
<input type="checkbox"/>	No.	Channel Name	Start Time	End Time
<input checked="" type="checkbox"/>	1	weg 2	02-07-2025 06:06:07	02-07-2025 06:10:14
C:/Users/vgirardi/Videos/WEG WCAM Manager				

Not Prompt Watermark Setting

Figure 5-21: Backup

5.3 REAL-TIME ALARM

In the Real-time Alarm interface, real-time device alarm information can be received and processed individually or in batches.

In the main menu, click on "Real-time Alarm" to enter the detailed interface, as shown in Figure 5-22.

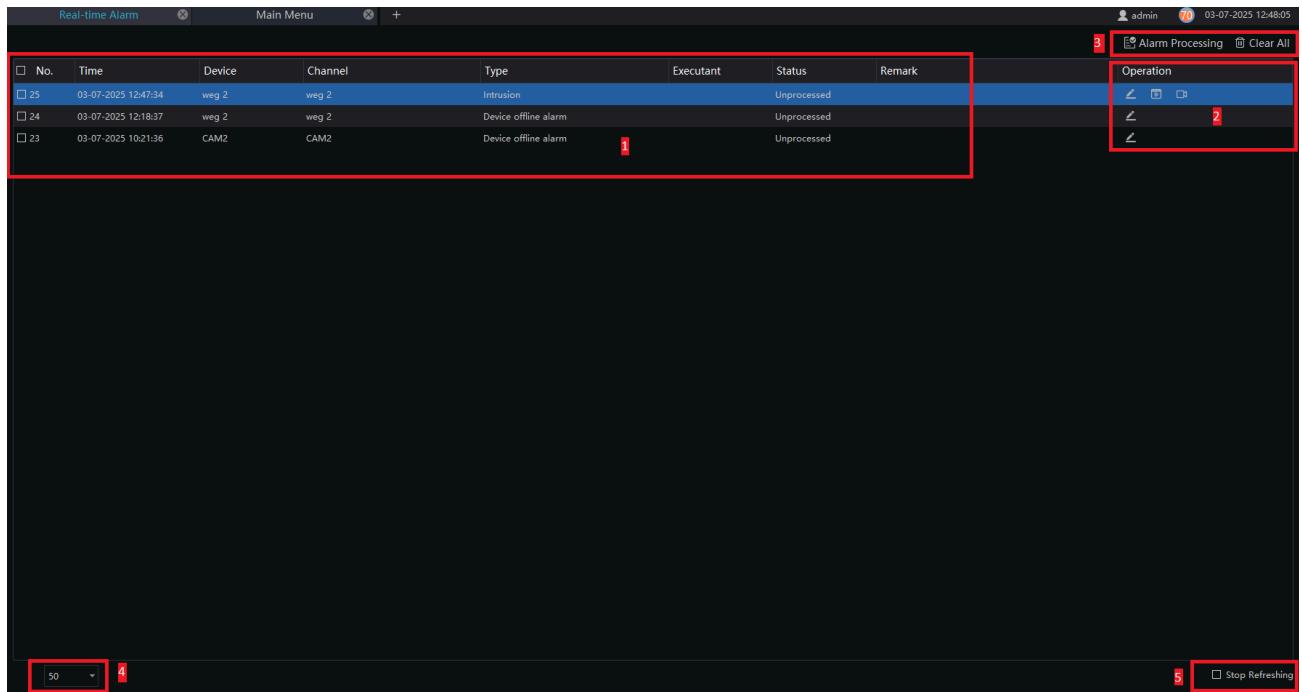
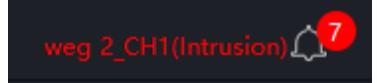


Figure 5-22: Alarm Interface

Number	Function	Description
1	Alarm Display Area	Displays alarm-related information
2	Alarm Operation	Alarm processing, alarm playback video, live video
3	Alarm Processing	Processes specified alarm information, click "clear" and the current alarm will be cleared. The thermal camera alarm can be exported, and the information includes comments, summary, action, temperature, alarm time, and so on.
4	Display Count	Number of alarms on the current page
5	Stop Refreshing	Check to stop updating the real-time alarm

Procedure:

Step 1: You can quickly access alarms by clicking the icon  in the upper right corner of the screen.

Step 2: Select the desired alarm, click the icon , and a pop-up window will appear. In this window, you can describe and classify the alarm.

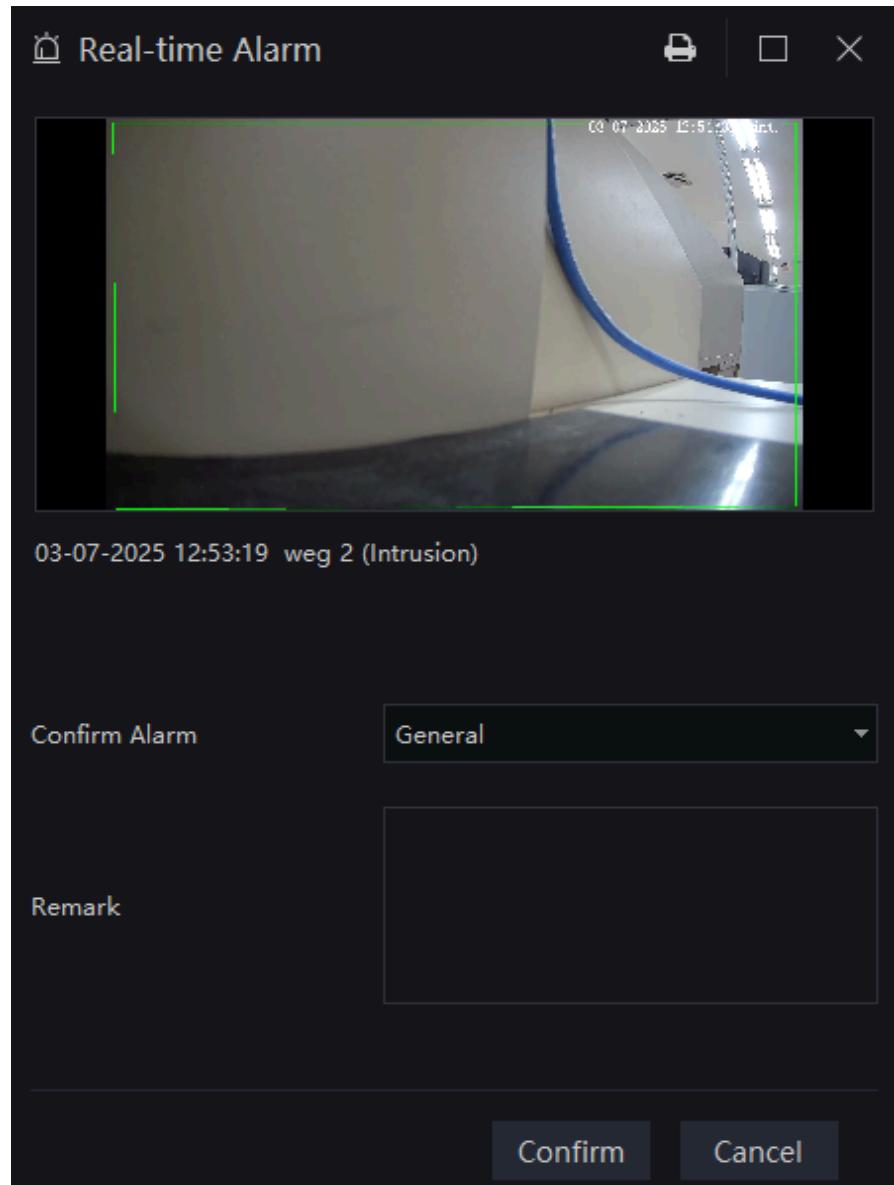


Figure 5-23: Alarm Process



Step 3: Click on to play the alarm occurrence video for 30 seconds.



Step 4: Click on to view the live video of the alarm device.

5.4 ALARM SEARCH

In the Alarm Search interface, you can access alarm history, view the alarm type, processing status, and device name. Additionally, results can be processed individually or in batches.

In the main menu, click "Alarm Search" to enter the detailed interface, as shown in Figure 5-24.

No.	Time	Device	Channel	Type	Executant	Status	Remark	1	2
□ 1	03-07-2025 13:08:31	weg 2	weg 2	Intrusion		Unprocessed			
□ 2	03-07-2025 12:59:39	weg 2	weg 2	Intrusion		Unprocessed			
□ 3	03-07-2025 12:59:24	weg 2	weg 2	Intrusion		Unprocessed			
□ 4	03-07-2025 12:57:52	weg 2	weg 2	Intrusion		Unprocessed			
□ 5	03-07-2025 12:57:28	weg 2	weg 2	Intrusion		Unprocessed			
□ 6	03-07-2025 12:57:08	weg 2	weg 2	Intrusion		Unprocessed			
□ 7	03-07-2025 12:56:48	weg 2	weg 2	Intrusion		Unprocessed			
□ 8	03-07-2025 12:56:28	weg 2	weg 2	Intrusion		Unprocessed			
□ 9	03-07-2025 12:55:44	weg 2	weg 2	Intrusion		Unprocessed			
□ 10	03-07-2025 12:53:51	weg 2	weg 2	Intrusion		Unprocessed			
□ 11	03-07-2025 12:53:18	weg 2	weg 2	Intrusion		Unprocessed			
□ 12	03-07-2025 12:53:04	weg 2	weg 2	Intrusion		Unprocessed			
□ 13	03-07-2025 12:52:27	weg 2	weg 2	Intrusion		Unprocessed			
□ 14	03-07-2025 12:51:32	weg 2	weg 2	Intrusion		Unprocessed			
□ 15	03-07-2025 12:47:34	weg 2	weg 2	Intrusion		Unprocessed			
□ 16	01-01-2019 00:03:29	CAM2	CAM2_CHN001	Motion Alarm		Unprocessed			
□ 17	01-01-2019 00:02:25	CAM2	CAM2_CHN001	Motion Alarm		Unprocessed			
□ 18	02-07-2025 15:38:58	CAM3	CAM3_CH1	Smart Motion		Unprocessed			
□ 19	02-07-2025 15:38:58	CAM3	CAM3_CH1	Intrusion		Unprocessed			
□ 20	02-07-2025 15:38:37	CAM3	CAM3_CH1	Intrusion		Unprocessed			
□ 21	02-07-2025 15:38:37	CAM3	CAM3_CH1	Smart Motion		Unprocessed			
□ 22	02-07-2025 15:37:29	CAM3	CAM3_CH1	Intrusion		Unprocessed			
□ 23	02-07-2025 15:37:17	CAM3	CAM3_CH1	Smart Motion		Unprocessed			
□ 24	02-07-2025 15:37:11	CAM3	CAM3_CH1	Intrusion		Unprocessed			
□ 25	02-07-2025 14:26:45	CAM3	CAM3_CH1	Intrusion		Unprocessed			

1 < 1 > 50 Total : 28 5

Figure 5-24: Alarm Search Interface

Number	Function	Description
1	Search Conditions	The user sets the search conditions, chooses the alarm type, progress status, and defines the search time
2	Process/Batch Download	Click to back up or process the alarm
3	Search Results	Search results
4	Operation	Edit, play, process, and Task Backup
5	Display Interface	Displays the current alarm page, total alarms, and option to switch to the next page

NOTE!

The processing status of the temperature alarm will affect the alarm statistics. Only the manual processing of alarm information related to overheating statistics can be accurate.

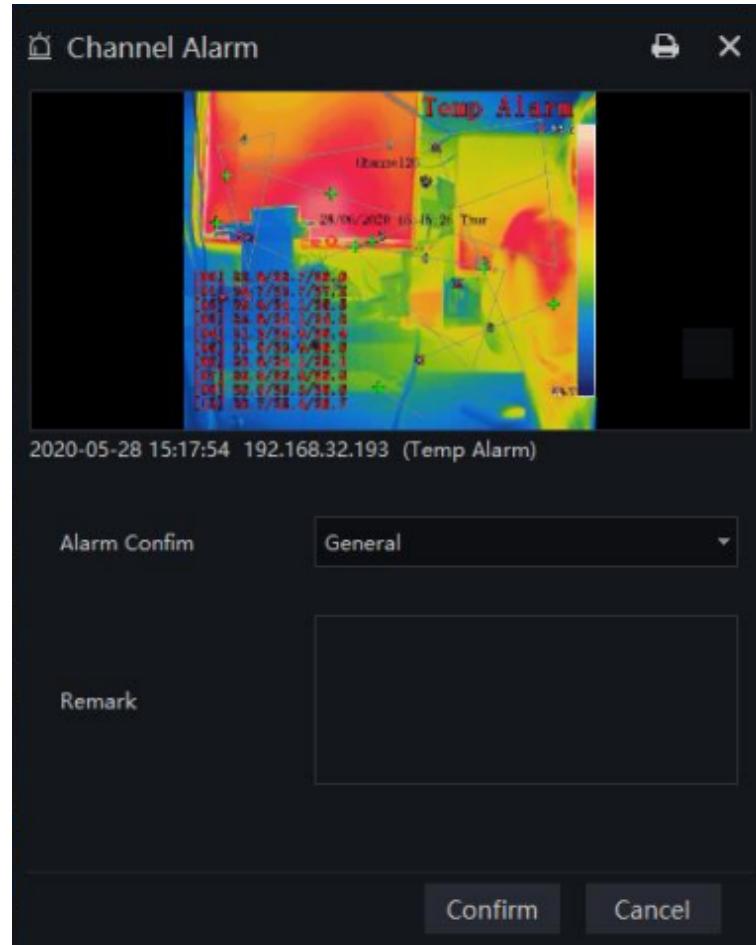


Figure 5-25: Alarm Processing

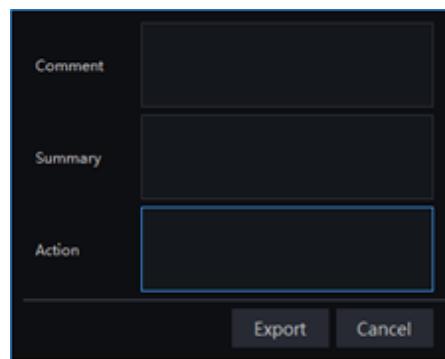


Figure 5-26: Thermal Alarm Export



Click on to export thermal image alarm information, which includes basic camera information, capture, temperature parameters, added comments, summary, action, and so on.

5.5 LAYOUT

In the layout interface, it is possible to link the channel to the window and set the search interval. The layout will be displayed in the "Live View" interface, making video monitoring more practical.

In the main menu, click "Layout" to enter the detailed interface and click on to add a new layout, as shown in Figure 5-27.

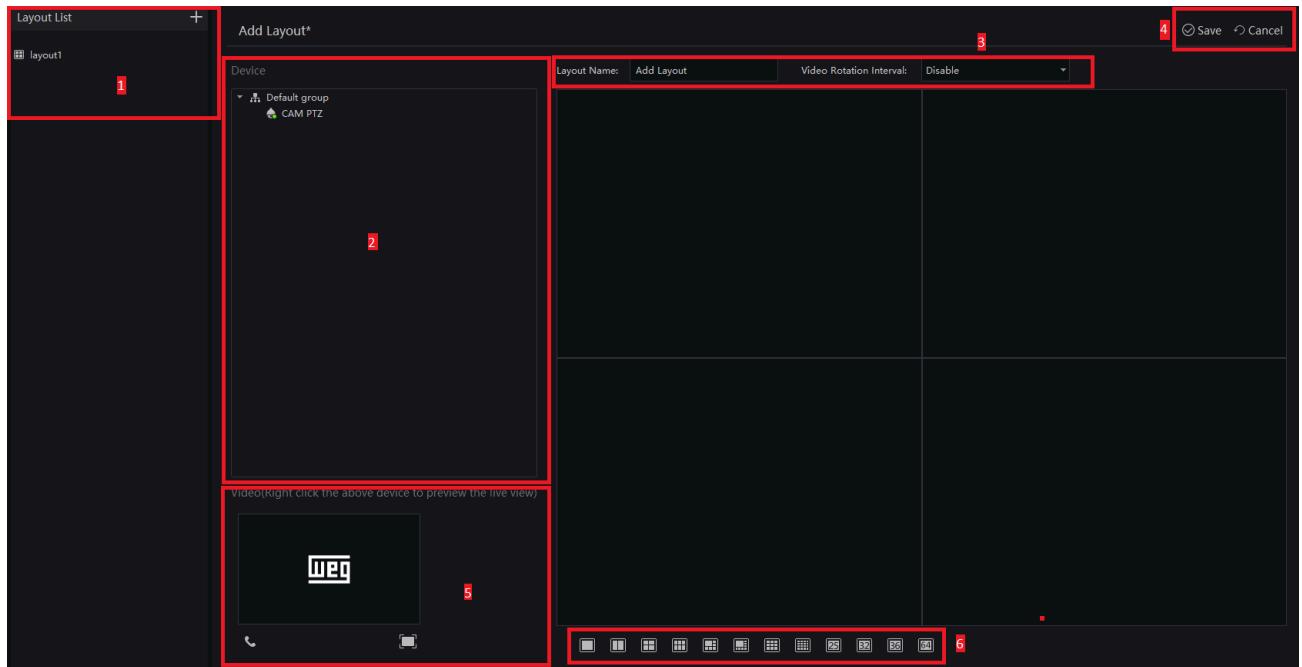


Figure 5-27: Layout Management Interface

Number	Function	Description
1	Create new layout	Click on to create a new layout
2	Device List	Drag the device to the layout screen
3	Basic layout information	Set the name of the new layout and define the Rotation Interval
4	Operation	Save or Cancel the layout configuration
5	Play the video	Right-click a device to play the video. 
6	Display mode	Choose the video display mode

Procedure



Step 1: Click on in the layout list to create a new layout.

Step 2: Enter the layout name and select the layout arrangement.

Step 3: Define the Video Rotation Interval.

Step 4: Select and hold the mouse to set the channel to be displayed in the layout window. You can link multiple channels in the same window and enable the display interval for users to view

multiple cameras.

Step 5: Click "Save" to save the settings.

5.6 E-MAP

In the E-Map interface, you can set up a map to facilitate monitoring and locating places. Multi-level submaps are supported.

Supported Files: JPG, PNG, and BMP.

On the new functions page, click "E-Map" to enter the detailed interface, as shown in Figure 5-28.

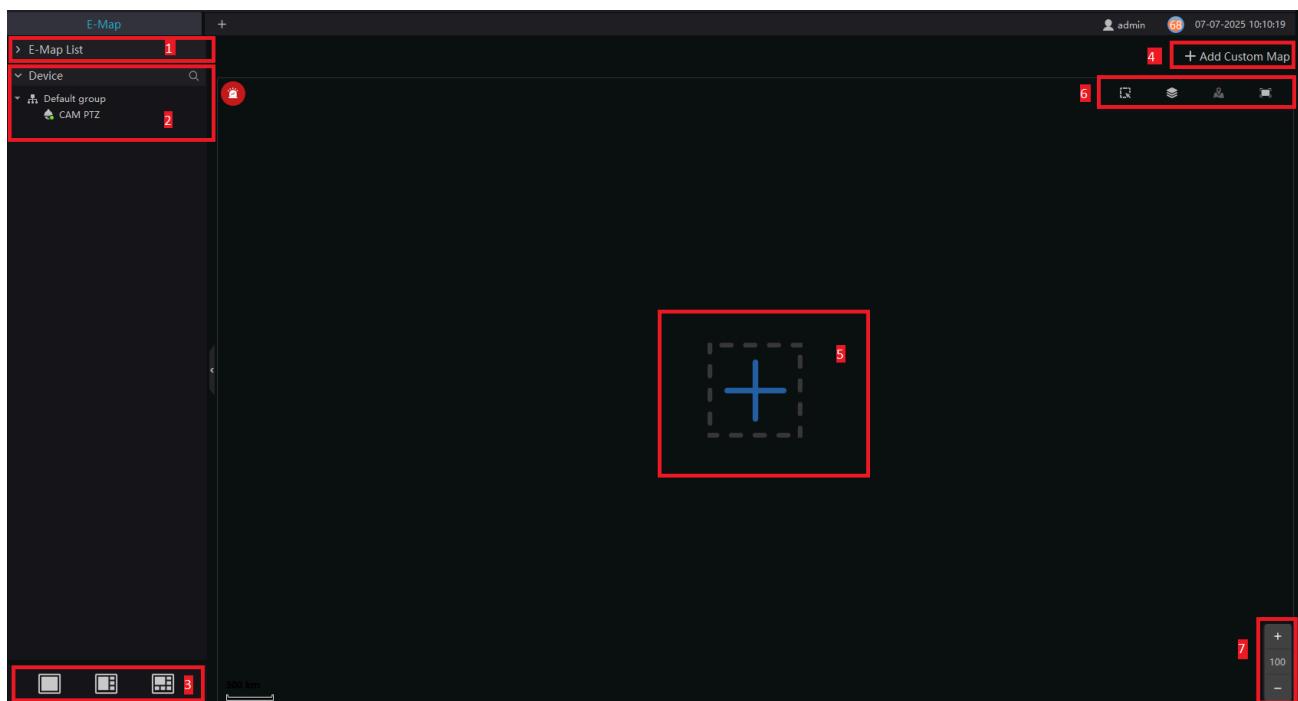


Figure 5-28: E-Map Interface

Number	Function	Description
1	E-Map List	All configured maps
2	Device	Device list
3	Display Layout	Map and video display layout
4	Add a map	Add a custom map
5	Add a map	Add a map
6	Map Operations	The user can operate devices on the map
7	Zoom In/Out	Enlarge the map to set monitoring points

5.6.1 Add a Map

Procedure:

Step 1: Click on to add a map:

+ Add Map

Map Type

World Map

Data sources

OpenStreetMap

Online/Offline map

Online

Confirm Cancel

Step 2: Enter the map name and select the map directory. You have two options: use the map already present in WCAM or add a custom map.

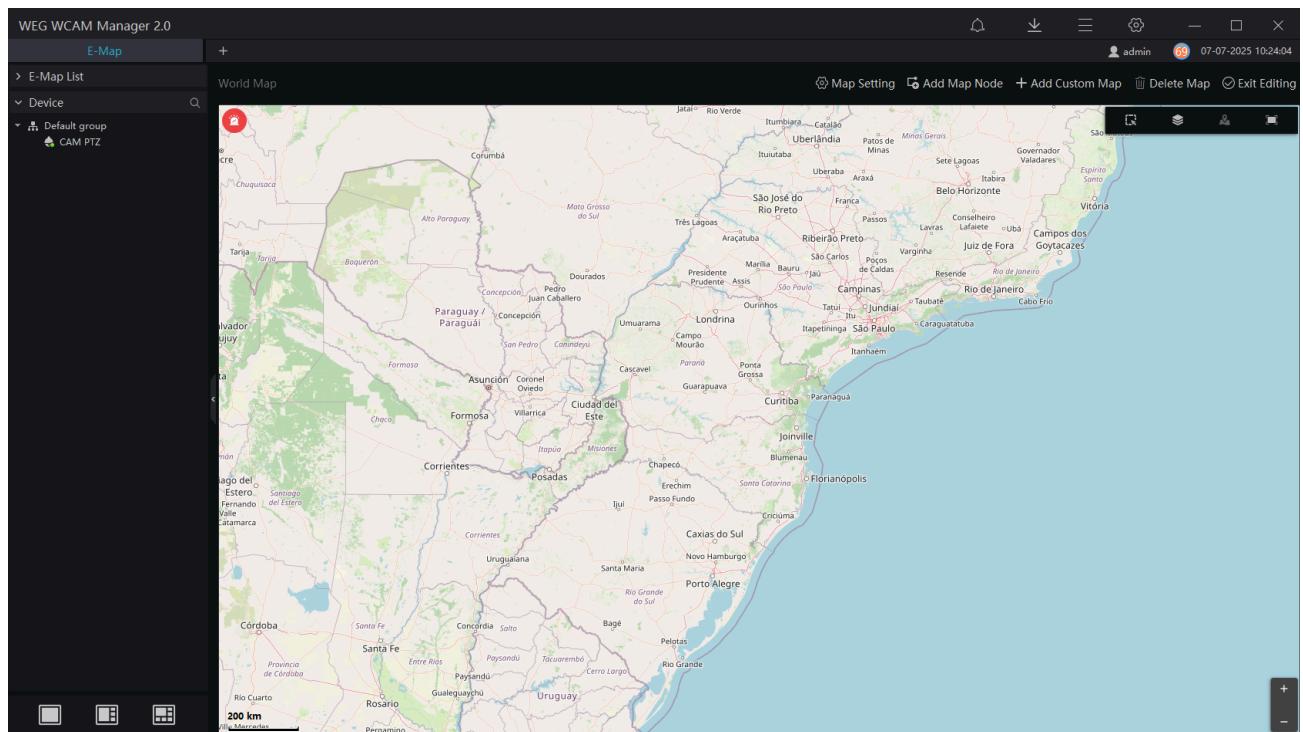


Figure 5-29: Global Map

Step 3: Click on "Exit Editing" to save the map.

TIP!

You can create a submap within the Global Map. Navigate through the map and select the desired area to create a detailed map of that region.

Click on  **Add Map Node** to create a node map, define a name, and click on "Save" to save the settings.

5.6.2 Edit the Map

Step 1: Click on  **Edit** to enter the edit status.

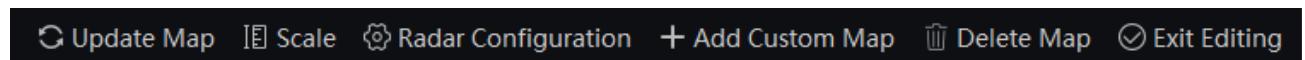


Figure 5-30: Edit the Map

Step 2: Click on "Scale," draw a line to act as a scale, and input the actual distance of the line. The scale will be displayed in the bottom left corner of the map page.

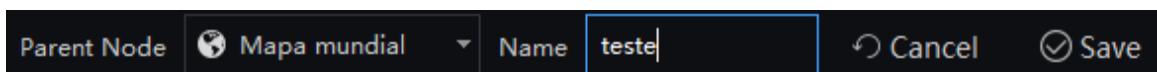


Figure 5-31: Map Configuration

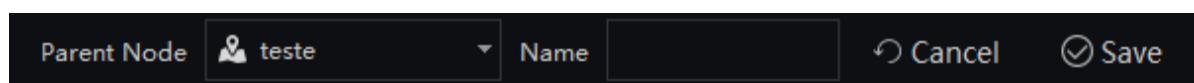


Figure 5-32: Add a Node Map

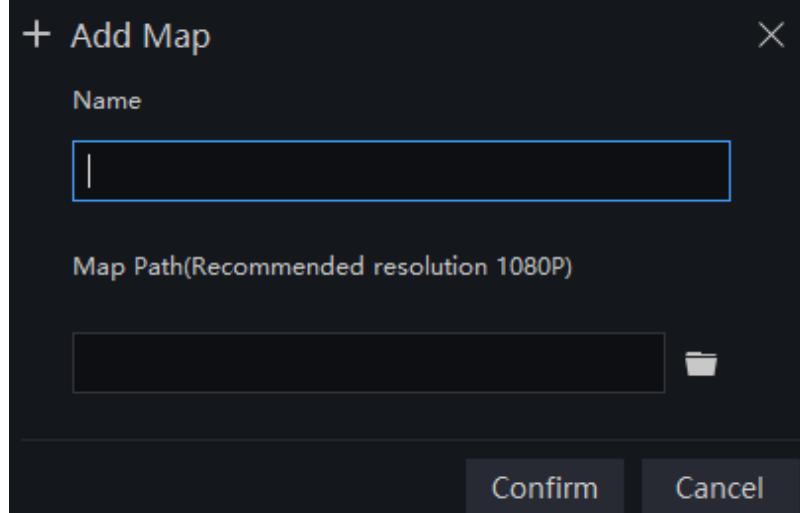


Figure 5-33: Custom Map

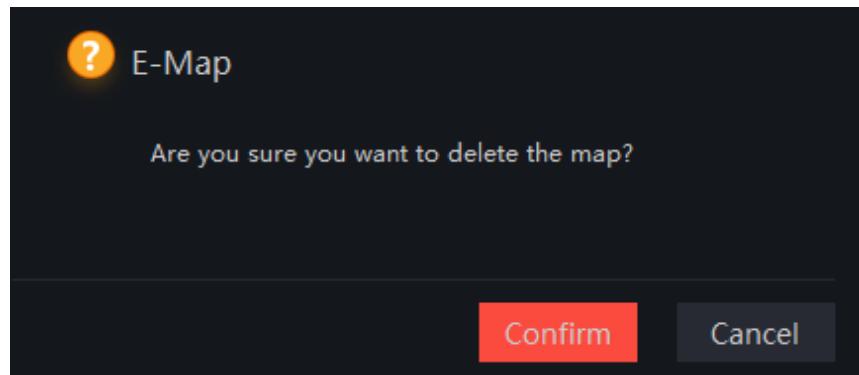
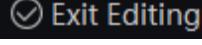


Figure 5-34: Delete Map

Step 3: Click on  to save the edits.

5.6.3 Quick Navigation



Step 1: Click on .

Step 2: Drag the mouse to select the area, and the result will be displayed in a pop-up window, as shown in Figure 5-35.

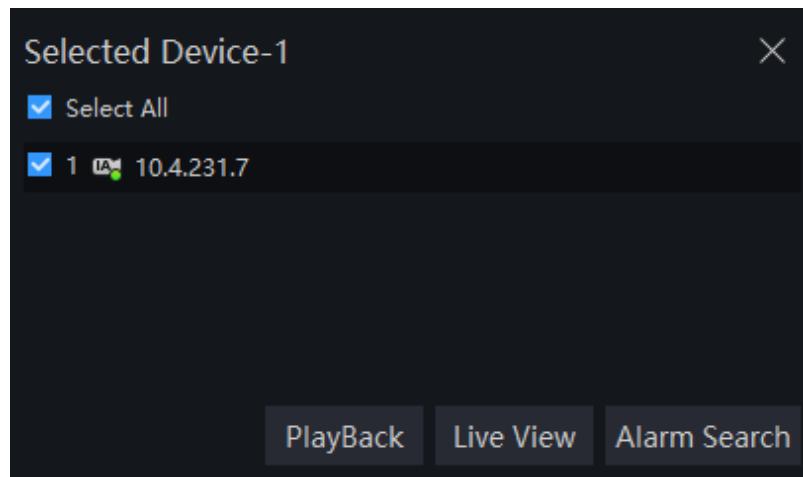
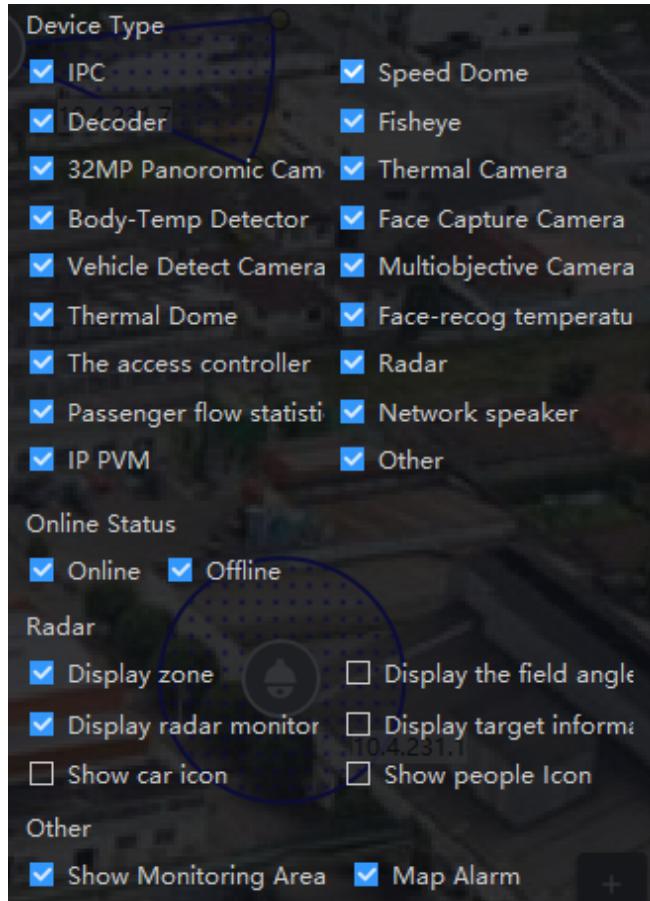


Figure 5-35: Selected Devices



Step 3: Click on  to filter the devices:



Step 4: If an alarm is triggered, click on  to position the camera, and double-click to view the live video.

Step 5: Click on  to view the alarm information.

Step 6: Click on  to set the screen division.

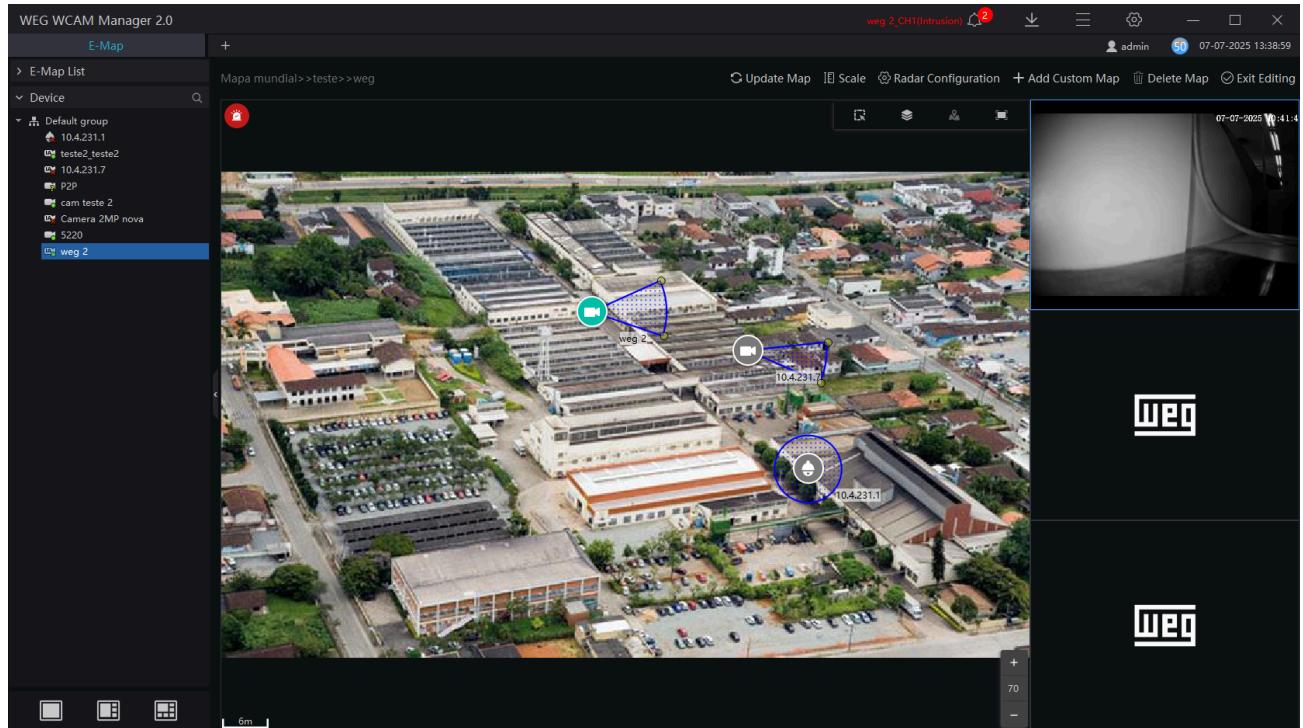


Figure 5-36: Map Live Video

Step 7: Double-click the camera on the map to view the live video or playback, as shown in Figure 5-37.

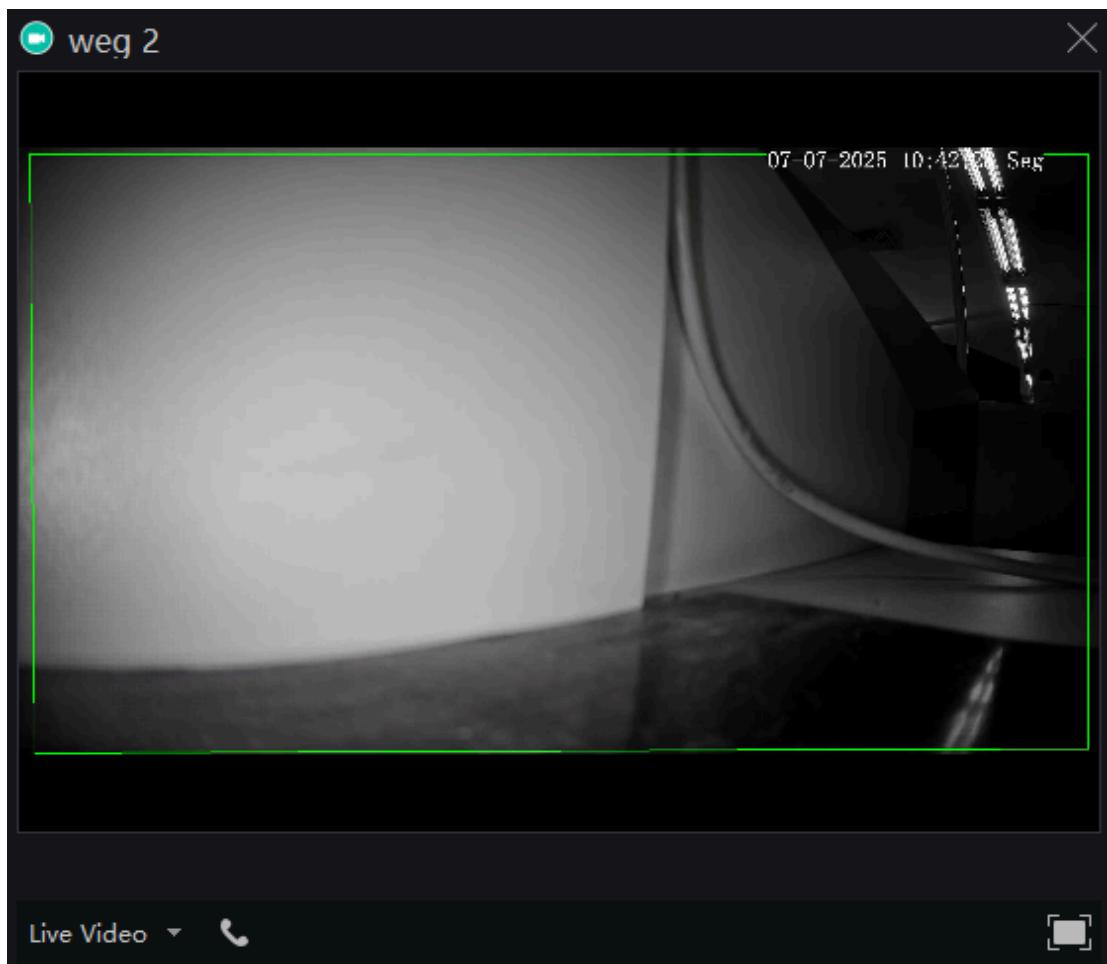


Figure 5-37: Live Video of an Alarm

5.7 REPORT STATISTICS

In the Report Statistics interface, users can view alarm statistics for groups and devices. The online device rate is also reported.

On the main menu page, click "Report Statistics" to access the detailed page, as shown in Figure 5-38.

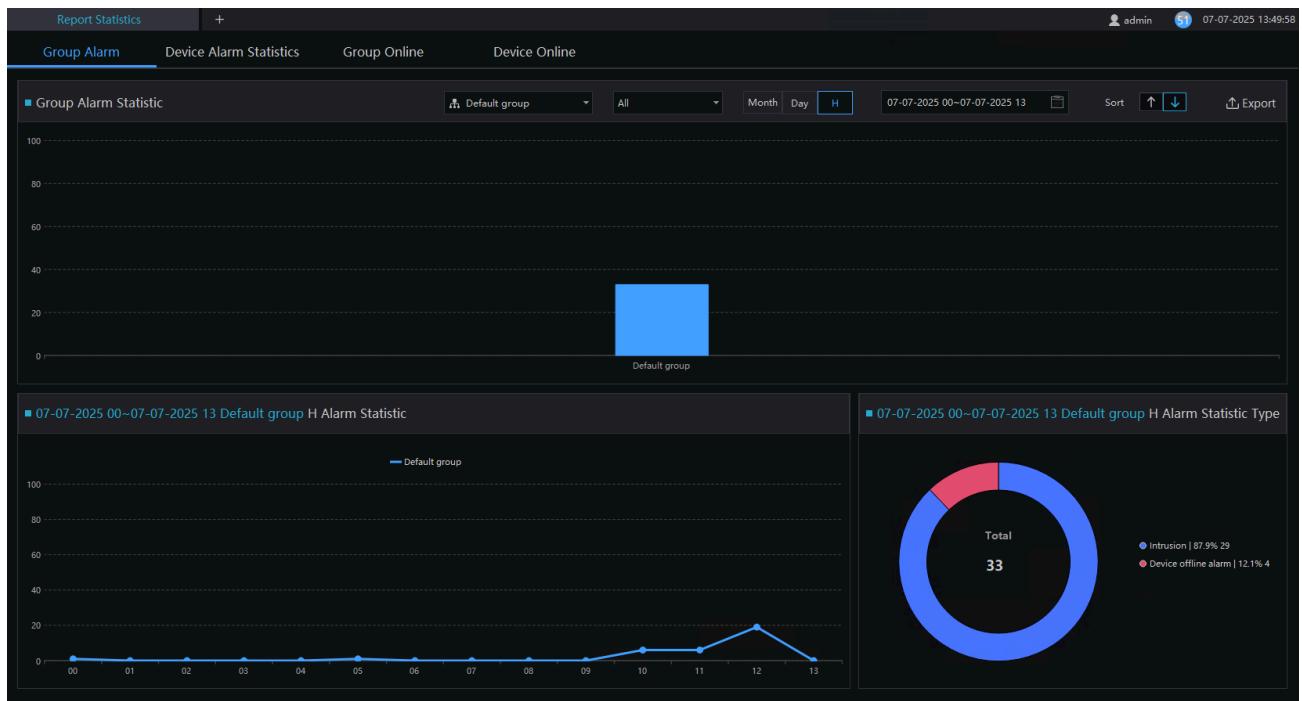


Figure 5-38: Reports and Statistics Interface

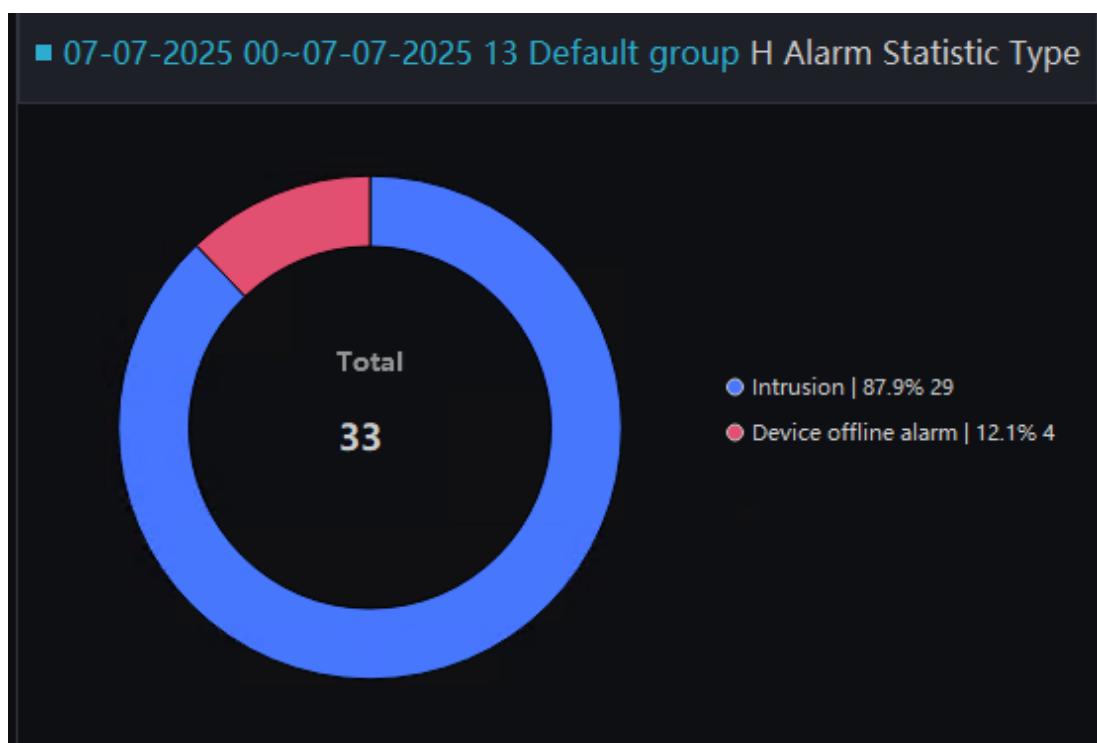


Figure 5-39: Alarm Statistics

There are three visual display methods for data statistics: histograms, line charts, and pie charts.

5.8 MONITORING CENTER

The Monitoring Center provides a comprehensive visual management platform. From the map, you can directly view the online status and access other functionalities such as:

- Regional Statistics
- Snapshot Statistics
- 7 Day Statistics
- 24-Hour Traffic Statistics
- Attendance
- Face Snapshot
- Real-time Alarm
- Maps
- Live Alarm Video

On the main menu, click on "Monitoring Center" to access the detailed page, as shown in Figure 5-40.

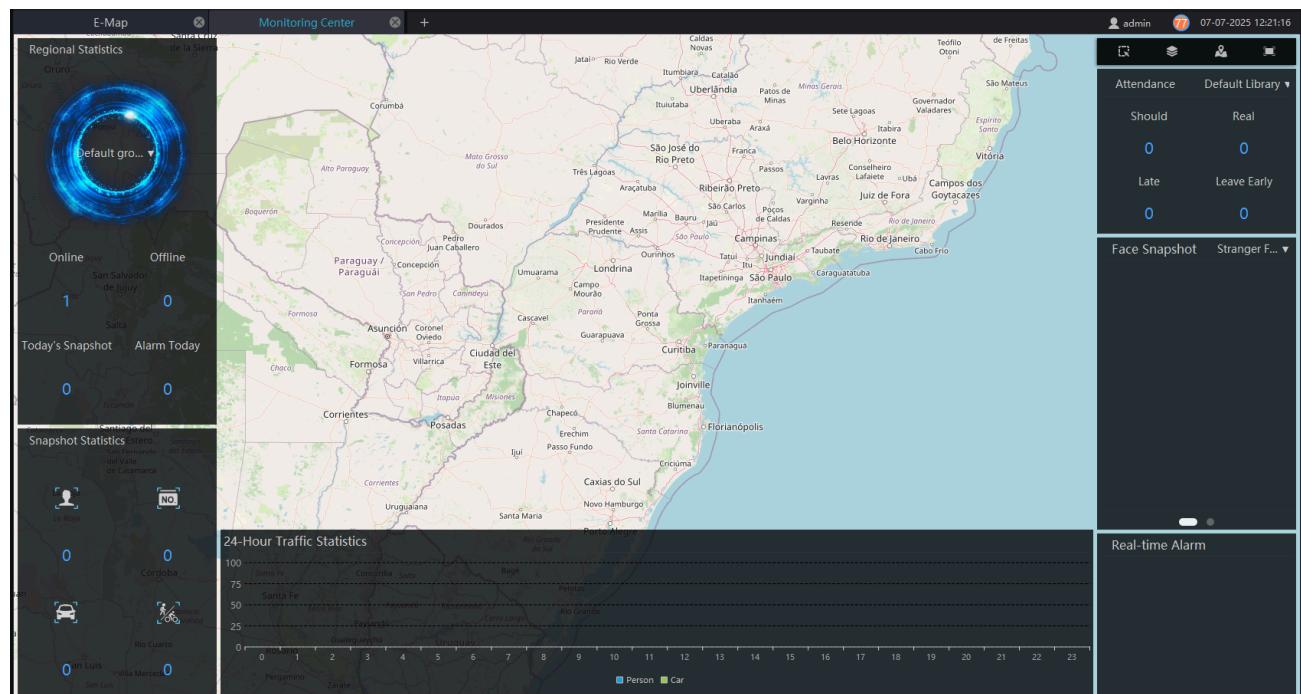


Figure 5-40: Monitoring Center

Features Overview:

- **Regional Statistics:** Counts the number of online and offline devices in different groups.
-

Snapshot Statistics: Provides statistics on faces, license plates, vehicles, people, and snapshots under the organization.

- **7-Day Statistics:** Shows pedestrian traffic, vehicle traffic, and alarm conditions from the past 7 days. This statistic updates daily and cannot be updated in real-time. By default, it alternates automatically between pedestrian and alarm statistics.
- **24 Hour Traffic Statistics:** Displays the number of people and cars in a 24-hour period.
- **Attendance:** Provides attendance statistics at control points within the group structure.
- **Face Capture:** Counts the frequency of strangers and captures individuals with elevated temperatures. By default, it alternates automatically between these two types of statistics, updated in real-time.
- **Real-Time Alarm:** Displays real-time alarm information. If the device is connected to the map, you can click to watch the real-time video.
- **Live Video:** Switches, in real-time, to alarm videos from devices present on the electronic map.

TIP!

By clicking on the camera on the map, you can view live videos or replay previous recordings.

5.9 EVENT LINKAGE

In the Event Linkage interface, users can configure actions related to alarms, including:

- **Trigger Condition:** Sets the criteria that activate the event.
- **Linkage Event:** Determines the actions to be executed, such as:
 - Sending emails.
 - PTZ (Pan/Tilt/Zoom) control.
 - IO (Input/Output) output.
 - Image capture.
 - Voice broadcasting.
- **Schedule:** Establishes the active period during which the defense will be applied.

Figure 5-41 illustrates this interface in detail.

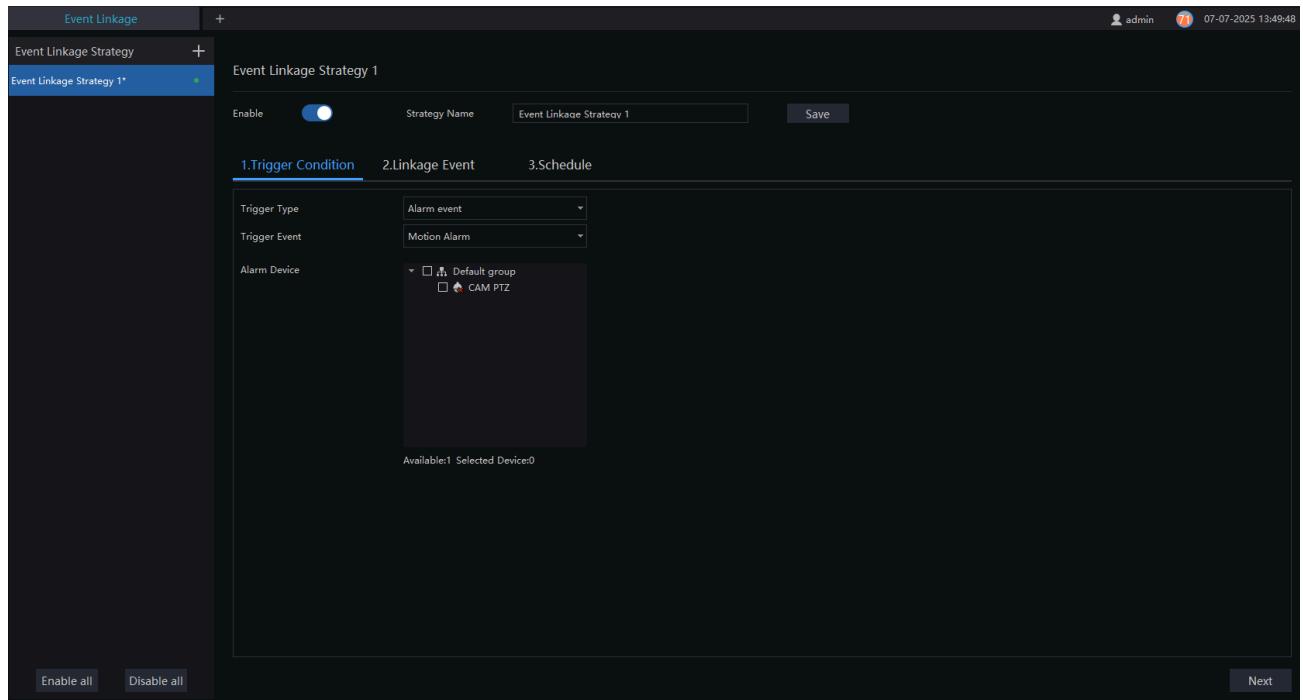


Figure 5-41: Event Linkage

Procedure:

Step 1: Click on **+** to add a new event linkage.

Step 2: Enable the strategy and define a name.

Step 3: Choose the trigger condition, as shown in Figure 5-42.

1.Trigger Condition 2.Linkage Event 3.Schedule

Trigger Type: Alarm event

Trigger Event: Motion Alarm

Alarm Device:

- Default group
- CAM PTZ

Available:1 Selected Device:0

Figure 5-42: Trigger Condition

Step 4: If "Timing" is selected, the user needs to define the trigger time and the days to repeat.

Step 5: If "Alarm Event" is selected, the user needs to choose the type of alarm and the desired devices, as shown in Figure 5-43.

1.Trigger Condition 2.Linkage Event 3.Schedule

SMTP

PTZ

IO Output

Snapshot Pictures

Voice Broadcasting

Figure 5-43: Alarm Events

Step 6: Click on the "Next Step" button to define the event linkage. Choose one or more alarm actions, as shown in Figure 5-43.

Step 7: Click on the "Next Step" button to define the defense schedule.

Step 8: Click on "Apply" to save the configuration.

5.10 SNAPSHOT RETRIEVAL

The Snapshot Retrieval interface is used to locate images captured and linked to events. During the defense setup, you can search for the alarm source equipment and review panoramic images captured by other linked equipment.

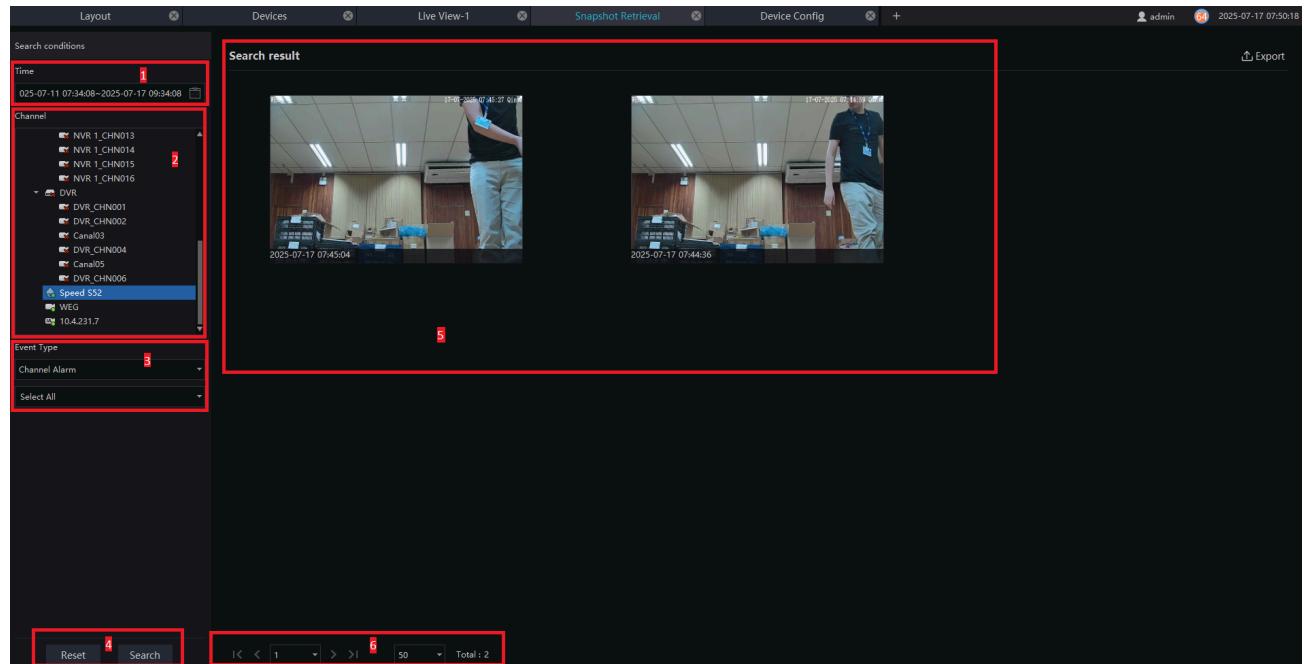


Figure 5-45: Snapshot Retrieval

Key Features and Functions:

Number	Function	Description
1	Time	 Click on the calendar icon to open the calendar and set the search range. The maximum search range is 7 days.
2	Channel	Select the alarm source device.
3	Event Type	Choose the event type and alarm type.
4	Reset/Search	<ul style="list-style-type: none"> - Click on "Reset" to reset the search conditions. - Click on "Search" to perform the search.
5	Result	Displays the search results. Click on an image to view detailed information. Results can be exported to a local folder.
6	Page	Displays device pages, the next page, and the number of snapshots.

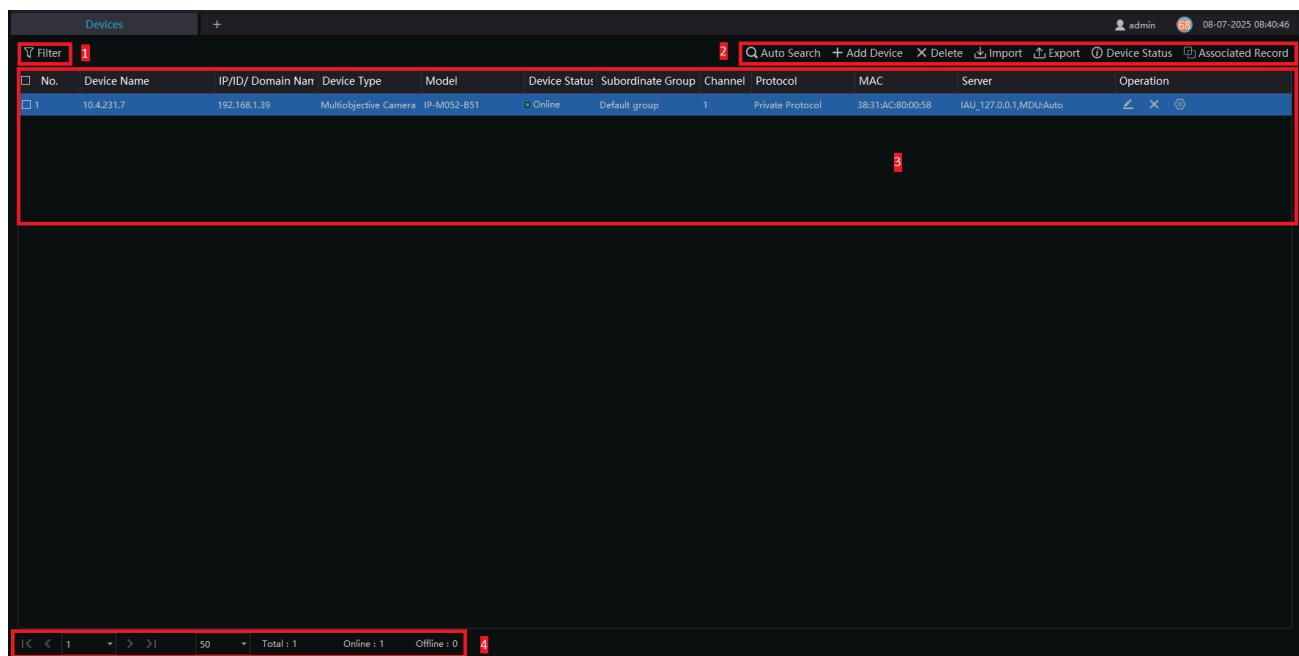
6. CONFIGURATION MAINTENANCE

6.1 DEVICES

On the device management page, you can add devices (such as IPC, DVR, NVR) through automatic search, manual addition, or batch import. The platform supports the following device types:

- IPC;
- DVR;
- NVR;
- Thermal Camera;
- Facial Capture Camera;

In the main menu, click on "Devices" to access the detailed page, as shown in Figure 6-1.



The screenshot shows a web-based device management interface. At the top, there is a header with the title 'Devices' and a search bar. Below the header is a toolbar with buttons for 'Auto Search', 'Add Device', 'Delete', 'Import', 'Export', 'Device Status', and 'Associated Record'. The main area is a table displaying device information. The columns include: No., Device Name, IP/ID/ Domain Name, Device Type, Model, Device Status, Subordinate Group, Channel, Protocol, MAC, Server, and Operation. A single row is visible in the table, showing: No. 1, Device Name 10.4.231.7, IP/ID/ Domain Name 192.168.1.39, Device Type Multiobjective Camera, Model IP-M052-B51, Device Status Online, Subordinate Group Default group, Channel 1, Protocol Private Protocol, MAC 38:31:AC:80:00:58, Server IAU_127.0.0.1, and Operation MDU:Auto. The table has a red border. At the bottom of the interface, there is a pagination section with buttons for navigating between pages and a summary of the total number of devices (Total: 1), the number of online devices (Online: 1), and the number of offline devices (Offline: 0). The entire interface is framed by a red border.

Figure 6-1: Device Management Interface

Key Features and Functions:

Number	Function	Description
1	Filter	Filter devices by setting the device type, online status, and device name.
2	Operation	Search, add, delete, export, import devices; view the status of all devices; associated recordings (if both the camera and the NVR are connected to the platform, recordings from the NVR can be synchronized with the IP cameras).
3	Device Information Display	View device details; operational options: edit, delete device, or quickly access the device configuration.
4	Page	Displays device pages, the next page, and the total quantity.

6.1.1 Auto Search

The device and the server must be on the same network segment.

Procedure:

Step 1: On the device management page, click on "Auto Search" to access the detailed page, as shown in Figure 6-2.

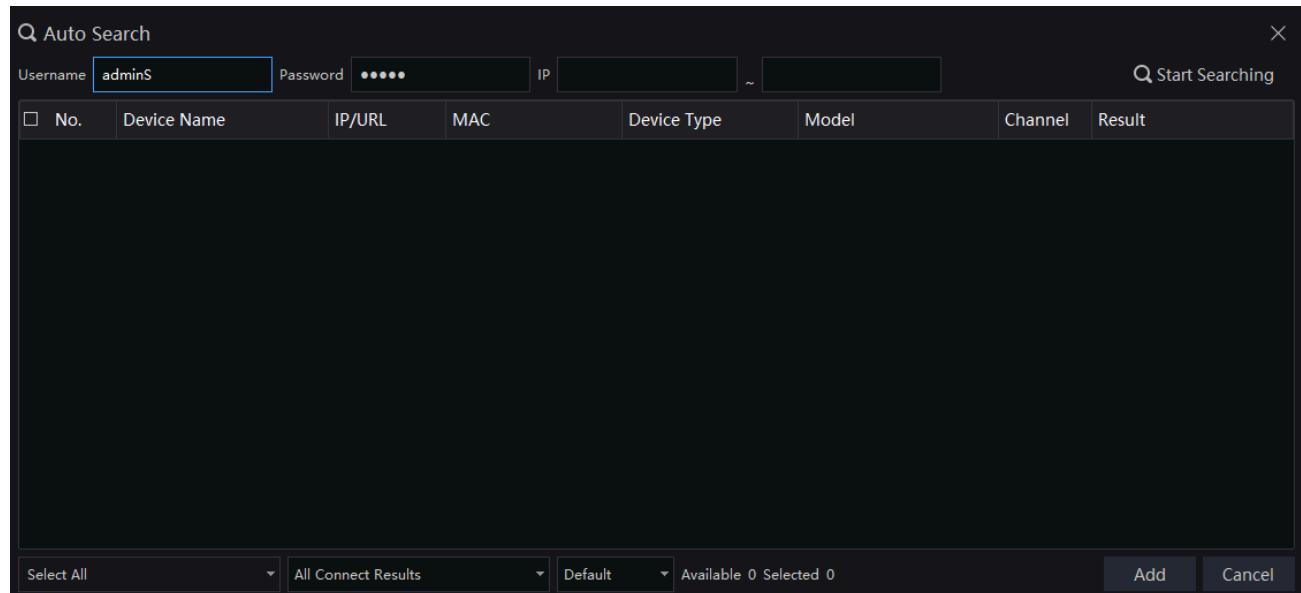


Figure 6-2: Automatic Search

Step 2: Enter the device's username and password, and set the IP range filter.

Step 3: Click on "Start Searching". The device on the same network as the client will be automatically searched, and the results will appear on the current page.

Step 4: Select the desired devices and click on "Add." Once completed, the device will be displayed in the device list.

TIP!

All devices can be added to the list, but if any device fails to connect, the reason might be an incorrect password or a configuration error. Modify the device settings manually to resolve the issue.

6.1.2 Add Manually

Procedure:

Step 1: Click on "Add Device" on the devices page, as shown in Figure 6-3.

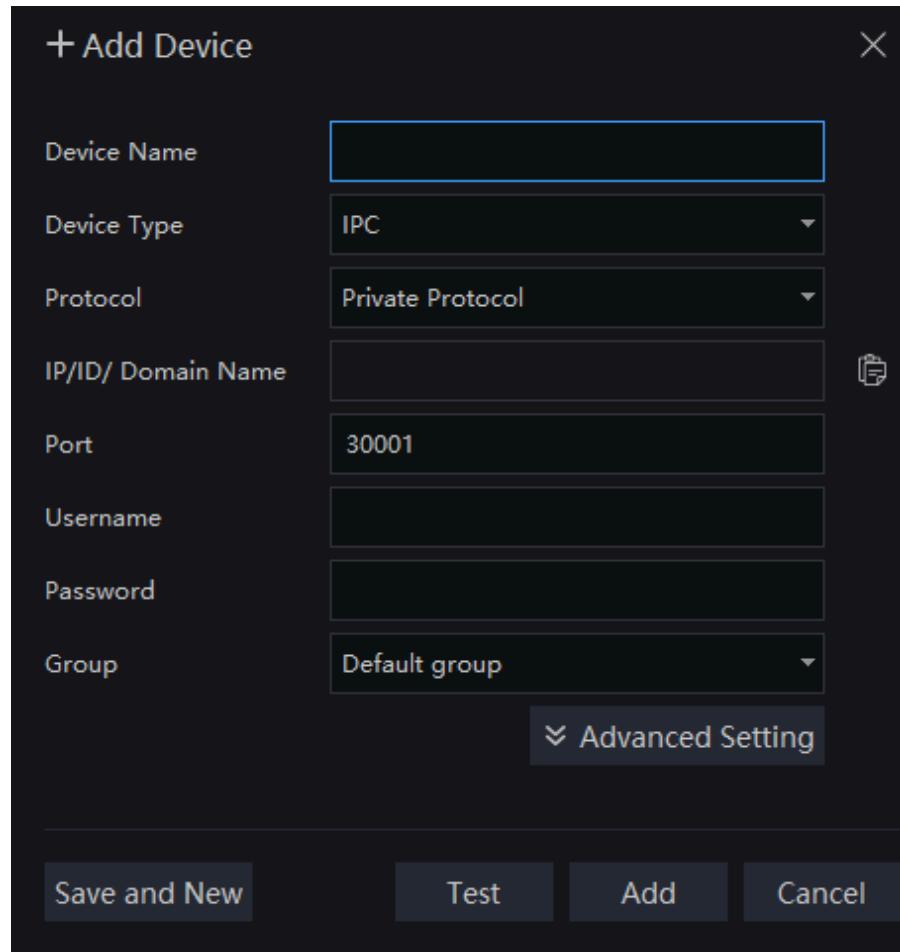


Figure 6-3: Add Device Manually

WARNING!

The intelligent analysis server does not support automatic addition; it only supports cameras with facial detection.

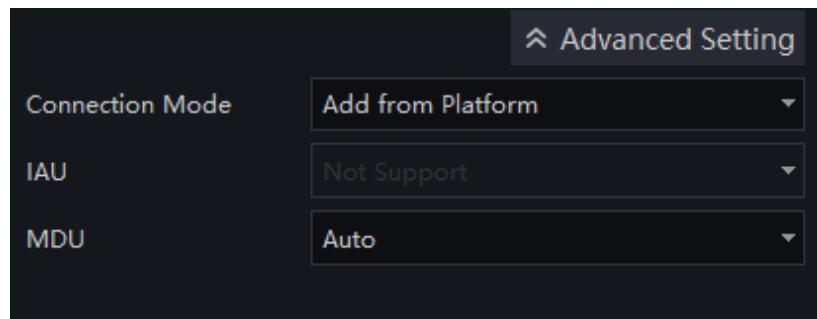


Figure 6-4: Associated Server

For advanced settings, the default connection mode is "Add from Platform". If you want to switch to the "Registration" mode, configure the parameters in the device's web interface (Configuration > Network Service > Platform Access) using advanced settings.

Step 2: Enter the device name, select the device type, input the IP address/username/password, and select the group.

Step 3: Click on "Test" to verify the settings, then click on "Save and New."

Step 4: A pop-up window appears "Added successfully," and the device will appear on the device management page (the device details will also appear on the page simultaneously).

Step 5: To delete cameras, select the number of cameras, click on "Delete," and then confirm by clicking "OK" to remove the cameras.

6.1.3 Export or Import Device

Procedure:

Step 1: Click on "Export."

Step 2: Click on "Export Template," and edit the information on the template page.

Step 3: Click on "Import."

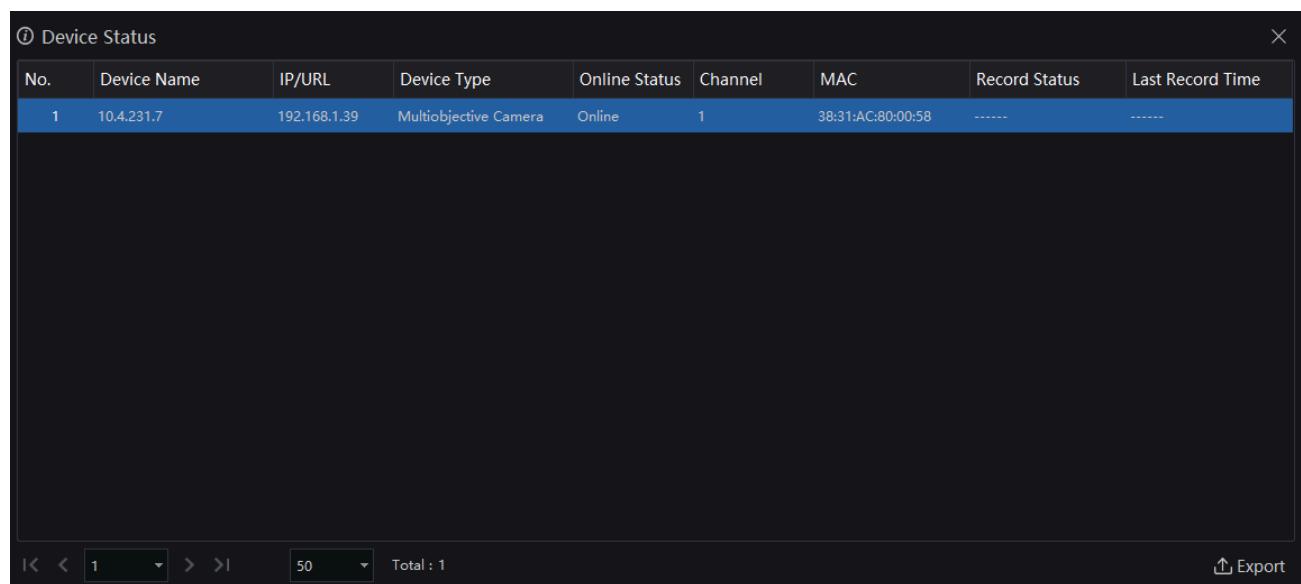
Step 4: Select the file to be imported and click Save.

6.1.4 Device Status

Procedure:

Step 1: Click on "Device Status."

Step 2: A pop-up window displays the status of the devices, as shown in Figure 6-5.



No.	Device Name	IP/URL	Device Type	Online Status	Channel	MAC	Record Status	Last Record Time
1	10.4.231.7	192.168.1.39	Multiobjective Camera	Online	1	38:31:AC:80:00:58	-----	-----

Figure 6-5: Device Status

Step 3: Click on "Export."

Step 4: Set the folder where you want to save the file.

6.2 DEVICE CONFIG

In the "Device Config" interface, you can view and configure device parameters such as bitrate parameters, motion detection parameters, OSD parameters, image parameters, and maintenance for IPC. For NVR devices, users can configure recording strategies and disk management. For thermal cameras, users can configure thermal parameters, smoke and flame detection, etc.

INFO!

The configuration functionality is related to the firmware version of the device.

In the main menu, click on "Configure Device" to access the detailed page, as shown in Figure 6-6.

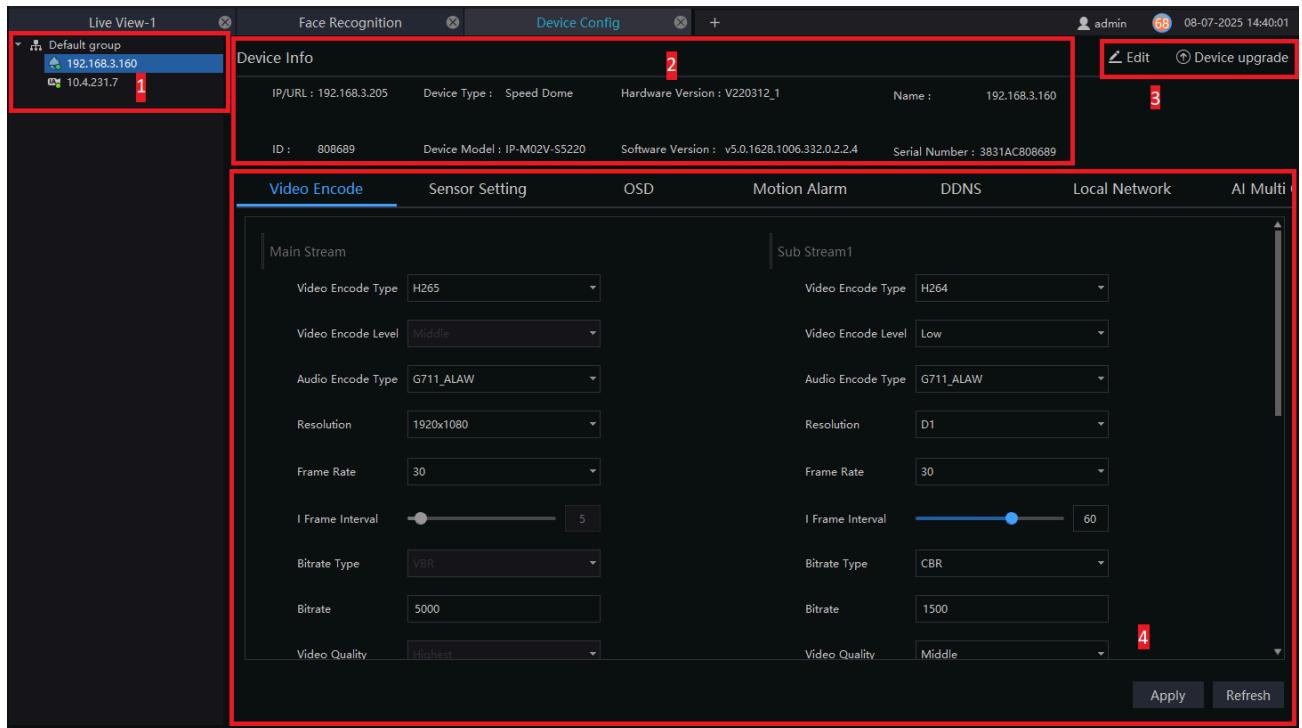


Figure 6-6: Device Configuration Interface

Key Features and Functions:

Number	Function	Description
1	Organization Structure	Displays the organization structure information.
2	Basic Information	Displays the basic information.
3	Edit/Device Upgrade	Edit: Edit the device information. Device Upgrade: Click to upgrade the device immediately.
4	Device Configuration	Displays and allows the configuration of the device. Click "Apply" to save the information.

6.3 GROUP

For large-scale surveillance, groups can be created to perform hierarchical management of devices. The system's default configuration includes a root group that supports up to 6 layers.

In the main menu, click on "Group" to access the detailed page, as shown in Figure 6-7.

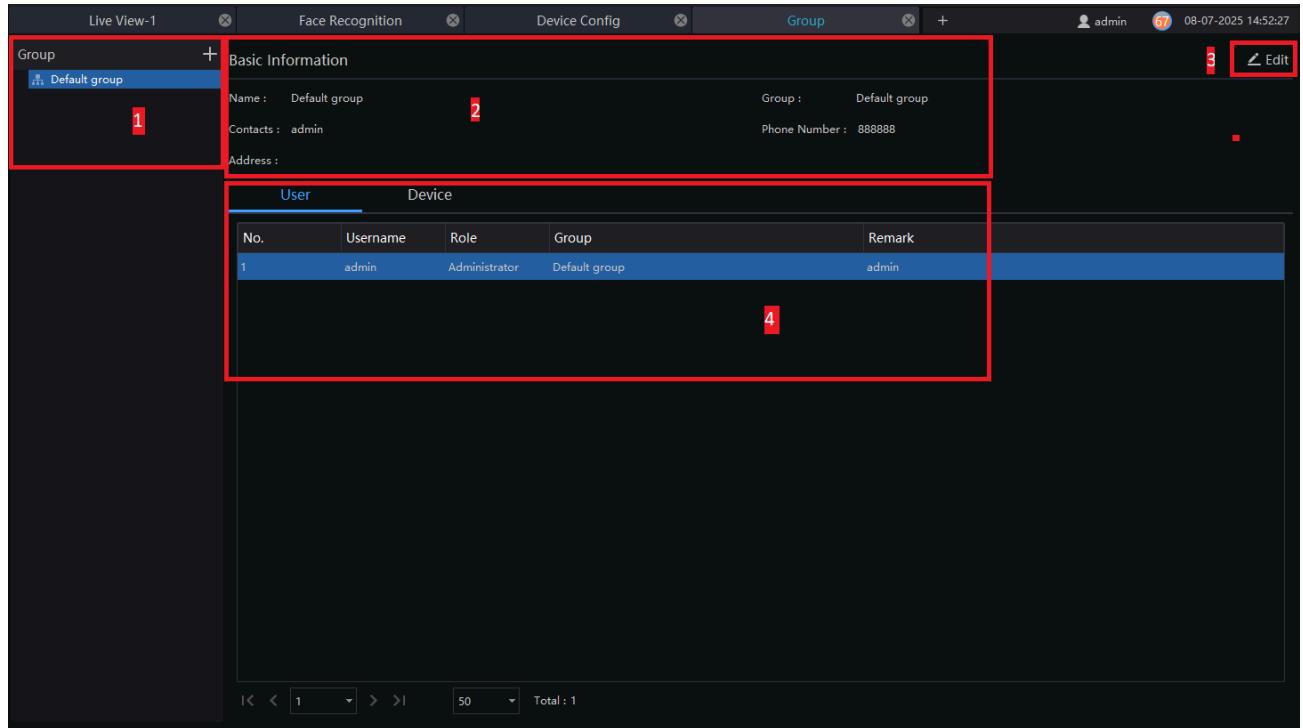


Figure 6-7: Group Interface

Key Features and Functions:

Number	Function	Description
1	Group	Displays the group tree; new groups can be added by clicking on the "+" button.
2	Basic Information	Displays the basic information of the device or group.
3	Edit	Basic information can be edited by clicking on "Edit."
4	User or Device Display Area	Displays user or device information.

6.3.1 Add a Group

Procedure:

Step 1: Click on "+" to add a new group, as shown in Figure 6-8.

+ Add Group

Name

Group Default group

Phone Number

Contacts

Address

Save and New 1

Save

Cancel

Figure 6-8: Add Group

Step 2: Enter the name, group, phone number, contacts, and address.

Step 3: Click on "Save and New" to save and create a new group simultaneously.

Step 4: Click on "Save" to save and finalize.

6.4 LOG

In the "Log" interface, users can query the operation log, server log, and system log.

In the main menu, click on "Log" to access the detailed page, as shown in Figure 6-9.

Log

Time: 07-07-2025 00:00:00~08-07-2025 15:07:01 1

Type: Select All 2

Option: Select All 3

Keywords: Only remarks are supported 4

Query 5

Export 6

No. User Time Type Operation Remark

1	admin	08-07-2025 14:32:54	Face Recognition	Update face recognition configuration	Update face recognition configuration
2	admin	08-07-2025 14:28:50	Face Recognition	Update face recognition configuration	Update face recognition configuration
3	admin	08-07-2025 14:27:56	Face Recognition	Update face recognition configuration	Update face recognition configuration
4	admin	08-07-2025 14:27:43	Face Recognition	Update face recognition configuration	Update face recognition configuration
5	admin	08-07-2025 14:26:10	Face Recognition	Update face recognition configuration	Update face recognition configuration
6	admin	08-07-2025 14:25:14	Face Recognition	Update face recognition configuration	Update face recognition configuration
7	admin	08-07-2025 14:24:28	Live View	Stop Preview	Stop Preview[10.4.231.7]
8	admin	08-07-2025 14:24:14	Live View	Stop Preview	Stop Preview[cam AI]
9	admin	08-07-2025 14:24:14	Devices	Delete Device	Delete Device[Name:cam AI Uid:800865]
10	admin	08-07-2025 14:24:14	Live View	Stop Preview	Stop Preview[cam AI]
11	admin	08-07-2025 14:22:24	Face Recognition	Update face recognition configuration	Update face recognition configuration
12	admin	08-07-2025 14:18:36	Devices	Add Device	Add Device[cam AI]
13	admin	08-07-2025 14:16:34	Devices	Delete Device	Delete Device[Name:cam weg2 Uid:10800]
14	admin	08-07-2025 14:16:25	Devices	Add Device	Add Device[cam weg2]
15	admin	08-07-2025 11:58:16	Live View	Start Preview	Start Preview[192.168.3.160]
16	admin	08-07-2025 11:58:16	Live View	Stop Preview	Stop Preview[10.4.231.7]
17	admin	08-07-2025 11:58:15	Live View	Stop Preview	Stop Preview[192.168.3.160]
18	admin	08-07-2025 11:58:15	Live View	Start Preview	Start Preview[10.4.231.7]
19	admin	08-07-2025 11:58:12	Live View	Stop Preview	Stop Preview[10.4.231.7]
20	admin	08-07-2025 11:58:12	Live View	Start Preview	Start Preview[192.168.3.160]
21	admin	08-07-2025 11:55:32	Face Recognition	Update face recognition configuration	Atualizar configuração de reconhecimento faci

1 2 3 4 5 6 7

Figure 6-9: Search Events Interface

Key Features and Functions:

Number	Function	Description
1	Time	Define the start and end time for the query.
2	Log Types	The default is to select all.
3	Log Option	The default is to select all. There are many options, allowing more detailed logs to be chosen separately.
4	Keywords	Define a keyword for quick queries.
5	Query	Executes the log search based on the previous settings.
6	Result	Displays the query results.
7	Interface Display	Shows the current page of logs, the number of logs, and the option to navigate to the next page.

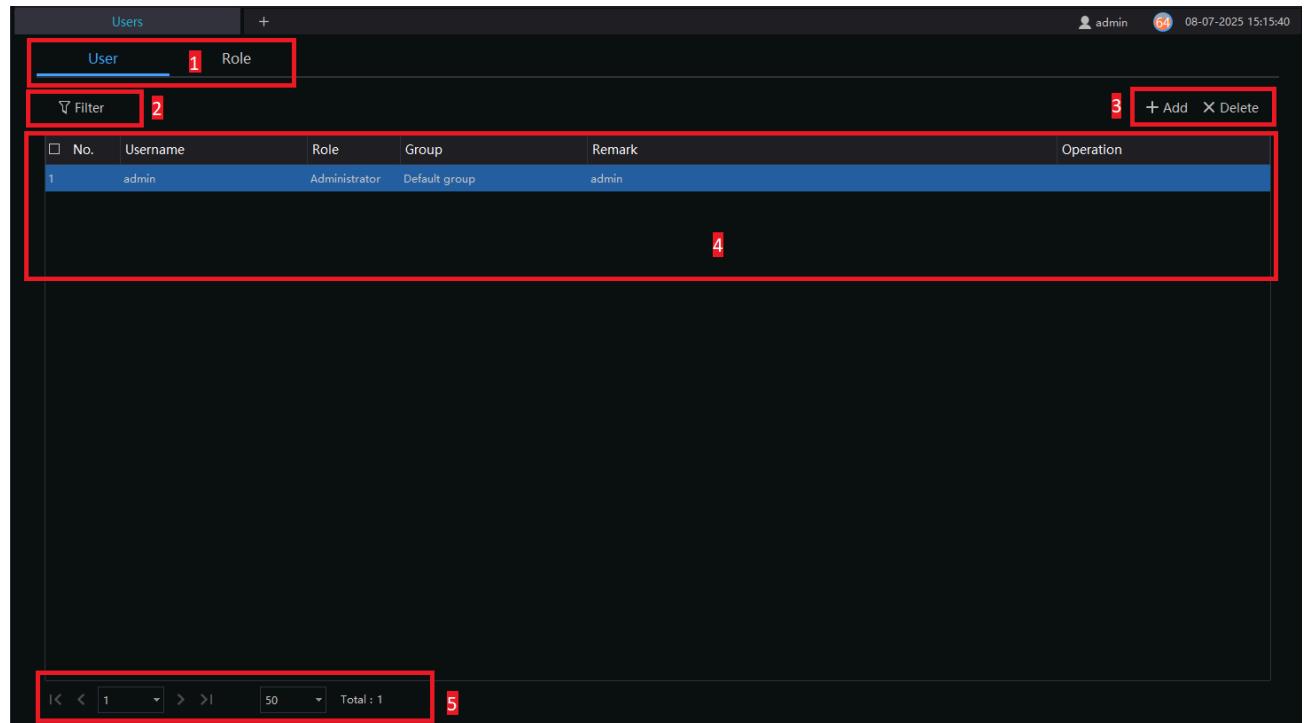
6.5 USERS

On the user page, you can add users, modify user privileges, search, or delete users through the user management feature.

The system includes a default **Administrator** and **Operator**:

- **Administrator:** Has all privileges.
- **Operator:** Has partial privileges.

In the main menu, click on "Users" to access the detailed page, as shown in Figure 6-10.



The screenshot shows a user management interface with the following numbered elements:

- 1: A red box highlights the "User" and "Role" input fields at the top left.
- 2: A red box highlights the "Filter" button and its input field at the top center.
- 3: A red box highlights the "+ Add" and "X Delete" buttons at the top right.
- 4: A red box highlights the user table body, which contains one row for "admin".
- 5: A red box highlights the pagination controls at the bottom, including the page number "1", a dropdown for "Total", and the text "Total : 1".

Figure 6-10: User Management Interface

Key Features and Functions:

Number	Function	Description
1	Users and Role	Choose users or roles to manage.
2	Filter	Set filter criteria; choose role, group, or user name for filtering.
3	Add/Delete	Add or delete a user or role.
4	Display Area	Displays user or role information.
5	Interface Display	Shows the current page of users/roles, the number of users, and an option to navigate to the next page.

6.5.1 Add User

Procedure:

Step 1: In the user management interface, click "Add" to add a new user.

+ Add User X

Username	<input type="text"/>	Password	<input type="text"/>	
Role	Administrator <input type="button" value="▼"/>	Weak	Middle	Strong
Group	Default group <input type="button" value="▼"/>	Remark	<input type="text"/>	

Menu Privilege **Channel Privilege** **Layout Privilege** **Face Lib Privilege**

Select All

Basic Functions

<input checked="" type="checkbox"/> Live View	<input checked="" type="checkbox"/> PlayBack	<input checked="" type="checkbox"/> Layout	<input checked="" type="checkbox"/> E-Map
<input checked="" type="checkbox"/> Real-time Alarm	<input checked="" type="checkbox"/> Alarm Search	<input checked="" type="checkbox"/> Report Statistics	<input checked="" type="checkbox"/> Monitoring Center
<input checked="" type="checkbox"/> Event Linkage	<input checked="" type="checkbox"/> Snapshot Retrieval		

Configuration Maintenance

<input checked="" type="checkbox"/> Devices	<input checked="" type="checkbox"/> Log	<input checked="" type="checkbox"/> Group	<input checked="" type="checkbox"/> Users
<input checked="" type="checkbox"/> Device Config	<input checked="" type="checkbox"/> Servers	<input checked="" type="checkbox"/> Alarm Mail	<input checked="" type="checkbox"/> Regional Management
<input checked="" type="checkbox"/> Broadcast Management			

Save and New Add Cancel

Figure 6-11: Add User

Step 2: Enter the name. Users can be set as "Administrator" or "Operator" by default.

Step 3: Set a password and assign the user to a group.

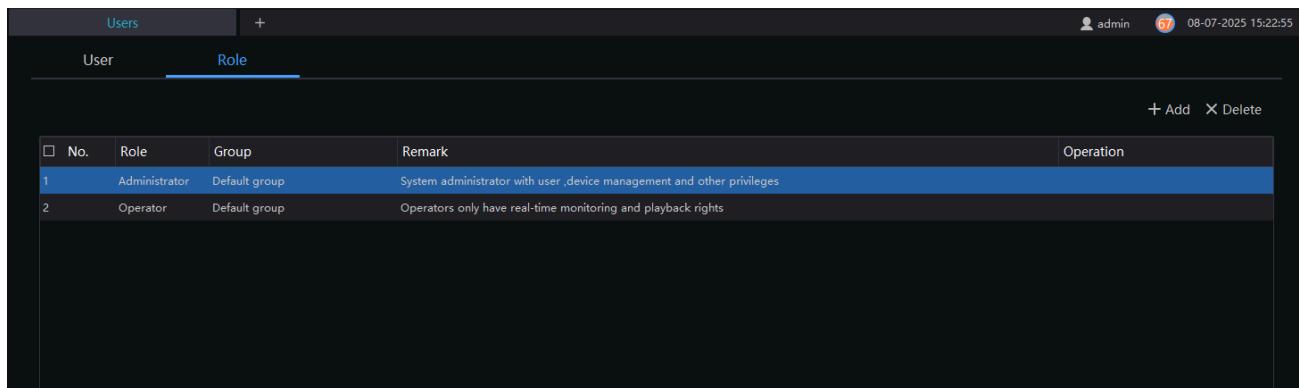
Step 4: Select the user's privileges.

Step 5: Click "Save and New" or "Add" to save and add the user. A pop-up window appears the message "Added successfully."

6.5.2 Add Role

Procedure:

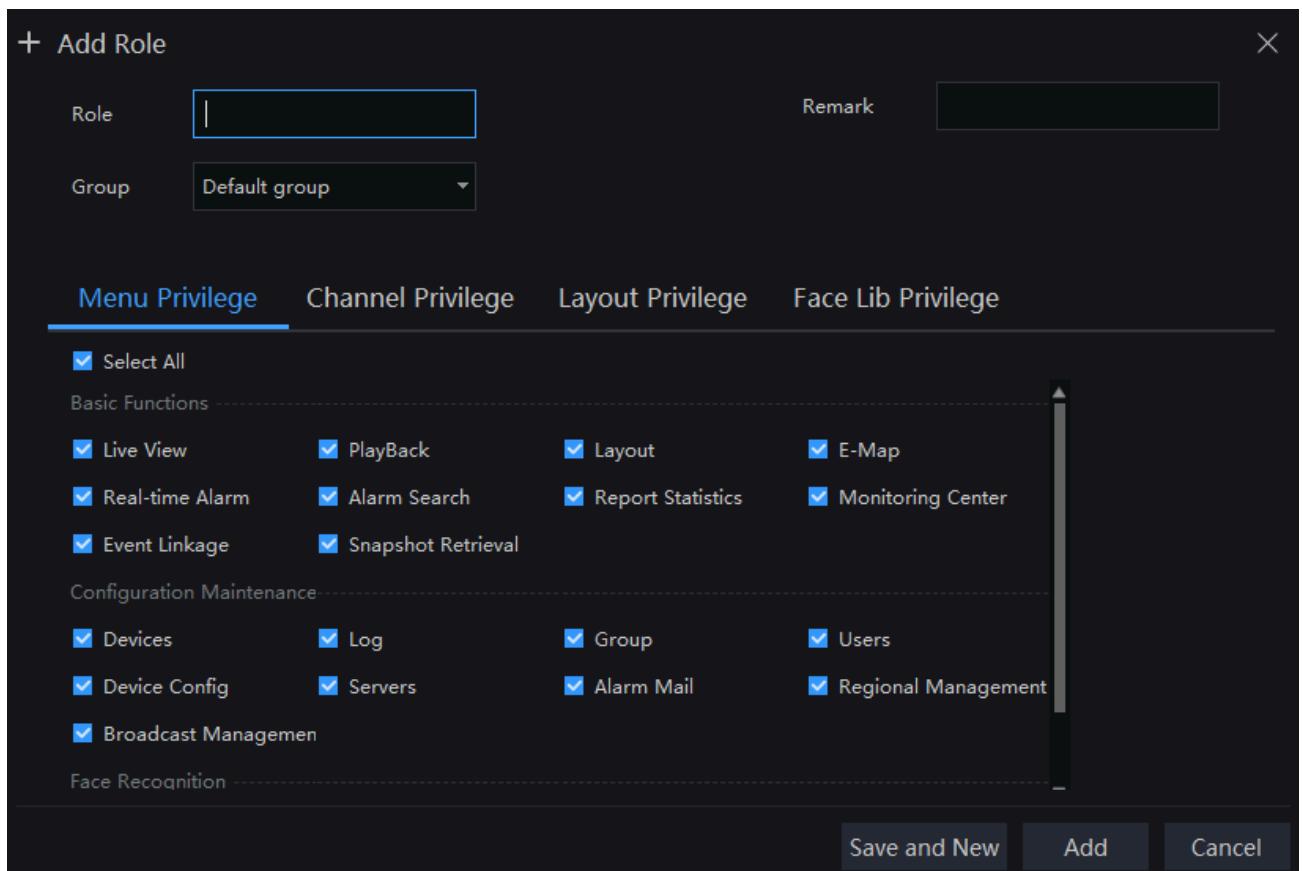
Step 1: In the user management interface, click on "Role" to access the interface shown in Figure 6-12.



No.	Role	Group	Remark	Operation
1	Administrator	Default group	System administrator with user, device management and other privileges	
2	Operator	Default group	Operators only have real-time monitoring and playback rights	

Figure 6-12: Role Interface

Step 2: Click on "Add," then enter the role name, group, and a description.



+ Add Role

Role:

Group: Default group

Remark:

Menu Privilege

Select All

Basic Functions

<input checked="" type="checkbox"/> Live View	<input checked="" type="checkbox"/> PlayBack	<input checked="" type="checkbox"/> Layout	<input checked="" type="checkbox"/> E-Map
<input checked="" type="checkbox"/> Real-time Alarm	<input checked="" type="checkbox"/> Alarm Search	<input checked="" type="checkbox"/> Report Statistics	<input checked="" type="checkbox"/> Monitoring Center
<input checked="" type="checkbox"/> Event Linkage	<input checked="" type="checkbox"/> Snapshot Retrieval		

Configuration Maintenance

<input checked="" type="checkbox"/> Devices	<input checked="" type="checkbox"/> Log	<input checked="" type="checkbox"/> Group	<input checked="" type="checkbox"/> Users
<input checked="" type="checkbox"/> Device Config	<input checked="" type="checkbox"/> Servers	<input checked="" type="checkbox"/> Alarm Mail	<input checked="" type="checkbox"/> Regional Management
<input checked="" type="checkbox"/> Broadcast Management			

Face Recognition

Save and New Add Cancel

Figure 6-13: Add Role

Step 3: Select the privileges for the role.

Step 4: Click on "Save and New" to save the current settings or "Add" to finalize the addition.

Step 5: The added role will be displayed in the interface. Click "Edit" or "Delete" to modify or remove the role.

6.6 SERVERS

In the server interface, you can view execution status, performance data, and server parameter configurations to better understand server runtime data and perform more efficient system maintenance.

In the main menu, click on "Servers" to access the detailed page, as shown in Figure 6-14.

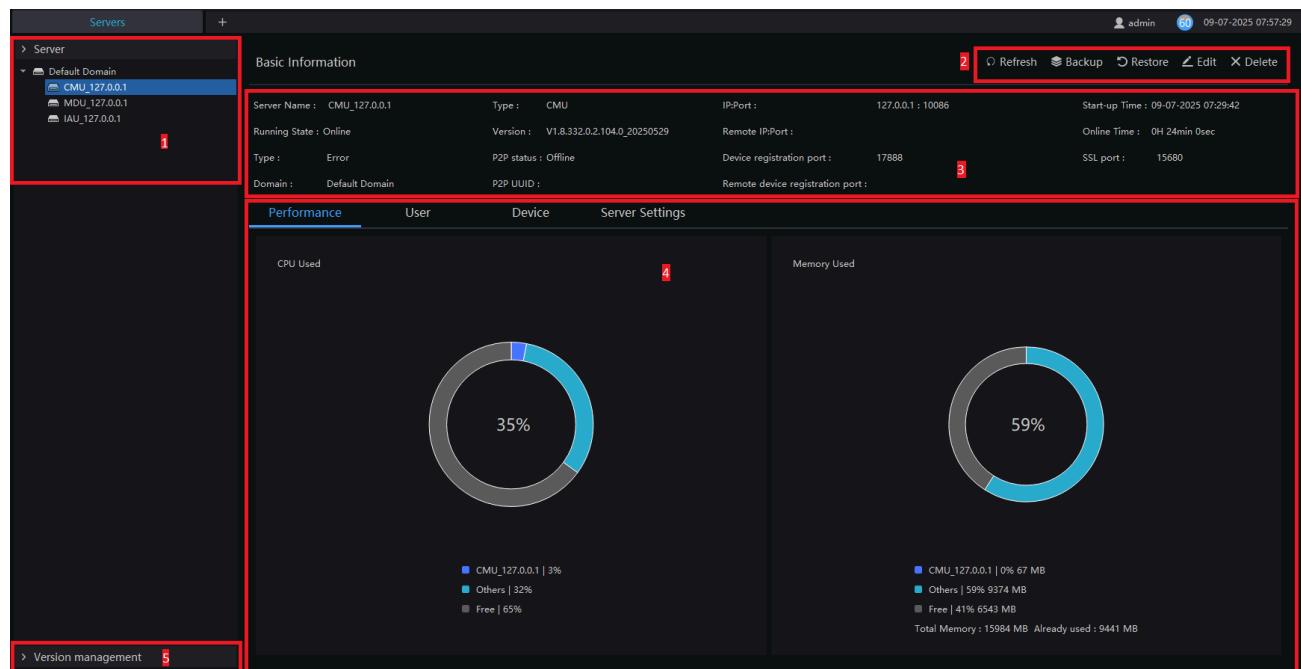


Figure 6-14: Server Interface

Key Features and Functions:

Number	Function	Description
1	Servers	Default Server, CMU/MDU/IAU Server.
2	Basic Operations	Refresh page, backup, restore, edit, and delete.
3	Basic Information	Basic server details.
4	Server Performance	Displays the performance information of the selected server.
5	Version Management	Release versions to the server and update the version for connected clients.

6.6.1 Central Management Server

Data backup and recovery are typically used for system migration. This process involves two main steps:

Data Backup:

- Involves downloading the data from the server where WCAM is installed.
- Backup data includes database information such as:
 - Users

- Devices
- Servers
- Alarms
- Logs
- Face photos, among others.

Data Recovery:

- Involves uploading the backup data to the servers.
- This step includes performing recovery operations and ensuring the system returns to normal functionality.

In server settings, users can configure the general parameters for the face capture limit. These parameters can be applied to all cameras with these functions, as shown in Figure 6-15.

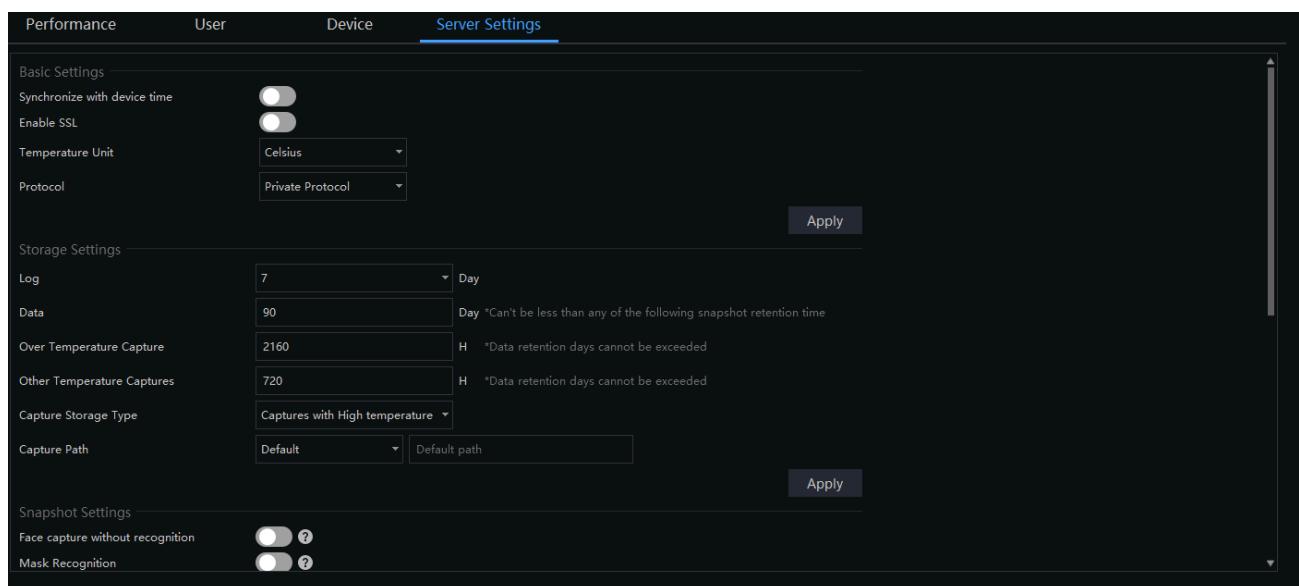


Figure 6-15: Server Settings

INFO!

If the retention time for Over Temperature Capture is null, it means that the image capture time will match the data storage duration in days.

INFO!

If the retention time for over-temperature/temperature capture is set to 0, it means that captured images will not be saved.

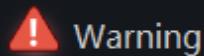
There are five server configurations:

Basic Settings: Time synchronization, enabling SSL, temperature unit, and device logging protocol.

Storage Configuration: Log retention days, data storage days, over-temperature capture retention time, other temperature capture retention time, Capture Storage Type, and capture path.

WARNING!

When the Capture Path is changed, the following message is displayed:



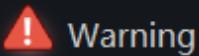
Modifying the capture path will result in the loss of all previously captured images, including the historical capture data of face search, license plate search, vehicle search, thermal imaging capture search and other image capture functions, which will not be able to view and obtain normally. This function is only recommended for platform deployment, please modify it carefully!

Confirm

Snapshot Settings: Face recognition, mask recognition, no-mask alarm, capture time, remove duplicate objects, and face algorithm mode.

WARNING!

When the face algorithm mode is changed, the following message is displayed:



Modifying the algorithm mode of face recognition will lead to the failure of all the face images in the current face database, which can not be recognized normally, and all the previously captured face images will not be retrieved normally in the way of image search. This function is only recommended for platform deployment, please modify it carefully!

Confirm

INFO!

Enable Face capture without recognition, skip facial recognition operations, and perform only temperature measurement management. All captured faces will be treated as strangers and cannot be searched using the image search function. The Face capture without recognition mode is suitable for scenarios where identifying individuals is not a concern, such as airports, subways, stations, other access controls, parks, and public service agencies.

Face Capture Limit: Ambiguity, confidence coefficient, face size (length), and face size (width).

Alarm Configuration: Remove repeat alarm time period.

6.6.1.1 Data Backup

Procedure:

Step 1: Click on  in the top-right corner. A window will appear, as shown in Figure 6-16.

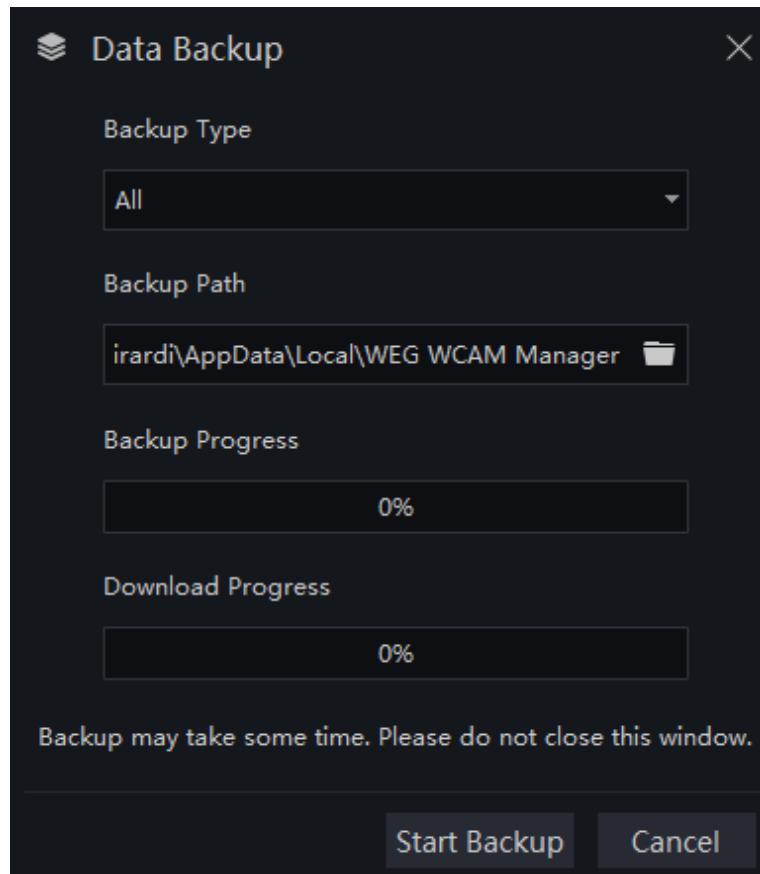


Figure 6-16: Data Backup

Step 2: Navigate to the backup path and click on "Start Backup" to back up the server data.

Step 3: Once the backup is successful, the backup progress will be displayed as "100%."

Step 4: Click on  to exit the backup process.

6.6.1.2 Restore Backup

Click on "Restore", and a window will appear, as shown in Figure 6-17.

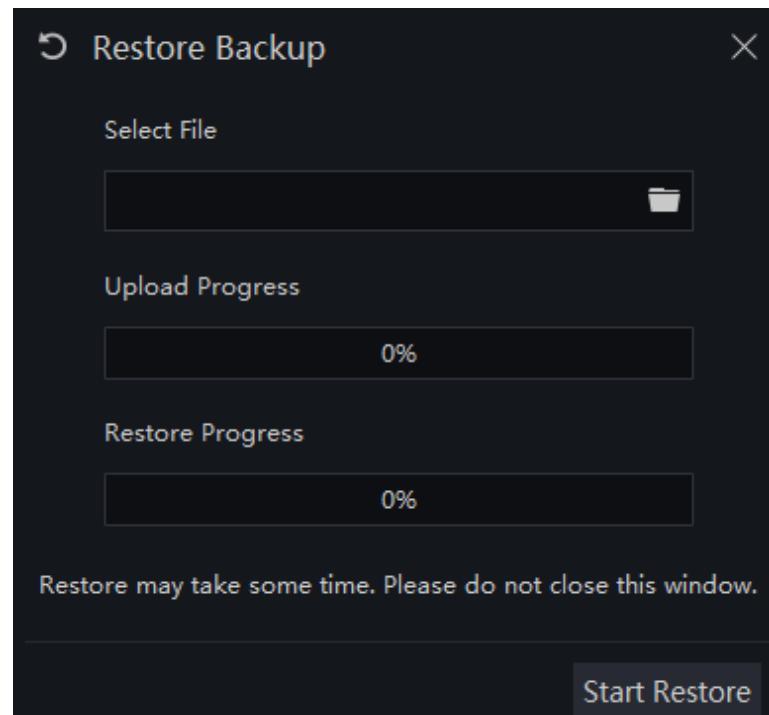


Figure 6-17: Restore Backup

6.6.2 Media Distribution Server

6.6.2.1 Performance and Status

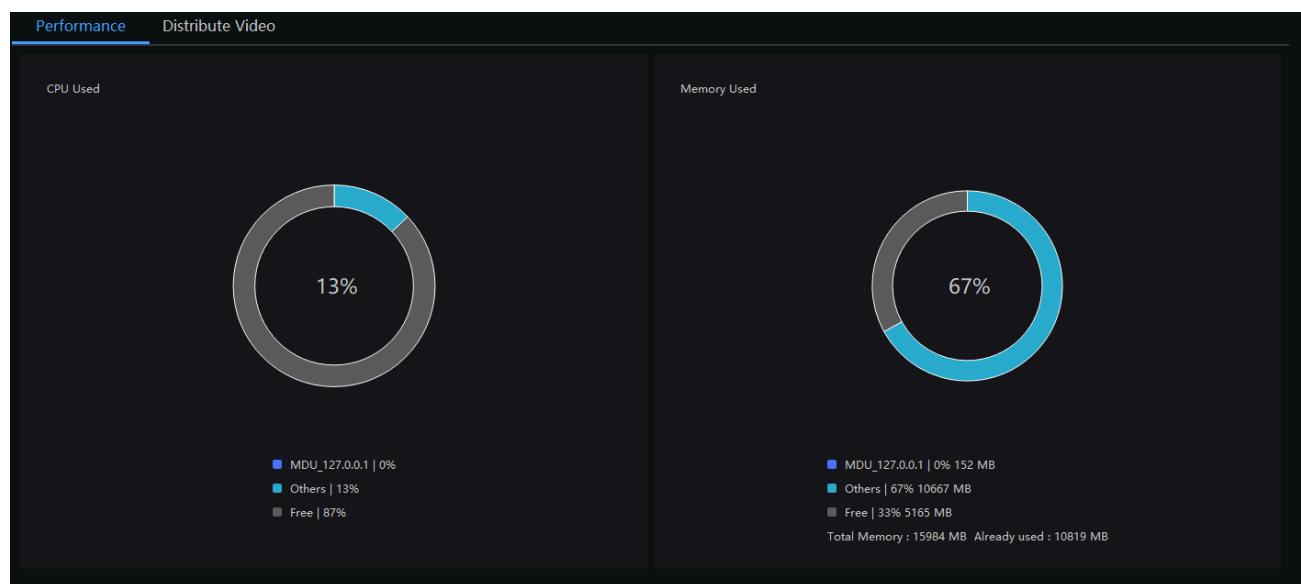


Figure 6-18: Performance

Performance Distribute Video					
No.	Channel UID	IP:Port	Bit Rate Input(Kbps)	Bit Rate Output(Kbps)	Request Time
1	800865_01	127.0.0.1:59470	855	927	09-07-2025 09:26:35
2	80045F_01	127.0.0.1:59351	299	291	09-07-2025 09:25:46
3	800865_01	127.0.0.1:59352	817	908	09-07-2025 09:25:47

|< < 1 > >| Total : 3

Figure 6-19: Status

6.6.3 Intelligent Analysis Server

6.6.3.1 Performance and Capture Information

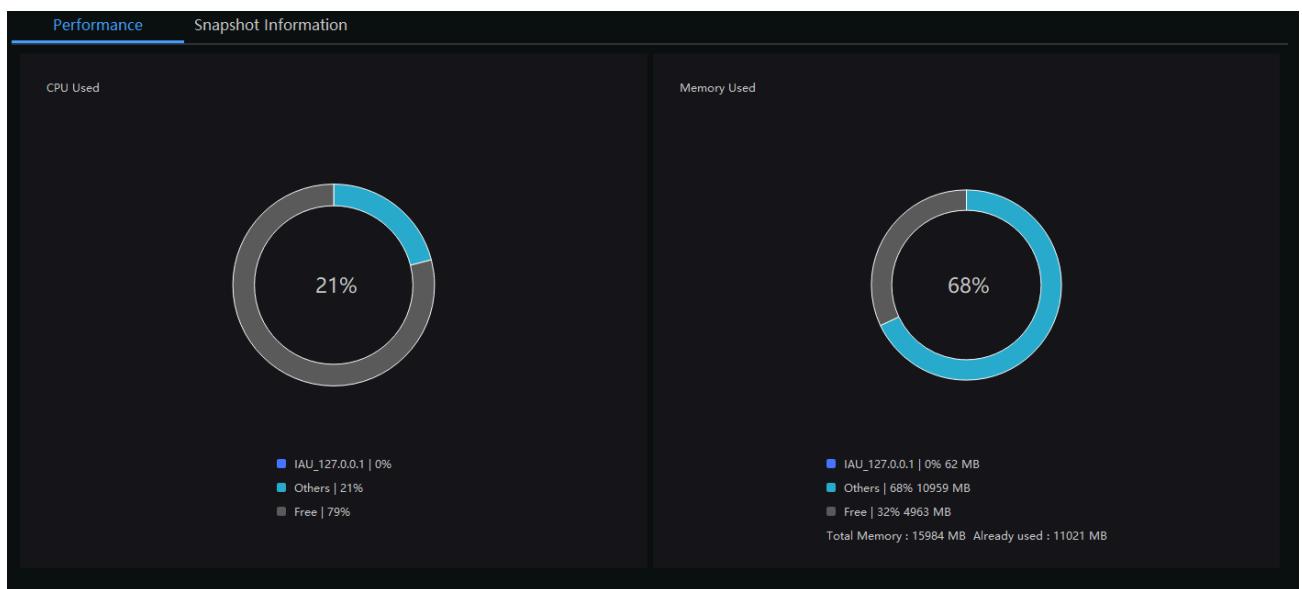


Figure 6-20: Performance

NOTE!

Snapshot Information is generally applicable to the facial capture device; it can analyze the image if the device captures correctly. If the number of captured faces is 0, check if the camera is configured properly.

No.	Channel UID	IP:Port	Login Time	Face Snapshot Count	Valid Face Count	Body Snapshot Count	Valid Body Count

Figure 6-21: Snapshot Information

6.6.4 Version Management

6.6.4.1 Version Management

Version management is used for the decentralized deployment of servers and client installations, facilitating the version update of all clients.

When the server uploads and updates the latest software version, all clients corresponding to the same server can receive notifications and manually perform the update.

Figure 6-22: Version Management

In the version management interface, click on "Release Version" to upload the latest version and install it on the server. All uploaded versions will be displayed in the list, and users can operate them.

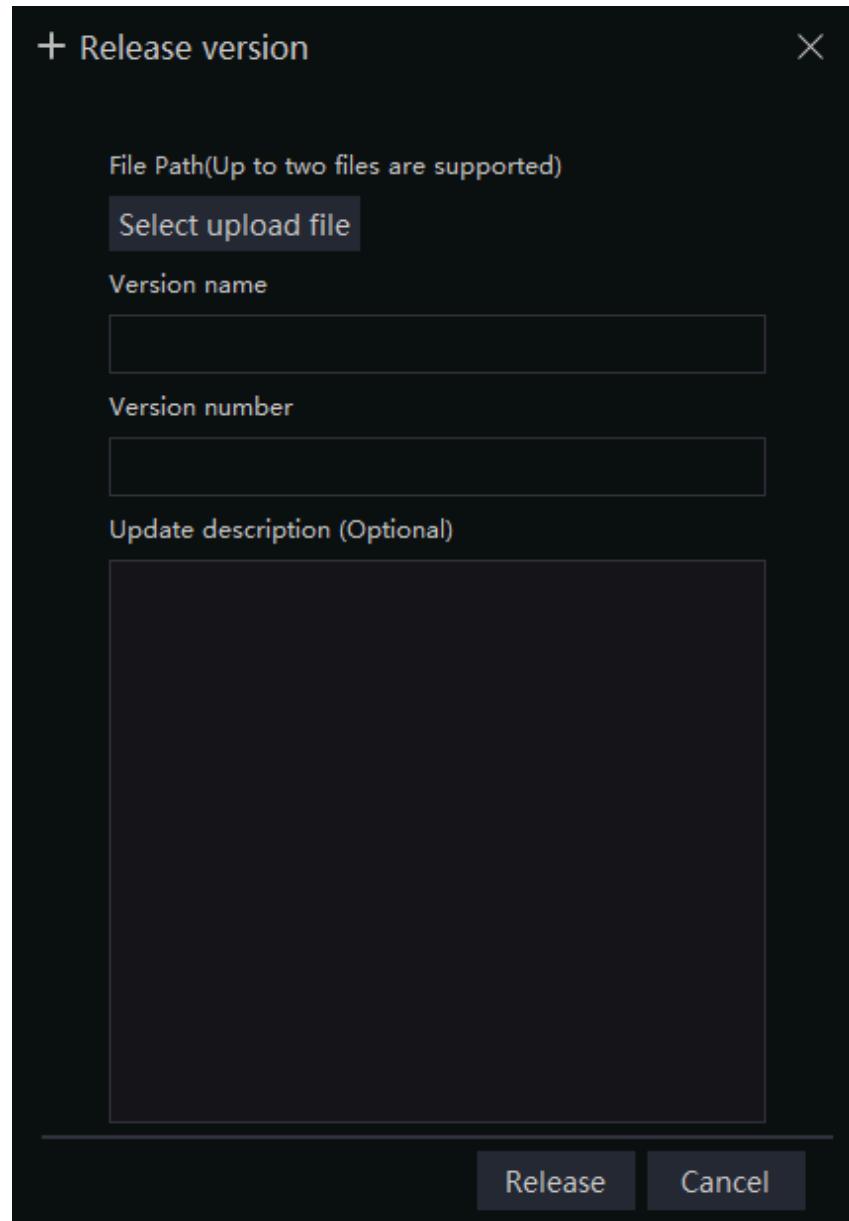


Figure 6-23: Version Release

6.6.4.2 Upgrade task

In the upgrade task interface, users can upload the version to the server. Click on "Update to the Latest Version" to perform the update. Clients on the same server can detect the version and will receive a reminder to update.

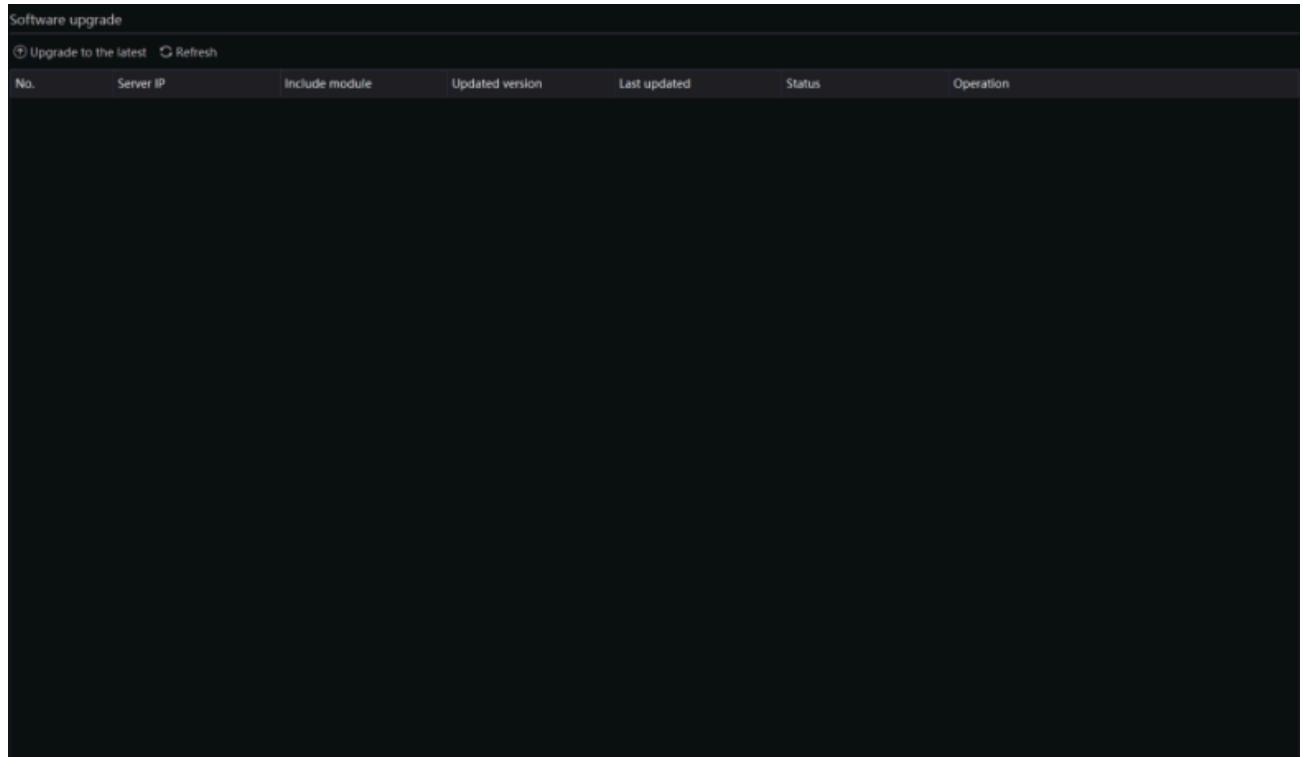


Figure 6-24: Software Update

NOTE!

When opening the client, you will see the update reminder. Click on "Update" to proceed with the update.

6.7 ALARM MAIL

Define the sender and recipient information for alerts. When an alert is sent, it can be forwarded to the corresponding people via email.

In the main menu, click on "Alarm Mail" to access the detailed page, as shown in Figure 6-25.

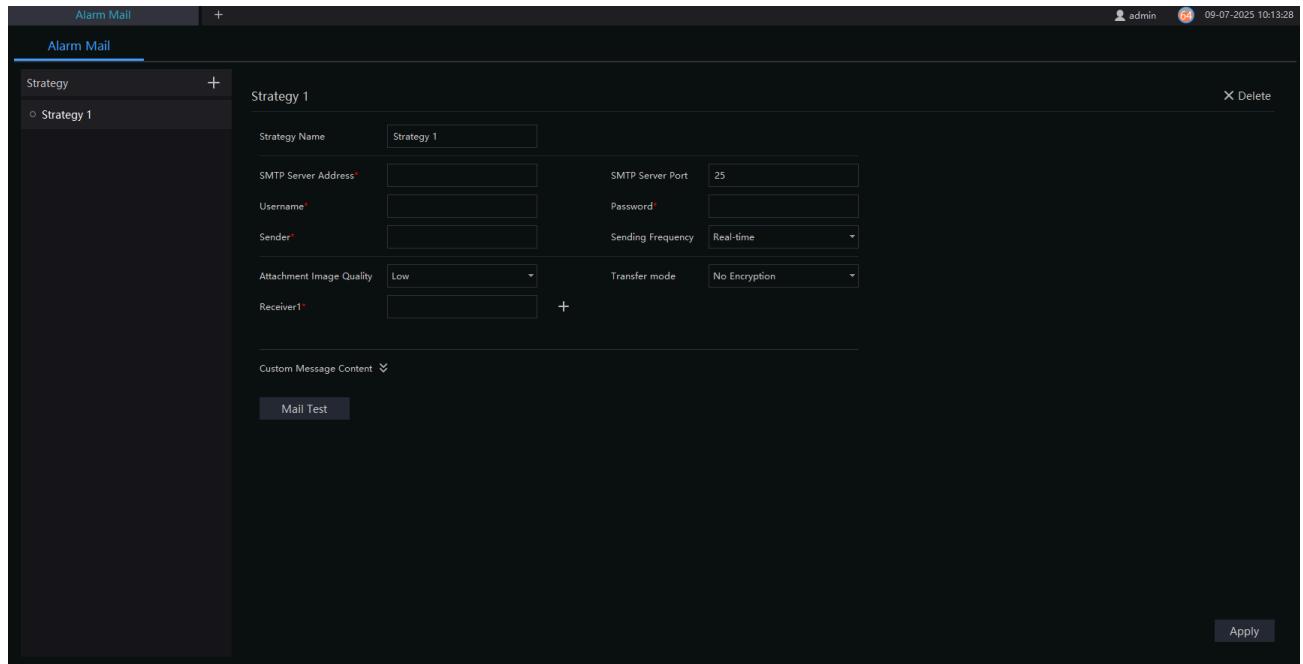


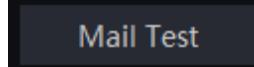
Figure 6-25: Alarm Mail Interface

Procedure:

Step 1: Click on  to add a new strategy.

Step 2: Enter the name and the necessary information for using SMTP.

Step 3: The alarm can be sent via email with a personalized message.

Step 4: Click on  to test the settings.

Step 5: Click on "Apply" to save the settings.

6.8 REGIONAL MANAGEMENT

Define regions to manage pedestrian flow, manage pedestrian flow and control parking zones, as shown in Figure 6-26.

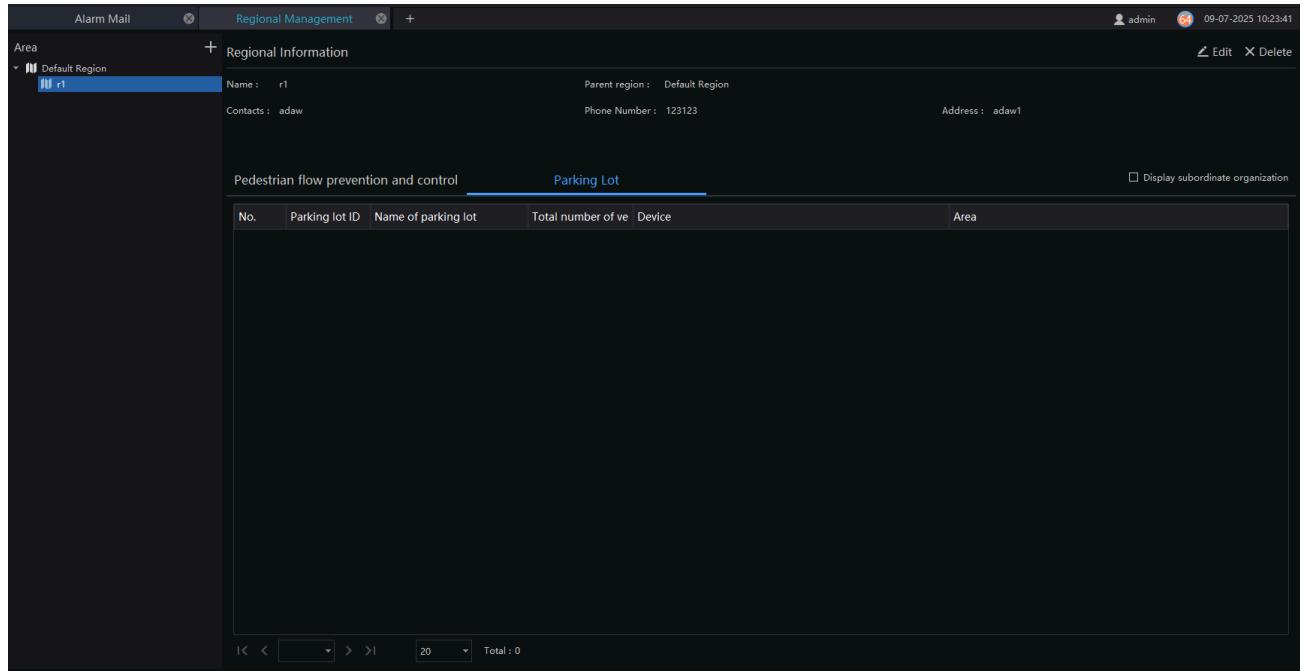


Figure 6-26: Regional Management Interface

Procedure:



Step 1: Click on  to add an area. Enter the name, region, phone number, contacts, and address.

Step 2: Click on "Save" to save the settings and add multiple parking areas. Click on "Save and New" to save the current settings and add another one, as shown in Figure 6-27.

The dialog box is titled '+ Add Area' and contains the following fields:

Name	<input type="text"/>
Parent region	<input type="text" value="r1"/>
Phone Number	<input type="text"/>
Contacts	<input type="text"/>
Address	<input type="text"/>

At the bottom, there are three buttons: 'Save and New' (highlighted in blue), 'Save', and 'Cancel'.

Figure 6-27: Add Area

Click on "Edit" or "Delete" to manage regional information.

Select the parking interface to view parking information, including:

- Parking ID,
- Name,
- Total number of vehicles,
- Device,
- Area,
- Subordinate organization.

This is illustrated in Figure 6-28.

No.	Parking lot ID	Name of parking lot	Total number of ve	Device	Area

Figure 6-28: Parking

NOTE!

The areas configured in the Regional Management interface apply to both Parking and Parking and Pedestrian flow prevention and control. If the user wishes to modify Parking and Pedestrian flow prevention and control regions, they must access the ****Regional Management**** interface to make the changes.

6.9 BROADCAST MANAGEMENT

For cameras with a speaker or connected to an audio output device, they can play radio broadcasts. The computer where the platform is installed must be connected to a microphone for audio collection. Click on "Broadcast Management" to enter the settings page. Choose the channel to play, click on "Start," and the selected camera will play the platform's audio. Click on "Stop" to turn off the playback.

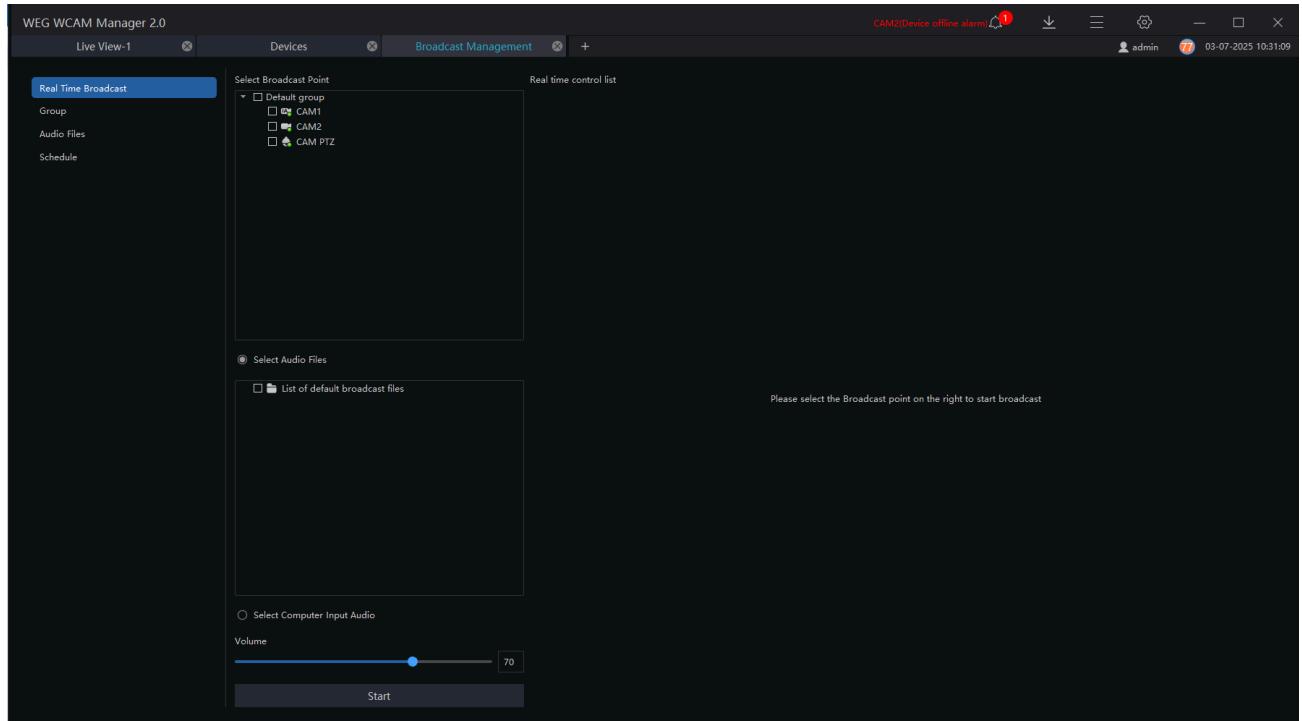


Figure 6-29: Broadcast Management

7. FACE RECOGNITION

7.1 FACE RECOGNITION

On the Face Recognition page, you can view the results of real-time face capture and comparison. This feature requires the prior addition of a facial image through the "Face Lib Manage" page.

In the main menu, click on "Face Recognition" to access the detailed page, as shown in Figure 7-1.

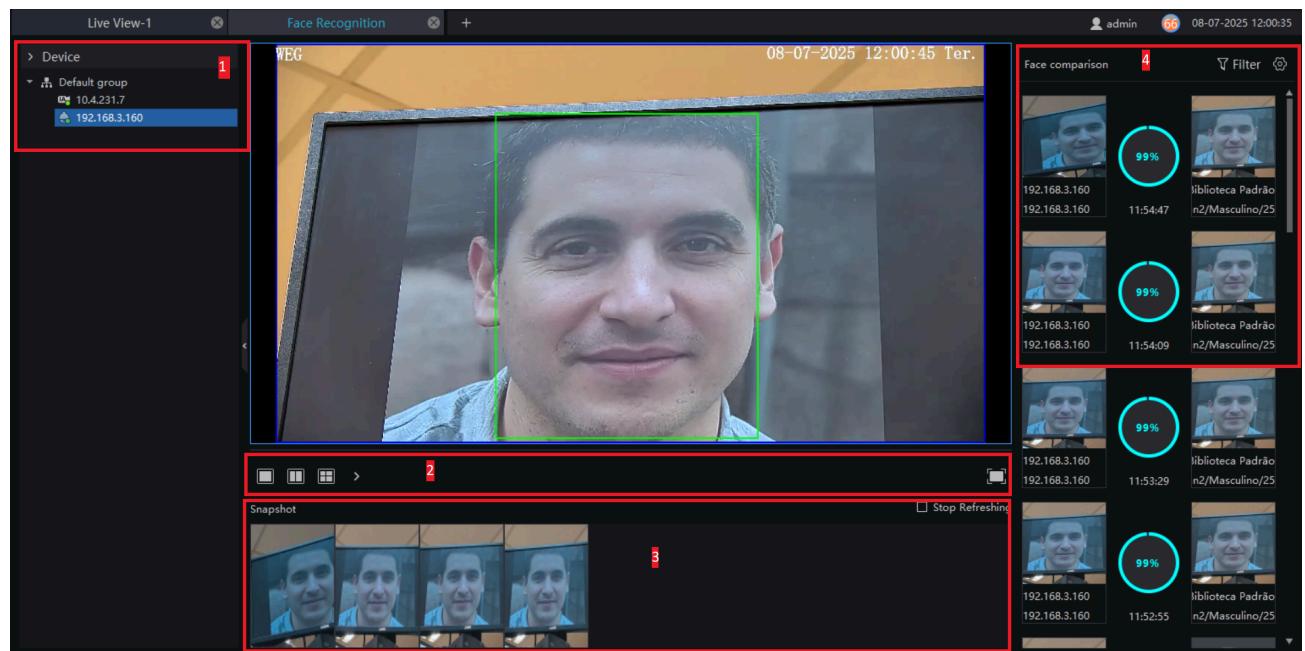


Figure 7-1: Face Recognition

Functions Overview:

Number	Function	Description
1	Device List	Displays the devices equipped with face recognition functionality.
2	Layout	Select the video layout.
3	Snapshot	Displays alarms triggered by recent captures. You can choose to stop the update.
4	Face Comparison	Compares captured faces with the library. Allows filtering of devices for quick matching by channel. By default, only real-time captures from 4 face recognition channels are displayed. These channels can be selected and configured, as described in Figure 7-2. When the valid time for a person expires, the captured image in the result will be marked as "invalid."

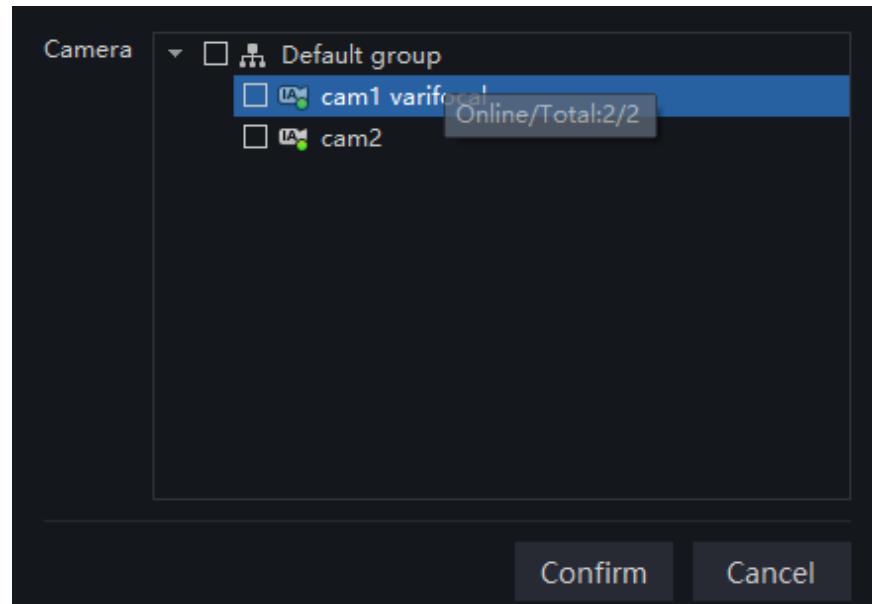


Figure 7-2: Device Filter

Procedure:

Step 1: Devices with the facial capture function will automatically capture faces. The capture appears in the facial comparison area.

Step 2: Click on the search icon located in the bottom right corner of the captured image to navigate directly to the intelligent search interface.

Step 3: Similar faces from the facial database that appear in the image will be compared in the comparison area.

If they have a similarity above the configured threshold, related information appears.

Step 4: Click on the “+” button displayed on the image to add it directly to the facial database.

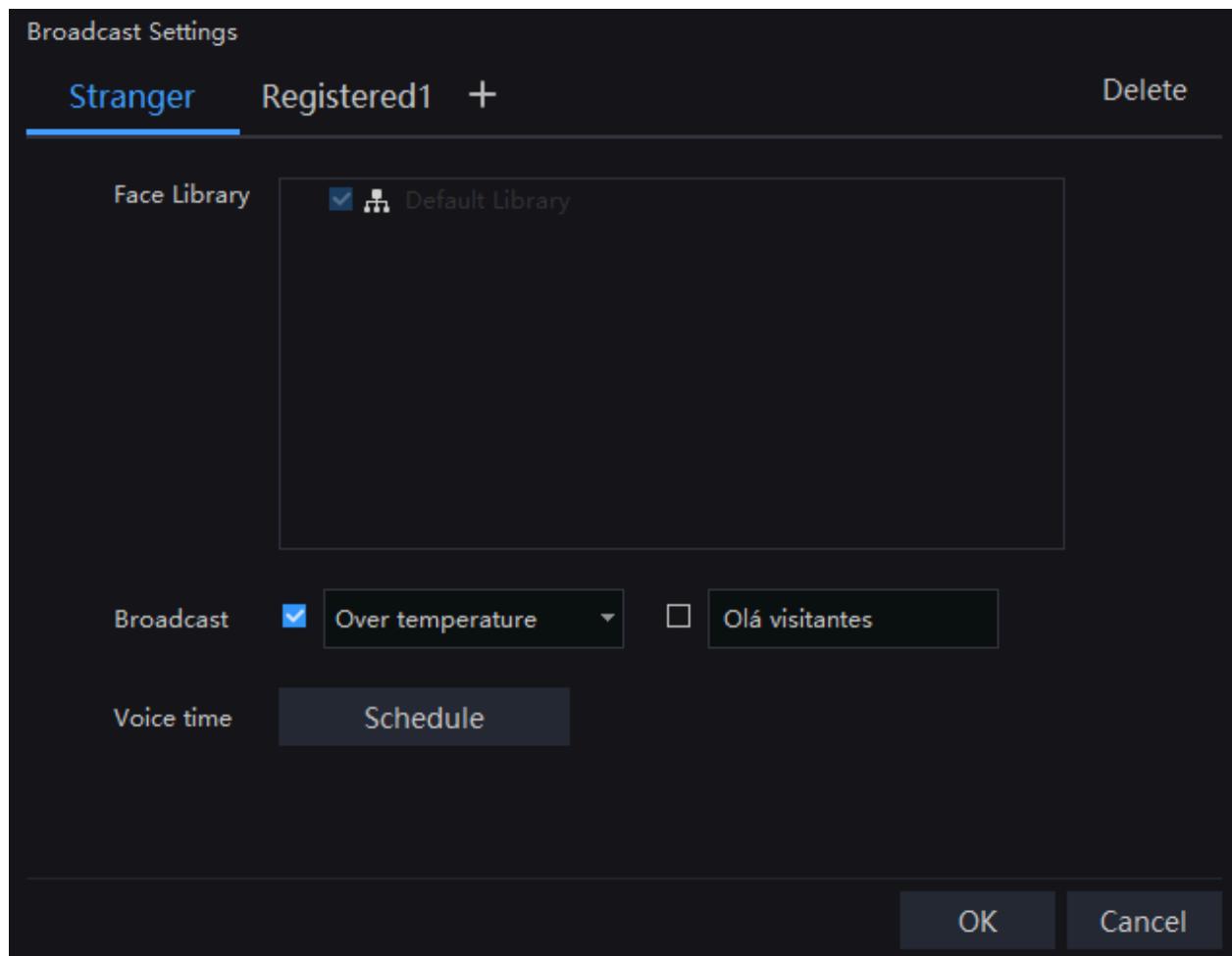


Figure 7-3: Broadcast Settings

Procedure:

Step 1: Select the full-screen display mode.

There are two available modes: card view (requires card size configuration) and card list view.

Step 2: Enable the "Strangers" option.

If this option is not enabled, captures of strangers will not be displayed in the comparison area.

Step 3: For strangers, configure the voice broadcast content.

The text must contain a maximum of 10 characters.

Step 4: For employees already registered in the facial library, mark the corresponding option in the library.

You can configure the system to announce the name, the capture time, and play a custom text.

Step 5: Set the voice playback duration.

Step 6: Click on the "+" button displayed on the image to add it directly to the facial database.

7.2 FACE LIB MANAGE

The "Face Lib Manage" interface allows you to create a multi-level face directory.

Different face libraries can be added, and personal information can be edited for facial recognition.

When the camera detects a face, it can compare it with the library to identify the individual captured.

In the main menu, click on "Face Lib Manage" to access the configuration page, as shown in Figure 7-4.

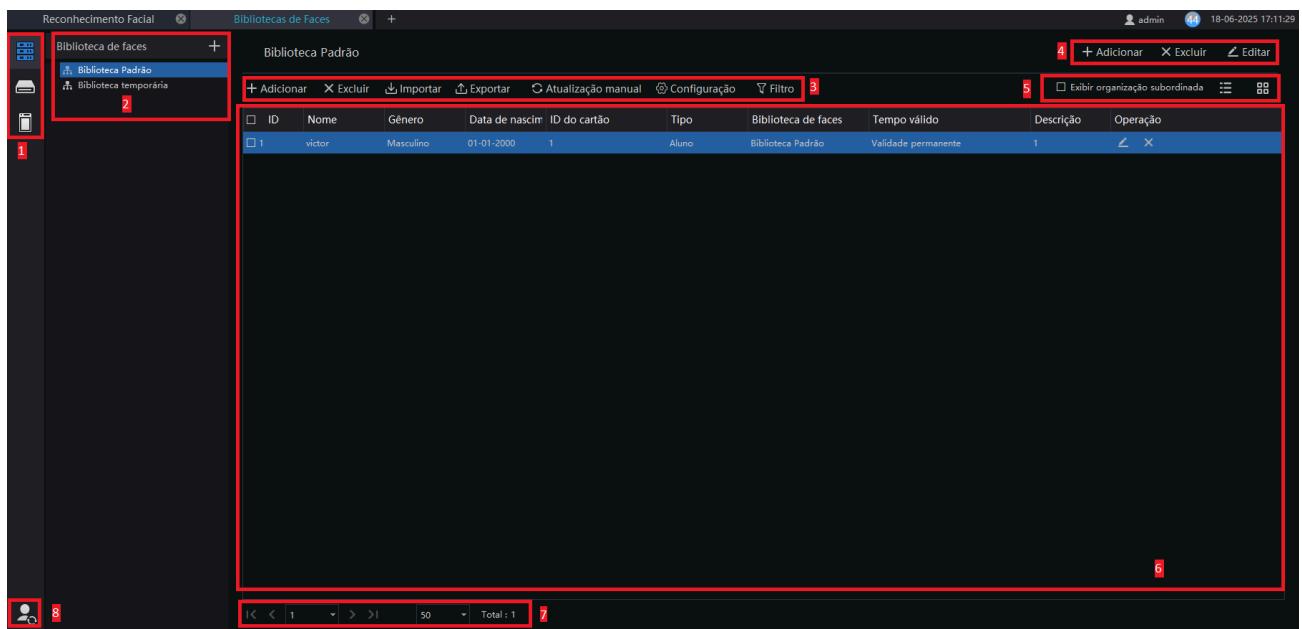


Figure 7-4: Face Lib Manage

Functions Overview:

Number	Function	Description
1	Face Library, NVR Face Database, and Access Control	Click the icon to switch the face database.
2	Face Library List	Face library, default group, and add library.
3	Basic Person Operations	Add, delete, import, export, manually update, configure, and filter.
4	Basic Library Operations	Add, delete, and edit library.
5	Layout	Toggle to display subordinate organization. Choose between list mode and card mode.
6	Registrations	Register faces.
7	Page Information	View page numbers, registration counts, and navigate to the next page.
8	Facial Database Sync strategy	The platform's libraries can be synchronized with the facial recognition terminal.

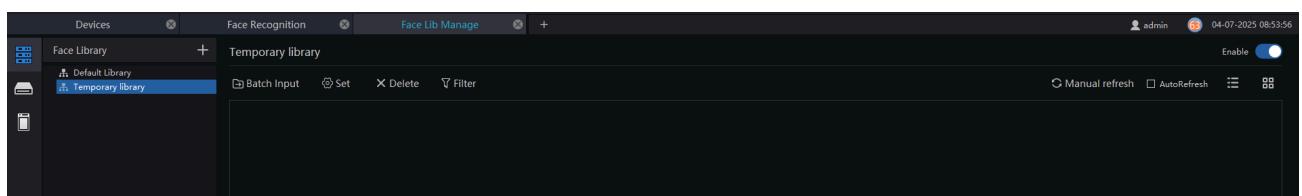


Figure 7-5: Temporary Library

Face Library Import Modes

There are two modes for importing face libraries:

■ Device Import

■ Local Import

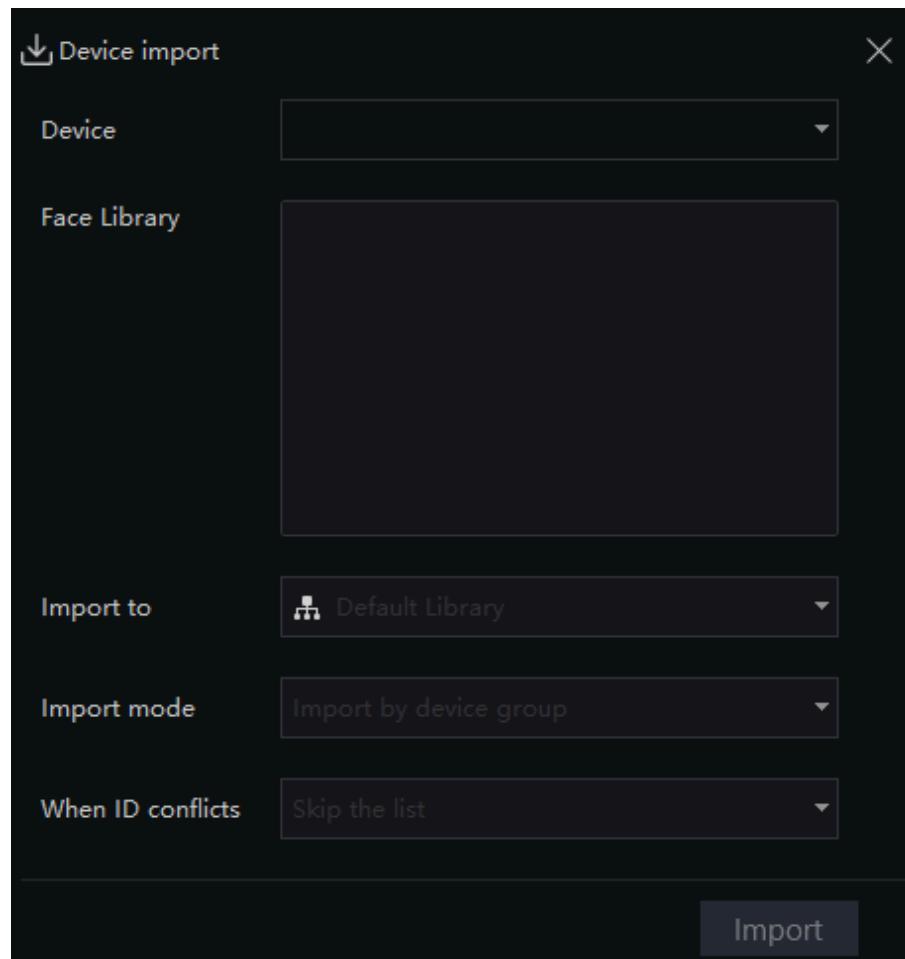


Figure 7-6: Device Import

Procedure for Device Import:

Step 1: Select the desired device.

Step 2: Choose the library to which the data should be imported and select the import mode.

Step 3: Define the strategy for ID conflicts and click "Import" to upload the libraries.

Step 4: The import result will be saved to the local folder.

Local Import:

Human faces stored in folders or local files can be imported to the platform in three different ways:

- **Image Scale**
- **Image Import**
- **Form Import**

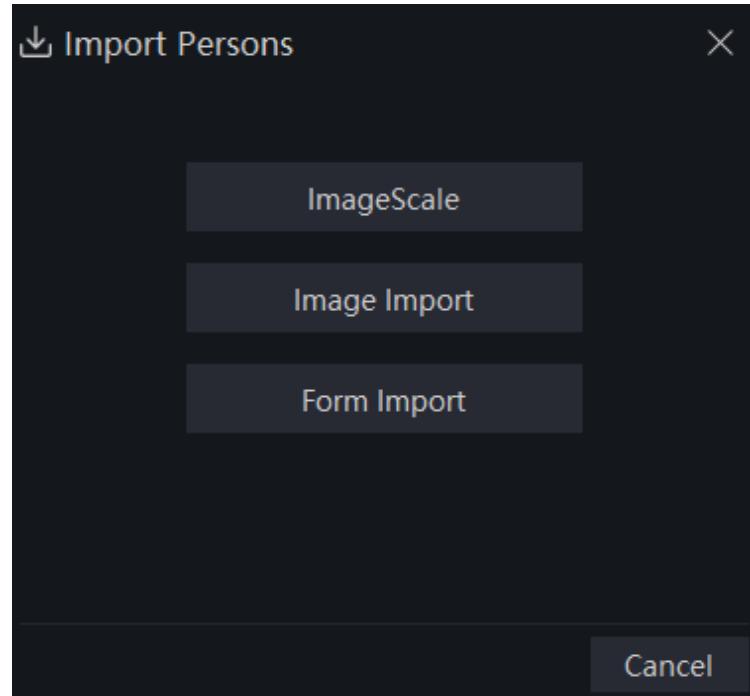


Figure 7-7: Local Import

Temporary Library

The temporary library will display all captured faces, and the number of captures will be shown on the screen.

- **Add to Library:**
Click on "+" to add the stranger's photo to the library.
- **Search:**
Click on the magnifying glass to enter the face search interface.

Detailed Interface Navigation

In the temporary library interface, click on "Batch Input" to access the detailed interface, as shown in **Figure 7-8**.

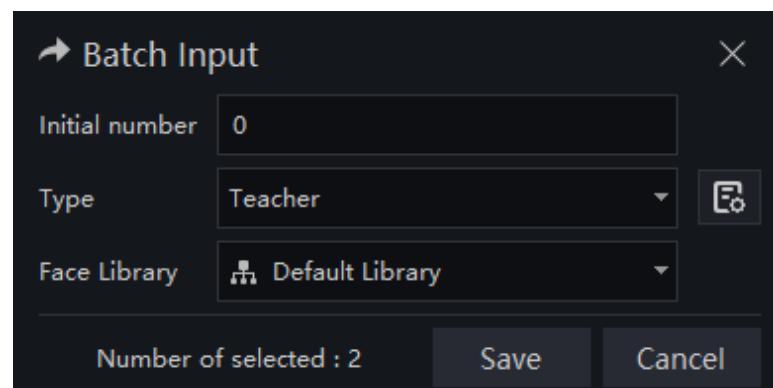


Figure 7-8: Batch Entry

Manual Updates

Click on "Manual refresh" to manually update photos, as presented in **Figure 7-9**.

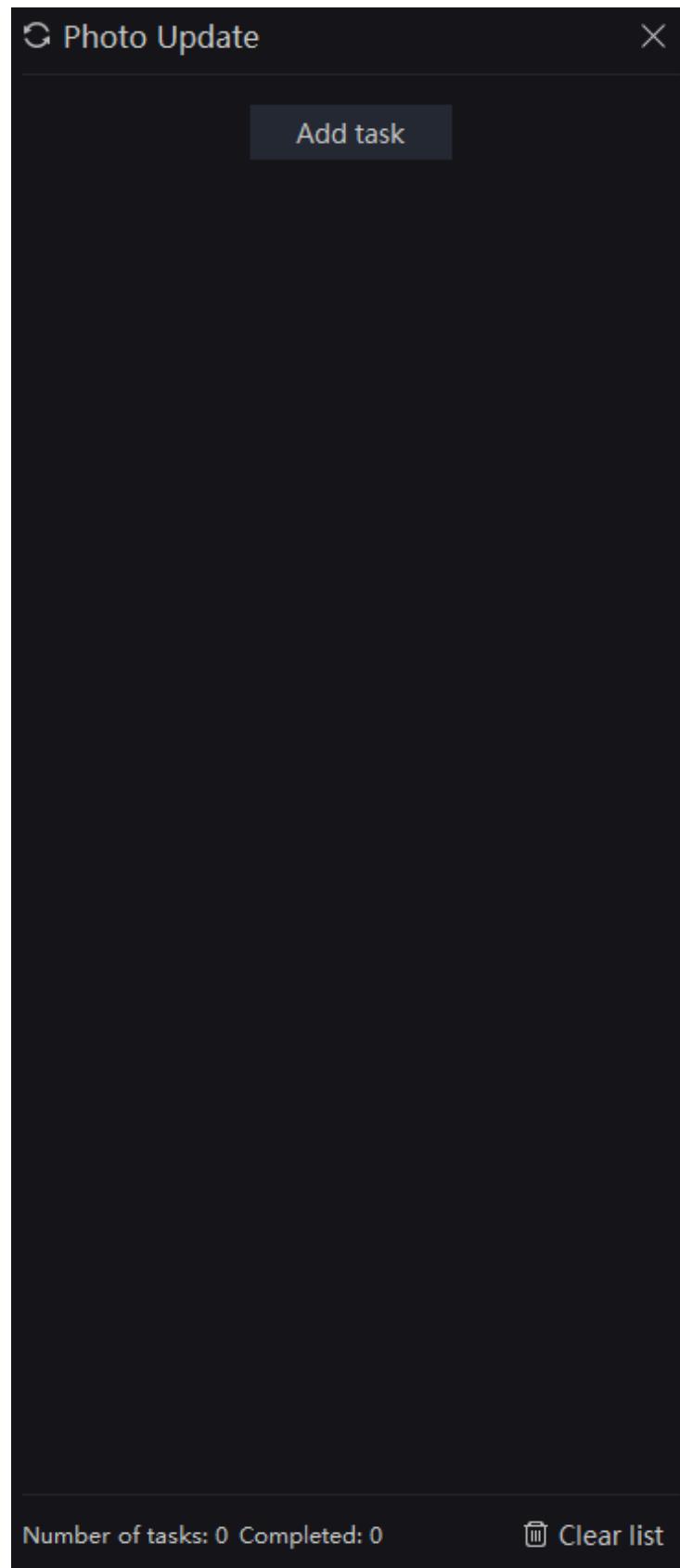


Figure 7-9: Photo Update

Additional Actions

Add Task:

Click on "Add Task" to select the face library.

You can opt to check or uncheck the option "Ignore list update for the week." The result appears in a window.

Set:

Click on "Set" to define the configurations for the temporary library, as shown in **Figure 7-10**.

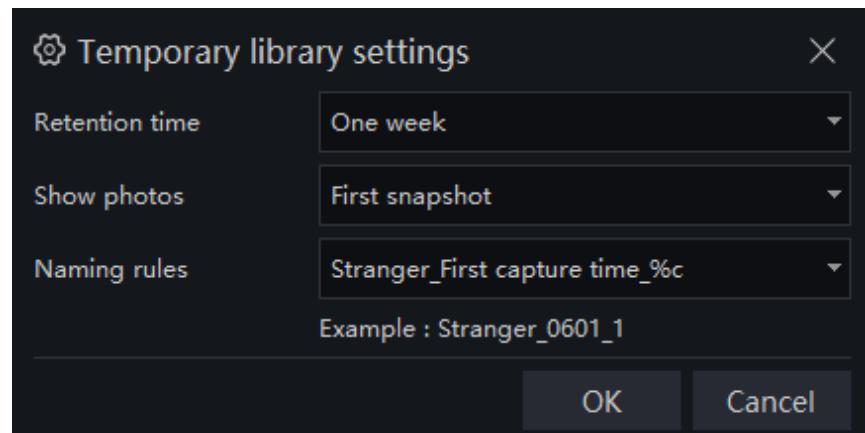


Figure 7-10: Temporary Library Settings

Filters in Temporary Library:

Click on "Filter" to define a filter, as shown in **Figure 7-11**.

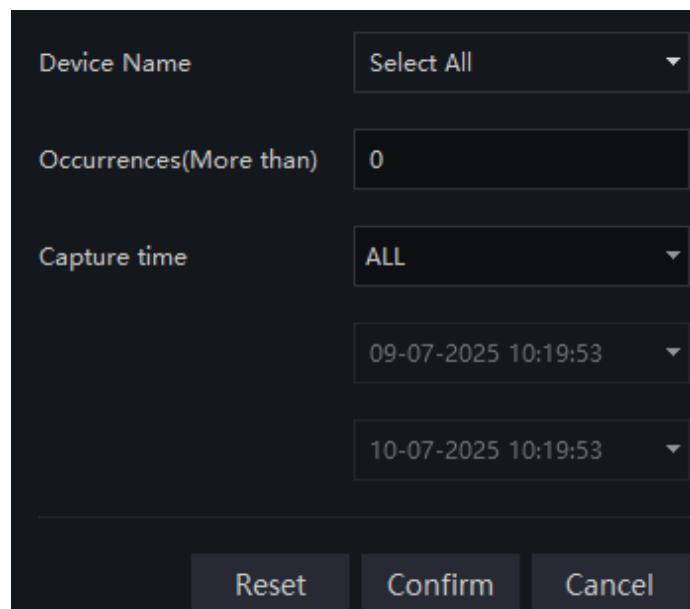


Figure 7-11: Filters in Temporary Library

INFO!

The temporary library is updated live.

7.2.1 Adding a Face Library

Procedure:

Step 1:

Click on "+" to add a face library.

Step 2:

Enter a name, select a library, and provide a description, as shown in **Figure 7-12**.

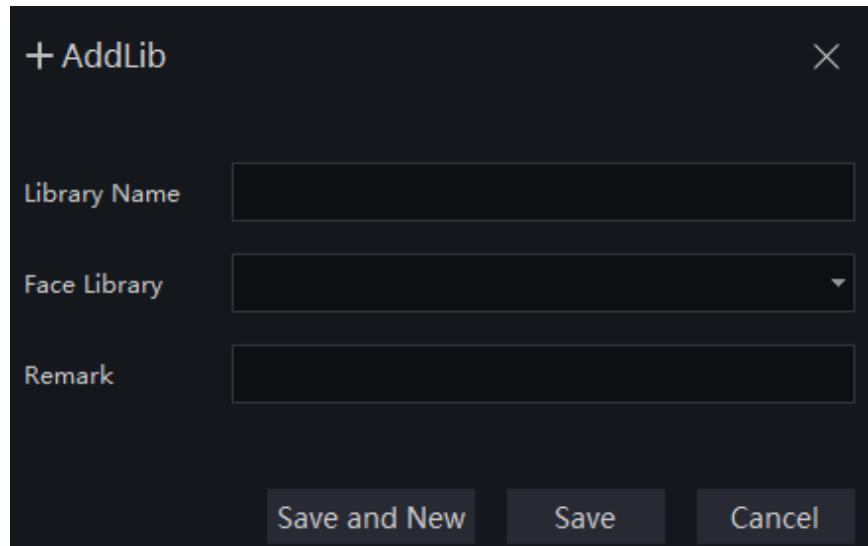


Figure 7-12: Adding a Face Library

Step 3:

Click "Save" to save the settings. Alternatively, click "Save and New" to save and add another new library.

7.2.1.1 Add Person Information

Procedure:

Step 1: Select the face library.

Step 2: Click on "Add" to add personal information.

Step 3: Enter the required information, as shown in **Figure 7-13**.

+ Add person information X

Basic Information Access Control

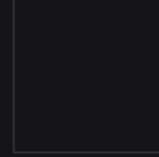
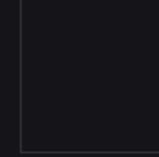
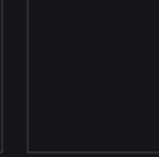
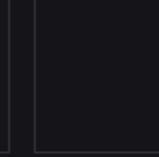
Name	<input type="text"/>
Gender	Male <input type="button" value="▼"/>
Date of Birth	01-01-2000 <input type="button" value="▼"/>
ID Card	<input type="text"/>
Type	Teacher <input type="button" value="▼"/> 
Face Library	Default Library <input type="button" value="▼"/>
Valid Time	Permanent validity <input type="button" value="▼"/>
Email	<input type="text"/>
Phone number	<input type="text"/>
Remark	<input type="text"/>
Picture	    
<input type="button" value="Select File"/> <input type="button" value="One key photo"/>	
<input type="button" value="Save and New"/> <input type="button" value="Save"/> <input type="button" value="Cancel"/>	

Figure 7-13: Personal Information

 Click on  to add or delete types.

Step 4: Add one or more photos for the user; more photos increase the comparison rate.

Step 5: Click on "One Key photo" to immediately capture the image of a person, as shown in **Figure 7-14**.

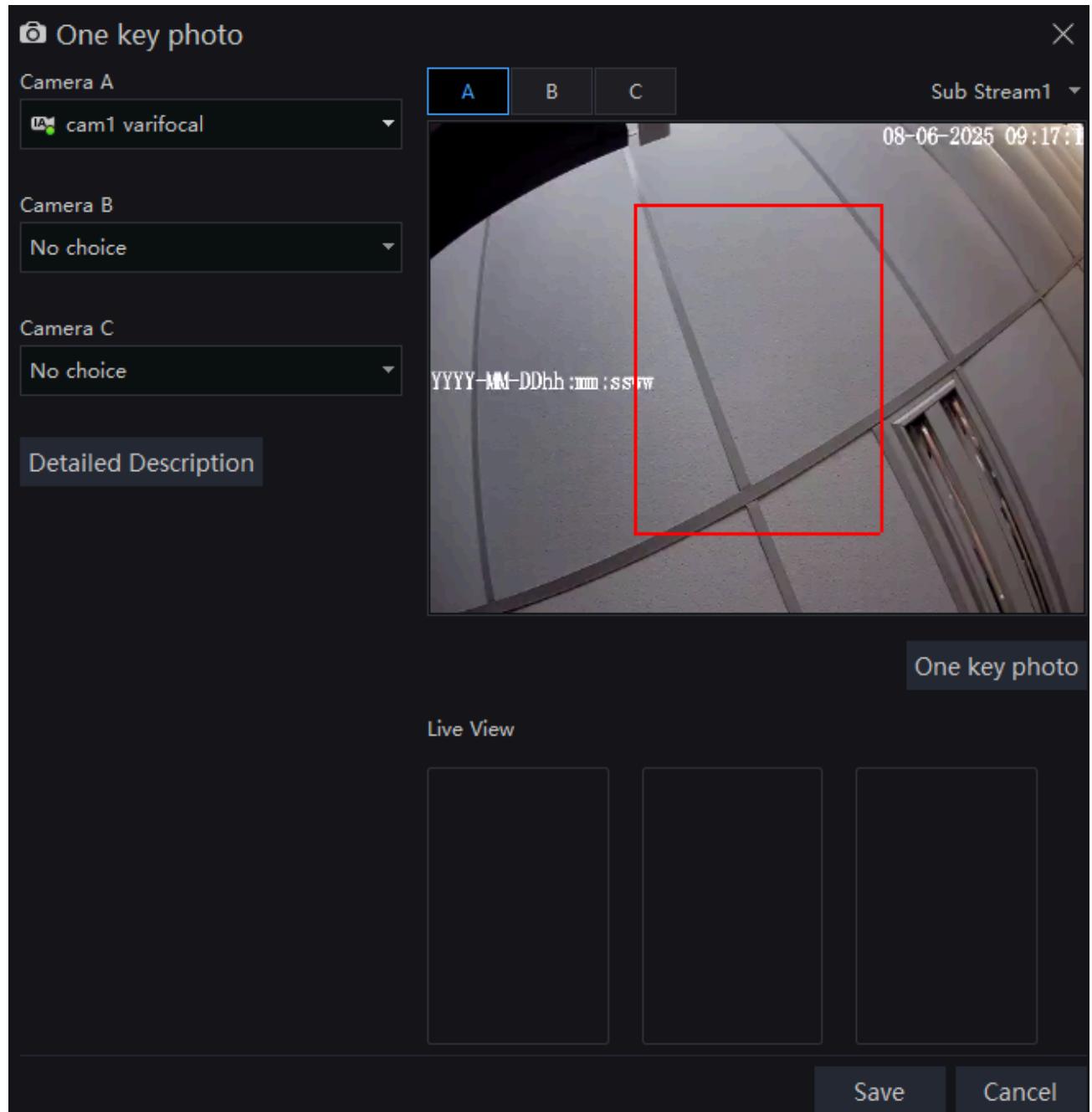


Figure 7-14: One key photo

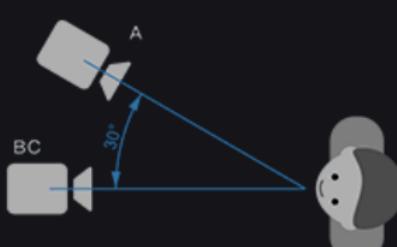
Step 6: Select a camera to perform the capture. If you want to capture multiple images and improve the comparison, you can choose up to 3 cameras to capture from different angles. The computer's webcam can also be used to capture the face.

Step 7: Click "Save", and a confirmation message appears the person was successfully added appears.

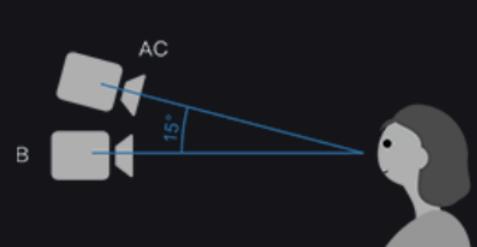
Installation environment

- Make the face in the shooting area in the middle of the picture, focus clearly, avoid backlight and side light;
- The camera pitch angle (vertical direction) is controlled within 15 degrees;
- The angle between the left and right cameras (horizontal direction) is between 15 degrees and 30 degrees;

Installation diagram



Top view



Side view

Figure 7-15: Best Angles

TIP!

Clear facial images are highly recommended as they provide greater accuracy in comparisons.

7.2.1.2 Batch Export

Template Procedure:

Step 1: Click on "Export" and select the "Export Template" option.

Step 2: Edit the name of the exported template and save the changes.

Personal Information Procedure:

Step 1: Click on "Export" and select the "Export Personal Information" option.

Step 2: Edit the exported name and save the changes.

7.2.1.3 Face Settings

Procedure:

Step 1: Click on "Set" to enter the face settings interface, as shown in Figure 5-16.

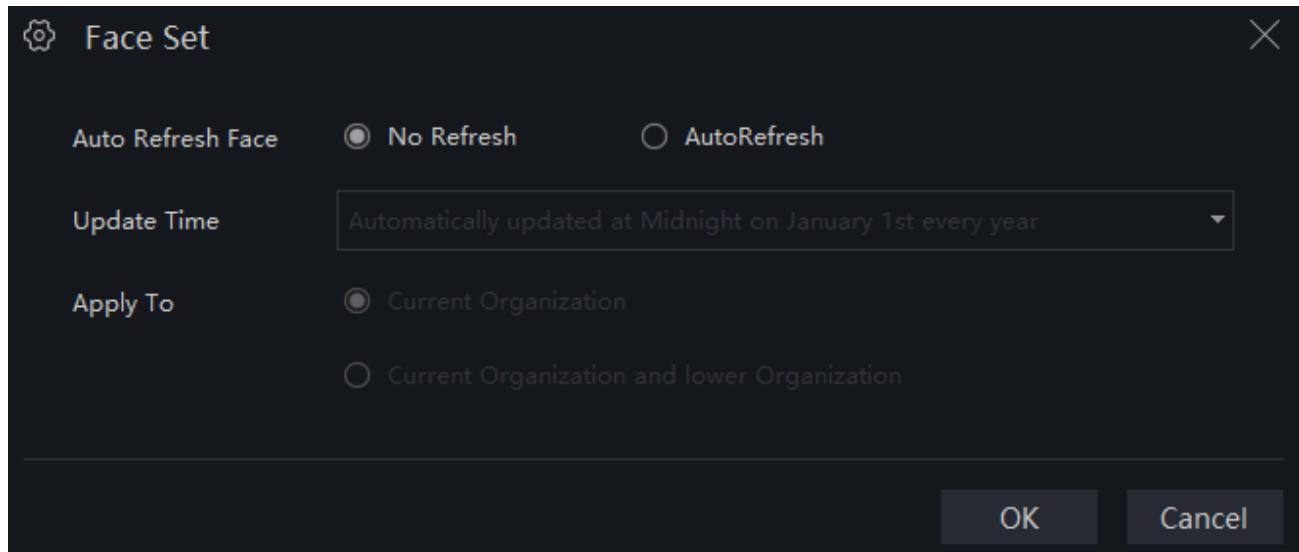


Figure 7-16: Face Settings

Step 2: Select "No Refresh" or "Auto Refresh".

Step 3: Choose the update time.

Step 4: Click "OK" to save the settings.

7.2.1.4 Filter

Procedure:

Step 1: Click on "Filter" to enter the filter interface, as shown in Figure 7-17.

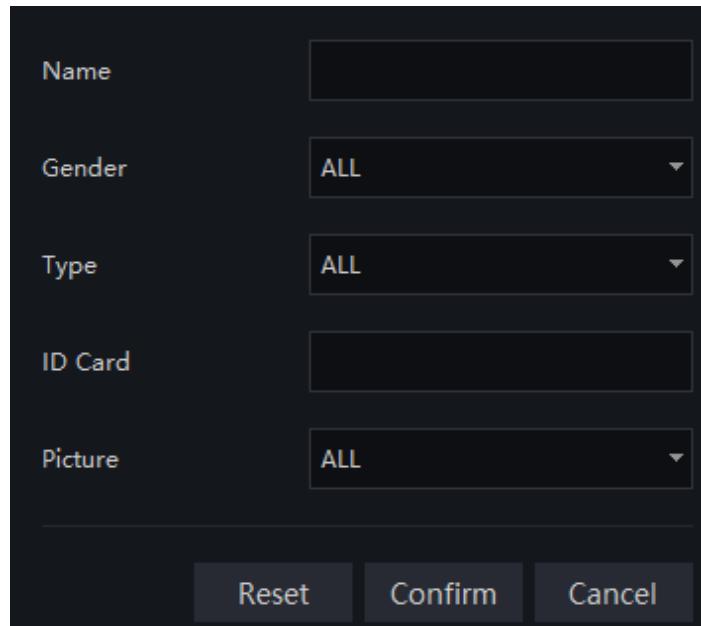


Figure 7-17: Filter

Step 2: Enter the data as needed.

Step 3: Click "Confirm" to save the settings.

7.2.2 NVR Face Database

In the NVR face database, the platform can set the parameters of an online NVR, as shown in Figure 7-18.

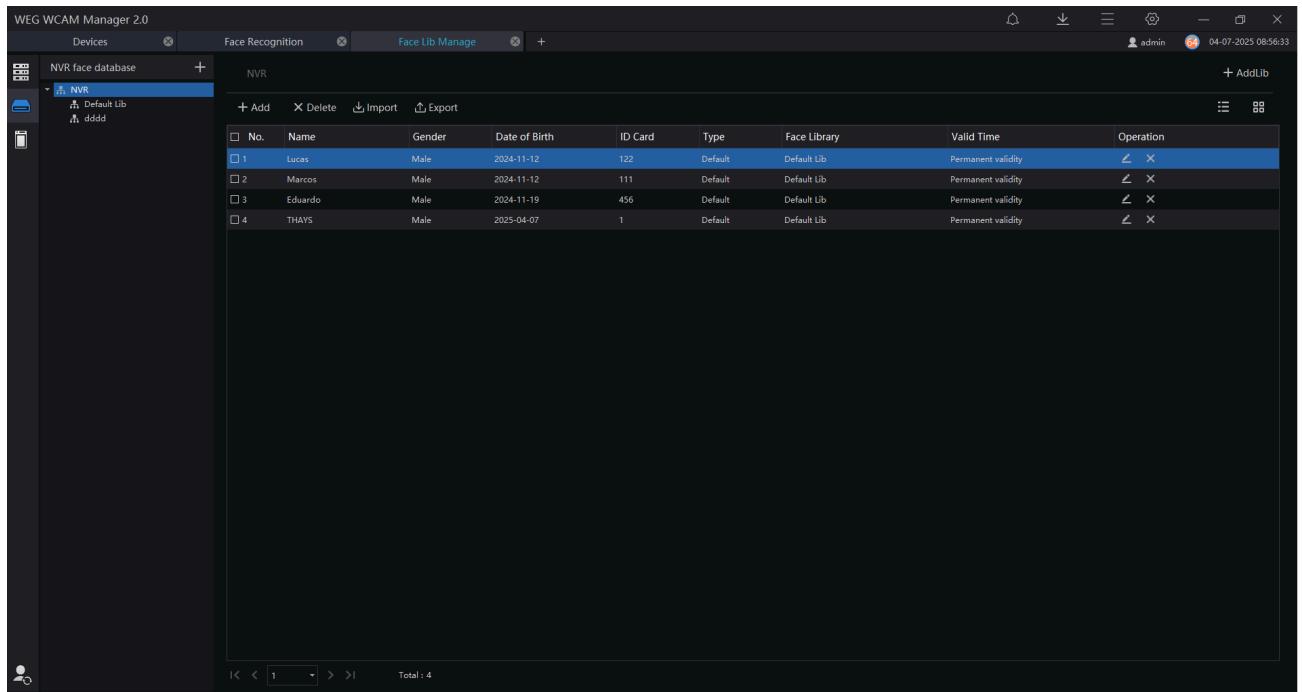


Figure 7-18: NVR Face Database

Add people or libraries to the NVR database, as shown in Figure 7-19. Users can delete/import/export the database in this interface.

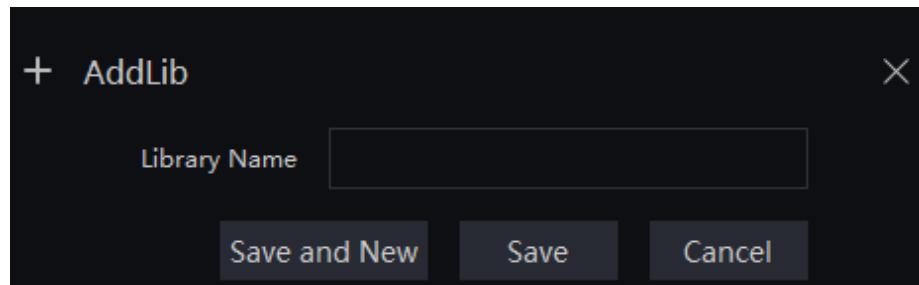


Figure 7-19: Add Library

7.2.3 Face Database Sync Strategy

This function is specific to access control cameras (such as thermal cameras with facial recognition) and AI NVR. The platform and camera can share the face library for access control cameras, as shown in Figure 7-21.

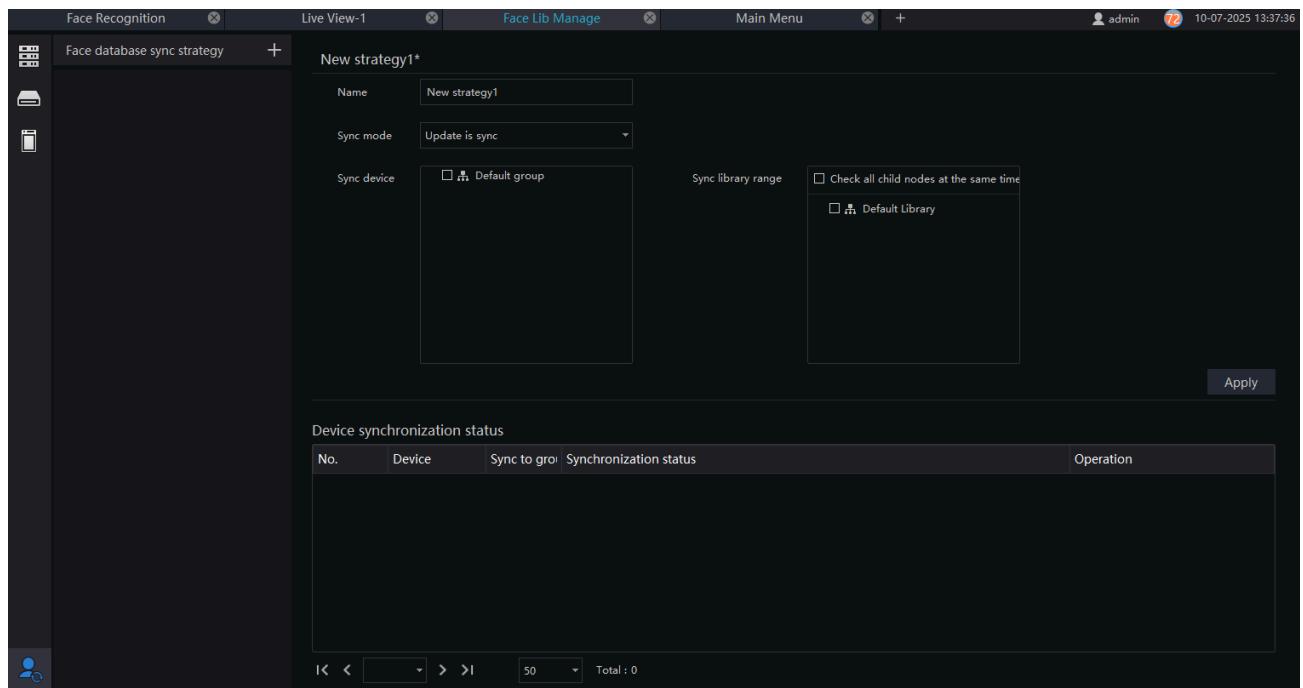


Figure 7-21: Face Database Sync Strategy

Procedure:

Step 1: Click "+" to add a new policy, as shown in Figure 7-22.

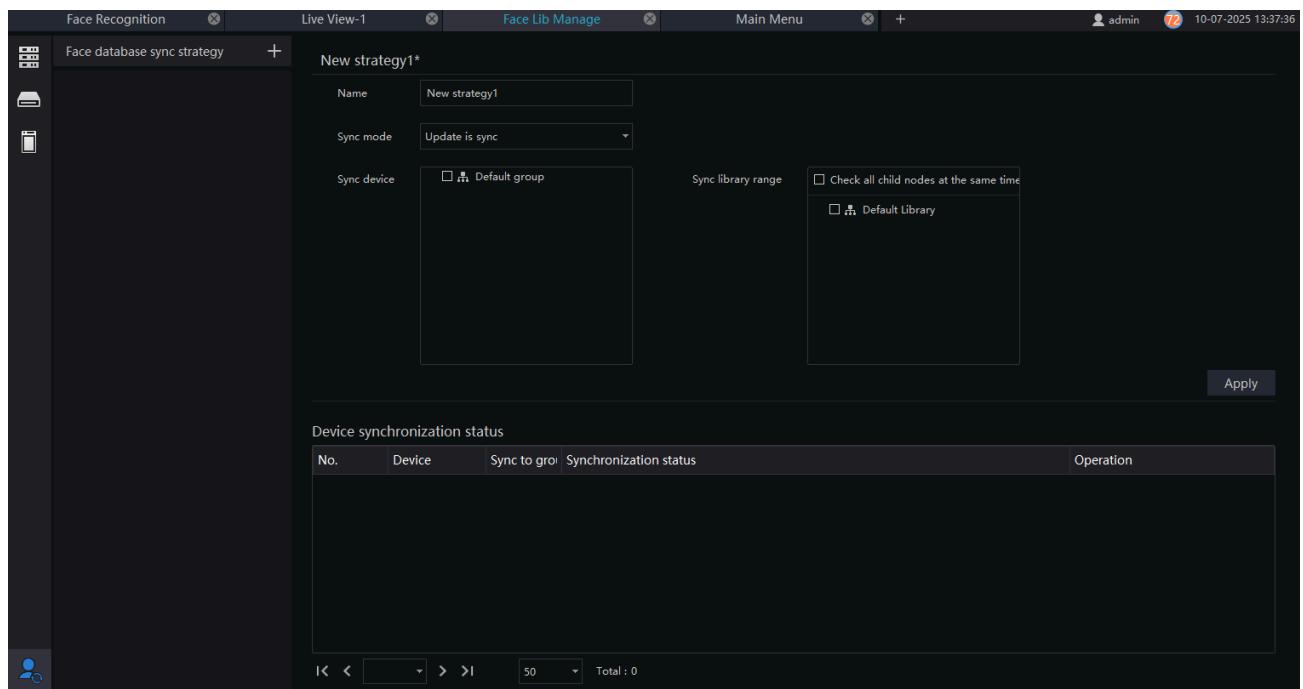


Figure 7-22: New Strategy

Step 2: Edit the name and choose the sync mode.

Step 3: Select the sync device and the sync library interval.

Step 4: Click "Apply" to save the settings. The sync status of the device appears at the bottom of the interface.

NOTE!

Sync failure means the facial library could not be synchronized with access control. The user can check the logs to identify the reasons. Waiting for sync means the device might be offline.

7.3 FACE MATCH CONFIG

On the facial recognition configuration page, you can add a comparison strategy between the camera and the face library so that different cameras are compared with different face databases. When the camera detects a face, it only compares it with the selected library.

NOTE!

This function is only for cameras with face detection.

In the main menu, click on "Face Match Config" to access the configuration interface, as shown in Figure 7-23.

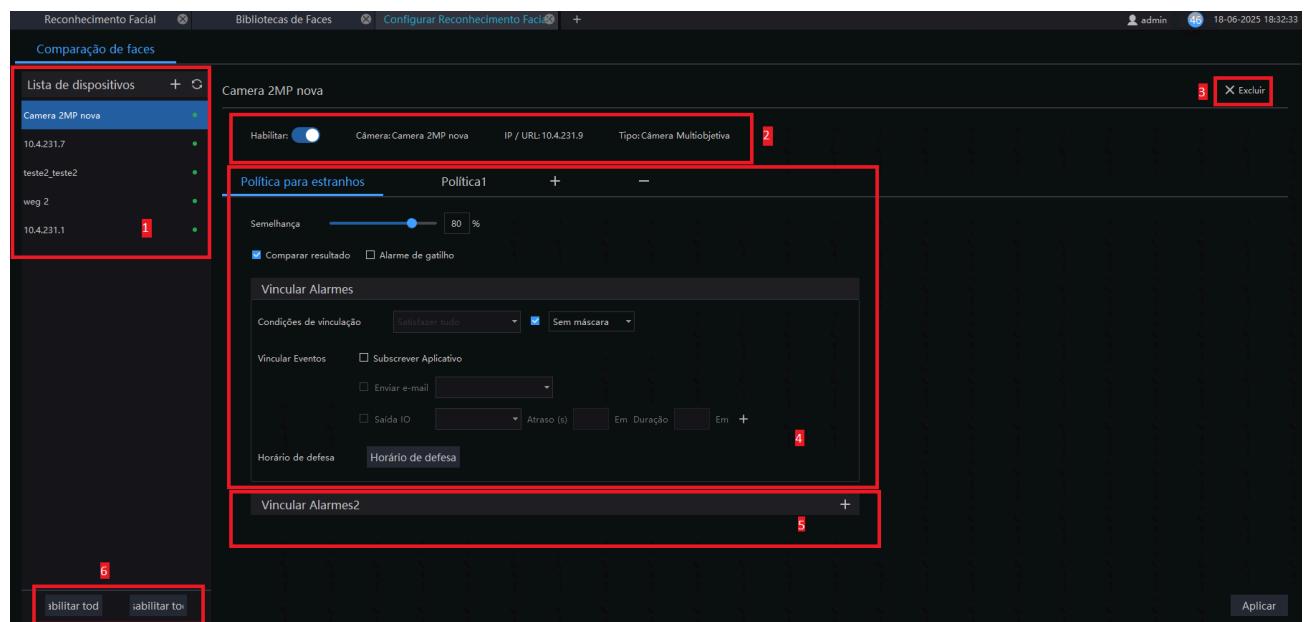


Figure 7-23: Face Match Config

Number	Function	Description
1	Device List	All devices with face detection are displayed in the list
2	Device Information	Detailed information about the device
3	Basic Operations	Delete device
4	Strategy	Add/Modify/Delete the policy for strangers or strategy
5	Event Linkage	Add/Modify/Delete alarm links
6	Enable/Disable All	Activate or deactivate the face detection function on all devices

7.3.1 Facial Comparison Configuration

Procedure:

Step 1: Click the "+" icon next to "Strategy" to add a strategy.

Step 2: Configure the settings according to your needs.

Step 3: Click "Apply" to save the settings.

The user can set binding conditions, such as a person with elevated temperature or without a mask. These two conditions are only applicable to body temperature measurement cameras.

In the binding scheme, the following options can be selected:

- App Notification
- Send Email
- IO Output (select ID and set the duration).

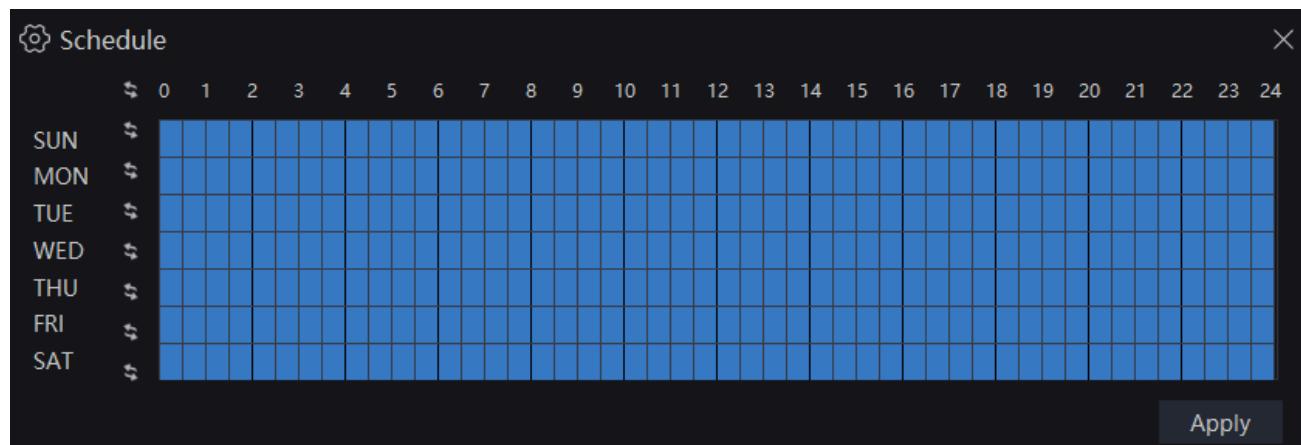


Figure 7-24: Defense Schedule

7.4 FACE SEARCH

On the "Face Search" page, you can select a face image. The system will search the platform for photos that match the face based on facial similarity. After this, it is possible to view and replay the person's trajectory on a map.

NOTE!

This function works only for cameras with facial recognition.

In the main menu, click on "Face Search" to access the detailed interface.

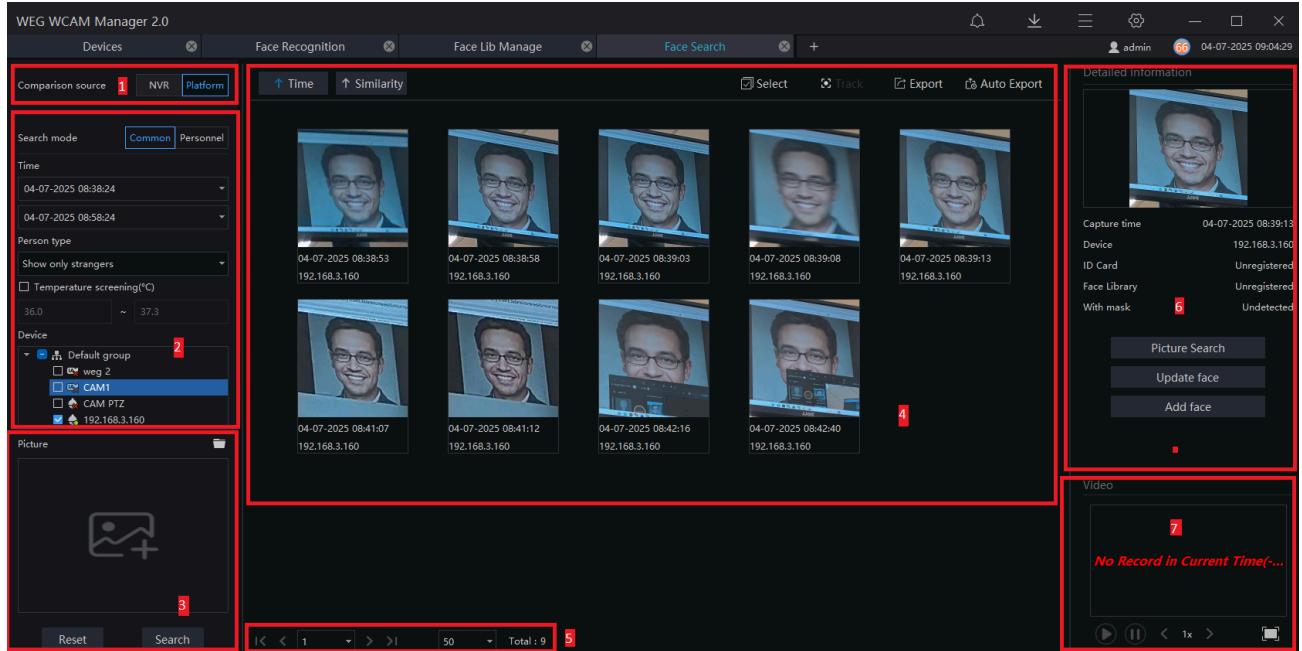


Figure 7-25: Face Search Interface

Number	Function	Description
1	Comparison Source	Choose the comparison source to perform the search: platform or AI NVR.
2	Set Search Mode	<p>The search modes are common and personal.</p> <ul style="list-style-type: none"> - Set the search time. - Select the capture camera; mark the group to select all cameras.
3	Picture	<ul style="list-style-type: none"> - Select the image from the local folder. - Set the similarity. - Reset: Resets the search items. - Search: Click "Search" to perform the query.
4	Results	Displays the results of the search for similar faces.
5	Page Information	Number of pages, total pages, and navigation to the next page.
6	Details	<ul style="list-style-type: none"> - Click on the image from the query results to display the panorama as captured. - The captured image can be inserted into the facial database. - To search directly using captures, click "Picture Search". - Click "Update Face" to update facial images in the database, as shown in Figure 7-26. - Click "Add Face" to register the searched image in the database, as shown in Figure 7-27. - Access the facial database and search for images. - Images captured by the camera are usually stored in the "snap" folder by default. - Click "Export" to export the search results.
7	Video	No Record in Current Time(...)

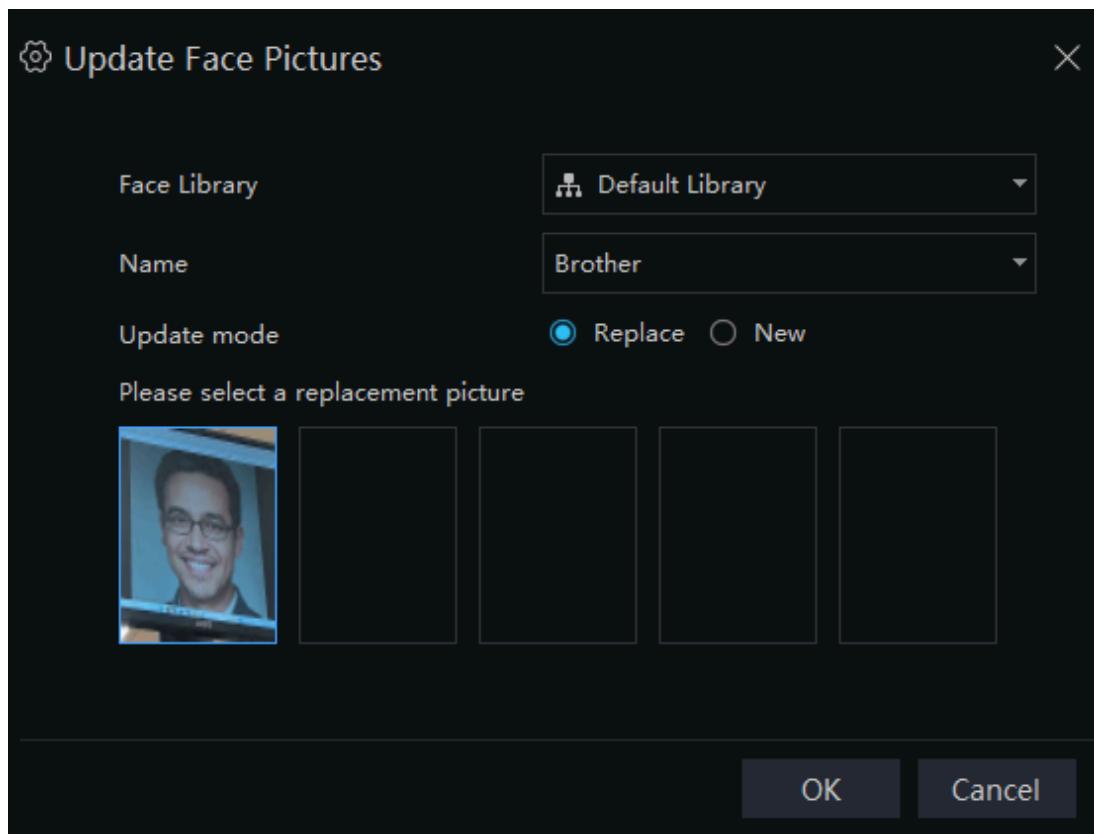


Figure 7-26: Update face

+ Add person information X

Basic Information **Access Control**

Name	
Gender	Male
Date of Birth	01-01-2000
ID Card	
Type	Teacher
Face Library	Default Library
Valid Time	Permanent validity
Email	Invalid Email's Address
Phone number	
Remark	

Picture

+Select FileOne key photo

Save and New Save Cancel

Figure 7-27: Add face

7.4.1 Picture Search

Procedure:

Step 1: Click on  to select the image.

Step 2: Set the similarity level.

Step 3: Click on "Search". The results appears based on time and similarity.

Step 4: Clicking on the images in the results will display the details.

Step 5: Click on "Register" to display the "Person Registration" pop-up interface. Enter the relevant information and then save.

Step 6: Click on "Select" for the photo from the search result.

7.4.2 Track

NOTE!

The user needs to configure two or more cameras with face detection on the Map first.

Procedure:

Step 1: Click on "Select" to choose the images.

Step 2: Mark the photos from different cameras.

Step 3: Click on "Track". A pop-up with a map will appear, as shown in Figure 7-29.

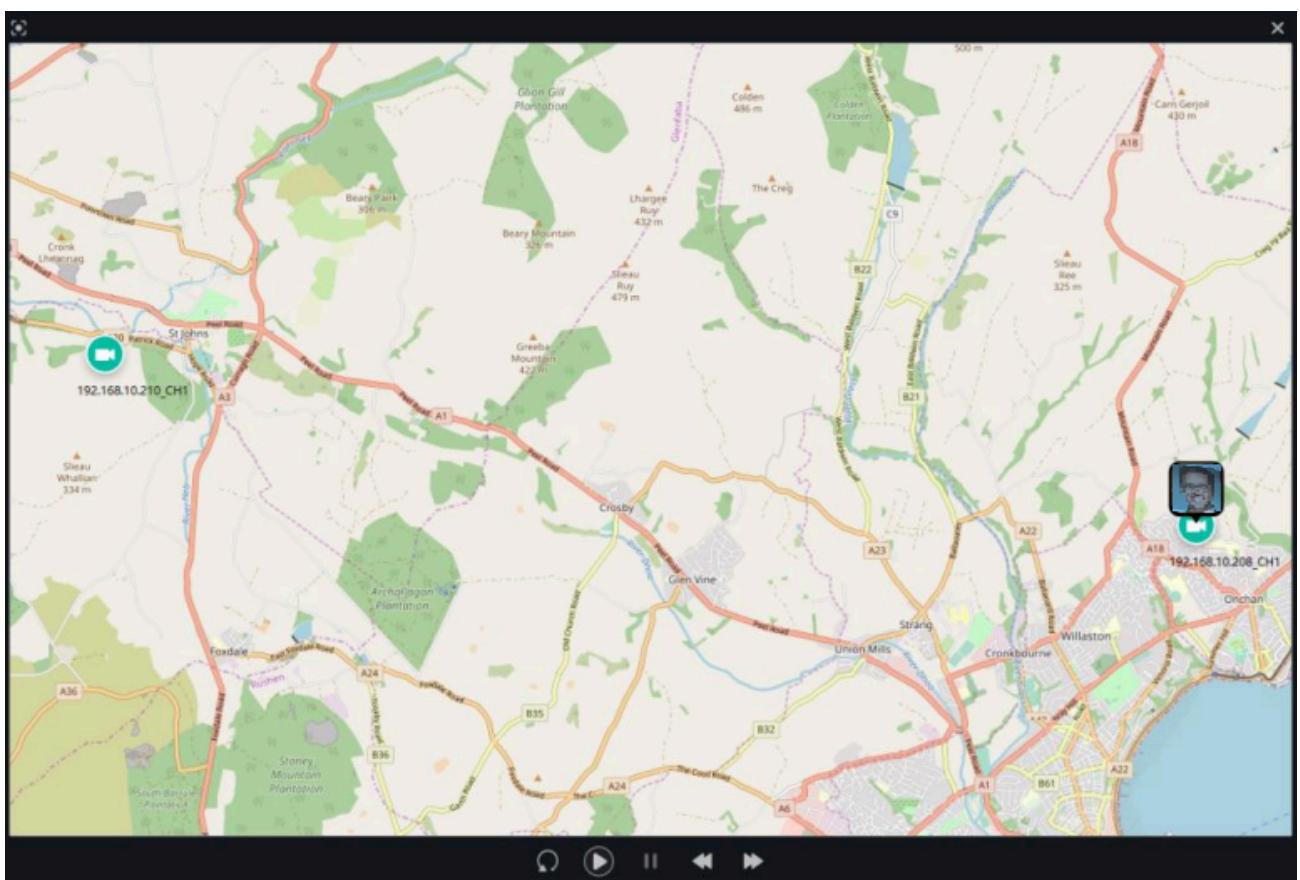


Figure 7-29: Track

Step 4: Replay or execute the trajectory line again.

7.5 CLASSIFICATION QUERY

On the "Classification Query" page, you can set the search conditions for the images.

NOTE!

This function only works for cameras with face detection.

In the main menu, click on "Classification Query" to view the configuration interface, as shown in Figure 7-30.

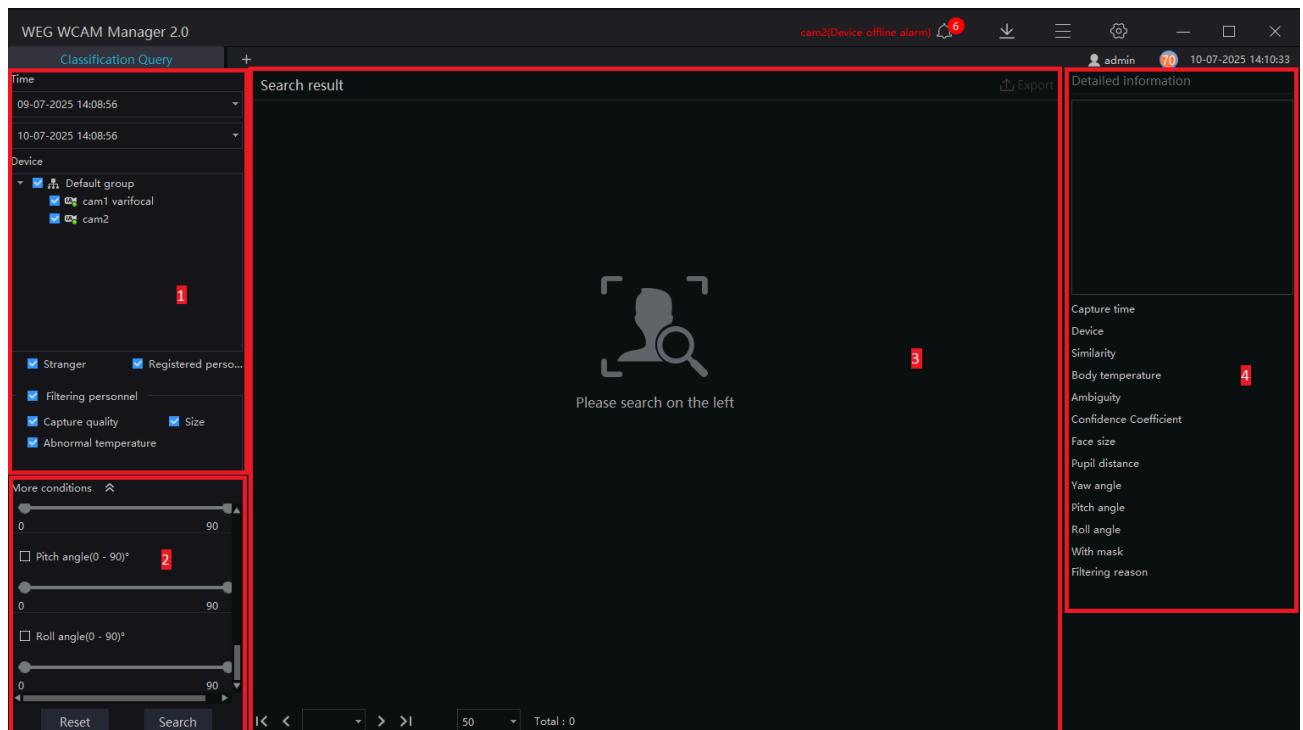


Figure 7-30: Classification Query

Number	Function	Description
1	Basic Query Conditions	Set the start time and end time. Mark the devices and modes of the facial libraries. Select personnel filtering conditions, such as capture quality, size, and abnormal temperatures.
2	More Conditions	Set similarity, confidence, face size, distance, yaw angle, pitch angle, and roll angle.
3	Results	The query results.
4	Detailed Information	The query results display detailed information.

Procedure:

Step 1: Set the query start time and select the device.

Step 2: Define the query conditions.

Step 3: Click on "Search" and the query results appears.

Step 4: Click on "Reset" to reset the query criteria.