

HikCentral Master Lite

User Manual

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Please use this Manual with the guidance and assistance of professionals trained in supporting the Product.

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Chapter 1 Overview

The HikCentral Master Lite Overseas Smart Business Management Platform uses a C/S structure and B/S hybrid architecture. Developed using a three-tiered model, the bottom layer uses a database-backed basic data layer for storing, accessing, and managing spatial and non-spatial data, as well as providing data services for the application system. The middle layer is the business layer for monitoring and alarm management, decision-making support and information services. The top layer is the presentation layer, which is the application service layer that serves different users. This software is mainly reliable, stable, with a complete structure, can make full use of existing equipment and data, has complete system management, is secure, has data update and maintenance mechanisms, and information classification and coding systems. This allows the system to provide a unified, real-time, high-speed, convenient, and intuitive visual information interface for all departments and personnel, so that the system can play a more important role when deployed.

The HikCentral Master Lite Overseas Smart Business Management Platform integrates industry-specific features. Adhering to the concepts of networking, integration and intelligence, the company has adopted advanced software and hardware development technology to solve the problems of centralized management, multi-level networking, information sharing, connectivity, multi-service integration, etc.

Chapter 2 Operating Environment Requirements

2.1 Server Configuration Requirements

Single server (additional instructions required if there are differences between multiple servers)

- CPU: Intel Xeon E5620 3.2GHz
- Memory: 64GB and above
- Network card: Gigabit dual network card, and install the latest drivers
- Operating system version: Linux hikosR3/R4



A single server with less than 32 GB of memory cannot be installed properly. Make sure there is at least 32GB of memory.

2.2 Client Configuration Requirements

- CPU: Intel or quad-core AMD, 2.0GHz and above
- Memory: 4 GB and above
- Operating system version: win7, win10, 32 and 64-bit supported
- Browser: IE11, Chrome



Browsers IE11 and below are unsupported, upgrade to IE11

2.3 Software Environment

Web application server

- Operating System: Hikvision's version of Linux Centos7.4
- Application Server: Tomcat8
- Database: PostgreSQL
- Browser: Google Chrome
- Client server: Microsoft® Windows 7, Windows 10 (32-bit and 64-bit)



Windows 7 and Windows 10 must be installed as administrator.

Chapter 3 Browser Configurations

When accessing the platform via Google Chrome, you need to configure the following:

Right-click the browser on the desktop - select "Properties" in the browser - click on "Shortcuts"
Add "--test-type --ignore-certificate-errors" to the shortcut target. Note that you need to enter a

space after the original target before input, as shown in Figure 3.1-1 below:

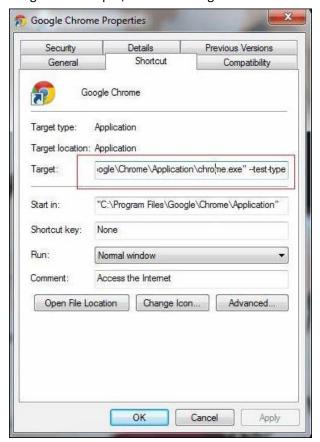


Figure 2.3-1

Chapter 4 Overview

This chapter mainly introduces the platform application features, including quick start, video center, query center, arming center, vehicle data application, statistical center and other modules. We will introduce each application's features one by one below.

4.1 Portal Menu

4.1.1 Application Label

After the user clicks on the application menu displayed in the portal, the page will be embedded in the portal as a tab. Up to 20 tabs can be opened.

Click on an application menu option to go to the application page and click "Refresh" shortcut on the right side of the tab bar to refresh the current tab. You may select "Tag Management" to close all applications on the left, on the right, other applications, or all applications. (See Figure 4.1-1 below).

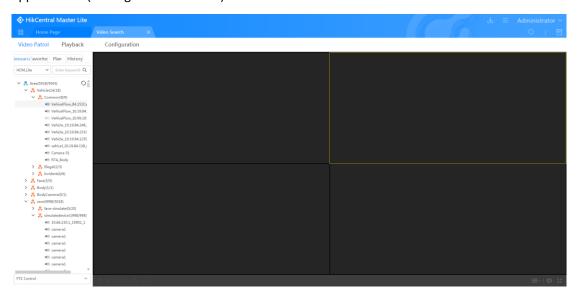


Figure 4.1-1 Application Label

4.1.2 Quick Start

Add the menu of frequently used applications to the quick start menu to quickly open frequently used applications (see Figure 4.1-2 below).

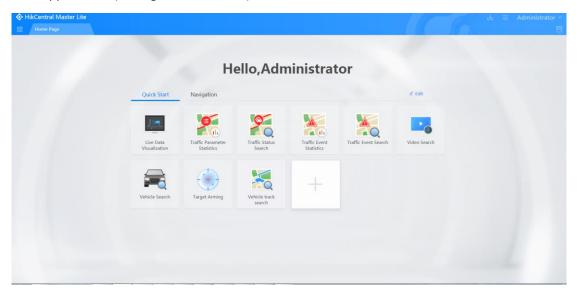


Figure 4.1-2 Quick Start

Click to open the add application panel and check the applications you wish to add (see Figure 4.1-3 below). The quick start menu supports a maximum of 12 applications.



Figure 4.1-3 Add Applications to Quick Start Menu

4.1.3 Quick Navigation

When you hover over the icon on the top left corner of the page, you may display all system application menus. Users may select any menu and click on it to go directly to the relevant application page (as shown below in Figure 4.1-4).

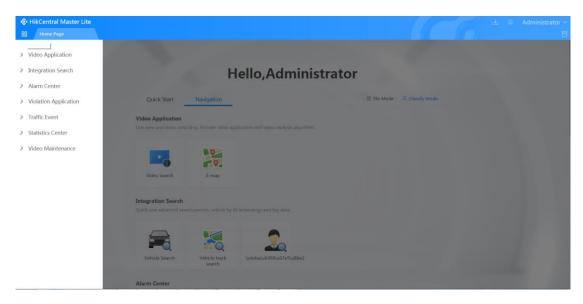


Figure 4.1-4 Quick Navigation

4.1.4 Download

Click the "Download" button in the upper right corner of the page to open the download page. You may choose to download the plug-in assistant, batch configuration tool and other toolkits as shown in Figure 4.1-5 below.

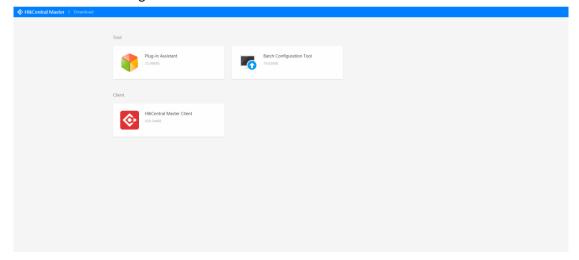


Figure 4.1-5 Download

4.1.4.1 Plug-in Assistant

You may download the plug-ins required to use the system, including the simple player, platform player, uploading assistant, rule drawing tool, annotation tool, screenshot tool, alarm assistant, real-time passing vehicle component, downloader, front-end device rules, configuration tools, etc. (the functions of specific plug-ins are introduced in the corresponding function sections).

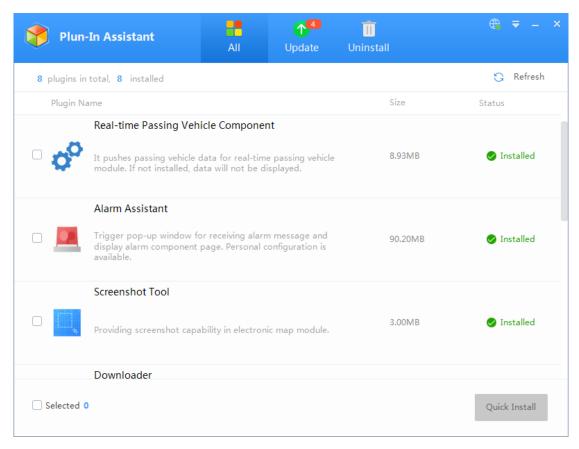


Figure 4.1-6 Plug-in Assistant

4.1.4.2 Google Chrome Web Browser

Chrome is the recommended browser for the HikCentral Master Lite Smart Application Platform.

4.1.4.3 Client Terminal

The client terminal is a PC platform application system, which allows for real-time monitoring on the client terminal without having to log in to the website.

4.1.5 User Login Management

4.1.5.1 Logout

Click the user login name in the upper right corner of the page, and click "Logout" to exit the system, as shown in Figure 4.1-7.

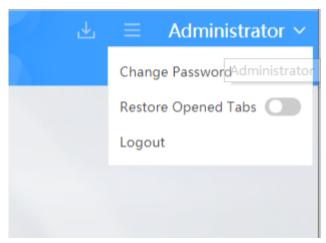


Figure 4.1-7 Logout

4.1.5.2 Change Password

After clicking "Change Password", you will be directed to the change password panel. Enter the old password correctly and set a new password, as shown in Figure 4.1-8 below.

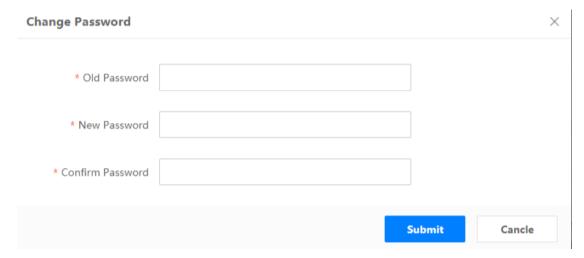


Figure 4.1-8 Change Password

4.1.6 System Management

Click the "System Management" button in the upper right corner of the page, select "System Management" in the secondary menu, which will direct you to the system management page. Here, you can perform directory resource management, user permission management, application configuration center management, smart task management, video network management and home page management.

4.1.7 Help Center

Click the "System Management" button in the upper right corner of the page, and select "Help Center" in the secondary menu. The system automatically downloads the user help documentation manual.

4.1.8 **About**

Users may view the platform name, version, etc., by clicking on the "System Management" button in the upper right corner of the page and selecting the "About" option in the secondary menu, as shown in Figure 4.1-9 below.

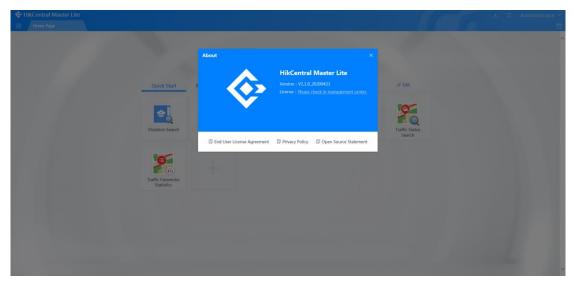


Figure 4.1-9 About

4.2 Video Application

The video center allows for real-time viewing and video querying. It also allows applications to be applied on video images and setting of video parsing algorithms. It mainly includes modules such as [Video Search] and [E-map], as shown in Figure 4.2-1.



Figure 4.2-1 Video Search

4.2.1 Video Patrol

Video Patrol is mainly used for management and grouping of frequently used equipment. The comprehensive management of equipment resources through collection, planning, etc., allows for camera live views and video playback.

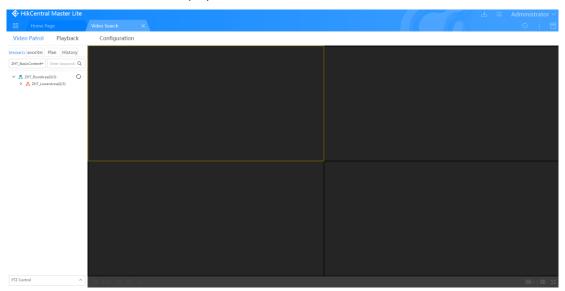


Figure 4.2-2 Preview Interface

4.2.1.1 Favorites Management

In "Favorites Management", the favorite folders are divided into two categories: "My Favorites" and "Favorites Shared by Others" (Figure 4.2-3). "My Favorites": user-created favorites; "Favorites Shared by Others": favorites shared by other users.

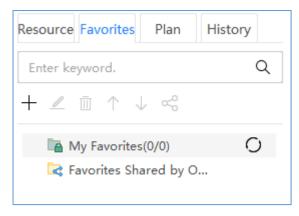


Figure 4.2-3 Favorites Categories

View favorites:

- ① Click the expand icon in front of any of the favorites folder icons to view the corresponding favorites resources in the resource tree;
- 2 Click on the favorites folder you wish to view. This will allow you to manage and view camera resources in the "Camera Resource Management Area".

• Add favorites:

Select the parent node to add a favorites folder to, then ① click on it +, and the "Add Favorites" window will pop up; ② enter a favorites folder name (to 32 characters, do not enter special characters such as '/:<>*?%; ③ click to save directly and add favorites to complete the operation; ④ if you need to add cameras directly when adding the favorites folder, you can click "Save and Add Cameras", as shown in Figure 4.2-4.

Camera resources that have been favorited can be further edited in the "Camera Resource Management Area". For details, see <u>4.2.1.3.2 Camera Resource Management Area</u>.

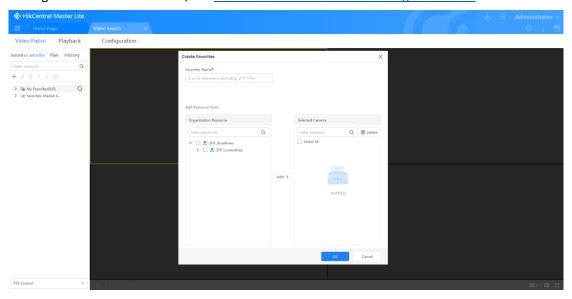


Figure 4.2-4 Add Favorites Folder

Delete favorites folder

- ① Select the favorites folder you wish to delete and click $\bar{\mathbb{I}}$;
- 2 The "Delete Favorites Folder" confirmation window will pop up. Confirm or cancel the deletion as shown in Figure 4.2-5 below:

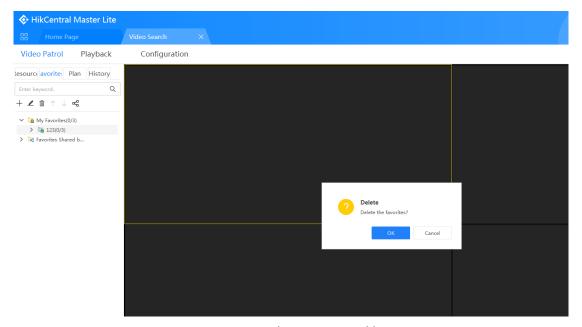


Figure 4.2-5 Delete Favorites Folder

Edit favorites folder:

- ① Click [Edit Favorites Folder] in "Favorites Folder Management" and the "Edit Favorites Folder" window will pop up.
- (2) Edit favorites folder names (up to 32 characters, do not use '/:<>*?% and other special characters);
- (3) Click to save directly, edit favorites folder to complete the operation;
- (4) Click to save and add cameras. Go directly to the camera editing window to add cameras, delete cameras and manage cameras;
- (5) Click "Cancel" to directly cancel editing favorites folder. See Figure 4.2-6 below

Share favorites folder:

- ① Under "My Favorites", select the favorites folders you wish to share. Click 🗠 [Share Favorites] and the "Share Favorites" window will pop up. The user resource area on the left displays the current user resources of the platform in the form of a resource tree. Users with whom you have shared resources or with whom you wish to share resources will be displayed in the selected user list.
- (2) Select the users you wish to share with in the resource tree;
- (3) Click to add:
- (4) Selected users will appear in the selected user list;
- (5) Select the shared user you wish to delete in the selected user list and click "Delete" to delete

the user.

6 Click "OK" to save your sharing settings. See Figure 4.2-6 below

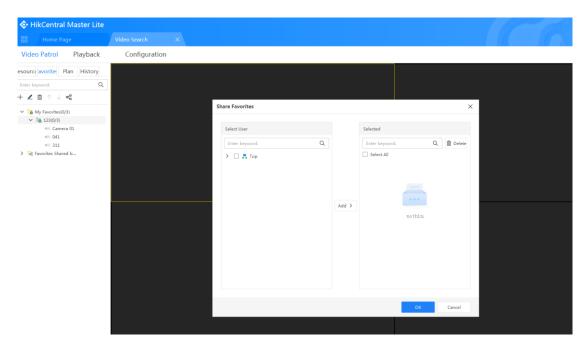


Figure 4.2-6 Share Favorites

4.2.1.2 Plan

Click the [Plan] button in the menu bar or click [Plan] on the video home page to enter the planning interface (see Figure 4.2-7).

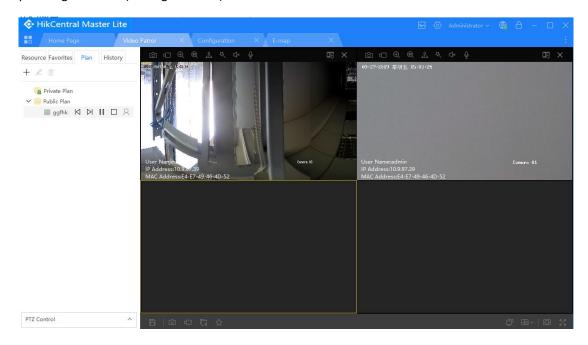


Figure 4.2-7 Enter Planning Interface

The planning interface is shown in Figure 4.2-8. The left side of the page is the plan management

area for adding, deleting and editing plans, and operational management for auto-switching of plans. The middle of the page is the camera resource management area, for camera live views, video playback, and operations such as adding, deleting and editing camera resources.

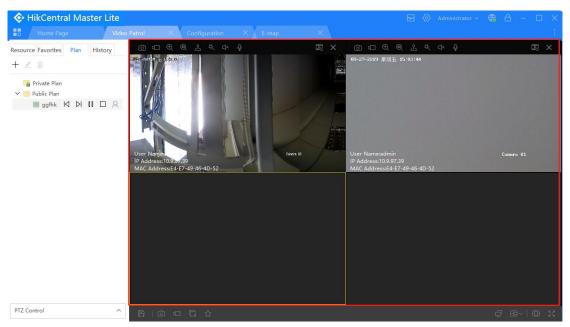


Figure 4.2-8 Plan Interface

4.2.1.2.1 Plan Management Area

In the planning management area, plans are divided into two categories: "Private Plan" and "Public Plan". "Private Plans" are plans created by the user, and "Public Plans" are plans shared by the user or other users.

4.2.1.2.2 Check Plan

Click the expand icon in front of any plan icon to view the corresponding plan resources in the resource tree. Then click on the plan you wish to view. This will allow you to manage and view camera resources in the Camera Resource Management area (see Figure 4.2-9).

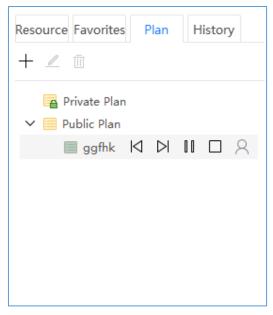


Figure 4.2-9 Check Plan

4.2.1.2.3 Add Plan

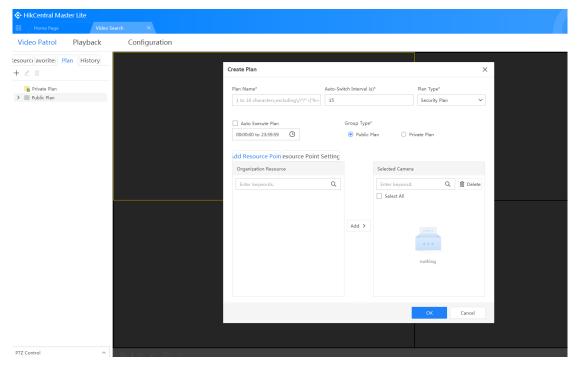


Figure 4.2-10 Add Plan

The plan can be added to the plan management, as shown in the following figure:

Label	Description
1	Click the " + " button and the "Add Plan" window will pop up
2	In the "Add Plan" window, edit the plan name, group type, plan profile, plan document,
	scenario type, number of split screens, auto-switch time (fields with a red asterisk at the
	front " *" are required; fields without the red asterisk are optional"

After editing the previous steps, click "Save Directly" or "Save and Add Cameras", or click "Cancel" to exit the add plan window. If you wish to add cameras, click "Save and Add Cameras" to manage camera resources. You may also edit camera resources in the plan later in the Camera Resource Management Area. For details, see 4.2.1.3.2 Camera Resource Management Area.

4.2.1.2.4 Delete Plan

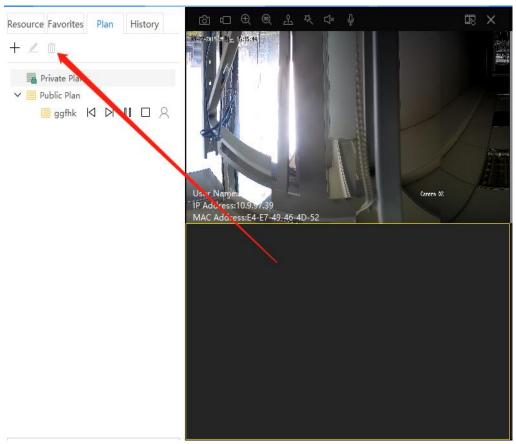


Figure 4.2-11 Delete Plan

The plan can be deleted from the plan management, as shown in the following figure:

Label	Description
1	Click the plan name to select the plan you wish to delete.
2	Click the " " button and the "Delete Plan" confirmation window will pop up
3	Click to confirm and delete

4.2.1.2.5 Edit Plan

The plan can be edited from the plan management, as shown in the following figure:

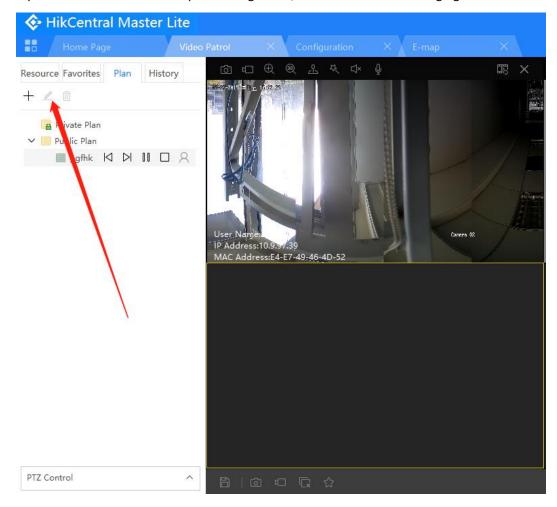
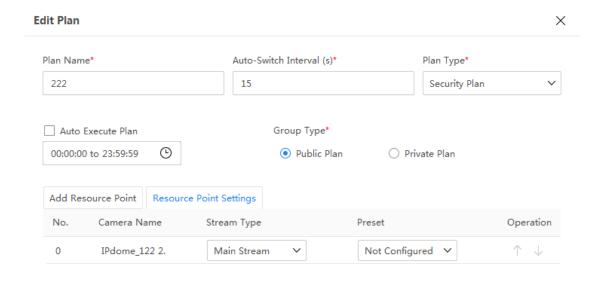


Figure 4.2-12 Edit Plan

Label	Description
1	Click the plan name to select the plan you wish to edit.
2	Click the "—— " button in the plan management area and the "Edit Plan" window will pop up
3	In the "Edit Plan" window, edit the plan name, group type, plan profile, plan document, scenario type, number of split screens, auto-switch time (fields with a red asterisk at the front " *" are required; fields without the red asterisk are optional"
4	After editing the previous steps, click "Save Directly" or "Save and Add Cameras", or click "Cancel" to exit the add plan window. If you wish to add cameras, click "Save and Add Cameras" to manage camera resources. You may also edit camera resources in the plan later in the Camera Resource Management Area.

4.2.1.2.6 Plan Camera Auto-switch

The plan management function supports auto-switch of plan cameras. You may do this by setting automatic inspection times for the cameras when adding the plan, with the shortest duration being 15s. This can also be changed in the plan editing interface.



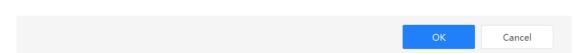


Figure 4.2-13 Auto-switch of Plan Cameras

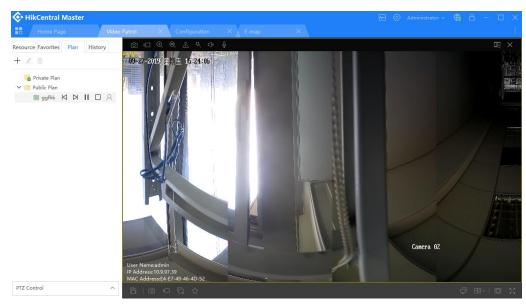


Figure 4.2-14 Interface for Auto-switch of Plan Cameras

Label	Description
1	Overview of plan cameras auto-switch. Real-time playback of each camera will
1	be displayed in order from top to bottom.
2	Video surveillance and live view of each camera
3	Video surveillance screenshot button
4	Video surveillance full screen button

4.2.1.3 Live View

Video Search module in the browser loads and syncs video live view and playback process in the client. The module uses a web control to build the client's playback interface into the browser. A notification for installing the video player control will pop up if it is missing.

4.2.1.3.1 Video Search

- ① Supports clicking of a camera thumbnail to display the live view via a pop-up player on the home page;
- ② Supports video digital zoom; supports real-time audio playback and volume adjustment;
- Supports one-click saving of the current playback screen;
- ④ Provides real-time video capture and video recording.

Label	Description
1	Click the "" button next to the player details in the tab bar to exit the interface
2	PTZ control, for details, refer to 4.2.1.4.2
	Screenshot function
3	□ Video recording function
3	Digital zoom
	Mute/unmute voice function
4	Supports viewing video clips from the most recent time period of the selected camera
5	Mainstream code and substream code switching
	Save
	Replay
	Full screen

4.2.1.3.2 Platform Player

Users can see camera live views via Platform Player.



Figure 4.2-15 Platform Player Live View

Label	Description
1	Image capture. You may take screenshots of the video during real-time monitoring.
	There will be a prompt to notify you that a screenshot has been taken, and the prompt will
	display the file name of the screenshot. The system supports opening the saved location or
	editing the image. If you click to edit the image and you have not installed the annotation
	tool, the system will automatically download the tool from the plug-in assistant;
	Emergency recording. After recording, there will be a prompt to notify you that the recording is complete. The prompt will display the file name of the recording. The system
	supports opening the saved location or opening the recording for quick playback. If you
	click to play the video and you have not installed the universal player, the system will

	automatically download the player from the plug-in assistant;
	Digital zoom. You may use the mouse to click and drag the area you wish to enlarge;
	3D zoom;
	PTZ control allows you to control the direction and movement of dome or half-dome cameras; bullet cameras cannot be adjusted;
	Video enhancements, including defogging, enhancement, noise reduction, sharpening, etc.; video parameters can be adjusted (brightness, contrast, saturation);
	Real-time tracking;
	Sound switch;
	Intercom. Supports video-voice intercom, supports automatic intercom recording; requires audio input to talk;
2	Real-time playback. Play back video recordings from this camera within the last 3 minutes;
	Close. Click to close the camera live view for this camera
3	Pause playback. Pause real-time monitoring;
	Capture all images. When the live view is shown as a multi-screen split screen display, screenshots can be taken of all cameras displayed;
	All emergency recordings. When the real-time plan is shown as a multi-screen split screen display, recording can be started for all cameras displayed at the same time;
4	Window layout. Multi-screen display can be selected. Different cameras can be selected for each display screen. The display types are 1×1, 2×2, 3×3, 1+5 and 1+2.
	Adaptive display. Supports modification of the preview display ratio (adaptive/full screen)
	Full screen conversion. Click to enter full screen mode; double-click the left mouse button to exit full screen mode
5	Auto-switch view. Click to start auto-switch
	Auto-switch settings. Set the auto-switch type and the auto-switch playback time
	PTZ control
6	> Delete. Click the screenshot or video you wish to delete, and click the "Delete" button to delete
	batton to aciete

4.2.1.4 Auto-Switch

First, configure the auto-switch playback settings. Click the "" button, and there will be a popup window as shown in the figure. Select manual or automatic auto-switch. When you select auto-switch, you must enter the auto-switch time interval. After entering, click "Confirm" to complete the operation.

After configuring the rotational inspection playback settings, click the "" rotational inspection preview to start the inspection.

4.2.1.5 PTZ Control

PTZ control includes three functions: device pan/tilt control, preset camera control, and video parameters. This allows for finer control of the viewing channels. For details, see Figure 4.2-16 below:



Figure 4.2-16 PTZ Control

Operation	Description
1	PTZ direction control Horizontal scanning Left click on the mouse and drag to adjust the rotation speed of the gimbal
2	(a) PTZ lock
3	Enlarge or reduce focal length. Adjust the zoom by adjusting the focal length; Focal length adjustment; Aperture size adjustment;
4	Iighting, wiper, reset From left to right: one-click focus, 3D magnification,



4.2.1.6 Playback

During video playback, you may search and view all the videos configured in the platform, and perform a series of operations including switching between regular playback and segment playback. The system also supports image capture, video trimming and the management of corresponding images and videos.

In the video resource thumbnail mode, click the playback button of the camera to enter video playback. When the playback mode is set as the platform player, the player will pop up automatically when you click "Playback" and playback will begin, as shown in Figure 4.2-17.

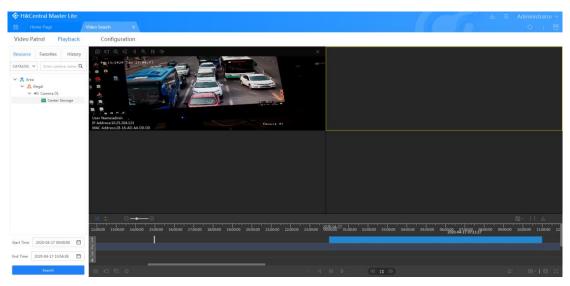


Figure 4.2-17 Video Playback

Label	Description
20001	Image capture. You may take screenshots of the video during monitoring. There will be a prompt to notify you that a screenshot has been taken, and the prompt will display the file name of the screenshot. The system supports opening the saved location or editing the image. If you click to edit the image and you have not installed the annotation tool, the system will automatically download the tool from the plug-in assistant;
1	Edit video recording. After the recording has been edited, a notification in the bottom right corner will show that editing has been completed and the file name of the recording will be displayed. The system supports opening the saved location of the edited recording or opening the recording for quick playback. If you click to play the recording and you have not installed the universal player, the system will automatically download the player from the plug-in assistant;

	Digital zoom. You may use the mouse to click and drag the area you wish to enlarge; Playback by segments. Supports up to four channels of simultaneous video recording playback, with each segment a minimum of 10 minutes long;
	Fast forward. Supports fast forwarding the progress bar in 10-second increments
	Video enhancements, including defogging, enhancement, noise reduction, sharpening, etc.; video parameters can be adjusted (brightness, contrast, saturation);
	Sound switch;
	Track history;
	Close. Click to close the camera live view for this camera
2	Select video playing mode. When "" is clicked, video recordings from different time periods can be played simultaneously with their respective start times. When " is clicked, video recordings from different time periods must be played simultaneously with the same start time, and videos that have not reached the playback time period will be paused; Timing precision. Click "+" "-" or click directly on the axis to adjust the precision of the video playback progress bar. The unit of least precision is 2 seconds and the maximum precision is 1 day;
	Display video recording type. Yellow for mobile recording, red for alarm recording, blue for scheduled recording, green for manual recording; Select a section on one of the video progress bars; Download. Download selected video clips
	Capture all images. When the live view is shown as a multi-screen split screen display, screenshots can be taken of all cameras displayed;
	All emergency recordings. When the real-time plan is shown as a multi-screen split screen display, recording can be started for all cameras displayed at the same time; Close all. Video playback will exit completely and playback will be terminated;
	Save all videos on the screen;
	Single frame back;
	Reverse playback;
3	Pause playback;
	Start playing;
	Single frame playback;
	Speed up/slow down playback;
	Hide/show progress bar;
	Turn on multi-screen;
	Window layout;
	Adaptive display;
	Full screen;
4	Screenshots and video clips can be viewed in the screenshots; You can view the camera display from a certain camera for any set time period;
	1 1

4.2.1.7 Configuration and Management

4.2.1.7.1 Camera Search

Camera Search supports searches in all directories, favorites or plans based on the entered camera name.

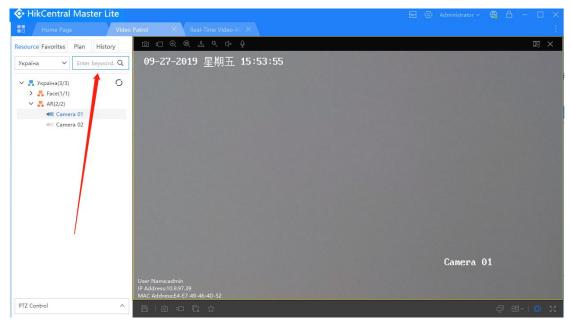


Figure 4.2-18 Camera Search

4.2.1.7.2 Historical Record

Place your mouse over the "Historical Record" button and recently viewed camera displays will be displayed in chronological order below the button. Click the "Play" button to the right of the camera video to view the real-time camera display. Click the "Resume" button to the right of the camera video to continue watching from the time node at the end of the last playback recording (only cameras that support video playback will display the "Resume" button).



Figure 4.2-19 Historical Record

presetpreset

4.2.2 **E-map**

The basic operations of the E-map include three modules: [map function], [resource search] and the [toolkit]. These modules are divided into three subsections for illustration.

4.2.2.1 Map Function

The map function includes basic map operations such as, map controls, spatial queries, keyword queries, and display controls.

4.2.2.1.1 Map Basic Operation

1. Map Dragging

Hold down the left mouse button and you will be able to drag the map when the pointer becomes $^{\textcircled{\$}}$.

2. Zoom In/Out

Resize map by scrolling mouse wheel.

3. Map Reset

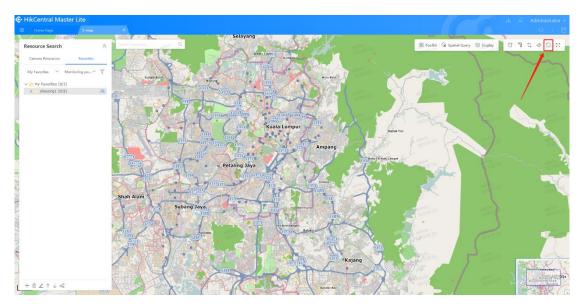


Figure 4.2-20 Map Reset

Click the "Reset" button to restore the map to its initial state (center point and zoom level).

4. Measurements

Measure the distance and area on the map as follows:

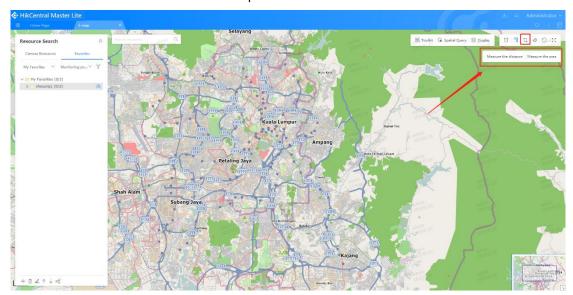


Figure 4.2-21 Measurements

Label	Description
1	Click "Measure" and a window will pop up on the right
2	Select the distance or area to be measured again
3	Click multiple times on the map to make a measurement (click to select the position, double-click to end drawing, press ESC to exit configuration, click "Clear" to clear all drawings)

5. Map Clearing

Clear everything on the map except for the layers in the layer control panel.

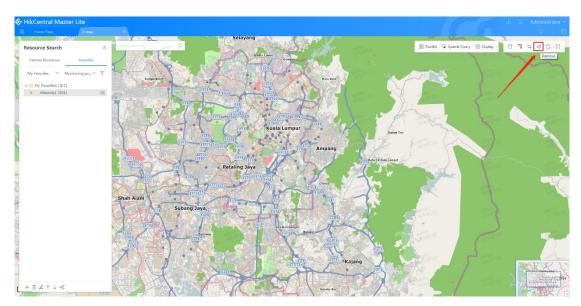


Figure 4.2-22 Map Clearing

6. Map screenshot

If the screenshot tool is installed, clicking the "Screenshot" button in the map functions will take a screenshot of the current map. If it is not installed, the download window will automatically pop up after clicking the "Screenshot" button in the map functions. (The screenshot tool must be downloaded from the plug-in assistant.)

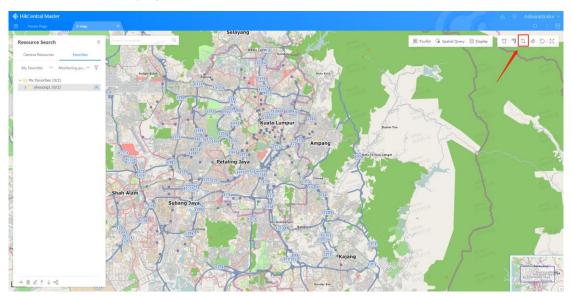


Figure 4.2-23 Map Screenshot

4.2.2.1.2 Map Widgets

1. PanoVu

The PanoVu map in the lower right corner of the map supports closing and expansion. Click "\sum" to close the PanoVu map and click "\sum" again to expand the map. Drag the blue box to change the

map display range.

2. Scale

Drag the left mouse button across the scale to zoom in and out on the map (this has the same effect as rotating the scroll wheel on the mouse). Click "⑤" to move the map (collapse the resource search list to see the scale at the bottom left of the map).

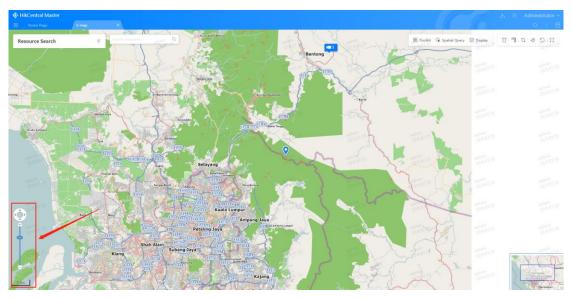


Figure 4.2-24 Scale

4.2.2.1.3 Spatial Query

Click on the spatial query in the map function and the spatial query window will pop up. You may select by circle, box, polygon, line, or by point. You may also select the camera resource type (camera, checkpoint, alarm input/output).

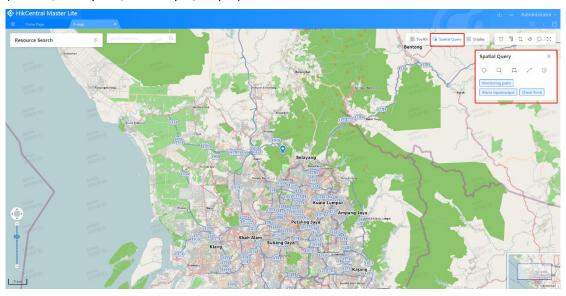


Figure 4.2-25 Spatial Query

Label	Description
1	Click on the spatial query in the map function and the spatial query window will pop up.

You may select cameras on the map by circle, box, polygon, line, or by point. You may also select the camera resource type (camera, checkpoint, and alarm input/output).

- O Selecting by circle. Drag to select the cameras in the circle on the map;
- Selecting by box. Drag to select the cameras in the box on the map;
- $^{\square}$ Selecting by polygon. Click multiple times to select cameras in the polygon on the map;
- Selecting by line. Click multiple times to select cameras within a certain range of the line;
- Selecting by point. Click to select cameras within a certain range of a point Click "X" to exit the spatial query window (for the above operations, click once to select the position, double-click to end drawing, press ESC to exit the configuration).

4.2.2.1.4 Display Control

2

It mainly controls independent display and hidden controls of the resource layer (resources from points of interest such as cameras, checkpoints, alarm input/output, portable video recorders, mobile devices, unmanned aerial vehicles and mobile clients). Users may also choose whether to display the map center point, resource name, AI mark and camera orientation in the display options. Click on the camera and checkpoint for more detailed display settings.

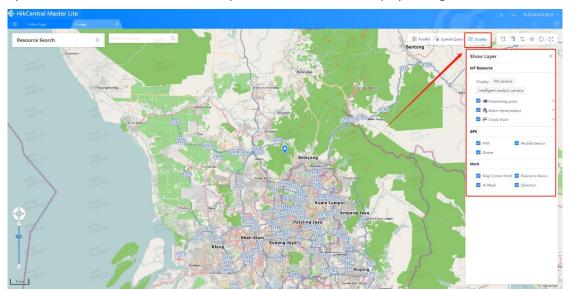


Figure 4.2-26 Display Control

In the display layer window, you may perform additional configurations of the camera and checkpoints. You may select the camera type, online status, cascading status, facial recognition ability, PanoVu series camera capability, other capabilities, equipment manufacturer, camera type, networking properties, etc. You may also check the cascading status in the checkpoint to filter out the camera resources you wish to display.

4.2.2.2 Resource Search

Resource search is divided into two modules: camera resource and favorites sharing. Click " $^{\circ}$ " to hide the resource search window, or click " $^{\circ}$ " to expand the resource search window.

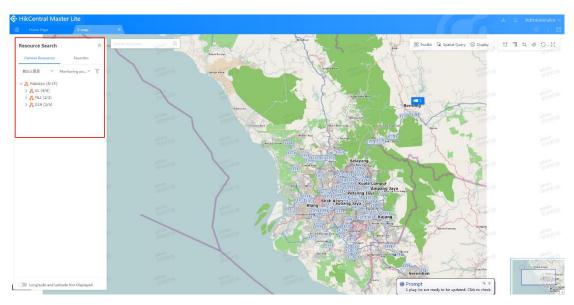


Figure 4.2-27 Resource Search

4.2.2.2.1 Camera Resource

Camera resources are displayed as primary or secondary resources. Click to select the cameras you wish to display. You may also use keyword searches to find and control resources. The specific camera resource functions include list view, map display, camera positioning, camera viewing, longitude and latitude editing, unmarked camera display, resource search, favorites, etc.

1. List View

Display video resources of the video platform in the form of an organization tree, including cameras, checkpoints, alarm input/output and other types of resources.

Label	Description
1	You may also select the camera resource type (camera, checkpoint, alarm input/output)
2	Select the camera resource directory you created
3	View camera resources in the organization tree

2. Displaying on Map

Display camera resources with their longitude and latitude coordinates on the map. Depending on the map zoom level, video surveillance resources are displayed by aggregation. In the figure on the left, the cameras with different latitudes and longitudes are scaled to form the aggregated cameras in the figure on the right.

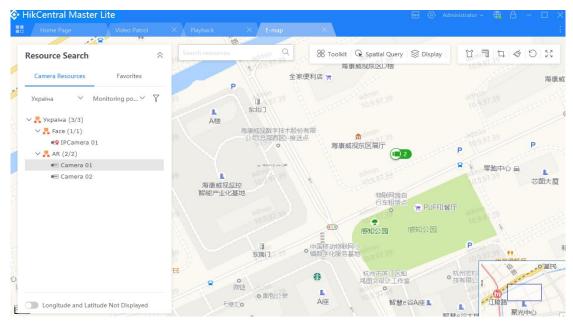


Figure 4.2-28 Displaying on Map

3. Camera Positioning

In the organization tree resource, clicks directly on the camera containing the longitude and latitude to directly locate the camera on the map. As shown in the figure below, click the camera resource name in icon 1 to directly locate the camera on the map. Icon 2 displays detailed information on the camera, and you may click the icon to view the camera display.

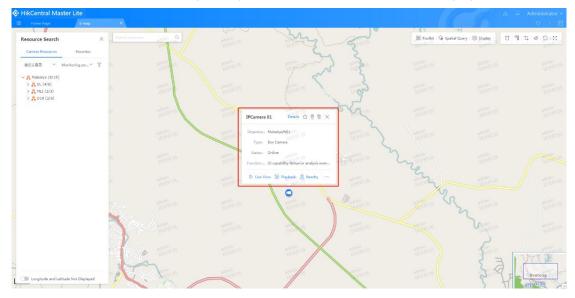


Figure 4.2-29 Camera Positioning

4. Camera Viewing

Click on any camera on the map or click on the camera in the camera resource to view camera display information. The attribute information displayed after clicking on the camera will differ according to the type of camera resource. The camera, checkpoint and alarm input/output will be introduced separately below.

(1) Camera

The camera information display includes basic information and Field of View (FoV) information. Regarding FoV, if the camera is a real FoV camera, the camera's FoV will be displayed in green on the map while other types of cameras will be displayed in blue. In the camera information panel, users may perform operations such as live view, playback, nearby operations, view details, and add favorites, mark/edit longitude and latitude. For cameras that do not have longitude and latitude labels, users are not able to perform nearby operations, as shown in the following figure.

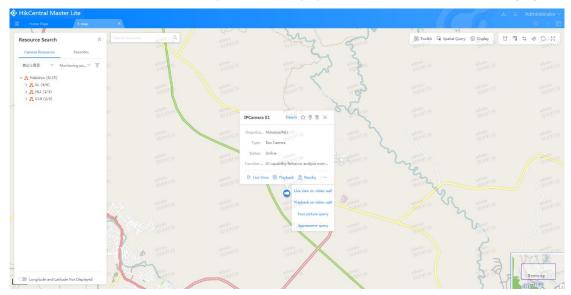


Figure 4.2-30 Camera Panel

Label	Description
1	After clicking "Details", the expandable window will display the camera's basic information and FoV. Basic information includes the name, organization, type, status, serial number, pixel, longitude and latitude, and other functional applications. FoV includes the camera's visual radius (meters), horizontal viewing angle (degrees) and lens orientation (degrees). You may choose to add this camera to existing favorites or create a new favorites folder; You may edit the longitude and latitude of this camera; You may delete the longitude and latitude displayed for this camera; Click to close this window;
2	After clicking live view, the live view of the camera can be viewed on the pop-up simple player. After clicking playback, the video playback of the camera can be viewed on the pop-up simple player. After clicking nearby, you can view the cameras nearby.

(2) Checkpoint

Checkpoint information displays basic properties of the checkpoint. In the checkpoint information panel, users may favorite cameras, mark/edit longitude and latitude, view live views, video playback, nearby, linked cameras, and perform vehicle searches. For checkpoints that do not have longitude and latitude labels, users are not able to perform nearby operations, as shown in the following figure.

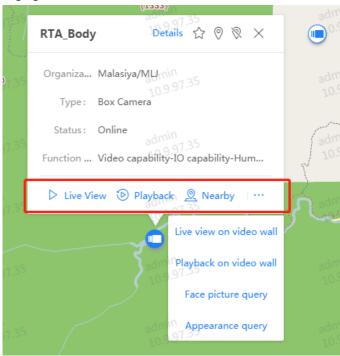


Figure 4.2-31 Checkpoint Panel

Label	Description
1	After clicking "Details", the expandable window will display the camera's basic information, including the name, organization, serial number, longitude and latitude, functional applications, use type and checkpoint type.
	You may choose to add the checkpoint to the existing favorites directory or a new favorites directory;
	You may edit the longitude and latitude of this checkpoint;
	You may delete the longitude and latitude of this checkpoint;
	X Click to close this window;
2	After clicking live view, the live view of the checkpoint can be viewed on the pop-up simple player
	After clicking playback, the video playback of the checkpoint can be viewed on the pop-up simple player
	After clicking nearby, you can view the cameras near the checkpoint

5. Longitude and Latitude Editing

By selecting the camera in the camera display, a window will appear as shown in the figure. To modify the coordinates, click " $^{\circ}$ " and re-select the longitude and latitude coordinates on the map; click " $^{\circ}$ " to delete the camera's longitude and latitude.

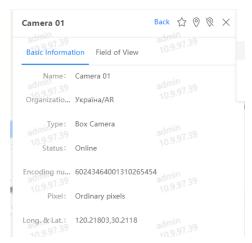


Figure 4.2-32 Edit/Delete Longitude and Latitude

6. Only Display Resources with No Longitude and Latitude

Click the "only display resources with no coordinates" button in the camera resource panel to only display camera resources with no longitude and latitude. You may add longitude and latitude coordinates to camera resources with no coordinates.

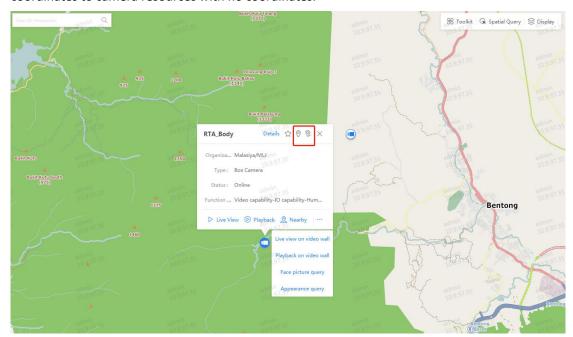


Figure 4.2-33 Only Display Resources with No Longitude and Latitude

Label	Description
1	Click "Longitude and Latitude Not Displayed"
2	Camera resources in the organization tree with the "" icon are cameras without coordinates. Click the camera and a window with detailed information on the camera will pop up.
3	Click " " and click on the map to select the camera's latitude and longitude to add the camera's coordinates.

7. Resource Search

You may search for cameras in the resource search, which supports fuzzy search using keywords and video surveillance resources. You may also filter the results for display.

Label	Description
1	After selecting the directory and surveillance type, enter the keywords you wish to search
	for and click " Q " to search
2	After clicking search, the resources found will be displayed. Click on the results to view
	detailed information of the cameras. If the camera's serial number is displayed in gray,
	such as " \P ", this means there are no coordinates for the camera. If the camera's serial
	number is displayed in red, such as " $ extstyle exts$
	and you may click directly on the map to locate the camera.

4.2.2.2. Favorites Sharing

This is mainly for the user to favorite or share cameras they are interested in. Users may create favorites directories according to their needs so that they may directly call or view these cameras in future. The "Favorites Sharing Management" supports camera search, favorites search, and adding, editing, sharing, re-ordering and deleting favorites.

1. Camera Search

You may search for cameras in the resource search, which supports fuzzy search using keywords and video surveillance resources. You may also filter the results for display.

Label	Description
1	After selecting the directory and surveillance type, enter the keywords you wish to search
	for and click " Q " to search
2	After clicking search, the resources found will be displayed. Click on the results to view
	detailed information of the cameras. If the camera's serial number is displayed in gray,
	such as " \P ", this means there are no coordinates for the camera. If the camera's serial
	number is displayed in red, such as "?", this means there are coordinates for the camera
	and you may click directly on the map to locate the camera.

2. Camera Viewing

Click on any camera on the map or click on the camera in the favorites directory to view camera display information. The attribute information displayed after clicking on the camera will differ according to the type of camera resource.

3. Add to Favorites Directory

"Favorites Sharing Management" supports the adding of favorites directories. Detailed steps are as follows:

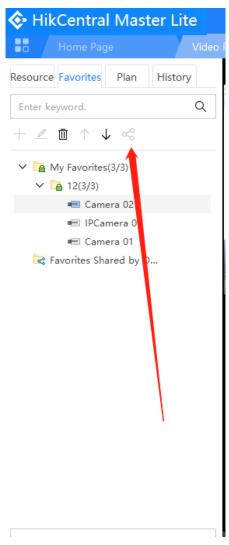


Figure 4.2-34 Add to Favorites Directory

Label	Description
1	Select a favorite directory folder. The favorites directory to be added is in this favorites directory.
2	In "Favorites Sharing Management", click " $\overline{}$ " and the "Add Favorites Directory" window will pop up
3	Enter new directory name
4	Click "Confirm" to add

4. Edit Favorites Directory

"Favorites Sharing Management" supports the editing of favorites directories. Specific steps to edit the directories are as follows:

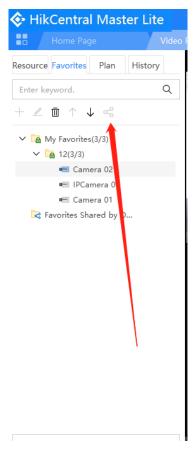


Figure 4.2-35 Edit Favorites Directory

Label	Description
1	Click on the favorites directory name to select the directory you wish to edit.
2	Click " and the "Edit Favorites Directory" window will pop up
3	Enter new directory name. Up to 32 characters allowed for group names, do not use '/:<>*?% and other special characters);
4	Click "Confirm" to complete editing

5. Share Favorites Directory

"Favorites Sharing Management" supports shared favorites directories.

Label	Description
1	Click to select favorites directory to share
2	Click "" and the "Share Favorites Directory" window will pop up. User resources in the current system are displayed in the form of resource trees in the user resource area. Users you wish to share resources with are displayed in the list of selected users.
3	Check the users with whom you wish to share the favorites directory. Click " " to add users to the "Selected Users" section on the right. You may also select users from the list by clicking " "."
4	Click "Confirm" to share

6. Re-order the Favorites Directory

Click " $^{\uparrow}$ $\,^{\downarrow}$ " in Favorites Sharing Management to re-order the favorites directories.

7. Delete Favorites Directory

If you receive a prompt regarding the resources in the favorites directory after selecting the favorites directory to be deleted and clicking " it means that there are still camera resources in the favorites directory. You must do the following to delete the favorites directory containing the camera resources:

Label	Description
1	Click to select the camera resource under the favorites directory containing the camera resource you wish to delete.
2	Click " " to remove all camera resources under the favorites directory
3	Click on the favorites directory again
4	Click " again to delete the favorites directory

4.2.2.3 Toolkit

The toolkit module contains map-related operational application functions, such as basic video applications, data analysis applications, GPS applications, trend analysis, etc. These functions are sorted to form an operational toolkit.

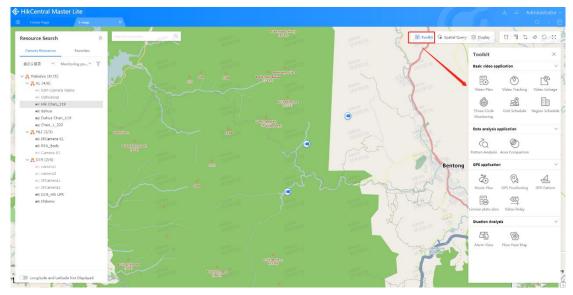


Figure 4.2-36 Toolkit

4.2.2.3.1 Basic Video Application

The basic video application within the toolkit includes video planning, video tracking, video linkage, three-circle monitoring, grid scheduling and site scheduling, as shown in the following figure.

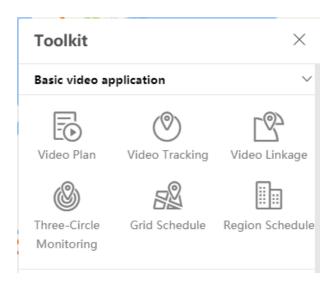


Figure 4.2-37 Basic Video Application

1. Video Plan

For important places and units, users should use the spatial query on the map to configure important video cameras, preset camera locations and auto-switch times to create corresponding video plans. When an important event occurs, the video can be called up with one click. This allows for auto-switch playback of important cameras so as to quickly understand the ground situation.

(1) Enable Plan

There are two methods to enable the plan:

Method 1:

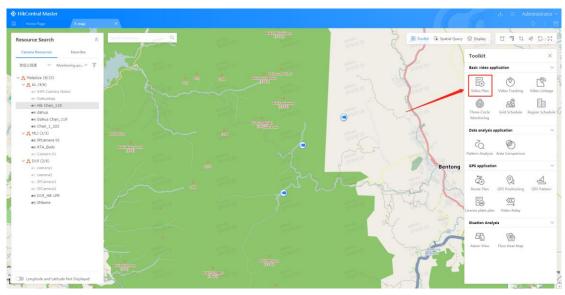


Figure 4.2-38 Enable Plan 1

Label	Description
1	Click on "Video Planning" in the Toolkit-Basic Video Application, and the video planning
	window will appear on the left side of the interface

Hover the pointer over any plan name and the "D" button will appear on the right side of the plan. Click the button to enable the plan

Method 2

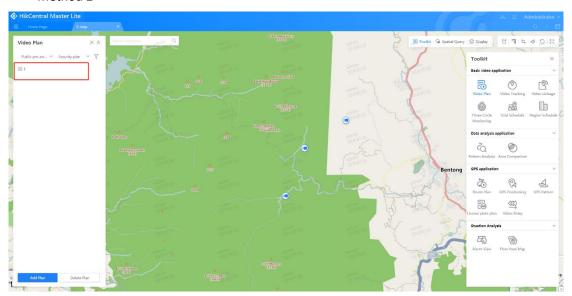


Figure 4.2-39 Enable Plan 2

Label	Description
1	In the video planning window, click on any plan name to view details of the plan
2	Click "Enable" to enable plan

(2) Add Plan

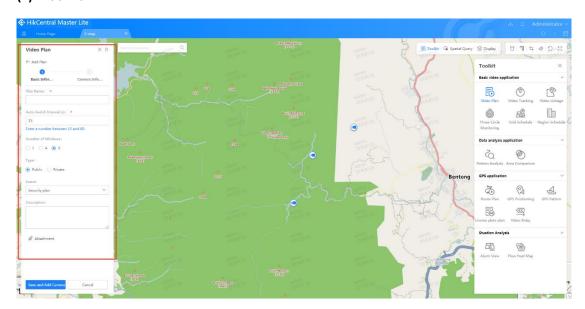


Figure 4.2-40 Add Plan

Label	Description
1	In the video planning window, click "Add Plan" to enter the add plan window.
2	Enter the name of the plan you wish to add, the auto-switch interval, number of screens,
	type, scenario, description. The window also supports uploading of attachments.
3	Click "Save and Add Cameras" to go to the "Add Camera" window.
4	+ Click to add cameras. For detailed steps, refer to figure 4.2-41.
	Check the cameras you wish to delete and click to delete them.

	Check the cameras you wish to move and click to rearrange their order.
5	Click "Save Plan" to add plan

Step-by-step details on how to add cameras are as follows:

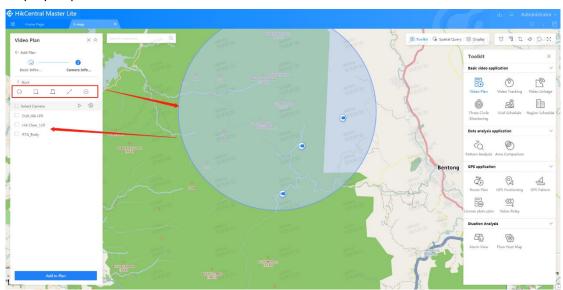


Figure 4.2-41 Add Cameras

Label	Description
1	Click to choose how you wish to select cameras on the map. Selecting by circle. Drag to select the cameras in the circle on the map; Selecting by box. Drag to select the cameras in the box on the map; Selecting by polygon. Click multiple times to select cameras in the polygon on the map; Selecting by line. Click multiple times to select cameras within a certain range of the line; Selecting by point. Click to select cameras within a certain range of a point Click "X" to exit the spatial query window (for the above operations, click once to select the positions; double-click to end drawing; press ESC to exit the configuration).
2	Select the cameras you wish to add by selecting the cameras on the map
3	All cameras circled on the map will be displayed in a list on the lower left. You may check the cameras and click " " or " " to automatically open the platform player for live view or playback (if the platform player is not installed, you will be prompted to install the plug-in assistant and download the player from the assistant)
4	After checking the selected cameras, click "Add to Plan" to complete adding the cameras

(3) Delete Plan

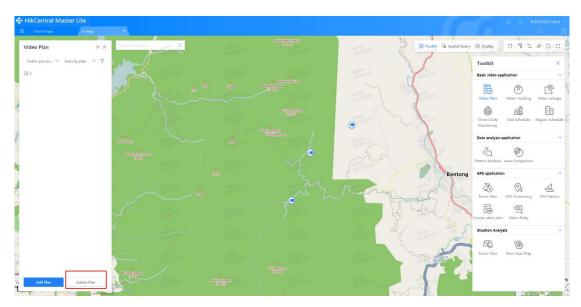


Figure 4.2-42 Delete Plan

Label	Description
1	Click "Delete Plan" to switch to delete plan mode.
2	Click the " button in front of the plan you wish to delete, and a confirmation window will pop up
3	Click "Confirm" to delete plan
4	Click "Return" to return to the initiate state

(4) Search Plan

In the video plan, select the category (Public Plan or Private Plan) and scenario (emergency command plan, key location plan, security plan). You may use the keyword search to look for plans.

(5) Check Plan

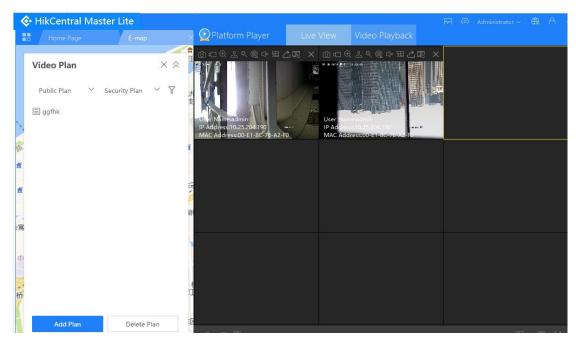


Figure 4.2-43 Check Plan

Label	Description
1	In the video planning window, click on any plan name to view the plan details panel
2	You can look up the basic plan information, including name, auto-switch interval (seconds),
	number of screens, type, scenario, description and accessories.
3	Click on "Camera Information" to view camera information for the plan and display it on
	the map. When the mouse moves to each camera, the corresponding camera will turn
	blue, i.e. " Cameras that are not selected will display in red, i.e. " ?"

(6) Edit Plan

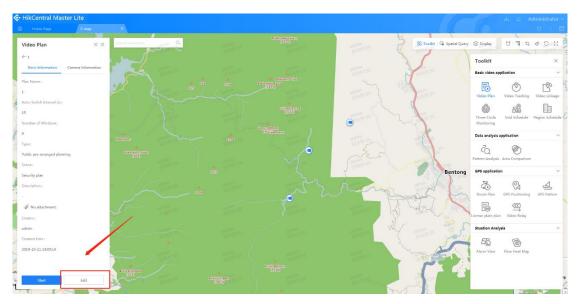


Figure 4.2-44 Edit Plan

Label Description	
-------------------	--

1	In the video planning window, click on any plan name to view the plan details panel
2	Click "Edit" in the plan details panel to view the editing window.
3	You can edit and modify the plan name, auto-switch interval (seconds), number of screens,
	type, scenario, description and accessories.
4	Click "Save and Edit Cameras" to save the basic information and view the camera editing
7	panel
5	You may use the " $^+$ $\bar{\mathbb{I}}$ $^+$ $^+$ " button to add, delete and re-order cameras
6	The camera mainstream/substream codes and preset locations can be changed. Click the
O	camera to directly locate it on the map.
7	You can further perform operations such as live view, playback, nearby, add to favorites,
/	editing longitude and latitude etc., after navigating to the camera.
8	Click "Save Plan" to complete editing

2. Video Tracking

Set designated position as the center to search for surrounding cameras, and mark the cameras with digits. Open the player to show live view. Select a camera and search again for the nearest set of cameras with the first camera as the center point. Mark the cameras with digits and drag the camera screen within the player to track the target. At the same time, the tracking path is drawn on the map showing the start and end points. Multiple tracking operations are possible.

(1) Real-time Tracking

In video tracking, click "Real-Time Tracking to view the real-time tracking panel and to perform the following operations:

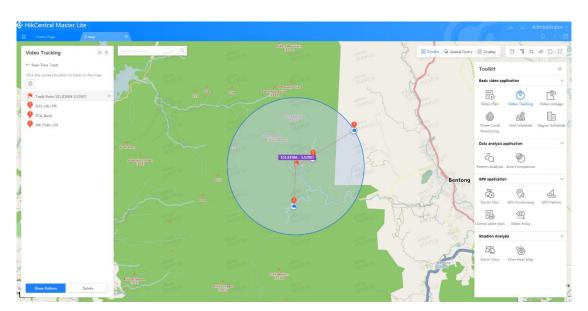


Figure 4.2-45 Real-time Tracking

Label	Description
1	To view the real-time tracking panel, click " "
2	Specify the corresponding tracking center point on the map. The system will search for the nearest cameras and call the player for real-time, live views;
	Click on the bubble icon on the map (e.g. " \ref{eq} "), and the system will start new tracking by searching nearby cameras, with the icon as the center point. The cameras on the player

will also be updated at the same time. Similarly, clicking the "button on the platform player will center this screen and the system will re-select the 5 nearest cameras.

Click "Show Pattern" to create patterns with start and end points from multiple tracking episodes

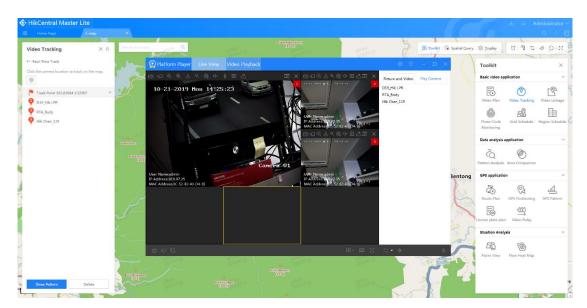


Figure 4.2-46 Platform Player Real-time Tracking

(2) Track History

The track history function operates the same way as real-time tracking, but calls video playback instead of live view on the platform player.

3. Video Linkage

To target suspicious persons or vehicles that appear at a particular location, selected FoV cameras near the target will automatically turn towards that location. At the same time, the visual range of the FoV cameras on the map will change as the cameras rotate.

1) Select cameras by box on the map. Click the target that you want the FoV camera to be trained on. The FoV camera will automatically turn to that position and centralized control will be enabled.

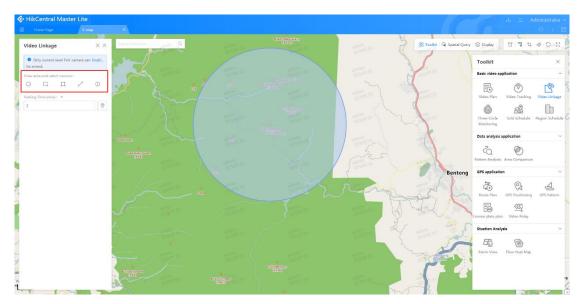


Figure 4.2-47 Video Linkage

Label	Description
1	Click to select the map drawing selection mode ($^{\circ}$ select by circle; $^{\square}$ select by box; $^{\square}$
	select by polygon; ✓ select by line; ⊙ select by point)
2	Select the camera area on the map (we use the circle selection mode as an example here)
3	The cameras in the selected area on the map will be displayed in the form of a list. You can
	check the cameras you wish to perform video linkage on.

2) Users can set the park time so that the FoV cameras remain trained on the target location. When the park time expires, the FoV cameras will automatically resume their original positions.

4. Three-Circle Monitoring

Based on the radii input for the three-circle monitoring, the three rings (three concentric circles) are automatically drawn on the map with the mouse click point as the center. All cameras within the three rings are queried and sorted according to their distance from the center point. Open the player to play the videos.

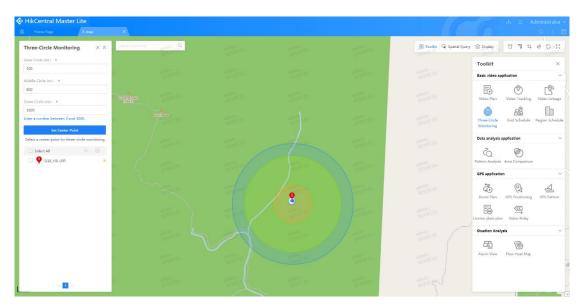


Figure 4.2-48 Three-circle Monitoring

Label	Description
1	Set the radii (meters) of the inner, middle and outer rings for the three-circle monitoring
2	Click to set the center point on the map
3	Set the center point on the map with a mouse click and sort the cameras in the circle by their distance from the center point
4	You may select the cameras that you wish to view live views of or perform video playback by checking the cameras and clicking "\rightarrow" or "\rightarrow". The platform player will pop up allowing for live view or playback or (the orange box behind the camera "\rightarrow" means the camera is within the inner ring; a green "\rightarrow" means the camera is between the inner and middle rings; a blue "\rightarrow" means the camera is between the middle ring and outer ring).

5. Grid Schedule

The function of the grid management module is to group grids, add and delete groups and grids, edit grids, and play real-time videos from the cameras in a particular grid.

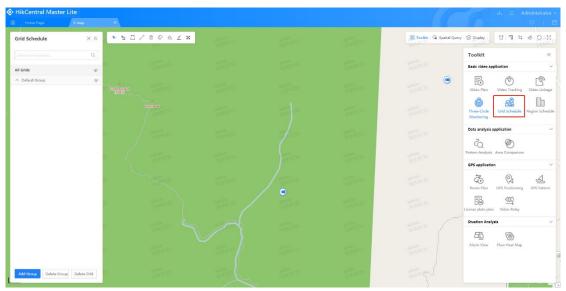


Figure 4.2-49 Grid Schedule

(1) Group Management

The group management area allows you to add, edit and delete groups. It also allows you to delete, hide/display grids, and perform grid playback. Multiple grids can be added under each group, making it easy for users to organize and manage grids.

1) Add group

Label	Description
1	Click "Add Group" at the bottom of the panel.
2	Enter the grid name in the pop-up input box and click "V" to add it. Click "X" to cancel add

2) Edit groups

Hover the pointer over the group and the "Edit" button will be displayed. Click on it and edit the group name in the input box. Click on other areas or press enter to save changes.

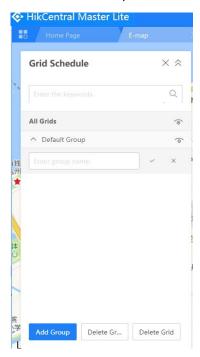


Figure 4.2-50 Edit Groups

Label	Description
1	Hover the pointer over the group and the edit button " " will be displayed. Click the button.
2	Enter the new group name. Clicks "V" to add and "X" to cancel add.

3) Delete group

Group management supports the deletion of group operations. When groups are deleted, all grids within the group will also be deleted.

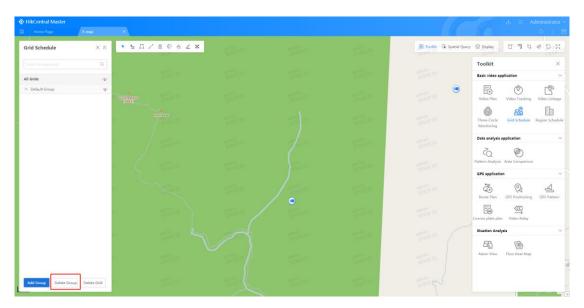


Figure 4.2-51 Delete Group

Label	Description
1	Click "Delete Group" and the " icon will display in front of the group
2	Click the " button in front of the group you wish to delete. Click the button and a confirmation window will pop up.
3	Click "Confirm" to delete group

4) Delete grid

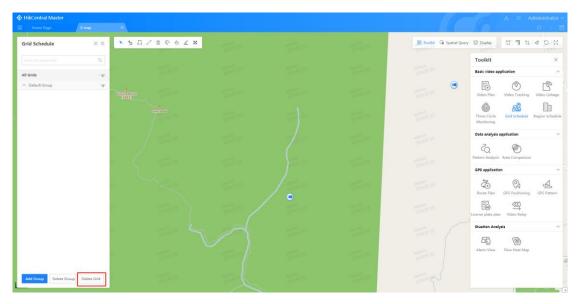


Figure 4.2-52 Delete Grid

Label	Description
1	Click the group that contains the grid you wish to delete. The names of grids groups expand
1	from top to bottom.
2	Click "Delete Grid" and the " icon will display in front of the grid
3	Click on the " button in front of the grid you wish to delete, and a confirmation window
	will pop up
4	Click "Confirm" to delete grid

5) Hide/display groups and grids

The " on the right of each group name is the hide/display button. Click once to hide all grids within the group on the map; click again to display grids. Hover the pointer over the grid name and the " o" icon will display to the right of the grid name. Click the icon to hide the grid; click again to display the grid.

6) Play grid

Supports live view of all cameras in the grid. After clicking, the platform player automatically pops up and shows the live view from multiple cameras at the same time using split screens.



Figure 4.2-53 Play Grid

Label	Description	
1	Hover the pointer over the name of the grid you wish to play and the " " icon will display on the right. Click to directly play the grid. You can also directly click the grid you wish to play, to view the camera live view interface of the grid.	
2	Click "Play" to play the selected grid	
3	Clicking on any camera within the camera live view panel in the grid will allow you to directly navigate to the camera's location on the map for further camera display.	
4	You can further view the basic information of the camera and perform operations such as live view, playback, and nearby.	

(2) Grid Management

1) Pointer

Click " *" to turn the mouse into a pointer. After you click buttons such "Draw Grid", you can click "Pointer" to return the mouse to its normal state.

2) Select grid

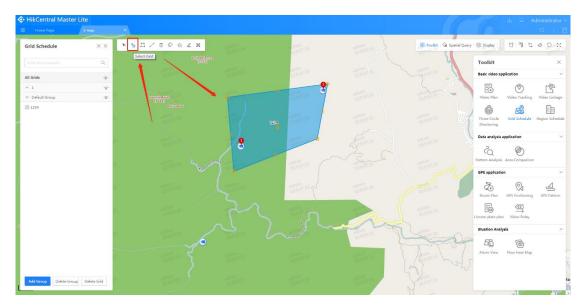


Figure 4.2-54 Select Grid

Label	Description
1	Click the "Select Grid" button " 🖫 " to select the grid you want using mouse clicks
2	Click the pointer within the grid area to select the grid. The selected grid will have an orange,
	circular stationary point near it.

3) Draw grid

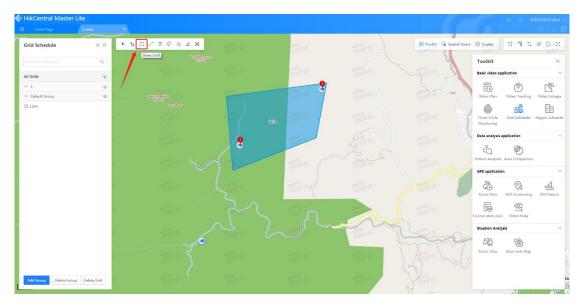


Figure 4.2-55 Draw Grid

Label	Description
1	Click " \square " the draw grid button
2	Click to draw a polygon on the map and double-click to stop drawing. The drawn grid will be displayed on the map.
3	When the drawing is complete, a new grid window will pop up. Select the group to which it belongs and enter the grid name.
4	Click "Confirm" to complete drawing the grid

4) Draw buffer grid

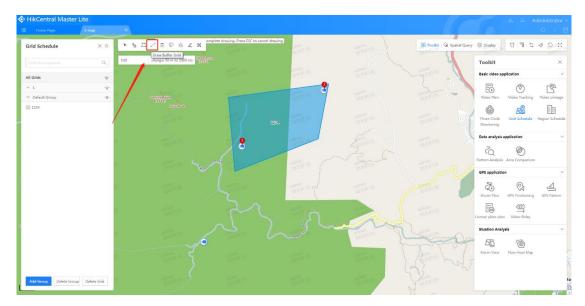


Figure 4.2-56 Draw Buffer Grid

Label	Description
1	Click " / " the draw grid button
2	Click to draw multiple segments that are connected end-to-end on the map and double-click to stop drawing. The drawn grid will be displayed on the map.
3	When the drawing is complete, a new grid window will pop up. Select the group to which it belongs and enter the grid name.
4	Click "Confirm" to complete drawing the grid

5) Delete grid

You may delete grids using grid management.

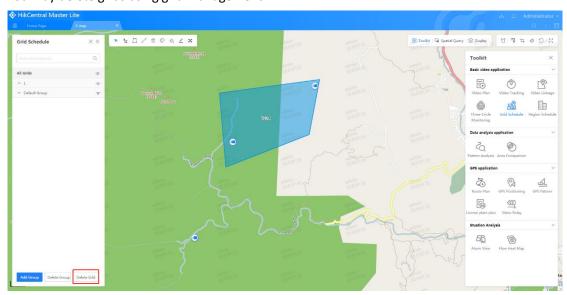


Figure 4.2-57 Delete Grid

Label	Description
1	Click the "Select Grid" button " 🖫 "
2	Click on the map to select the grid you wish to delete. The selected grid will have an orange, circular stationary point near it.
3	Click the " $^{ar{ \square}}$ " button and a grid deletion confirmation window will pop up.
4	Click "Confirm" to delete grid.

6) Edit grid type

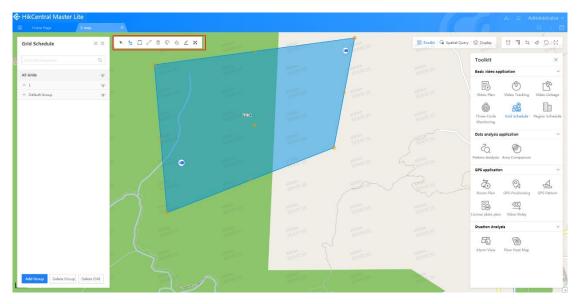


Figure 4.2-58 Edit Grid Type

Labe	l Description
1	Click the "Select Grid" button " " "
2	Click on the map to select the grid you wish to delete. The selected grid will have an orange, circular stationary point near it.
3	Click the " C" button and the quick style window will pop up
4	Click to select the grid display type on the map.

7) Edit grid fill color

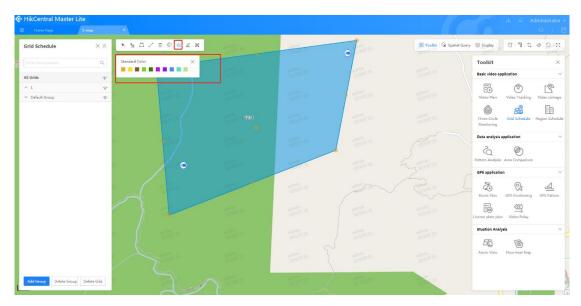


Figure 4.2-59 Grid Fill Color

Label	Description
1	Click the "Select Grid" button " " "
2	Click on the map to select the grid you wish to delete. The selected grid will have an orange, circular stationary point near it.
3	Click the " 🗟 " button and the grid fill color window will pop up
4	Click to select the grid fill color on the map

8) Edit grid contours

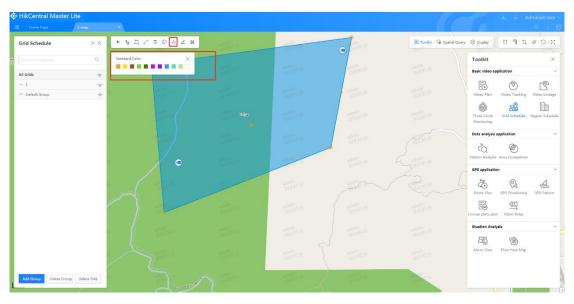


Figure 4.2-60 Edit Grid Contours

Label	Description	
1	Click the "Select Grid" button " 🖫 "	
2	Click on the map to select the grid you wish to delete. The selected grid will have an orange, circular stationary point near it.	
3	Click the " <- " button and the contour window will pop up	
4	Click to select the grid contour color to be displayed on the map	

9) Edit grid transparency

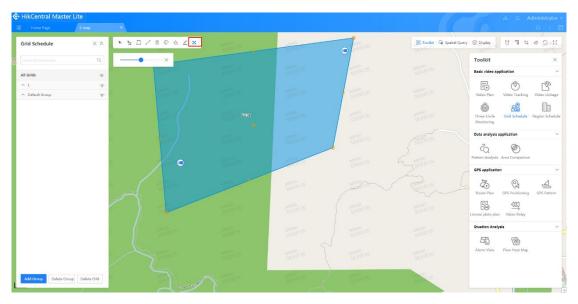


Figure 4.2-61 Edit Grid Transparency

Label	Description
1	Click the "Select Grid" button " " "
2	Click on the map to select the grid you wish to delete. The selected grid will have an orange, circular stationary point near it.
3	Click the " " button and the transparency window will pop up
4	Drag to change the selected grid transparency level

(3) Grid shortcuts

You can perform shortcuts by selecting the grid and clicking the right mouse button. These shortcuts include copying grid styles, pasting grid styles, editing attributes and deleting grids

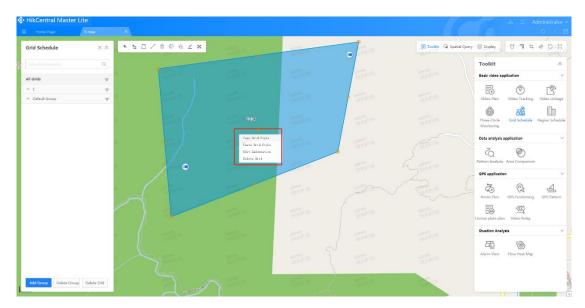


Figure 4.2-62 Grid Shortcuts

1) Copy grid style

Select the grid and right-click on the mouse to choose the grid style to copy. You can copy the contour color, fill color, and transparency level of the grid. You can also copy and paste them to other grids so that the other grids have the same style as the current grid.

2) Paste grid style

After copying the grid style, you may select the grid that you wish to change the style of. Right-click on "Paste Grid Style" to paste the grid style that you have previously copied.

3) Edit attributes

After selecting the grid, right-click to edit attributes. The following window will appear where you can change the group and grid name. After changing, click "Confirm" to complete editing.

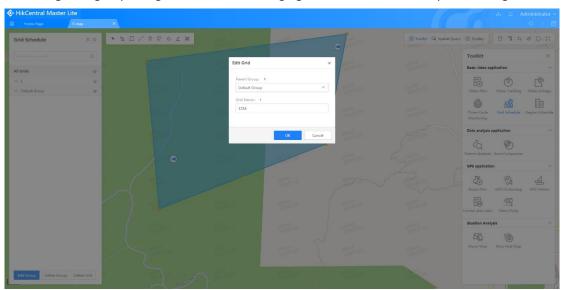


Figure 4.2-63 Edit Attributes

4) Delete grid

After selecting the grid, right-click on "Delete Grid". The following confirmation window will appear. Click "Confirm" to delete the grid.



Figure 4.2-64 Delete Grid Shortcut

6. Site Schedule

This mainly describes specific key areas and their camera distribution in greater detail by adding more indoor diagrams or structural diagrams.

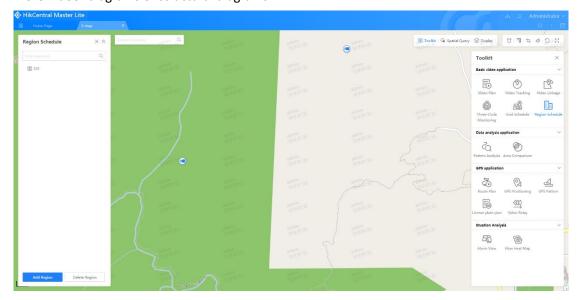


Figure 4.2-65 Camera Distribution Description

(1) Site Management

Site management mainly refers to adding, editing and deleting sites, as well as site information display.

(1) Add site

To add a site, users may click "Add Site" in the site management interface to draw the site

location on the map and enter the site information.

(2) Edit site

Users can select site options in the site list on the left, select camera sites on the map, and display site information. You may also click the site icon directly on the map to display site information. In the site information panel, click it edit site

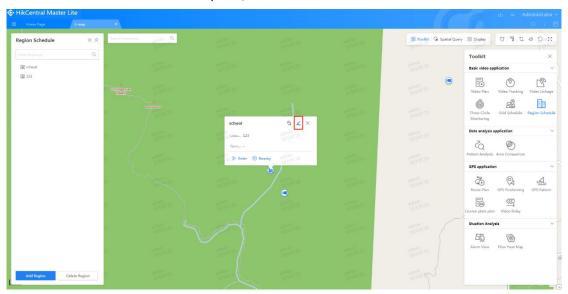


Figure 4.2-66 Edit Site

(3) Delete site

Users can click "Delete Site" and the site list will be in deletable mode. Click \bigcirc in front of the site to delete individually.

4 Update site coordinates

Users may edit the longitude and latitude within the site information panel.

(5) Site information display

In the "Site Information" panel, users can view the site location and remarks. They can also view the area associated with the site by clicking "Enter Site". The search nearby function allows for searching of cameras, checkpoints, social cameras, IO input and other resources near the site, but does not include portable video recorders, mobile devices and GPS equipment. It functions the same way as the search nearby function in the resource information panel.

(2) Site Area Management

The site area management is mainly for the management of the area's indoor map, including adding, deleting and editing the area (map retransmission).

Users can select a site and click "Enter Site" in the site information panel to access the site area management page.

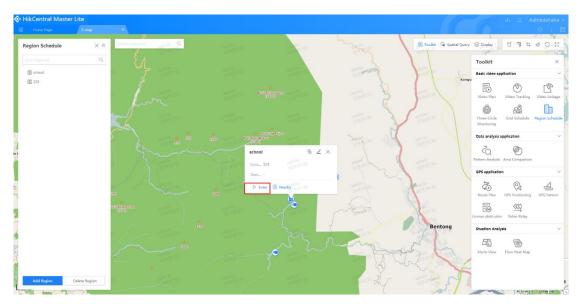


Figure 4.2-67 Site Area Management

4.2.2.3.2 Data Analysis Application

1. Pattern Analysis

Based on the license plate number, start time and end time, the vehicle passing data from all the checkpoints passed by the vehicle will be searched. These patterns will be displayed on the map and you may perform pattern playback. As there is too much vehicle passing data at the checkpoints passed by the vehicle, the effective period for the search is limited to three days. Enter the vehicle number, vehicle passing time, and click "Search". After data has been found, click "Pattern Playback" to display the vehicle's driving pattern on the map. Click "Start" in the player and the vehicle will move on the map. The speed button in the player controls the speed at which the vehicle travels. The "Capture" button controls whether to display or hide the captured image.

2. Area Collision

Draw any area on the map to search for checkpoints in the area and perform a collision query on vehicles that have passed through those checkpoints within a selected time period. The license plates can then be checked again using previous conditions, against vehicle passing data at the checkpoints.

① Click "Draw" to draw the relevant area on the map, and select the start and end time. Click "Collision Analysis" to analyze. On this page, the "Clear" button is used to clear the corresponding area that has been drawn. The "Positioning" button moves the corresponding area to the center of the map and the area will flash.

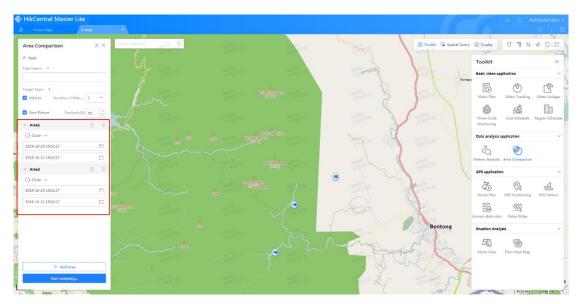


Figure 4.2-68 Search Area

- ② Click on the license plate in the analysis results to view the checkpoint passing vehicle data.
- 3 Delete area

When the number of areas exceeds two, you may click the "Delete" button to delete the corresponding areas.

3. Vehicle Searching by Driving Pattern

Search matched vehicle information according to driving pattern and time period.

4.2.2.3.3 GPS Application

1. Route Plan

- ① Supports plan auto-switch live view; supports deleting and searching plans.
- ② Supports confirming cameras by drawing lines on the map and setting a buffer radius;
- 3 Supports live view and playback of selected cameras

2. GPS Positioning

Display position of tracking targets on the map after targets are added in batches; supports deleting tracking targets. View details of selected target GPS (serial number, speed, direction, longitude and latitude); open platform player to show live view.

3. GPS Pattern

Search the GPS locations of portable video recorders and mobile devices on the map by time, and display their patterns on the map. You may control the speed, progress, etc. of the playback using the player. The specific operation is the same as in 2.5.10 Driving Pattern.

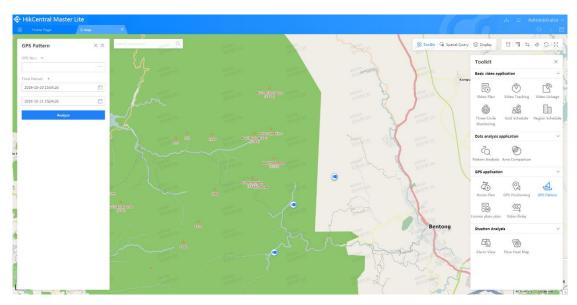


Figure 4.2-69 GPS Pattern

4. Video Relay

Achieve video auto-switch playing by video relay after camera in triggering distance opened according to real-time GPS information of the target (portable video recorder, mobile device or unmanned aerial vehicle). The positions of the portable video recorder, mobile device and unmanned aerial vehicle within this module are updated in real time with the target arming module process.

- 1) Select tracking target.
- 2) Set triggering distance and number of windows, and click "Track" to begin tracking.

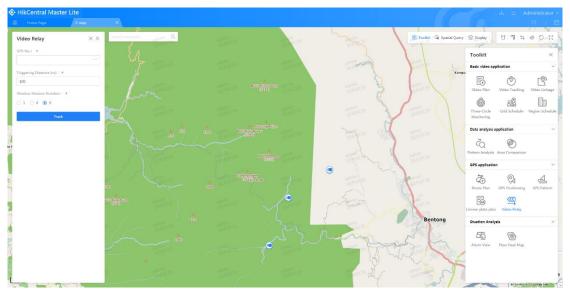


Figure 4.2-70 Set Triggering Distance and Number of Windows

3) Select the cameras and click "Live View" or "Playback" for real-time live views or video playback. Click "Stop tracking" to end tracking.

4.2.2.3.4 Trend Analysis

1. Alarm View

The alarm view mainly displays alarm information generated by dynamic resources and the map linkage function. ① Users can check "Mute Alarms" at the top of the panel and the latest alarm notifications will not be displayed; ② Click the alarm type drop-down menu to select the alarm type to query. There are three types of alarms: arming alarms, behavior analysis alarm and device alarm. Click on a type to display the alarm device location (camera and IO) and alarm status. ③ Click alarm device on the map or alarm in the list to view details. Click "Live View" or "Playback" in the details pop-up window to view videos associated with the camera. ④ When the alarm is triggered, a notification will appear in the list and the latest alarm will be prompted on the map; click to view details.

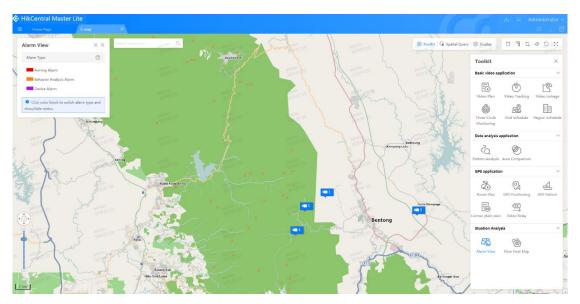


Figure 4.2-71 Alarm

2. Flow Heat Map

Show the vehicle traffic flow situation at a selected time on the map, as shown below.

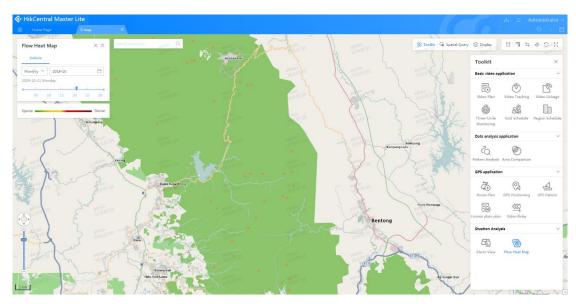


Figure 4.2-72 Flow Heat Map

4.3 Query Center

The query center uses artificial intelligence and big data technology for quick and advanced searches of persons and vehicles, helping users to quickly confirm information on persons and vehicles. The query center includes four applications, [Vehicle Search] and [Vehicle Track Search], as shown in the figures below.

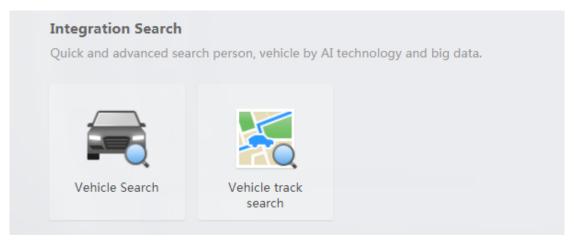


Figure 4.3-1 Query Center

4.3.1 Vehicle Search

The vehicle search mainly performs searches based on vehicle attributes within the captured database to track the target's patterns. The main function is searching by vehicle attributes.

4.3.1.1 Vehicle Attributes Search

Vehicle attributes search supports searching vehicle passing records within a user-specified time period and camera range, based on the license plate, passing vehicle type and linked relationships (see Figure 4.3-2). Click "See More Conditions" to set more vehicle-related search conditions (for detailed conditions, see Figure 4.3-3).



Figure 4.3-2 Vehicle Attributes Search Results



Figure 4.3-3 Set More Vehicle Conditions

The search results based on the search conditions will be displayed as shown below in Figure 4.3-4.

- ① Supports the export of all or partial vehicle images and associated structural information in the search results in XLS format.
- (2) Can be displayed as a picture or list;
- (3) The current vehicle license plate information, checkpoint image capture information and image capture time are displayed below the resulting image;
- 4 More search result shortcuts: click Details" to view details; click for map positioning; click to view video playback.
- (5) When you click on any search result, detailed information of the currently selected search result and information on linked objects will be displayed on the right side of the page; there are shortcut keys on the bottom of the details page to perform shortcut operations on the search results. When you click on a location, the image capture device for the resulting search image will be marked on the map. Toggle the "Details" switch on the right to close the details page on the right. Click "Full Screen" to be directed to the results details page.

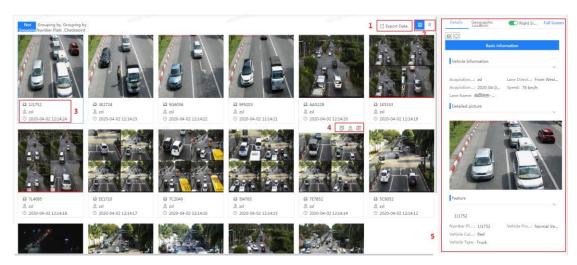


Figure 4.3-4 Vehicle Attributes Search Results

Click "View Details" or "Full Screen View" on the details page on the right to be directed to the target details page, as shown in Figure 4.3-5.



Figure 4.3-5 Vehicle Attributes Search Target Details Page

Label	Description
1	Display large result image
2	The shortcut keys include functions such as image zoom, picture download, video playback, quick arming, etc. Move the mouse to "More" to include functions such as driving patterns (see 4.6.1 "Driving Pattern Search"), vehicle hideout (see 4.6.4 "Vehicle Hideout"), vehicle driving along (see 4.6.8 "Vehicle Driving Along"), searching by vehicle picture (see 4.3.4.2 "Searching by Vehicle Picture), etc.
3	Result image list
4	Result image map positioning
5	Display specific target information, including vehicle passing information and vehicle attributes
6	Click "Proofread and Edit" to proofread and edit vehicle structure information

4.3.2 Vehicle Track Search

The vehicle track search refers to the analysis of the checkpoints that a vehicle passes by. Users can display the track of the vehicle on the map by specifying its number plate and passing dates and then simulate the driving. Captured image of the vehicle and other details will be displayed at each passing point. See Figure 4.3-6 for specific instructions: ① Enter the number plate of the vehicle; ② Select the checkpoint scope; ③ Select the time period; ④ Click to query.

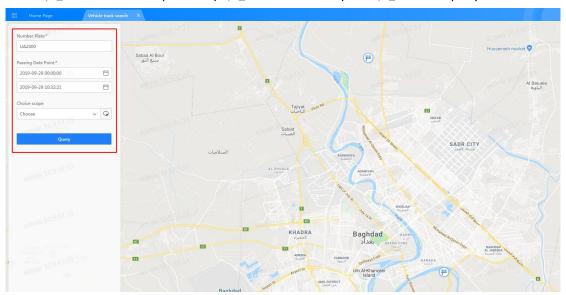


Figure 4.3-6 Vehicle Track Search

The query result displays the passing records of the vehicle during the selected time period, and marks the track of the target vehicle on the map. See Figure 4.3-7 below for details:



Figure 4.3-7 Vehicle Track Search Results

Label	Description
1	Show query options
2	Passing records of the target vehicle. When clicking a passing record, the captured image of the record shows on the map on the right.
3	Control vehicle track playback and playback speed

4 Marking of the vehicle track on the map

4.4 Arming Alarm Center

The arming alarm center mainly serves to arm the system's vehicles and personnel, and to configure corresponding device alarm and linkage rules. The arming alarm center includes two main applications: [Target Arming] and [Alarm Search].

4.4.1 Target Arming

4.4.1.1 Arming List

Users can view all arming tasks in the current system, understand the current status of arming tasks, and manage arming tasks.

4.4.1.1.1 View Arming List

Users can view arming tasks in the arming list page and manage the operations of arming tasks. Detailed operations are shown below (as in Figure 4.4-1):

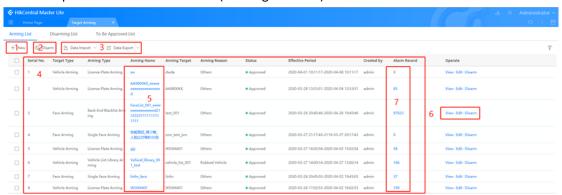


Figure 4.4-1 Arming List Page

Label	Description												
1	Arming Task Creating (for details on how to create a new task, see 4.4.2.1.2 "Arming												
	Task Creating Module")												
2	You may disarm tasks in batches to remove arming alarms												
3	upports batch import and export of arming task data. Move the mouse to "Import												
	Data" to download the import template.												
4	The list displays all tasks that have not been disarmed												
5	Click arming name to view basic information and linkage information of the arming												
	task, as shown in Figure 4.4-2												
6	Manage arming task operations Click "View" to view basic information and linkage												
	information of the arming task; click "Edit" to edit information such as the arming												
	task name; click "Disarm" to disarm the arming task.												
7	Click "Alarm Record" to view alarm records and other map identifiers (see												

Figure 4.4-3).

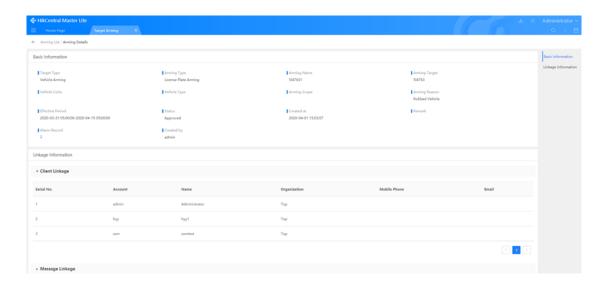


Figure 4.4-2 Arming Task Details

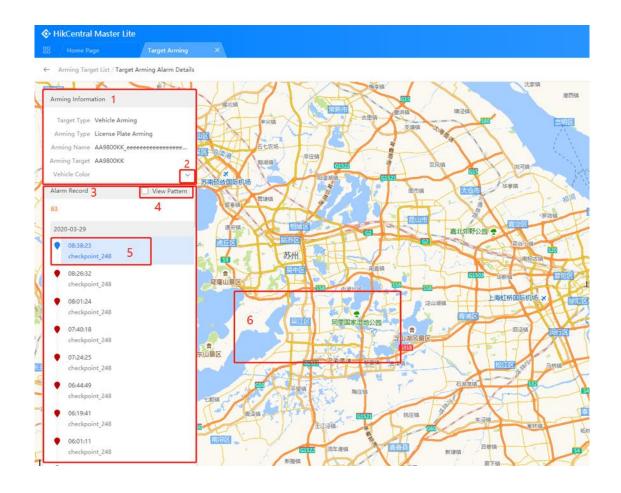


Figure 4.4-3 Alarm Records

Label	Description
1	Display arming details

2	Click the symbol to expand arming information
3	Display alarm records in chronological order
4	View alarm patterns on the map
5	Display captured image
6	Display position of current alarm record on the map

4.4.1.1.2 Arming Task Creating

After click "Create New" (as in Figure 4.4-1 tab 1), the system will automatically be directed to create new target arming page. Users must first select target type based on their arming requirements; after saving the arming task, the target type cannot be modified (see Figure 4.4-4).



Figure 4.4-4 Select Arming Type

(1) Vehicle arming

Vehicle arming supports four arming types: license plate arming, vehicle model arming, red list arming and vehicle list library arming (see Figure 4.4-5).

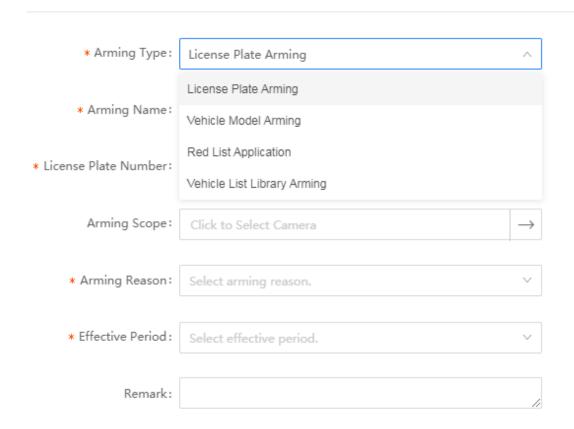


Figure 4.4-5 Vehicle Arming Type

Vehicle arming

The platform compares the license plate with real-time passing vehicle data, and sends the arming passing vehicle information to the platform alarm notification. When arming a new license plate, you must first fill in the basic arming information (see Figure 4.4-6) before configuring the alarm linkage information. When vehicle passing information is detected, the alarm message will be sent to the relevant user based on the configured alarm linkage information (see Figure 4.4-7).

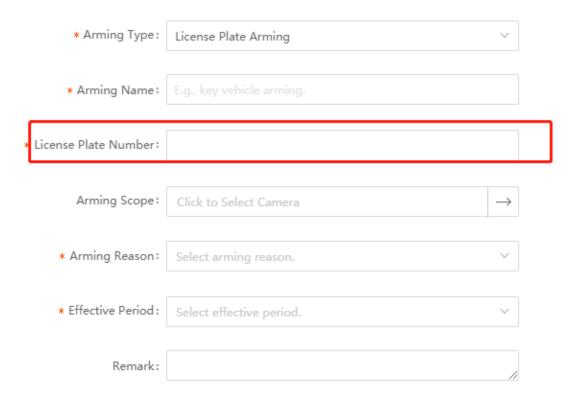


Figure 4.4-6 Vehicle Arming Basic Information

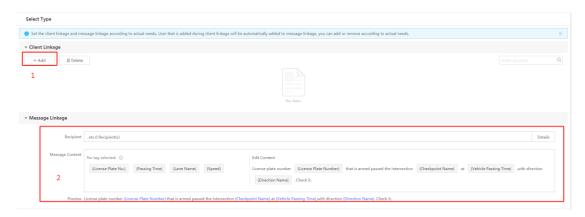


Figure 4.4-7 Alarm Linkage Configuration

Label	Description
1	Click "Add" to select the client linkage users to add, through the resource tree on the
	pop-up page (see Figure 4.4-8).
2	In the SMS linkage window, users may set the SMS content for alarm notifications.

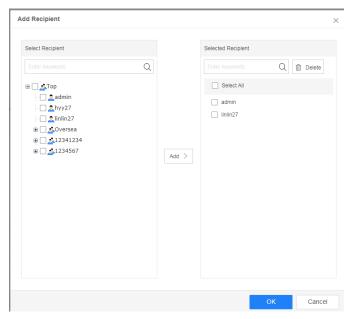


Figure 4.4-8 Add Client Linkage Users

- Vehicle model arming: model arming refers to arming real-time passing vehicle data flows based on structural information such as vehicle brand and vehicle color, as well as image models. The arming process references the license plate arming process
- Issue red list: The arming process references the license plate arming process. Vehicle data that has undergone red list arming can only be queried and viewed on the red list, therefore red list arming does not require alarm linkage information configuration.
- Vehicle list library arming: arming according to the vehicle list library added to the platform. Vehicles that meet the requirements will trigger the alarm.

(2) Face picture arming

Face picture arming can be divided into two main categories: blacklist arming and single person arming. Blacklist arming is blanket arming targeted at the large amount of face picture information in the list library. Single face arming requires users to uploading face pictures of the target. For detailed operation, refer to vehicle arming

4.4.1.2 Disarming List

Users can view disarmed tasks in the disarming list, manage disarmed tasks, or re-arm tasks. For details, see Figure 4.4-9 below:

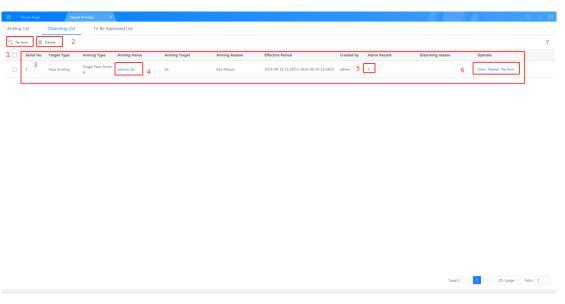


Figure 4.4-9 Disarming List

Label	Description
1	Batch re-arm selected tasks
2	Batch delete arming tasks
3	The list displays all disarmed tasks
4	Click arming name to view basic information and linkage information of the arming
	task
5	Click "Alarm Record" to view alarm details
6	Manage arming tasks. Click "View" to view basic information and linkage information of the arming task; click "Edit" to edit information such as the arming task name; click "Delete" to delete arming task; click "Re-arm" to re-arm task; click "Retry Disarm" to disarm the task again.
7	Click and the interface shown in Figure 4.4-10 will pop up. Users may filter tasks based on target type, arming type, arming name, approval status, arming target, etc.



Figure 4.4-10 Filter Disarming List

4.4.1.3 To Be Approved List

The "To Be Approved List" mainly presents arming tasks that are awaiting approval. For details, see Figure 4.4-11 below:

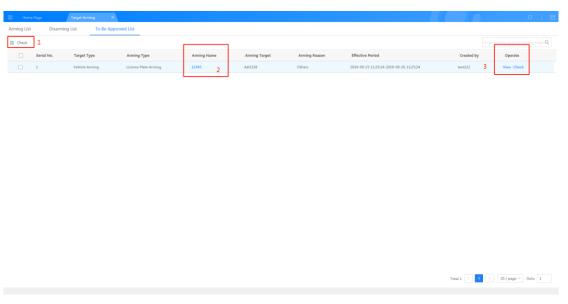


Figure 4.4-11 To Be Approved List

Label	Description
1	Batch approve selected tasks Click "Check" to select whether or not to approve the selected arming tasks in the pop-up window, and to fill out approval comments (see Figure 4.4-12)
2	Click arming name to view basic information and linkage information of the arming task
3	Manage arming task operations Click "View" to view the basic information and linkage information of the arming task; click "Check" to select whether or not to approve the selected arming tasks in the pop-up window, and to fill out approval comments (see Figure 4.4-12)

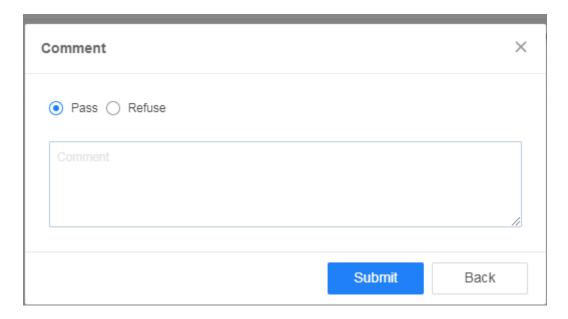


Figure 4.4-12 Approval Window

4.4.2 Alarm Search

4.4.2.1 Target Alarm Search

The target alarm search page list displays all target alarm records for the current system (see Figure 4.4-13). Record information includes arming names, arming types, arming targets, image

capture devices, alarm time and arming reasons. ① Click to open the filter interface as shown in 4.4-14. You may filter records by arming name, target type, arming target, arming reason, alarm time, etc. ② Click "View" to open the record details page (see Figure 4.4-15).

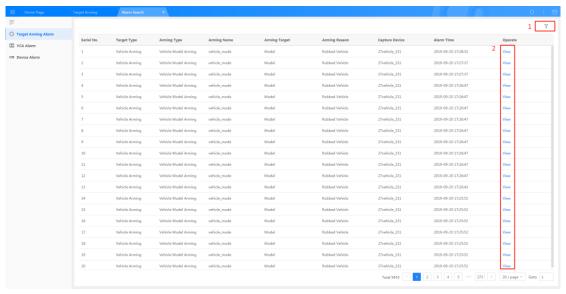


Figure 4.4-13 Target Alarm Search Page



Figure 4.4-14 Target Alarm Filter Page

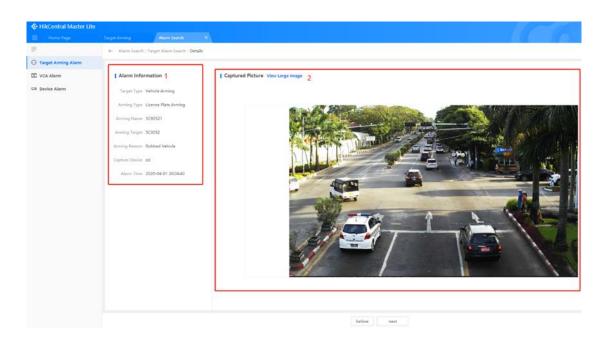


Figure 4.4-15 Target Alarm Details

Label	Description							
1	Display detailed alarm information							
2	Display captured image							

4.4.2.2 Device Alarm Search

The device alarm search page list displays all device alarm records for the current system (see Figure 4.4-16). Record information includes device types, device names, alarm type and alarm

time. ① Click To open the filter interface as shown in 4.4-17. You may filter records by device type, device name, alarm type, alarm time, etc. ② Click "View" to open the record details page (see Figure 4.4-18).

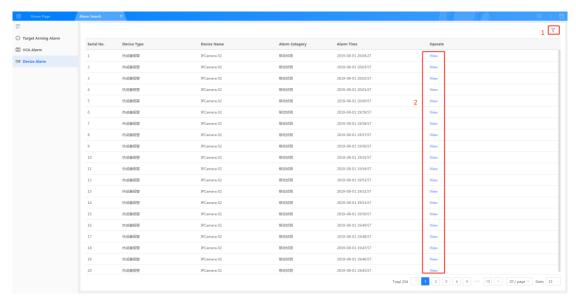


Figure 4.4-16 device alarm search page



Figure 4.4-17 device alarm filter

Figure 4.4-18 device alarm details page

Label	Description							
1	Display detailed alarm information							
2	Display captured image							

4.4.2.3 Video Parsing Alarm Search

The Video Parsing alarm search page list displays all Video Parsing alarm records for the current system (see Figure 4.4-19). Record information includes analysis types, device names, alarm type

and alarm time. ① Click to open the filter interface as shown in 4.4-20. You may filter records by analysis type, device name, alarm type, alarm time, etc. ② Click "View" to open the record details page (see Figure 4.4-21).

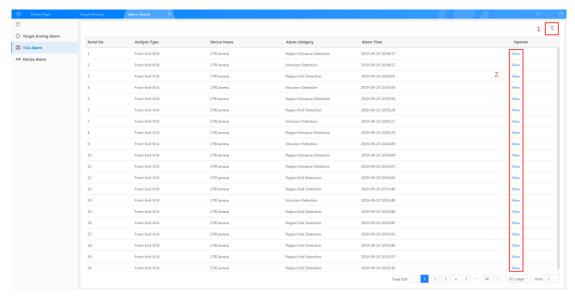


Figure 4.4-19 Behavior Analysis Alarm Page



Figure 4.4-20 Behavior Analysis Alarm Filter

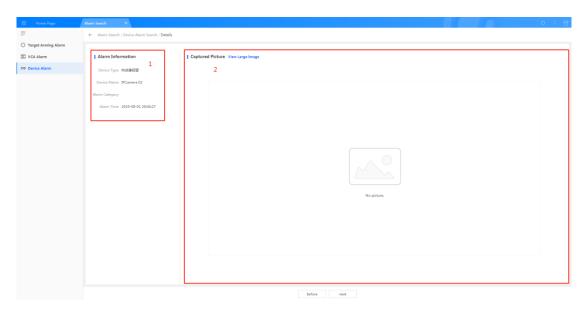


Figure 4.4-21 Video Parsing Alarm Details

Label	Description								
1	Display detailed alarm information								
2	Display captured image								

4.4.3 Alarm Assistant

The alarm assistant provides real-time arming alarm notifications and pop-up prompts. After installing the plug-in assistant and logging in to the platform, the alarm assistant tool will automatically install and run.

4.4.3.1 Login

If you log out of the alarm assistant while the platform is running and you need to access it after logging in again, refresh the page and the platform will automatically install and log you in; you

can also click the icon to log in to the alarm assistant using the standard platform username and password (as shown below in Figure 4.4-22). Fill in the server IP address and port number in the server configuration section. The IP address is based on the actual platform deployment server. The port number is usually 443.

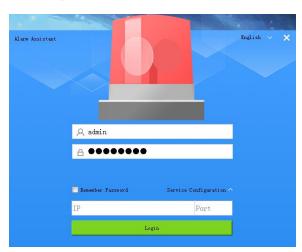


Figure 4.4-22 Alarm Assistant Records

4.4.3.2 Alarm Notification

For target arming, and Video Parsing alarm and alarm device linkage configuration within the system management, users who have configured the client linkage notification will see a window pop up automatically with the alarm information when the alarm is triggered. For details, see Figure 4.4-23 below:

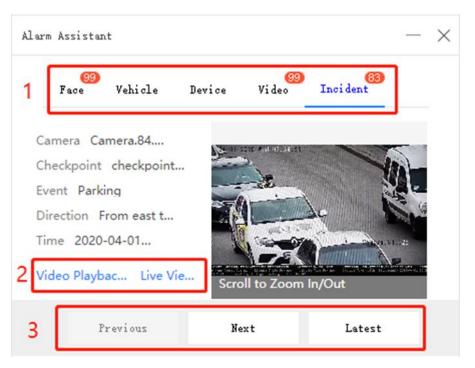


Figure 4.4-23 Alarm Notifications

Label	Description
1	Switch tab to view alarm notifications of different objects.
2	Supports viewing alarm details of the back-end smart analysis; face picture alarm messages need to be viewed in the client
3	Switch previous/next alarm message; view the latest alarm message.

4.4.3.3 Alarm Settings

Locate the alarm assistant icon in the system notification bar and right-click on the icon to open the alarm assistant configuration panel and configure the alarm notifications for the assistant. See below for details:

(1) Settings: in the alarm settings, users can configure the desktop pop-up window and alarm sound as shown in Figure 4.4-24 below. You can choose whether to enable the desktop pop-up window, alarm type of the desktop pop-up window, and the alarm sound. The system also supports setting different alarm sounds for different alarm types.

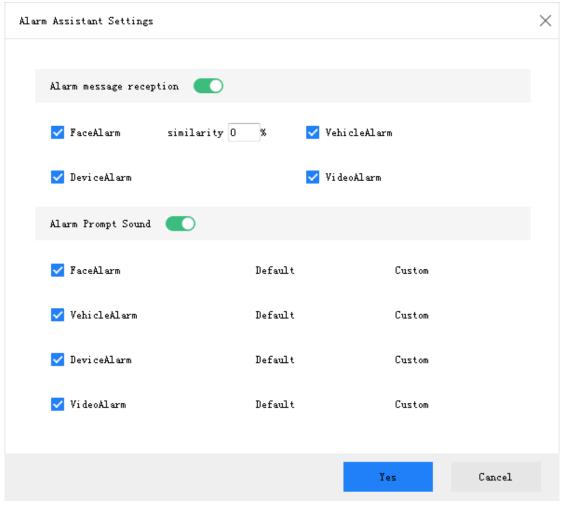


Figure 4.4-24 Alarm Assistant Settings

- (2) Alarm auto pop-up: choose whether the alarm information window pops up automatically when you receive alarm notifications
- (3) Mark all as read: mark all alarm notifications as read
- (4) Exit: click "Exit" to exit the alarm assistant. You will not receive any more alarm messages.

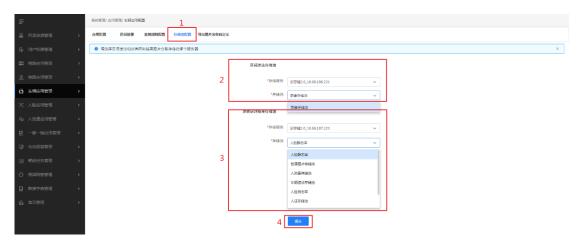


Figure 4.4-25 Storage Pool Configuration

Label	Description
1	In the vehicle application configuration interface, click "Storage Pool Configuration" to access
1	the storage pool configuration panel.
2	In the storage pool configuration panel, you can select the server and storage pool for
2	segment violation images (each server has a different storage pool)
2	In the storage pool configuration panel, you can select the server and storage pool for
3	investigation result images (each server has a different storage pool)
4	After configuring, click "Submit" to complete storage pool configuration

4.5 Violation Application

The violation application performs searches, verifications, and statistics analyses on vehicles with violations in the system. The violation application includes [Violation Search], [Violation Verification], and [Violation Statistics] (see Figure 4.5-1).

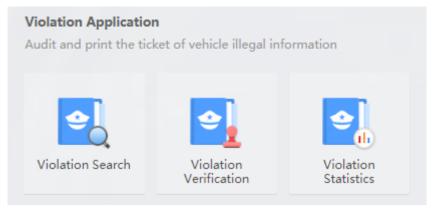


Figure 4.5-1 Violation Application

4.5.1 Violation Search

The violation search performs searches on the vehicles with violations according to the filter conditions specified by the user. Target images can be displayed or exported in the search results. See Figure 4.5-2 for detailed instructions: ①Select time period; ②Select checkpoint, violation behavior, and verification status; ③Select vehicle type; ④Click to search.

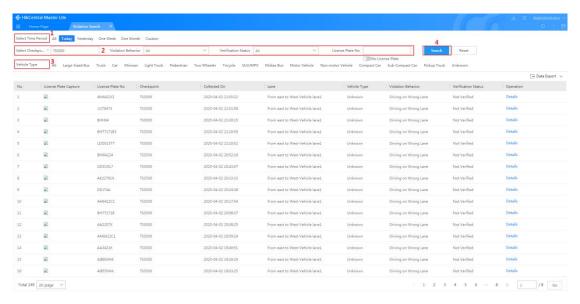


Figure 4.5-2 Vehicle Violation Search

Click "Details" to check detailed violation information of a vehicle as shown in Figure 4.5-3:

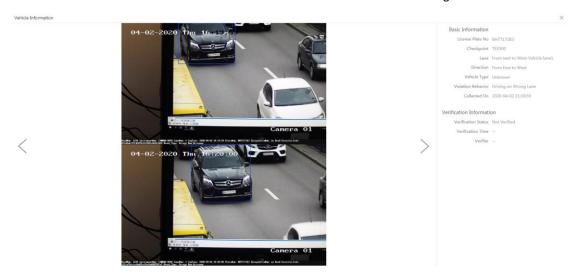


Figure 4.5-3 Vehicle Violation Details

Enter license plate number and configure filter conditions to search violations under this license directly as shown in Figure 4.5-4.



Figure 4.5-4 Search Violations with License Plate Number

Note: Users can enable "No License Plate" to show unlicensed vehicles with violations only.

4.5.2 Violation Verification

Using the violation verification, users can verify and process vehicle violation data manually. See Figure 4.5-5 for detailed instructions: ①Select a violation type and an unverified violation data; ②Verify the violation (by downloading image and video playback to check if the captured vehicle matches the actual violating vehicle); ③Enter the vehicle owner's information; ④Click to generate a violation notice.

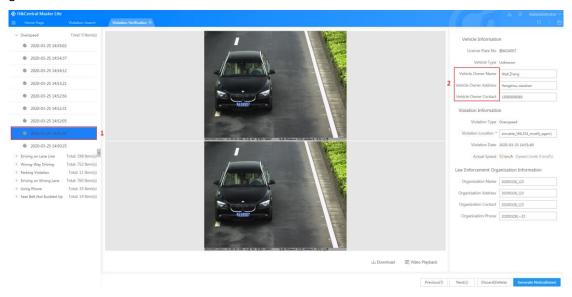


Figure 4.5-5 Verifying Vehicle Violations

Note: Users can configure law enforcement organization information in "System Configuration"—"Application"—"Vehicle Violation."

After generating a violation notice, the system will display the result of the punishment (see Figure 4.5-6):

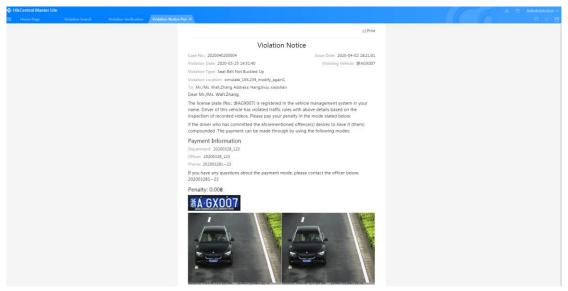


Figure 4.5-6 Vehicle Violation Notice Preview

After verifying violations, the total number of the corresponding violation type will decline. Verification status of the processed vehicle will be updated to "Approved" when searching this

vehicle in the violation search page (see Figure 4.5-7).

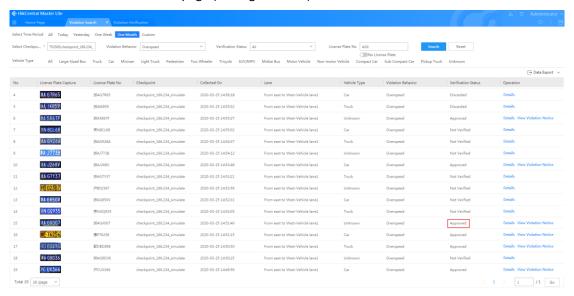


Figure 4.5-7 Verification Status in Violation Search

Note: Users can quickly switch unverified vehicles by clicking the previous and next buttons.

4.5.3 Violation Statistics

The violation statistics provides statistic analysis of the vehicle violation data and automatically generates trend charts. See Figure 4.5-8 for detailed instructions: ①Select time period (in weeks, months, or years) of the violation data; ②Users can select violation data ranking types (in violation behavior, location, or vehicle).

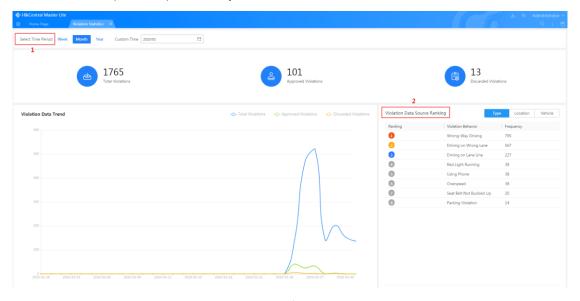


Figure 4.5-8 Violation Statistics

4.6 Traffic Event

Traffic Event performs searches and statistic analyses on traffic events or status which are analyzed and uploaded by devices. Traffic Event includes four applications: [Traffic Event Search], [Traffic Event Statistics], [Traffic Status Search], and [Traffic Parameter Statistics] (see Figure 4.6-1).

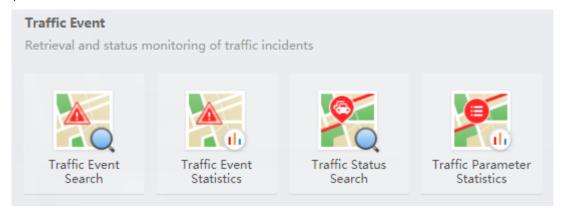


Figure 4.6-1 Traffic Event

4.6.1 Traffic Event Search

In Traffic Event Search module, users can search and filter traffic events uploaded by devices. Users can also view, replay, or export certain event data in the search results. See Figure 4.6-2 for detailed instructions: ①Select checkpoint(s); ②Select direction; ③Select event type; ④Select time period.

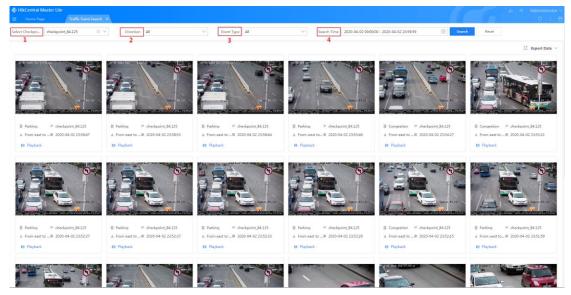


Figure 4.6-2 Traffic Event Search

Users can view large pictures by clicking the thumbnail images in the search results. Users can also adjust the picture size (see Figure 4.6-3):

View Picture ×

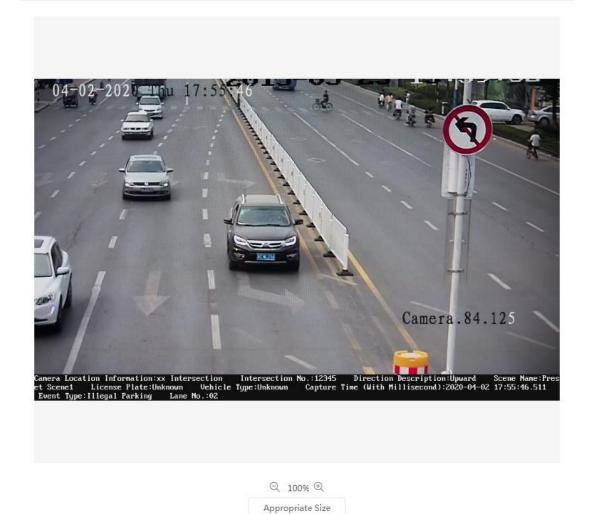


Figure 4.6-3 Traffic Event View

To replay the video footage related to a traffic event, click "Playback" (see Figure 4.6-4):



Figure 4.6-4 Traffic Event Data Playback

Users can export traffic events by using Export Data function (see Figure 4.6-5).

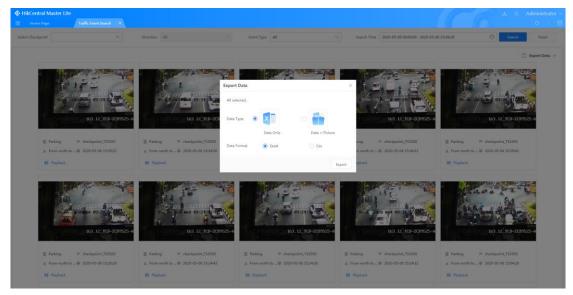


Figure 4.6-5 Traffic Event Data Export

Select storing destination, enter folder name, and click "OK" (see Figure 4.6-6).

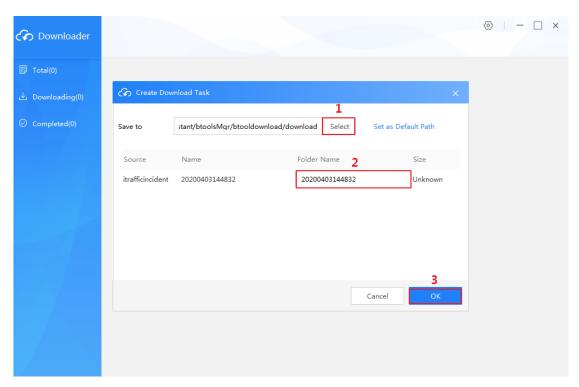


Figure 4.6-6 Traffic Event Data Download

Download completed. (see Figure 4.6-7); Open the downloaded spreadsheet and you can view the corresponding traffic event data (see Figure 4.6-8).

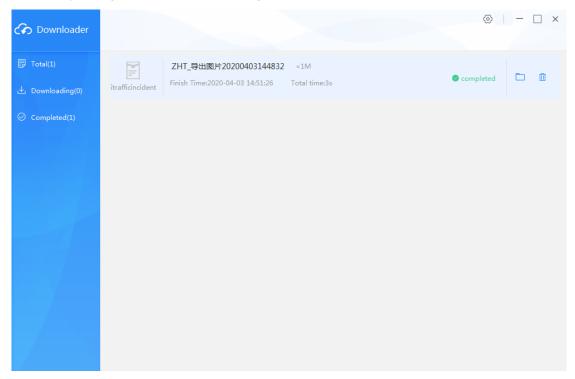


Figure 4.6-7 Traffic Event Data Download Completed

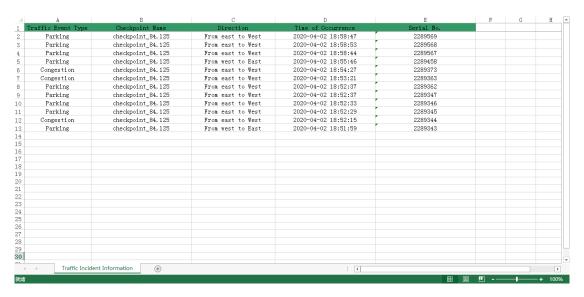


Figure 4.6-8 Traffic Event Data Export Table

4.6.2 Traffic Event Statistics

In Traffic Event Statistics module, users can analyze traffic events uploaded by devices and sort them by event type, checkpoint, or date. Users can also export pictures and text reports.

4.6.2.1 Sort by Event Type

See Figure 4.6-9 for detailed instructions: ①Click "By Event Type"; ②Select search time (in day, month, or year); ③Select statistics scope; ④Click Search.

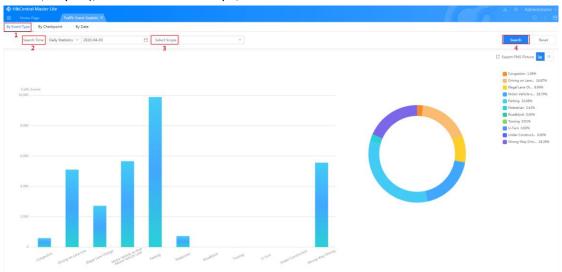


Figure 4.6-9 Statistics Sorted by Event Type (Bar Chart)

By default, statistics are displayed in bar chart. Click "Table" to switch to text report (see Figure 4.6-10):

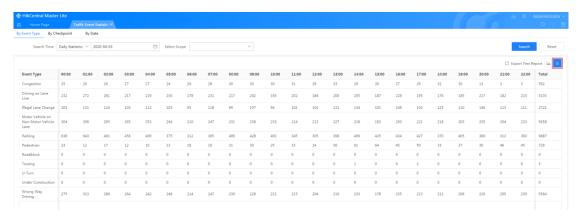


Figure 4.6-10 Statistics Sorted by Event Type (Table)

By clicking "Export PNG Picture" and "Export Text Report", you can export picture reports and table reports respectively (see Figure 4.6-11 and Figure 4.6-12).

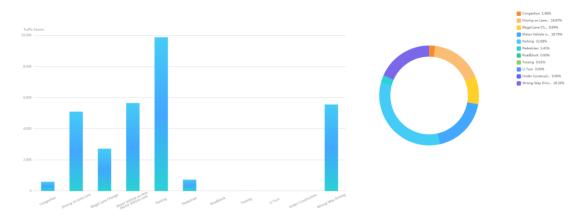


Figure 4.6-11 Statistics Sorted by Event Type (Exported Picture)



Figure 4.6-12 Statistics Sorted by Event Type (Exported Table)

4.6.2.2 Sort by Checkpoint

See Figure 4.6-13 for detailed instructions: ①Click "By Checkpoint"; ②Select search time (in day, month, or year); ③Select statistics scope; ④Click Search.

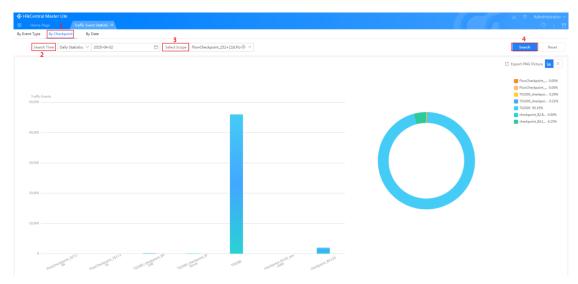


Figure 4.6-13 Statistics Sorted by Checkpoint (Bar Chart)

By default, statistics are displayed in bar chart. Click "Table" to switch to text report (see Figure 4.6-14):



Figure 4.6-14 Statistics Sorted by Checkpoint (Table)

By clicking "Export PNG Picture" and "Export Text Report", you can export picture reports and table reports respectively (see Figure 4.6-15 and Figure 4.6-16).

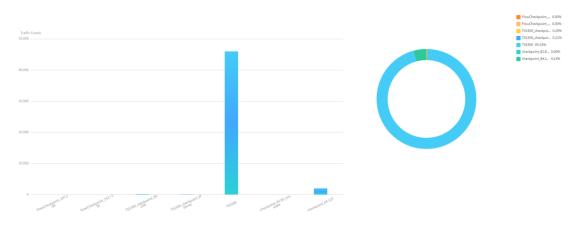


Figure 4.6-15 Statistics Sorted by Checkpoint (Exported Picture)

	Traffic incident Statistics Information																
Cross Name	2020-04-01 00:00	2020-04-01 01:00	2020-04-01 02:00	2020-04-01 03:00	2020-04-01 04:00	2020-04-01 05:00	2020-04-01 06:00	2020-04-01 07:00	2020-04-01 08:00	2020-04-01 09:00	2020-04-01 10:00	2020-04-01 11:00	2020-04-01 12:00	2020-04-01 13:00	2020-04-01 14:00	2020-04-01 15:00	2020-04-01 16:00
FlowCheckpoi nt_107.194	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FlowCheckpoi nt_252+116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TSS300_check point_84.248	5	6	0	0	0	36	13	1	0	0	0	0	0	0	16	36	29
TSS300_check point_IPdome		0	0	0	0	10	0	0	0	0	0	0	0	0	22	39	29
TSS500	718	728	1374	2811	2865	2892	2637	2407	2198	2104	1953	1873	1792	1963	1902	1794	1764
checkpoint_8 2.83_simulat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
checkpoint_8 4.125	59	60	56	66	58	60	57	70	99	102	101	105	104	94	90	94	102

Figure 4.6-16 Statistics Sorted by Checkpoint (Exported Table)

4.6.2.3 Sort by Date

See Figure 4.6-17 for detailed instructions: ①Click "By Date"; ②Select search time (in day, month, or year); ③Select statistics scope; ④Click Search.

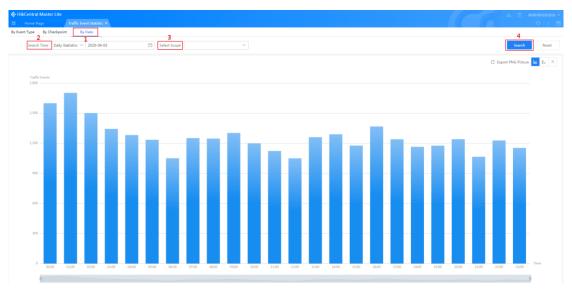


Figure 4.6-17 Statistics Sorted by Date (Bar Chart)

By default, statistics are displayed in bar chart. Click "Line Chart" to switch to line chart view (see Figure 4.6-18):

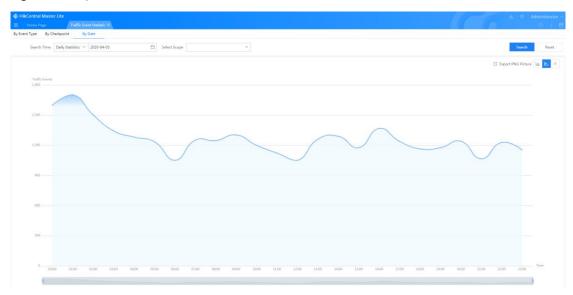


Figure 4.6-18 Statistics Sorted by Date (Line Chart)

Click "Table" to switch to text report (see Figure 4.6-19):

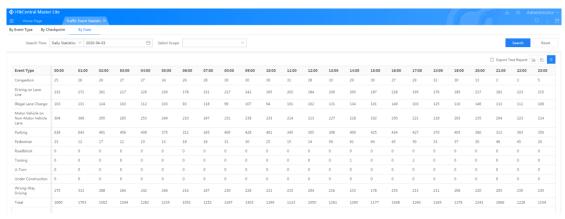


Figure 4.6-19 Statistics Sorted by Date (Table)

By clicking "Export PNG Picture" and "Export Text Report", you can export picture reports and table reports respectively (see Figure 4.6-20, Figure 4.6-21, and Figure 4.6-22).

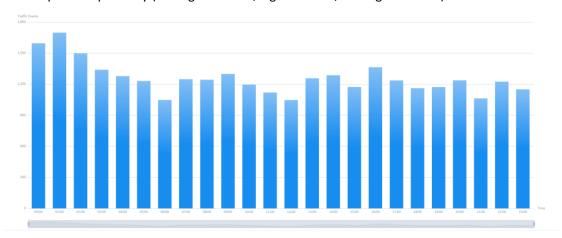


Figure 4.6-20 Statistics Sorted by Checkpoint (Exported Bar Chart)

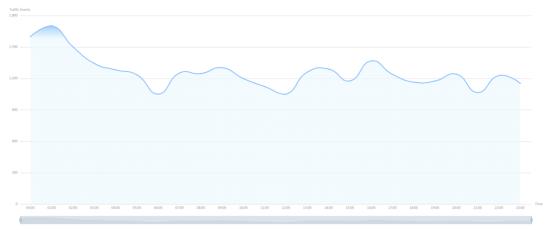


Figure 4.6-21 Statistics Sorted by Checkpoint (Exported Line Chart)



Figure 4.6-22 Statistics Sorted by Checkpoint (Exported Table)

4.6.3 Traffic Statistics Search

Traffic Statistics Search module provides queries on checkpoints' traffic status (such as smooth, slow traffic, congestion, and no status). See Figure 4.6-23 for detailed instructions: ①Select checkpoint(s); ②Select direction; ③Select traffic status; ④Set search time; ⑤Click Search.

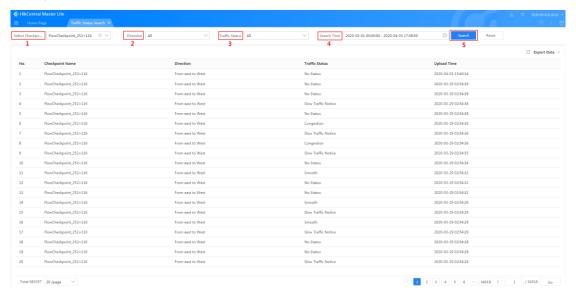


Figure 4.6-23 Traffic Status Search

To export data (export selected or export all), see Figure 4.6-24 and Figure 4.6-25.

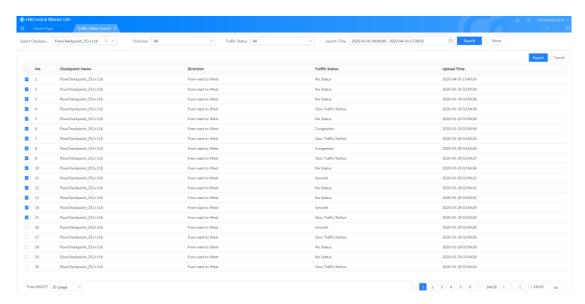


Figure 4.6-24 Traffic Status Data Export

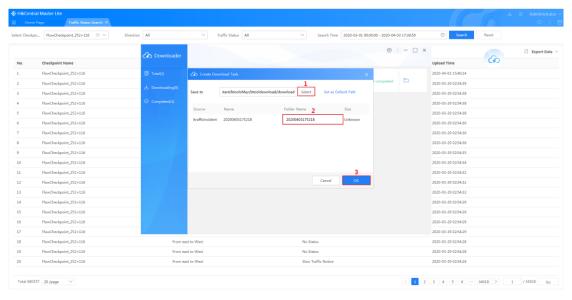


Figure 4.6-25 Traffic Status Data Download

After the download is complete, open Traffic Status Information spreadsheet (see Figure 4.6-26).

Checkpoint Name	Direction	Traffic Status	Update time
FlowCheckpoint_252+116	From east to West	No Status	2020-04-03T10:40:14.000+03:00
FlowCheckpoint_252+116	From east to West	No Status	2020-03-28T20:54:39.000+02:00
FlowCheckpoint_252+116	From east to West	No Status	2020-03-28T20:54:38.000+02:00
FlowCheckpoint_252+116	From east to West	No Status	2020-03-28T20:54:38.000+02:00
FlowCheckpoint_252+116	From east to West	Slow Traffic Notice	2020-03-28T20:54:38.000+02:00
FlowCheckpoint_252+116	From east to West	Congestion	2020-03-28T20:54:36.000+02:00
FlowCheckpoint_252+116	From east to West	Slow Traffic Notice	2020-03-28T20:54:36.000+02:00
FlowCheckpoint_252+116	From east to West	Congestion	2020-03-28T20:54:36.000+02:00
FlowCheckpoint_252+116	From east to West	Slow Traffic Notice	2020-03-28T20:54:35.000+02:00
FlowCheckpoint_252+116	From east to West	No Status	2020-03-28T20:54:34.000+02:00
FlowCheckpoint_252+116	From east to West	No Status	2020-03-28T20:54:32.000+02:00
FlowCheckpoint_252+116	From east to West	No Status	2020-03-28T20:54:32.000+02:00
FlowCheckpoint_252+116	From east to West	Smooth	2020-03-28T20:54:32.000+02:00
FlowCheckpoint_252+116	From east to West	Slow Traffic Notice	2020-03-28T20:54:29.000+02:00
FlowCheckpoint_252+116	From east to West	Smooth	2020-03-28T20:54:29.000+02:00

Figure 4.6-26 Traffic Status Information

4.6.4 Traffic Parameter Statistics

Traffic Parameter Statistics module analyzes parameters uploaded by traffic devices and generates picture reports and text reports.

See Figure 4.6-27 for detailed instructions: ①Select checkpoint(s); ②Select statistics type; ③ Select report type; ④Click Search.



Figure 4.6-27 Traffic Parameter Statistics (Bar Chart)

By default, statistics are displayed in bar chart. Click "Line Chart" to switch to line chart view (see Figure 4.6-28):

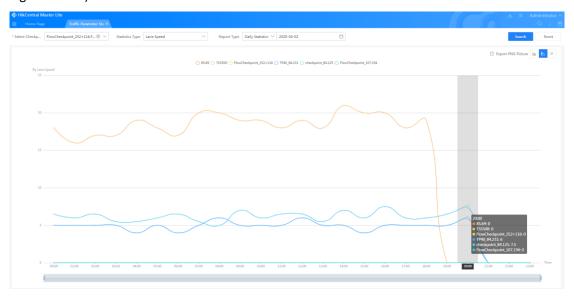
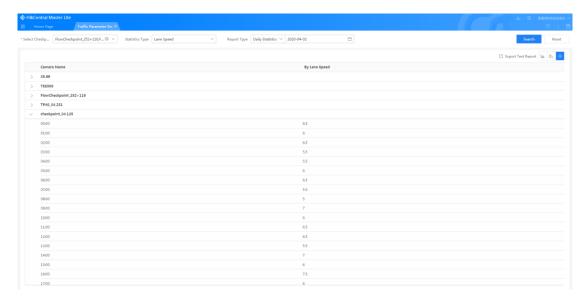


Figure 4.6-28 Traffic Parameter Statistics (Line Chart)

Click "Table" to switch to text report (see Figure 4.6-29):



By clicking "Export PNG Picture" and "Export Text Report", you can export picture reports and table reports respectively (see Figure 4.6-30, Figure 4.6-31, and Figure 4.6-32).



Figure 4.6-30 Statistics Sorted by Date (Exported Bar Chart)



Figure 4.6-31 Statistics Sorted by Date (Exported Line Chart)



Figure 4.6-32 Statistics Sorted by Date (Exported Table)

Note: In this chapter, lane speed is set as the statistics type. Other statistics types are time headway, space headway, space occupancy rate, time occupancy rate, small vehicle quantity, medium vehicle quantity, large vehicle quantity, and heavy vehicle quantity.

4.7 Statistics Center

Statistics Center presents many types of data in graphical form using big data storage and big data analytics technology. The data statistics mainly include [Vehicle Data Statistics], [Traffic Flow Statistics], [Behavior Statistics], [Crowd Tendency Statistics], and [Live Data Visualization].

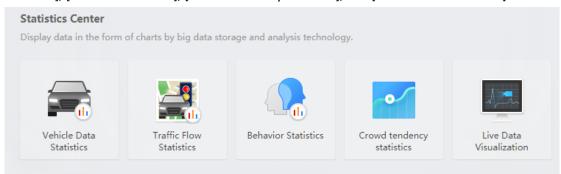
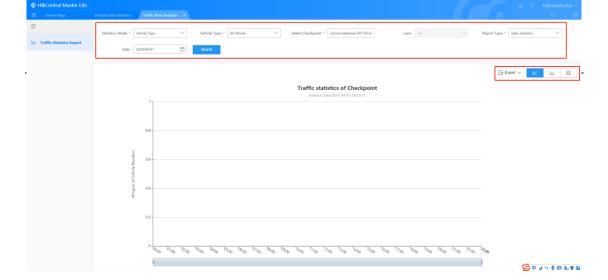


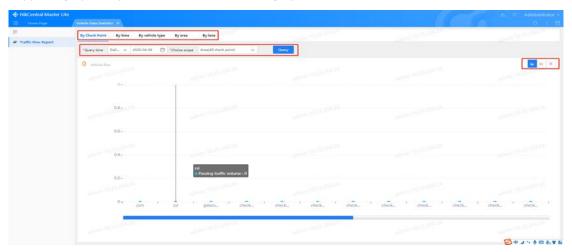
Figure 4.7-1 Statistics Center



4.7.1 Vehicle Data Statistics

Vehicle Data Statistics module is used mainly to display the data statistics analysis results for vehicle related capture, monitoring, and other related data.

As shown in figure 4.7-2, ① Vehicle Data Statistics supports the presentation of data according to checkpoint, time, vehicle type, area, lane, and other categories; ② Traffic flow data according to the chosen time and checkpoint range can be presented in daily, monthly, and yearly reports; ③ Supports graphical presentation of data in bar graphs, line charts, data lists, and other forms.



4.7.2 Traffic Flow Statistics

Traffic Flow Statistics module displays the statistics analysis results for vehicle related capture, monitoring, and other related data.

As shown in Figure 4.7-3, ① Traffic Flow Statistics supports statistics analyses according to vehicle type, lane average speed, space headway, time headway, space occupancy rate, and time occupancy rate; ② Traffic flow data according to the chosen time and checkpoint range can be presented in daily, weekly, monthly, and yearly reports; ③ Supports graphical presentation of data in bar graphs, line charts, data lists, and other forms. Reports can be exported.

Figure 4.7-3 Traffic Flow Statistics

4.7.3 Behavior Statistics

Behavior Statistics module provides analyses of data including violent motion, fast moving, gathering, and falling down. As shown in Figure 4.7-4, the interface of Behavior Statistics displays total number of alarms today, total number of history alarm, total number of tasks on platform, alarm type statistics, alarm type distribution statistics, number of alarms in recent one month, and cameras with alarm yesterday.

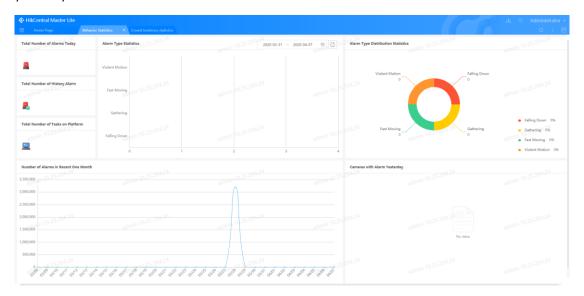


Figure 4.7-4 Behavior Statistics

4.7.4 Crowd Tendency Statistics

Crowd Tendency Statistics module displays crowd tendency related data, including functions such as crowd tendency map display, crowd tendency alarm search, people counting display, and people counting data report.

4.7.4.1 Crowd Tendency Map Display

As shown in Figure 4.7-5, Crowd Tendency Map Display shows crowd density of each camera spot on a GIS map.



Figure 4.7-5 Crowd Tendency Map Display

4.7.4.2 Crowd Tendency Alarm Search

As shown in Figure 4.7-6, Crowd Tendency Alarm Search module supports searching according to the type, name, and time period of alarm sources.

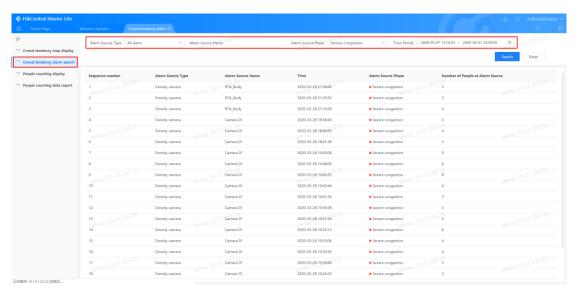


Figure 4.7-6 Crowd Tendency Alarm Search

4.7.4.3 People Counting Display

As shown in Figure 4.7-7, People Counting Display module can show crowd density data such as total current people counting, real-time possession, max people gathering density, Top 5 people gathering density cameras, daily remaining in real time, people counting statistics in half hour, people counting statistics in areas, history people counting data, total people counting in 24 hours. The module also supports displaying on video wall (see Figure 4.7-8).

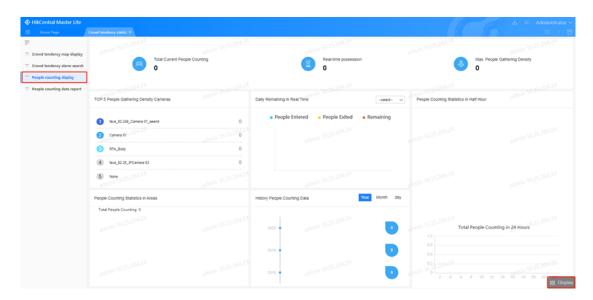


Figure 4.7-7 People Counting Display



Figure 4.7-8 People Counting Display

4.7.4.4 People Counting Data Report

As shown in Figure 4.7-9, People Counting Data Report module supports sorting people counting according to place, report type, time and then generating reports.



Figure 4.7-9 People Counting Data Report

4.7.5 Live Data Visualization

As shown in Figure 4.7-10 and figure 4.7-11, Live Data Visualization module is a video wall interface.

Users can view real-time alarm list, real-time captures, blacklist alarms for the detected vehicles and faces, and real-time camera footages.

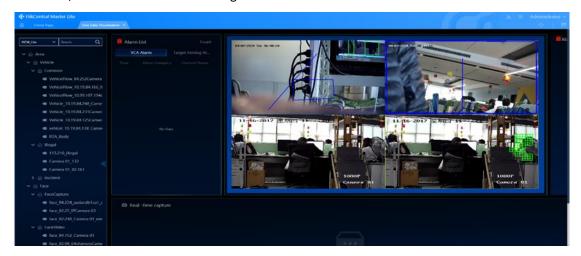


Figure 4.7-10 Live Data Visualization

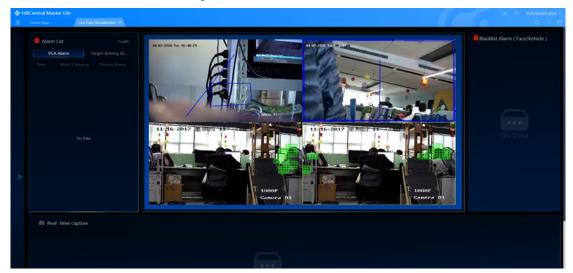


Figure 4.7-11 Live Data Visualization

4.8 Video Maintenance

Video Maintenance includes the four modules of maintenance: Overview, Video Surveillance, Alarm Search, and Report Analysis.

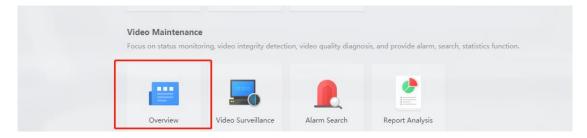


Figure 4.8-1 Video Maintenance

4.8.1 Maintenance Overview

4.8.1.1 Inspection Status Statistics

This box shows the online rate, normal image rate, and completed recordings rate (previous day) of high-definition/standard-definition cameras on the platform (flow diagnosis), and can be filtered using the organization drop-down menu on the upper left corner.



Figure 4.8-2 Maintenance Overview

Clicking on different sections of the pie chart (such as online cameras in green), will show the number of online/offline cameras according to organization.

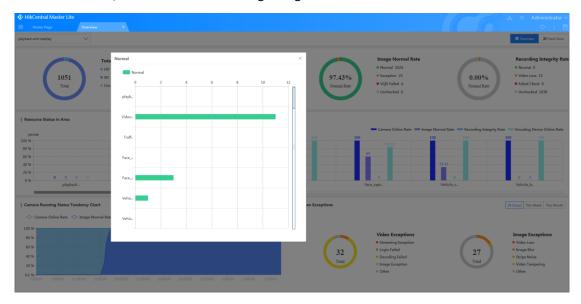


Figure 4.8-3 Inspection Result Details

A detailed page with information including camera name, area, and IP address is shown when the green bar (statistics of online cameras) in the image above is clicked

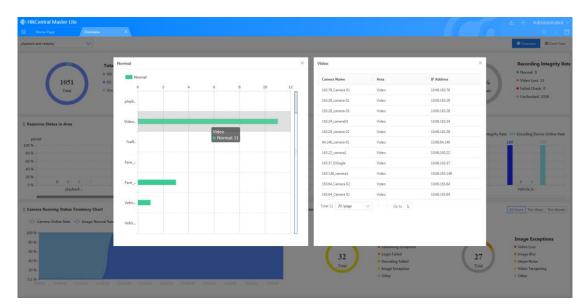


Figure 4.8-4 Online Camera Details

4.8.1.2 Running Status Statistics

Running Status Statistics includes the Area Resource Running Status statistics chart, the Camera Running Status Trend Graph, and Video Exception Statistics

4.8.1.2.1 Area Resource Running Status

Area Resource Running Status Statistics uses a bar graph to display the operational statuses of cameras and encoders linked to the child organizations under the parent organization (can be filtered in the drop-down menu in the upper-left corner). This includes the online camera rate, normal image rate, completed recordings rate, and online encoder rate:



Figure 4.8-5 Area Resource Running Status

Details will be automatically displayed when the mouse is hovered over an area, as shown in the figure below

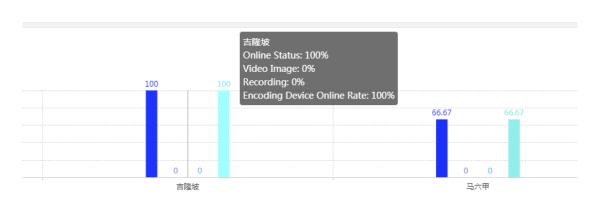


Figure 4.8-6 Area Data Status

Clicking the data in the image (for example: Online Status 100%) will display the offline camera details for the organization, as shown in the figure below:

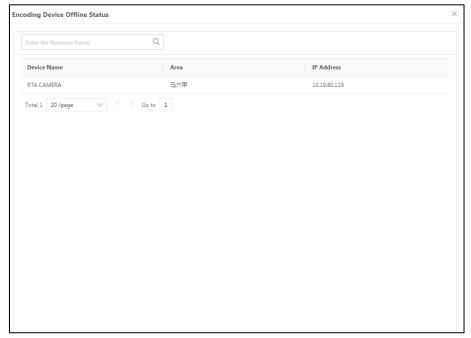


Figure 4.8-7 Encoding Device Offline Status

The four default statuses are displayed, and selecting status types on the upper right corner will hide those status types in the bar chart. For example, clicking "Encoding Device Online Rate" will gray it out, and the encoding device online rate will be hidden in the bar chart:



Figure 4.8-8 Hiding the Encoding Device Online Rate in the Bar Chart

4.8.1.2.2 Camera Running Status Trend Graph

The Camera Running Status Trend Graph displays the camera online rate and normal image rate of the last 24 hours, week, or month in a line chart. This chart is great for observing the overall operational stability of the resources. Moving the mouse cursor over the chart will show data corresponding to the time. Similarly, the camera online rate and the normal image rate can be hidden:

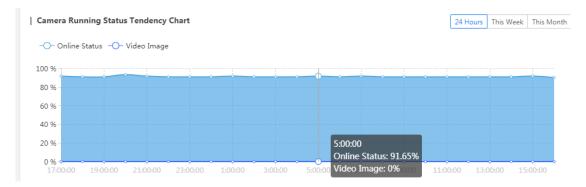


Figure 4.8-9 Camera Running Status Trend Graph

4.8.1.2.3 Video Exception Statistics

Video Exception Statistics uses pie charts to display the camera streaming statuses and image exception statuses (successful stream decoding parts) in the last 24 hours, week, or month.



Figure 4.8-10 Video/Image Exception Statistics

Clicking on the different colors on the pie chart (for example, Image Exception), will display the corresponding camera exception information. If the red section (Streaming Exception) on the pie chart on the left was clicked, camera information for streaming exceptions (streaming failed) will be displayed.



Figure 4.8-11 Camera Exception Details

4.8.2 Quick Maintenance

Quick Maintenance shows the overall running data of the resource which can be exported, and also has assessments for computation rankings by area with the "Data Box", "Area Assessment Box" and "Data Gauge" features.

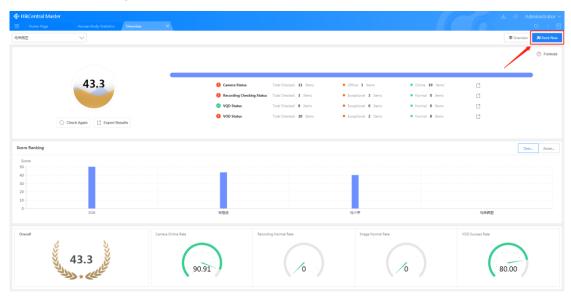


Figure 4.8-12 Quick Maintenance

4.8.2.1 Data Box

This box shows the Camera Status, Recording Checking Status, Video Quality Diagnosis (VQD) Status, Video On-demand (VOD) Status, and also supports the exporting of this data. "Check

Again" reloads the data (does not re-check), and clicking on the export icon on the right side will export the data (shown in 1 in the figure below. The default format is csv. The "Export Results" button under the pie chart on the left (shown in 2 in the figure below) only exports the four data categories and does not export all the detailed data.

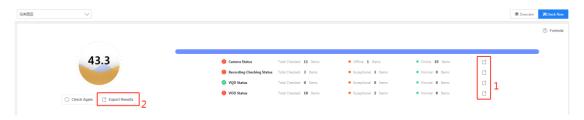


Figure 4.8-13 Data Box

4.8.2.2 Area Assessment Box

This box displays the assessment data for various areas under the parent organization in a bar chart. The parent organization can be chosen in the upper left corner, and the corresponding calculation formula can be seen on the upper right side. The information can be sorted in ascending or descending order and the actual scores can be seen by moving the mouse cursor over the bar chart.



Figure 4.8-14 Area Assessment Box

4.8.2.3 Data Gauge

This box displays the data in the data box with gauges.



Figure 4.8-15 Data Gauges

4.8.3 Video Monitoring

4.8.3.1 Camera Monitoring

This page includes three parts: Online Detection, Video Monitoring, and Recording Inspection

4.8.3.1.1 Online Detection

Signal statuses on the device channels are obtained using probes according to the corresponding protocol (sdk, onvif, active device via VAG, etc.) and the detection results are displayed in the interface as below:

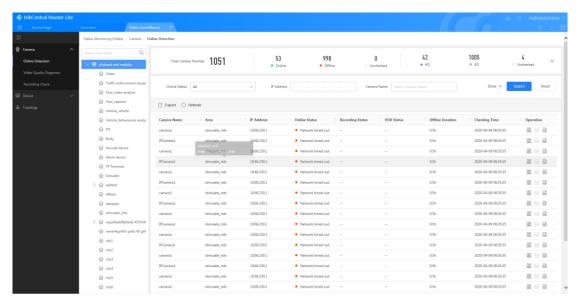


Figure 4.8-16 Camera Running Status

Table 4.8-1 Parameter descriptions

Parameter	Description
Online	Camera with normal signal status
Offline	Camera with offline/no video signal status
Undetected	Cameras with no detected signal status
High definition	Camera is able to stream normally and video diagnostics detects that the
	image resolution is 720P or above
Standard	Camera is able to stream normally and video diagnostics detects that the
definition	image resolution is below 720P
Undetected	Camera not yet added to video diagnostic collection plan or stream failed

The camera list shows the Camera Name, Area, IP Address, Online Status, VOD Status, Offline Duration, Checking Time, etc.:

Clicking on the operations list will start real-time detection of camera statuses; clicking will display the camera details which show the basic and historical status information of that camera.

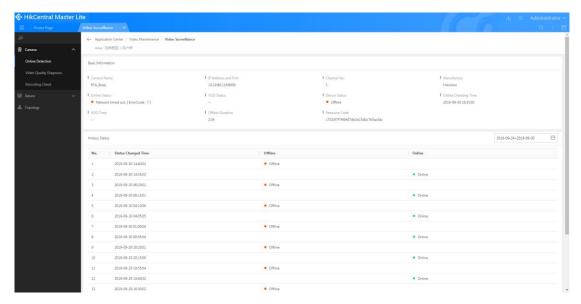


Figure 4.8-17 Camera Details

Click " to analyze camera link, display streaming link diagnosis results is graphical form, display error information and handling suggestions, and also display recent device and camera warning messages.

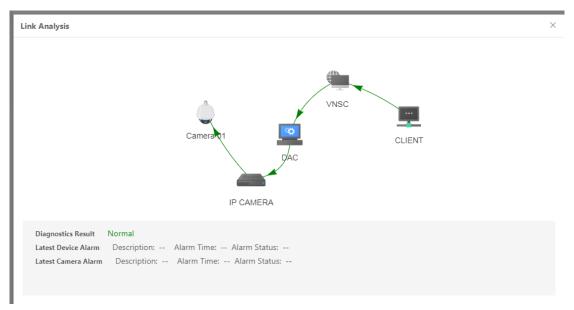


Figure 4.8-18 Link Analysis Results

4.8.3.1.2 Video Diagnosis

This feature utilizes probes to diagnose camera streaming operation to check video quality. The inspection results are shown below in Figure 4.8-19. Results can also be shown in thumbnail form as shown in Figure 4.8-20:

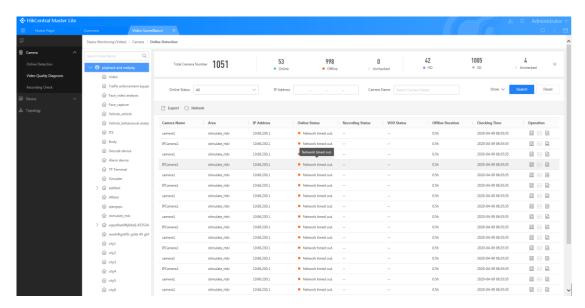


Figure 4.8-19 Video Diagnosis Status Page

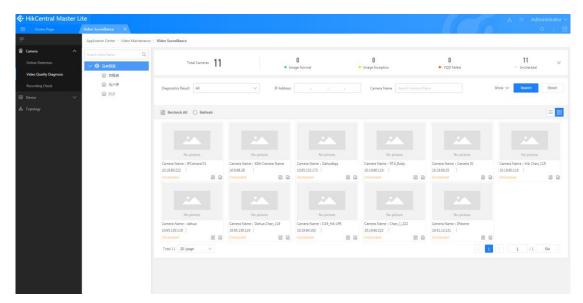


Figure 4.8-20 Thumbnail Display

Figure 4.8-21 Video Diagnosis Parameter Descriptions

Parameter	Description		
Image normal	Streaming successful and images are normal		
Image exception	Streaming successful but problem with image quality (blurry, black/white, etc.)		
Diagnosis failed	Failed to stream or decoding failed		
Undetected	Cannot configure camera		

Cameras are presented in a list by default which lists the names, areas, linked devices, and other basic information of the various cameras, as well as the diagnostic results, exception reason, stream delay, and determine whether the front-end device is standard or high definition according to diagnostic results.

The system supports real-time image re-inspection, image diagnosis preview, and detailed view for cameras. The system will perform real-time inspection of the selected camera when the

button in the operations list is clicked; clicking the button will batch re-inspect the cameras with image exceptions, as shown in the figure below:

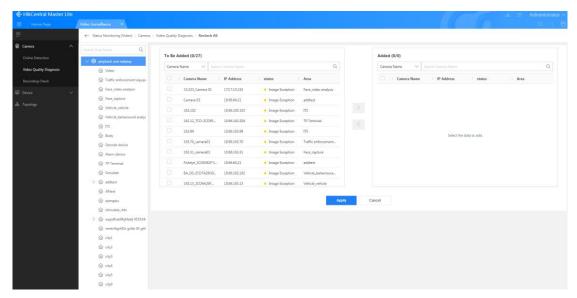


Figure 4.8-22 Quick Re-inspection

4.8.3.1.3 Recording Inspection

This feature uses probes to obtain the completeness data from cameras from scheduled recordings of the previous day and the data of scheduled recordings for the number of days saved. A single data entry corresponds to one type of storage method in a camera. The inspection results are shown in figure below:

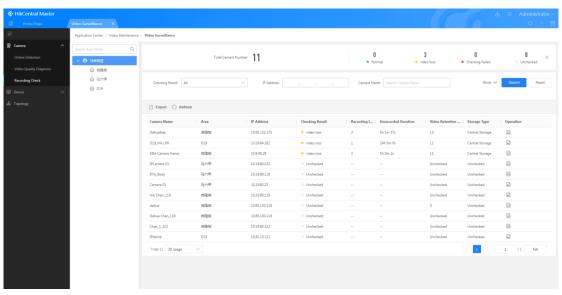


Figure 4.8-23 Recording Inspection

Table 4.8-2 Recording inspection parameter descriptions

Parameter	Description
Recording compete	The recordings for the 24 hours of that day were completed
Recording lost	All or parts of the recordings for the 24 hours of that day were lost
Inspection failed Call interface failure, could not return recording results	
Undetected	Could not detect recording status

Click on the details button to view information and historical data of the recording. You can compare it with the platform recording playback.

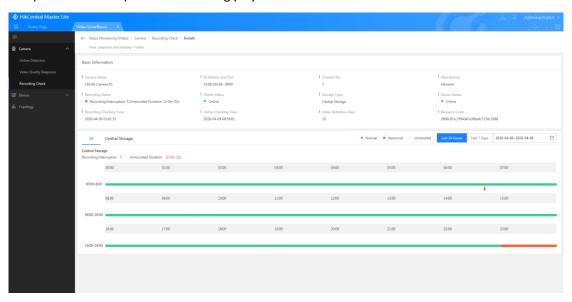


Figure 4.8-24 Recording Details

4.8.3.2 Device Monitoring

This page includes three parts, namely Encoding Device, Storage Device and Decoding Device.

4.8.3.2.1 Encoding Device

Different probes are used by network management to obtain status and other information of encoding devices added using different protocols. This information is displayed in the page below:

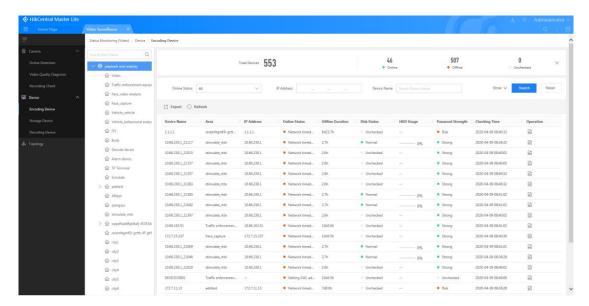


Figure 4.8-25 Encoding Device Running Status

Table 4.8-3 Encoding device running status parameter descriptions

Parameter	Description
Online	Encoding device can be logged into and accessed normally
Offline	Failed to login to decoding device
Undetected	Could not detect status of encoding device

The encoding device list shows the Device Name, Area, IP Address, Online Status, Offline Duration, Password Strength, HDD Status, HDD Utilization, Checking Time, etc.

Table 4.8-4 Password Strength Definitions

Password strength	Definition
Risky password	Password is less than 8 characters long, only contains one type of character, is the same as the user name, or is just the user name spelled backwards, etc.
Weak password	The set password is a combination of digits and lower case letters, or digits and upper case letters.
Medium strength password	The set password is a combination of digits and special characters, lowercase letters and special characters, uppercase letters and special characters, or lowercase letters and uppercase character.
Strong password	The set password contains three or more types of characters (digits, lowercase letters, uppercase letters, and special characters)

Click on the icon in the operations list to view device details. Device details show the basic information, HDD information, and historical status information of the device.

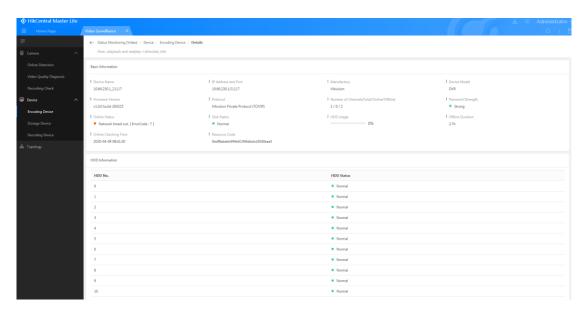


Figure 4.8-26 Encoding Device Details

4.8.3.2.2 Decoding Device

Different probes are used by network management to obtain the status and other information of Hikvision decoding devices (non-video integrated platform).

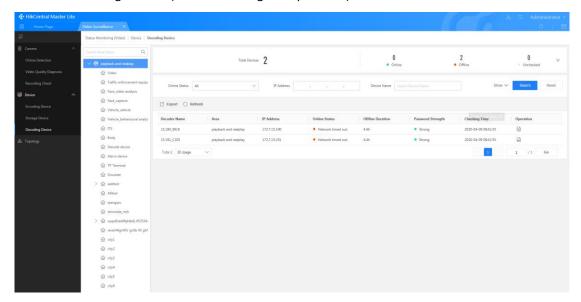


Figure 4.8-27 Decoding Device Running Status

Table 4.8-5 Parameter Descriptions

Parameter	Description
Online	Decoding device can be logged into and accessed normally
Offline	Failed to login to decoding device
Undetected	Could not detect status of decoding device

The device list shows the Device Name, Area, IP Address, Online Status, Password Strength, Offline Duration, Checking Time, etc.

Click on the icon in the operations list to view device details. Device details show the basic information and historical status information of the device

4.8.3.3 Storage Device

Different probes are used by network management to obtain the HDD usage status and other information of Hikvision storage devices (such as CVR, separately-added NVRs). The display page is shown below:

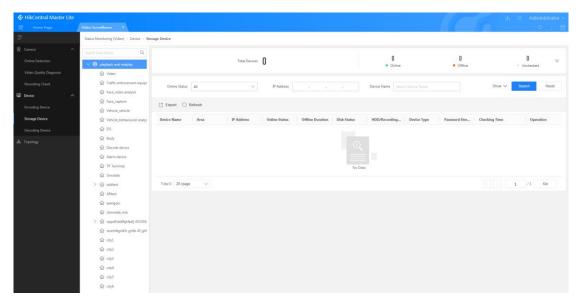


Figure 4.8-28 Storage Device Running Status
Table 4.8-6 Parameter Descriptions

Parameter	Description
Online	Storage device is working normally
Offline	Storage device is not working normally
Undetected	Could not detect status of storage device

The storage device list shows the Device Name, Area, IP Address, Online Status, Password Strength, HDD Status, Offline Duration, Recording Volume Utilization, Checking Time, etc.

Click the icon in the operations list to view device information and the various disk usage statuses.

4.8.3.4 Topology Monitoring

The system supports custom defined topology trees and topology page functions. Click on the topology tree node name on the left of the page in the "View Library" to view the topological map corresponding to the nodes. You can also add, delete and edit nodes.

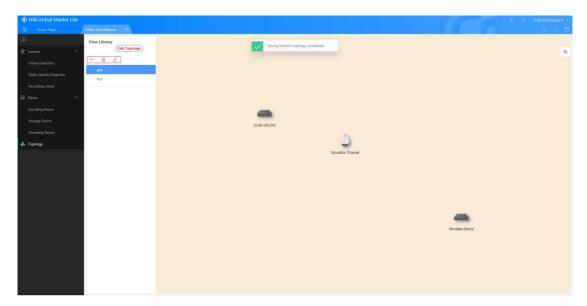


Figure 4.8-29 Topology Tree Nodes

Furthermore, the system also supports the editing of topology map nodes, links, and other contents of the selected node. The steps are as follows:

- ① Click on "edit topology" to go to the topology drawing page.
- ② Drag the required devices or services from the Network Component Library to the drawing panel to add new nodes. The Network Component Library provided by the system includes: surveillance devices (cameras, encoding devices, decoding devices, storage devices), network devices (server, switches), and services (network sharing, device access frameworks, media gateways).

4.8.4 Alarm Search

The Alarm Search module displays various types of alarm data (device, camera offline, video quality exception, recording exception, others), and alarm handling generated by the network management inspection process in a single place.

The Alarm Search page displays the newly added alarms, total number of alarms, and number of different alarm types of the day, as shown in the figure below:

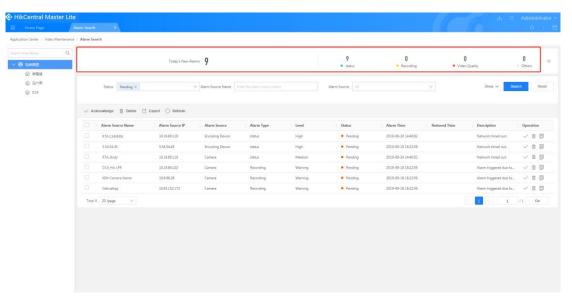


Figure 4.8-30 Alarm Search

The system also displays alarm information including Alarm Source Name, Alarm Source IP, Alarm Source Type, Level, Status, Alarm Time, Restored Time, Description, and Operations list, etc. The system displays information for ongoing alarms by default.

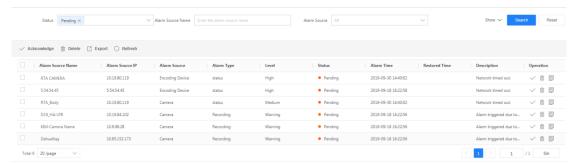
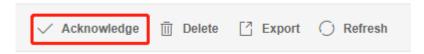


Figure 4.8-31 Alarm Information List

Handle, delete, and other operations are available in the Operations list.

Alarm handling can be performed on alarms that haven't been restored to normalcy. To resolve

an alarm, click the button after the alarm and an alarm resolution window will pop-up. Fill in the alarm resolution information and click "save". To handle multiple alarms at the same time, select the alarms that need to be handled, then click the "Acknowledge" button on the top of the page, and an alarm handling window will pop-up. Fill in the alarm resolution information and click "save".



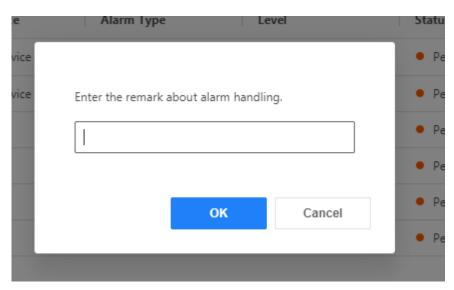


Figure 4.8-32 Alarm Handling Interface

Delete operations can be performed for false alarms and alarms that can't be handled. To delete an alarm, click the ______ button after the alarm and an alarm deletion confirmation window will pop-up. Click "OK" to confirm. To delete multiple alarms at the same time, select the alarms to be deleted, then click the delete button on the top of the page and a delete confirmation window will pop-up. Click "OK" to confirm.

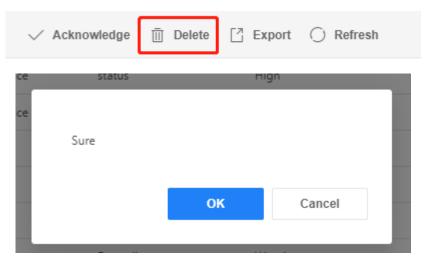


Figure 4.8-33 Delete Alarm Interface

Alarm details include basic information of the alarm source, historical alarm information, and other content.

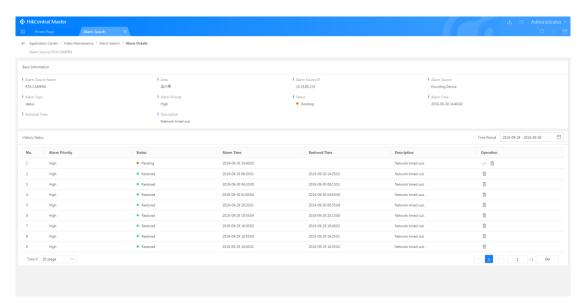


Figure 4.8-34 Alarm Details

4.8.5 Statistical Report

The Statistical Report module shows the data statistics for the network management platform inspection and includes Area Maintenance Statistics, Video Quality Statistics, and Recording Integrity Statistics for the previous day, Streaming Status Statistics, Streaming Status Statistics, Real-time Camera Online Status Statistics, and Recording Storage Days Statistics.

4.8.5.1 Area Maintenance Statistics

Area Maintenance Statistics presents the Camera Online Rates, Image Normal Rate, and Recording Normal Rate in different areas, and also the respective weights of each, as well as the Score and Ranking. This enables the various areas to be assessed. Viewing of statistics by month or time range is supported. The contents of the report can be exported.

The Area Maintenance "Top 10 Areas" lists out the top 10 areas according to their scores. The Camera Online Rate, Image Normal Rate, Recording Normal Rate, and VOD Success Rate, and other indicators are shown in bar chart form.

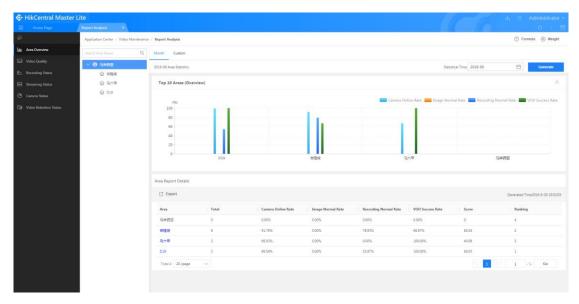


Figure 4.8-35 Top 10 Areas for Area Maintenance Scores

The system also supports the displaying of detailed data of Area Maintenance Statistics. Click an area name to view the camera status details in the area:

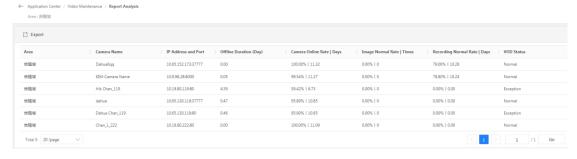


Figure 4.8-36 Details

The formula icon on the upper right corner shows the formulas of how the Camera Online Rate, Video Quality Diagnosis Success Rate, and Image Normal Rate are calculated.

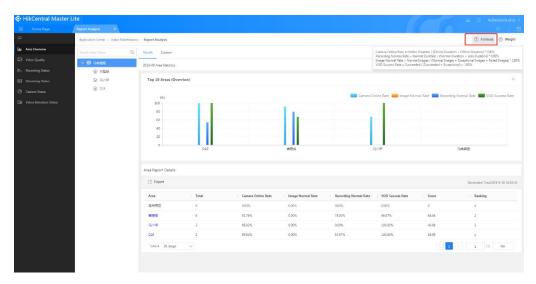


Figure 4.8-37 Calculation Formula

The weight percentage for each item can be configured in Weight configuration:

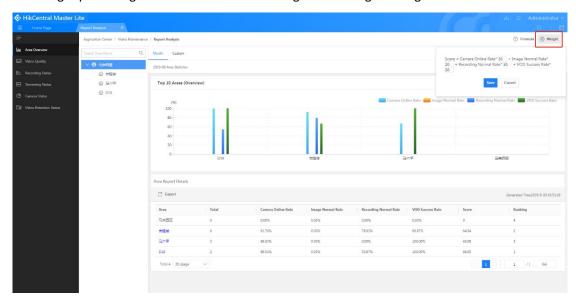


Figure 4.8-38 Weight Configuration

4.8.5.2 Video Quality Statistics

This shows the Top 10 cameras with the best video image quality in each area. The top 10 areas in terms of Image Normal Rate are listed in a bar graph form.

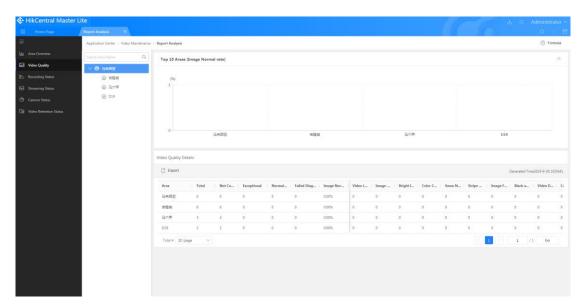


Figure 4.8-39 Top 10 Image Normal Rate

Video Quality Details lists out the total number of cameras, unconfigured cameras, exceptions, normal cameras, diagnosis failures, and other statuses, as well as the Image Normal Rate for the areas. It also shows the number of cameras with various types of exceptions out of the 14 image detection indicators.

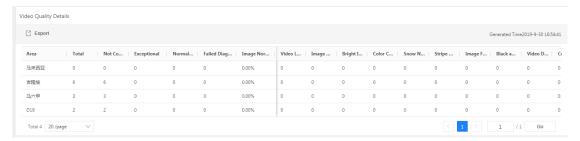


Figure 4.8-40 Video Quality Details

Click the exception number to enter the exception list.

The formula in the upper right corner shows the formula for the calculation of the recording integrity.

4.8.5.3 Recording Integrity Status Statistics

This shows the integrity statuses of camera recordings in the various areas. The data statistics can be presented in a monthly or set time range view.

Firstly, the system provides a top 10 ranking for integrity, which lists the top 10 areas according to integrity rates in descending order and shows it in a bar chart form.

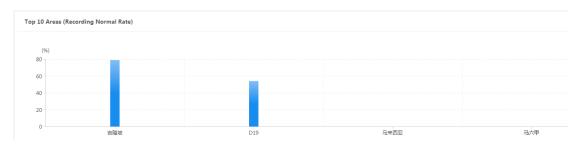


Figure 4.8-41 Top 10 Recording Integrity

Secondly, the system provides a recording integrity statistics details list which shows the overall recording integrity for each area according to the specified time, and lists out the integrity statuses of recordings of each day in detail within the time period.



Figure 4.8-42 Video Integrity Statistics Details

Hovering the mouse over "Formula" on the upper right corner, will show to the formula for calculating integrity

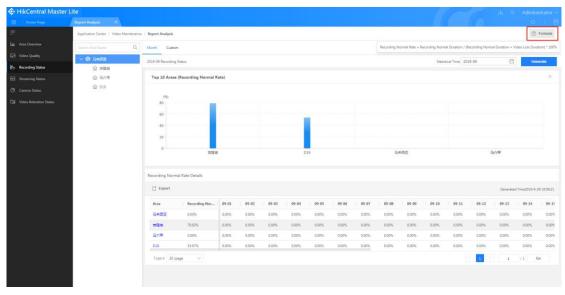


Figure 4.8-43 Video Integrity Formula

4.8.5.4 Streaming Status Statistics

Steaming Status Statistics module is mainly used to display the number of streams, successful streams, and streaming success rate of cameras on the platform. You can view the formula used to calculate the Streaming Success Rate by clicking the button in the upper right corner.

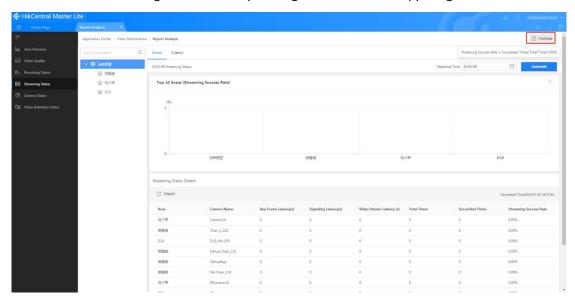


Figure 4.8-44 Streaming Status Statistics Page

4.8.5.5 Real-Time Camera Statistics

Real-Time Camera Statistics is mainly used to present the Real-time Online status of cameras in the areas which corresponds to the online pie chart in Video Overview.

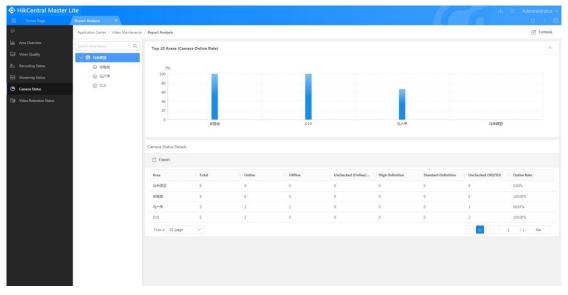


Figure 4.8-45 Real-time Camera Online Rates

4.8.5.6 Video Storage Status Statistics

Video Storage Status Statistics is mainly used to display whether the number of storage days within the areas meet the standard. The default time configuration is 30 days. This standard time can be edited in network management configuration.

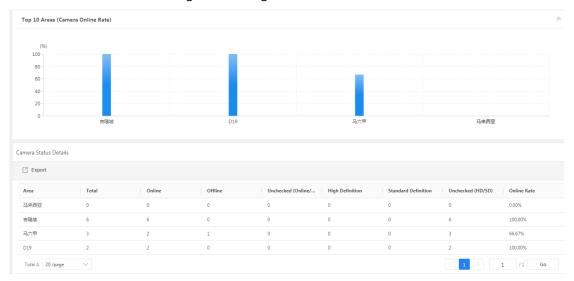


Figure 4.8-46 Camera Recording Storage Compliance Rate

4.9 System Management

System Configuration is the key to the effective application of various basic functions of the system and is where the various basic functions and can be edited and configured. System Configuration includes: "Directory Resource Management", "User Permission Management", "Application Configuration Center", "Video Maintenance Management", and "Home Page Management". These will be introduced in detail below.

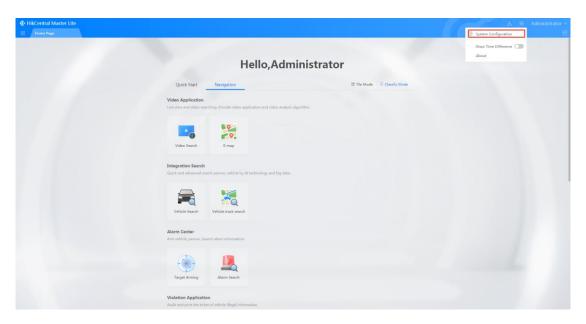


Figure 4.9-1 System Configuration

As shown in figure 4.9-1, clicking the "e" icon in the upper right corner of the interface will reveal a drop-down menu. Click "System Configuration "to enter System Configuration. The System Configuration screen is shown in figure 4.9-2.Click on the "e" button on the upper left corner of "System Configuration" to show or hide the System Configuration options.

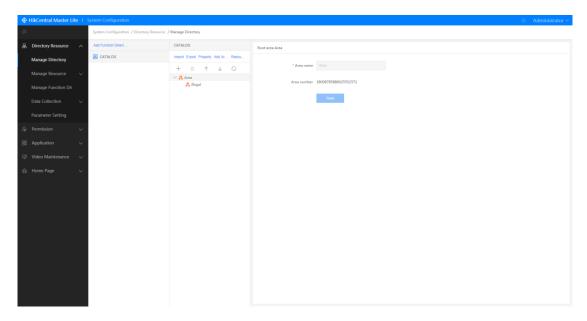


Figure 4.9-2 System Configuration Interface

4.9.1 Directory Resource Management

Directory Resource Management is mainly used for directory management, resource management, function and resource linking, data collection configuration and directory resource parameter configuration.

4.9.1.1 Basic Directory Management

Directories can be classified as Basic and Service Directories. Basic Directories are divided by country, province, city, district, and streets, and are assigned a standard number, which cannot be changed. Service Directories can be changed and edited according to user definitions.

Basic directory types include: template import directory and custom directory, as shown in the figure below:

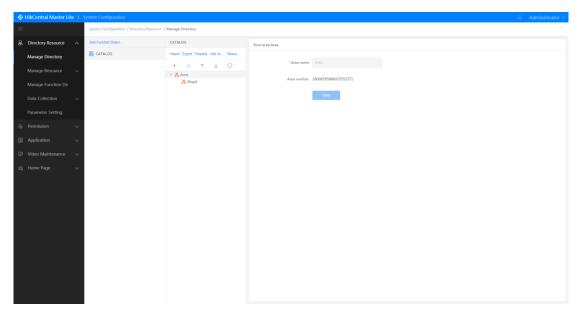


Figure 4.9-3 Create Basic Directory

1. Directory Attributes

The directory names, information, and area numbers can be viewed, and the selected directory name can be edited: Select the Basic Directory and click on the corresponding area node in the directory to view and edit the area name (root area name cannot be edited).

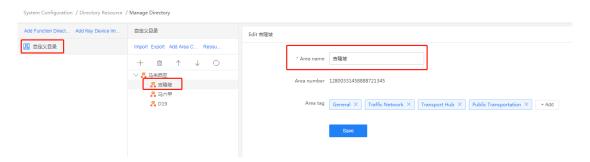


Figure 4.9-4 View/Edit Area

2. Area Management

Child areas can be added and deleted under the selected area tree. Child areas can also be edited, and areas can be sorted.

(1) Add Subordinate Area

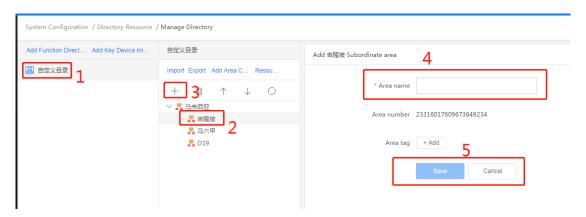


Figure 4.9-5 Adding Subordinate Areas

Label	Description
1	Click on the Basic Directory and select the child area you want to add
2	Select the area node where the child node is to be created
2	Click the " $+$ " button and an Add "xx" subordinate area panel will appear on the the right side
3	Edit area name (fields with "*" are required)
4	Click "Save" to add the subordinate area; click "Cancel" to cancel the operation

(2) Delete Area

Area nodes besides the root area can be deleted under the area tree.

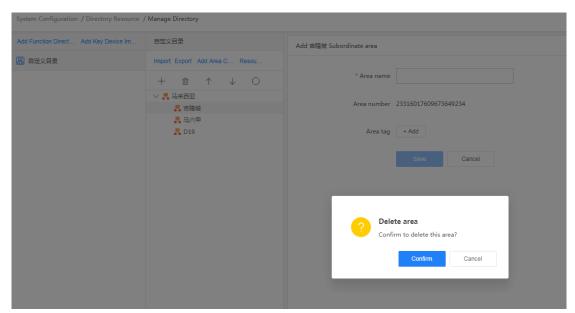


Figure 4.9-6 Delete Area

Label	Description
1	Select the area nodes to be deleted (besides the root area)
2	Click the " $^{\parallel}$ " button and a delete confirmation window will pop-up; if there are subordinate areas under this area, you will be notified with a "Please delete subordinate areas first before deleting this area" message
3	Click "Confirm" to delete or click "cancel" to cancel the operation

(3) Adjust Area Order

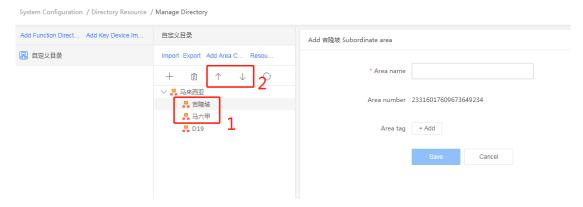


Figure 4.9-7 Adjust Area Order

Label	Description
1	Click the area that you want to change the order of under the selected basic directory
2	Use the "Move up" and "Move down" buttons to change the area order (the top area cannot
	be moved further up and the bottom area cannot be moved further down)

(4) Refresh Areas

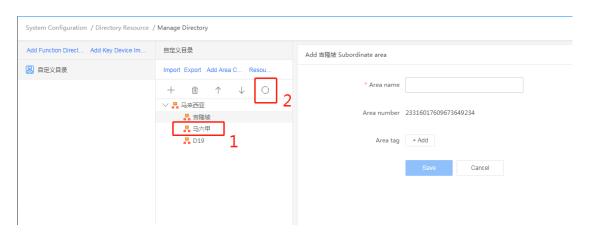


Figure 4.9-8 Refresh Areas

Label	Description	
1	Select the area you want to refresh	
2	After clicking the "Refresh" button, a success notification will appear	

3. Import Directory Data

User created Service Directories can also be imported. The import content should be areas.

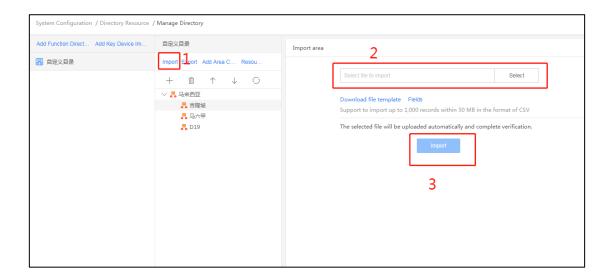


Figure 4.9-9 Import Directory Data

Label	Description
1	Select the directory with the import data and click the "Import" button. An Import area
1	interface will appear on the right
2	Click the "Select" button and select the file to import (see the file template
2	(catalogTemplate.csv) and field descriptions for import file specifications)
3	Click "Import" to complete import operation

4. Export Directory Data

Similar with the import function, "Guobiao" (GB, National Chinese Standards) directories or user defined Service Directories can be exported.

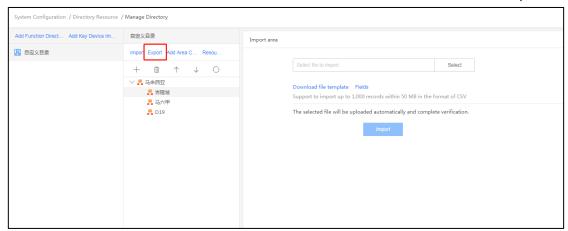


Figure 4.9-10 Export Directory Data

Label	Description
1	Click the "Export" button and the browser will automatically download the data files in this directory. The file will in the CSV format.
2	If using the Google Chrome browser, download the file as indicated in 2 in the figure; if using other browsers, you can find the downloaded file in the browser's download manager.

5. Import Basic Unit

The Import Basic Unit function operates similarly to the import function mentioned above. However, the difference is that this function only uses GB directories and the import contents are GB area numbers.

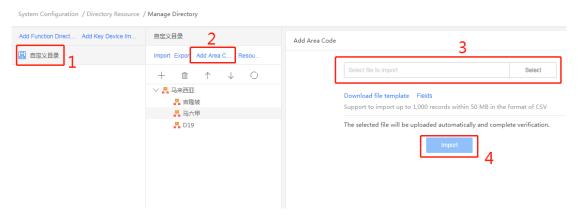


Figure 4.9-11 Import Basic Unit Data

Label	Description
1	Select the GB directory
2	Click the "Import Basic Unit" button and the Import Basic Unit interface will appear on the right
3	Click the "Select" button to select the import file (see the file template for import file specifications and field descriptions). The file will be automatically uploaded and checked after selection.
4	After the file check has completed, click "import" to import the file

6. Resource Redirection Management

Clicking the button will take you to the Resource Redirection Management page. See the next section for details on resource management.

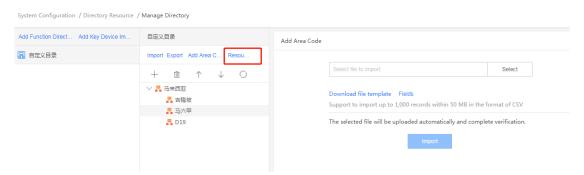


Figure 4.9-12 Resource Redirection Management

4.9.1.2 Resource Management

The functions related to resource management can be classified as organization search, camera,

encoding device, checkpoint, alarm device, and so on.

4.9.1.2.1 Video Surveillance

1. Encoding Device Management

Encoding Device Management functions include adding and deleting encoding devices, synchronizing device information, and importing and exporting encoding devices. The system also supports searching by device IP address and device name.

(1) Add Encoding Device

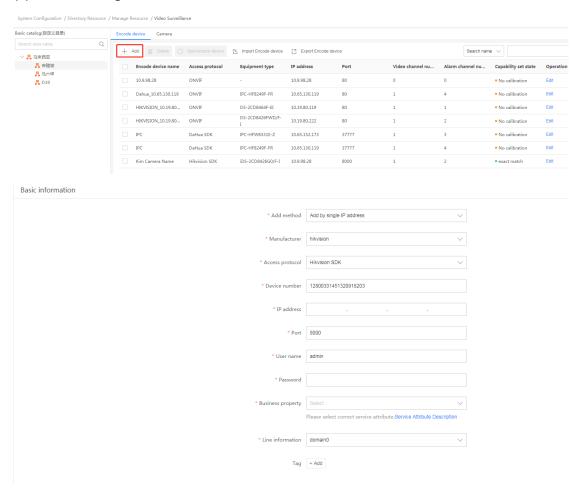


Figure 4.9-13 Add Encoding Device

Label	Description
1	Click the "Add" button to enter the add encoding device interface
2	Enter the basic information including Add method (supports adding new devices using serial number or IP address), Manufacturer, Access protocol, Device number, IP address, Port, User name, Password, "Business property", and "Line information" (fields with "*" are required)
3	Enter the number of analog and digital channels, and the number of alarm input and outputs
4	Click "Save" to add encoding device

(2) Synchronize or Delete Device

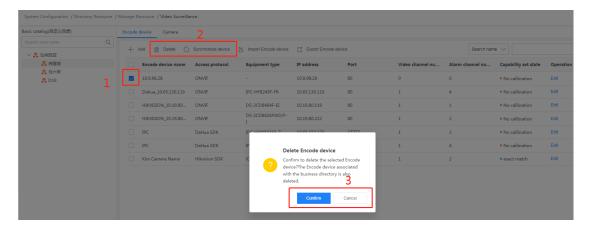
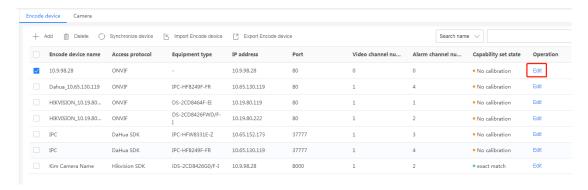


Figure 4.9-14 Synchronize or Delete Device

Label	Description
1	Select the encoding devices that you want to synchronize or delete
2	Click the "Delete" button and a delete encoding device confirmation window will pop-up, as shown in 3; Click the "Synchronize device" button to synchronize and refresh the selected devices. The most recent statuses will then be displayed.
3	Click "Confirm" to delete

(3) Edit Encoding Device



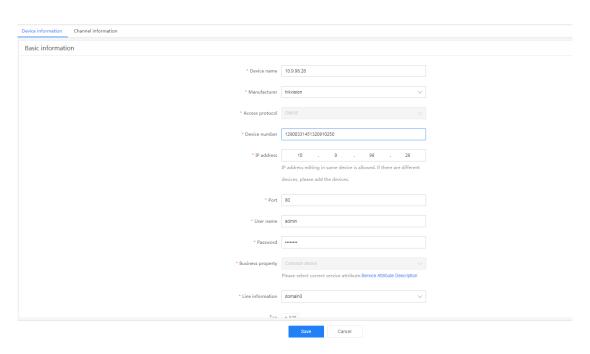


Figure 4.9-15 Edit Encoding Device

Label	Description
1	Click the "Edit" button for the encoding device you want to edit in the encoding device list to enter the edit encoding device interface
2	Basic information (Business property, Device name, Device number, Port, User name, Password, DAC and Domain information) can be edited in this interface. The other information cannot be changed (fields with "*" are required)
3	Click "Save" to edit the encoding device

(4) Import Encoding Device

Batch importing of encoding devices is supported. The total number of record entries to be imported should be under 1,000 and the import file should be in CSV format and be under 50M is size.

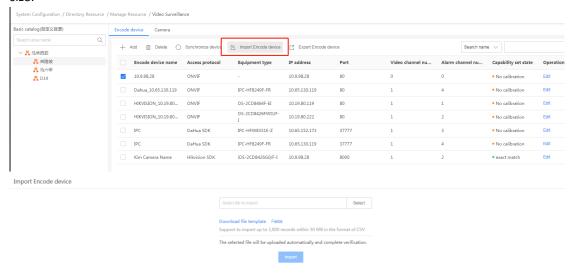


Figure 4.9-16 Import Encoding Device

Label	Description
Label	Description
1	Click the "Import Encode device" button to enter the import encoding device interface
2	Click "Select" to select the file to import (see the reference template for the import file

	format)
3	Click "Import" to import encoding device

(5) Export Encoding Device

Use the Export Encoding Device function to export all the information of devices in the selected area to a local folder in the CSV format.

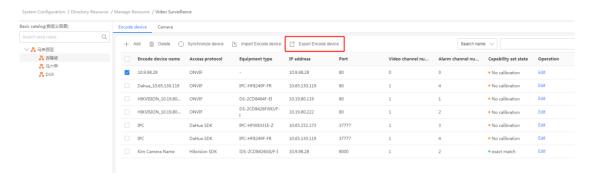


Figure 4.9-17 Export Encoding Device

Label	Description
1	Click the "Export Encode device" button and the browser will automatically download the file from this directory. The file will be in CSV format
2	If using the Google Chrome browser, download the file as indicated in 2 in the figure; if using
	other browsers, you can find the downloaded file in the browser's download manager.

(6) Search Encoding Device

The encoding device interface supports two searching methods of "search by IP address" and "search by name" for fast searching.

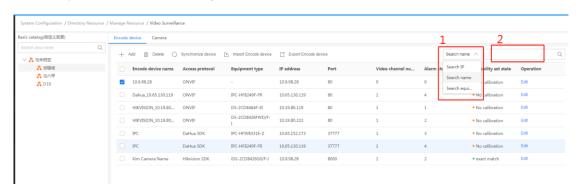


Figure 4.9-18 Search Encoding Device

Label	Description
1	Click " ^" to select search method. You can choose Search IP address, Search device type, or Search name
2	Enter IP address/device name and click " to search. The search results are shown in a list

2. Camera Management

Click the directory on the upper left corner of the interface to expand the directory menu, and

click on the corresponding directory to open it, as shown in figure 4.9-19.

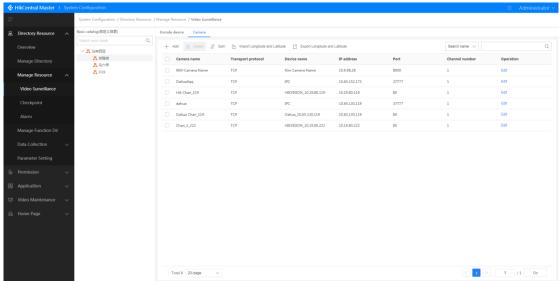
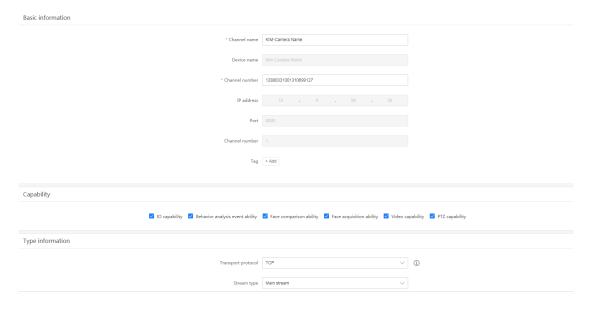


Figure 4.9-19 Cameras

(1) Basic Directory Camera Management

Basic Directory Camera Management supports the editing of the basic information, capability set, type information, audio information, and location information of cameras. It also supports the batch delete of cameras under different areas. It can be used to batch edit the organizations of which cameras belong to, and to add cameras to the current area and encoding device. It also supports the import and export of camera data under the current area.

(2) Edit



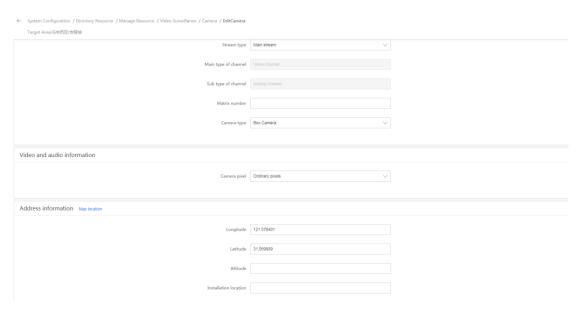
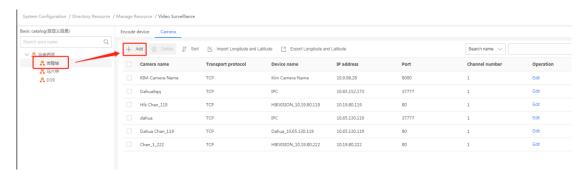


Figure 4.9-20 Edit Camera

Label	Description
1	After selecting the area in the Basic Directory, the camera information for this area is listed in
1	the interface
2	Click the "Edit" button to enter the edit camera interface
3	Channel name and channel number can be edited in "Basic information" (fields with "*" are
3	required)
4	You can view the video, IO, and face capture collection, and behavior analysis capabilities in
4	the capability set and select them
5	You can edit the Transport Protocol, Stream Type, Matrix number, and Camera type in "Type
5	information"
6	"Camera pixel" can be edited in "Video and audio information"
7	Camera Latitude, Longitude, Altitude, and Installation location can be edited in "Address
	information", and geographical positioning can be performed directly using the map.
8	After editing is complete, click the "Save" button to complete editing the camera

(3) Add



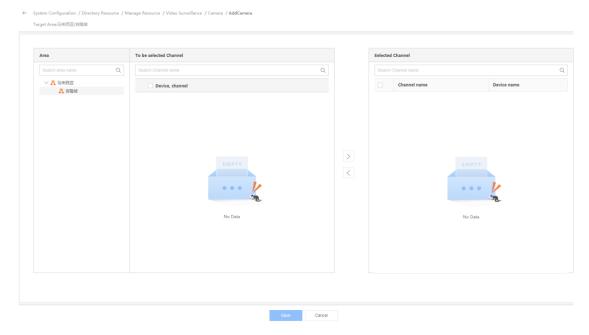


Figure 4.9-21 Add Camera

Label	Description
1	Select area, and select the cameras you want to add to the current area
2	Click the "Add" button to enter the add camera interface
3	In "To be selected channel", select the device channels you want to add (you can search using the search box at the top to quickly search for your channel)
4	Click " > "to move the cameras selected in the "To be selected channel" area to the "Selected channel" area Click " < " to remove channels from the "Selected channels" list
5	Added cameras will be displayed in a list and can be removed by clicking "
6	Click the "Save" button to add camera

(4) Delete

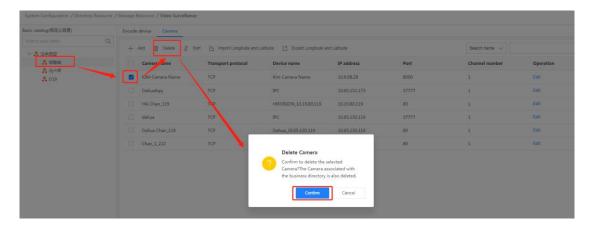


Figure 4.9-22 Delete Camera

Label	Description
1	Selected the area which contains the cameras you want to delete from the Basic Directory
2	Select the cameras you want to delete from the list

3	Click the "Delete" button and a delete camera confirmation window will pop-up
4	Click "Confirm" to delete the cameras or click "Cancel" to cancel the operation

(5) Sort

Left-click the mouse to drag and sort the cameras under the area.

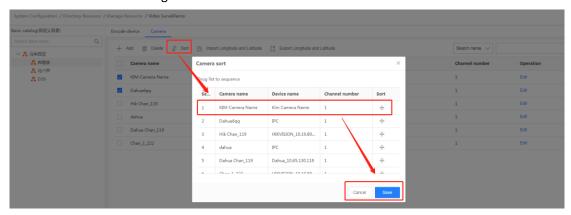


Figure 4.9-23 Camera Sort

Label	Description
1	Select the area required for sorting, then click the "Sort" button above the camera list and the camera sort window will pop-up.
2	Right-click to drag a camera to change the camera's order position
3	Click "Save" to complete camera sorting

(6) Import Longitude and Latitude

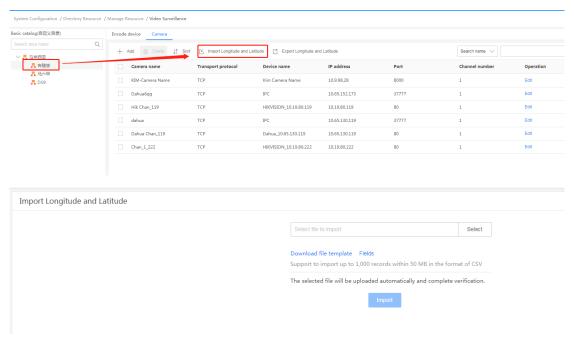


Figure 4.9-24 Import Longitude and Latitude

Label	Description	
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1	Select area from the Basic Directory
2	Click the "Import Longitude and Latitude" button to enter the Import Longitude and Latitude interface
3	Click the "Select" button and select the import file (see the file template as a reference for the file content). The file will be automatically uploaded a checked after selection.
4	After the file check has completed, click "Import" to complete the import longitude and latitude operation.

(7) Export Longitude and Latitude

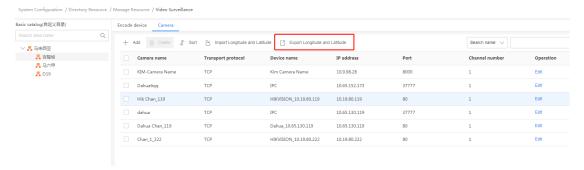


Figure 4.9-25 Export Longitude and Latitude

Label	Description
1	Select area from the Basic Directory
2	Click the "Export Longitude and Latitude" button and the browser will automatically download the camera longitude and latitude data file for the area. The file will be in CSV format
3	If using the Google Chrome browser, download the file as indicated in 3 in the figure; if using other browsers, you can find the downloaded file in the browser's download manager.

4.9.1.2.2 Checkpoint

1. Basic Directory Checkpoint Management

New checkpoints can be added in Basic Directory Checkpoints; checkpoint and lane information can be edited and checkpoints can be batch deleted under different areas; capture cameras can be added or deleted to selected checkpoints; batch configuration cloud analysis mode is supported for checkpoints, and city entrance and checkpoint information can be "applied".

(1) Add Checkpoint

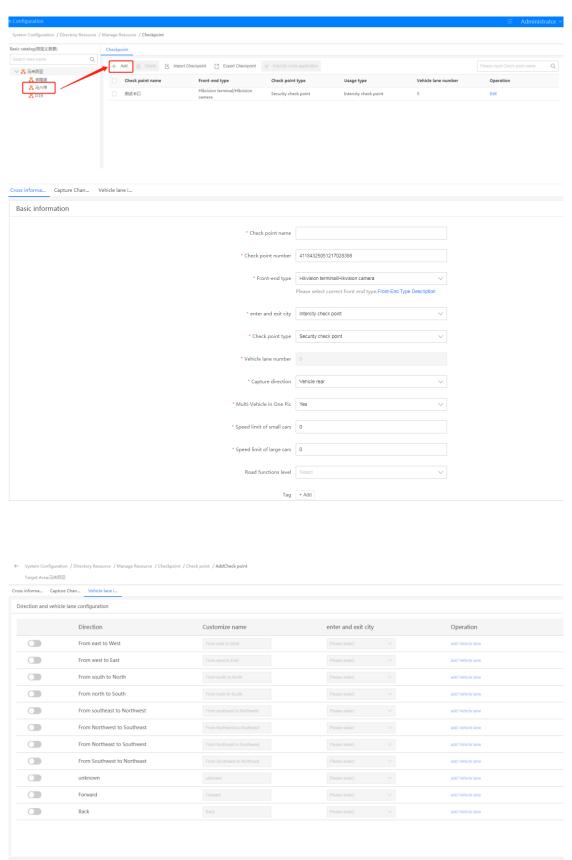


Figure 4.9-26 Add Checkpoint

Save Cancel

Label	Description
1	Select Basic Directory
2	Select the area you want to add checkpoint to
3	Click the "Add "button to enter the "Add checkpoint" interface
4	Enter the Check point name, Check point number, GB code, Check point type, Usage type, enable/disable cloud analysis, Multi-vehicle in One Pic, Capture direction, Road functions level, longitude and latitude (fields with "*" are required), in the Check point info interface
5	You can add or delete capture cameras in the capture camera information interface. See the "Add or Delete Capture Camera" section for more details.
6	You can configure directions and vehicle lanes in the vehicle lane information interface and add multiple directions and lanes. Cameras can be linked to each lane (fields with "*" are required)
7	Click "Save" to add the checkpoint

(2) Edit Checkpoint

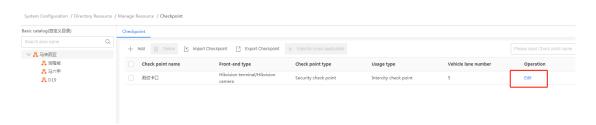


Figure 4.9-27 Edit Checkpoint

Label	Description
1	Select the area of the checkpoint you want to edit in the Basic Directory tree
2	Click the "Edit" button corresponding to the checkpoint you want to edit
3	You can edit the Check point name, Check point number, GB code, Check point type, Usage type, enable/disable cloud analysis, Multi-vehicle in One Pic, Capture direction, Road functions level, longitude, latitude, etc. (fields with "*" are required), in the Check point info interface
4	You can add or delete capture cameras in the capture camera information interface. See the "Add or Delete Capture Camera" section for more details.
5	You can configure directions and vehicle lanes in the vehicle lane information interface and add multiple directions and lanes. Cameras can be linked to each lane (fields with "*" are required)
6	Click the "Save" button to finish editing the checkpoint

(3) Delete Checkpoint

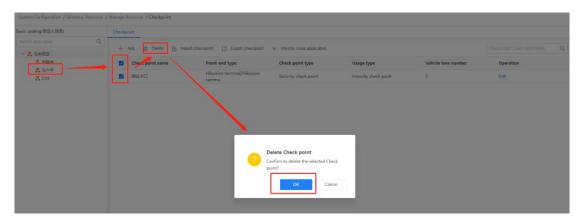


Figure 4.9-28 Delete Checkpoint

Label	Description
1	Select the area of the checkpoint you want to edit in the Basic Directory tree
2	Select the checkpoint you want to delete in the checkpoint list under the area
3	Click the "Delete" button and a delete checkpoint confirmation window will pop-up
4	Click "OK" to confirm checkpoint deletion

(4) Add Capture Camera

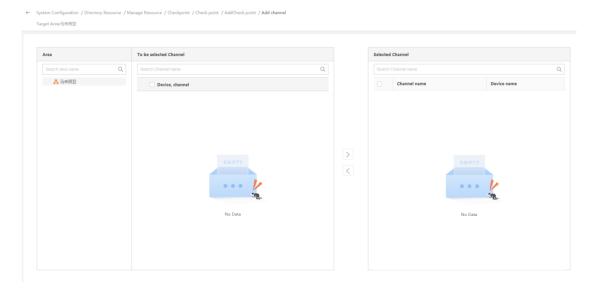


Figure 4.9-29 Add Capture Camera

Label	Description
1	Click the "Add" button in the capture camera information interface to enter the add capture
	camera interface
2	Select the cameras you want to add in the "To be selected camera" list
3	Click " >> " to add the selected capture cameras from the "To be selected camera" list to the "Selected camera" list
	Click " " to delete the selected capture cameras that were added to the capture camera list
4	The added capture cameras are listed in this area. You can select cameras and follow the
	operations in 3 to delete cameras

(5) Apply Checkpoint Information

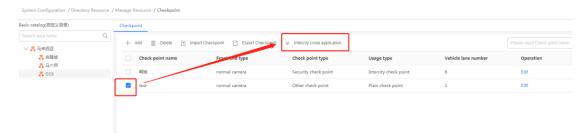


Figure 4.9-30 Apply Checkpoint Information

Label	Description
1	Select the area of the checkpoint you want to configure from the Basic Directory list
2	Select the checkpoint you want to apply checkpoint information to in the area checkpoint list
3	Click the "Intercity cross application" button to apply checkpoint information

(6) Import Checkpoint

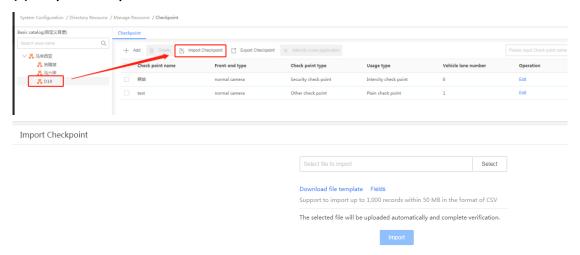


Figure 4.9-31 Import Checkpoint

Label	Description
1	Click the "Import Checkpoint" button to enter the Import Checkpoint interface
2	Click the "Select" button and select the import file (see the file template as a reference for the file content). The file will be automatically uploaded a checked after selection.
3	After the file check has completed, click "Import" to complete the checkpoint import operation.

(7) Export Checkpoint



Figure 4.9-32 Export Checkpoint

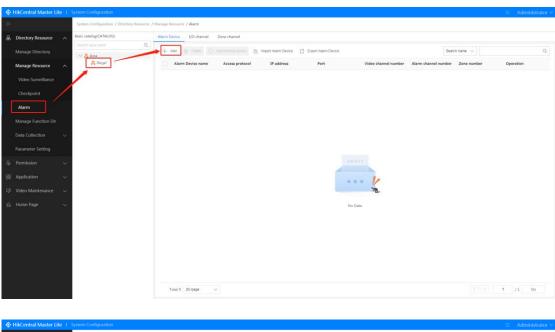
Label	Description
1	Click the "Export Checkpoint" button
2	The browser will automatically download the checkpoint data file for the area. The file will be in CSV format

4.9.1.2.3 Alarm

1. Basic Directory Alarm Device Management

Basic Directory Alarm Device Management supports the adding of new alarm device information, and the editing of alarm device information. It also supports the batch deletion of alarm devices under an organization as well as the importing and exporting of alarm devices.

(1) Add Alarm Device



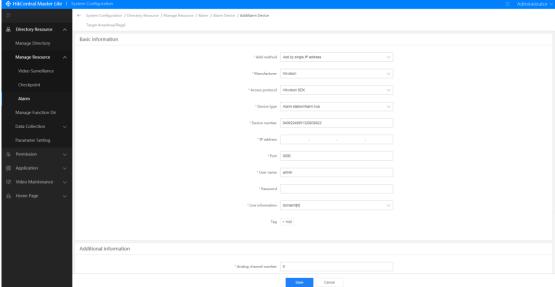


Figure 4.9-33 Add Alarm Device

Label	Description
1	Select the area in Basic Directory, and the alarm devices under this area will be listed in the interface. If there are no alarm devices, "No Data" will be displayed. You can add devices using "Add Alarm Device"
2	Click the "Add" button to enter the "Add Alarm Device" interface
3	Enter the Add method, Access protocol, Device type, Device number, IP address, Port, User name, Password, and Line information (fields with "*" are required)
4	Enter the number of analog and digital channels, the alarm input number, and other additional information
4	Click "Save" to add alarm device

(2) Edit Alarm Device

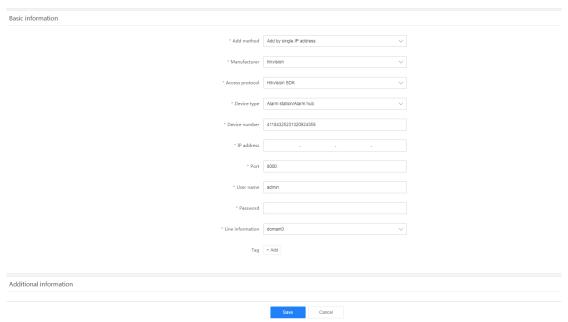


Figure 4.9-34 Edit Alarm Device

Label	Description
1	Select the area in Basic Directory, and the alarm devices under this area will be listed in the interface
2	Click the "Edit" button on the right of the alarm device you want to edit to enter the edit alarm device interface
3	You can edit the Device name, Device type, Alarm number, Port, User name, Password, and other information. Access protocol and IP address cannot be modified (fields with "*" are required)
4	You can enter or modify longitude and latitude optionally (you can click on "Map positioning" to obtain longitude and latitude values directly)
5	Click the "Save" button to finish editing the alarm device

(3) Synchronize Device

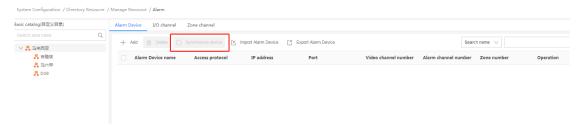


Figure 4.9-35 Synchronize Alarm Device

Label	Description
1	Select the area in Basic Directory, and the alarm devices under this area will be listed in the
1	interface
2	Select the alarm device you want to synchronize
3	Click the "Synchronize device" button to display the synchronize device success or device
	offline statuses

(4) Import Alarm Device

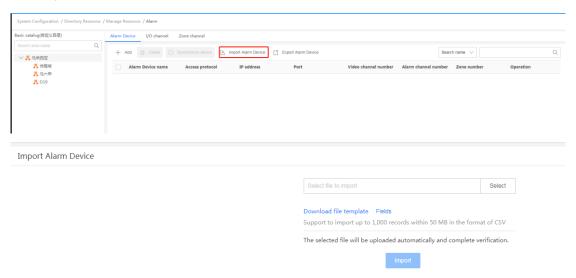


Figure 4.9-36 Import Alarm Device

Label	Description
1	Click the "Import Alarm Device" button to enter the Import Alarm Device interface
2	Click the "Select" button and select the import file (see the file template as a reference for the file content). The file will be automatically uploaded a checked after selection.
3	After the file check has completed, click "Import" to complete the probe import operation.

(5) Export Alarm Device

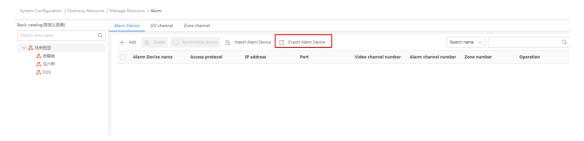


Figure 4.9-37 Export Alarm Device

Label	Description
1	Click the "Export Alarm Device" button and the browser will automatically download the probe data file for the area. The file will be in CSV format
2	If using the Google Chrome browser, download the file as indicated in 2 in the figure; if using other browsers, you can find the downloaded file in the browser's download manager.

4.9.1.3 Service Resource Linkage

If you want to link resources to the corresponding Service Directory as shown in Figure 4.9-38, you can add the corresponding Service Directory resources in "Manage Function Dir" after creating a video service directory called "Video".

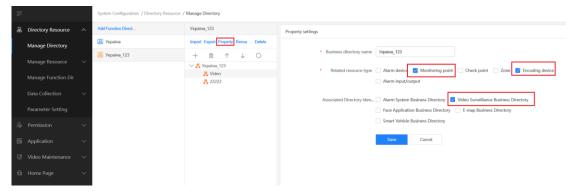


Figure 4.9-38 Create Service Directory

4.9.1.4 Data Collection Configuration

4.9.1.4.1 Video Application

1. GPS Collection Configuration

Configure message queue application protocol, method and IP address of device with GPS collection capability and delete existed configuration.



Figure 4.9-39 GPS Collection Configuration

Configure MQ message queue



Figure 4.9-40 MQ Configuration

2. People Density Configuration

Supports the message queue configuration for devices with "people density statistical capability", the selection of message queue protocol, method, and IP address, and the deletion of existing configurations; supports the storage method configuration for devices with "people density statistical capability", the selection of storage application protocol and storage server, and the deletion of existing configurations.

3. People Counting Configuration

Configure message queue application protocol, method and IP address of device with people counting capability and delete existed configuration.

4. Behavior Analysis Configuration

Configure message queue application protocol, method and IP address of device with behavior analysis capability and delete existed configuration.

5. Video Parsing Configuration

Used for configuring storage methods of devices with Video Parsing capabilities, and also supports the removal of existing configurations.

4.9.1.4.2 Face Picture Application

1. Facial Recognition Configuration

Supports the configuring of smart service address and application protocol of devices with facial recognition capabilities, and also the deletion of existing configurations; supports the configuring of message queue application protocol, method and IP address of devices with facial recognition capabilities, and also the deletion of existing configurations. Smart service configuration is shown below:

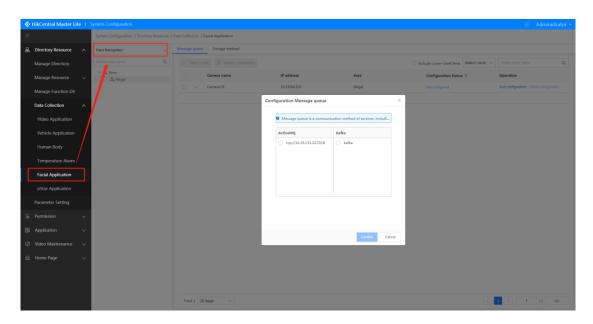


Figure 4.9-41 Facial Recognition Configuration

4.9.1.4.3 Vehicle Application

1. Vehicle Recognition Configuration

Configure message queue application protocol, method, and IP address for device with vehicle recognition capability. Configure cloud analysis or not and delete existed configuration.

4.9.1.4.4 Human Body Application

Supports the message queue configuration for devices with "body recognition capability", the selection of message queue protocol, method, and IP address, and the deletion of existing configurations; supports the storage method configuration for devices with "body recognition capability", the selection of storage application protocol and storage server, and the deletion of existing configurations.

4.9.1.4.5 Temperature Alarm

Temperature Alarm supports configuring the delivery protocol, method, and IP address of the message queue for thermal imaging devices with temperature measurement. Temperature Alarm also supports deleting existing configurations.

4.9.1.4.6 pStor Application

pStor Application supports configuring the delivery protocol, method, and IP address of the message queue for devices with vehicle image recognition. pStor Application also supports deleting existing configurations.

4.9.1.5 Directory Resource Configuration

1. General Configuration

Supports the setting of whether or not to enable root level node name editing, channel name synchronization, and device name synchronization; supports the setting of the maximum number of connected devices in each area and the maximum number of cameras in each area.

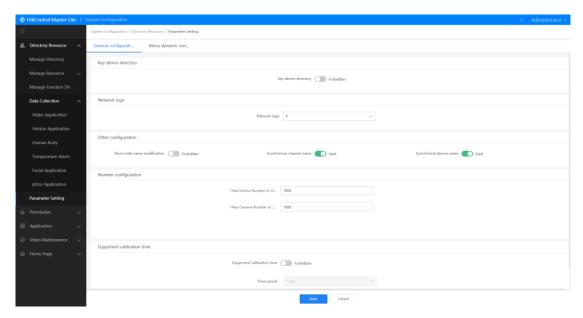


Figure 4.9-42 General Configuration

2. Dynamic Menu Configuration

Supports the setting of whether or not to enable encoding device and cameras menus under the video camera menu; supports the setting of whether or not to enable alarm device, IO channel, and zone channel menus under the alarm menu; supports the setting of whether or not to enable checkpoint label menu under the checkpoint menu.

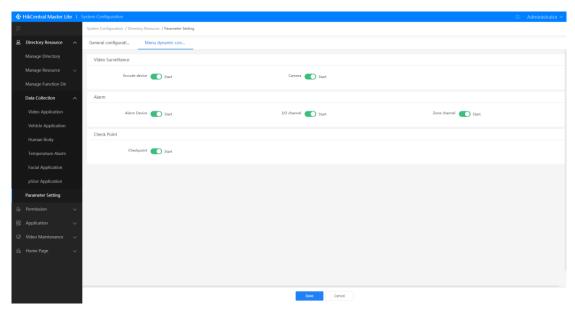


Figure 4.9-43 Dynamic Menu Configuration

4.9.2 User Permission Management

User Permission Management is divided into the three main parts of User Management, Department Management, and Role Management.

4.9.2.1 User Management

The User Management interface contains the User List, Add User, Delete User, User on Top, User Enabling/Disabling, Department Change, Password Reset, User Filtering, User Export, User Import, User Information Checking, User Identity Editing, User Permission Editing, Extend User Field, and other functions. These functions are explained in the following section.

4.9.2.1.1 User Management

1. User List

Display user list information in the home page, including user name, status, real name, department, etc. Click department tree on the left of user list to display users in the department. Check Contain Lower-Level to display users in this department or users in all departments of subdepartments.

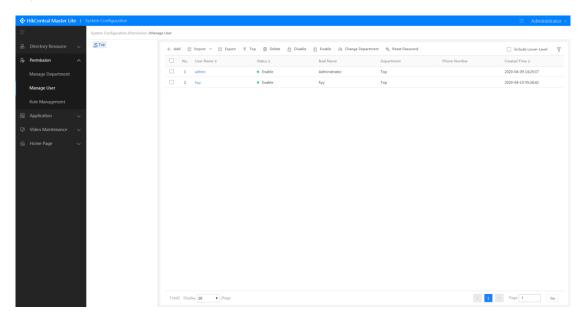


Figure 4.9-44 User List

2. User Adding

Users can be added along with the users' basic information and login credential information. When editing user information, the police no. and ID no. fields must be filled in. Supports the

configuring of user privilege weight for PTZ platform control locking. The higher the "weight", the more privilege the user will have access to; supports the configuring of user login credential information including login password, authentication method, online policy, login address binding, etc.

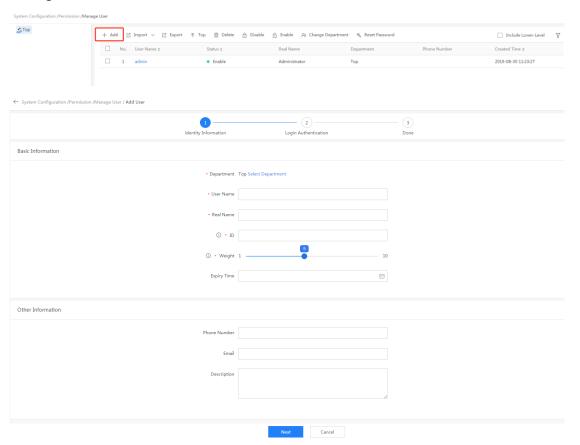


Figure 4.9-45 Add User

Label	Description
1	Click the "Add" button in the User Management interface to enter the "Add user" interface
2	Select the department and enter User Name, Real Name, Police No., ID No., Weight (user
	permission level), and Expiry Time. Fields with "*" are required
3	You can enter the user's mobile number, email address, description, date of birth, QQ
	number, and gender optionally
4	Click the "Next" button to enter the login credentials interface
5	Here, you can configure the password and set the period as "custom" to modify the validity
5	period
	When the configuration method is set as "system configuration", all authentication methods
6	and login methods will be selected by default;
6	When the configuration method is set to custom, the authentication method and login
	method can be selected according to the users' needs
7	Click login policy and select custom to edit the "online number" for a user (online number
/	range is between 0~500)
8	The user to be created can be bound to a login address, so that the user can only login from
0	or within the specified address segment.
	Click the "Save" button to add user;
9	Click "Back" to return to identity information to continue editing;
	Click "Cancel" to exit adding user;

3. User Deleting

Supports single or batch user delete. The steps are as follows:

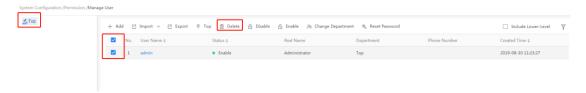


Figure 4.9-46 Delete User

Label	Description
1	Select the department of the user you want to delete in the department tree. The users in
	the department will be listed in the interface
2	Select the user(s) you want to delete (batch delete is available)
3	Click the "Delete" button and a delete confirmation window will pop-up
4	Click the "OK" button to delete

4. User on Top

Single or multiple users can be pinned to the top of the list. The steps are as follows:

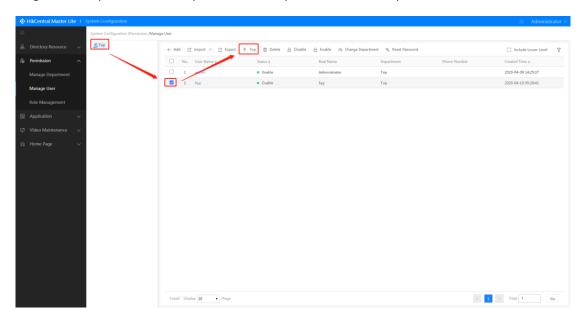


Figure 4.9-47 User on Top

L	abel	Description
1	1	Select the department of the user you want to rearrange the order of, and the users in the
	1	department will be listed in the interface
	2	Select the user(s) you want to pin to the top (can select multiple users)
	3	Click the "User on Top" button to pin the selected users to the top of the list

5. User Enabling or Disabling

Users can be enabled and disabled individually or in batch. The steps are as follows:

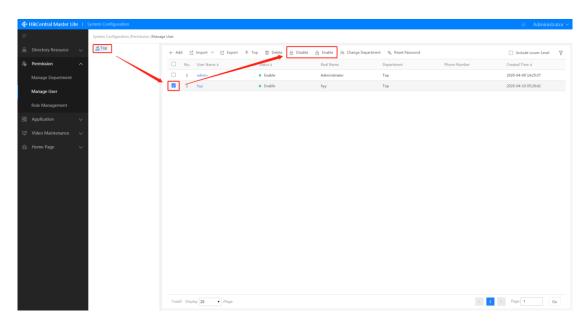


Figure 4.9-48 Enabling/Disabling Users

Label	Description
1	Select the department of the user you want to enable or disable in the department tree. The
	users in the department will be listed in the interface
2	Select the user(s) you want to enable or disable (can select multiple users)
3	Click the "Enable" button, to enable the selected user(s). If the user is already enabled, the status will not change after clicking the "enable" button. If the user has been disabled, its status will change to enabled; Click the "Disable" button, to disable the selected user(s). If the user is already disabled, the status will not change after clicking the "disabled" button. If the user has been enabled, its status will change to disabled;

6. Department Change

You can move one or multiple users to another department. The steps are as follows:

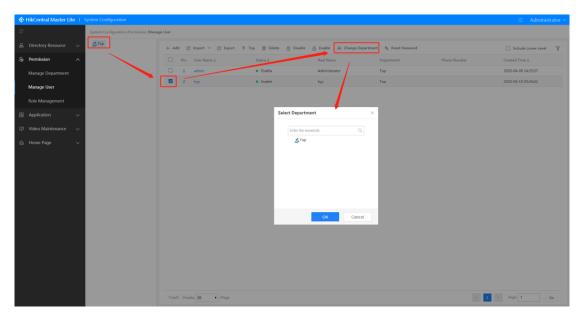


Figure 4.9-49 Department Change

Label	Description
1	Select the current department of the user who will be moved to another department in the
	department tree. The users in the department will be listed in the interface
2	Select the user(s) you want to move to another department (can select multiple users)
3	Click the "Change Department" button and a "Select Department" window will pop-up
4	Select the department you want to change to in the department tree. You can also enter
4	keywords to search for a department in the search window
5	Click the "OK" button and the selected users will be moved to the selected department

7. Password Reset

Administrators can reset the password of one or multiple users to the default password; users are required to change passwords at the first login after their password has been reset. The default password after resetting is: Abc12345. The steps for resetting password are as follows:

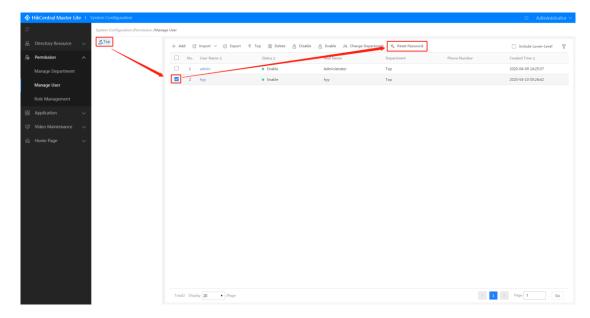


Figure 4.9-50 Password Reset

Label	Description
1	Select the department of the user who you want to reset password for in the department
1	tree. The users in the department will be listed in the interface
2	Select the user(s) you want reset the password for (can select multiple users)
3	Click the "Reset Password" button and the passwords for the selected user(s) will be reset to
	the default password: Abc12345

8. User Filtering

Filter by user name, user status, real name and phone number to display matched user information.

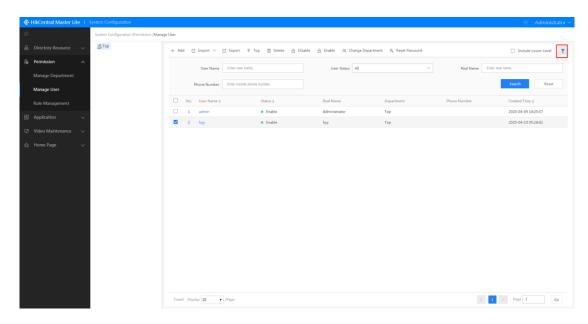


Figure 4.9-51 User Filtering

Label	Description
1	Select the department of the user who you want to perform user filtering in the department tree. The users in the department will be listed in the interface
2	Click the " $\overline{\ }$ " button and the user filtering drop-down menu will appear
3	You can search for users by entering User Name, User Status, Real Name, or Phone Number then clicking the "Search" button to search for the target user in the selected department. After search is complete, you can click other departments as shown in 1 to do another search with the same conditions

9. User Export

User information can be exported according to conditions. The steps for "user export" are as follows:

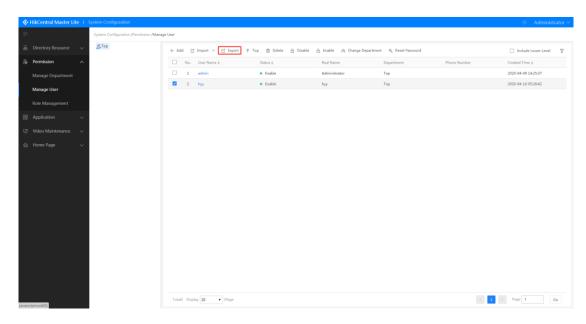


Figure 4.9-52 User Export

Label	Description
1	Click the department of the user you want to export
2	Click the "Export" button and all the user information under the department will be automatically downloaded by the browser's downloader or the system's default downloader. The user information file will be in the .xls file format and can be opened with Excel.

10. User Import

User files that are correctly formatted can be imported. If import error occurs due to data content error, an import error report can be downloaded to view the error details. The steps are as follows:

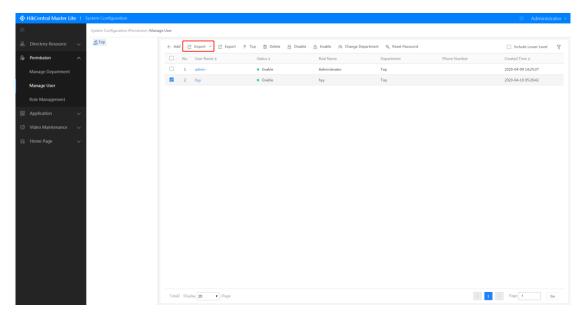


Figure 4.9-53 User Import

Label	Description
1	Click the department of the user you want to import, and the user information will be imported to the department
2	Click the "Import" button and a file window will appear
3	Find and select the Excel file for the user information you want to import
4	Click the "Open" button to start importing the user information
5	After import has been successful, the notification shown in 5 will appear. If there is too much data you can refresh and view again
6	When an import error occurs due to data content error, users can download and view the "Import error report" which is an Excel file. The system automatically marks the data errors
7	Click the "OK" button to close the window. You can check whether there are errors with the user information, then import again

11. User Information Checking

User information, including identity, login credentials, and permission-related information can be checked. The steps are as follows:

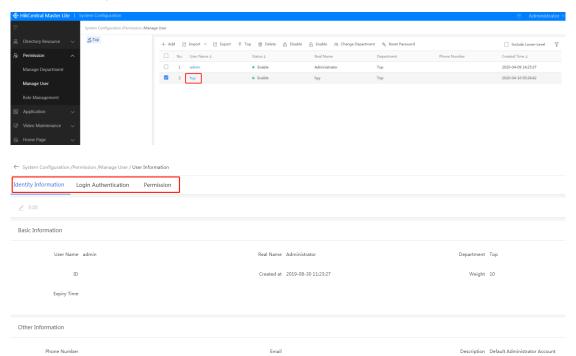


Figure 4.9-54 User Information Checking

Label	Description
1	Select the department of the user whose information you want to check, and the users in the
	department will be listed in the interface
2	Click the user name of the user you want to check to enter the user information interface
3	You can check the user's identity, login credentials, and permissions-related information in
	the user information interface

12. User Identity Editing

This function supports user identity information editing with the exception of editing for the administrator. However, user names cannot be edited after creation. Carry out the "User Information Checking" steps from the previous section and select the users whose permission you want to edit. After entering the user information interface, take the following steps to edit user Identity Information:

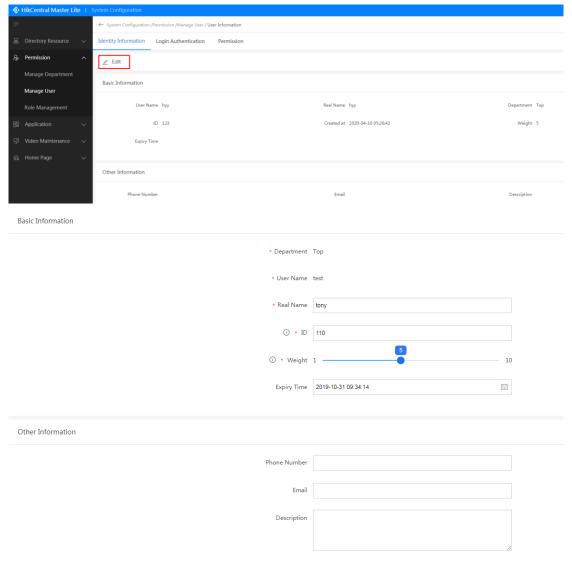
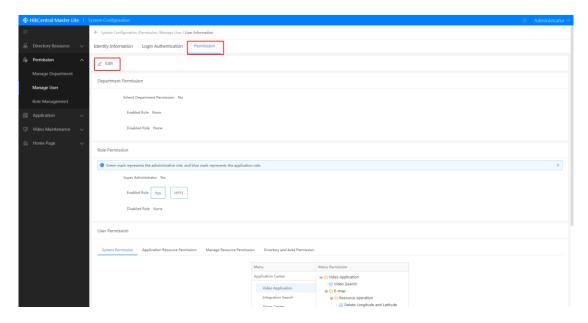


Figure 4.9-55 User Identity Editing

Label	Description
1	Click "Identity Information" in the user information interface to switch to the Identity Information tab
2	Click the "Edit" button in the Identity Information tab to enter the "Edit Information Identity" interface
3	You can edit Real Name, Police no., ID no., and Expiry Time in the Basic Information fields (fields with " * " are required)
4	You can edit the Phone Number, Email address, and Description in the Other Information fields
5	Click the "Save" button to finish editing the user identity

13. User Permission Editing

You can edit the roles linked to users and whether or not to inherit department permissions with the exception of editing for administrators. Carry out the "User Information Checking" steps from the previous section and select the users whose permission you want to edit. After entering the user information interface, take the following steps to edit user Permission:



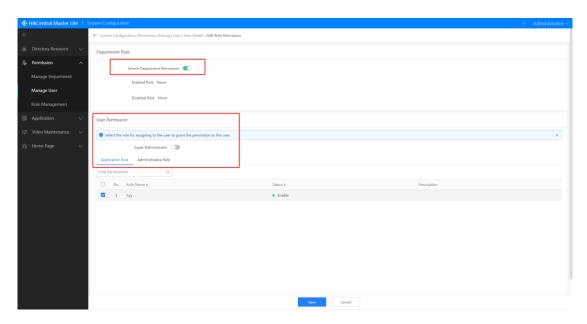
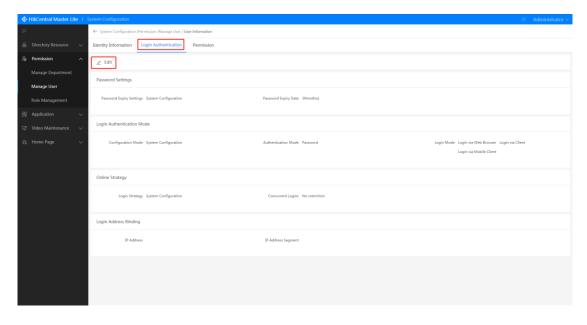


Figure 4.9-56 User Permission Editing

Label	Description
1	Click "Permission" in the user information interface to switch to the Permission tab
2	Click the "Edit" button in the Permission tab to enter the "Edit Permission" interface
3	You can select whether or not to inherit department permissions in the Department Role box
4	You can select the user permissions that you want in the User Permission box. After selection and saving, the edited user will have all the permissions of the selected roles.
5	Click the "Save" button to finish editing permission

14. User Login Certification Information Editing

User login credentials can be edited (except for administrator) and Password Settings, Login Authentication Mode, Online Strategy, Login Address Binding, and other settings can be configured. Carry out the "User Information Checking" steps from the previous section and select the users whose Login Authentication information you want to edit. After entering the Login Authentication interface, take the following steps to edit Login Authentication:



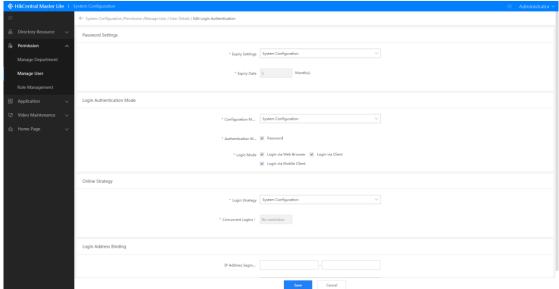


Figure 4.9-57 User Login Certification Information Editing

Label	Description
1	Click "Login Authentication" in the user information interface to switch to the Login Authentication tab
2	Click the "Edit" button in the Login Authentication tab to enter the "Edit Login Authentication" interface
3	Expiry Settings can be edited in the Password Settings box. When "System Configuration" is selected, the expiry period is set to 3 months by default. When the Expiry Setting is set to "Custom", the expiry period can be customized (fields with "*" are required)
4	Configuration Mode can be edited in the Login Authentication Mode box. When "System Configuration" is selected, all the Authentication Mode and Login Mode options are selected by default. When set to "Custom", users can select the Authentication Mode and Login Modes as required (fields with "*" are required)
5	Login Strategy can be selected in the Online Strategy box. When "System Configuration" is selected, "Concurrent Logins" is set to 0 by default. When set to "Custom", users can set the number of concurrent logins as required (fields with "*" are required)
6	User IP address or IP address segment can be set in the "Login Address Binding box. A user will not be able to log in from an address that is not the set IP address or within the set IP address segment
7	Click the "Save" button to finish editing the user login authentication settings

4.9.2.1.2 User Extension Fields

Extensions fields for additional user information can also be added. Extension field content is added in Data Dictionary as shown in the figure below.

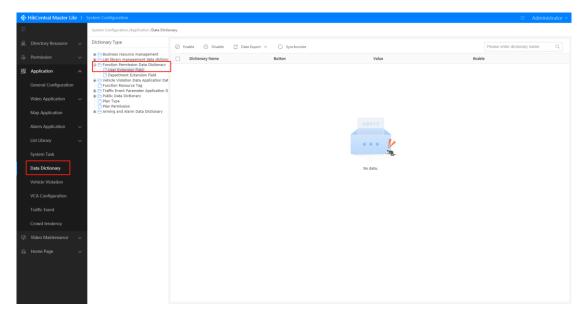


Figure 4.9-58 Adding Extension Fields in Data Dictionary

4.9.2.2 Department Management

Functions such as Department List, Department Adding, Department Sorting, Department Export, Department Import, Department Deleting, Department Information Checking, Department Information Editing, and Department Extension Fields, are available in Department Management.

4.9.2.2.1 Department Management

1. Department List

The Department List is shown as a tree in the home page. List information includes Department Name, Department no., Created Time, Description, etc.

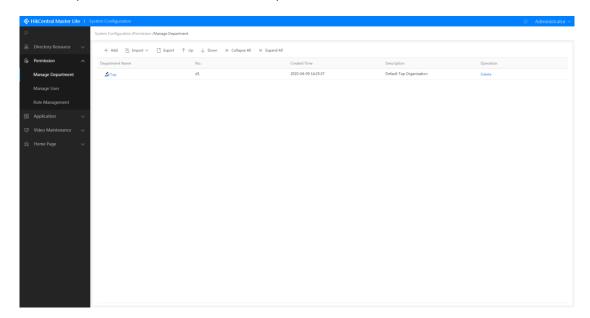
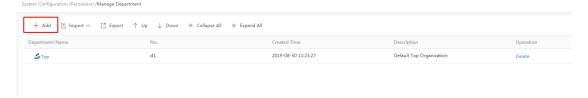


Figure 4.9-59 Department List

2. Department Adding

Departments can be added in Department Management. The steps are as follows:



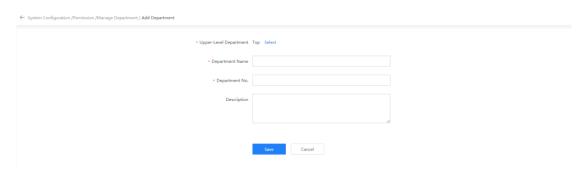


Figure 4.9-60 Department Adding

Label	Description
1	Click the "Add" button in Department Management to enter the Add Department interface
2	You can select the Upper-Level Department and enter the Department Name, Department No., and Description (fields with " * " are required)
3	Click the "Save" button to add department

3. Department Sorting

Departments can be sorted by moving departments up or down the list. The steps are as follows:

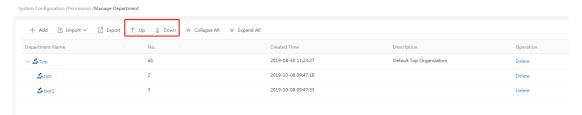


Figure 4.9-61 Department Sorting

Label	Description
1	Select the department that you want to change the order of in the department list
2	Click "Up" or "Down" to adjust the order of the department on the department list (when a department is the only one under a parent department, its order cannot be changed)

4. Department Export

All the information in a department can be exported in Department Management. Click the "Export" button on top of the department list and the browser will automatically download a file containing all the department information (in xls file format) and can be viewed in the browser's download manager.

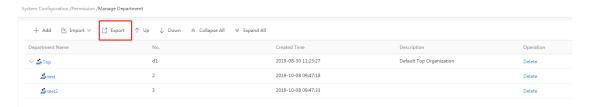


Figure 4.9-62 Department Export

5. Department Import

A correctly formatted department file can be imported in Department Management. When an import error due to data content error occurs, a department import error report can be downloaded to check the error details.

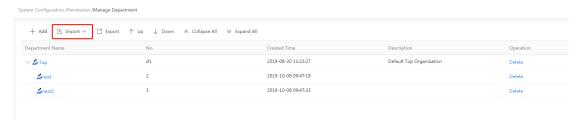


Figure 4.9-63 Department Import

Label	Description
1	Click the "Import" button and a drop-down menu will appear
2	Click the "Import" button in the drop-down menu and a window will appear. Here, you can select the Excel file you want to import (file must be in xls format)
3	Select the Excel file you want to import (file must be in xls format)
4	Click the "Open" button to start importing
5	When the notification in 5 is shown, the import has been completed successfully
6	When an import error occurs due to data content error, a department import error report can be downloaded to view the error details (The downloaded file is an Excel file, which shows the errors within the data content) Click the "OK" button to close the window

6. Department Deleting

Departments can be deleted in Department Management. Departments cannot be deleted if users exist in the department or its sub-departments. The steps for deleting departments are as follows:

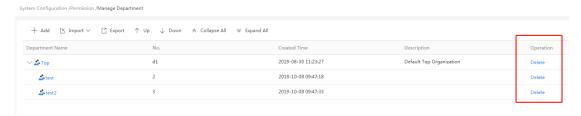


Figure 4.9-64 Department Deleting

Label	Description
1	Click the "Delete" button on the right side of the department you want to delete, and a delete confirmation window will pop-up
2	Click "OK" to delete the department

7. Department Information Checking

Click the department name to view department information which includes the "Basic Information" and "Linked Role" boxes.

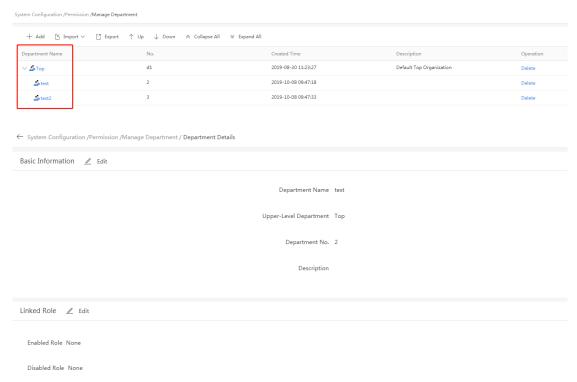


Figure 4.9-65 Department Information Checking

Label	Description
1	Click the department name of the department whose information you want to check to enter the department details page
2	You can view the Basic Information for the department including Department Name, Upper- Level Department, Department No., and description
3	You can also view the roles linked to the department and the role permissions linked to the department

8. Department Information Editing

Department "Basic Information" and "Linked Role" can be edited. Department No., and Upper-Level Department cannot be edited in "Basic Information".

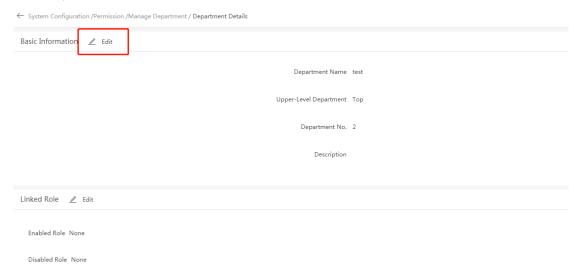


Figure 4.9-66 Department Information Editing

Label	Description
1	Click the department name of the department whose information you want to edit to enter the department details page
2	If you want to edit the department's "Basic Information", click on the "Edit" button in the Basic Information box to enter the Edit Basic Information interface. See the section below for the steps
3	If you want to edit the department's linked roles, click on the "Edit" button in the Linked Role box to enter the edit department permission interface. See the detailed section below for the steps

(1) Editing Basic Information

Click the "Edit" button to enter the Edit Department Information details page. The steps are as follows:

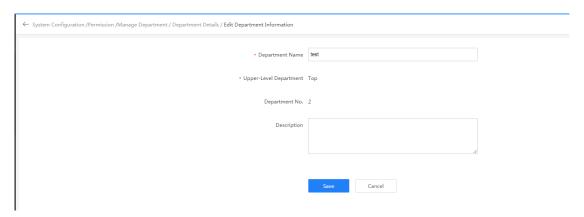
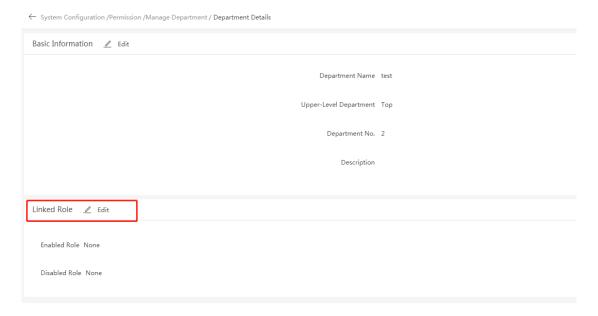


Figure 4.9-67 Editing Basic Information

Label	Description
1	In the Department Details page, click the "Edit" button in "Basic Information" to enter the edit department information interface
2	Edit the Department Name and Description. Upper-Level Department and Department No., cannot be edited
3	Click the "Save" button to finish editing Basic Information

(2) Editing Linked Role

Go to the edit department permission interface by clicking on the "Edit" button after "Basic Information" in the Department Details page



← System Configuration / Permission / Manage Department / Department Details / Edit Department Permission

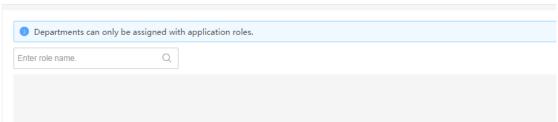


Figure 4.9-68 Editing Linked Role (Permission Information)

Label	Description
1	You can enter keywords or full name of the department you want to search for in the search box, and click " " to start search
2	Click the roles you want to link with the department. After linking, the department will have the permissions of the linked roles
3	Roles that are already linked will be shown at the end of the list. You can click them again to unselect them, and they will be no longer be linked to the department after saving
4	Click the "Save" button to link role (permissions)

4.9.2.2.2 Department Extension Fields

Additional extension fields can be added to store additional department information. Extension field content is added in Data Dictionary as shown in the figure below. You can add department extension field content in Data Dictionary Management.

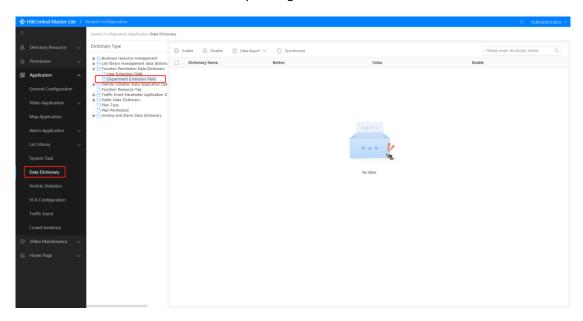


Figure 4.9-69 Department Extension Fields

4.9.2.3 Role Management

Roles are the different positions and rankings within a company. After configuring the roles, corresponding permissions can be allocated to departments and users. The Role Management interface includes Role List, Role Deleting, Role Enabling/Disabling, Role Basic Information Adding/Editing, Role Permission Information Adding/Editing, Organization Permission Copying, Role Distributing, and other functions.

4.9.2.3.1 Role List Management

1. Role List

The home page of Role Management displays the Role List, and shows the created "application roles" and "administrative roles" currently in the system. The list information includes: Role Name, Status, Description, Created Time, etc.

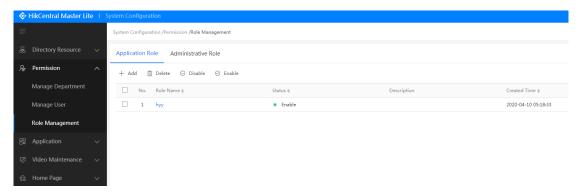


Figure 4.9-70 Role List

2. Role Deleting

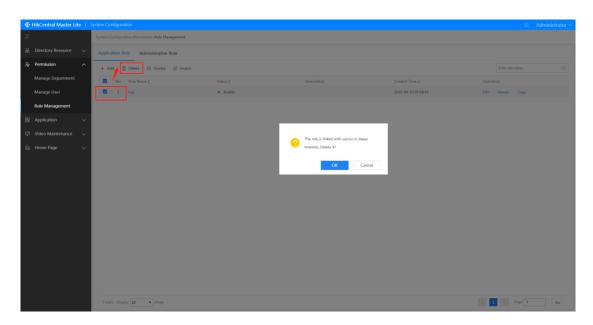


Figure 4.9-71 Role Deleting

Label	Description
1	Select the application roles or administrative roles you want to delete in the department list
2	Click the "Delete" button and a delete confirmation window will pop-up
3	Click "OK" to delete the roles

3. Role Enabling/Disabling

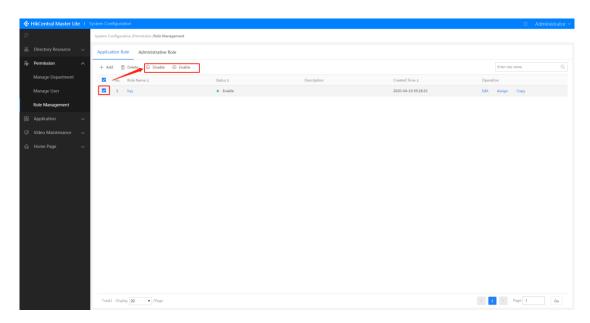
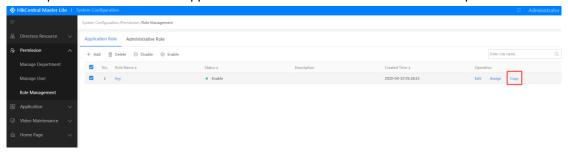


Figure 4.9-72 Role Enabling/Disabling

Label	Description
1	Select the application roles or administrative roles you want to enable/disable in the department list
2	Click the "Enable" button to enable the selected roles Click the "Disable" button to disable the selected roles

4. Role Copying

All the permissions of selected application roles or administrative roles can be copied.



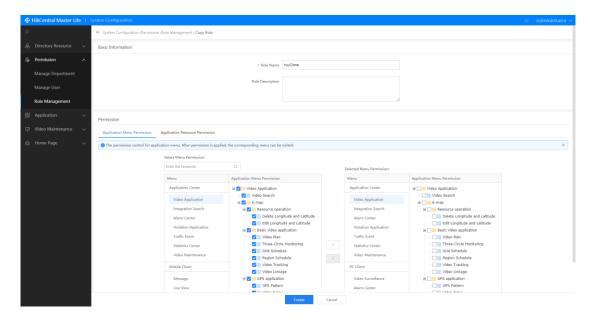
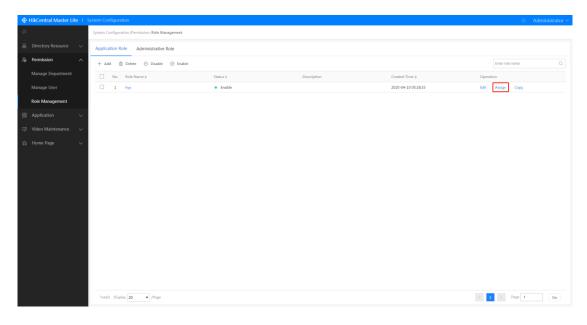


Figure 4.9-73 Copying Application Roles

Label	Description
1	Click the role names of the roles you want to copy in the Application Role list in the Role Management interface and click the "Copy" button. You will be taken to the Copy Role interface (Click Edit to manage the copied role in the same way)
2	You can enter the Role Name and Role Description in the Basic Information section
3	The Permission section shows the role's "menu permissions", "resource permissions", etc.
4	Click the corresponding menu and use " " to select the permission or use " " to cancel the permission selection;
5	Click the "Create" button to finish copying the role

5. Role Distributing

Distribute selected role to any department or user.



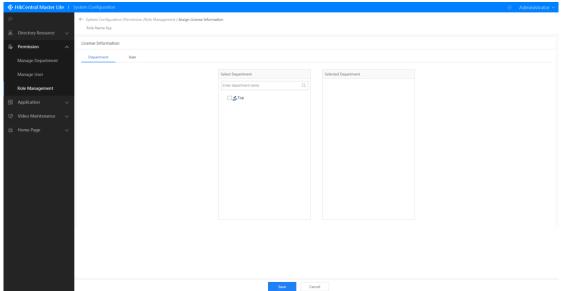


Figure 4.9-74 Role Distributing

F	
Label	Description
1	Click the "Assign" button on the right of the Application Role or Administrative Role you want to assign in the Role Management interface to enter the "Assign License Information" interface
2	You can assign permissions to departments. Select the department that you want to assign roles to from the department tree. The selected departments will be shown in the "Selected Department" area
3	You can assign permissions to users. Select a department from the department tree, and all the users in the department will be shown on the right. Select the users you want to assign roles to, and the selected users will be shown in the "Selected User" area
4	Click the "Save" button to complete role assignment

4.9.2.3.2 Administrative Role Management

Administrative Role permissions can be added/edited. This includes "menu permissions" and "resource permissions". Menu Permission: menu permissions configuration; Resource Permissions: before selecting resource permissions, the resource directories must first be configured before configuring the corresponding resources.

1. Administrative Role Adding

(1) Add Menu Permissions

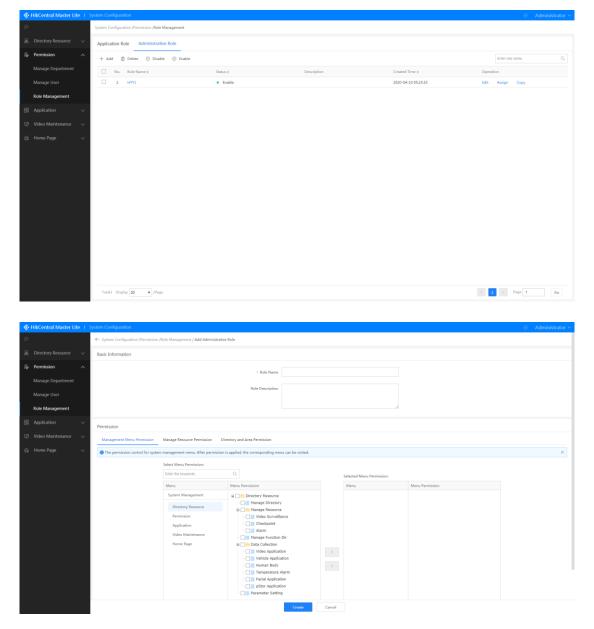


Figure 4.9-75 Add Role Function Permissions

Label	Description
1	Select the administrative role in the Role Management interface and click "Add" to enter the Add Administrative Role interface
2	Enter the Role Name and Role Description in the Basic Information box (fields with "*" are required)
3	Click "Menu Permission" to display the menu permissions
4	Select the menus, such as Directory Resource Management, User Permission Management, etc., you want to add to the role from the menu list. After clicking on the items, the menu permissions will appear on the right. The selected permissions will be added to the role
5	Click the """ button to add the selected permissions to the "Selected Menu Permission" area Click the """ button to remove the selected permissions from the "Selected Menu Permission" area
6	The selected function permissions will appear in this area. You can select permissions and take the steps in 5 to remove them
7	Click "Create" to add the permissions to the role

(2) Adding Administrative Resource Permissions

After adding menu permissions in the Add Administrative Role interface, you can continue adding administrative resource permissions to roles. The steps are as follows:

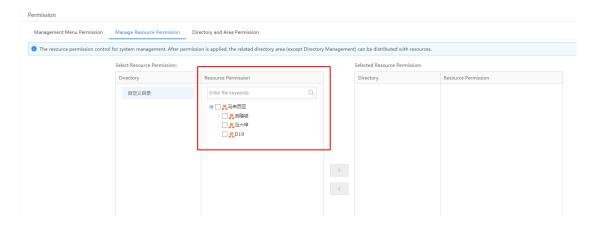


Figure 4.9-76 Adding Administrative Resource Permissions

Label	Description
1	Click the "Manage Resource Permission" button in the add role interface to switch to the resource function permissions interface
2	Select the directory with the resource function permission that you want to add to the role (including Basic Directory and Service Directory). The resources included in each directory is shown on the right

3	Select the resource permissions you want
4	Click the " " button to add the corresponding resource permissions to the "Selected Resource Permissions" area
5	Confirm the selected resource permissions
6	Click the "Create" button to add the administrative resource permissions

2. Edit Role Permissions

(1) Edit Menu Permissions

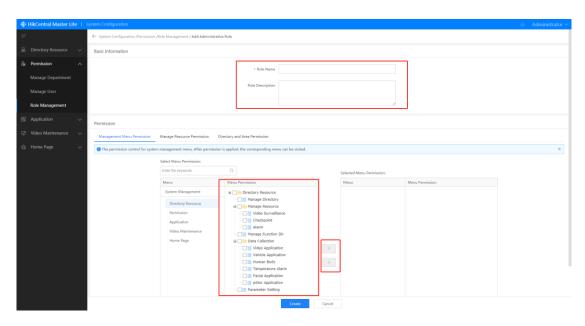


Figure 4.9-77 Edit Role Function Permissions

Label	Description
1	Click the "edit" button on the right of the role you want to edit in the Role Management interface to enter the edit basic information interface
2	Enter the Role Name and Role Description in the Basic Information box (fields with "*" are required). Click "Function Permission" to display the Function Permissions interface
3	Click the """ button to add the selected menu permissions to the "Selected Menu Permissions" area Click the """ button to remove the selected permissions from the "Selected Menu Permissions" area
4	Click the "Save" button to complete editing the menu permissions

(2) Edit Management Resource Permissions

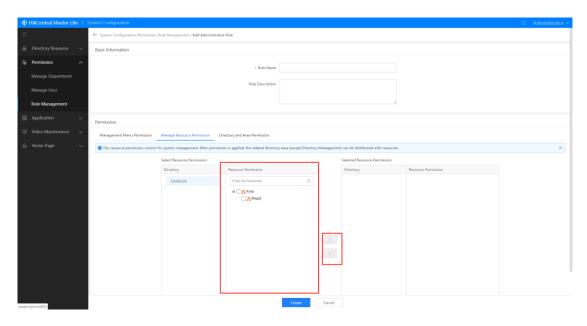


Figure 4.9-78 Edit Management Resource Permissions

Label	Description
1	Click "Manage Resource Permissions" in the Edit Basic Information interface to enter the resource function permissions interface
2	Edit the basic information including Role Name and Role Description
3	Operation is identical to adding resource permissions: Use " " and " " to select or cancel the selected items
4	Click "Save" to complete editing role permissions

4.9.3 Application Configuration Center

4.9.3.1 General Configuration

General Configuration is composed of the two modules of Login Configuration and Arming Configuration.

4.9.3.1.1 Login Information Configuration

The Maximum Number of Online Users, Password Expiry Date, Authentication Type, Login Type, and other settings can be configured in Login Configuration.

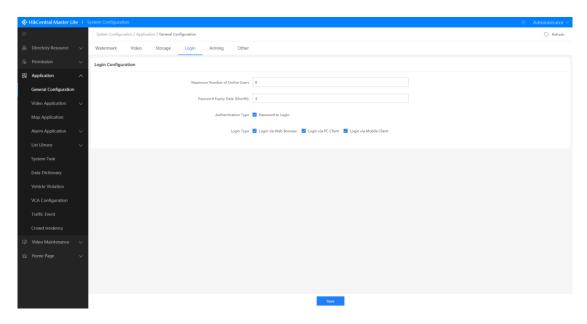


Figure 4.9-79 Login Configuration

4.9.3.1.2 Watermark Configuration

Watermarks on videos and pages can be enabled or disabled

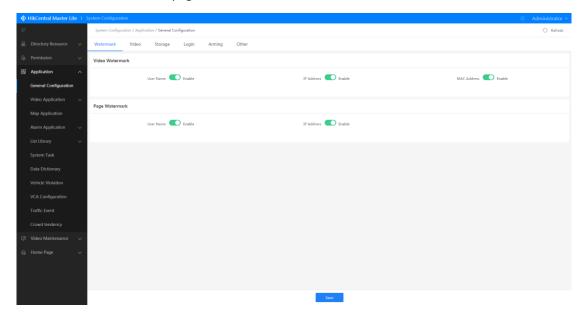


Figure 4.9-80 Watermark Configuration

4.9.3.1.3 Video Configuration

The Pre-play and Post-play Time can be configured

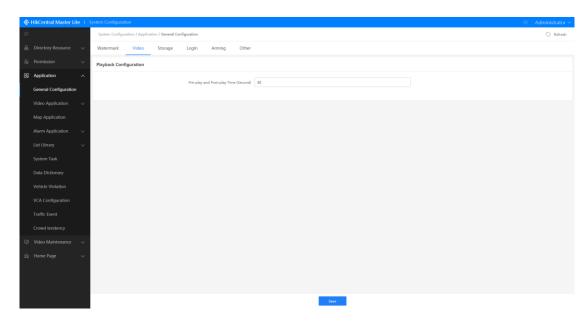


Figure 4.9-81 Video Configuration

4.9.3.1.4 Storage Configuration

Cloud storage configuration

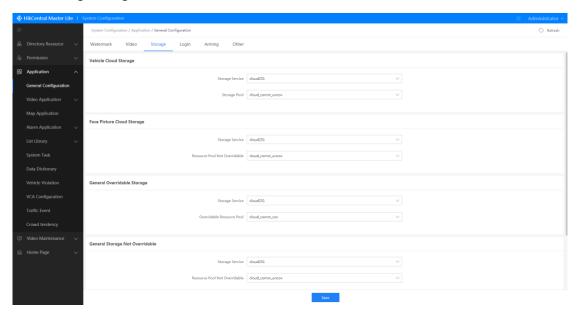


Figure 4.9-82 Storage Configuration

4.9.3.1.5 Arming Configuration

Used for configuring arming related settings, arming review options and arming quantity. Arming review options can be enabled/disabled.

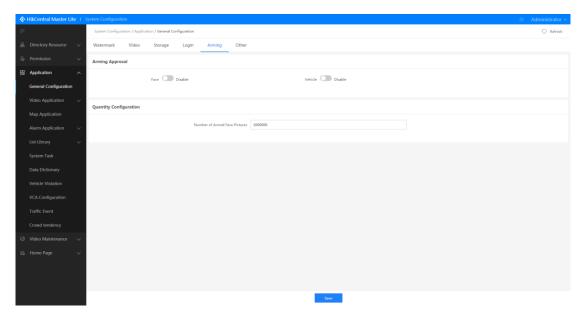


Figure 4.9-83 Arming Configuration

4.9.3.1.6 Other Configurations

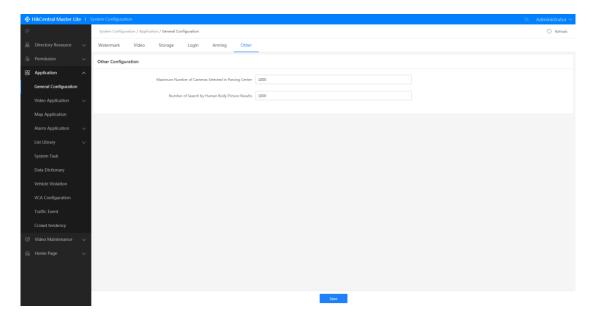


Figure 4.9-84 Other Configurations

4.9.3.2 Video Application Management

Video Application Management is divided into the two main modules of Recording Schedule Management and Media Scheduling Management.

4.9.3.2.1 Recording Schedule Management

Recording Schedule Management can be classified into Camera Configuration Management and

Schedule Template Configuration.

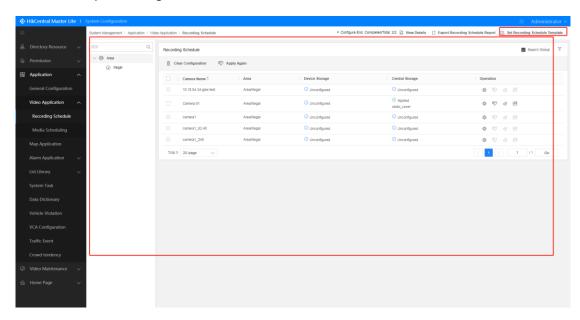


Figure 4.9-85 Recording Schedule Management

1. Camera Configuration Management

(1) Recording Schedule Configuration

Camera recording schedule configuration can be performed via the Camera Configuration Management interface and cameras that have already been configured can be edited. The operational steps for editing already configured cameras is the same, and will be introduced together as shown in the figure below.

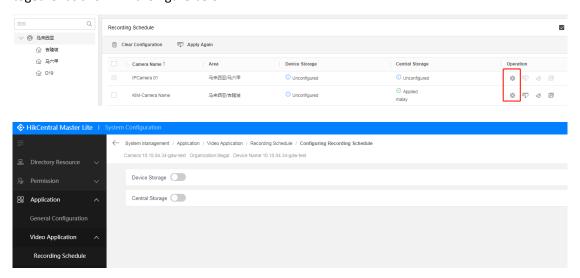


Figure 4.9-86 Recording Schedule Configuration

Label	Description
1	Find the organization that the camera with the recording schedule you want to edit is in from the organization tree. The cameras under the organization will be listed in the interface
2	Click the "Configure" button on the right of the camera you want to configure to enter the Recording Schedule Configuration interface
3	Click "Device Storage" to enable the device storage function, and the window shown 4 will appear
4	The Stream Type, Schedule Template, Recording Storage Time, and Audio Records can be configured in the Device Storage box
5	Click "Central Storage" to enable the central storage function, and the window shown in 6 will appear
6	Stream Type, Resource Pool, Streaming method, and Schedule Template can be configured in the Central Storage box
7	Click the "Save" button to complete recording schedule configuration

(2) Camera Configuration Statistics

Hover the mouse over the organization name in the resource tree in Camera Scheduling Management, and a window with the camera schedule status statistics for the organization will appear on the right. This will show the number of successful applications of camera recording schedules under the organization, the number of failed applications, the number of unconfigured schedules and the total number of schedules. This function clearly and intuitively shows the camera recording schedule configuration statuses under the organization. This is particularly useful for showing statistics conveniently when there are many cameras.

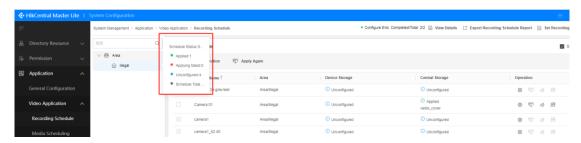


Figure 4.9-87 Camera Configuration Statistics

(3) Camera Configuration List

The Camera Configuration List shows all the cameras under an organization and shows the Camera Name, Area, statues of storage methods, storage location, and other information.

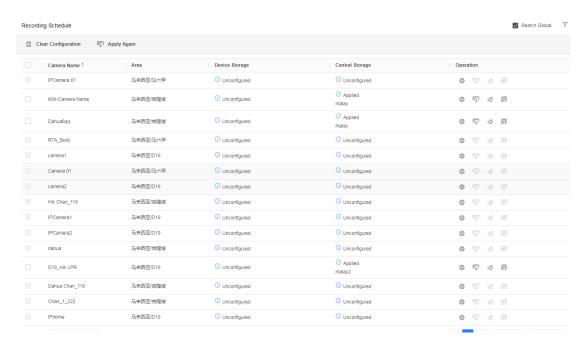


Figure 4.9-88 Camera Configuration List

(4) Camera Configuration Search

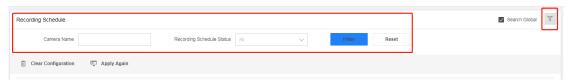


Figure 4.9-89 Camera Configuration Search

Label	Description
1	Click the "\sqrt{"}" button in the upper right corner of the Recording Schedule management interface and the window in 2 will appear
2	You can enter the Camera Name or select a Recording Schedule Status to filter and you can click "Reset" to clear the search content

(5) Clear Configuration

Click the "Clear Configuration" button in the Recording Schedule management interface and a drop-down menu will appear. You can select "Clear Configuration", "Clear Exceptional Configuration", and "Clear All Configuration" from the drop-down menu as shown in the figure below.

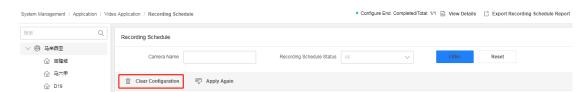


Figure 4.9-90 Clear Configuration Button

(6) Clear Configuration Function

"Clear Configuration" will clear the configurations for the selected camera(s). The selected camera(s) must be already configured. Unconfigured cameras cannot be used with the "Clear Configuration" operation.

Label	Description
1	Select the organization of the camera which you want to clear configuration
2	Select the cameras you want to clear configurations for from the camera list (batch delete is available)
3	Select "Clear Configuration" from the drop-down menu that appears after clicking the Clear Configuration button, and a configuration deletion confirmation window will appear
4	You can also click the "Clear Configuration" button on the right of the camera you want to delete configurations for, in the interface. Similarly a confirmation like the one shown in 5 will appear (this clearing method only works for individual cameras)
5	Click the "OK" button to complete clearing the recording schedule configurations

(7) Clear Exceptional Configuration

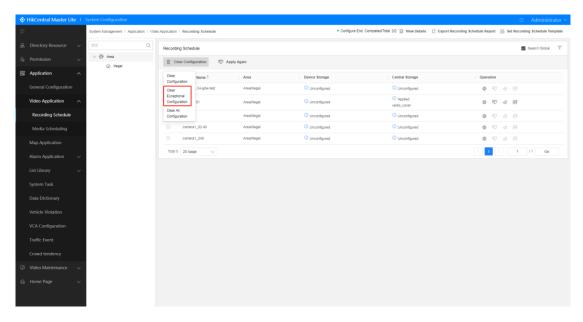


Figure 4.9-91 Clear Exceptional Configuration

Label	Description
1	Select the organization of the camera which you want to clear exceptional configuration (exceptional configuration includes failed applications, configuration exception, etc.)
2	Select "Clear Exceptional Configuration" from the drop-down menu that appears after clicking the Clear Configuration button, and all the cameras with exceptional configurations under the organization will be cleared

(8) Clear All Configuration

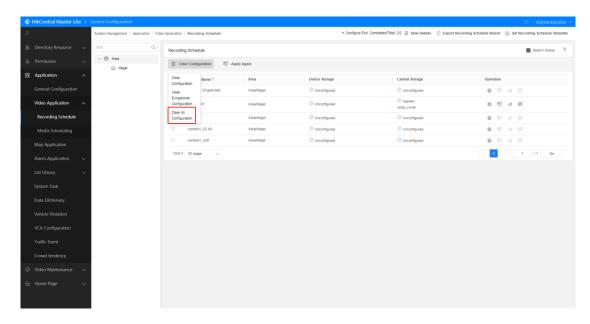


Figure 4.9-92 Clear All Configuration

Label	Description
1	Select the organization of the camera which you want to clear all configurations
2	Select "Clear All Configuration" from the drop-down menu that appears after clicking the Clear Configuration button, and all configured cameras under the organization will be cleared

(9) Apply Again

When a camera exception or configuration error occurs, or if configuration has been modified, you can click the "Apply Again" button to apply the latest configuration to the cameras so that the camera statuses are synchronized with their configuration.

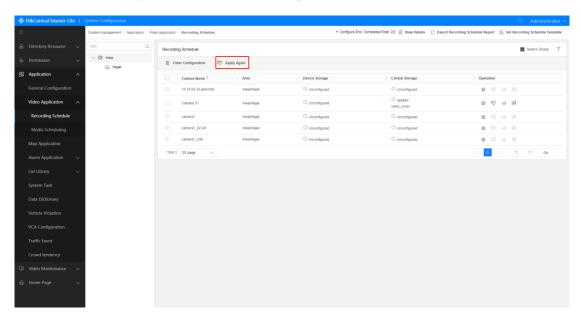


Figure 4.9-93 Apply Again

Label	Description
1	Select the organization of the camera you want to perform the "Apply Again" operation on
2	Select the cameras on which you want to apply the recording schedule, then click the "Apply Again" button above the list; or click the "button in the list You can select "Apply Exception Schedule" or "Apply All Schedule" to complete the corresponding applications under the organization
3	Click the "OK" button to complete the operation

(10) Copy Recording Schedule

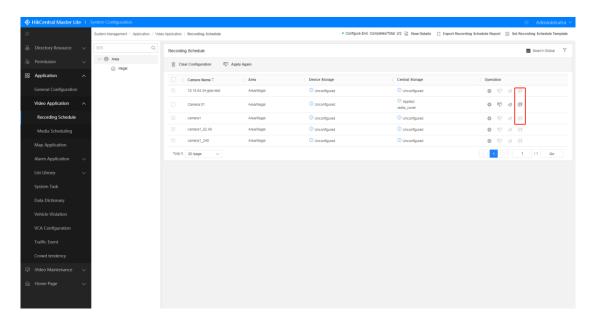


Figure 4.9-94 Copy Recording Schedule

Label	Description
1	Select the organization of the camera you want to copy recording schedule from
2	Click the "Copy Configuration" button on the right of the camera you want to copy the recording schedule from, and a Copy Recording Schedule configuration window will pop-up
3	You can select the recording schedules you want to copy from the recording schedules area, and you choose to either store recordings in device storage or central storage (if there is only one recording schedule, device storage, or central storage for the camera you want to copy, only the original recording schedule configured for the camera is shown in this area)
4	Select the camera you want to copy the recording schedule to from the organization tree
5	Click the "Save" button to copy the recording schedule

2. Schedule Template Configuration

You can view all the schedule templates in the Schedule Template interface. You can click the templates you want to view on the left and the template information will be displayed on the right.

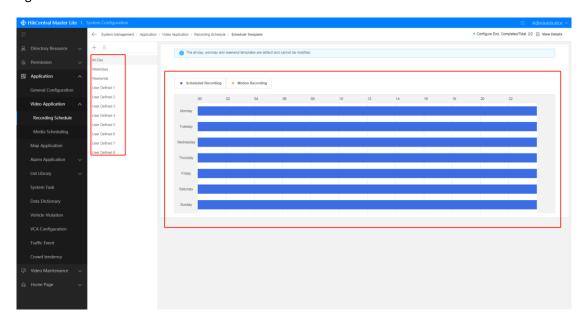


Figure 4.9-95 Template List

(1) Edit Schedule Template

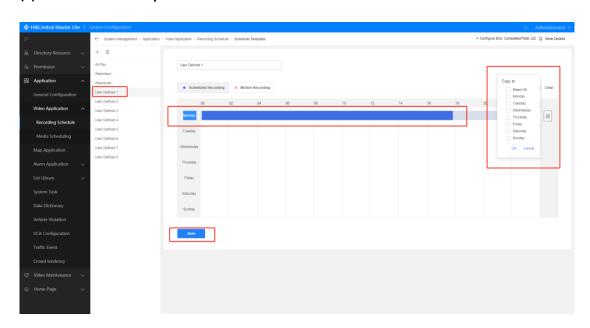


Figure 4.9-96 Edit Schedule Template

Label	Description
1	Select the schedule template you want to edit (All days, work days, and weekend templates

	are default templates, and cannot be modified)
2	You can change the name of the templates (cannot be blank)
3	After selecting recording type (blue is scheduled recording, orange is moving recording), you can set the time Interval of schedule template by dragging on the time bar. Left-click to select a Interval, and a time Interval window will appear above the Interval where you can enter the time Interval with precision to the minute
4	You can click the " " copy button after a configured scheduled recording Interval and a "Copy to Day" window will appear where you can select which day to copy the settings to (can select multiple days)
5	Click the "Clear" button to clear all the Interval on the time bar of the schedule template
6	Click the "Save" button to save the edited template interval If you want to cancel editing the template, you can click on another template as shown in 1 to cancel editing

(2) Add Schedule Template

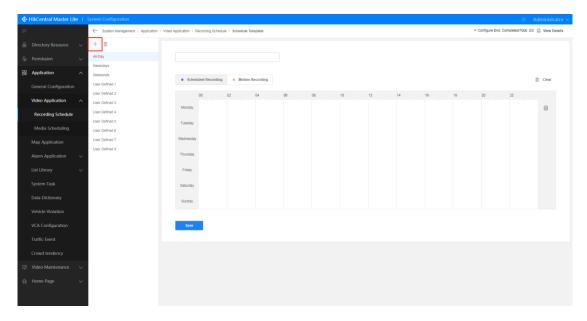


Figure 4.9-97 Add Schedule Template

Label	Description
1	Click the "Add" button above the template list and an empty template will be displayed
2	Enter the template name and edit the time Interval of the template on the time bar. For more details of the steps see the section "Edit Schedule Template"
3	Click the "Save" button to add the schedule template

(3) Delete Schedule Template

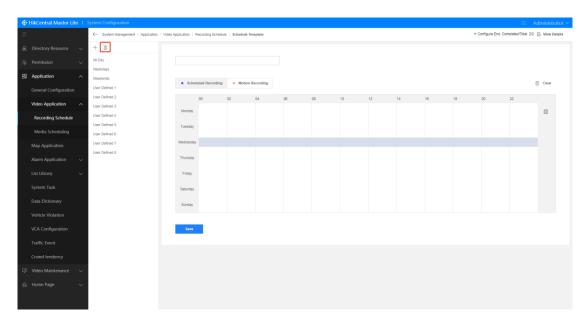


Figure 4.9-98 Delete Schedule Template

Label	Description
1	Select the schedule templates you want to delete from the template list
2	Click the "Delete" button and a delete recording schedule confirmation window will pop-up
3	Click "OK" to delete the recording schedule

4.9.3.2.2 Media Scheduling Management

1. Media Configuration

All covered scenes, including root-level live view and playback, cascade live view and playback, central storage playback, and stream forwarding are displayed in the "Scene" list. Click on cascade live view and playback, central storage playback, or stream forwarding to use the following functions (no other functions are included besides scene list functions for root-level live view and playback. This scene uses smart media scheduling strategies and media load status auto matching to optimize media links so that users get the best results without manual configuration):

(1) Scene List

The Scene List shows all the covered scenes which currently include root-level live view and playback, cascade live view and playback, central storage playback, and stream forwarding. We will use root-level live view and playback and cascade live view and playback as examples to

introduce how to operate the system, as shown in the figure below. Click the scene you want to view in the scene list, and the media for this scene will be listed. These can be classified by group, and can be expanded or hidden.

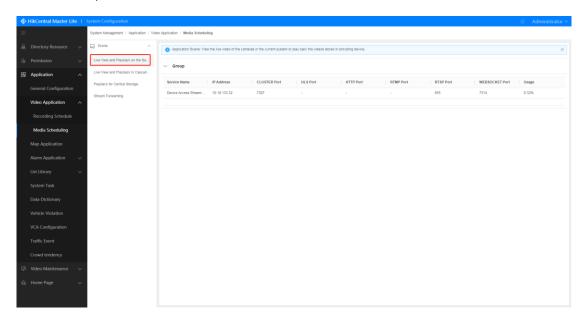


Figure 4.9-99 Scene list

(2) Add Media Group

Using central storage as an example, the detailed steps for adding a media group are as follows:

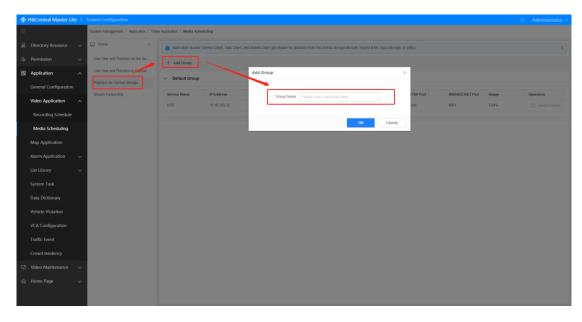


Figure 4.9-100 Adding Media Group

Label	Description
1	Click the "Add Group" button and an Add Group window will pop-up
2	Enter the Group Name (maximum of 32 characters, cannot contain special characters)

3 Click the "OK" button to add group

(3) Delete Media Group

Using central storage as an example, the detailed steps for deleting a media group are as follows:

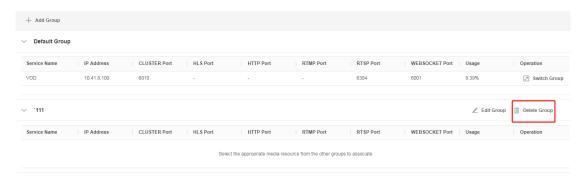


Figure 4.9-101 Delete Media Group

Label	Description
1	Click the "Delete Group" button to the right of the group you want to delete and a delete group confirmation window will pop-up (default group cannot be deleted)
2	Click the "OK" button to delete group

(4) Edit Media Group

A media group's name can be edited. Using central storage as an example, the detailed steps for editing a media group are as follows:

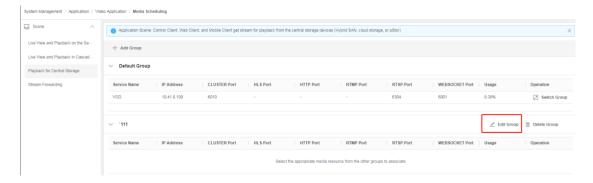


Figure 4.9-102 Edit Media Group

Label	Description
1	Click the "Edit Group" button to the right of the group you want to edit and a edit group confirmation window will pop-up (default group cannot be deleted)
2	Enter the new Group Name you want to rename to (maximum of 32 characters, cannot contain special characters)
3	Click the "OK" button to edit the group

(5) Moving Media

Using central storage as an example, the detailed steps for moving media are as follows:

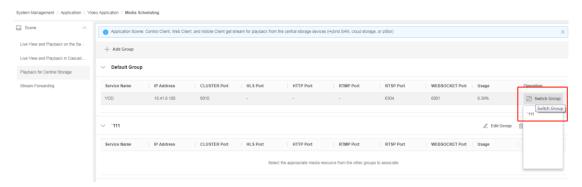


Figure 4.9-103 Moving Media

Label	Description
1	Click on the expand button in front of the media group and all the media under this group will be displayed
2	Click the "Switch Group" button for the media you want to move and a drop-down menu will appear will all the groups in the scene
3	Click the name of the group you want to move the media to and a group switch confirmation window will pop-up
4	Click "OK" to switch group

4.9.3.3 Map Application Management

4.9.3.3.1 Map Application Configuration

Only Map Application Configuration is currently available in Map Application Management. This includes Coordinate System, Initial View, Zoom Level, Resource Layer, Default Parameter, and other configurations.

1. Coordinate System

The coordinate system configuration supports the switching between the Mercator coordinate system and the standard coordinate system.

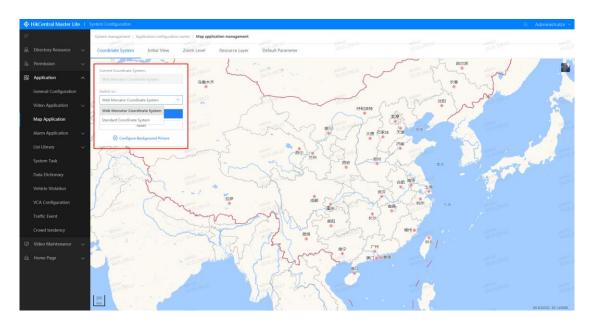


Figure 4.9-104 Coordinate System Configuration

Label	Description
1	You can select between the Mercator coordinate system and the standard coordinate system
	Click "Save" to switch coordinate systems; Click the "Reset" button to switch back to the system default coordinate system;
2	Click " Click " Copen a new page and enter the HGIS system configuration. See "HGIS System Manual" for details on using this page

2. Initial View

Settings for the initial map view can be configured including setting of the initial center point and initial map level.

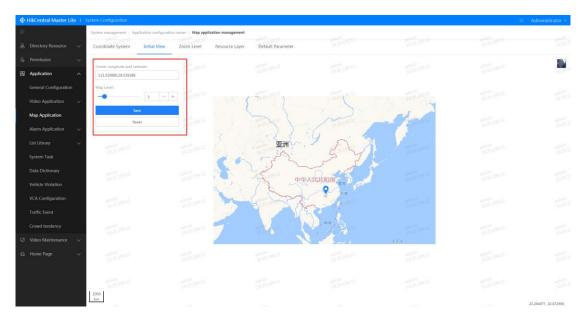


Figure 4.9-105 Initial View Configuration

Label	Description
1	Click the "Initial View" button on the top of the Map Application Configuration interface to
1	enter the Initial View settings interface
	The "\gamma" icon represents the center point of the initial view for the current map. You can drag
2	it in the map to move it. When the center point is moved, the longitude and latitude values
	shown in 2 will also change
	You can directly enter the longitude and latitude to change the center point of the initial
	view of the current map;
3	You can drag the progress bar or click "+" or "-" to change the map zoom level in the Map
	Level option The higher the zoom level, the greater the map magnification factor; the lower
	the zoom level, the smaller the map magnification factor and the view becomes wider;
	Click the "Save" button to complete the initial view settings;
4	Click the "Reset" button to restore the longitude and latitude values, and the map zoom level
	to the system default values

3. Aggregation Level Configuration

Similar types of resources can be aggregated together to reduce the clutter on the page. The aggregation level can be set in the Aggregation Level Configuration, and the number of devices in a surrounding area can be displayed in numerical form on the map.

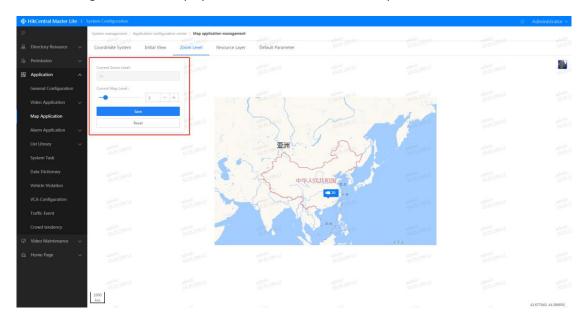


Figure 4.9-106 Aggregation Level Configuration

Label	Description
1	Click the "Aggregation Level" button on the top of the Map Application Configuration interface
1	to enter the Aggregation Level settings interface
	When the map zoom level reaches the set aggregation level, similar types of resources within
2	a certain radius will be aggregated together and represented in numerical form to show the
	number of devices in a surrounding area. You can zoom in further to view the individual
	resources
	You can drag the progress bar or click "+" or "-" to change the map zoom level in the current map.
2	You can also move the mouse onto the map and use the scroll wheel to zoom in and out. The
3	higher the zoom level, the greater the map magnification factor, and the greater the details; the
	lower the zoom level, the smaller the map magnification factor, and the wider the view;
	Click the "Save" button to set the current map level as the current aggregation level;
4	Click the "Reset" button to restore the aggregation level to the system default value (system
	default aggregation level is 15)

4. Resource Layer Configuration

Click the "Resource Layer" button above the Map Application Configuration interface to enter the Resource Layer Configuration interface to configure camera and geographical resources.

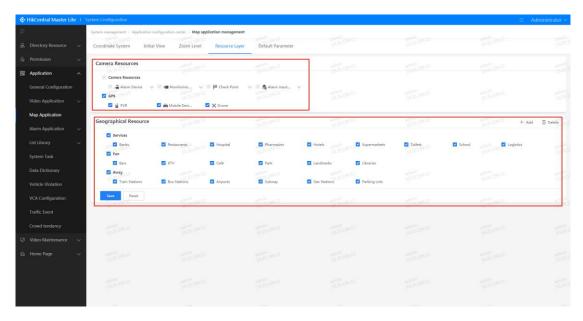


Figure 4.9-107 Resource Layer

5. Function Parameters

You can configure all types of system function parameters, as shown in the figure.

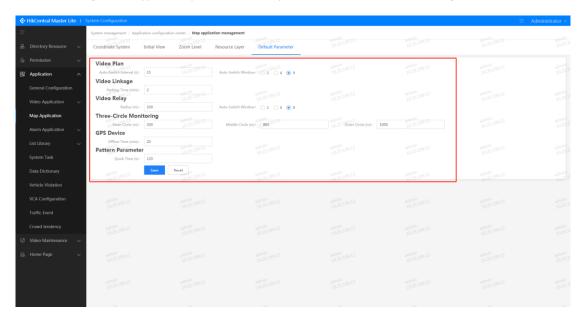


Figure 4.9-108 Function Parameter Configuration

Label	Description
1	Click the "Default Parameter" button on the top of the Map Application Configuration
1	interface to enter the Default Parameter settings interface
	The default parameters for Video Plan, Video Linkage, Video Relay, Three-Circle Monitoring,
2	GPS Device, and Pattern Parameter can be configured and edited in the Default Parameter
2	interface. After configuration, the default parameters for each function will be refreshed and
	displayed in "Video Search—E-map—Toolkit"
3	Click the "Save" button to complete configuration of the default parameters

4.9.3.4 Alarm Application Management

Alarm Application Management can be divided into the two modules of VCA Alarm Configuration and Alarm Device Linkage Configuration.

4.9.3.4.1 VCA Alarm Configuration

VCA Alarm Configuration operations can be classified as VCA Alarm Management and VCA Alarm Display, as shown in the figure below:

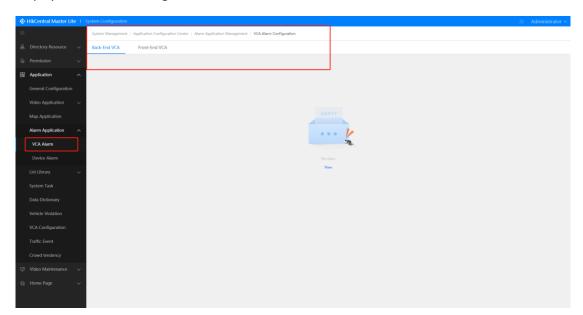


Figure 4.9-109 VCA Alarm Configuration

VCA Alarm Management includes viewing/editing alarm information, rules settings, adding analysis alarms, basic management, data export, and other functions.

1. Information Display

Display by page all Video Parsing alarm message in list, including analysis type, device name, priority, alarm type and linkage action.

2. Add Analysis Alarm

VCA alarm rules can be configured; new analysis alarms can be added and analysis types can be configured (Front-end smart analysis or back-end smart analysis). Video Parsing rules and linkage information can also be configured.

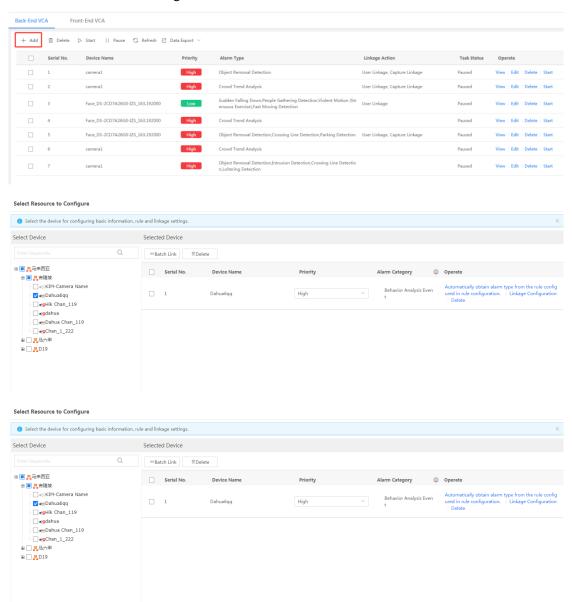


Figure 4.9-110 Add Analysis Alarm

Label	Description
1	Click the "Add" button in VCA Alarm Management to enter the add VCA Alarm interface
2	Back-End VCA is used for the smart behavioral analysis of back-end devices such as servers, and the configuration of the linkage for the generated alarms; Front-End VCA is used for front-end devices and the configuration of the linkage for the generated alarms;
3	Use the resource tree in Basic Directory in the resource configuration box to add devices (you can also click the "Map Selection" button to select device from a map). After adding the device, it will be listed on the right, where you can configure its rules, perform linkage configuration or delete it Click "Rule Configuration" and the system will automatically open the rule configuration tool of the plug-in helper. Rules can be created for camera images (if you have not yet downloaded and installed the rules configuration tool, it will be automatically downloaded from the plug-in helper) Click "Linkage Configuration" to enter the alarm linkage configuration interface for alarm linkage settings
4	Click the "Complete" button to add new analysis alarm; Click the "Continue adding" button to continue adding analysis alarms

3. View Alarm Information

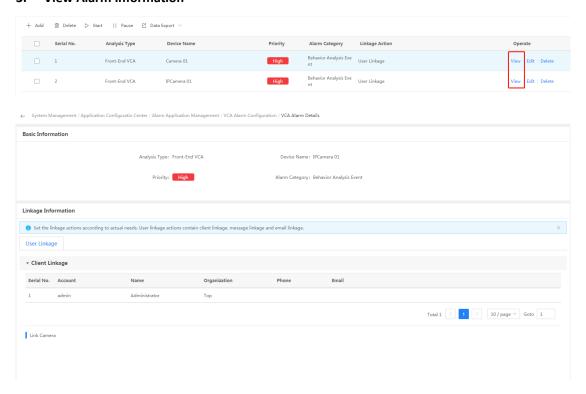


Figure 4.9-111 View Alarm Information

Label	Description
1	Click the "View" button on the right of the VCA alarm info you want to view in the VCA Alarm
1	Configuration interface to enter the VCA Alarm details interface
2	This view shows basic information including Analysis Type, Device Name, Priority level, and
2	Alarm Category of the VCA alarm
2	This view shows the linkage info of the VCA alarm and supports user linkage, capture image
3	linkage, alarm export, alarm on video wall, recording linkage, and PTZ linkage

4. Edit Alarm Information

You can edit existing alarm info. The steps are as follows:

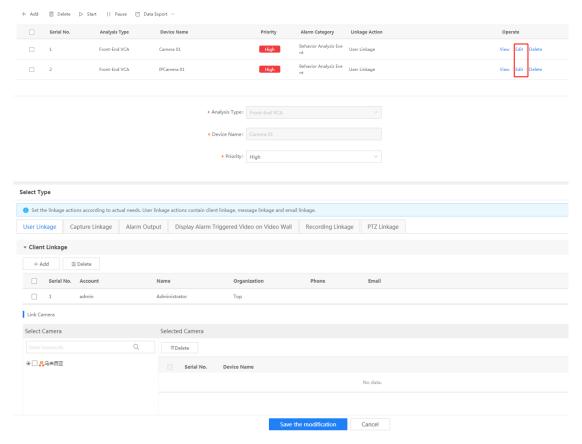


Figure 4.9-112 Edit Alarm Information

Label	Description
	Click the "More" button on the right of the VCA alarm info you want to view in the VCA Alarm
1	Configuration interface and a drop-down menu will appear. Select "Edit" from the drop-down
	menu to enter the Edit VCA Alarm interface
2	You can modify the Priority level in the Basic Information box
3	You can select the tab you want to edit in the alarm linkage view. We will use "User Linkage"
3	as an example for introduction to this feature
	You can add or delete client users in the User Linkage tab. When an alarm goes off the system
4	will automatically send alarm notifications to these users (SMS linkage and email linkage:
	alarm notification is sent to user's mobile phone or email address)
	You can select the cameras that you want to configure Video Parsing alarm on. When an
	alarm is triggered in these cameras, a notification will be sent to the client users;
5	Custom on-screen display content is also supported. You can set your own notifications which
	will be shown when an alarm is triggered. The default or set alarm notification content is
	shown in the right in "On-screen Display Preview"
6	After completing all the VCA alarm info editing, click the "Save the modification" button to
6	complete editing the alarm info

5. Alarm Filtering

Conditions are used to filter the alarms in the list. Conditions include alarm name and alarm level. Click on the " \mathbb{T} " button in the upper right corner of the VCA Alarm Configuration interface, and an alarm filtering interface will be shown. You can use conditions to filter the alarm list. Conditions include Analysis Type, Device Name, Priority Level, and Alarm Category. Click "Search"

to start filtering.

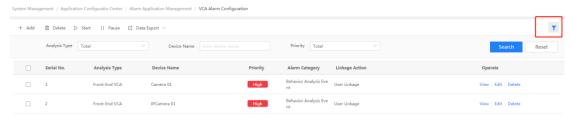


Figure 4.9-113 Alarm Filtering

6. Basic Management

Batch delete, enable and stop analysis alarm task.

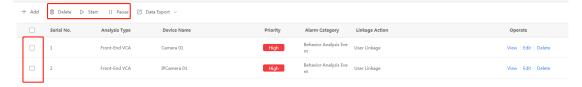


Figure 4.9-114 Basic Management

Label	Description
1	Select the alarm analysis you want to delete, start or pause, in the VCA Alarm interface
2	Click on the "Delete", "Start", or "Pause" buttons to perform the corresponding operations (start/pause alarm analysis type must be back-end smart analysis, start/pause operation cannot be used with front-end smart analysis)

7. Data Export

Export all, this page or selected analysis alarm data.

You can export all or the selected analysis alarm data. Click the "Data Export" button in VCA Alarm Management, and a drop-down menu will appear. You can select "Export All" or "Export Selected" from the drop-down menu. "Export All" will export all the alarm analysis, while "Export Selected" will export the selected alarm analysis. The exported file will be in the .xlsx Excel file format.

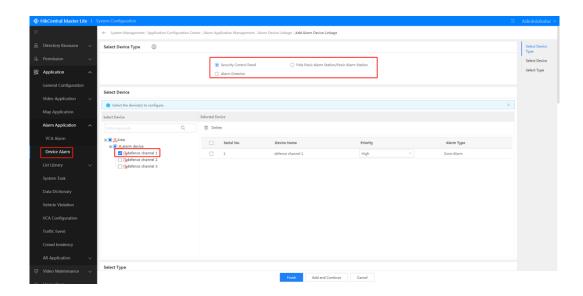


Figure 4.9-115 Data Export

4.9.3.4.2 Device Alarm Configuration

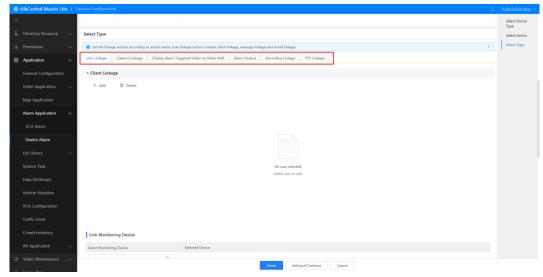
1. Add Alarm Device

Select a device type and configure relevant alarm settings.



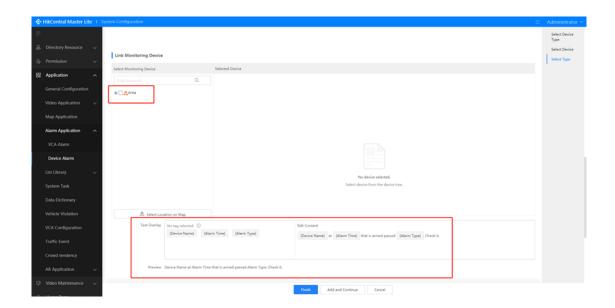
2. Configure Linkage Setting

Select configure linkage settings.



3. Configure Linkage Device

Select linkage video channels and edit linkage push notifications.



4.9.3.5 List Library Management

List Library management is divided into Manage List Library, Apply List Library, and List Library Setting.

4.9.3.5.1 Manage List Library

In Manage List Library, users can manage face list and vehicle list.

4.9.3.5.2 Face List

You can perform face list library configuration-related operations in this interface. Click on any face list library to enter the list. Here, you can perform pedestrian face record management-related operations. The operations are introduced below.

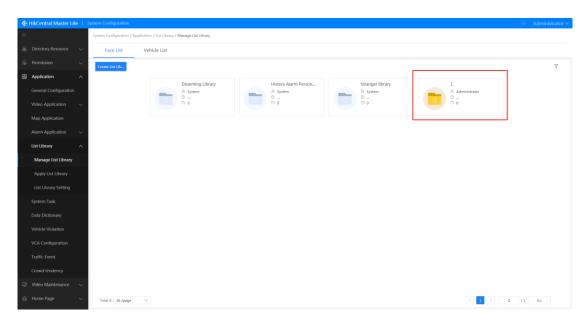
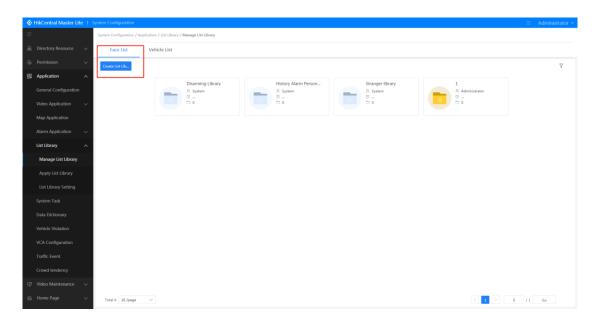


Figure 4.9-116 Face List Library Configuration

1. List Library Management

(1) Add List Library

You can add list libraries in the List Library Management interface. The created list library can be used to store specific types of face images, and be either shared or not shared, with specific users. User-created list libraries have the "" icon, while system list libraries have the "" icon.



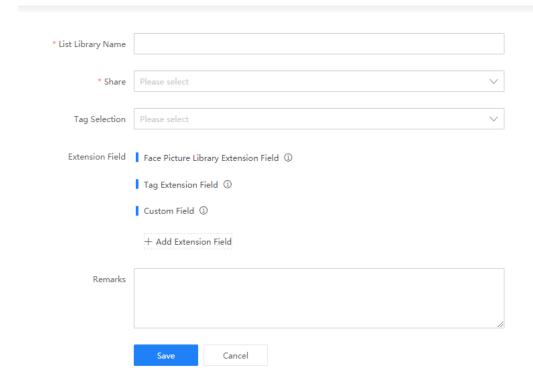


Figure 4.9-117 Add List Library

Label	Description
1	Click "Create List Library" in the List Library Management interface to enter the add list
	library interface
	You can enter the List Library name and Remarks, and you can select whether or not to
2	share. When "Share" is selected, you can select the users you want to share with in the
	sharing list
3	Click the "Save" button to complete adding list library

(2) Edit List Library

You can edit the list library name and remarks. The steps are as follows:

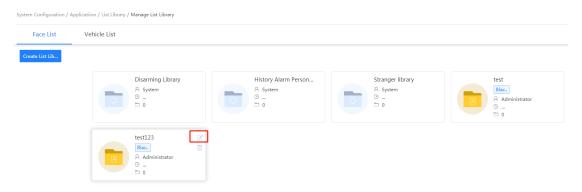


Figure 4.9-118 Edit List Library

Label	Description
	Move the mouse to any list library that you want to edit in the List Library Management
1	interface and a " utton will appear on the right of the list library. Click it to enter the edit
	list library interface
_	You can edit the name of the list library as well as the remarks, and set whether or not to
	share the library. When "Share" is set, you can select the users you want to share with in the

	sharing list
3	Click the "Save" button to complete the edit list library operation

(3) Delete List Library

You can delete list libraries and all their list data. The steps are as follows:

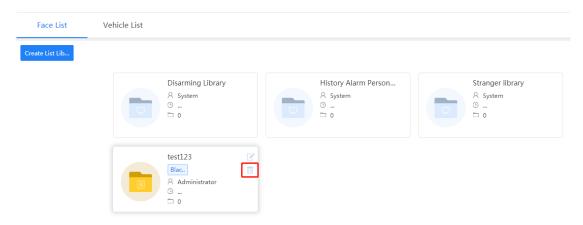


Figure 4.9-119 Delete List Library

Label	Description
	Move the mouse to any list library that you want to delete in the List Library interface, and a
1	" button will appear on the right of the list library. After clicking it, a list deletion
	confirmation window will pop-up
2	Click the "OK" button to delete the list library
	Click on any device in the drop-down menu. After clicking, a "\" mark will appear to the right
3	of the device name indicating that the device will be cascaded. Multiple devices can be
	cascaded
4	Click the "OK" button to cascade the device

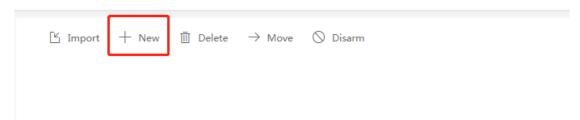
2. Face Record Management

You can add and delete face records, search faces conditionally, view face record details, disarm, move people across lists, and perform other functions in the Face Management interface. You can add new face records, delete face records, use condition search, and view face records.

(1) Add Face Record

You can upload face images and add personal information to a library in the Face Management interface. The steps are as follows:

← System Configuration / Application / List Library / Manage List Library / Face List / test123



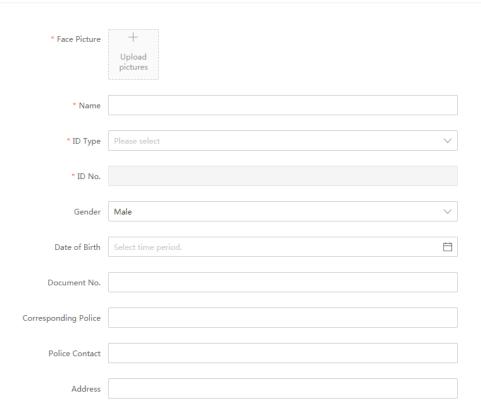


Figure 4.9-120 Add Face Record

Label	Description
1	After entering the list library from the Face Record Management interface, click the " $^{+~\%}$ " button to enter the add face record interface
2	You can upload face images, and enter Name, ID Type, ID number, Gender, Date of Birth, Nationality, Province, City, District, Document No., Corresponding Police, Police Contact no., Address, and other information in the add face record interface (fields with "*" are required)
3	The last two lines of information are user-added information and can be added/configured in "Face Application Management—Face Application Configuration"
4	After entering the information, click the "Save" button to complete adding new face record

(2) Delete Face Record

You can delete face images inside libraries and delete uploaded records in Face Record Management. The steps are as follows:

← System Configuration / Applicatiion / List Library / Manage List Library / Face List / test123

Light House Disarm

Figure 4.9-121 Delete Face Record

Label	Description
1	Click the face images in the Face Record Management interface for selection. Selected people

	will have a "V" marked on the upper right corner
2	Click the "
3	Click the "OK" button in the window and the face record will be deleted

(3) Condition Search

Click the " \mathbb{T} " button on the upper right corner in Face Record Management, and a search interface will appear. You can enter Name, Gender, Province, City, ID Type, ID No., and other information as conditions for the search.

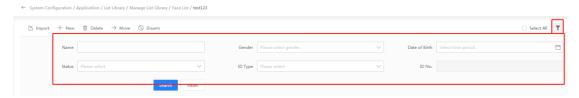


Figure 4.9-122 Condition Search

4.9.3.5.3 Apply List Library

Face list libraries can be applied to devices. Devices support front-end Deep Eye and DeepinMind list library configuration

4.9.3.5.4 List Library Setting

You can create face list library labels. Black list, red list, and custom labels can be created. You can also create extension fields for list libraries. Newly created labels can be selected when creating new list libraries.

4.9.3.6 Vehicle Violation

In Vehicle Violation, users can configure the violation rule, duplicate violation counting rule, and the configuration of violation video playback time. Users can change the display of violation data in verification to by day or by violation type. Users also can configure law enforcement organization information here.

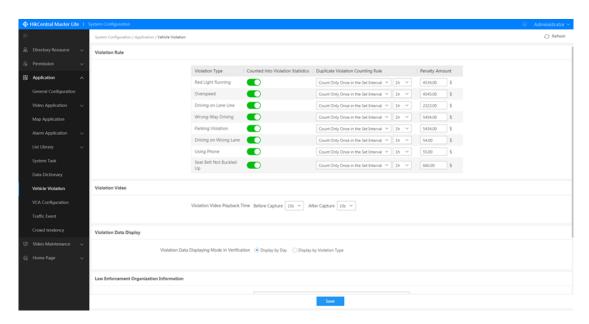


Figure 4.9-123 Vehicle Violation

4.9.3.7 System Task Management

4.9.3.7.1 Task Management Configuration

The System Task list displays the Task Name, Execution Period, Last Executing Time, Last Executing Duration, Last Executing Results, Task Description, Segment quantity, and other information; you can execute system tasks manually; you can set whether or not to enable tasks and you can also check the task execution log at the same time.

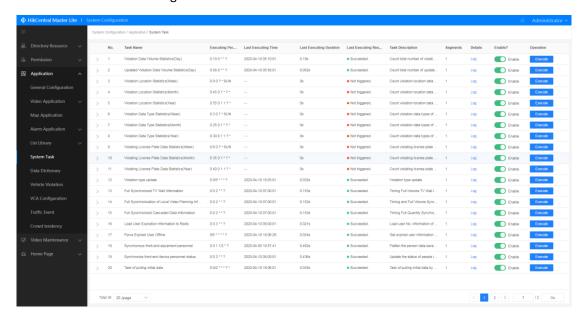


Figure 4.9-124 Task Management Configuration

4.9.3.8 Data Dictionary Management

Data Dictionary Management contains functions such as show Data Dictionary Display, Data Dictionary Details View, Enable/Disable, Dictionary Export, and Dictionary Sync, etc.

4.9.3.8.1 Data Dictionary Display

The various types of data dictionaries are displayed as multi-level directories. You can manually click on the button "+" in front of a directory name to expand the directory.

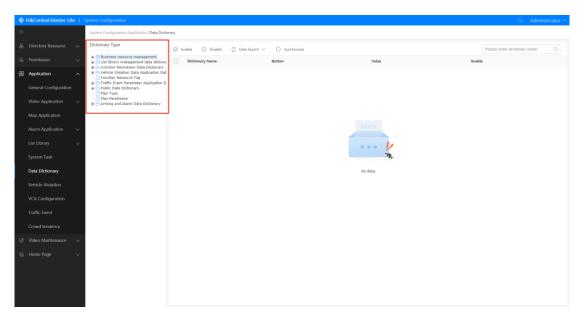


Figure 4.9-125 Data Dictionary Display

4.9.3.8.2 Data Dictionary Details Checking

After clicking on a data dictionary type name in the Data Dictionary Management interface, a list with the Dictionary Names, Buttons, Values, and Enable statuses will be shown.

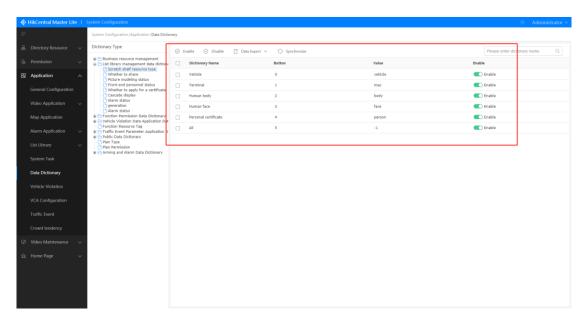


Figure 4.9-126 Data Dictionary Details View

4.9.3.8.3 Disable/Enable

You can enable/disable data dictionaries in the Data Dictionary Management interface. The steps are as follows:

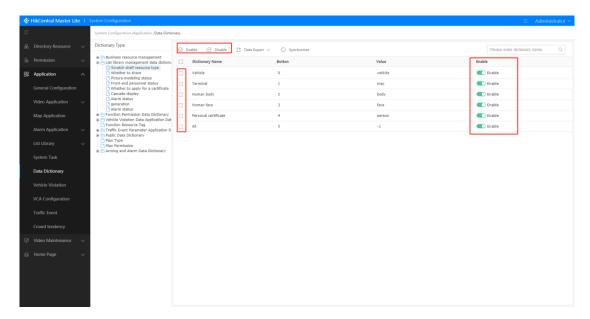


Figure 4.9-127 Enable/Disable Data Dictionary

Label	Description
1	Select the data dictionary you want to enable or disable
2	Click the "Enable" or "Disable" button to enable or disable the selected data dictionary
3	You can also click the " Toggle button in the "Enable" column to enable or disable

4.9.3.8.4 Dictionary Export

Click the "Data Export" button as shown in the figure below, and select "Export All" or "Export

Selected" to export all or the selected data dictionaries. The exported file will be in the .xlsx Excel file format. After selecting the export method, you can view the downloaded file in the browser's download manager.

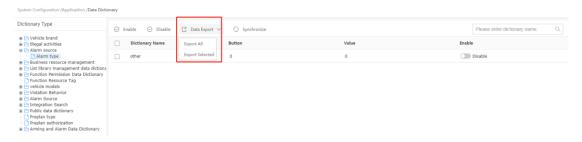


Figure 4.9-128 Dictionary Export

4.9.3.8.5 Dictionary Sync

As shown in the figure below, click the " \circ synchronize" button to synchronize the current data dictionary with the server. After enabling/disabling a data dictionary, you should click the " \circ synchronize" button to synchronize.

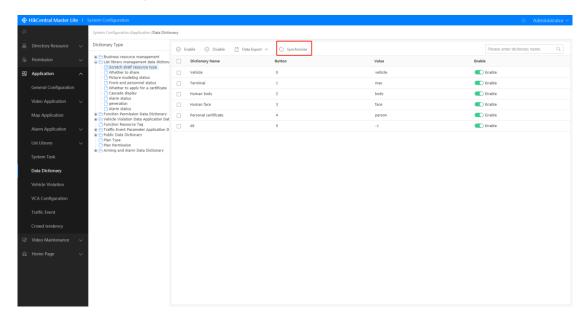


Figure 4.9-129 Dictionary Sync

4.9.3.9 Behavior Analysis Server Management

In Behavior Analysis Server Management, users can add, delete, and modify behavior analysis servers. Batch addition of behavior analysis servers is not supported. Users can add behavior analysis server clusters.

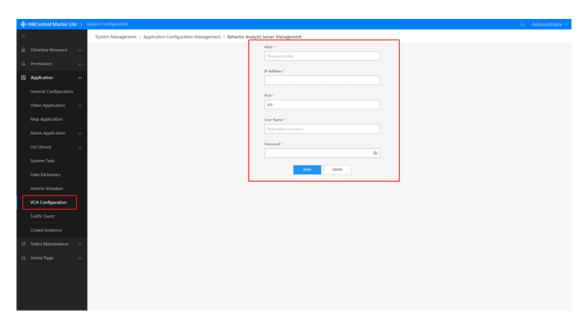
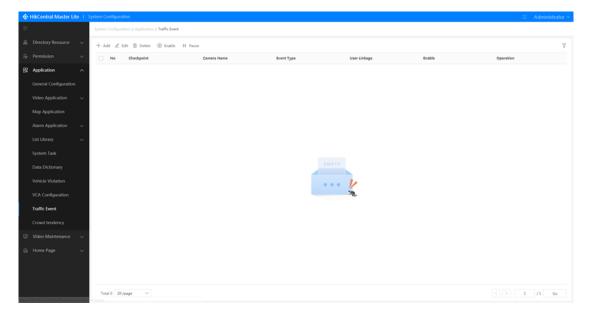


Figure 4.9-130 Behavior Analysis Server Management

4.9.3.10 Traffic Event Linkage Management

In Traffic Event, users can manage traffic event linkages and batch configure event types and user linkage rules.

Select cameras that need to be configured, traffic event type, and users that receive push notifications. Click "Finish" to save the configuration.



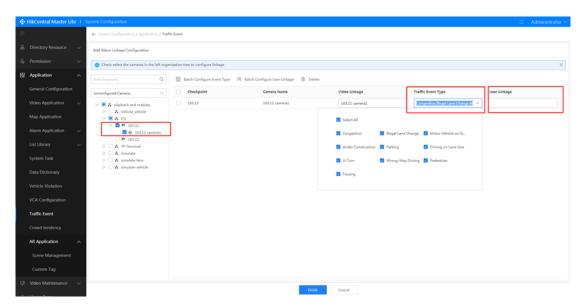


Figure 4.9-131 Traffic Event Linkage Management

4.9.3.11 Crowd Tendency Application Configuration

Users can add areas on map, configure monitoring resources, and configure alarm settings.

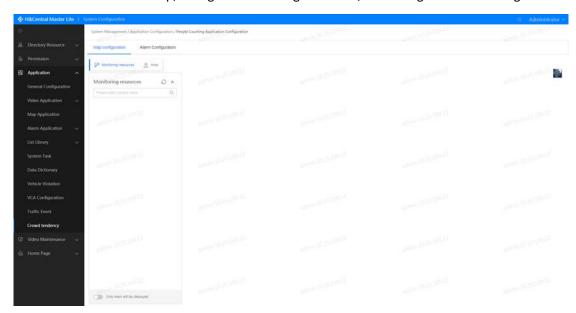
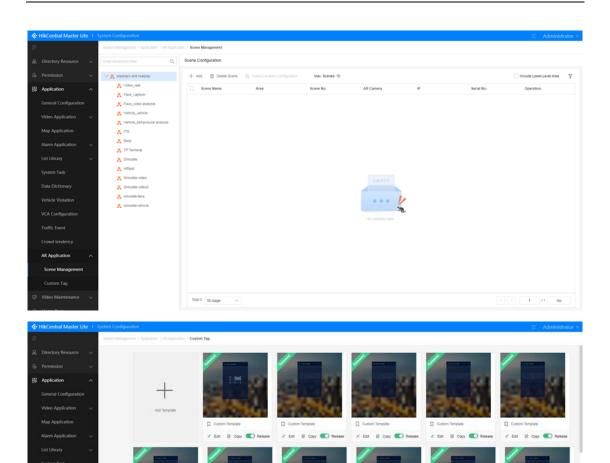


Figure 4.9-132 Crowd Tendency Application Configuration

4.9.3.12 AR Application

In AR Application, users can configure scene numbers and locations according to AR cameras. Personalized configurations such as image+video template, video template, and custom tag are supported.



4.9.4 Video Maintenance Management

Video Maintenance Management can be classified into Alarm Configuration and Inspection Schedule Configuration.

4.9.4.1 Alarm Configuration

Device Status Alarm, Performance Alarm, and Threshold values can be configured in Alarm Configuration. The operations will be introduced using encoding devices as an example. The steps for other devices and encoding devices are similar.

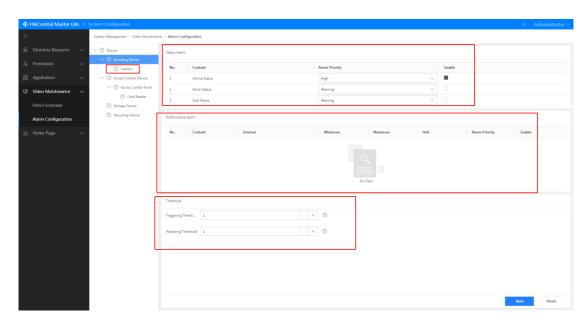


Figure 4.9-133 Alarm Configuration

Label	Description
1	Click the devices you want to configure in the device resource tree
2	You can set alarms for device statuses. Status indicators include online status, recording inspection, video quality inspection, and hardware status. You can also configure the levels of corresponding statuses, which are the five levels of "notification", "alarm", "secondary", "primary", and "serious". Checking the enable column of the corresponding setting will enable the status alarm
3	Alarms can be set for device performance, which target indicators such as primary streaming frame rate, primary streaming bit-rate, sub-stream frame rate, sub-stream bit-rate, and its minimum and maximum values, warning level, etc. You can select the alarm from the enable column to enable the corresponding performance alarms
4	Users can directly use the keyboard or click the "+" or "-" buttons in the Threshold section to change the trigger threshold values and also to restore the threshold values
5	Click the "Save" button to complete alarm configuration Click the "Reset" button the restore the selected settings or parameters in Alarm Configuration to their default values

4.9.4.2 Inspection Schedule Configuration

4.9.4.2.1 Details

All the current system inspection schedules can be listed along with their Schedule Name, Inspection Type, Collection Object, Inspection Time, Inspection Frequency, Status, Details, and other information. Click the "Check" button for the inspection schedule you want to check to enter the details page. Here, you can check the Resource Type, Schedule Name, Schedule Type, Schedule Frequency, and Schedule Template of the inspection schedule.

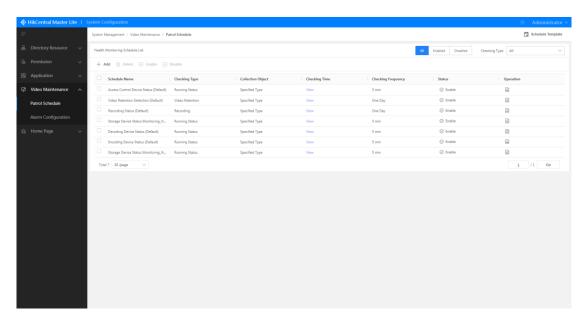


Figure 4.9-134 Inspection Schedule Configuration

4.9.4.2.2 Add Inspection Schedule

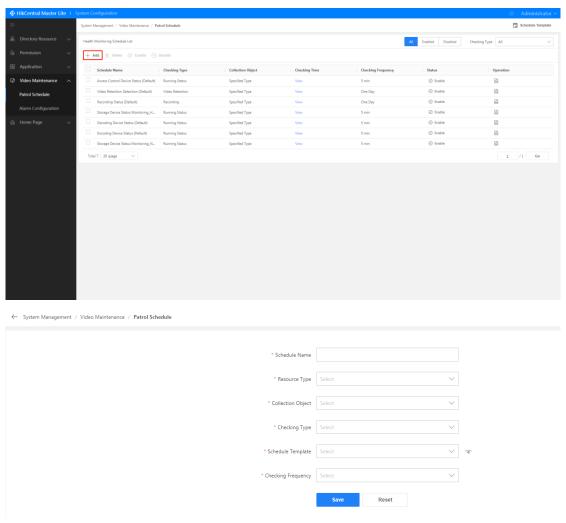


Figure 4.9-135 Add inspection Schedule

Label	Description
1	Click the "Add" button in the Inspection Schedule Configuration interface to enter the add
	new inspection schedule interface
2	Select the Resource Type, Inspection Type, Schedule Template, and Inspection Frequency,
	and enter the Schedule Name in the add new inspection schedule interface (click the " $^{\circ}$ "
	button to the right of the Schedule Template field and a Schedule Template progress bar will
	appear for you to check the inspection schedule of each template)
3	Click the "Save" button to add inspection schedule

4.9.4.2.3 Edit Inspection Schedule

You can edit inspection schedules in the Inspection Schedule Configuration interface. Only user created inspection schedules can be edited, that is, default schedules cannot be edited.

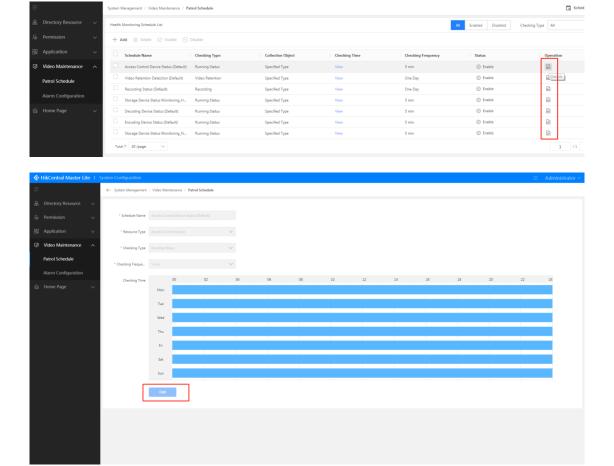


Figure 4.9-136 Edit Inspection Schedule

Label	Description
1	Click the " " button on the right of the inspection schedules that you want to edit to enter
	the schedule details page
2	Click the "Edit" button at the bottom of the schedule details page. You will be taken to an
	interface where you can edit the information.
3	You can edit the schedule name and inspection frequency
4	You can re-configure inspection schedule templates. After reselecting, the time bars for the
	newly selected schedule will be displayed in the lower time bar

5	Click on the time bar for any day and information about the time section will pop-up which
	you can edit or delete
6	Click on the " button on the right of the time bar of any day to copy the settings for that
	day to other day(s)
7	Click the "Save" button to finish editing the schedule

4.9.4.2.4 Delete Inspection Schedule

You can delete inspection schedules in the Inspection Schedule Configuration interface. Inspection schedules must have the "disabled" status before they can be deleted. Inspection schedules that are "enabled" cannot be deleted and must be disabled first.

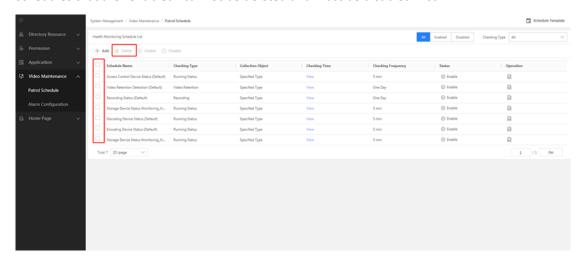


Figure 4.9-137 Delete Inspection Schedule

Label	Description
1	Select the inspection schedules you want to delete (ones with "enabled" status cannot be deleted)
2	Click the "Delete" button and a delete confirmation window will pop-up
3	Click the "OK" button to delete inspection schedule

4.9.4.2.5 Enable/Disable Inspection Schedule

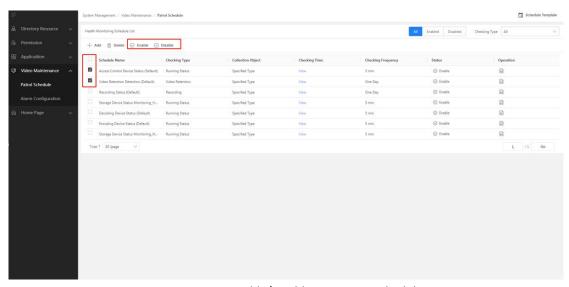


Figure 4.9-138 Enable/Disable Inspection Schedule

Label	Description
1	Select the inspection schedules you want to enable/disable
2	Click the "Enable" or "Disable" buttons and the selected inspection schedules will be enabled or disabled

4.9.4.2.6 Inspection Schedule Filtering

You can filter the existing inspection schedules via the options on the upper right corner of the Inspection Schedule Configuration interface. Users can view the corresponding inspection schedules according to conditions. Users can select to view enabled or disabled schedules, and can view the corresponding inspection schedules according to inspection type.

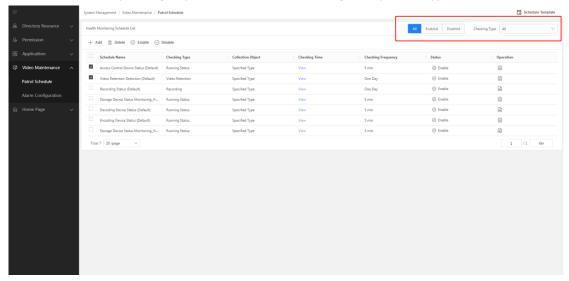


Figure 4.9-139 Inspection Schedule Filtering

4.9.4.2.7 Schedule Template

You can click the "Schedule Template" button on the upper right corner of the Inspection Schedule Configuration interface to enter the inspection schedule template configuration interface, where you can add and delete schedule templates (default templates cannot be deleted or edited).

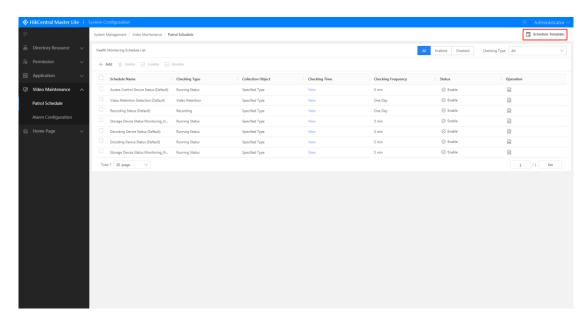


Figure 4.9-140 Schedule Templates

1. Add Schedule Template

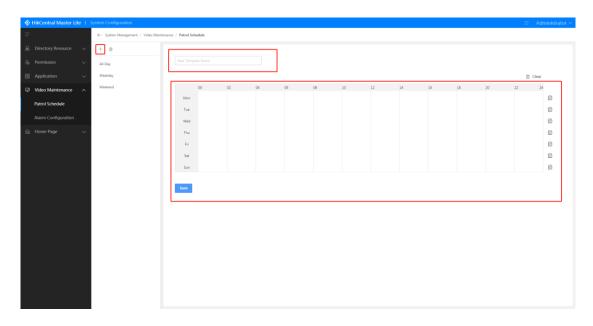


Figure 4.9-141 Add Schedule Template

Label	Description
1	Click the " $^+$ " button in the Schedule Template interface and an add new schedule template interface will appear on the right
2	Enter the name of the new template
3	Click and drag within the time bar to configure the schedule. After dragging, a time bar window will pop-up where you can adjust the start and end time more precisely; Click the " " button after the time bar to copy the time bar settings for that day onto another day or to all days; You can click the " Clear " button to clear the set time bar
4	Click the "Save" button to add the inspection schedule template

2. Delete Schedule Template

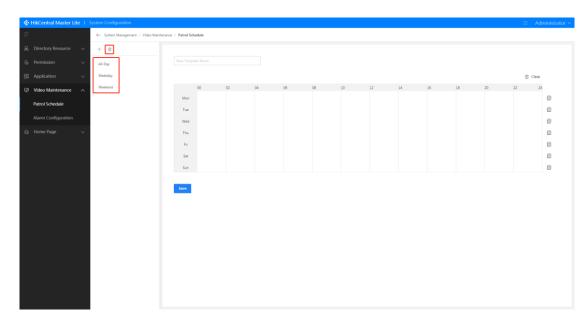


Figure 4.9-142 Delete Schedule Template

Label	Description
1	Click to select the schedule templates you want to delete (All-day, Workday, and Weekend templates are default templates and cannot be deleted)
2	Click the " Dutton and a grid deletion confirmation window will pop up.
3	Click the "OK" button to delete the schedule template

4.9.5 Home Page Management

Home Page Management is divided into the four main modules of Menu Management, Theme Management, Tool Management, and Plug-In Management. These are introduced separately below.

4.9.5.1 Menu Management

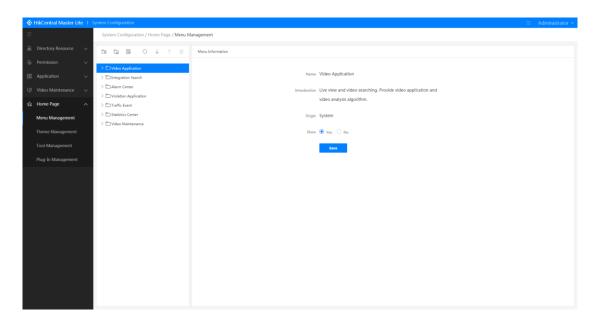


Figure 4.9-143 Menu Management

4.9.5.1.1 General Application

You can click on the "Sync" button on the upper right corner to synchronize General Application. You can also click the "Edit" button to enter the edit page for General Application.

1. Add Categories

(1) Adding Categories

You can add new categories which will appear below the chosen category. The newly added category will be the same level as the selected category, and will not have a parent or child relationship.

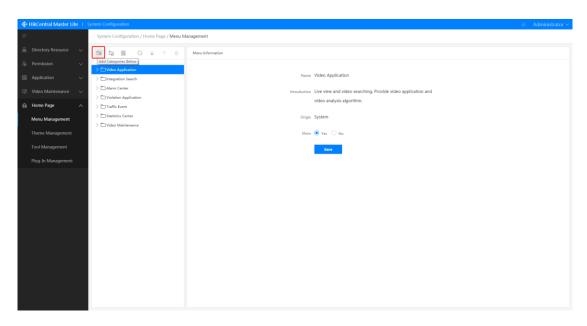


Figure 4.9-144 Adding Categories

Label	Description
1	Click the category that you want to add another category below
2	Click the " button and a drop-down menu will appear
3	Click the "Add Categories Below" button, and a new category will be shown below the
	already selected category. As shown in 1, the custom category is the newly added category

(2) Add Subcategory

You can add new subcategories under the chosen category. The new subcategory will have a parent-child relationship with the chosen category, and the chosen category will contain the newly added subcategory.

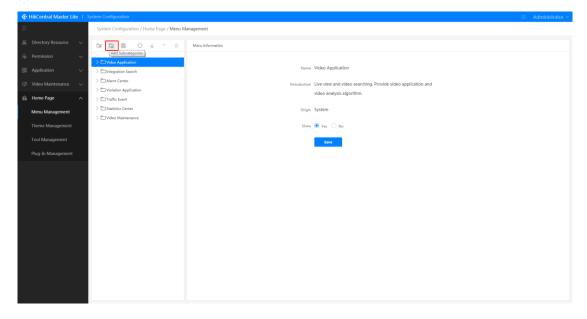


Figure 4.9-145 Add Subcategory

Label	Description
1	Click the category that you want to add subcategories to
2	Click the " 🖥 " button and a drop-down menu will appear
3	Click "Add Subcategories" in the drop-down menu and to add a subcategory. The added subcategory will be shown in the organization tree under the selected category
4	A newly added subcategory is shown in 4. The newly added subcategories, Video Search, Emap, and Video Parsing all belong to Video Center

2. Edit Category

The edit category function supports the adding of categories and the editing of existing ones (only the visibility of system categories may be edited). The steps are as follows:

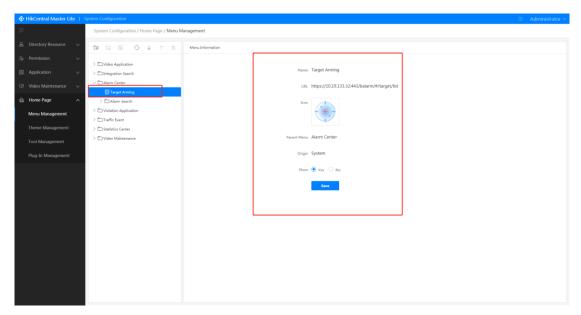


Figure 4.9-146 Edit Category

Label	Description
1	Click the category you want to edit and the information for the category will be displayed on the right (only the visibility of system categories may be edited)
2	You can edit the category name, icon, and visibility
3	Click the "Save" button to complete editing the category

3. Add Menu

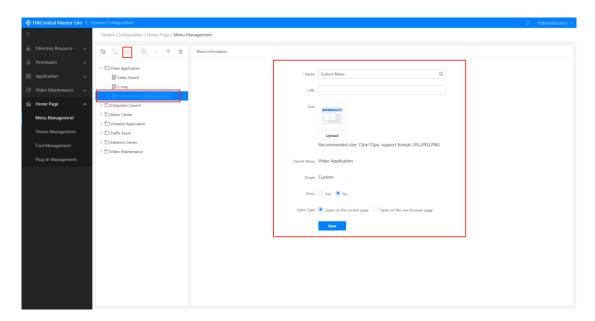


Figure 4.9-147 Add Menu

Label	Description
1	Click the category that you want to add menu to
2	Click the " B" button to add the menu
3	The added menu will be under this category

4. Edit Menu

The edit menu function supports the adding of menus and the editing of existing ones (only the visibility of system menus may be edited). The steps are as follows:

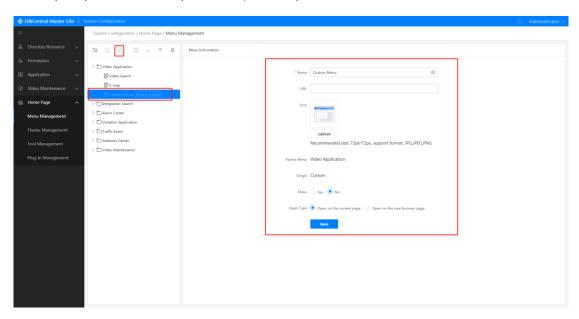
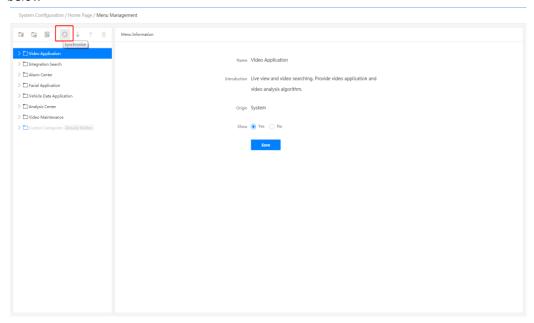


Figure 4.9-148 Edit Menu

Label	Description
1	Click the menu you want to edit and the information for the menu will be displayed on the right (only the visibility of system menus may be edited)
2	You can edit the Name, URL, icon, Open Type, and show and link options for the menu
3	Click the "Save" button to complete editing the menus

5. Menu Synchronization

You can perform the menu synchronization operation by clicking the button shown in the figure below



6. Category Tree Order Adjustment

This function will adjust the order of categories or menus in the category tree (can only adjust currently existing categories).

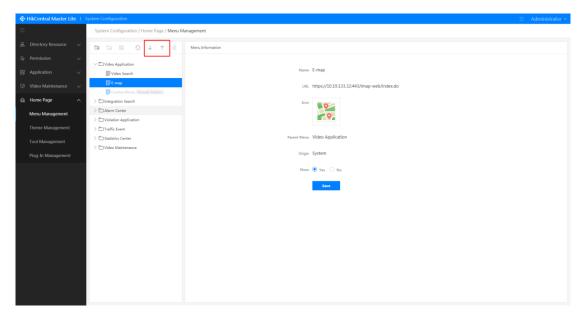


Figure 4.9-149 Category Tree Order Adjustment

Label	Description
1	Click to select the categories or menus you want to adjust the order of (menus are used here as an example)
2	Click the " \downarrow " button to to move the selected category or menu down Click the " \uparrow " button to to move the selected category or menu up

7. Delete Category or Menu

You can delete user defined categories or menus in the General Application editing interface. System default categories or menus cannot be deleted.

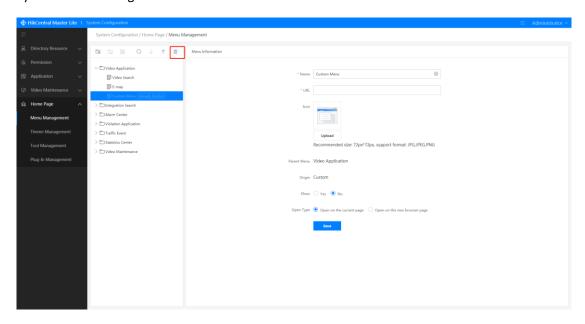


Figure 4.9-150 Delete Category or Menu

Label	Description
1	Click to select the categories or menus you want to delete (categories are used here as an example)
2	Click the " $^{ar{\blacksquare}}$ " button and a grid deletion confirmation window will pop up.
3	Click the "OK" button to delete category or menu

4.9.5.2 Theme Management

The page elements and copyrights can be configured in Theme Management. The operations are introduced below.

4.9.5.2.1 Page Element Settings

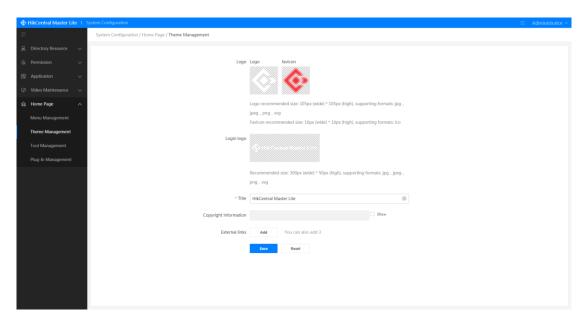


Figure 4.9-151 Page Element Settings

Label	Description
1	Click Page Element Settings in the Theme Management interface to display the Page Element
	Settings interface
2	The platform's logo icon can be changed with an uploaded image. The website title can also
	be edited, while external links can be displayed/hidden and added. After selecting "Show",
	the external links will be displayed in the upper right corner of the page
3	Click the "Save" button to complete the Page Element Settings
	Click the "Restore Default" button to restore the various settings in Page Element Settings to
	their default values

4.9.5.3 Tool Management

Users can add or delete tools in Tool Management. They can also edit, adjust the order, and perform other operations on uploaded tools.

4.9.5.3.1 Custom Tool Management

1. Custom Tool Adding

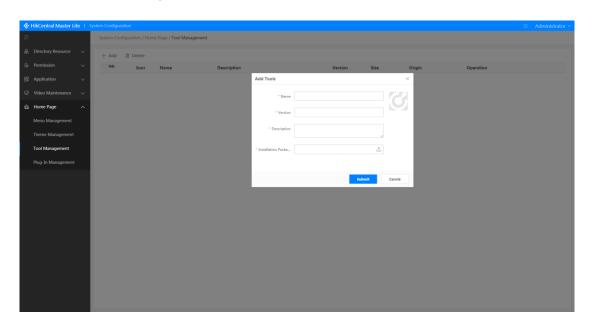


Figure 4.9-152 Tool Management

Label	Description
1	Click the "Add" button in the Tool Management interface and an add custom tool window will
	рор-ир
2	Enter the Name, Version, and Description, then click " 1" to upload the installation package
	(need to wait for upload to complete)
3	After upload has completed, click the "OK" button to add the tool

2. Custom Tool Editing

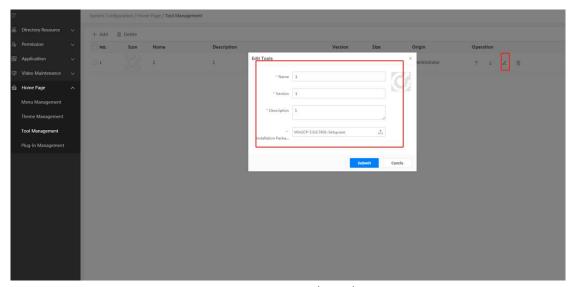


Figure 4.9-153 Edit Tool

Label	Description
1	Click the " " button to the right of the tool you want to edit in the Tool Management interface, and an edit custom tool window will pop-up
2	You can edit the Name, Version, and Description, then click " Δ to re-upload the installation package (need to wait for upload to complete)
3	Click the "OK" button to complete editing the tool

4.9.5.3.2 Custom Tool Deleting

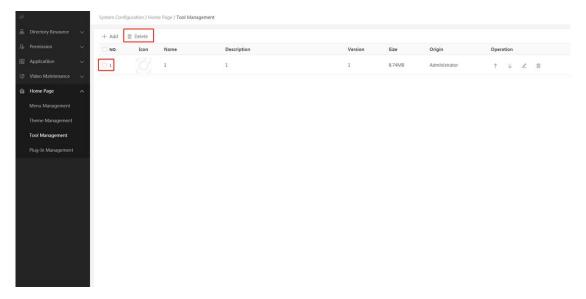


Figure 4.9-154 Delete Tool

Label	Description	
1	Select the tools you want to delete from the Tool Management interface	
2	Click the "Delete" button and a delete confirmation window will pop-up	
3	You can click the " " button on the right of the tool you want to delete, and a delete confirmation window will pop-up	
4	Click the "OK" button to delete the tool	

4.9.5.3.3 Order Adjust

You can change the order of tools in the list when there are multiple uploaded tools by using the " $^+$ " buttons on the right of the tools. Clicking " $^+$ " will move the tool downwards, and clicking " $^+$ " will move it upwards.

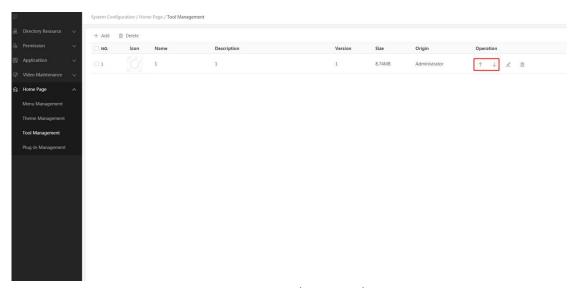


Figure 4.9-155 Adjusting Order

4.9.5.3.4 Custom Tool Display

Display custom tool available for downloading at current system in list.

4.9.5.4 Plug-In Management

You can add and delete plug-ins, and adjust plug-in order in Plug-In Management.

4.9.5.4.1 Add Plug-In

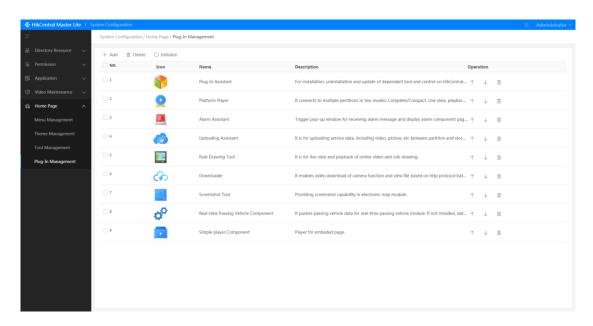


Figure 4.9-156 Add Plug-in

Label	Description	
1	Click the "Add" button in Plug-In Management and an open file window will appear	
2	Click the plug-in package you want to add from the local PC in the open file window.	
3	Click the "Open" button and the installation package will begin to upload. When the upload has completed, the added plug-in will be displayed in the plug-in list	

4.9.5.4.2 Delete Plug-In

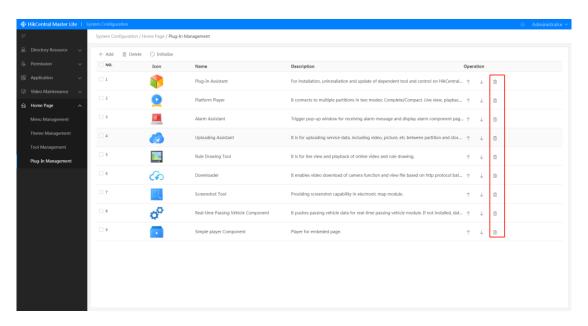


Figure 4.9-157 Delete Plug-in

Label	Description	
1	Select the plug-in you want to delete from the plug-in list in the Plug-In Management	
	interface	
2	Click the "Delete" button and a delete confirmation window will pop-up	
3	You can also click the " " button to the right of the plug-in you want to delete, and a delete	
	confirmation window will pop-up	
4	Click the "OK" button to delete the plug-in	

4.9.5.4.3 Adjust Plug-In Order

You can change the order of plug-ins in the Plug-In list by using the " $^{\uparrow}$ " buttons on the right of the plug-ins. Clicking " $^{\downarrow}$ " will move the plug-in downwards, and clicking " $^{\uparrow}$ " will move it upwards.

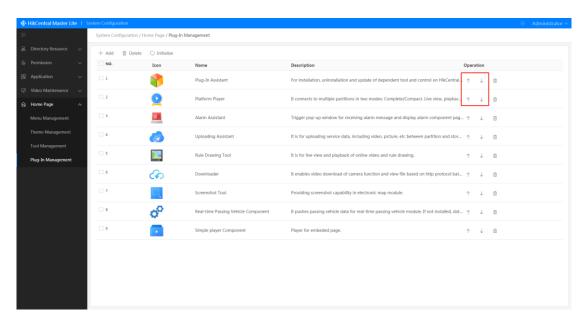


Figure 4.9-158 Adjust Plug-in Order

Chapter 5 Mobile Client Introduction

5.1 Mobile Software Installation

Contact project technical support to acquire the mobile client if needed.

5.1.1 **Login**

The mobile client supports multiple login methods, including username+password, pattern, and fingerprint. Users will enter the portal page after login.

5.1.2 Personal Center

Tap on the upper left corner of the screen to enter Personal Center. Users can check user account, department, version update, and version number (see Figure 5.1-1).

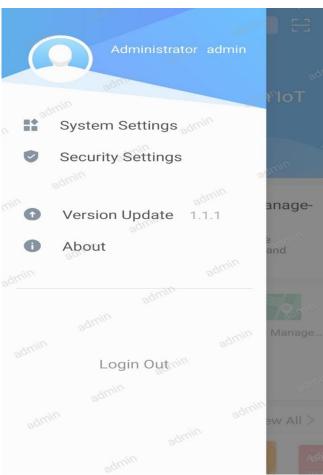


Figure 5.1-1 Personal Center

5.1.2.1 System Settings

In **System Settings**, users can configure settings such as turning on/off notifications, notification methods, and DTS switch. Users can also configure message types (notification, sound, and vibration) for each alarm type (face, vehicle, device, and VCA alarm) individually (see Figure 5.1-2).

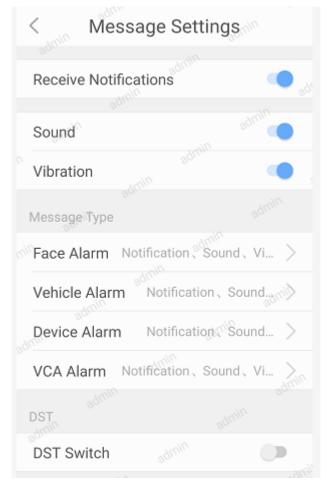


Figure 5.1-2 System Settings

5.1.2.2 Security Settings

Tap **Security Settings** to configure password settings. Users can choose to use a security pattern and set their own pattern (see Figure 5.1-3).



Figure 5.1-3 Security Settings

Tap **Change Password** and enter the old password and new password to change the password (see Figure 5.1-4).



Figure 5.1-4 Change Password

5.1.2.3 Version Update

Tap Version Update to check if there is an update. Users can update manually.

5.1.2.4 About

Tap **About** to view the copyright information, instructions, and QR code for downloading.

5.1.2.5 Logout

Tap **Logout** and a confirmation dialog box will pop up. Users can choose "Logout" to quit the platform while saving history data.

5.1.3 **Search**

Tap **Search** on the top of the screen to enter the search page. Users can search for information such as license plate numbers, names, devices, and ID cards (see Figure 5.1-5).

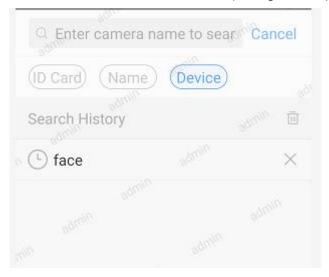


Figure 5.1-5 Search

If you search vehicles, the system will jump to vehicle search interface. You can set filter conditions such as the passing time, type, color, and brand of the vehicle. If you search names, devices, or ID cards, the system will return a list of the search results. Tap any record to check the details of that record (see Figure 5.1-6).

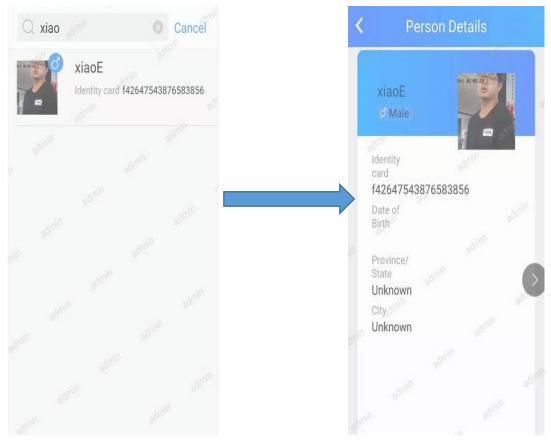


Figure 5.1-6 Name Search Result

5.2 Live View and Playback

5.2.1 Live View

5.2.1.1 Organization

Live View and Playback

Tap Playback on the main page to enter the Live View and Playback page. To open organization tree panel, select **Live View** and scroll to the bottom of the page and tap

Organization or at the center of the live view player. Enter Organization to unfold organization tree (see Figure 5.2-1). The current organization hierarchy is shown at the bottom of the screen.

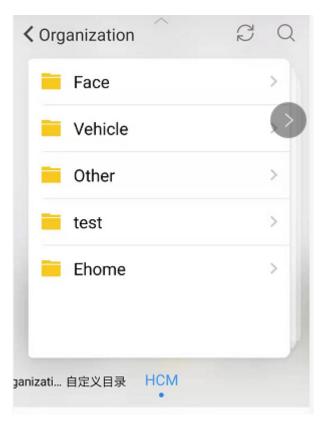


Figure 5.2-1 Organization

on the top of **Organization** to expand/collapse the organization panel. Tap the name of each organization level and expand each directory until you reach the resource level. Tap the name of a camera to watch real-time image in the live view player. A maximum of four channels can be viewed at the same time (see Figure 5.2-2).

Swipe to the left on **Organization** page to back to higher levels and swipe to the right to go to subordinate levels that are opened earlier. Tap **Organization** to go back to live view page. Tap

to use fuzzy search on cameras. Tap to refresh the current organization resource list.

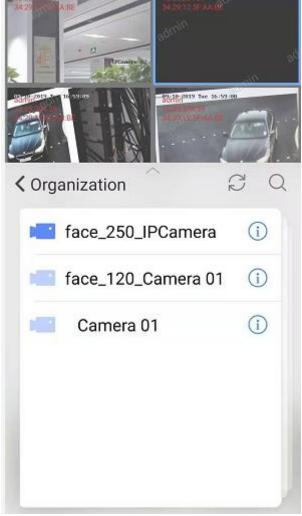


Figure 5.2-2 Camera Live View

Tap to check the details of each camera (see Figure 5.2-3).

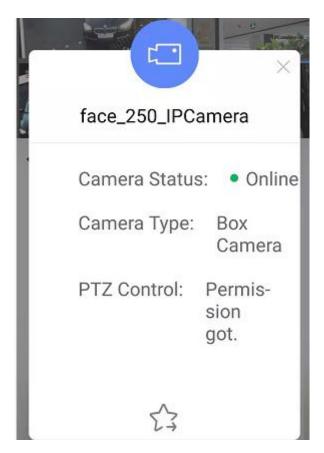


Figure 5.2-3 Camera Details

5.2.1.2 Live View Control

Tap on each live view window and control shortcuts will pop up below the image (see Figure 5.2-4).



Figure 5.2-4 Video Control

Label	Description
1	Single window / Multiple windows
2	Audio on/off
3	Video definition switch

4	Full screen
5	Favorites

Users can also control the live view video via the following controls:

: Capture. Tap the icon to take a snapshot manually. A thumbnail will show up at the lower left corner of the screen. Tap on the thumbnail to manage the images. Captured images are stored in local folders. Users can also view and manage images in File Management.

: Record. Tap the icon to record the video and a status of "Recording" will show on screen. Tap it again to stop recording and the recording status will disappear. A thumbnail will show up at the lower left corner of the screen. Tap on the thumbnail to manage the recordings. Video recordings are stored in local folders. Users can also replay and manage local recordings in File Management.

: Window Switch. Tap the icon to switch to single-window view where you can configure settings such as only audio, definition, and full screen. Tap again to switch back to default.



: Digital Zoom. Users can zoom in wanted areas to better focus on details.



: PTZ Control. Users can control the focal length, aperture, and the configuration and invoking of the preset locations of the devices that supports PTZ controls. PTZ direction adjustment and horizontal scanning are also supported. See Figure 5.2-5.

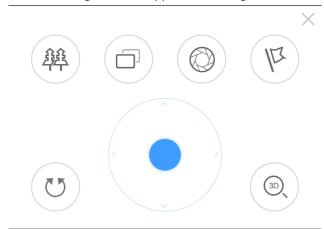


Figure 5.2-5 PTZ Control

Button	Description
A	Focal length adjustment
	Focus
(O)	Aperture adjustment
(k)	Auto scanning
(U)	Horizontal scanning
(0)	3D Zoom in
	PTZ direction control

5.2.1.3 Recently Viewed

Recently Viewed module is at the bottom of the Live View and Playback page. Recently Viewed shows the thumbnails of the recently viewed cameras and sorts them in descending time order. Tap on a thumbnail to start camera live view or playback via the player (see Figure 5.2-6).

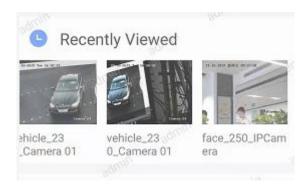


Figure 5.2-6 Recently Viewed

5.2.2 Playback

5.2.2.1 Start Playback

Tap **Playback** on the live view tab to switch to the playback tab. Tap

player to open the organization tree panel. Users can choose and check the desired cameras. The procedure is similar to that on the live view tab (see Figure 5.2-7).



Figure 5.2-7 Camera Playback

5.2.2.2 Playback Control

See Figure 5.2-8 for detailed instructions for playback controls:



Figure 5.2-8 Playback Control

Label	Description
1	Tap on the video to show the audio control button. You can turn on/off video or audio.
2	Tap on the video to show the full screen button. You can play the video in full screen.
3	Progress bar. Drag to control playtime.
4	Capture. Tap to take a snapshot manually. A thumbnail will show up at the lower left corner of the screen. Tap on the thumbnail to manage the images. Captured images are stored in local folders. Users can also view and manage images in File Management.
5	Play or pause the playback.
6	Record. Tap the icon to record the video and a status of "Recording" will show on screen. Tap it again to stop recording and the recording status will disappear. A thumbnail will show up at the lower left corner of the screen. Tap on the thumbnail to manage the recordings. Video recordings are stored in local folders. Users can also replay and manage local recordings in File Management.
7	Select the date of the video playback.
8	Select the storing location of video recordings.

5.3 File Management



on the home page to enter **File Management**.

Users can view and manage captured pictures and video recordings by switching between tabs. Tap on the pictures or videos to view them (see Figure 5.3-1).

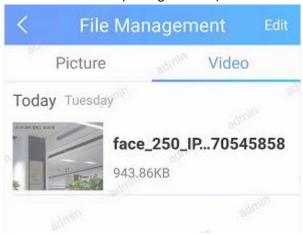


Figure 5.3-1 File Management

5.4 Video Displaying



Users first need to register their phones as cameras. Then tap ANR on the home page to enter and use the video displaying application. Other phones and PCs with the client installed can view the camera image of the phone in real-time.

5.5 Map Application



Tap Manage.... on the home page to enter map application. The page shows all the cameras

within the current areas on map. Tap on the lower left corner of the screen to check your current location (requires location permission in advance) as Figure 5.5-1 shows. The mobile client supports gestures and zoom in/out button for scaling.

Tap Camera Search and enter camera keywords to start fuzzy search. You can also select camera types to filter cameras. Cameras can be divided into four types: box camera, semi dome, speed dome, and PTZ. Tap on a camera type to show the map that displays a list of cameras of this type and their locations. When you drag the map, the list below will automatically refresh and display the camera information within the current view.

Tap any camera to check its location on the map. Tap to quick check the live view of the corresponding camera. You can control the audio, capture snapshots, and record videos for the live view. Tap to quick check video playback of the corresponding camera.

Swipe up the blue square of the camera list to expand camera list area (see Figure 5.5-2).

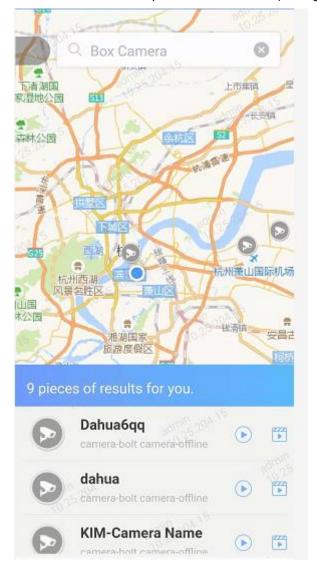


Figure 5.5-1 Camera Search

5.6 Vehicle Application

Vehicle application for the mobile client includes three main parts: [Search by Vehicle], [Vehicle Search], and [Vehicle Arming] (see Figure 5.6-1).

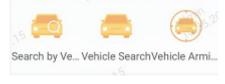


Figure 5.6-1 Vehicle Application

5.6.1 Vehicle Search

Tap Vehicle Search to enter Vehicle Search page. Users can search vehicle-passing records with license plate number, passing period, passing region, vehicle type, and vehicle color (see Figure 5.6-2).

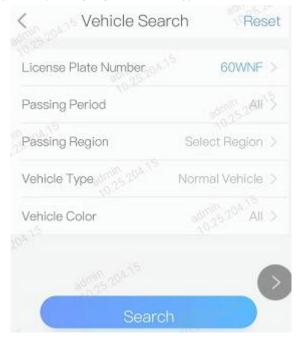


Figure 5.6-2 Vehicle Search

The results display all the passing records of the searching targets in a list (see Figure 5.6-3). Tap **More** to go back to the Vehicle Search page to add more filters.

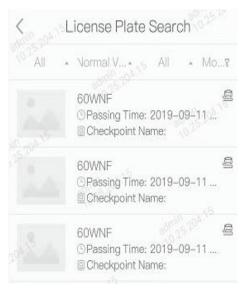


Figure 5.6-3 Passing Record

Tap at the right side of each passing record to show View Pattern button. Tap View

Pattern to enter the Driving Pattern Search page. Users can view the driving pattern of the vehicle on different dates (see Figure 5.6-4).

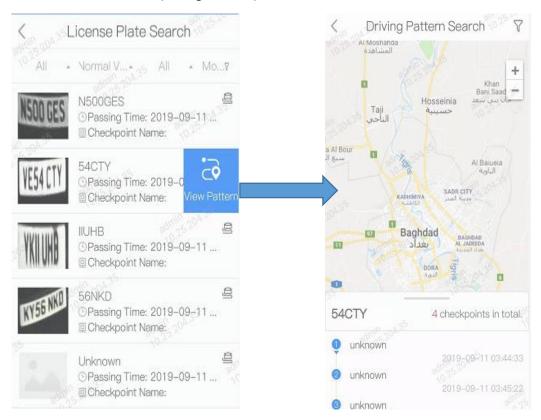


Figure 5.6-4 Vehicle Driving Pattern

Tap on each passing record to check the details. The Passing Vehicle Detail page displays captured picture, specific passing information, vehicle features, and other information (see Figure 5.6-5)

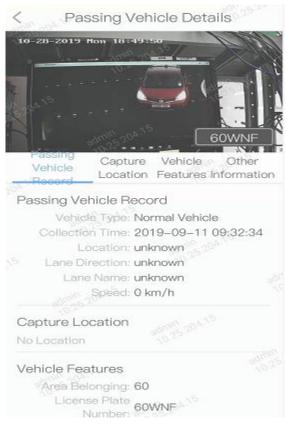


Figure 5.6-5 Passing Vehicle Details

5.6.2 Vehicle Arming

5.6.2.1 Vehicle Arming Information



Tap Vehicle Arming to enter Vehicle Arming Information page. Users can view information of every approved arming task, including arming vehicles, arming names, and arming reasons (see Figure 5.6-6).



Figure 5.6-6 Arming Task List

Tap on each vehicle arming to check the arming details (see Figure 5.6-7). On Arming Details page, users can disarm a vehicle and corresponding arming information will be deleted.

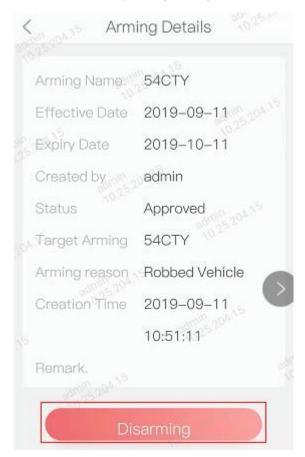


Figure 5.6-7 Arming Details

5.6.2.2 Add Arming Task

On Vehicle Arming page, users can tap Add Arming Task and enter arming name, effective date,

expiry date, plate number, arming reason, and other information to add a new arming task (see Figure 5.6-8). The arming task will be synced to the arming list of the platform and will appear on the Vehicle Arming page on the mobile client after approval.

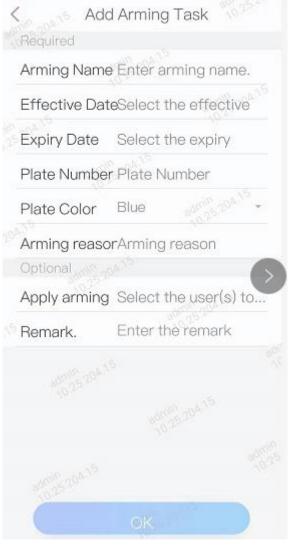


Figure 5.6-8 Add Arming Task

5.7 Alarm Message

5.7.1 Alarm Information

When an alarm occurs, the Alarm Information module on the home page will display the type and time of the alarm (see Figure 5.7-1).

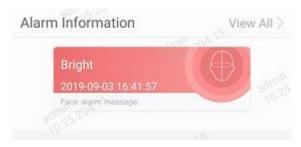


Figure 5.7-1 Alarm Information

Tap on each alarm message to check the details. Different alarm types have different details:

• Face alarm message: See Figure 5.7-2. The alarm list displays information and captures of the suspect.

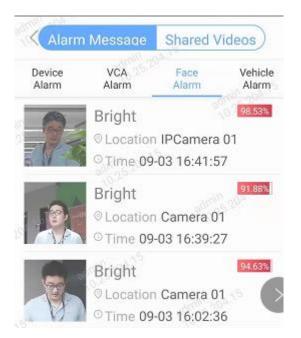


Figure 5.7-2 Face Alarm Details

 Vehicle alarm message: See Figure 5.7-3. The detail page displays vehicle HD capture, alarm information, passing information, vehicle features, and other information.

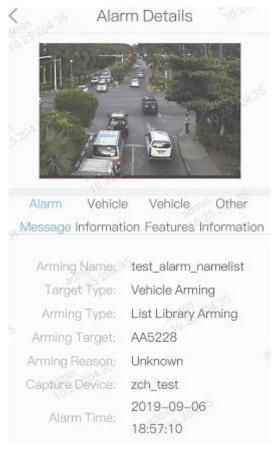


Figure 5.7-3 Vehicle Alarm Details

 Device alarm message: See Figure 5.7-4. The detail page displays HD capture, device name, alarm time, and alarm type. Tap Playback and Live View at the bottom to watch live view or playback of the device.



Figure 5.7-4 Device Alarm Details

• Smart analysis alarm message: See Figure 5.7-5. The detail page displays device name, alarm time, and alarm type.



Figure 5.7-5 Smart Analysis Alarm Details

5.7.2 Alarm Message List

Tap **View All** at the Alarm Information module on the home page to enter the alarm message page. Switch tabs to check different types of alarm messages:

- Device Alarm: Shows the name and type of the device and the type and time of the alarm in the list
- VCA Alarm: Shows captures, the name and type of the device, and the time and type of the alarm in the list
- Face Alarm: Shows captures, the name of the best match in the arming library, and the similarity, location, and time of the captured target.
- Vehicle Alarm: Shows captures, license plate number, time, arming task name, location of the passing vehicle.

Tap on each alarm record to check the details (see Figure 5.7-6):



Figure 5.7-6 Alarm Types

Chapter 6 FAQ

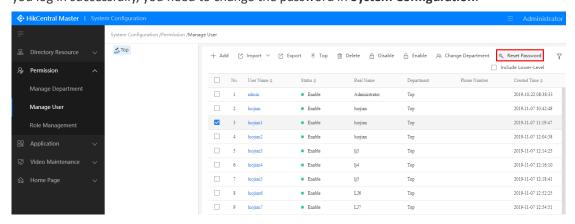
6.1 What's the password for login after the user account is reset?

Question

What's the password for login after the user account is reset?

Answer

After the administrator reset an account, the initial password of this account is **Abc@123**. When you log in successfully, you need to change the password in **System Configuration**.



6.2 Live view failed with prompt "Plug-In Assistant not installed".

Question

Live view failed on the Web Client with prompt "Plug-In Assistant not installed".

Reason

- The installed Plug-In Assistant is not allowed to run in the browser.
- The installation disk of Plug-In Assistant is encrypted.

Answer

- Allow the browser to run the Plug-In Assistant.
- Check whether the installation disk of Plug-In Assistant is encrypted? If so, move the installation file to other unencrypted disk.

6.3 What's the address for License Activation?

Question

What's the address for License Activation?

Answer

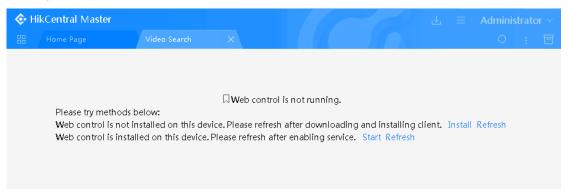
You can visit the following two websites:

- The officially authorized address for offline activation:
 http://license.hikvision.com/#/index/licenseActivation/active
- The officially authorized address (public network) for activation:
 http://license.hikvision.com:8888/#/index/licenseActivation/active

6.4 Why can't I enter Video Search module?

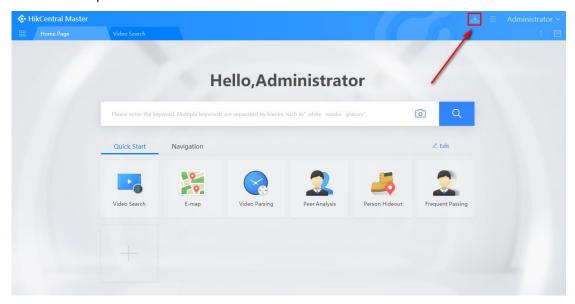
Question

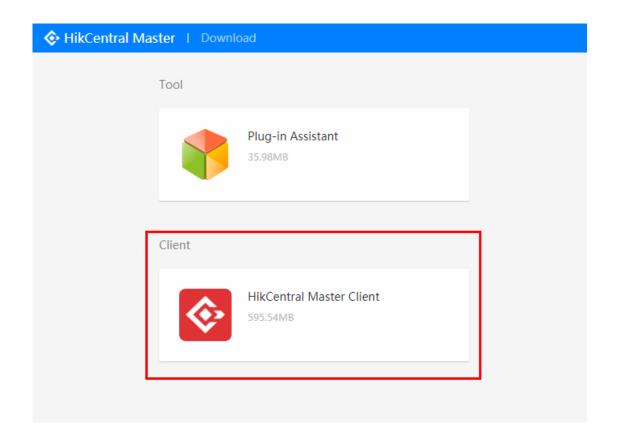
Failed to enter **Video Search** module on the Web Client with prompt "Web control is not running".



Answer

You need to install the Control Client first since the live view function of the Web Client is based on the Control Client. After installing the Control Client, you need to enter the Web Client again. The download path is as follows:

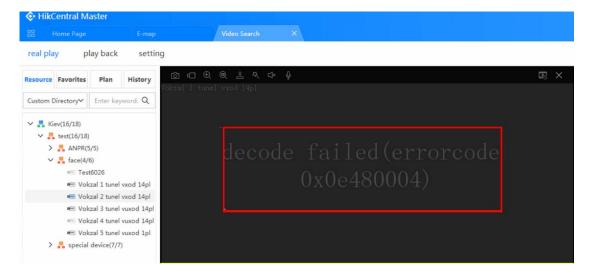




6.5 Live view failed with prompt "decode failed" (error code: 0x0e480004)

Question

Live view failed in Video Search module with prompt "decode failed"?



Reason

Decoding mode error.

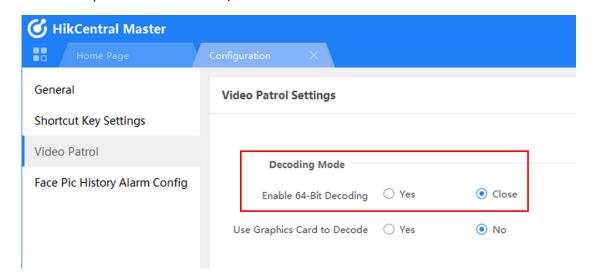
Solution

You need to check the decoding mode on the Control Client.

Perform the following steps:

- 1. Click Configuration \rightarrow Video Patrol \rightarrow Decoding Mode.
- 2. Select to enable or disable 64-Bit Decoding.

Note: If you have selected **Yes**, then select **Close**;
If you have selected **Close**, then select **Yes**.



6.6 Failed to view face capture and alarm capture.

Question

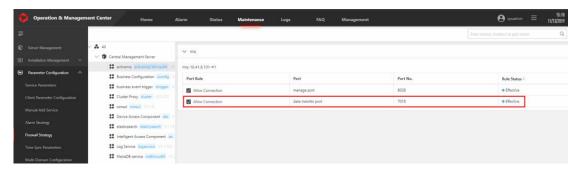
Why can't I view the real-time face capture and alarm capture?



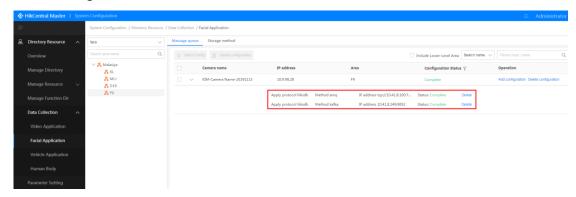
Answer

• Check if you have enabled No. 7018 Port in **Operation & Management Center**.

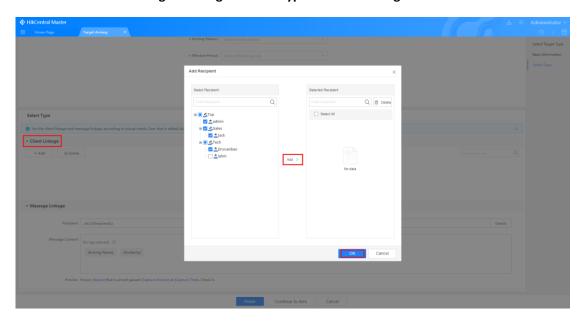
Click Maintenance \rightarrow Parameter Configuration \rightarrow Firewall Strategy \rightarrow activemq.



- Check if you have configured ActiveMQ and kafka on the Web Client.
 - $\label{eq:click-system-configuration} \begin{tabular}{ll} Click System Configuration \rightarrow Data Collection \rightarrow Facial Application \rightarrow Add Configuration. \end{tabular}$



- Check if you have configured client linkage on the HikCentral Master Control Client.
 - $\mathsf{Click} \ \mathbf{Alarm} \ \mathbf{Center} \to \mathbf{Target} \ \mathbf{Arming} \to \mathbf{Select} \ \mathbf{Type} \to \mathbf{Client} \ \mathbf{Linkage} \to \mathbf{Add}$



- Check if you have the target arming permission on the Web Client.
 - ${\sf Click}\ {\sf System}\ {\sf Configuration} \rightarrow {\sf Permission} \rightarrow {\sf Role}\ {\sf Management} \rightarrow {\sf Application}\ {\sf Role} \rightarrow {\sf Edit}$

