DM60-W3 Series

Manual(V1.0)

Statement:

1. The contents herein will be updated from time to time and added to the newly revised manual without notice.

2. This manual may contain technical inaccuracies or printing errors.

Safety Cautions:

1) For equipment installation, please have service personnel or system installation personnel with qualification to operate.

2) This device must be installed in an environment with lightning protection measures.

3) To prevent the lens from any damage or contamination, please do not touch the lens.

4) Please pay attention to prevent the lens from any abrasion, scratch or even damage.

5) As the uncooled infrared thermal imaging temperature module adopts a highly sensitive thermal sensor, the lens should not be directly aimed at substantial radiation sources (e.g.the sun, direct or reflected laser beam) under any circumstances (power on or power off), or it will cause permanent damage to the uncooled infrared thermal imaging temperature module.

6) As the product is a precise electronic device, please handle with care in the process of utilization, storage and transportation, to prevent the device from colliding under heavy external

force, falling from high place and other dangerous actions.

7) In the process of transportation and storage, the ambient temperature should not be less than -25 ℃; the original packing box must be adopted during transportation.

8) Before starting up the device, ensure that the power supply is connected properly. Wrongly connected power supply may damage the device.

9) Do not press any object on the power cable, nor put the device on any place where the power cable is easily accessible.

10) In case of any abnormal operation of the device, please contact the supplier and do not dismantle the equipment without authorization.

After-sales service: 400 887 1897

Contents

1. Introduction

DM60-W3 series are a new-generation intelligent infrared thermal imaging body temperature rapid screening system developed by Zhejiang Dali Technology Co., Ltd. on the basis of years of infrared R&D experience in combination with the actual market demands. The system features contact-free, retention-free and multi-person temperature measurement in one time, while integrating the functions of multi-target face detection and capture, face-to-face database comparison, and rapid screening of human body with fever symptoms in the crowd. As the candidate product shortlisted by General Administration of Quality Supervision, DW60-W series have been widely adopted in inspection and quarantine departments for multiple years, which can be extensively adopted in customs ports, airports, stations, enterprises, schools, parks, banks, prisons and other sites.

1.1 Features

1 The series include four specifications, each adopting 640*480/384*288/320*240/160*120 full real-time high-sensitivity uncooled infrared thermal imaging temperature measurement module and capable of measuring the shell temperature of human body remotely & free of contact;

2 Adopt high-definition 2 megapixel low illumination wide dynamic range network camera;

3 The system covers a temperature measurement range of 20 ℃ - 50 ℃, with a detection distance of 3-10 meters;

4 The system provides real-time dynamic thermal image, which can realize multi-objective automatic measurement in fast and accurate manner;

5 Support multi-target face detection, automatic capture of warning screen;

6 Support face vs. face database comparison mode, with the highest recognition speed of 0.2 s;

7 The face database inputs can realize face comparison function;

9. Face comparison accuracy is close to 99%. We suggest to take off hat or mask;

10. Feature data flow detection function, automatic large face images captured from full range image for scrolling display;

11. Support a maximum face comparison capacity of 20000, realizing large capacity and high recognition rate;

12. The system features the automatic correction function for body internal & shell temperature;

13. The system features automatic temperature correction function with reference black body and high precision temperature sensor, which can work stably and reliably all the year round;

14. The system features video recording function, which facilitates real-time recording of monitoring screen;

15. The system has over temperature warning and abnormal information output functions;

16. The system provides data statistics function, which can formulate bar charts for statistics of visitor flow rate of the current day and over temperature warning population, etc.

1.2 Ancillaries and Files

Ancillaries and documents of DM60-W3 series include:

No.	Name	Qty.	Unit	Remark
1	DM60-W3 Main Device	1	Set	
2	Network Cable	1	Piece	
3	Power Adapter	1	Piece	
4	Power Cable	1	Piece	
5	Black Body	1	Set	
6	Power Cable for Black Body	1	Piece	
7	Control Panel	1	Set	Optional

8	Computer Host	1	Set	Optional
9	Display	1	Set	Optional
10	Tripod	2	Sets	Optional
11	Optical Disc	1	Piece	Instruction Included
12	Quality Certificate	1	Piece	

2 Structure &Installation Instruction

2.1 Device Outline

Figure 1

2.2 Host Interface Definition

Figure 2 Tail Circuit of Host

Definition of Tail Circuit Interface of Host is as follows：

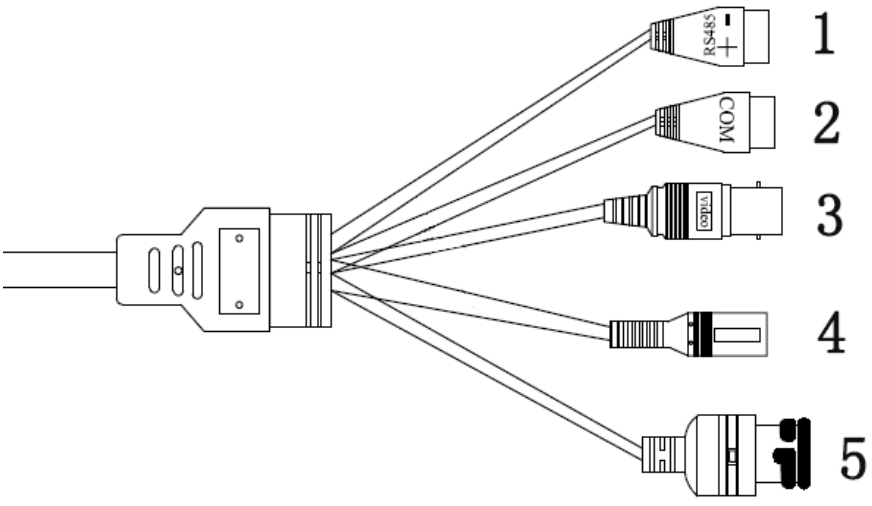


Figure 3 Interface

No.	Definition	Note
1	RS485 Output	RS485 Output (Reserved)

2	COM port	Warning Output (Reserved)
3	CVBS_OUT Output	Analog Video Output (Reserved)
4	DC12V Power Supply	Power Supply
5	RJ45 Internet Access	Network Cable Interface

2.3 Installation Instruction

2.3.1 Host Installation

2.3.1 .1 Host Installation

- **Mobile Station Host Installation (Optional)**

1. Take out the host bracket in the accessory, insert the host bracket into the host bracket port of the mobile station through the entire mobile station case till reaching the bottom, and fix the bracket with screws, as shown in Figure 4.

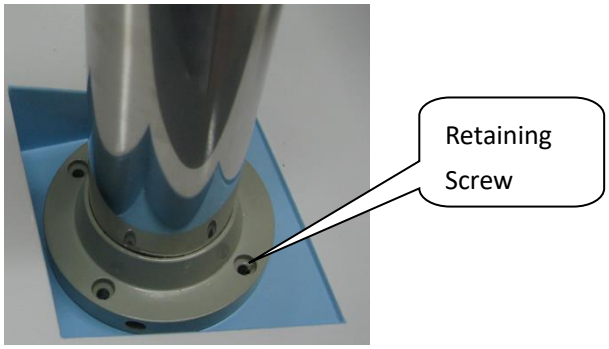


Figure 4

2. Take out the power adapter from the ancillaries, and insert the power cable through the host bracket **from bottom to top**. Take out the network cable from the ancillary and insert through the host bracket from top to bottom. When threading, adjust the length of the bracket to the shortest in advance.

3. Fix the host in the ancillary to the host bracket, as shown in Figure 5.

4. Take out the host and universal joint from the accessories, and install them as shown in Figure 5. After installation, fix the host on the host bracket.

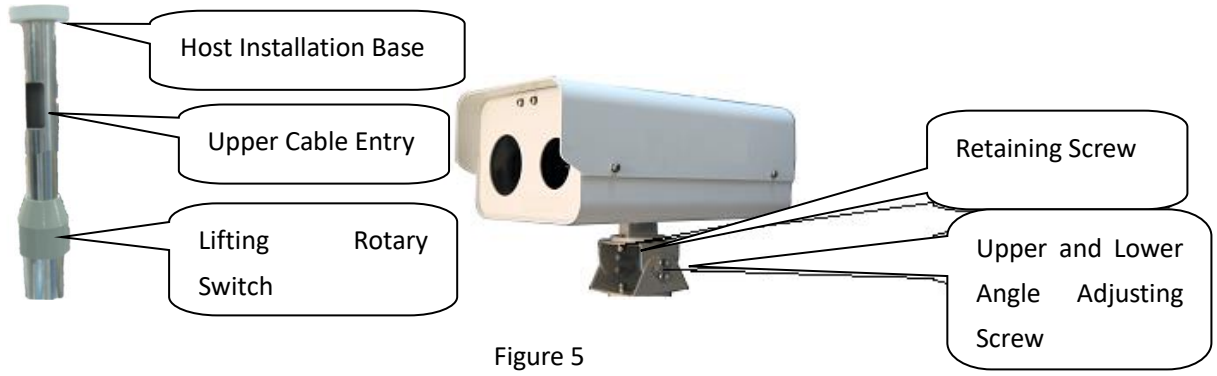


Figure 5

5. Connect the power cable and network cable of the host.

2.3.1.2 Black Body Installation

1. Open the bottom supporting seat of tripod (optional) supporting black body and place on the ground, as shown in Figure 6 below;

Figure 6

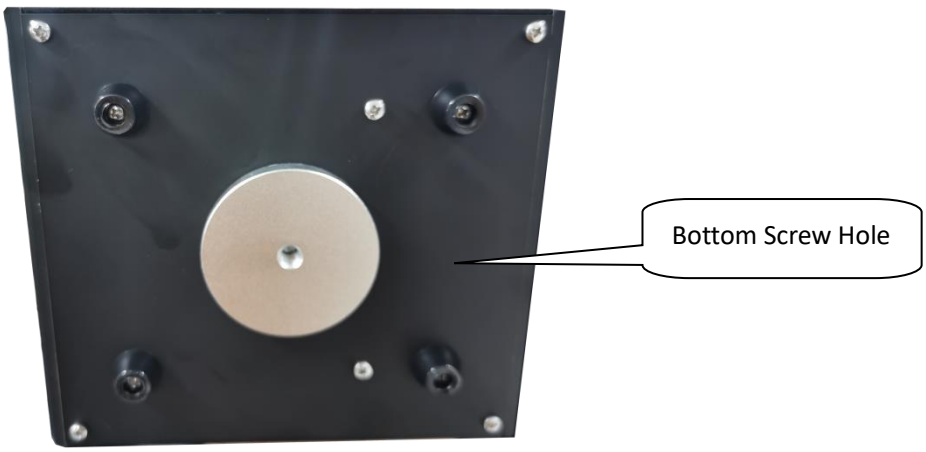


Figure 7

2. Take out the black body in the ancillary, and align the screw holes at the bottom (as shown in

Figure 7) with the 1/4 connecting screw head on top of the tripod (optional), as shown in Figure 8. Rotate to fasten the black body.

Figure 8

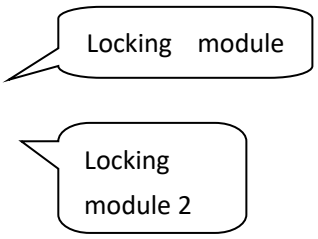


Figure 9

3. Adjust the height of the expansion links of the tripod, and fasten the locking module, as shown in Figure 9.

4. The middle black body bracket adopted is about 3-5 meters from the mobile station, and the black body position is adjusted to the upper left or right corner of the infrared image.

2.3.2 Fixing and Installation

Carry out wiring design and installation as required by the User, and provide bracket, control panel, lifting, and various installation and fixing methods. The installation should be carried out indoors. As shown in the figure:

Figure 10 Lifting

Figure 11 Lifting

Figure 12 Tripod Bracket

Figure 13 With Large Screen Monitoring Effect

3 Device Operation Instruction

3.1 Back-end Software Operating Environment

Operating System: WIN7/ WIN10 32 or 64 Bit

CPU：Intel Core i5 and above; 3.1GHzl; Dual Core and above

Hard Disk: 2T and above

Memory: 4GB and above

Recommended Minimum Resolution: 1920 * 1080

Display: 22 Inch Wide Screen Recommended

3.2 Installation and Uninstallation of Client

3.2.1 Installation

Start up the computer for the first time and click 

to install back-end software.

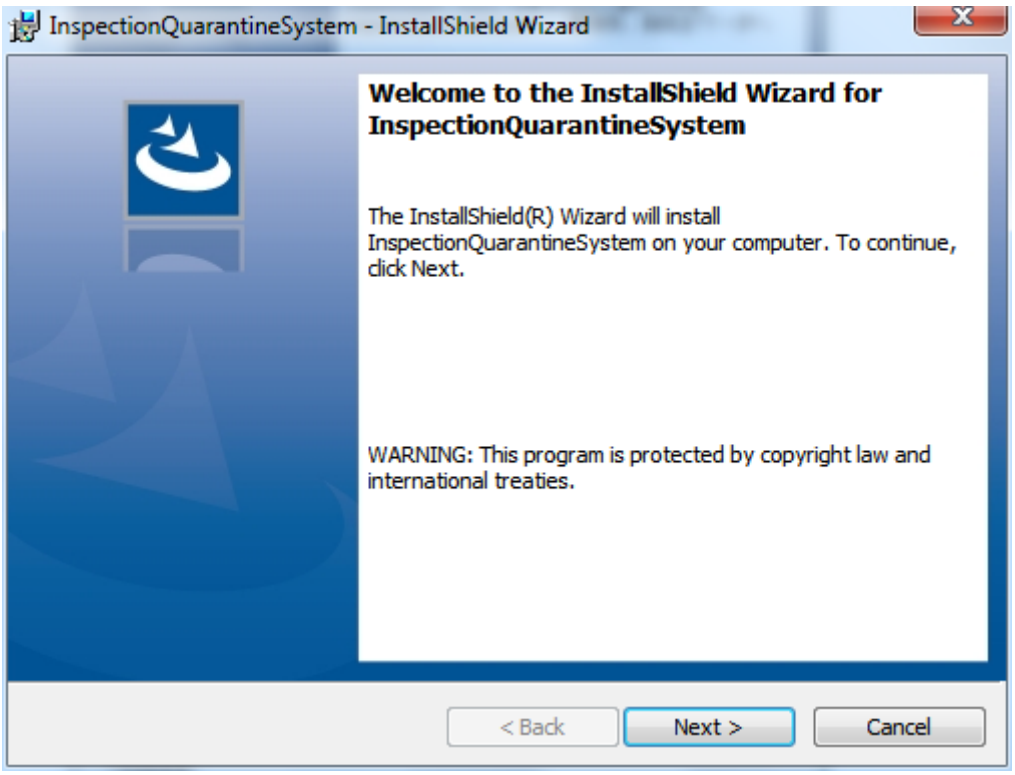


Figure 14 Client Installation

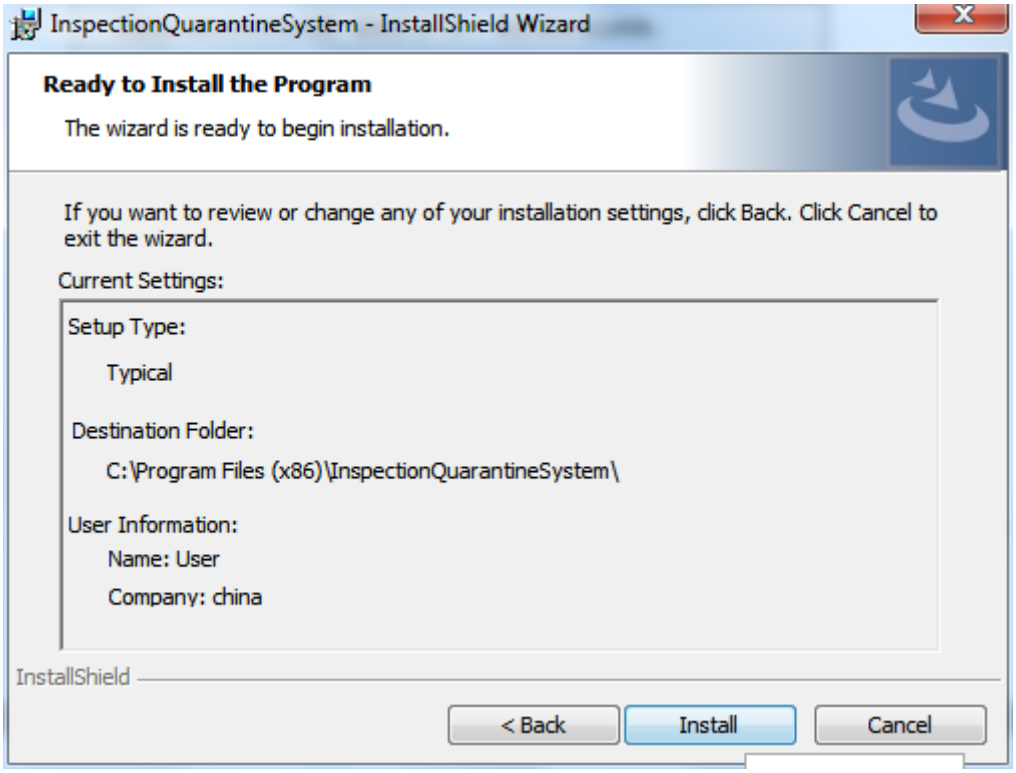


Figure 15 Client Installation

Default Installation Path C:\Program Files (x86)\InspectionQuarantineSystem. Click “Install”.

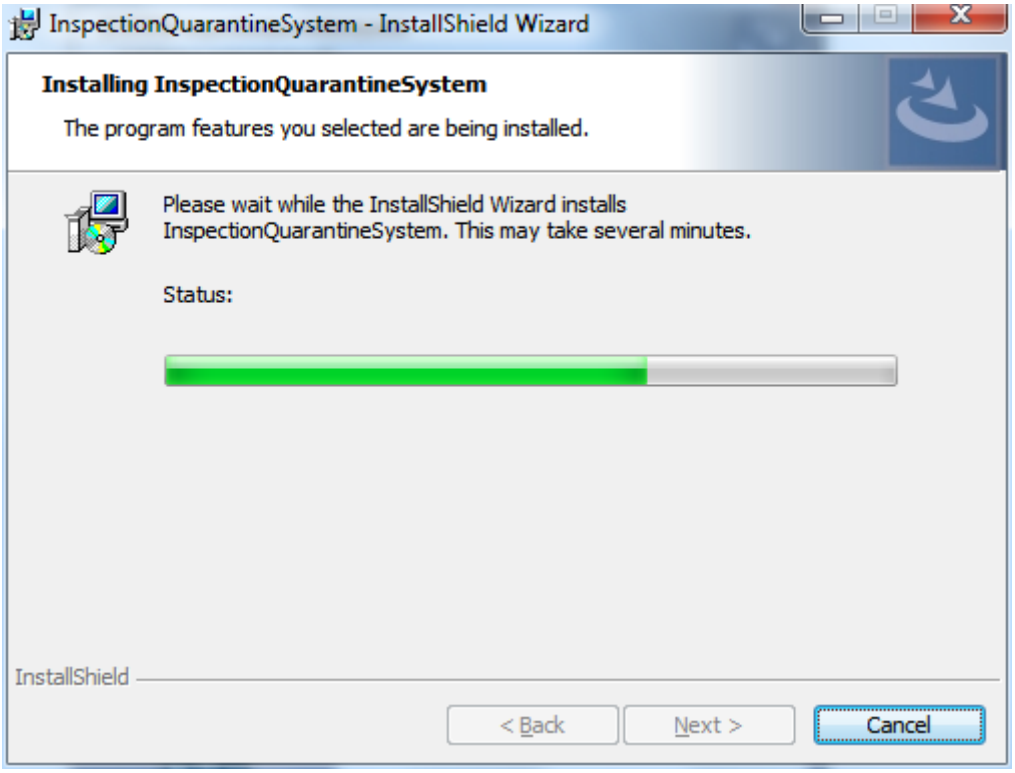


Figure 16 Installation Process

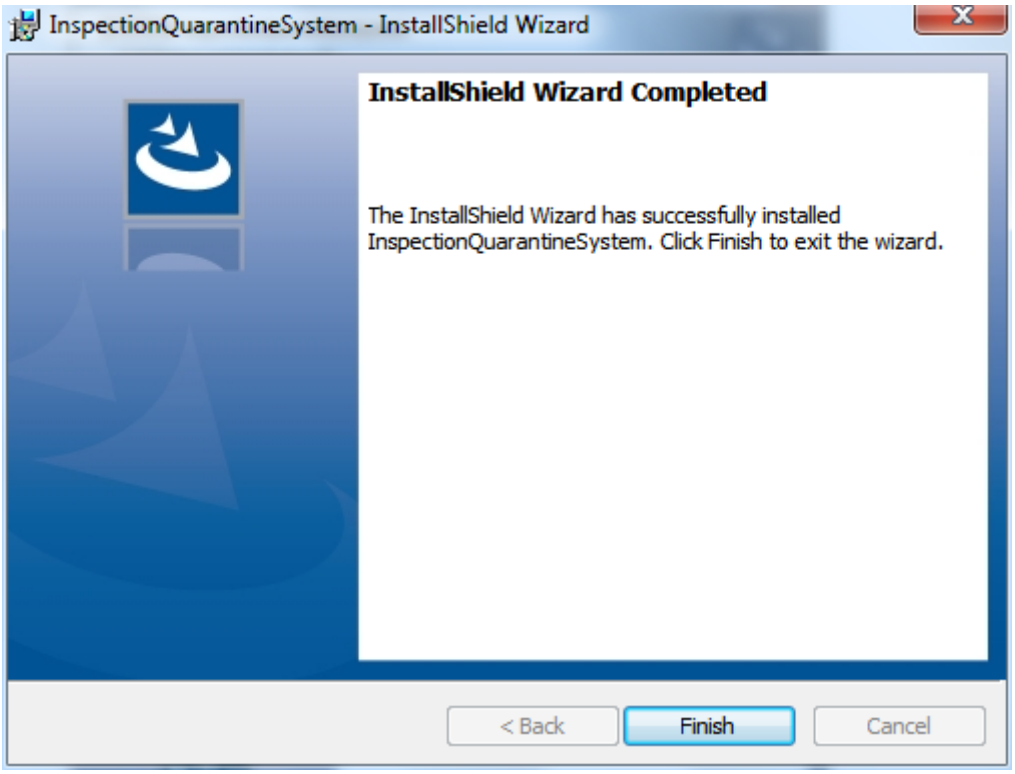


Figure 17 Completion of Installation

3.2.2 Uninstallation

Search "inspectionquarantines system" in "Control panel - > programs and functions - > uninstall or change program", and right-click menu to select "change", as shown in the figure below.

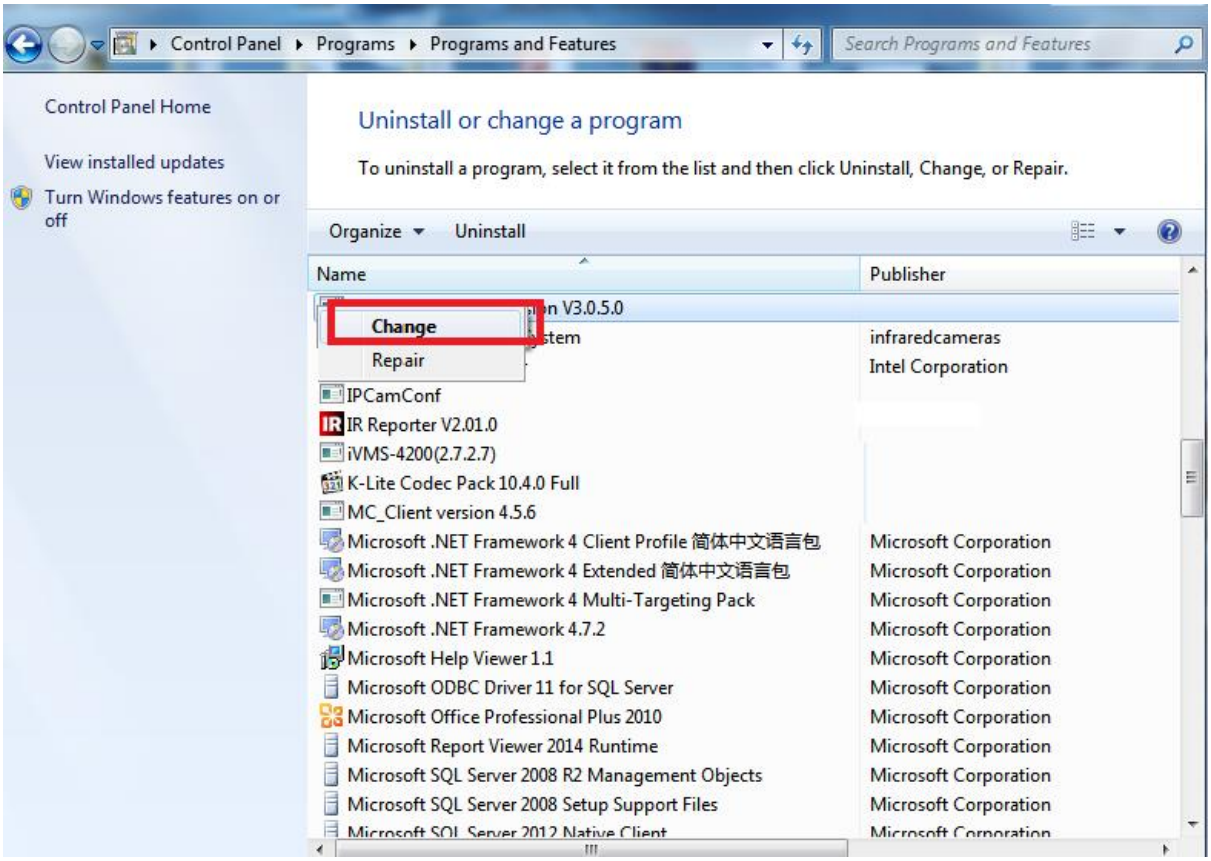


Figure 18 Select Change Program on Control Panel

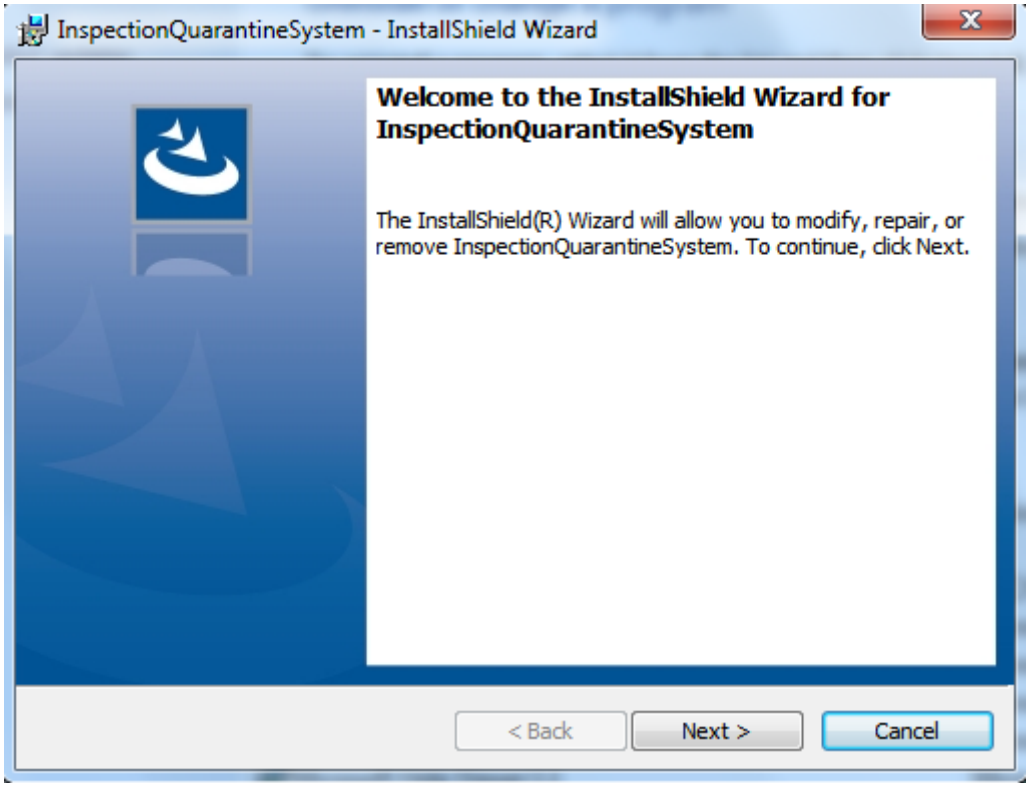


Figure 19 Client Installation

User may select to "Modify", "Repair" and "Delete" the software. Select "Delete" and click "Next Step" to execute software uninstallation.

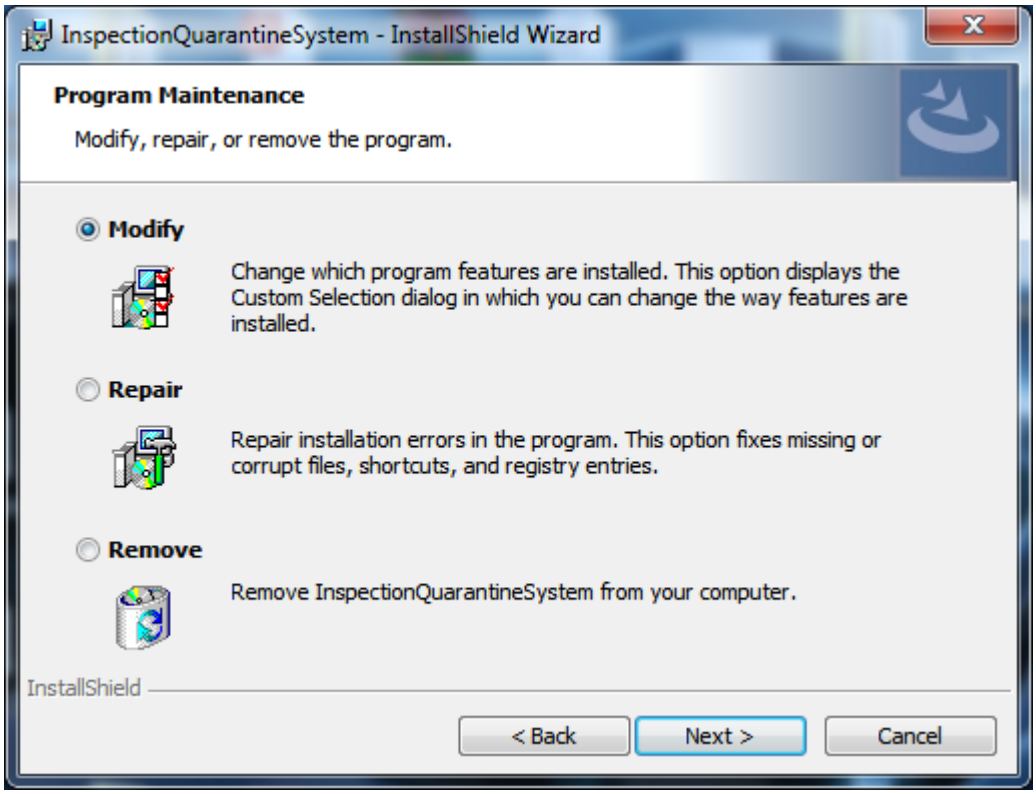


Figure 20 Client Uninstallation

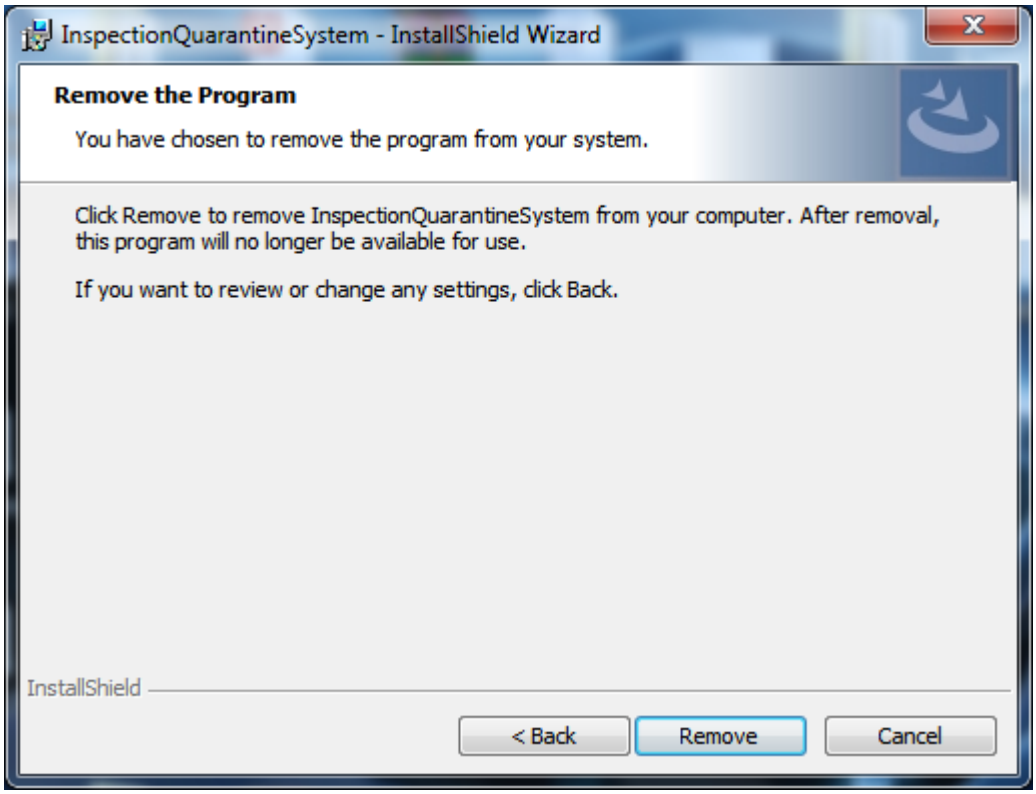


Figure 21 Client Uninstallation

Click "Delete" to execute uninstallation, and skip to the interface below to complete the uninstallation.

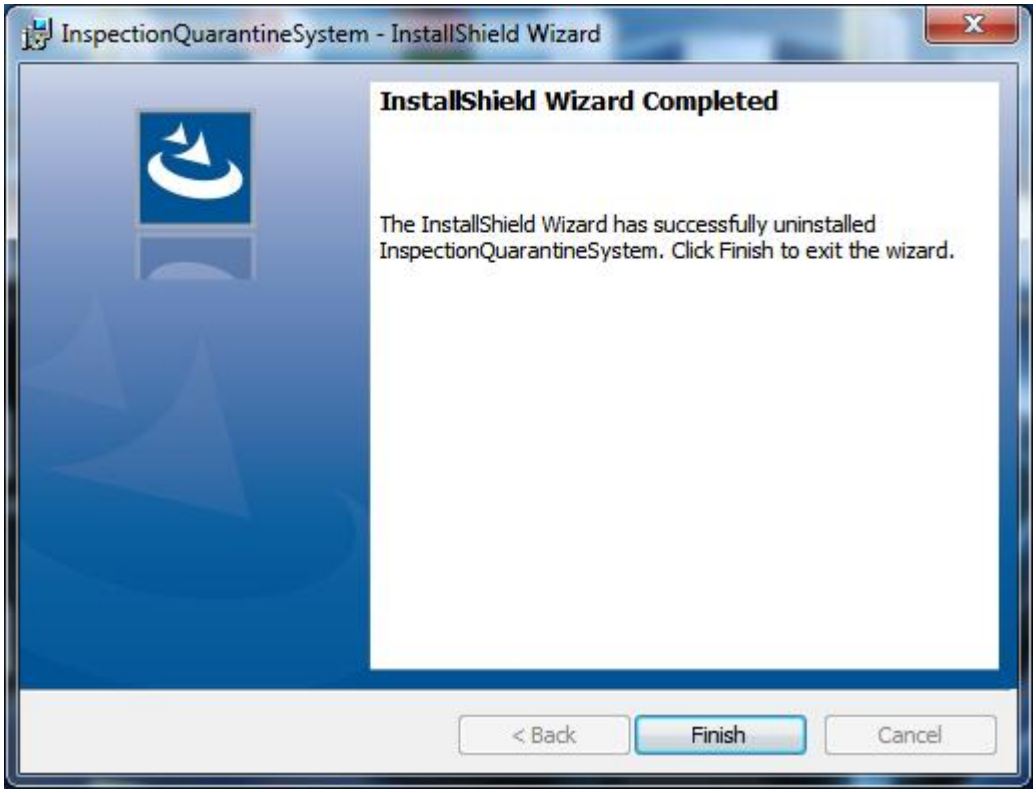


Figure 22 Completion of Uninstallation

3.3 Run Back-end Software

At the completion of client software installation, double click “  ” on the desktop, to enter client main interface.

3.3 Initial Interface of Back-end Software

The initialization login host interface is shown in the figure below:

Figure 23 Client Initialization Interface

Setting Items	Note
1 Real-time Preview	Provide real-time image preview, with face large image rolling and temperature measurement value displayed on the left side, and current-day statistics on the right side
2 Device Management	Provide device adding, modifying, removing and start-up functions
3 Temperature Measuring Configuration	Provide OSD information, blind zone, temperature compensation & correction, double light position calibration, black body setting, alarm configuration and local system parameter setting functions relevant to image stacking

4 Record and Query	Provide searching and playback functions of image & video records
5 Statistical Graph	Automatically generate monitoring statistical bar chart according to the temperature measurement data of the day and the week
6 Face Database Management	Provide face database information input and upload host functions

3.4 Real-time Preview

3.4.1 Configuration Wizard

Configuration Wizard before Real-time Preview:

- Step 1: Add device correctly in "Device Management", "Start up Device" after selecting device to start preview;
- Step 2: Set the black body position in "Temperature Measurement Configuration" - > "Black Body Configuration";
- Step 3: Calibrate the double light position in "Temperature Measurement Configuration" - > "Double Light Calibration";
- Step 4: Synchronize time;
- Step 5: Set the temperature correction in "Temperature Measurement Configuration" - "Temperature Compensation".

The above steps are key operations.

3.4.2 Real-time Preview

At the completion of the above settings, the main interface displays the real-time preview effect, providing visible and infrared real-time monitoring and local video and capture, with the captured face

large image scrolling displayed on the left side, and the current-day visitor flow rate and high temperature population statistics and the current-day population and one-week high temperature population statistics bar chart.on the right side,

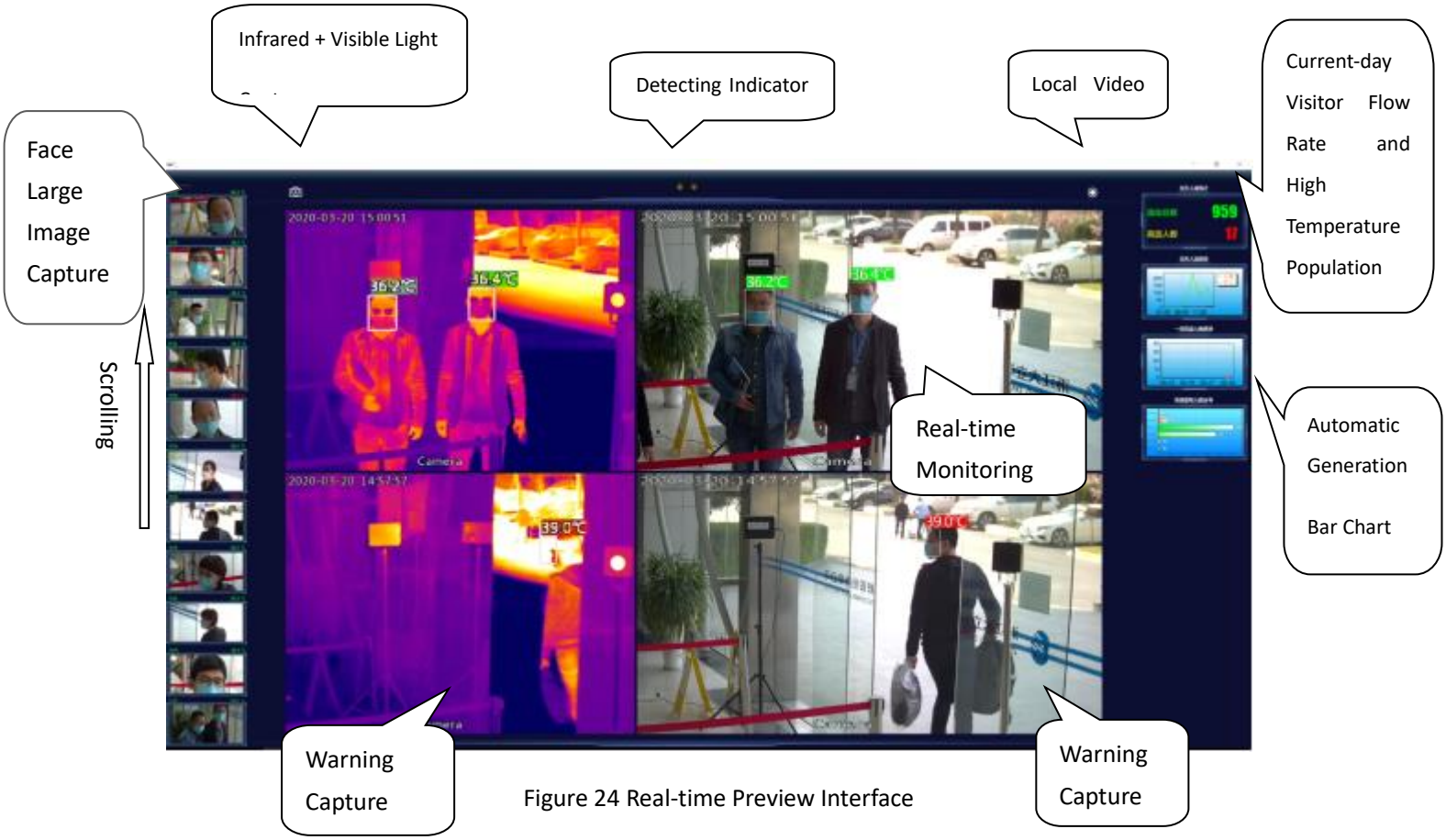


Figure 24 Real-time Preview Interface

- Real time monitoring: provide infrared and visible light real-time video monitoring, and display face

detection frame and the highest temperature of face in face mode. Support multiple people simultaneous temperature measurement.

Figure 25 Single Person Temperature Detection

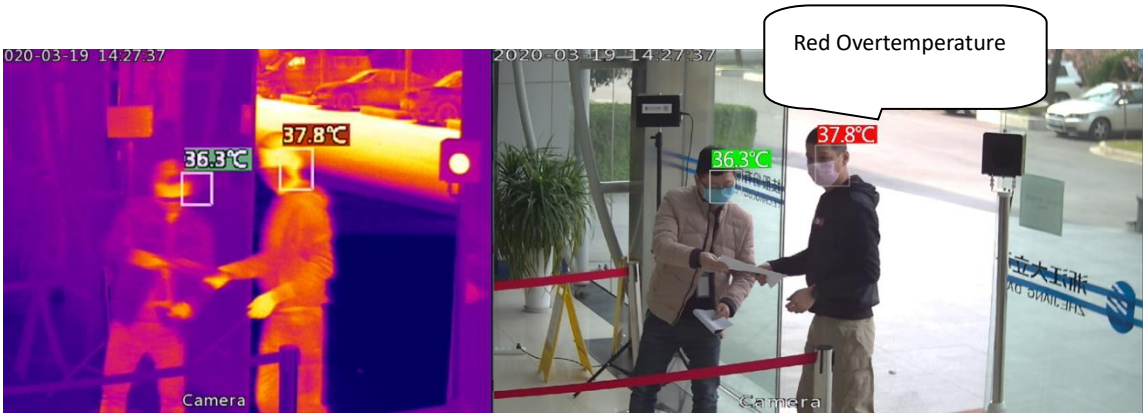


Figure 26 Multiple People Temperature Detection

- Warning capture: when the detection reaches the preset temperature alarm value, capture the visible and infrared images automatically and trigger the sound alarm and other alarm mechanism jointly.
- Manual capture: provide "infrared image + visible light image" manual capture button on the preview interface  Each click can capture one infrared image and one visible image simultaneously. Default image saving path: D:\DM_Picture (C:\DM_Picture when D disk is not available), which can be modified through the image path in "temperature measurement configuration - > system settings".

Manual Video Recording

Manual Capture

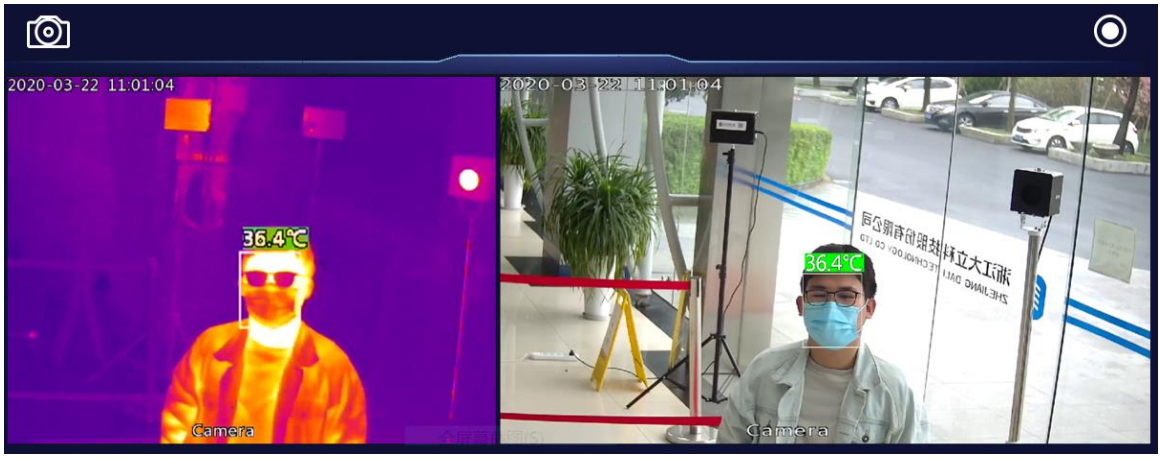


Figure 27 Manual Recording and Capture

- Manual video recording: click the manual video recording button  . Infrared and visible light video can be recorded simultaneously, and click  to stop recording.
- Detecting indicator: switch the indicator status in face mode. Display  when detecting normal face temperature,  when detecting high temperature, and  when failed to detect any face.
- Scrolling display of large face image: automatically large face image matting from panorama and scrolling display main interface on the left side. Display up to 11 large face images simultaneously.

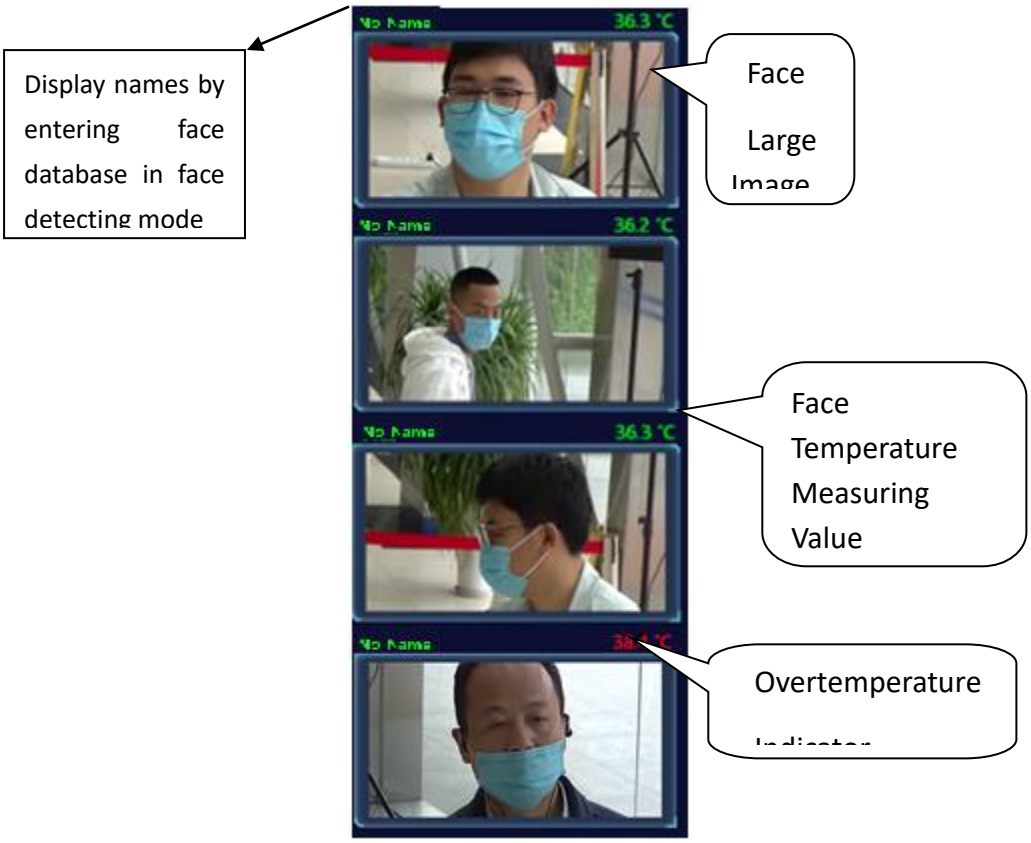


Figure 28 Large Face Image

- Statistical chart: generate various bar charts automatically according to the daily / weekly real-time temperature measurement data, to display the real-time temperature measurement visitor flow rate statistics, the current-day population trend, the latest week high temperature population trend, and the population distribution in each temperature segment. The bar charts above can be viewed in the "statistical chart" interface in the menu.

Figure 29 Real-time Statistics

3.5 Device Management

There is no device for the first installation by default, which is configured by "Device management -> add device - > device information configuration - > add device".

3.5.1 Add Device

Device adding method:

- Name: Enter custom device name
- IP address and port: the factory default IP address of the device is 192.168.1.102, and the default port is 5000.

  Users may modify IP address and gateway of network parameters via web pages, to ensure that the IP addresses of the configured device and the connected computer are in the same network segment.
- User name and password: enter the factory default user name and password of the device in the configuration interface.

  Default User Name: Admin Password: Admin123
- Remark: Please **ensure to** enter the "remark" information of the device as device ID.

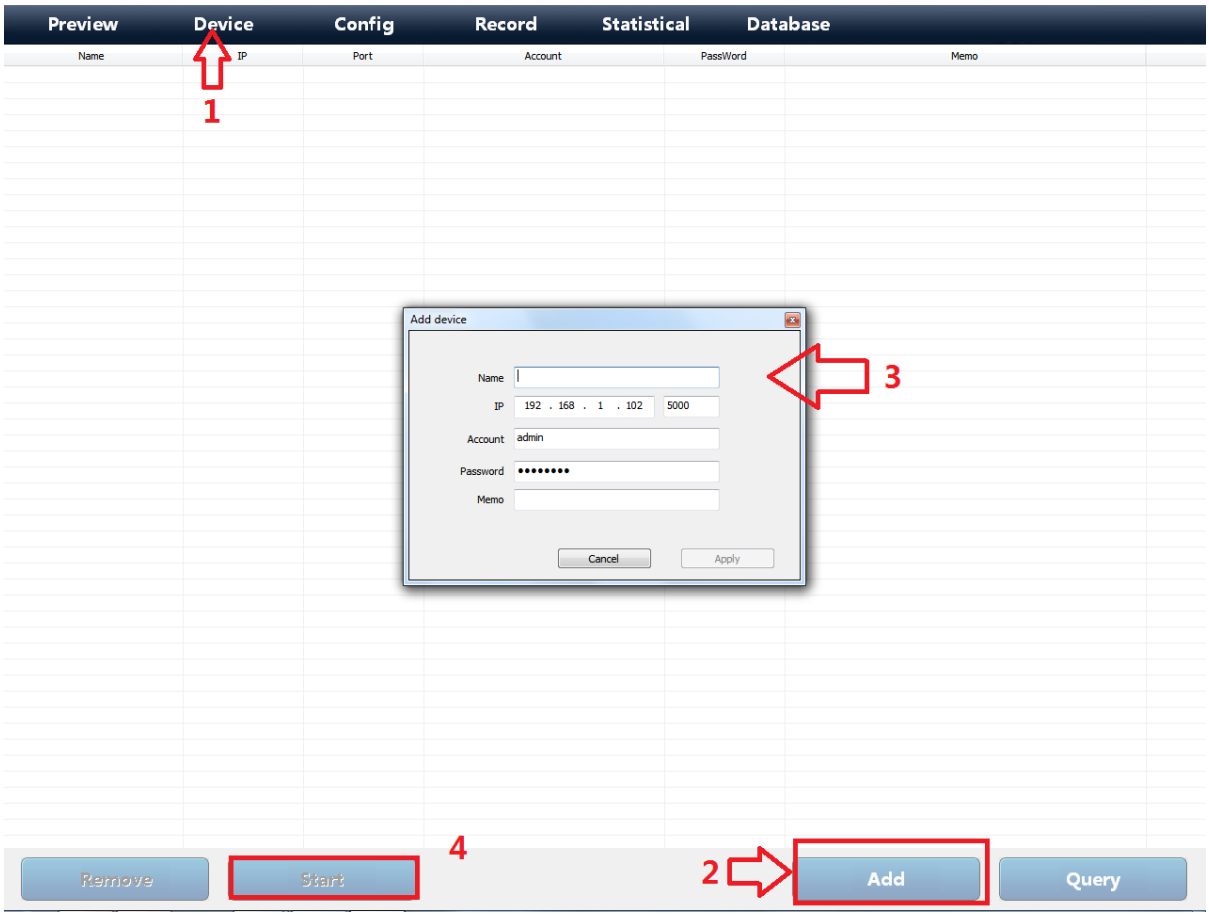


Figure 30 Add Device

At the completion of the device information configuration, click "Start up Device" to automatically open the monitoring screen in the main interface "Real-time Preview".

3.5.2 Deletion of Device Information

Select the device in device list column and select "Delete Device". As shown in the figure below.

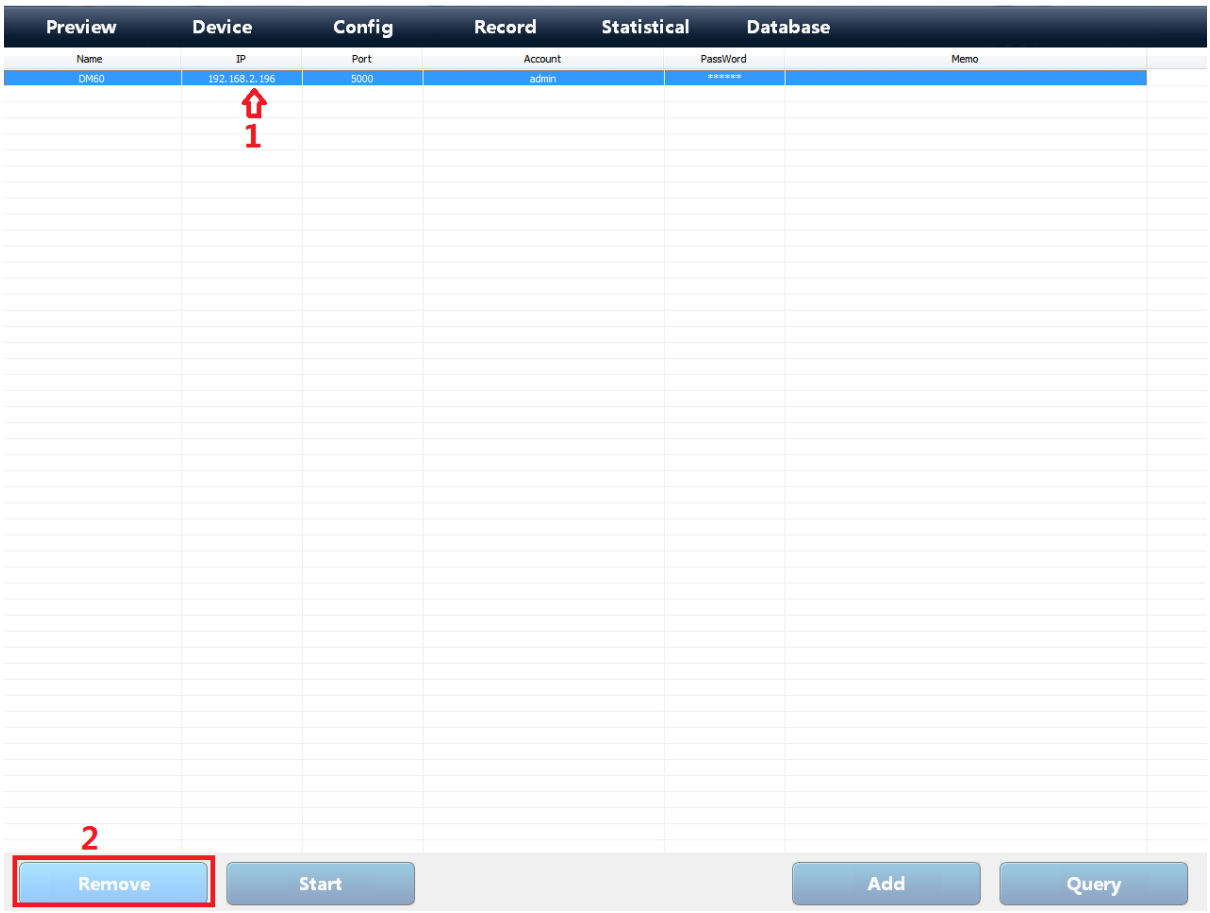


Figure 31 Deletion of Device

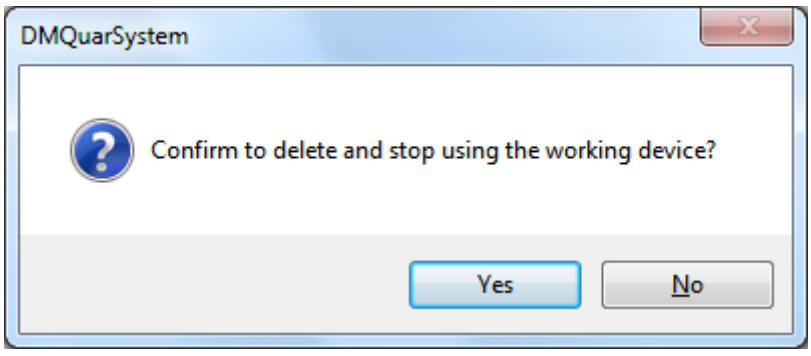


Figure 32 Deletion Confirmation

3.5.3 Start up Device

When adding multiple devices, select the device in the device list column in the "device management" interface to switch monitoring screen, and select "start up device" to switch and display the preview

screen in "real-time preview".

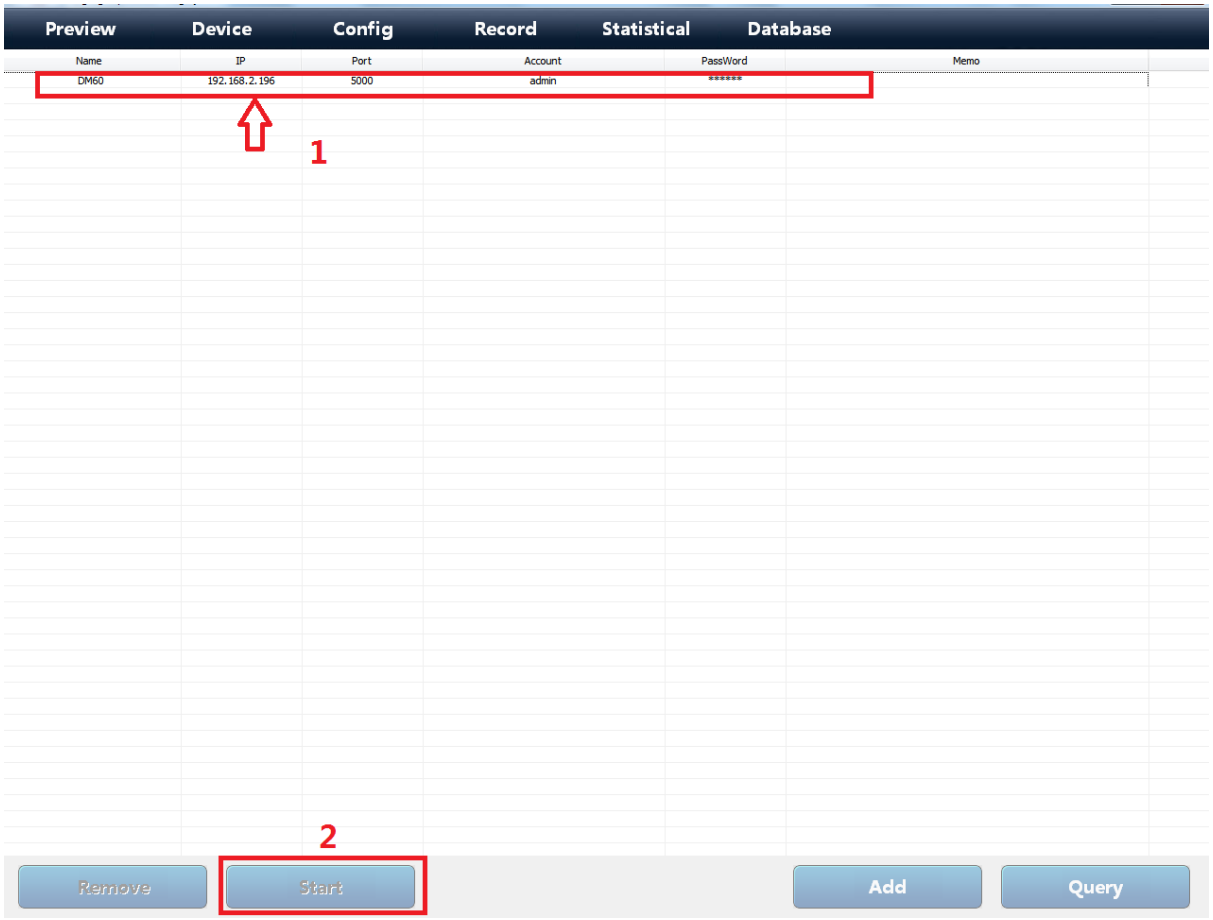


Figure 33 Start up Device

3.6 Temperature Measuring Configuration

Menu Items	Note
1 Image Setting	Provide infrared video color mode selection, surveillance video OSD information overlay setting, time synchronization and device calibration functions; visible light video brightness, contrast, chroma, saturation,

	exposure compensation, and other parameter setting functions. For detailed setting, please refer to Chapter3.6.1.
2 Blind Setting	For interferent with temperature exceeding human body, set blind zone to prevent false alarm. For detailed setting, please refer to Chapter3.6.2.
3 Temperature Compensation	Provide temperature compensation & correction function. For detailed setting, please refer to Chapter3.6.3.
4 Double Light Calibration	Provide double light lens for horizontal and angle position calibration function. For detailed setting, please refer to Chapter3.6.4.
5 Black Body Configuration	Provide black body position, black body temperature and radiance setting functions. For detailed setting, please refer to Chapter3.6.5.
6 Alarm Configuration	Provide alarm enabling, alarm temperature, temperature measuring range, alarm mode, alarm interval, temperature measuring frame number setting and audio file selection functions. For detailed setting, please refer to Chapter3.6.6.
7 System Setting	Provide local video, image capture file path and validity saving setting, language switch and version number view functions. For detailed setting, please refer to Chapter3.6.7.

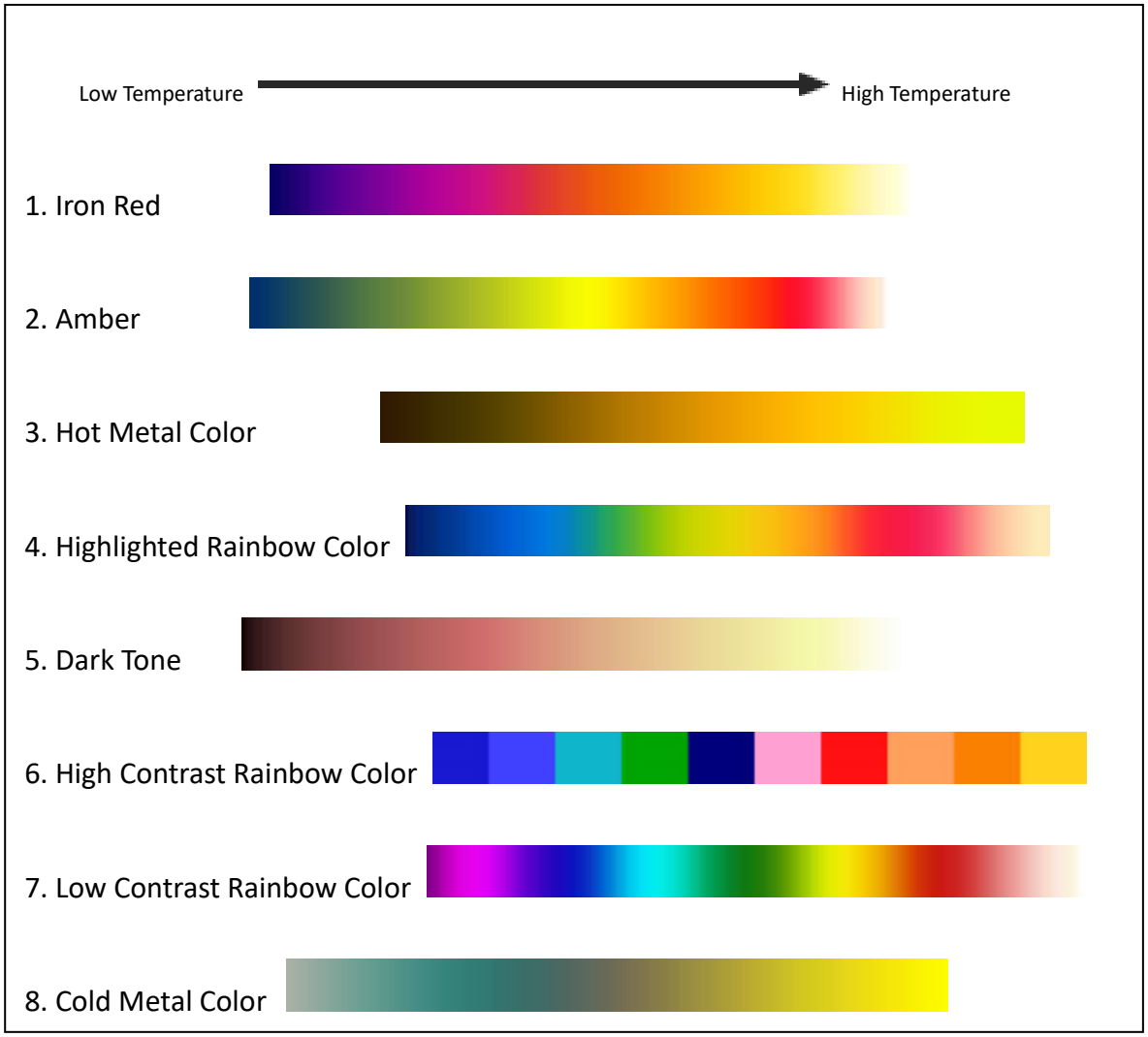
3.6.1 Image Setting

Enter into the setting interface via "Temperature measuring configuration -> image setting". Provide the display setting function for infrared image and visible light image.

3.6.1.1 Infrared Image Setting

Infrared image settings: include infrared video color multiple mode selection, OSD information display and time synchronization setting.

Color mode selection: provide infrared video color multiple mode selection, and detect object temperature via color differentiation. Refer to the figure below for details.


Low Temperature
High Temperature
1. Iron Red
2. Amber
3. Hot Metal Color
4. Highlighted Rainbow Color
5. Dark Tone
6. High Contrast Rainbow Color
7. Low Contrast Rainbow Color
8. Cold Metal Color

- OSD information setting: provide OSD information (such as time, device name, and custom content) overlay and coordinate location setting on infrared video.
- Time synchronization: adjust the time of the front-end device in accord with that of PC back-stage management.
- Device calibration: in case of any noise on the infrared screen or poor screen definition, click "device calibration" for manual zero setting and calibration.

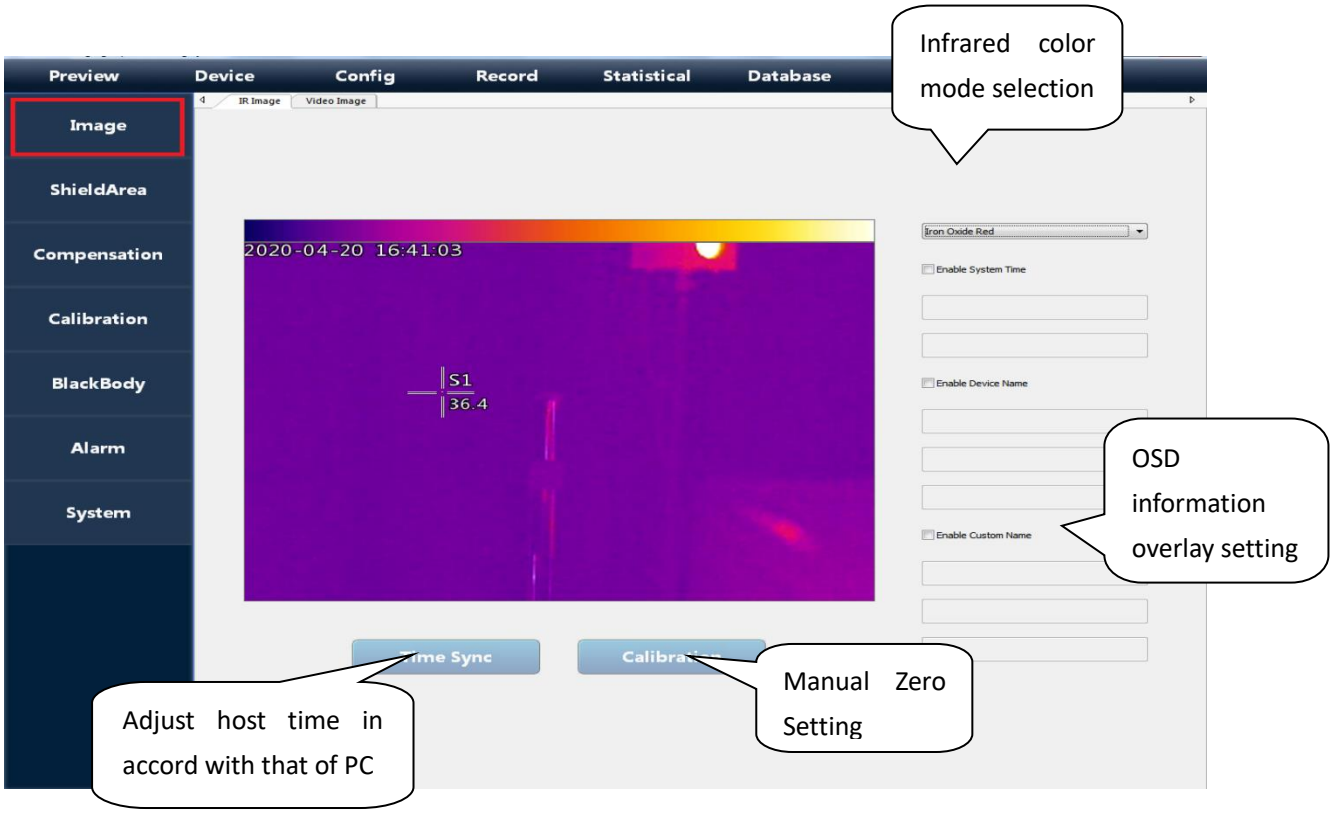


Figure 34 Infrared Image Setting

3.6.1.2 Visible Light Image Setting

Visible light image setting: include brightness, contrast, chroma, saturation, light compensation and other parameter settings of visible light video.

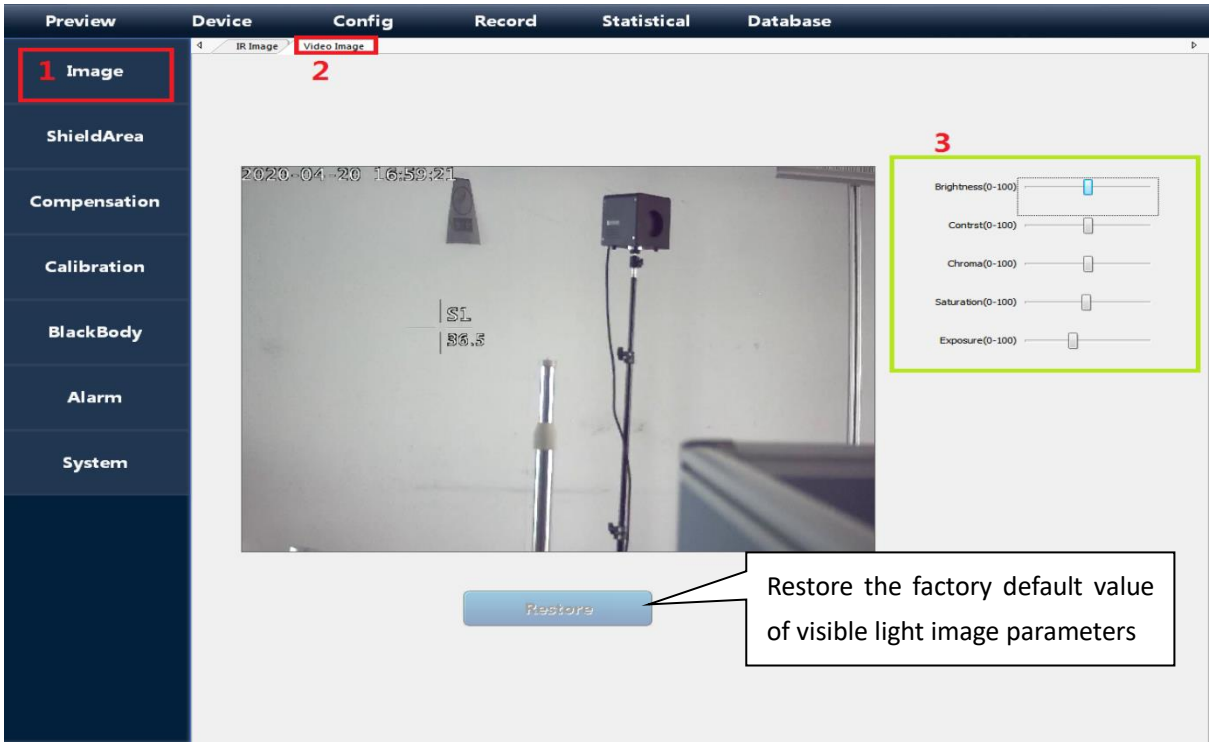


Figure 35 Visible Light Image Setting

Drag the adjustment button to adjust the brightness, contrast, chroma, saturation, exposure compensation and various parameters of the visible light, for instant view of the effect on the monitoring image on the left.

3.6.2 Blind Setting

Enter into the setting interface via "Temperature measuring configuration -> blind setting".

In case of any object with temperature exceeding human body interference detection in the image, this function may be adopted for blind setting. There will not be temperature measurement or alarm in the zone after blinding.

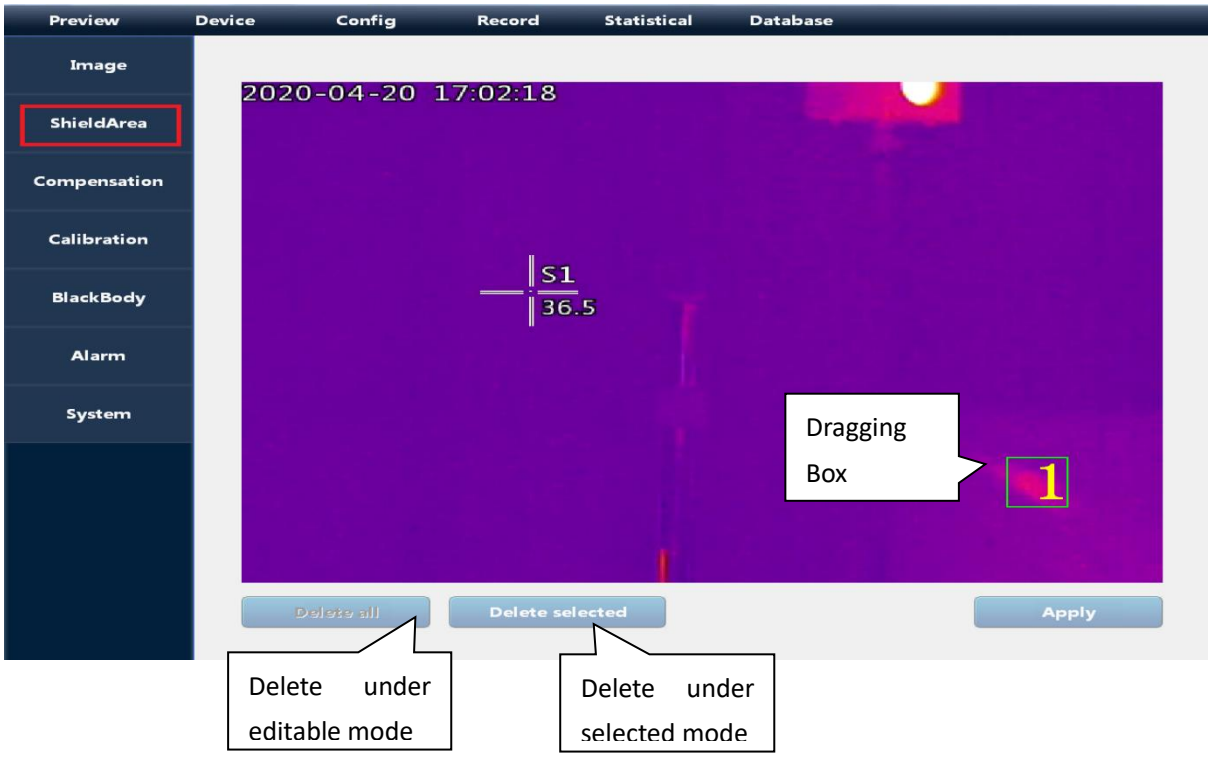


Figure 36 Blind Setting

- Blind zone for single deletion : select one zone and click "Delete the Selected";
- Delete all the blind zones: drag any blind zone, automatically switch to editable mode, and click "Delete All" to delete all the blind zones;

At the completion of blind zone edition, click "Apply" to complete the setting and validate the blind zone.

- Up to 32 blind zones are allowed.

3.6.3 Temperature Compensation

Enter into the setting interface via "Temperature measuring configuration -> temperature compensation".

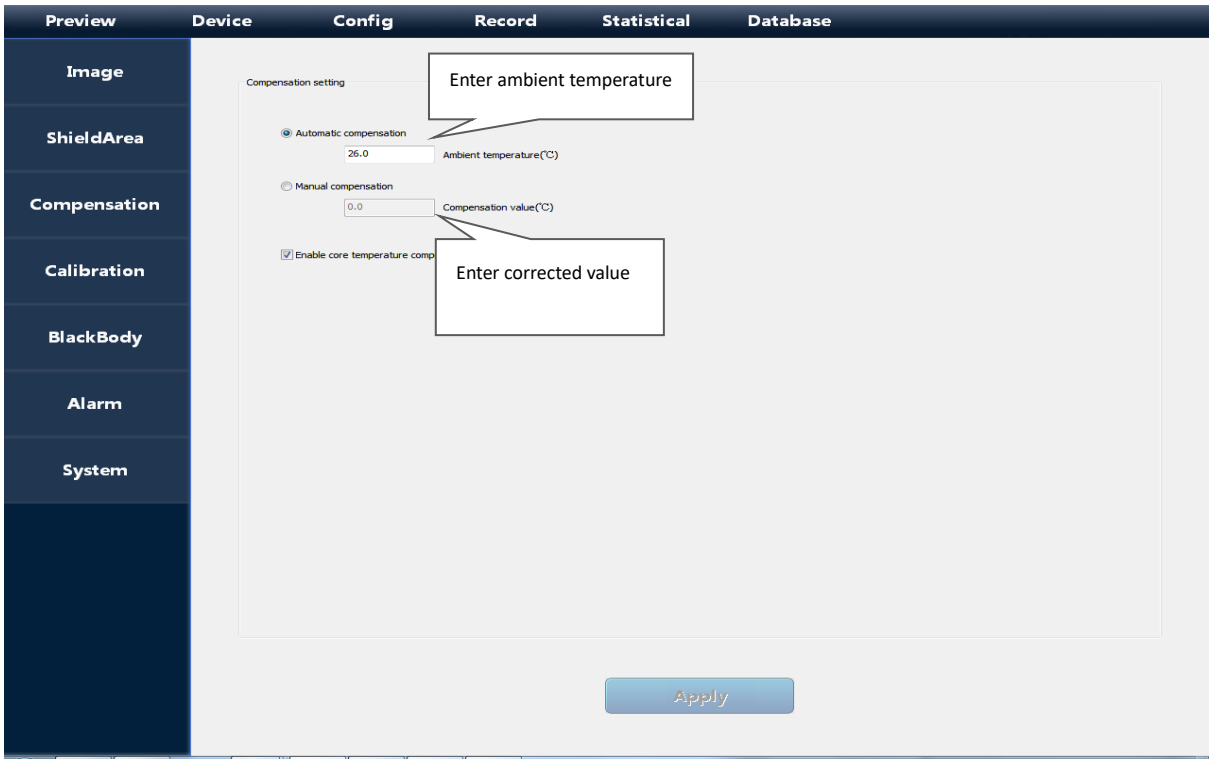


Figure 37 Temperature Compensation Setting

Provide three temperature correction modes: automatic compensation, manual compensation and shell & axillary temperature compensation according to ambient temperature.

- Automatic compensation: the system automatically compensates the current ambient temperature entered by the user according to the algorithm;
- Manual compensation: the corrected value can be entered, and the corrected temperature can be negative;
- Axillary temperature correction: it can be started along with manual temperature compensation. The function is to automatically display the measured shell temperature value as the corresponding axillary temperature;

3.6.4 Double Light Calibration

Enter into the Double Light Calibration setting interface via "Temperature measuring configuration -> double light calibration".

As the optical field angles of infrared and visible light are different, if the double light correction is not carried out, the object image positions displayed in the infrared and visible light real-time images will differ, so the user needs to set the calibration position.

The calibration position is to mark the position of one object in the infrared and visible light real-time images.

Setting: two calibration boxes (square boxes in  blue line and  orange line respectively) will be displayed twice on various points in any position of the field overlay sections in the infrared and visible light real-time images. Move the yellow calibration points on the infrared and visible light real-time images to the same reference object, and then move the green calibration points on the two images to another reference object. Click "Apply" at the completion of setting of all the 4 points, to complete setting.

Note: 1. If the device position is not moved at the completion of one calibration operation, it is not necessary to calibrate again.

2. The four calibration points should be close to the diagonal of the screen to the largest extent.

3. Two pairs of calibration points should correspond.

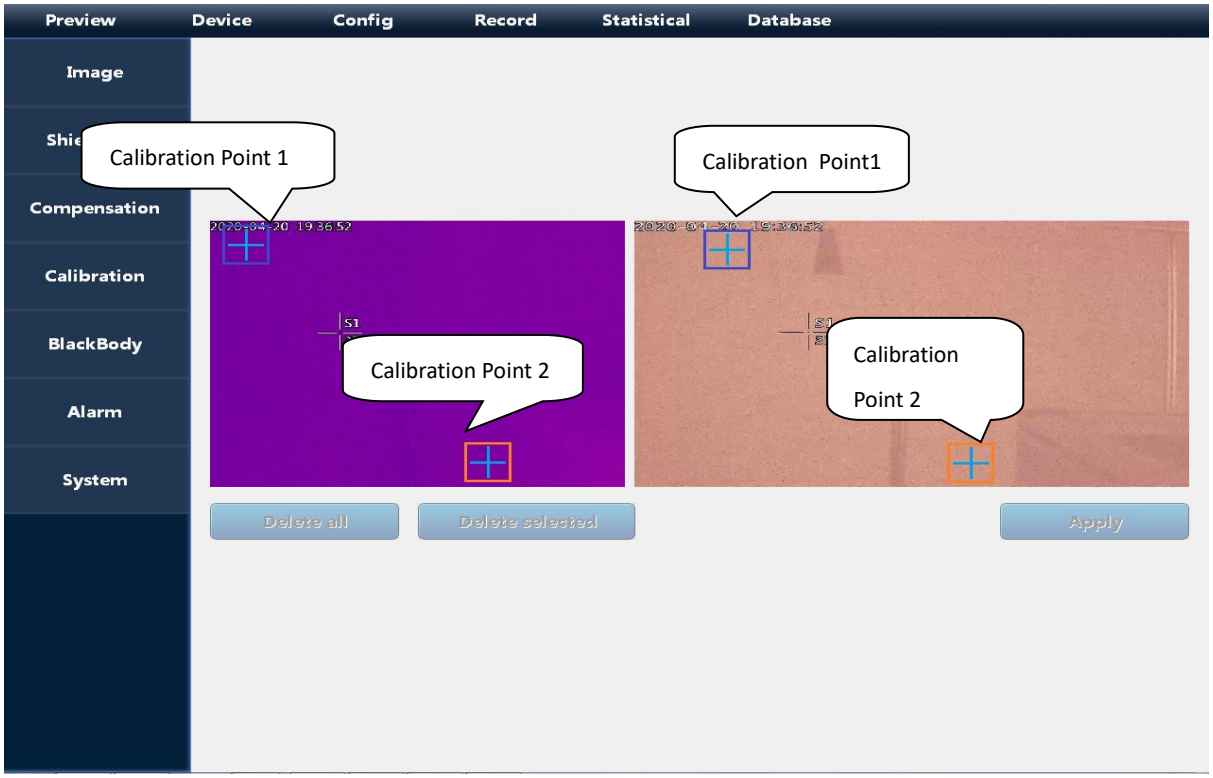


Figure 38 Double Light Calibration

3.6.5 Black Body Configuration

Enter into the black body setting interface via "Temperature measuring configuration - > black body".

Taking black body as the reference source of temperature measuring system, the system will automatically carry out real-time temperature measurement correction, to ensure the accuracy of temperature measurement.

For black body installation, the distance between the black body and the host should be around 3-5 meters (confirm with the manufacturer whether the infrared lens configuration of the system is permissible when exceeding 5 meters). For position adjustment of black body, place the black body in the upper left or upper right corner of the image in the infrared monitoring screen.

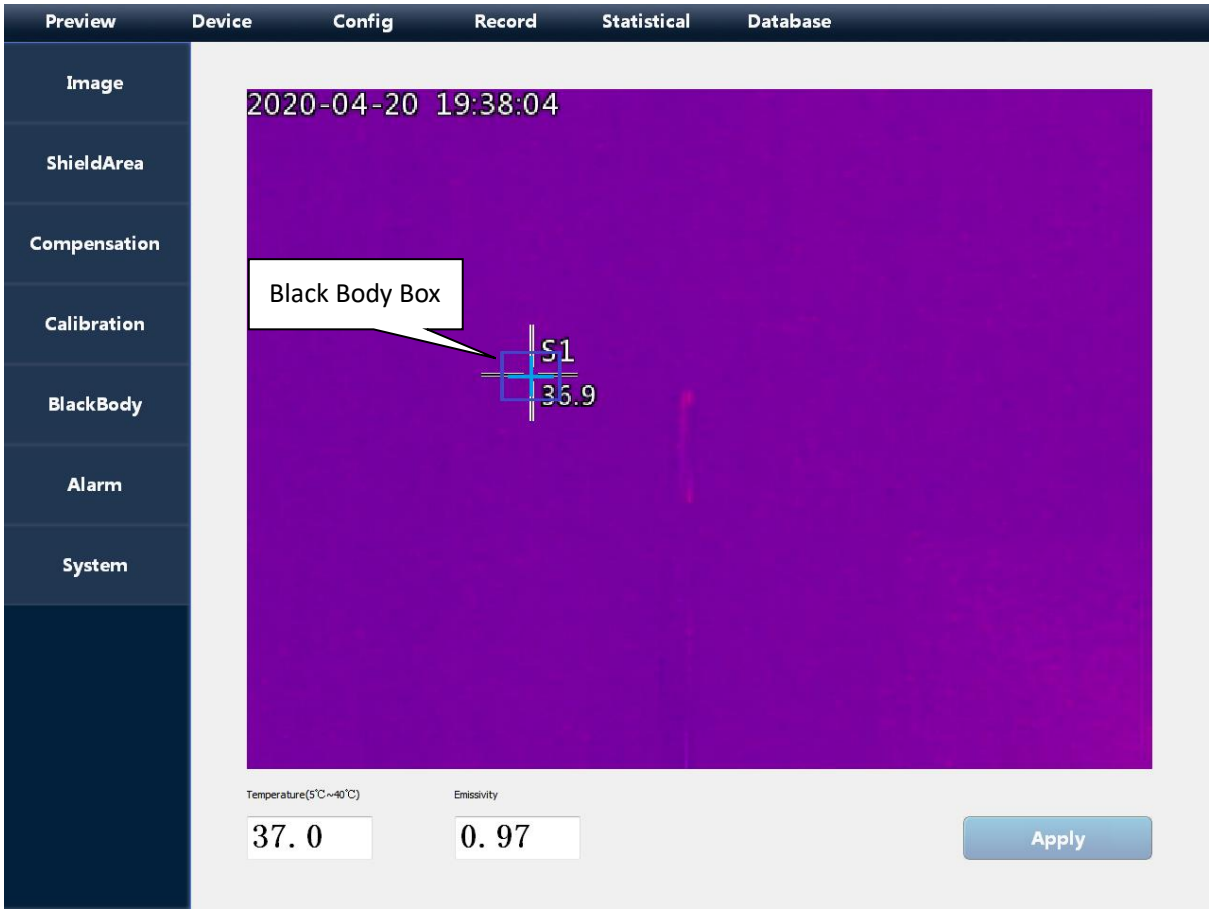


Figure 39 Black Body Configuration

Setting: mark the location of the black body with box on the infrared real-time image on the page. Pay attention to place the center area of the black body in the box, as shown in the figure above.

Enter the black body temperature (37 ° C or 98.6 ° F by default) and radiation rate (0.96 (≤1)), and click "Apply" button to take effect.

Change box: place the black body zone in box again, and click "Apply" to take effect;

Moving zone: move the mouse on the box. When a hand-shape icon appears, move to another location and click "Apply" button to take effect.

Note: only one black body zone box can be set.

3.6.6 Alarm Configuration

Enter into the alarm setting interface via "Temperature measuring configuration - > alarm configuration". The alarm configuration consists of two parts, i.e. "parameter configuration" and "face detection dimension", which can be switched via the tab on the upper part of the interface.

3.6.6.1 Alarm Parameter Configuration

Enter into the setting interface via "Temperature measuring configuration - > alarm configuration - > parameter configuration".

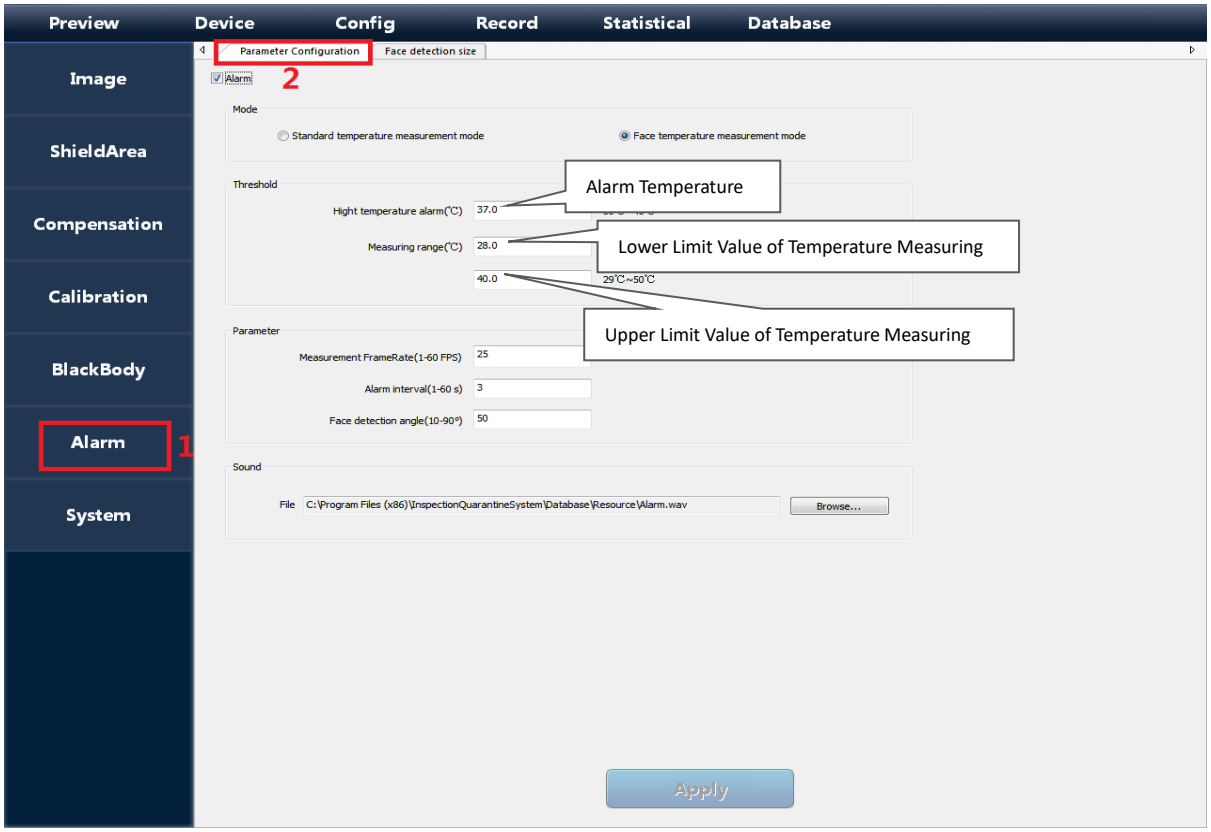


Figure 40 Alarm Configuration

Alarm setting page provides alarm enabling, temperature, threshold value, alarm mode, temperature

measuring frame number setting, alarm interval and audio file setting.

- Turn on alarm: provide alarm enabling setting. When the temperature measurement value reaches the alarm setting value, the alarm linkage mechanism will be triggered, such as warning image capture, audible alarm, the high-temperature population statistics, etc.

  ▲ The maximum number of alarms triggered in one single screen is 20.

- Alarm Mode:

Standard alarm mode: zonal temperature detection, which raise alarm in case of overtemperature without distinguishing people or objects;

Face alarm mode: only measure the temperatures of the recognized faces, and raise alarm in case of overtemperature.

- Temperature threshold value setting: enter the fever alarm value, the lower and upper limit values of temperature measurement.

  ▲ Judging conditions for triggering overtemperature alarm: the detection temperature value reaches or exceeds the specified "fever temperature value", and the temperature value is between the "lower and upper limit values of temperature measurement", otherwise the system will judge that it is not human body temperature nor raise alarm.

- Temperature measurement parameter configuration:

Temperature measuring frame number: the default temperature measuring frame number is 25FPS, and the maximum permissible setting of current model is 25FPS;

Alarm interval: interval between two consecutive alarms;

Face detection angle: the maximum slip angle towards left and right of face detection. It is recommended to set according to the default factory value of 50 °;

0 Degree on the Front Side

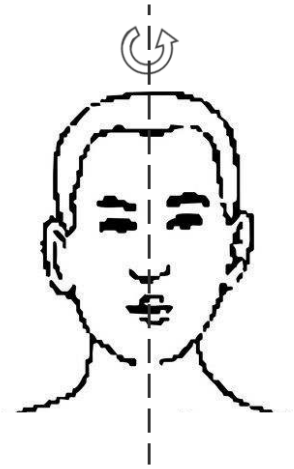


Figure 41 Face Detection Angle

- Audio file: provide the selections of alarm audio files. The default audio file storage path: C:\Program Files (x86)\InspectionQuarantineSystem\Database\Resource\Alarm.wav. .wav files can be replaced by files recorded by yourself kept in the same file names.

3.6.6.2 Face Detection Dimension Setting

Enter into the setting interface via "Temperature measuring configuration - >alarm configuration -> face detection dimension".

Figure 42 Face Dimension Setting

Drag the mouse to select the face dimension in the visible light video screen, as shown in the blue box above. To trigger capture, the length and width should exceed the set size values.

3.6.7 Local System Setting

Enter into the setting interface via "Temperature measuring configuration - > system setting".

System setting provides the parameter settings below:

- Path setting: provide optional saving paths for video and image files (visiting image capture, alarm image capture).

  File valid saving period: 30 days by default.

- Language options:

  Provide switching and display functions among Chinese, Japanese, Korean, English, Russian, Turkish

language, and other languages. Click the "Apply" button below to switch language versions automatically.

- Temperature unit: provide temperature measurement conversion between Celsius and Fahrenheit;
- Software version information: display version numbers of SDK, host, and client software.

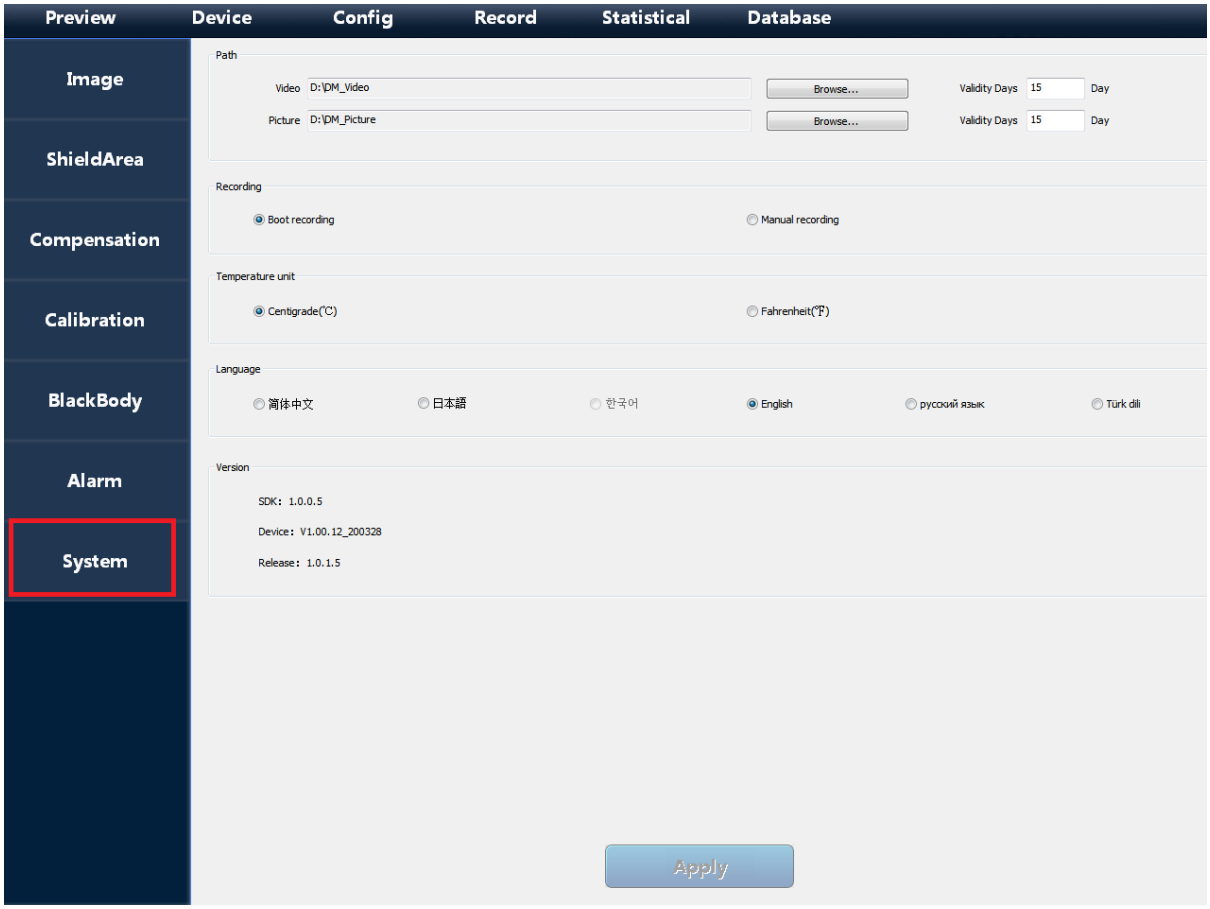


Figure 43 Local System Setting

3.7 Record Query

Provide searching and playback functions of image & video records.

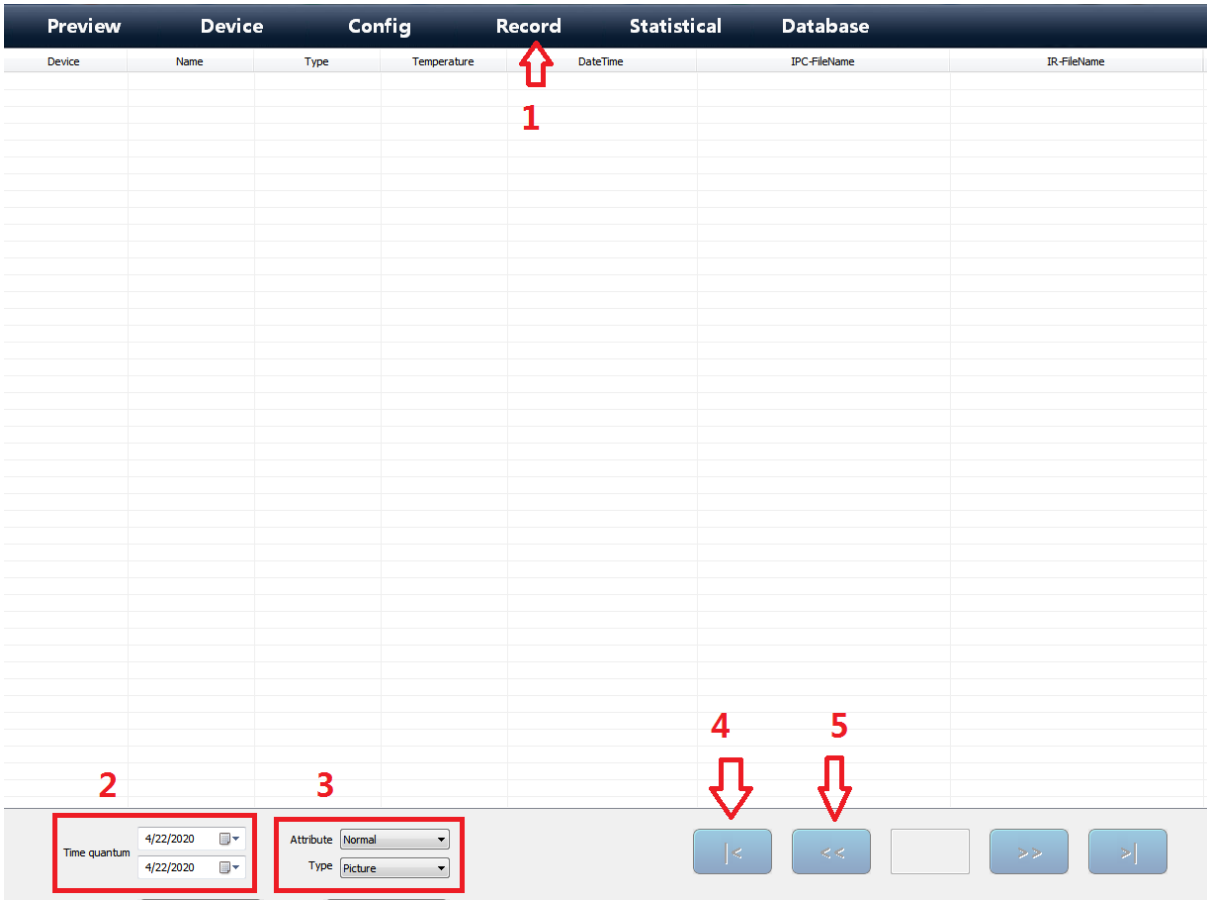
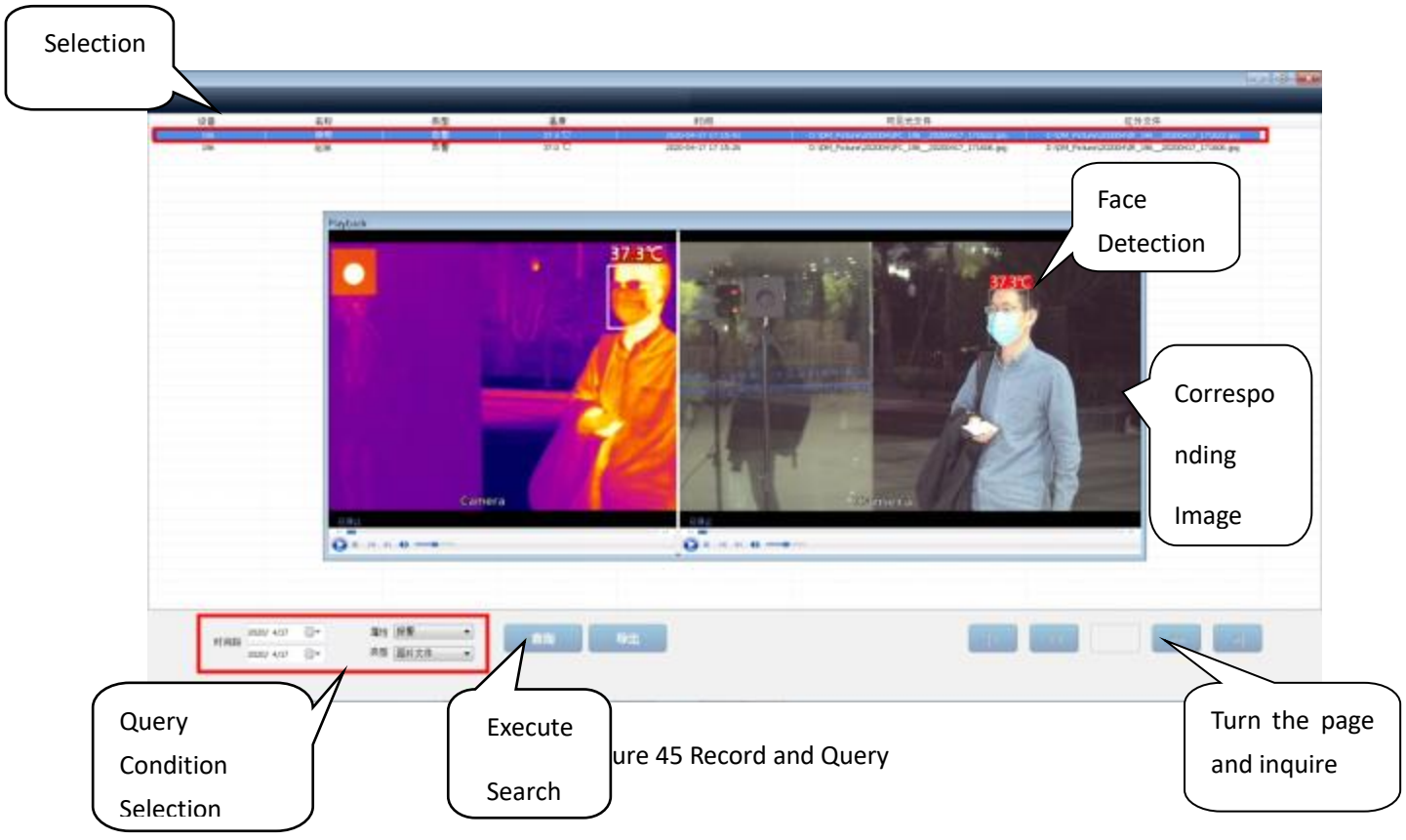


Figure 44 Record and Query

Select the time period and file type (picture / video) to be searched as required and click "Query" button to display the history of the time period in the upper list column. Switch page number by turning the page on the right.

When the file type to be searched is "picture", the infrared and visible light capture record will be displayed after query. Double click the record to pop up the video window and display the picture. The face frame and temperature will be displayed when raising alarm. The normal image capture will only display the visible light image.



ure 45 Record and Query

The "Name" column in the record information searched and displayed is displayed as "Specific Name" when entered into the face database and recognized, or as "No Name" when not entered into the face database or recognized.

When the search file type is "video", display the video record in the list box after query. Double click one record to pop up the video play window for automatic play. When playing, provide stop, previous/next

section, volume control, and other functions.

Record export: click "Export" button as shown in Figure 45 to export and save the displayed record in .xlsx format.

3.8 Statistical Graph

Automatically generate real-time monitoring statistical bar chart according to the temperature measurement data of the day and the week, for analysis.

Figure 46 Statistical Graph

3.9 Face Database Management

Face database management includes two modules, i.e. face modeling and data maintenance.

3.9.1 Face Database Modeling

Enter into the setting interface via "Face database management - > face database modeling".

Face database modeling provides two input modes, i.e. manual input and batch input.

3.9.1.1 Manual Entry of Personnel Information

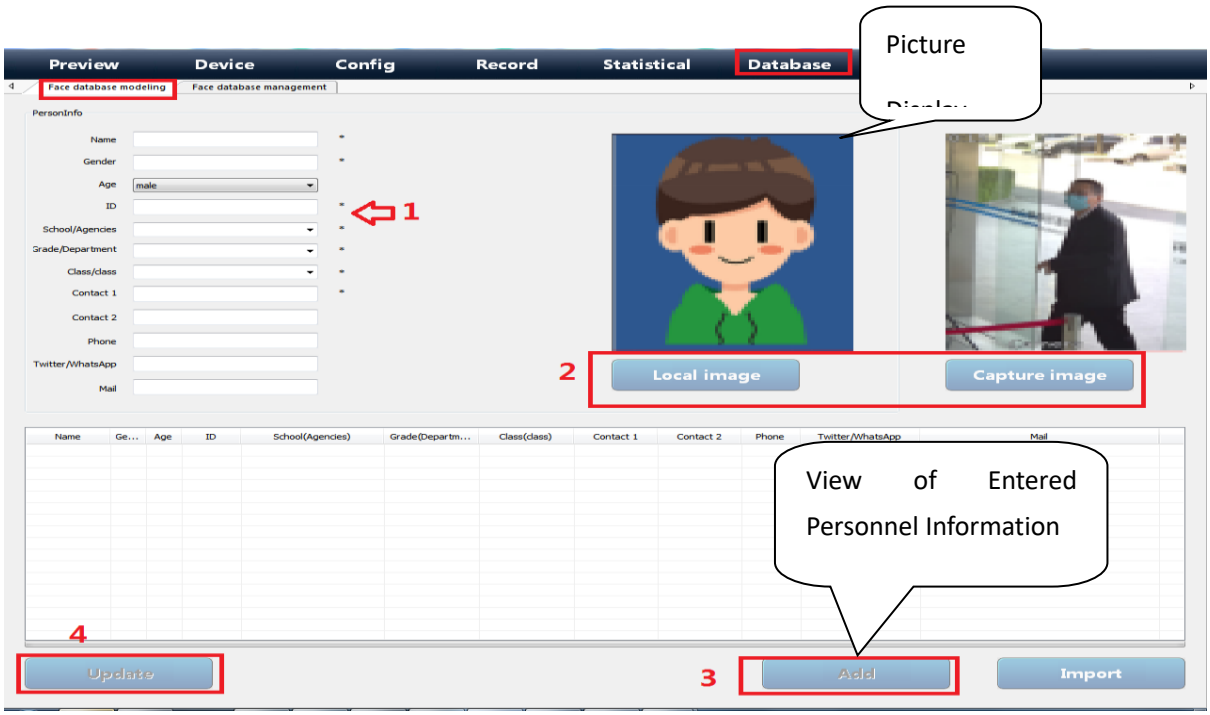


Figure 47 Personnel Information Entry In turn

Local face database entry steps:

1. Personnel information entry: enter all personnel information in the personnel information column with certificate number associated with student ID, ID card, and other certificate numbers;

2. Face database file entry: provide two approaches, i.e. "local photo jpg format upload" and "real-time head portrait acquisition";

3. At the completion of the first and second operations, click "Add" to enter the personnel information;

4. The personnel information entered is displayed in the information column for view and confirmation;

5. At the completion of personnel information entry and addition, click "Update" to import into the local face database;

Requirements on face information acquisition:

1. Refer to 1-inch photo in certificate (mugshot);

2. Show forehead; mask is not recommended;

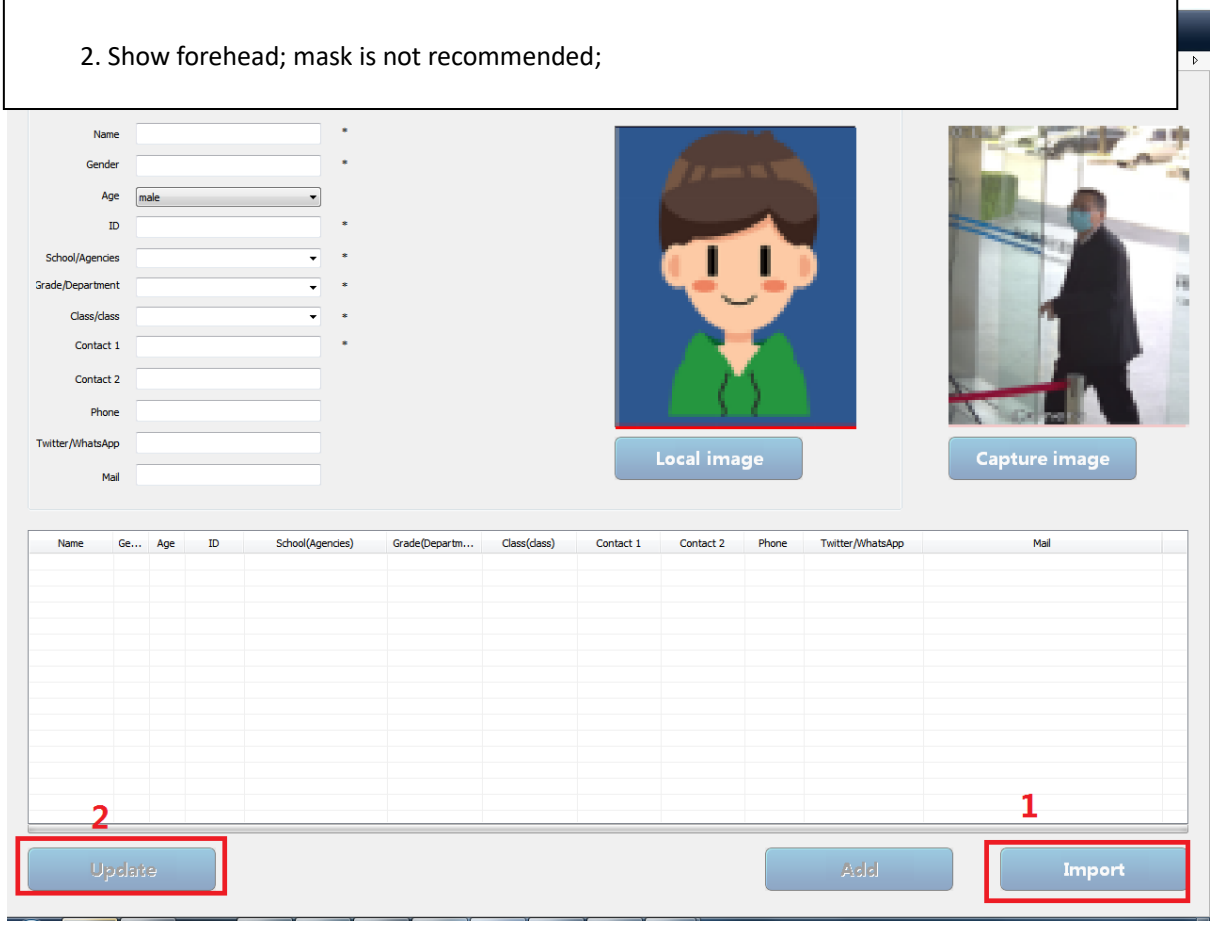


Figure 48 Batch Entry of Personnel Information

Local face database batch entry steps:

1. Enter into the personnel information in the format below in local Excel files as shown in the figure below, and save in .csv format;

Manually create a Photo folder, to save all personnel photos in the format of "name.jpg";

Store the above .csv files and Photo folder in the path of the same level;

2. Click "Import" and select .csv file;

3. Click “Update” to import.

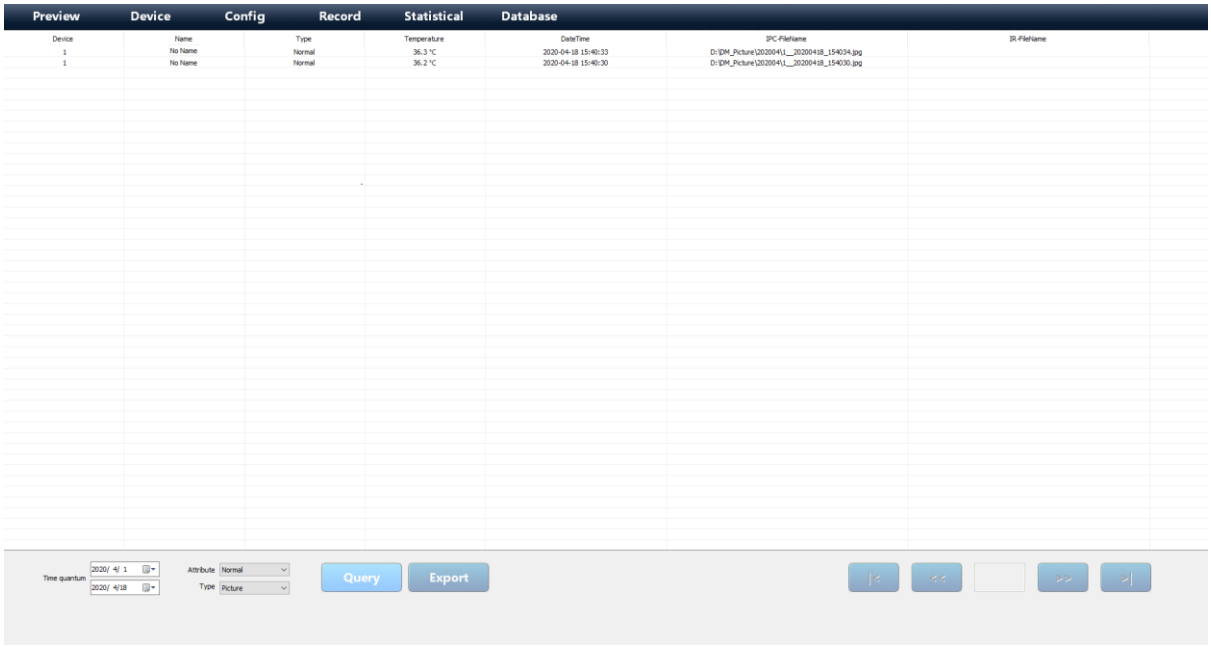


Figure 49 Personnel Information

3.9.2 Data Maintenance

Enter into personnel data upload and query interface via "Face database management - > data maintenance".

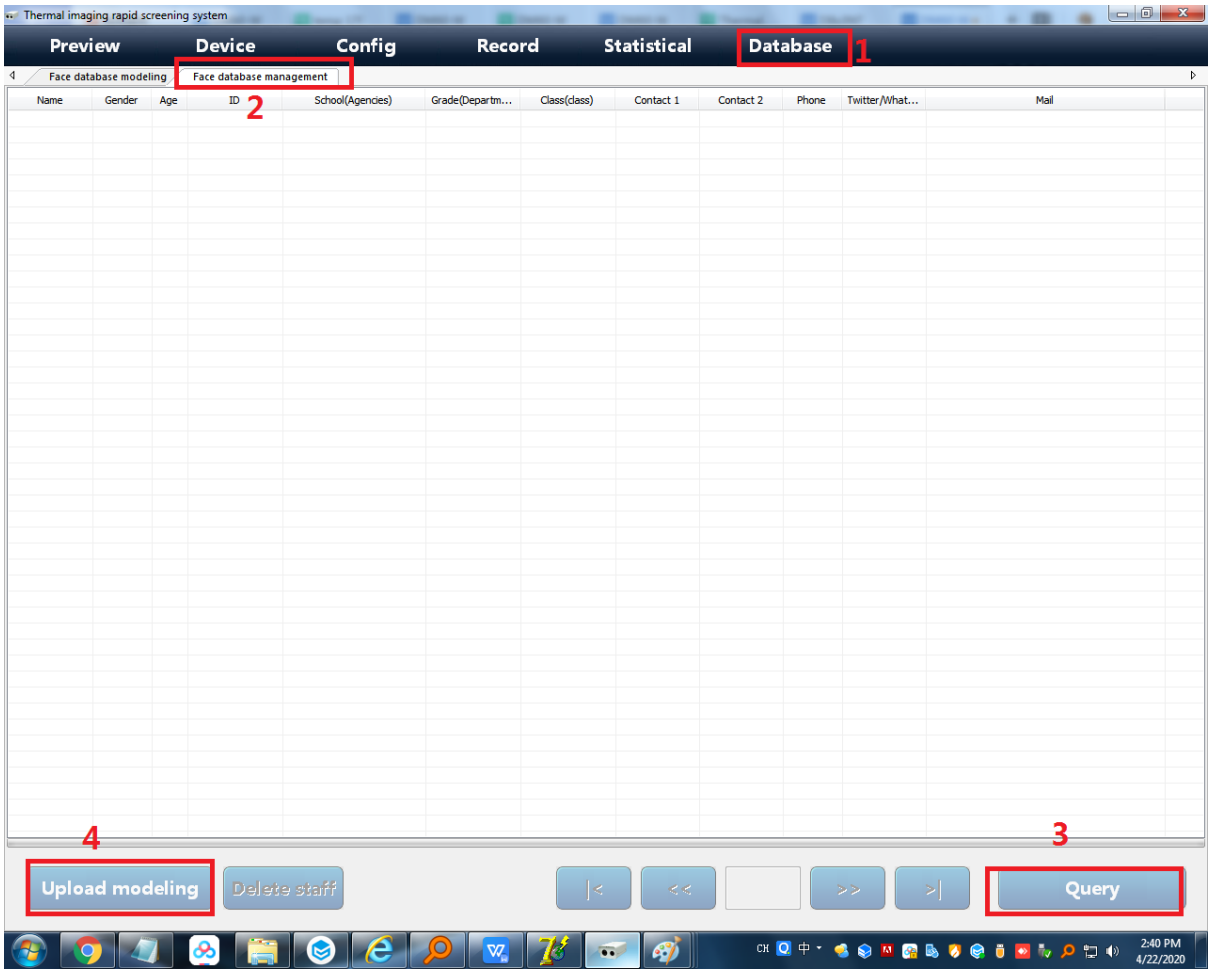


Figure 50 Personnel Data Upload

At the completion of entry of all the personnel information, click "Inquire personnel" to confirm personnel information entered, and carry out "Upload modeling data" operation. Upon completion, upload all the personnel information to the host device for saving.

4. Cautions for Use

1. After the start-up of temperature measuring device, there is a self-inspection duration of about 30 seconds. During this period, the system software cannot be connected to the device end.

2. The system software is generally installed in the factory. Click the operation program for utilization on site. Do not modify the internal documents, otherwise the software will not run.

3. The continuous system operation duration is recommended to be 12 hours. If it exceeds 12 hours, it is recommended to shut down the computer, disconnect the main power switch of the mobile station before start-up again.

5. Technical Specifications

Item		Technical Notes
Infrared Image Temperature Measuring Module	Detector Performance	
	Detector Type	Uncooled Focal Plane Micro-heat Detector
	Pixel	640*480/384*288/320*240/160*120
	Wavelength coverage	8-14μm
	Sensitivity	≤50mK
	Focal Length	18mm
	Frame frequency	50/60Hz
	Measurement Analysis	
	Temperature Measurement Range	20℃-50℃
	Temperature Measurement Accuracy	±0.3℃ (external black body mode)
	Temperature Measuring Repeatability	±0.3

	Warning Responding Duration	≤1s
	Temperature Measurement Correction	Temperature comparison and correction via external black body
Visible Light Imaging Module	Imaging System	200W Visible Light Imaging Module
	Pixel	1920*1280
Computer Host (if configured)	CPU	Intel Core i5 and above; 3.1GHzl; Dual Core and above
	Memory	Above 4GB
	Hard Disk	Above 2T
Display (if configured)	Dimension	22 Inch Touch Display (Resolution: 1920 * 1080 and above)
System Software Function	Alarm	Multiple Point Alarm Function
	Video Recording and Photo Taking	Alarm Photo Taking and Real-time Video Recording Functions
	Detecting Function	Face Automatic Detection + Temperature Measuring Function
	Zonal Screen Function	Any Zonal Screen
	Temperature Display	Display Temperature Simultaneously in Infrared and Visible Light Image
	Temperature Correction	Automatic Correction of Internal & Shell Temperature
System Power	Input Power	220V
Environment Applicability	Work Temperature	16℃-32℃
	Work Temperature	≤90% (Non-Condensing）

The above instructions are subject to change without notice