User Manual

ZKIVA-Edge T1

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English

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If there is any issue related to the product, please contact us.

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About the Company

ZKTeco is one of the world's largest manufacturers of RFID and Biometric (Fingerprint, Facial, Finger-vein) readers. Product offerings include Access Control readers and panels, Near & Far-range Facial Recognition Cameras, Elevator/Floor access controllers, Turnstiles, License Plate Recognition (LPR) gate controllers and Consumer products including battery-operated fingerprint and face-reader door locks. Our security solutions are multi-lingual and localized in over 18 different languages. At the ZKTeco state-of-the-art 700,000 square foot ISO9001-certified manufacturing facility, we control manufacturing, product design, component assembly, and logistics/shipping, all under one roof.

The founders of ZKTeco have been determined for independent research and development of biometric verification procedures and the productization of biometric verification SDK, which was initially widely applied in PC security and identity authentication fields. With the continuous enhancement of the development and plenty of market applications, the team has gradually constructed an identity authentication ecosystem and smart security ecosystem, which are based on biometric verification techniques. With years of experience in the industrialization of biometric verifications, ZKTeco was officially established in 2007 and now has been one of the globally leading enterprises in the biometric verification industry owning various patents and being selected as the National High-tech Enterprise for 6 consecutive years. Its products are protected by intellectual property rights.

About the Manual

This manual introduces the operations of **ZKIVA-Edge T1**.

All figures displayed are for illustration purposes only. Figures in this manual may not be exactly consistent with the actual products.

Document Conventions

Conventions used in this manual are listed below:

GUI Conventions

For Software	
Convention	**Description**
Bold font	Used to identify software interface names, **OK**, **Confirm**, **Cancel**.
>	Multi-level menus are separated by these brackets. For example, **File** > **Create** > **Folder**.
For Device	
Convention	**Description**
< >	Button or key names for devices. For example, press <**OK**>.
[ ]	Window names, menu items, data tables, and field names are inside square brackets. For example, pop up the [New User] window.
/	Multi-level menus are separated by forwarding slashes. For example, [File/Create/Folder].

Symbols

Convention	Description
	This represents a note that needs to pay more attention to.
	The general information helps in performing the operations faster.
	The information is significant.
	Care is taken to avoid danger or mistakes.
	The statement or event that warns of something or that serves as a cautionary example.

Table of Contents

1. <u>System Instructions</u>

1.1   Important Security Instructions

Read and follow the instructions carefully before operation. Please keep the instructions for future reference:

1. **Accessories**: Please use the recommended accessories which are manufactured or delivered with the product. Do not use other accessories, including major alarming systems and monitoring systems. The primary alarming and monitoring system should comply with the local applicable fire-prevention and security standards.

2. **Installation Cautions:** Do not place this equipment on an unstable table, tripod mount, support, or base, lest the equipment falls and get damaged or any other undesirable outcome resulting in severe personal injuries. Therefore, it is essential to install the equipment as instructed by the manufacturer.

3. All peripheral devices must be grounded.

4. External connecting cables must not be visible. All connections and idle wire ends must be covered with insulating tape to avoid equipment damage from accidental contact with exposed wires.

5. **Repair:** Do not attempt to get the item repaired without authorization. Disassembly or separation is dangerous and may result in shock. A qualified technician should perform all repairs.

6. If any of the following situations occur, immediately unplug the power supply from the device and notify the technician:

    A. The power cord or connector is damaged.
    B. Any liquid or material spilled into the equipment.
    C. The equipment is wet or exposed to bad weather (rain, snow, etc.).
    D. If the equipment does not function properly, even when operated as instructed, please make sure that only the control components specified in the operating instructions are adjusted. Incorrect adjustments to other control components may cause equipment damage or failure to operate permanently.
    E. The equipment falls, or its performance changes dramatically.

7. **Component Replacement:** If a component must be replaced, only a specific manufacturer's authorized experts can do it.

8. **Security Inspection**: After repairing the equipment, the technician must do a security inspection to confirm that everything is operating properly.

9. **Power Supply**: Use only the power supply type specified on the label to operate the equipment. If you are unsure about the type of power supply, contact the technician.

> (i) Any violation of the following cautions is likely to result in personal injury or equipment failure. We will not be responsible for the damages or injuries caused thereby.
>
> * Before installation, switch Off the external circuit (that supplies power to the system), including locks.
> * Before connecting the equipment to the power supply, make sure that the output voltage is within the specified range.
> * Never connect the power before the completion of installation.

1.2   Installation Instructions

1.   When the system is turned on, it is not recommended to repeatedly plug and unplug connection terminals. Before beginning any welding task, disconnect the connecting terminals.
2.   Unauthorized removal or replacement of any ZKIVA-Edge T1 may cause damage to the edge.
3.   It is not recommended that any other auxiliary devices be connected without authorization. All non-routine activities must be informed in advance to our engineers.
4.   ZKIVA-Edge T1 should not share the same power socket with any other large-current device.

2. System Instructions

The ZKIVA-Edge T1 video analytic edge was created to help regular IPC equip with intelligent video analytics such as facial recognition, perimeter protection, tail detection, and personnel verification. This edge server is built with industry-leading computer vision and deep learning technologies, as well as a high-speed NPU, to provide quick, reliable, and accurate video analytic performance.

3. Background Management

To help users conveniently manage ZKIVA-Edge T1, the Background Management Platform is added. With this function, the users can connect to the ZKIVA-Edge T1 through a PC and enter the IP address of the ZKIVA-Edge T1 to access the web.

Users can also use the Web Server function to perform other operations, such as Snapshot configuration, Data upload, Real-time preview etc.

The following is the default login method:

- IP Address: 192.168.1.200 (default)
- Username: hxgk (default)
- Password: hxgk1234 (default)
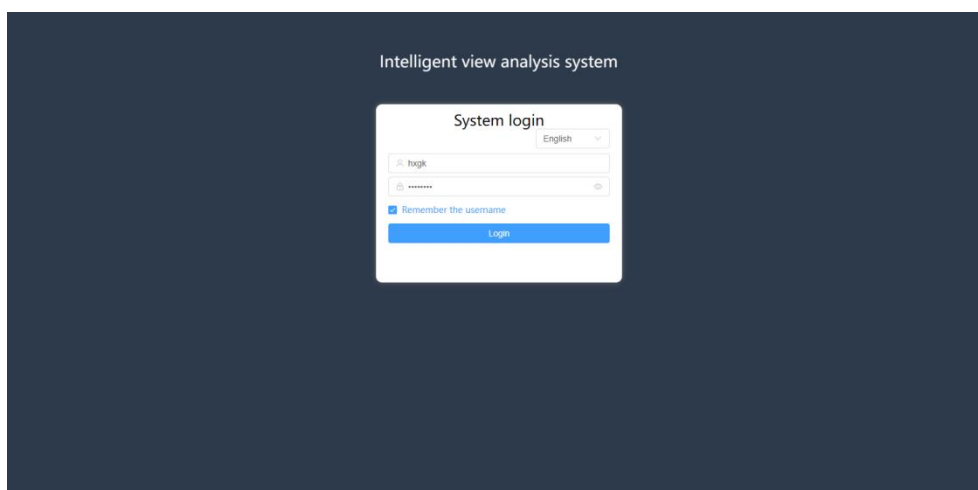
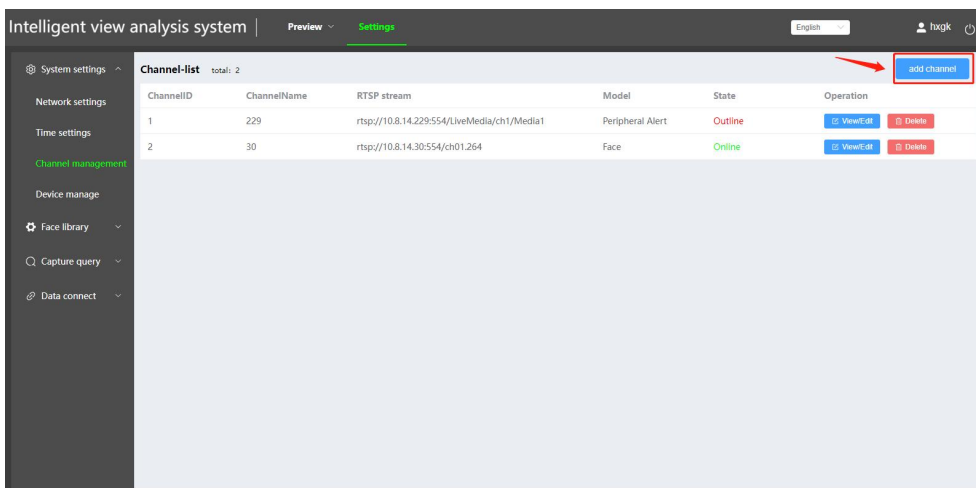# 4. Snapshot Management

4.1 Channel List

Click [Settings] > [Channel Management] to configure the video stream that the box accesses, users can add, delete, and edit the channels.
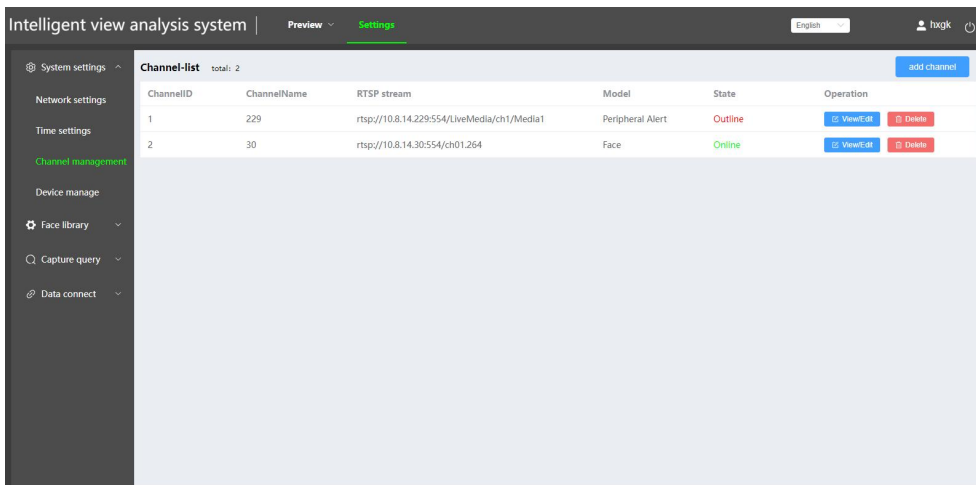
4.2 Add Channels

Click [Add Channel], Fill in the relevant information below:

Channel ID	Enter a complete RTSP stream address (e.g., RTSP: / / 192.168.1.114 / live/cycle).
Channel Name	Enter the corresponding channel name.
Mainstream	In the background, the username and password are combined with the main code stream address.
Sub stream	Set as demand.
Username	Enter the corresponding Username.
Password	Enter the corresponding Password.

Users can also click on the [Onvif Search] button to search for available video streams within the same LAN.

1. Click on the [Get RTSP Address] with the left mouse button.
2. Select the address to search and enter the **Username** and **Password** (IPC does not require access authentication and can be left blank).
3. Click to obtain the **RTSP address**.

4.3 Capture Rules and Area Settings

After adding the channel, the Capture Rules and Area Settings interface will be displayed, the default mode is structed mode (Structured parsing rule configuration).

By clicking [View/Edit], we can also view the capture rules and area settings in the channel list.

4.3.1 Struct Mode

When the channel type is the Struct, there will be a Structured parsing rule configuration.

- Push strategy: Time-first Strategy (Default)
- Push Interval: 0
- Push-pictures: 1

Click [Start Drawing] button, to the right is the ROI area where the users can draw a rectangle, then click the mouse in the corresponding position, according to the upper left vertex, the lower right vertex total two points to determine a region.

Note: If no region is drawn, the entire screen is set by default.
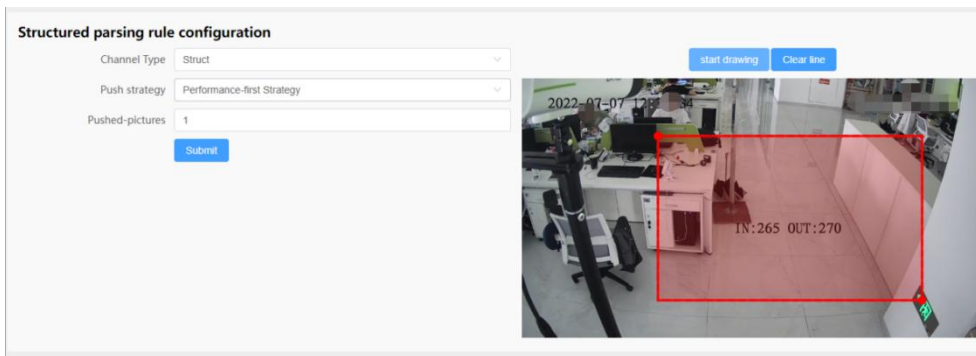
4.3.2 Facial Recognition Rules Configuration

When the channel type is the Face, there will be a Facial recognition rule configuration.
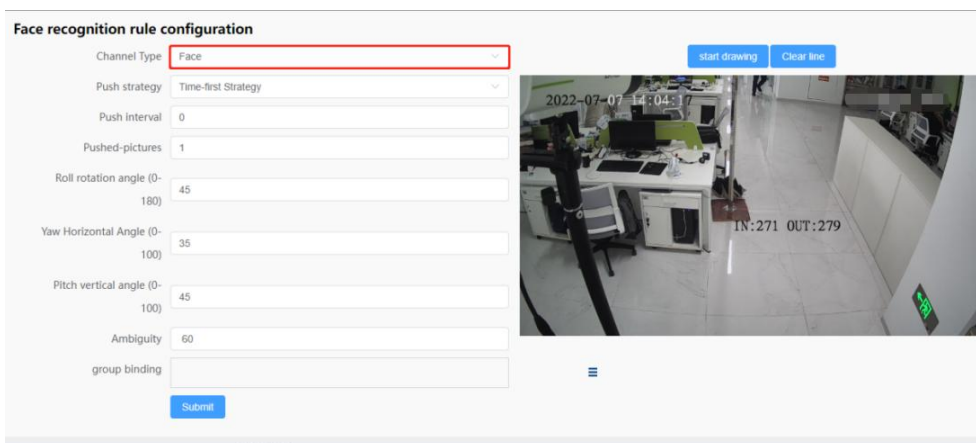
1. Set parameters as required and click the small icon ☰ of group binding on the right side.
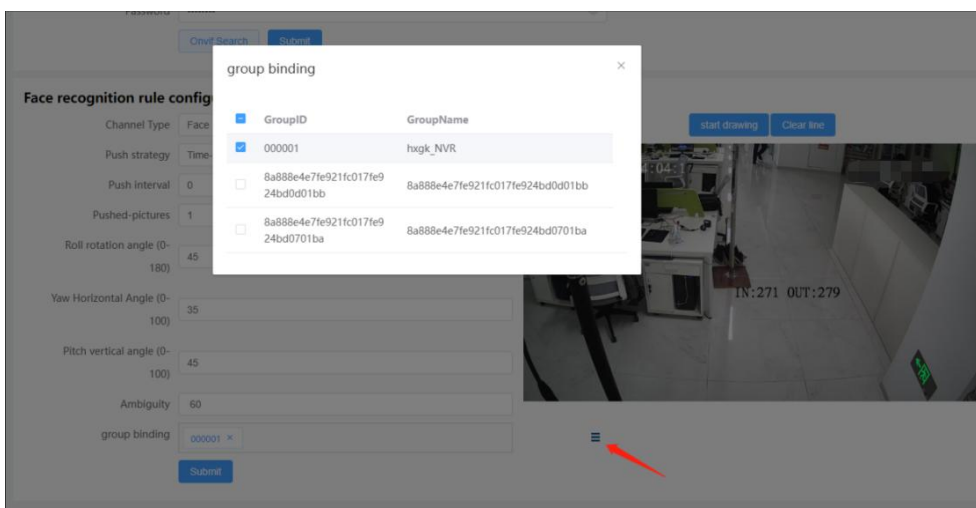
2. Select the face group to bind on the pop-up interface, At the right side we can draw the rectangular ROI area.
3. Click [Start Drawing] button, then click the mouse in the corresponding position, according to the upper left vertex, the lower right vertex total two points to determine a region.
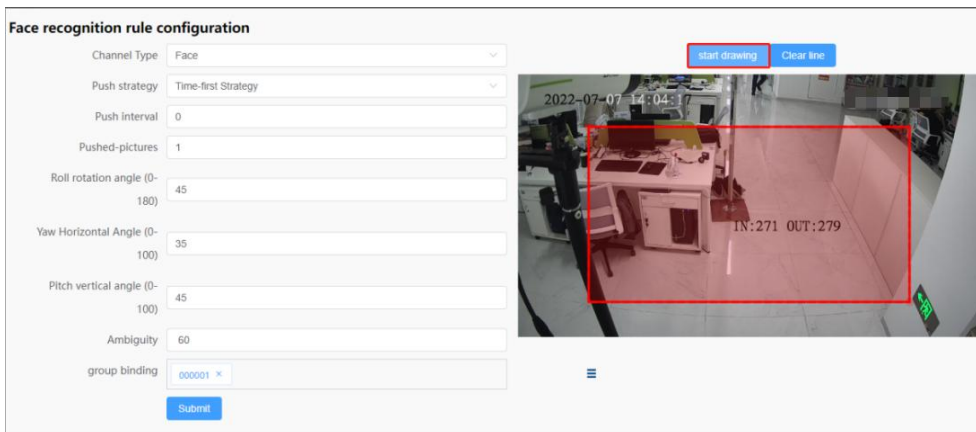
Note: If no region is drawn, the entire screen is set by default.
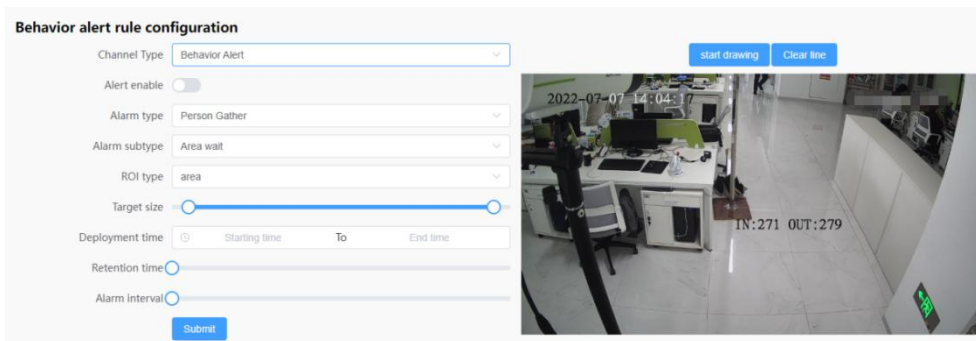
4.3.3 Alert Mode

There are two Alert Modes, Peripheral Alert and Behavior Alert.
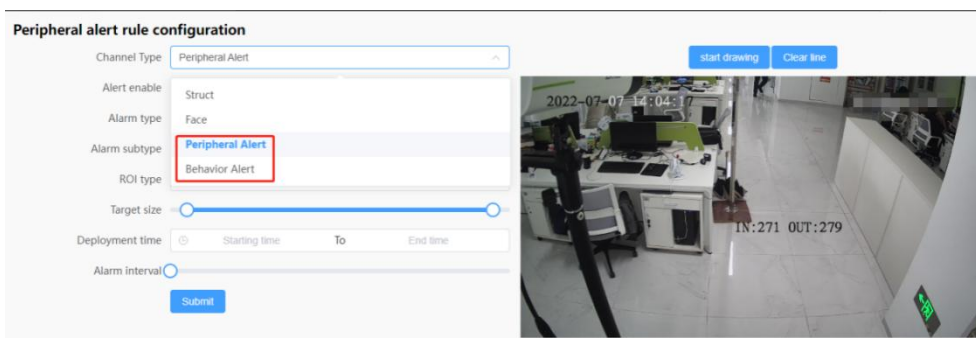
The Peripheral Alert Interface:
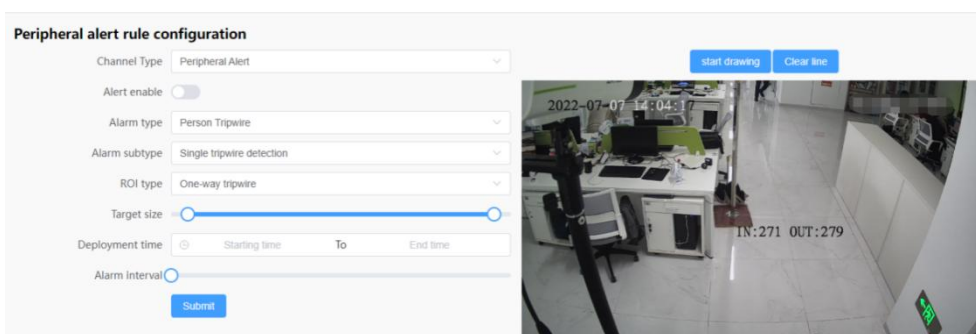
The Behavior Alert Interface:

We can configure the corresponding the two alert modes as required.

1. Click [Start Drawing] button to draw the area, click the left mouse button to draw the vertices of the polygon area, right-click to finish drawing.
2. Click [Submit] button after drawing.

5. Real-Time Preview

1. Click [Preview] we can clearly view the real-time display of pedestrian, vehicle snapshot information and statistical information.
2. Real-time preview can also show face patterns (face and human body relevant information).
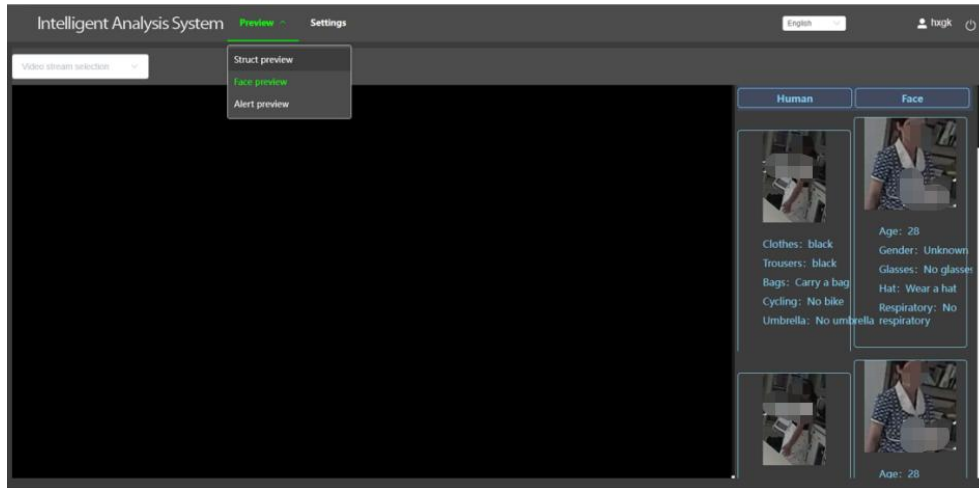
5.1 Struct Preview

From Struct Preview, the users can clearly view the information about portrait capture, vehicle snapshots and non-vehicles.
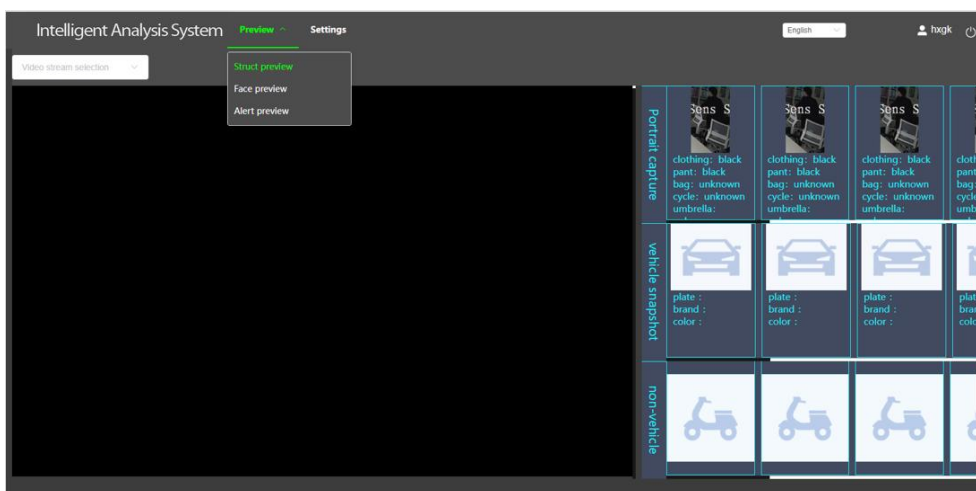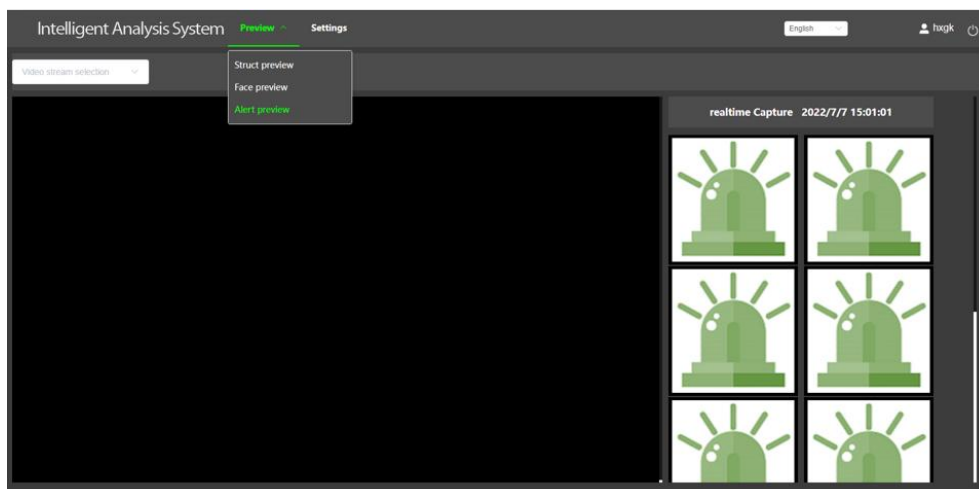
5.2   Face Preview

From Face Preview, the users can clearly view the information about personnel face capture and human body structure.
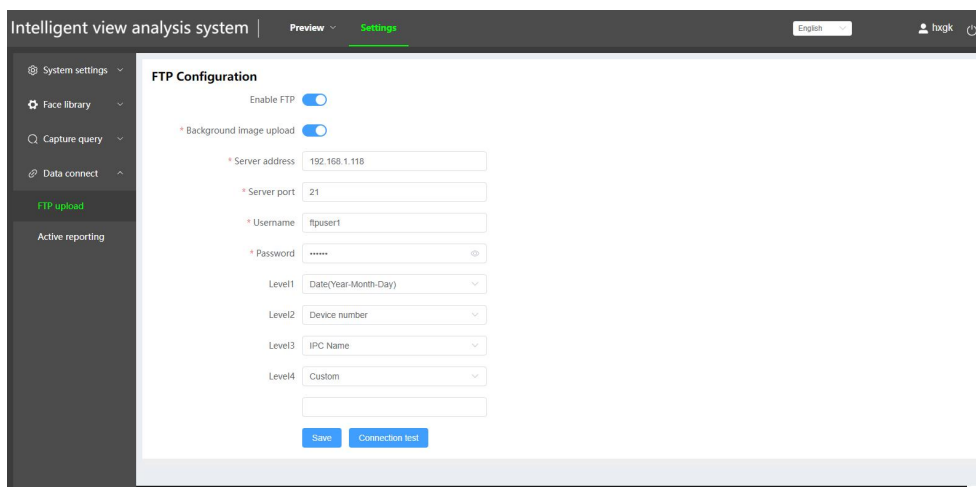

5.3   Alert Preview

From Alert Preview can display the peripheral alert mode, the users can view the information related to behavior analysis.
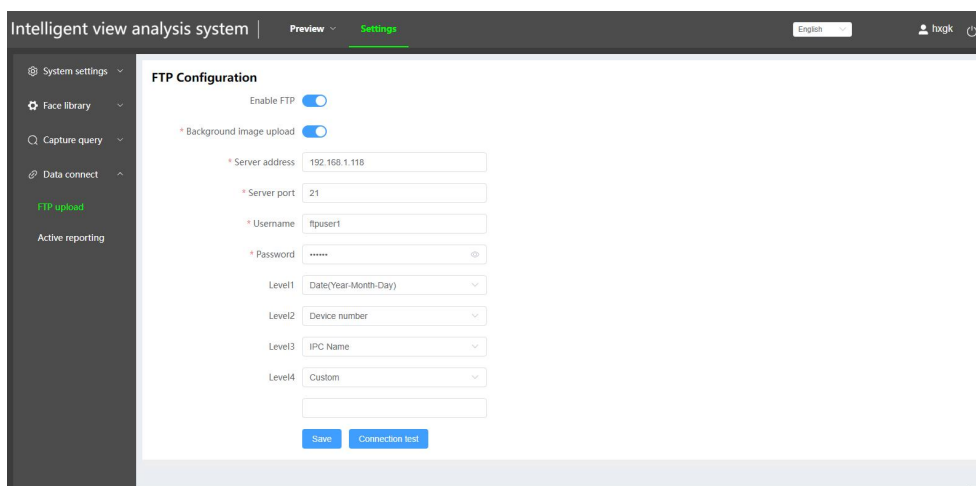
6. Data Connect

Data Connect includes two parts: FTP upload, and Active reporting.

6.1 FTP Upload

1. Click [Data connect] > [FTP upload], click on the Enable button Enable FTP 🔵 and edit, then enter the FTP server IP address, Port number, Username, Password etc. then save the FTP server configuration.

2. Click the [Connection test] button to test the connectivity of the FTP server.

6.2   Active Reporting

6.2.1 HTTP Mode

1. Click [Data connect] > [Active reporting], then configure the parameter settings related to the master device:
    - ➢ Active upload: Open   Active upload ⬤ (After opening, the capture information will be uploaded to the HTTP server.)
    - ➢ Server address (separate ports with ':'): Fill in the relevant URL.
    - ➢ Upload interval (0-10 second): Fill in the relevant number.
    - ➢ Numbers of repeat upload (0-2): Fill in the relevant number.
    - ➢ Data type: Three types available (capture, recognition, capture + recognition).
    - ➢ Feature upload: Optional.
    - ➢ Capture images upload: Optional.
    - ➢ Background image upload: Optional.
    - ➢ Persistent upload: Optional.

2. Click [Submit].
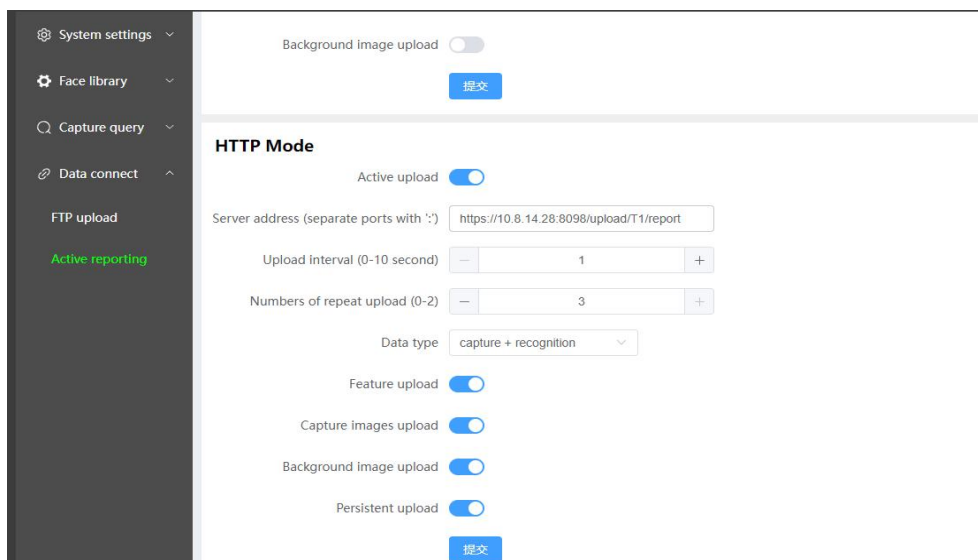
6.2.2 WebSocket Mode

1. Click [Data connect] > [Active reporting], configure the parameter settings related to the WS Mode:
2. Configure the Parameter settings for active reporting of alarm information:
    - ➢ Active upload: Open   Active upload ⬤ (After opening, the capture information will be uploaded to the WS server).
    - ➢ Server address (separate ports with ':'): Fill in the relevant address.
    - ➢ Upload interval (0-10 second): Fill in the relevant number.
    - ➢ Numbers of repeat upload (0-2): Fill in the relevant number.
    - ➢ Capture images upload: Optional (Image information will be uploaded when the status is enabled).
    - ➢ Background image upload: Optional (Image information will be uploaded when the status is enabled).
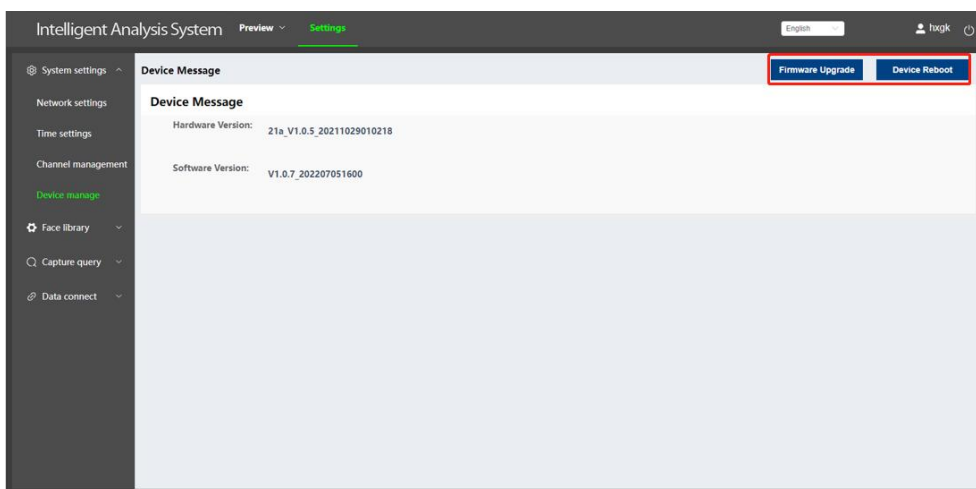
3. Click [Submit].
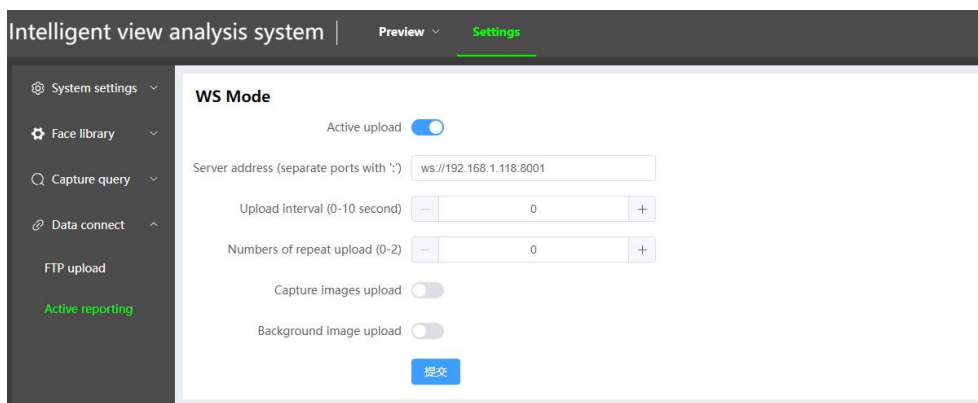
7. Snapshot Research

Click [Settings] > [Capture query], the users can view the snapshot data corresponding to the peripheral alert mode when the data is reported passively.
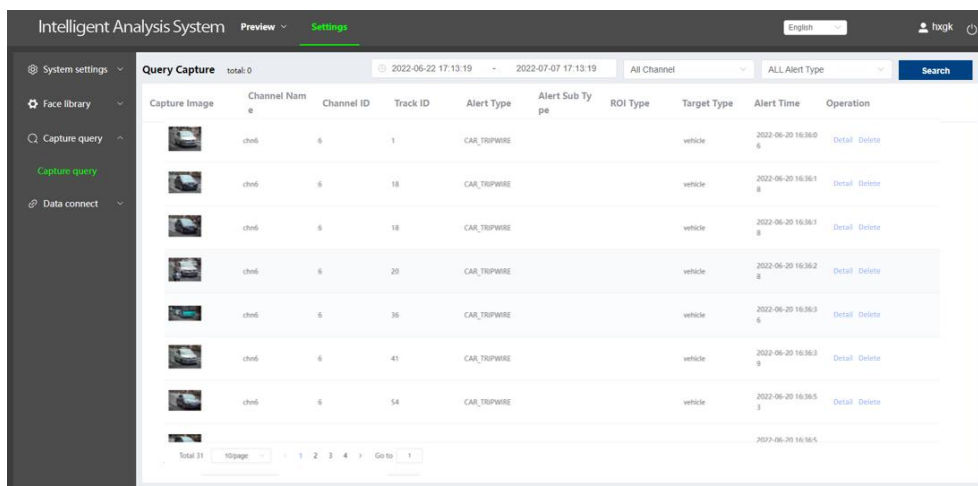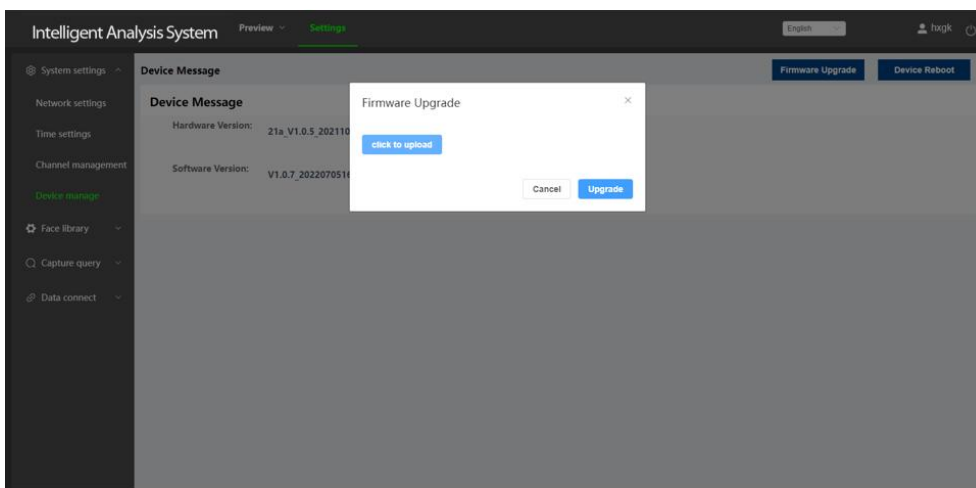
8. <u>Device Maintenance</u>

Click [Settings] > [Device Manage], the users can operate the Firmware Upgrade and the Device Reboot.

If the users want to upgrade the firmware, click [Firmware Upgrade], and upload the firmware upgrade package, it will restart after the upgrade is successful.

Firmware description:

```
firmware_V1.0.3_20220614
├─ readme. txt
└─ upgrade.tar.gz
```

File	Description
firmware_V1.0.3_20220614.tar.gz	Name of the firmware package.
├─ readme.txt	Version updates.
├─ upgrade.tar.gz	Firmware upgrade package.

Take the *firmware_V1.0.3_20220614.tar.gz* for example, after *firewarefirmware_V1.0.3_20220614.tar.gz* is unzipped, the users can use *Upgrade/tar.gz* to upgrade on the web page.

Green
Label

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