

# Human Living Body Temperature Detection And Face recognition Terminal

## Operation manual

(please read carefully before using the product)



## **Attention**

- This operation manual is for reference only. All appearance and functions of the product are subject to the actual product
- This product can be equipped with optional modules such as WiFi, Wiegand IC card reader, etc. Please refer to the actual product
- Do not aim the lens of the device at the object with strong light, as it will affect the capturing effect, or even damage the lens
- Please configure all passwords and other relevant product security settings, and take good care of your user name and password
- Biometrics products cannot be 100% suitable for any security environment or high security use, please use combination authentication
- The firmware of this device will be updated from time to time. For your better experience, please timely maintain and upgrade

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# 1 Product overview

## 1.1 Product introduction

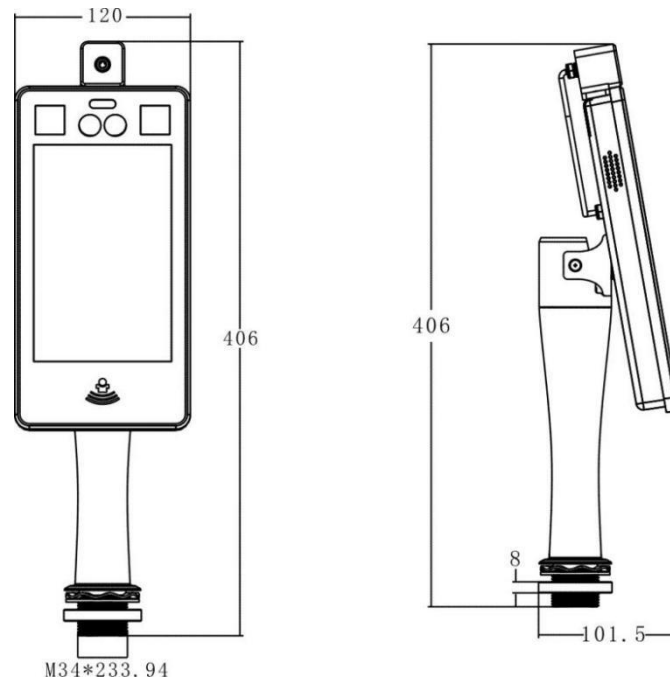
The human living body temperature detection and face recognition terminal is a face comparison terminal product, providing human living detection, body temperature detection, face capture and comparison and other basic functions. Wifi function, 4G, IC, ID and other corresponding software and hardware modules optional(Standard one do not include these features). It provides a more secure and convenient scheme for people access management. The device can be widely used in building access control, attendance, airport station security, community access control and other scenes.

## 1.2 Product features

- The embedded Linux operating system has an overwhelming advantage over the Android system in terms of reliability and stability. Support the output of real-time video stream to other device, one complete face capture, recognition, infrared temperature measurement function.
- Abnormal body temperature alarm: non-contact body surface temperature detection within one second, the temperature measurement distance is 25-45cm, temperature measurement error range  $\pm 0.5^{\circ}\text{C}$ , abnormal body temperature linkage external sound and light alarm.
- Double sensor design, infrared vivo detection algorithm, effectively prevent photos and video fraud.
- Identity card +IC card(alternative) double identification module optional, can achieve 1:1, 1: N comparison mode.
- The face recognition distance is within 0.5-3 meters, and the face can be recognized and registered in the picture across 260 pixels or more.
- Face detection technology based on improved multi-task cascade convolution neural network is adopted to reduce the requirement of image quality and greatly improve the detection speed of face.
- With the deep learning algorithm, support 10000 face database storage.
- Support local login to query and setup device parameters, view real-time monitoring and face comparison results.
- Support to configurate device parameters in central center, provide security authentication.
- Flexible face data import, support single, batch picture file import and real-time snapshot import.
- Support common person, white list person, blacklist person etc., different face type.
- Support voice broadcast after face recognition
- Support FTP upload face recognition data.

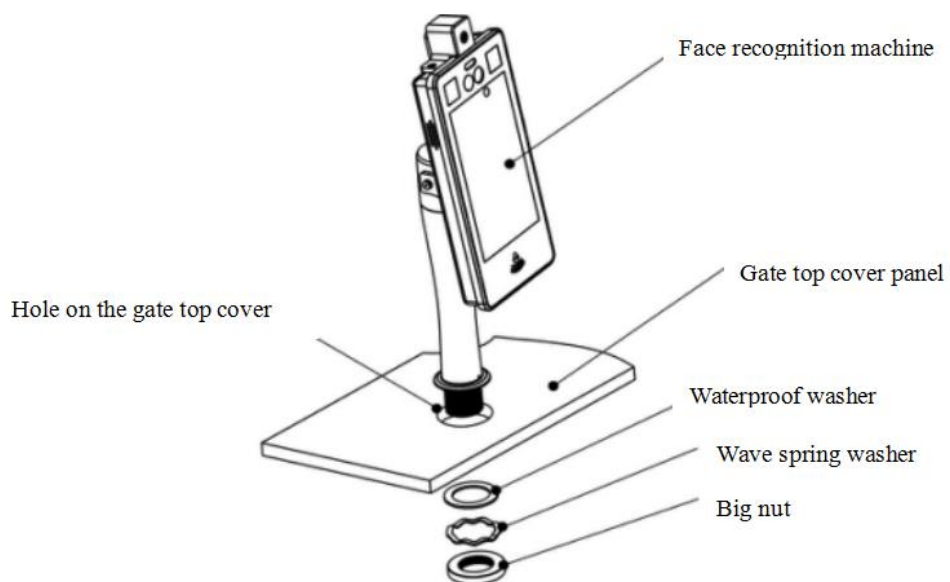
- Support to run in offline mode
- Support TF card storage, can store 10W face capture and recognition records.
- Provide 485, I/O input and output, wigan and other peripheral interfaces.
- 4G module is optional to meet the needs of wireless transmission applications.
- Optional sunshade cover, rainproof, anti - light impact image effect.

## 2 Product installation (dimension drawing)



### 2.1 Vertical installation of channel brake

This equipment needs to be installed on the gate machine. Before installation, it is necessary to ensure that the top cover plate of the has been punched with the hole position matching the equipment.



**Note: Roof opening size of gate machine is  $\varnothing 40$  mm (+ / - 2).**

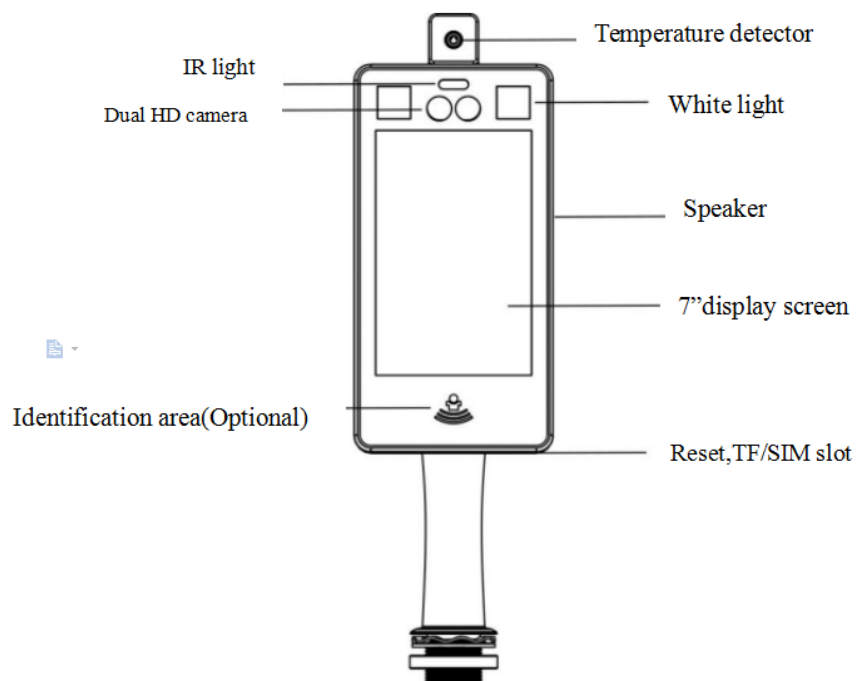
## 2.2 Vertical bracket installation method



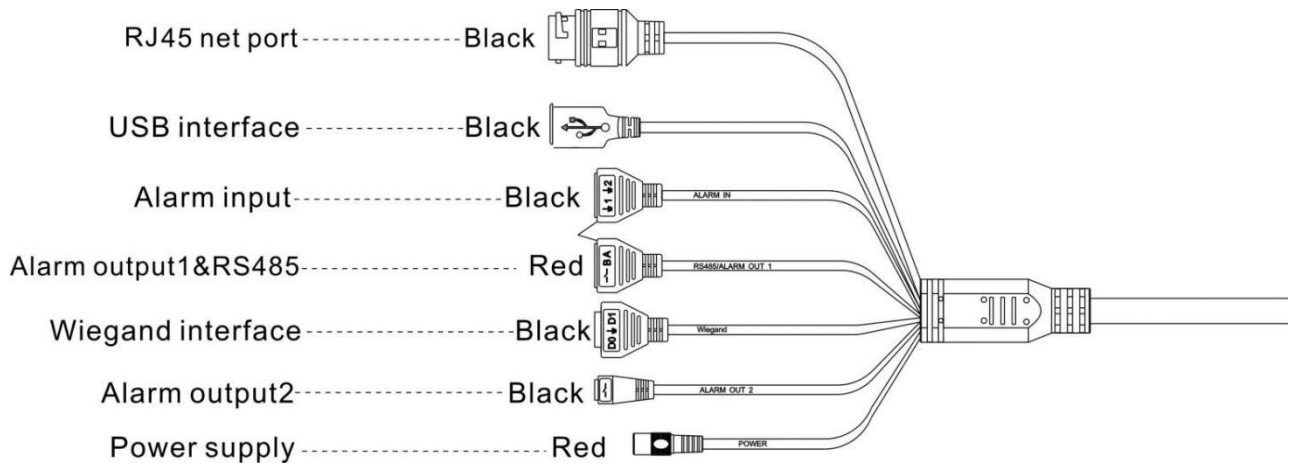
Floor stand rapid deployment  
Material: High quality steel  
Specification: 1-1.5M adjustable  
Support bottom screw fixation  
Easy to install

## 3 Wiring instructions

Wiring diagram is as follows:



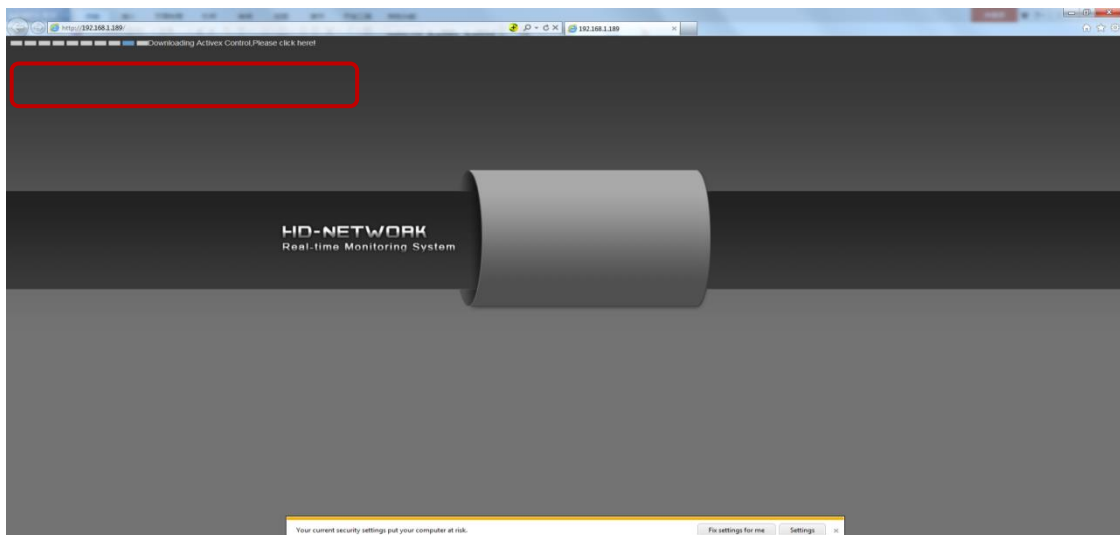




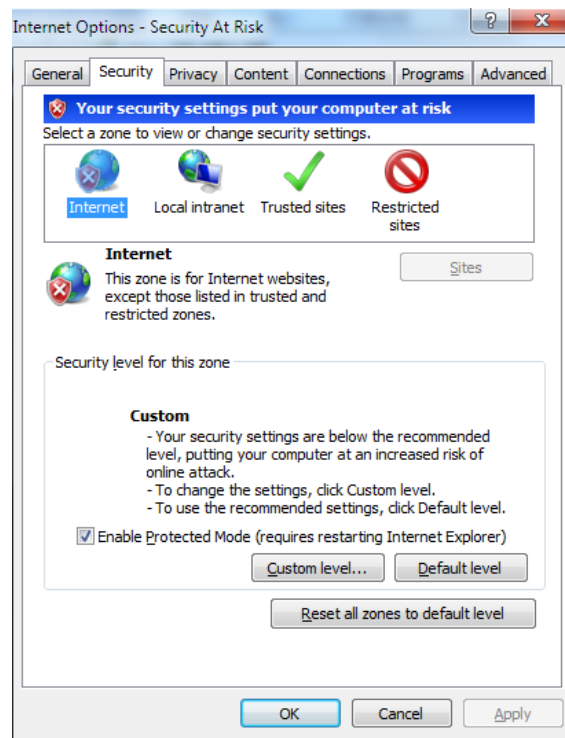
## 4 Client software

### 4.1 Control ActiveX installation


Login the device with Internet explorer browser and enter the IP address in the url bar. The device's default IP is 192.168.1.189 (or check the IP in the lower right corner of the device display screen after the power on). After login, download the control and install the control according to the prompts.

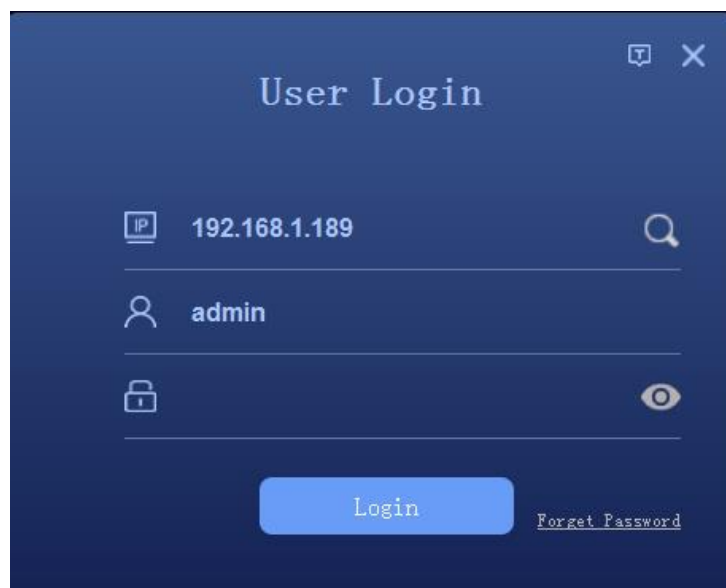



Note: if unable to download, modify Internet explorer browser "tools" menu options, tick off the protected mode.



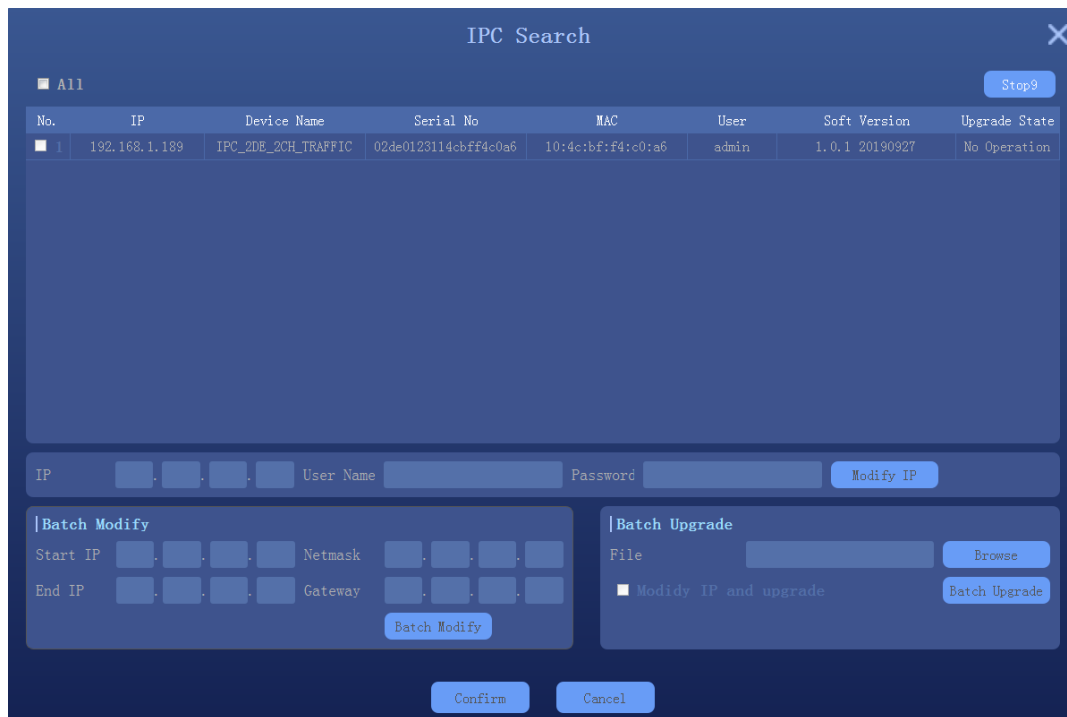
## 4.2 Login interface

After installing the control, the desktop will generate the application icon . Double-click to run, and the following login interface will appear. Enter the device password (default is 888888) and click the "login" button to log in the device.



Or click  to enter the device search interface, click the "search" button to search the device and select

the device to log in.



### 4.3 Preview interface



① Live preview window

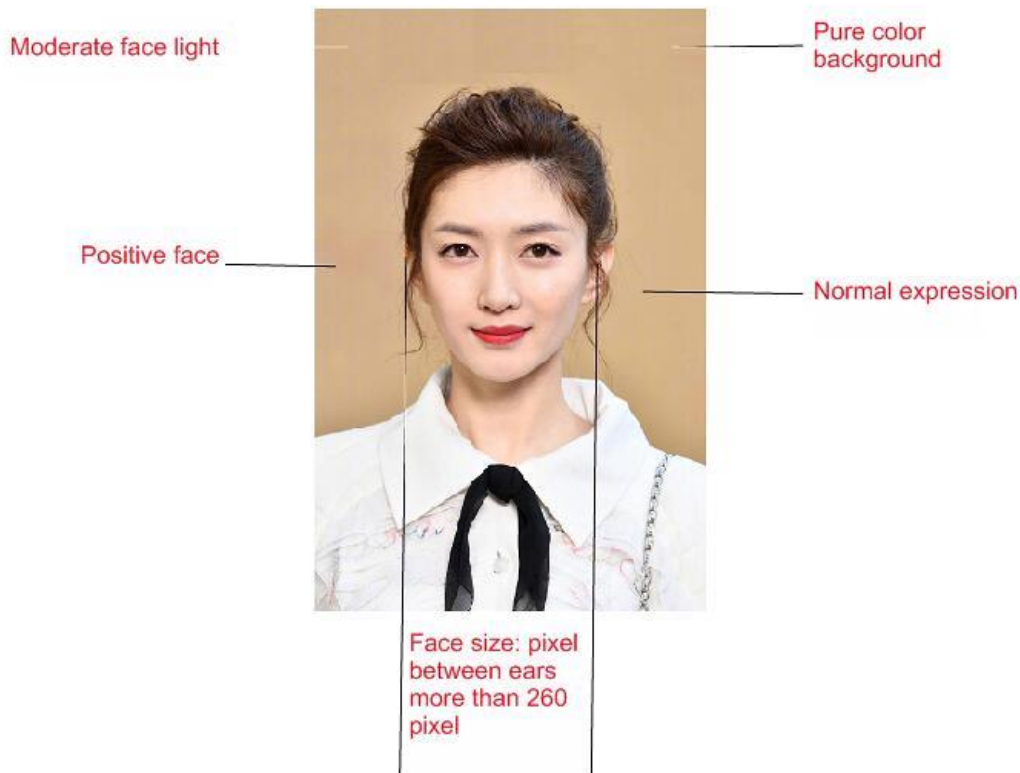
- ② Comparison results show: similarity, name, description, group, temperature, list type
- ③ Real-time snapshot results show: snapshot time, image threshold, body temperature

## 4.4 List management

List management, face database management, single face registration, batch face registration, real-time face image import.

### 4.4.1 Face picture requirements

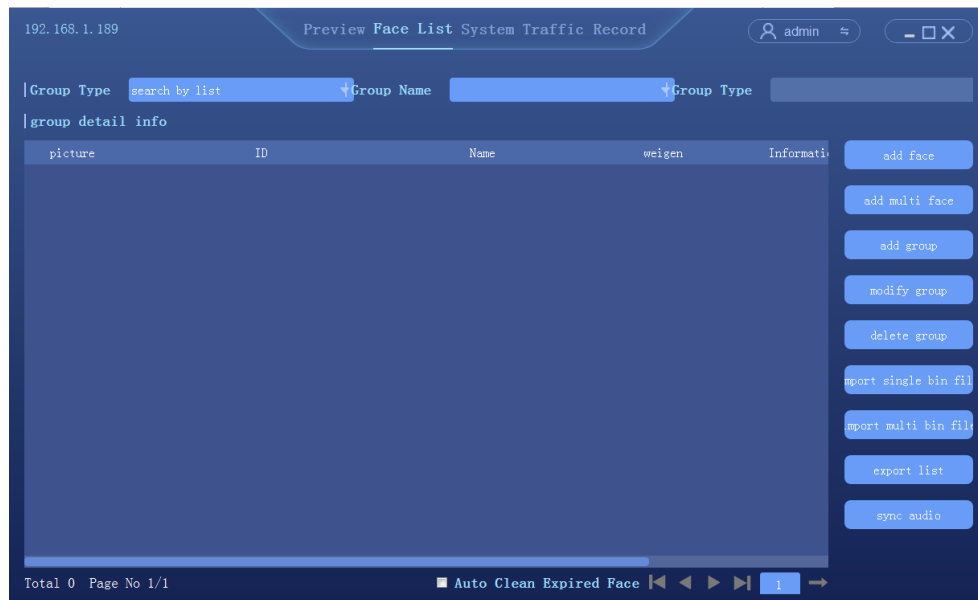
To ensure the accuracy of the recognition, use a recent and new photo. Only one face in the picture has a width of 260 pixels or more.



**Note:** face image must not be more than 1M, so as to avoid failure when importing face library

### 4.4.2 Single face import

Select "list management" to enter the list management interface, as follows



Steps:

- ① Add group: set the group name and group type (whitelist, blacklist or visitor)

### Description :

Visitor type grouping, setup the time period, and check ☒ **Auto Clean Expired Face**, then the face data will be automatically deleted from the face library after reach the expiration time.

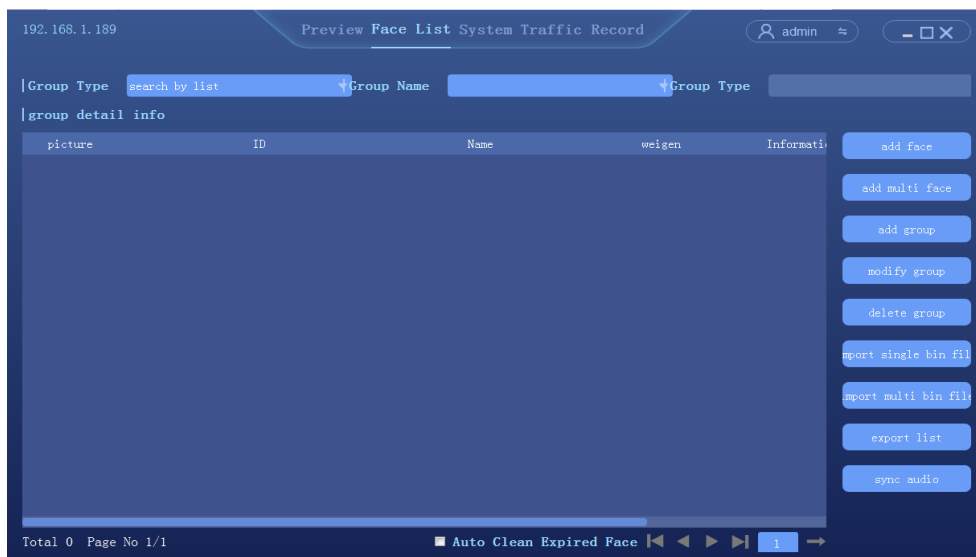
- ② Select add new face

- ◆ Click [browse] to check the location of face photo and select
- ◆ Fill in name, ID, Information.,etc

- ◆ Click “confirm” to end

### 4.4.3 Batch Add

Select "list management" to enter the list management interface, as follows.

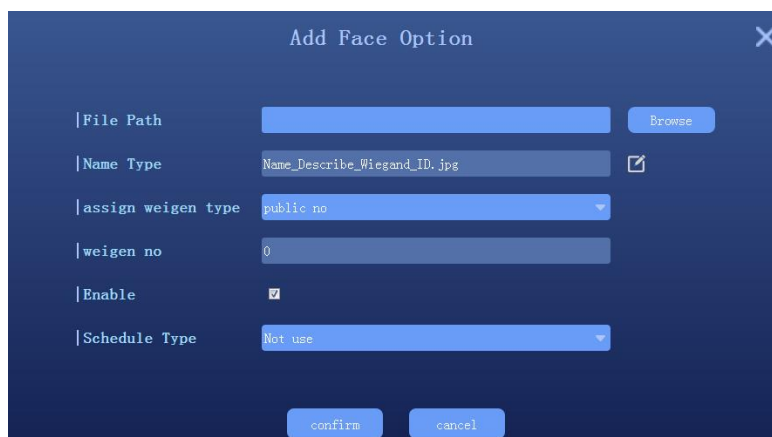



Steps:

- ③ Add group: set the name and group type (whitelist, blacklist or visitors)



- ④ Select "add multiple faces"




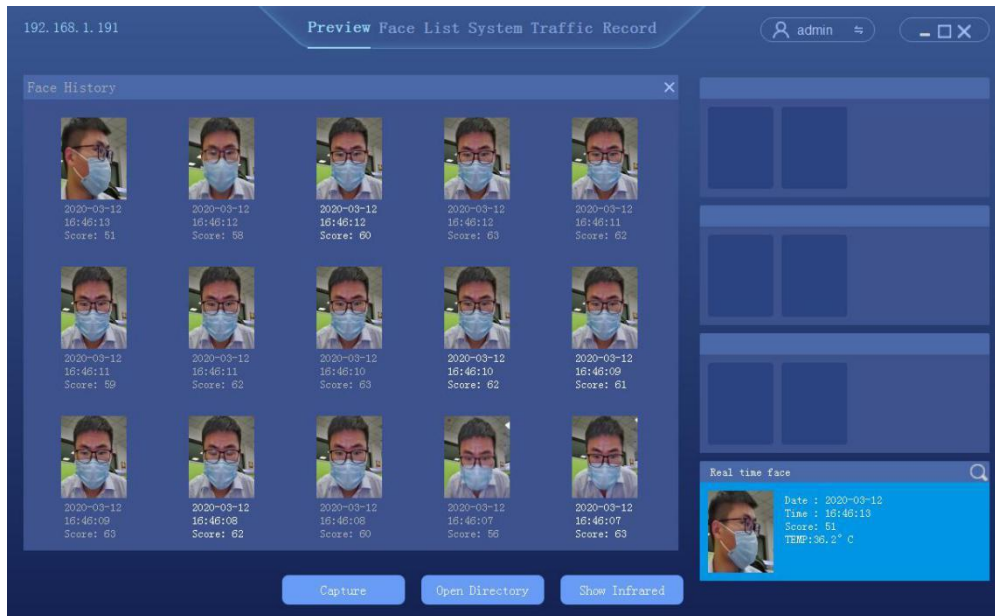
- ◆ Click  to setup face image import format; Note: the face photo naming format should be corresponding to avoid import failure

- ◆ Click [browse] and select the folder corresponding to face library
- ◆ Click confirm and wait for the import to complete the import

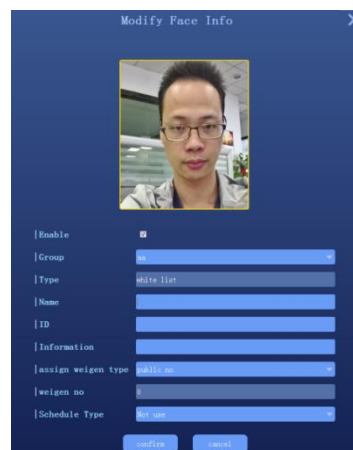
#### 4.4.4 Real-time face image import

In Preview interface, when a person passes by the device, the device will keep to capture the human face.

Click the icon  on the right side of the human face to view the picture captured in real time, as shown below:



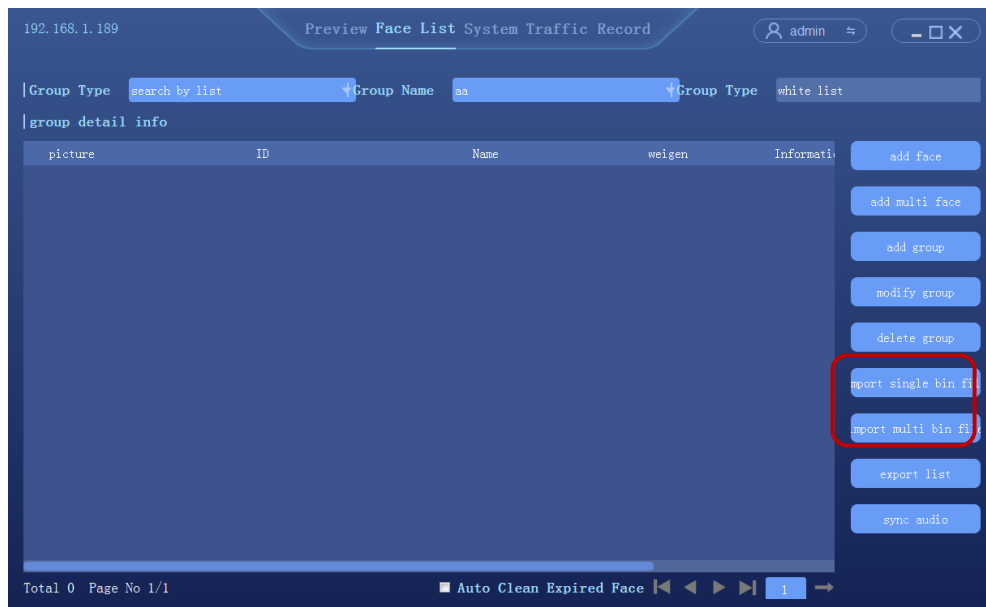
In the face history, select the face image as the template to import into the device



Note: For this import mode, groups need to be setup in advance in the list management

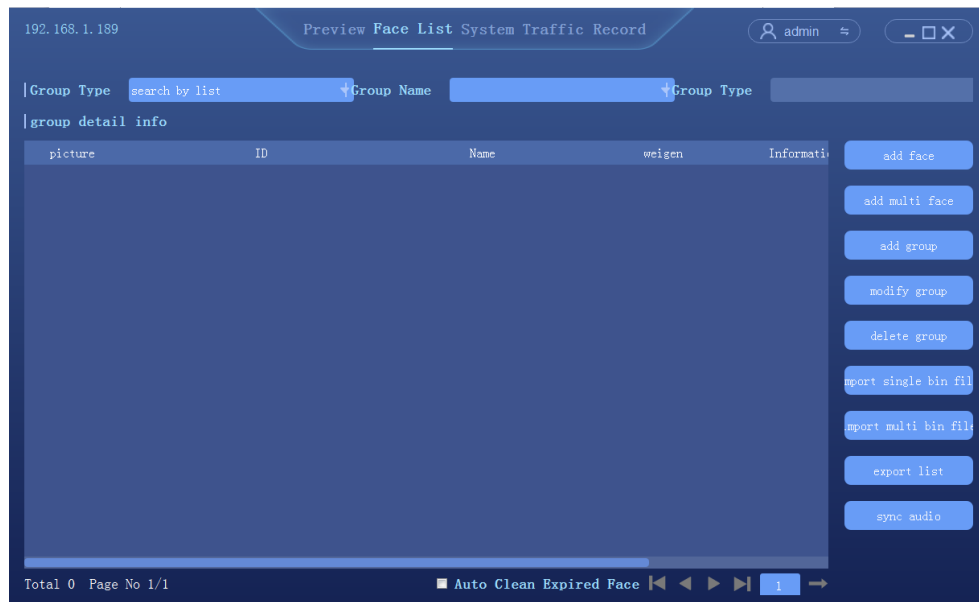
#### 4.4.5 Binary format face library import

The device supports one or more binary format grouping face library import, select "single bin file" or "multiple bin file" respectively, as follows



#### 4.4.6 Exported face library

In the list management screen, see below



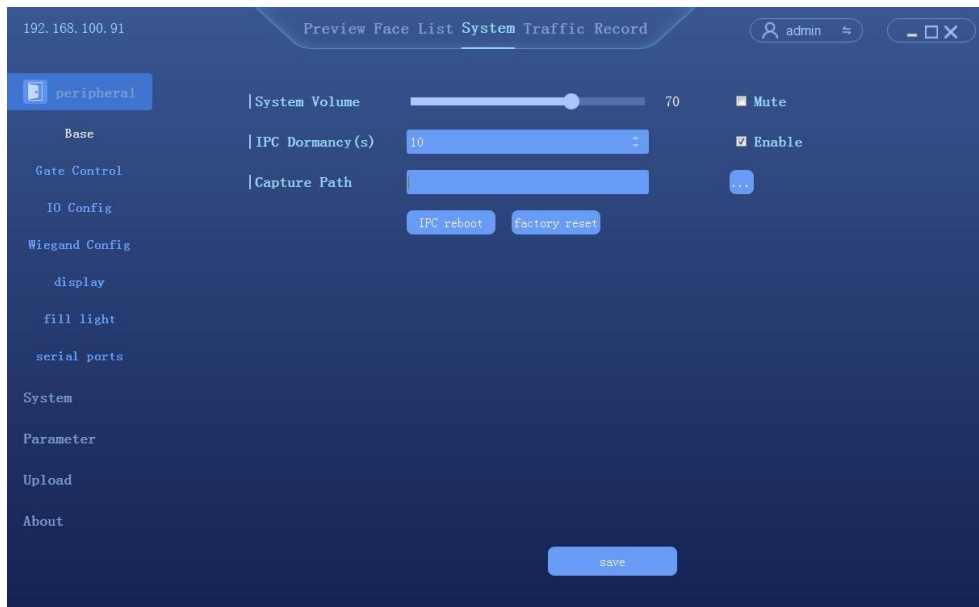
- ◆ Click export face list;
- ◆ Setup the save path of face library export
- ◆ According to the group name, automatically export all groups in the face library, save the format as binary (.bin) file
- ◆ When finished, click "ok"



## 4.5 Peripheral control

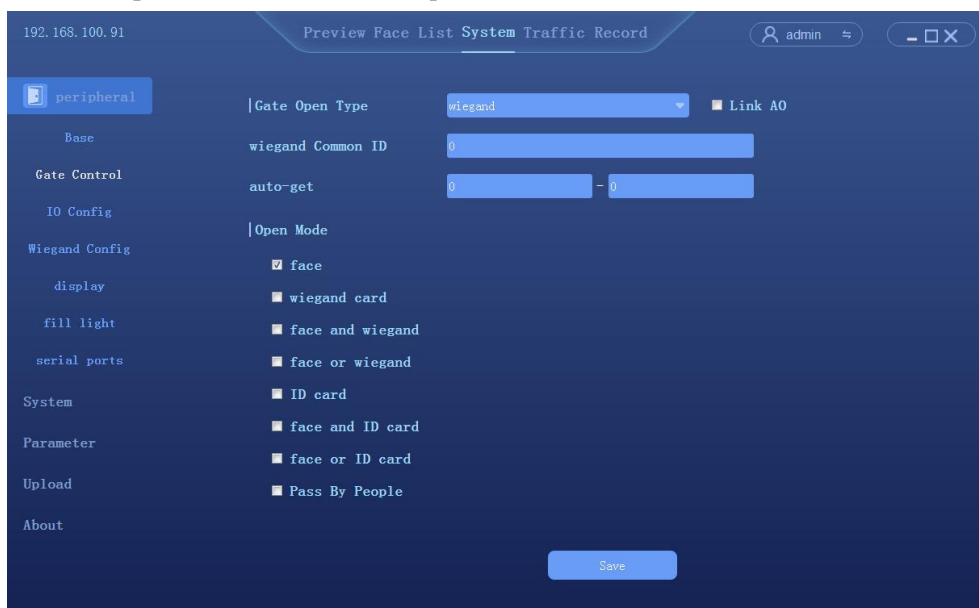
### 4.5.1 Basic setup

Click [peripheral] → [system] to enter the system setting interface



### 4.5.2 Gate control

Click [peripheral] → [Open Mode] to enter the Open Mode control interface

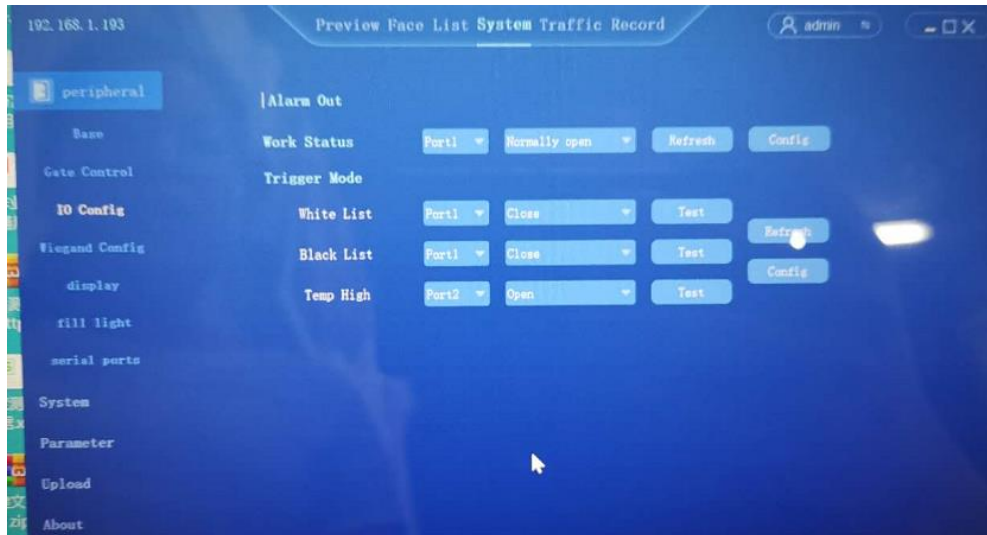


- Gate open type: can select relay or Wiegand two ways
- Relay. : relay channel 0 (out0) or relay output channel 1 (out1)
- Delay time: hold time of opening state

- Open mode:
  - ① Face: The capture face matched the face in database to open the gate
  - ② Unification of face and ID card: The capture face matched the face in ID card to open the gate
  - ③ Pass the gate: Once someone to open the gate

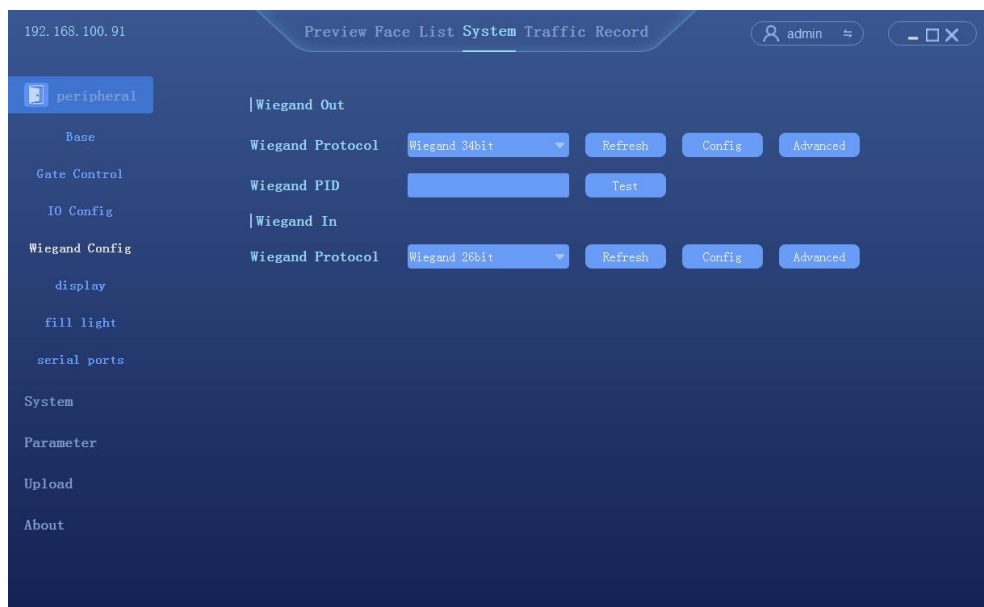
### 4.5.3 GPIO control

Click [peripheral] → [GPIO] to enter the GPIO control interface



### 4.5.4 Wiegand Config

Click [peripheral] → [Wiegand configuration] to enter the Wiegand configuration interface.

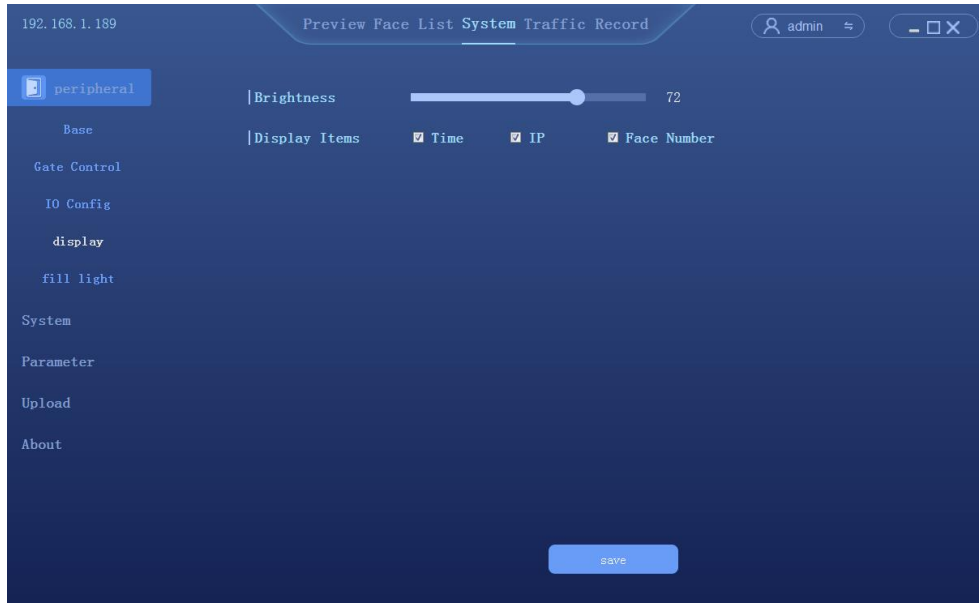


- Wiegand protocol (output) : Wiegand 26 bit/Wiegand 36 bit/Wiegand 66 bit optional
- Wiegand number: test to see if Wiegand works

- Wiegand protocol (input) : Wiegand 26 bit/Wiegand 36 bit/Wiegand 66 bit optional

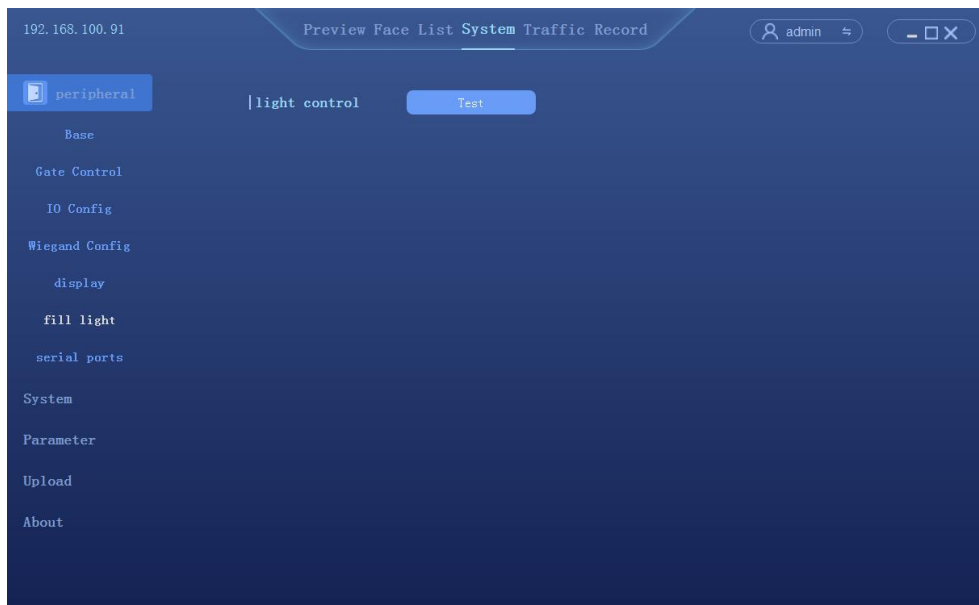
### 4.5.5 Display Settings

Click [peripheral control] → [display Settings] to enter the display Settings interface



### 4.5.6 Fill Light

Click [peripheral control] → [fill light] to enter the fill light interface



- Test to see if fill light works

### 4.5.7 Serial port

Click [peripheral control] → [serial port] to enter the serial interface

The screenshot shows a web interface for serial port configuration. The top bar includes the IP address 192.168.100.91, navigation tabs (Preview Face List, System Traffic Record), and a user profile (admin). The left sidebar lists menu items: peripheral (selected), Base, Gate Control, IO Config, Wiegand Config, display, fill light, serial ports, System, Parameter, Upload, and About. The main content area is titled 'Serial Ports Type' with a dropdown set to 'send'. It displays '485 serial ports' and configuration fields for Baud Rate (9600), Data Bit (8), Stop Bit (1), and Check Digit (none). Below these are two large text areas for 'Send Data' and 'Receive Data', each with a 'Clear Data' button. A 'Send' button is located between the text areas, and a 'Save' button is at the bottom center.

- Serial port type: send/receive

## 4.6 The system configuration

### 4.6.1 Setup the time

Click [System] → [Time] to enter the time setting interface

The screenshot shows a web interface for system time configuration. The top bar includes the IP address 192.168.1.189, navigation tabs (Preview Face List, System Traffic Record), and a user profile (admin). The left sidebar lists menu items: peripheral, System (selected), Time, Network, User, Parameter, Upload, and About. The main content area is titled 'System' and contains the following settings: 'Device date' (2019-11-21 11:47:18) with 'Modify' and 'Sync' buttons; 'Timezone' (UTC+08:00) with a dropdown menu; 'Timezone adj' (00 Minutes) with a spinner; 'Enable NTP timing' (selected) and 'Disable NTP timing' (disabled) radio buttons; 'Timing interval' (24) with a slider and 'Hour' label; and 'Server address' (asia.pool.ntp.org) with a text input field. A 'Save' button is located at the bottom center.

- Device date: To configure the device time. Mode: Manual modify and PC synchronization
- NTP: The device synchronize the time with the network NTP server

## 4.6.2 Network Settings

Click [System] → [Network] to enter the network settings interface

The screenshot shows a web management interface with a dark blue theme. At the top, there's a header bar with the IP address '192.168.1.189' on the left, and navigation tabs 'Preview Face List', 'System', and 'Traffic Record' in the center. On the right of the header, there's a user profile 'admin' and window control icons. A left sidebar contains a menu with 'peripheral', 'System' (highlighted), 'Time', 'Network', 'User', 'Parameter', 'Upload', and 'About'. The main content area is titled 'Network' and contains settings for a network card. It includes fields for 'Network Card' (set to 'LAN1'), 'MAC Address' (set to '10:4C:BF:F4:C0:A6'), and 'Network Status' (set to '100M Full Duplex'). Below these, there are radio buttons for 'DHCP' (selected) and 'Static IP'. Under 'Static IP', there are input fields for 'IP Address' (192, 168, 1, 189), 'Mask' (255, 255, 255, 0), and 'Gateway' (192, 168, 1, 1). Further down, there are radio buttons for 'Auto Obtain DNS Address' and 'Use Following DNS Address'. Under 'Use Following DNS Address', there are input fields for 'DNS1' (111, 111, 111, 111) and 'DNS2' (222, 222, 222, 222). A checkbox for 'Telnet' is checked. A 'Save' button is located at the bottom right of the settings area.

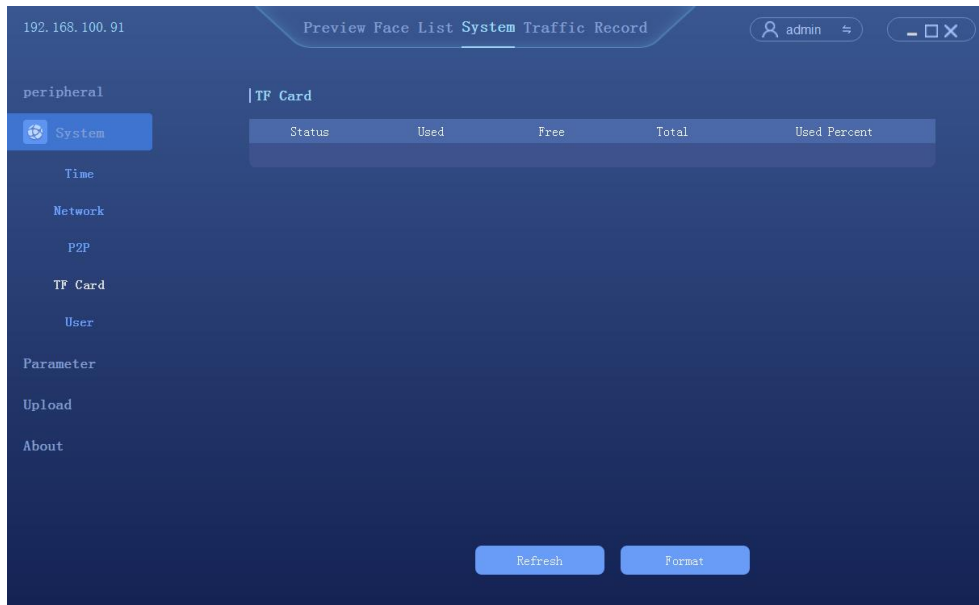
## 4.6.3 P2P

Click [System] → **【P2P】** , to enter the P2P settings interface

- [download mobile app] → [scan ID add device] enter the Faceeye interface. Note: the device IP must be able to go on the outer network

## 4.6.4 TF Card

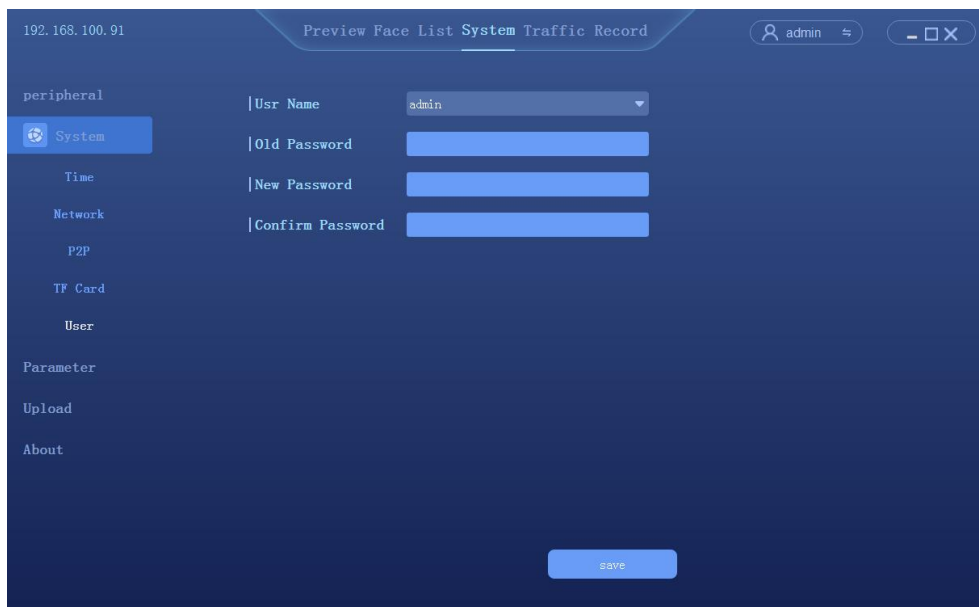
Click [System] → **【TF Card】** , to enter the TF card settings interface



- Check the status of TF card in real time. Actual functionality (under development)

## 4.6.5 User management

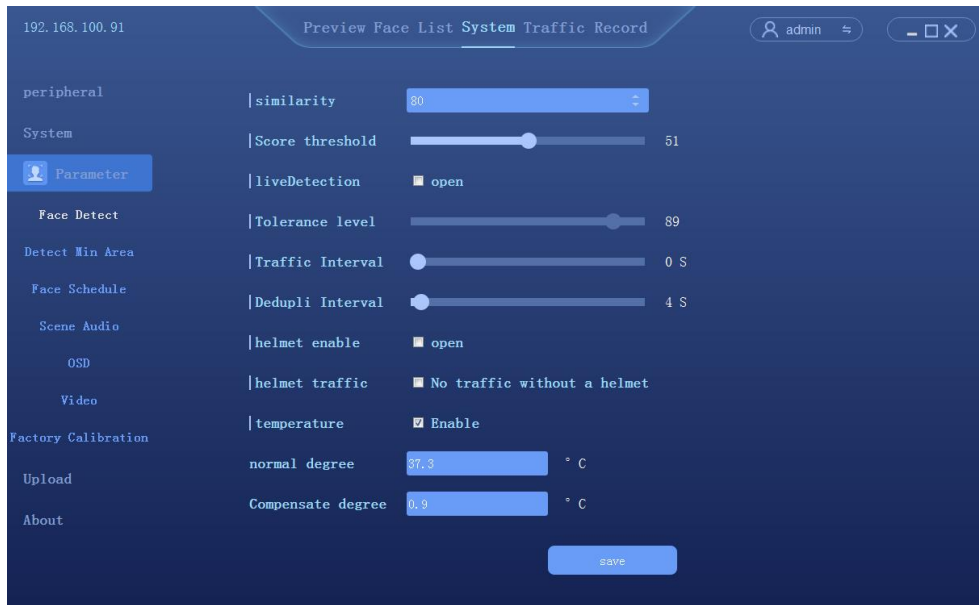
Click [System] → [User] to enter the user management interface



## 4.7 Parameter Settings

### 4.7.1 Face detection

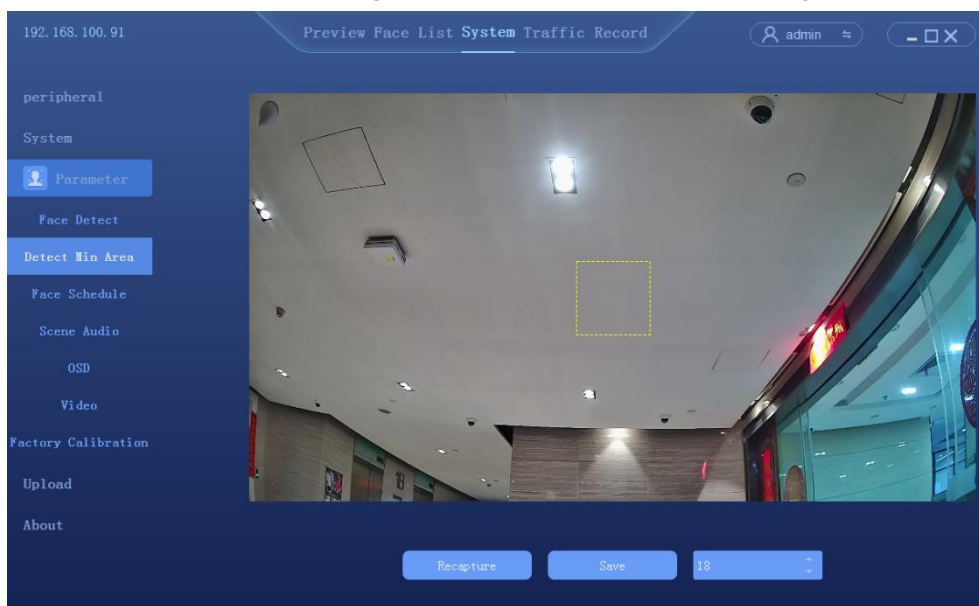
Click [System] → [Parameter] → [face detect] to enter the setting interface



- Enable the temperature detection
- Normal temperature degree: To setup a default temperature here. The alarm out will be triggered once the temperature detected is higher than the default value. The device support 2ch alarm output, please go to GPIO setup to open Temp High to trigger alarm output.
- Temperature correction: compensation according to the measured temperature

## 4.7.2 Detect target minimum size

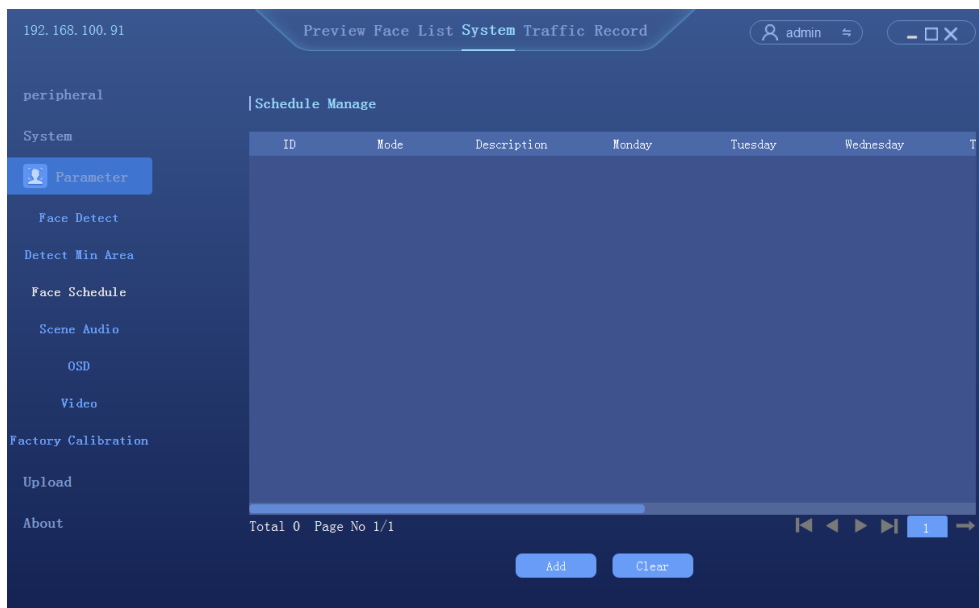
Click [System] → [Parameter] → [Detect target minimum size] to enter the setting interface



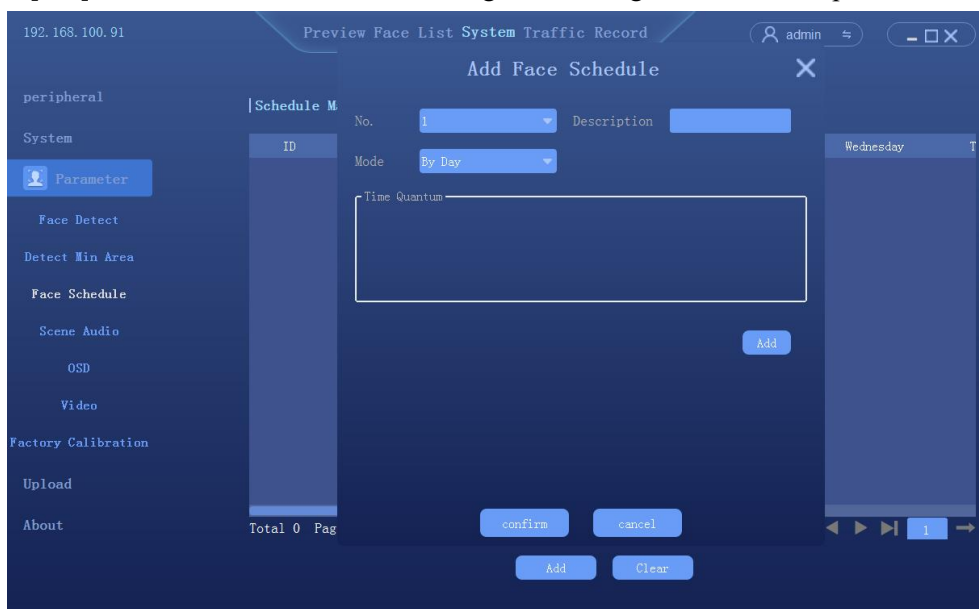
- Detection target size 1-82 is optional

### 4.7.3 Dispatching management

Click [System] → [Parameter] → [dispatching management] to enter the setting interface



Click [add] to enter the interface of scheduling time setting, total of 6 time periods can be set



### 4.7.4 Scene Audio

Click System → Parameter → Scene Audio to enter the setting interface

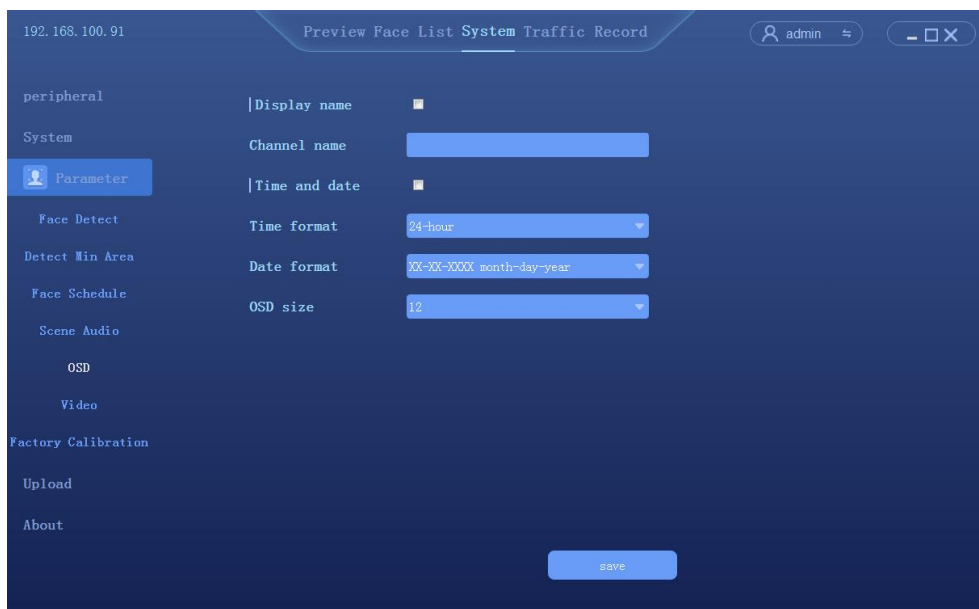




- Broadcast mode can be customized
- All voice prompts can be imported or recorded (The computer system must have Windows/TTS function)

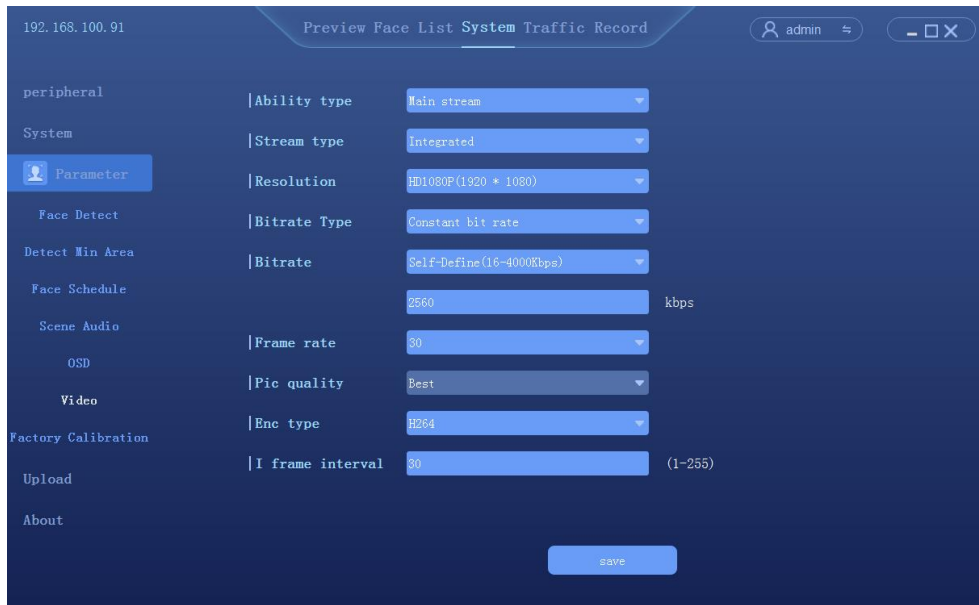
## 4.7.5 OSD Setting

Click [System] → [Parameter] → [OSD] to enter the setting interface



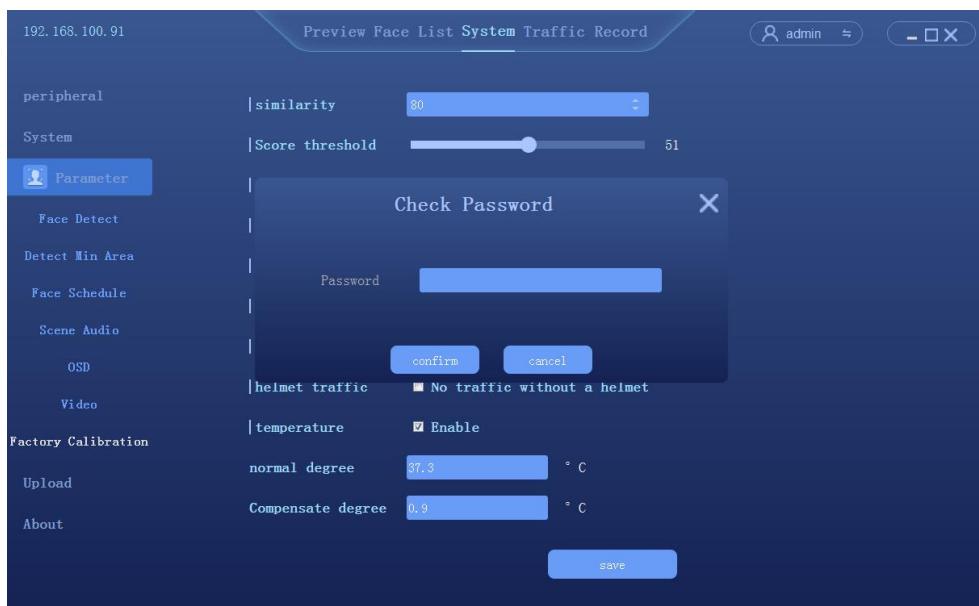
## 4.7.6 Video parameter setting

Click [System] → [Parameter] → [Video parameter setting] to enter the setting interface



### 4.7.7 Factory calibration

Click [System] → [Parameter] → [Factory calibration] to enter the setting interface



- Pre-factory calibration, this function is closed to end users.

## 4.8 Data upload

Click [System] → [Data upload] to enter the setting interface

- Data upload: FTP/HTTP two ways, upload pictures can be selected to capture or compare pictures

## 4.9 About

### 4.9.1 About

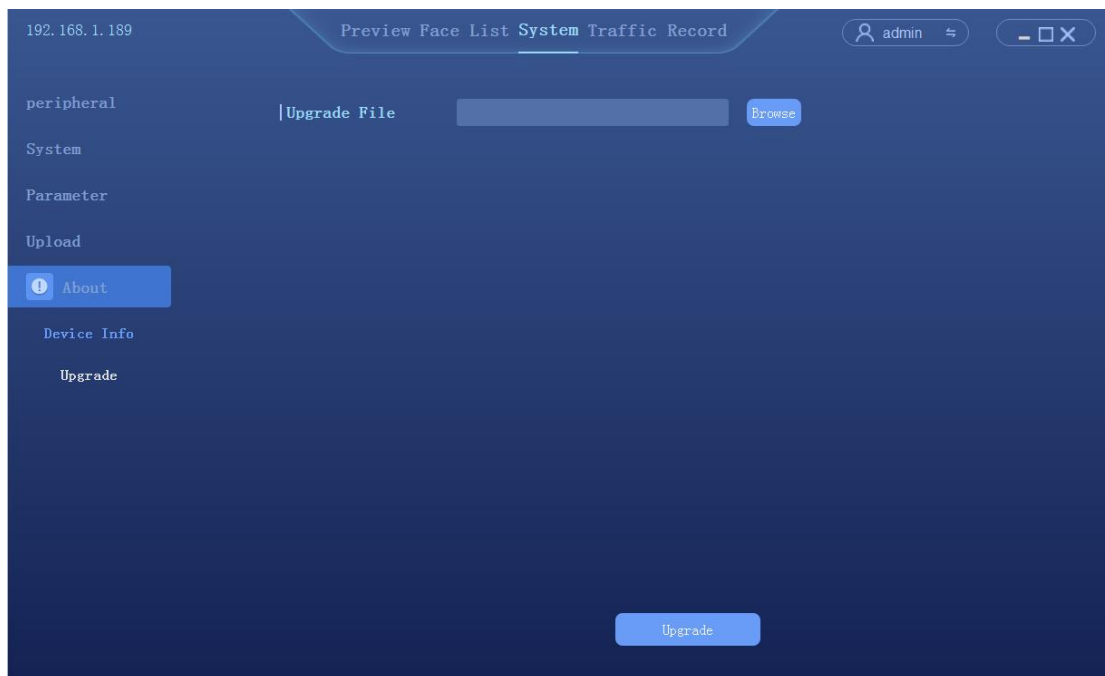
Click [System] → [About] to enter the interface

- Name: Self-setting
- Device serial number: display camera serial number
- Display resolution: the resolution of the camera screen
- Firmware version: displays the current firmware version of the camera

- Version description: a description of the current firmware version
- Face algorithm version: the version of the face recognition algorithm used by the camera
- Client version: the current client software version of the camera

### 4.9.2 Firmware upgrade

Click [System configuration] → [system information] to enter the interface



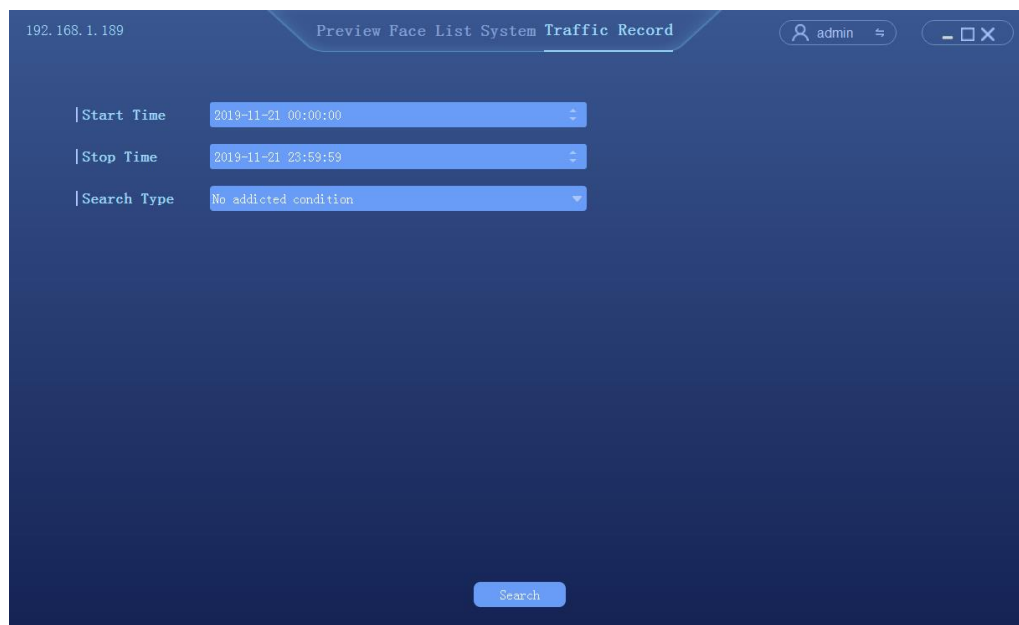
### 4.9.3 System Diagnostics

Click [System configuration] → [system information]→ [System Diagnostics] to enter the interface



## 4.10 Access records

Query the history of the catch, export the record as needed, export the record including Excel file and the catch photo



◆ Set query time period: start time and end time

◆ Select search type:

- ① No additional information query: query all traffic records in the corresponding time period
- ② According to the type of access: list management, pass, id card, authorized passage, stranger access

|Start Time 2019-11-21 00:00:00

|Stop Time 2019-11-21 23:59:59

|Search Type According to pass way

Traffic Type

- ☒ Face List
- ☐ Pass Card
- ☐ ID Card
- ☐ Admin Pass
- ☐ Stranger Pass

Search

③ According to the list query: white list, blacklist, visitor list

|Start Time 2019-11-21 00:00:00

|Stop Time 2019-11-21 23:59:59

|Search Type According to list type

List Type

- ☒ black list
- ☐ white list
- ☐ visit list

Search

④ According to other information query: input name or id number query

|Start Time 2019-11-21 00:00:00

|Stop Time 2019-11-21 23:59:59

|Search Type According to information


☐ Fuzzy query

Inquiry Type Inquiry By Name

Search

⑤ According to the slice query: to compare the search chart





|Start Time: 2019-11-21 00:00:00  
 |Stop Time: 2019-11-21 23:59:59  
 |Search Type: According to picture  
 Similarity: 80


  
 Browse

Search

◆ Retrieval, the query result is shown as follows:

192.168.1.189 Preview Face List System Traffic Record admin

No	Picture	Template	Time	Similarity	In	Out	Type	Auth	Traffic	ID	Name
6		-	2019-11-21 12:02:15	0		Stranger	unauthori...			(Loss of information)	
7		-	2019-11-21 14:18:22	0		Stranger	unauthori...			(Loss of information)	
8		-	2019-11-21 14:22:01	0		Stranger	unauthori...			(Loss of information)	
9		-	2019-11-21 14:40:57	0		Stranger	unauthori...			(Loss of information)	

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