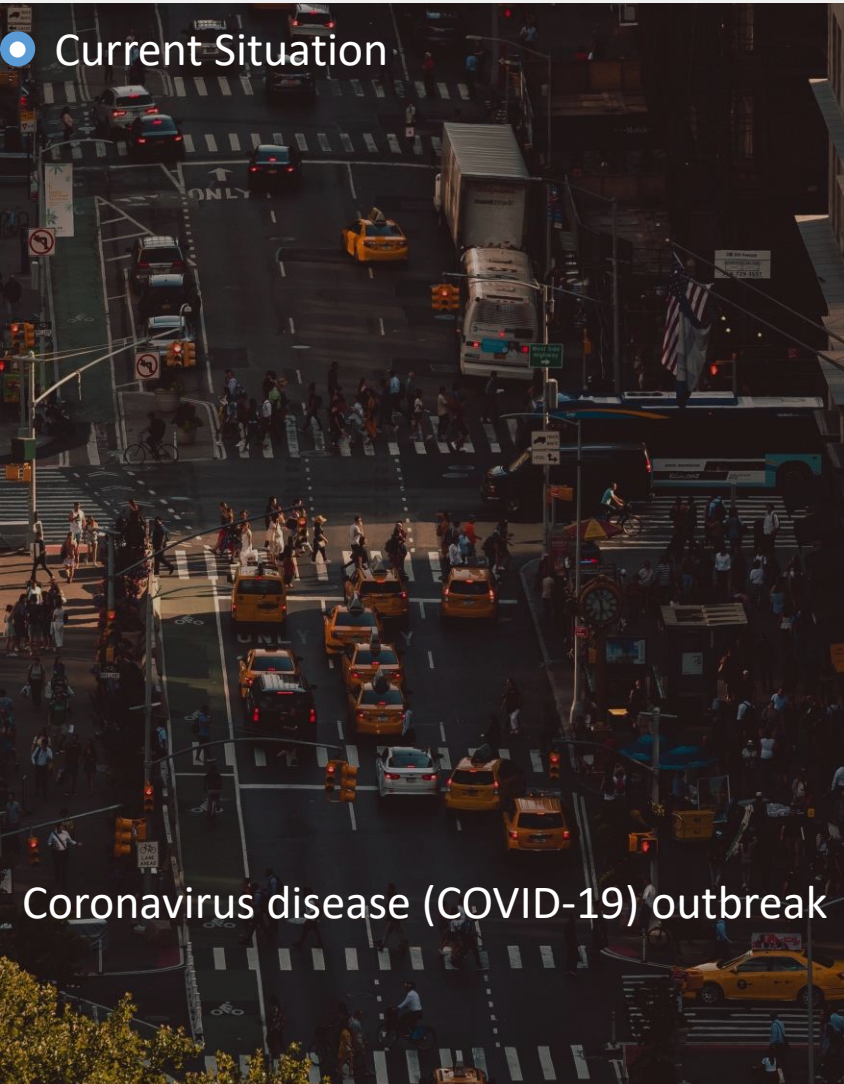


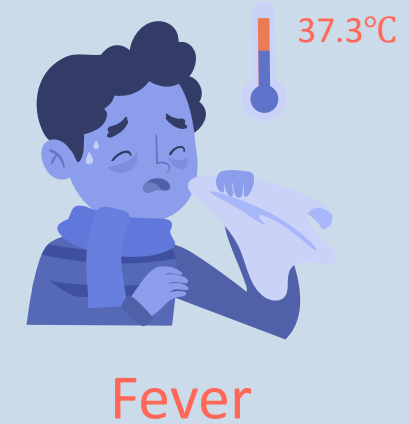
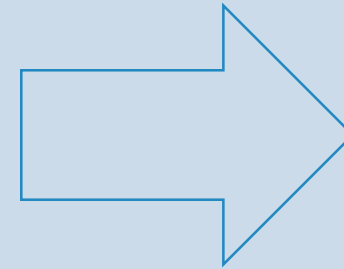
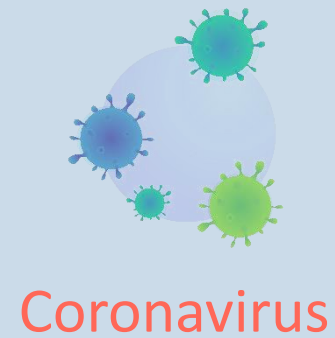


UNV Heat-Tracker series Body Temperature Measurement Solution & Products

Background



● Key Symptom



● Main Purposes of Taking Body Temperature



Entrance



Effective screening of patients with fever



Make sure the area is free of infection

Challenge

Mercury thermometer



Infrared thermometer



Traditional Solution

Electronic thermometer



In-ear thermometer



- ? Manual inspection with manpower consumption
- ? Slow pass at the entrance and exit
- ? Easy to cause stagnation and cross infection

UNV Heat-Tracker Solution

1

Thermographic Fever Screening System



2

Temperature Measurement Face Recognition Terminal



3

Human Body Temperature Measurement Gate



Workflow Optimization

• Traditional Thermometer Solution

Slow Manual Inspection

• UNV Heat-Tracker Solution



Quick Non-contact Body Temperature Screening



Abnormal case

Manual Re-check

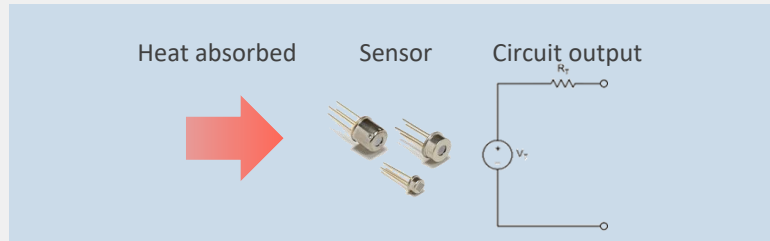
Advantage

- More secure, non-contact temperature measurement.
- More efficient, quick progress with mask wearing detection.
- More convenient, easy-to-deploy solution.

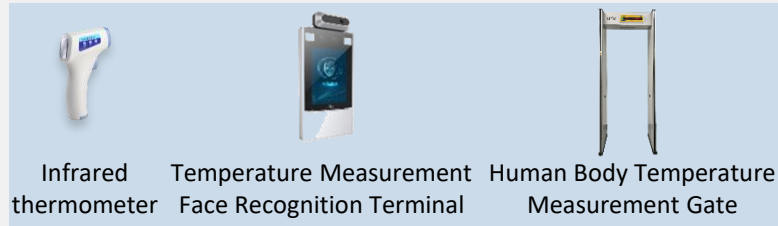
Technology of Temperature Measurement

Thermopile

Principle



Typical products



Measuring accuracy

High

Measuring distance

Within 1m

NETD

200-300mK

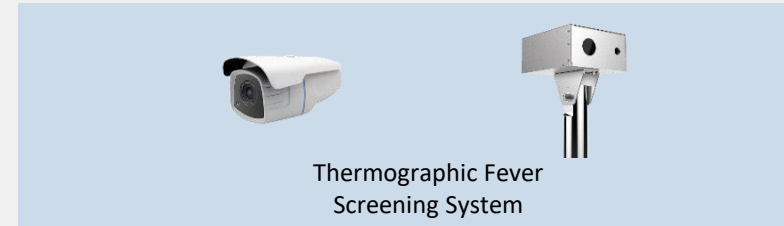
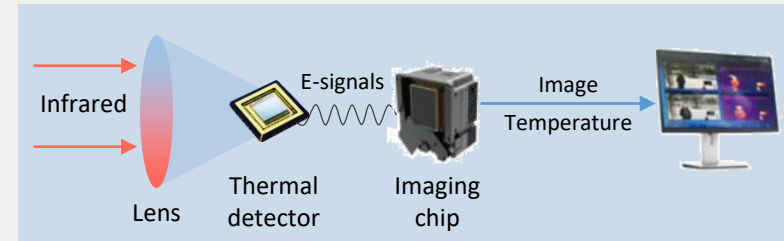
Application field

Low budget, company, school, apartment...

Cost

Normal

Thermal Imaging



High

Within 10m

30-50mK

Enough budget, government, airport, station...

High

Everything in nature with a temperature above absolute zero ($-273\text{ }^{\circ}\text{C}$) radiates outward with its properties and temperature at all times. The related infrared radiation intensity is related to the temperature of the object.

01

Thermographic Fever Screening System

Solution

Uni 2165H Hand Hold Thermographic Fever Detection



USS-SC160-T-O



USS-SC160E-T-O

Key Features

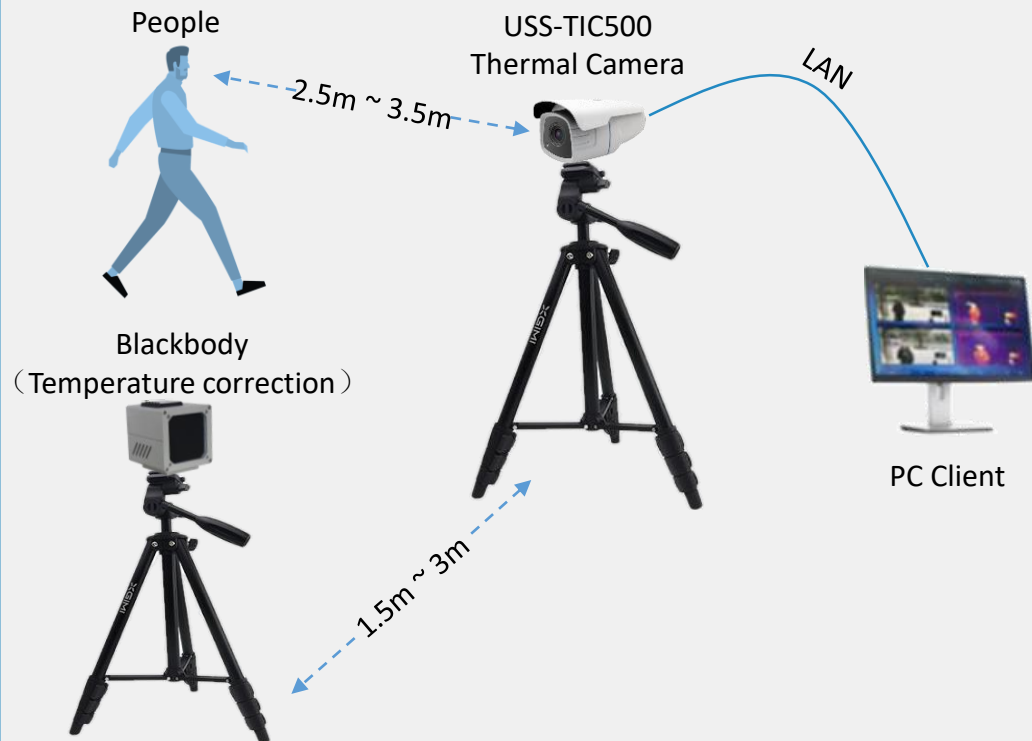
- Easy to setup, No Configuration Required
- 2.8'' TFT screen
- Infrared resolution: 160*120
- Range of temperature measurement :30°C~45°C
- Accuracy: $\pm 0.5^{\circ}\text{C}$ (1m)
- Photographed function and SD card storage
- Point temperature measurement
- Type-C USB interface for lithium battery charging
- 1/4'' tripod mounting hole

Solution UNi 2165H



Solution

USS-TIC500 Thermographic Fever Screening System



Solution Composition

1*Bullet thermal camera, 1*Black body, 2*Tripod, 1*PC Client

Camera Resolution

Thermal camera : 384×288 pixels Visible light camera : 5MP

Advantage

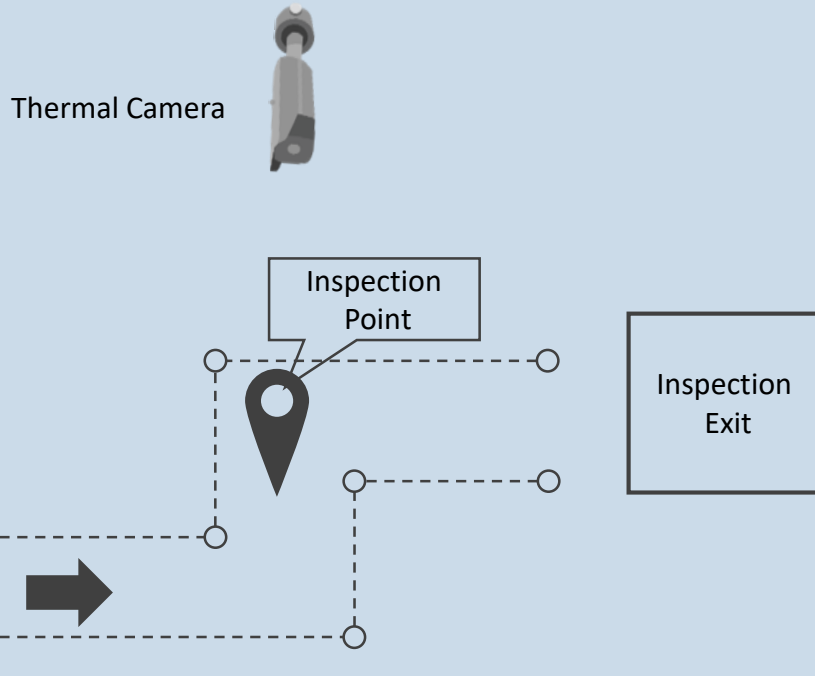
- High accuracy with blackbody, only $\pm 0.3^{\circ}\text{C}$ deviation.
- Easy installation and simple configuration.
- Support **AI face detection**, multiple targets screening at the same time.

Set up tips:

- Keep the distance between target and camera about **2.5 ~ 3.5 m**
- The black body is used together with body temperature measurement bullet, **1.5m ~ 3m** away from the camera
- Make sure that the black body **would not be blocked** by other targets during temperature measurement
- Recommend to set up the solution in a stable environment without wind in the **indoor space**.

Screening Process

Quick Inspection Channel



Sign



Isolation belt



Loudspeaker



1 Set up a quick channel

Set up a quick screening channel in the indoor space to separate space into few parts.

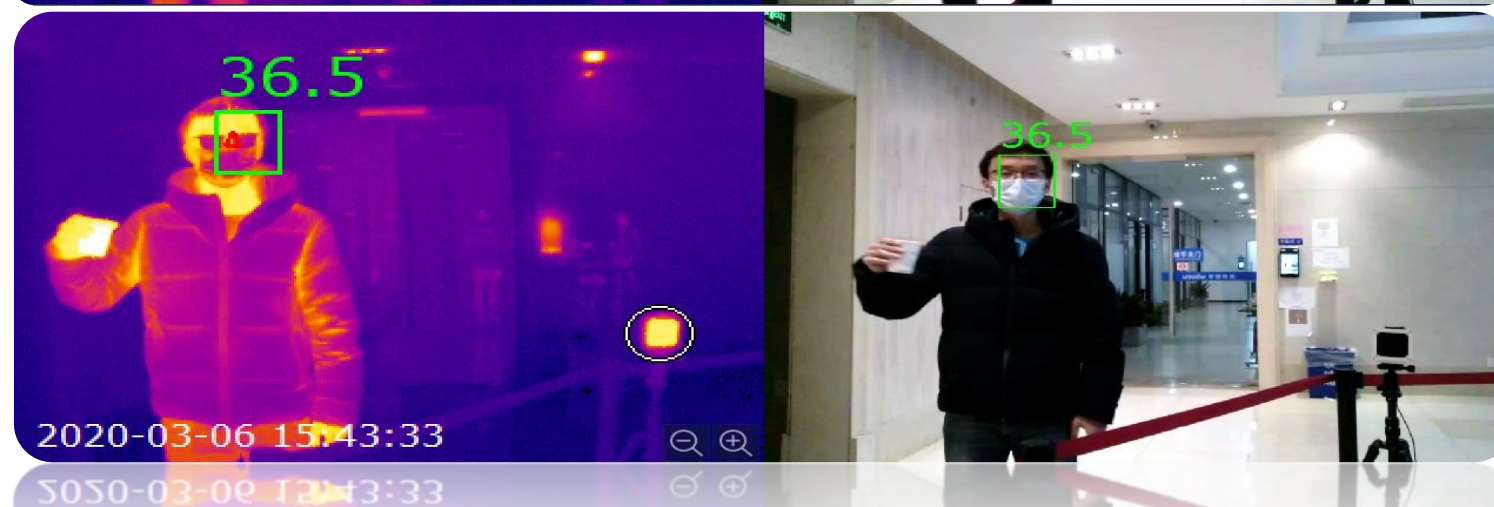
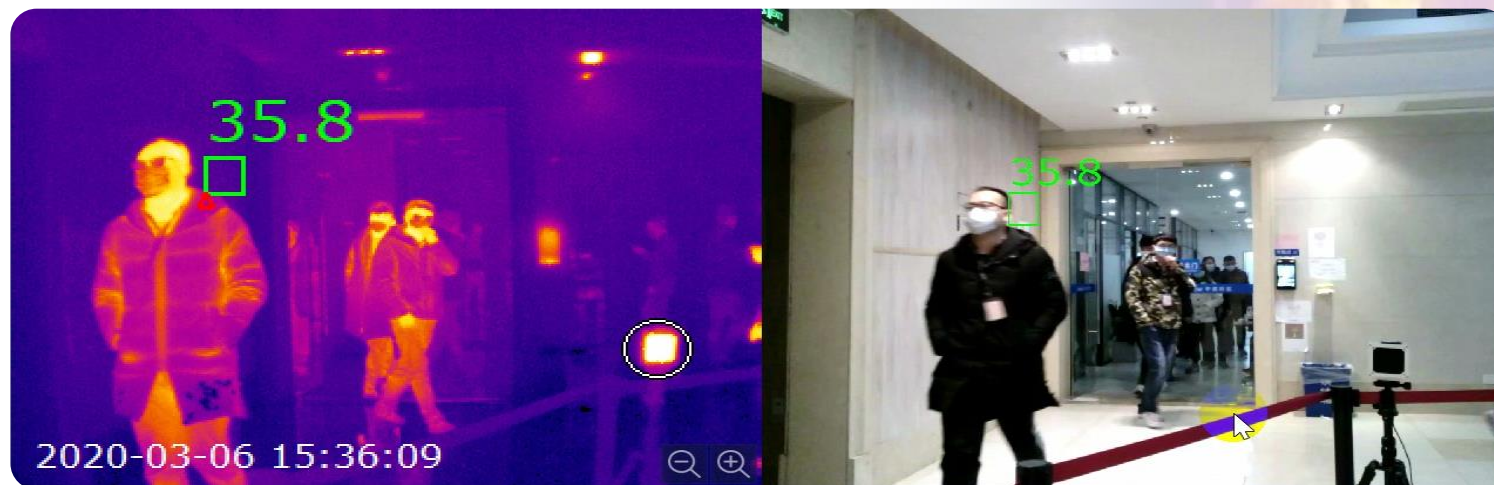
2 Thermal camera quick screening

Using thermal fever screening solutions to do quick screening of moving crowd and ensure the efficiency

3 Thermometer secondary check

For the person who is doubt fever symptoms, using thermometer to do secondary check is necessary.

Highlight Function



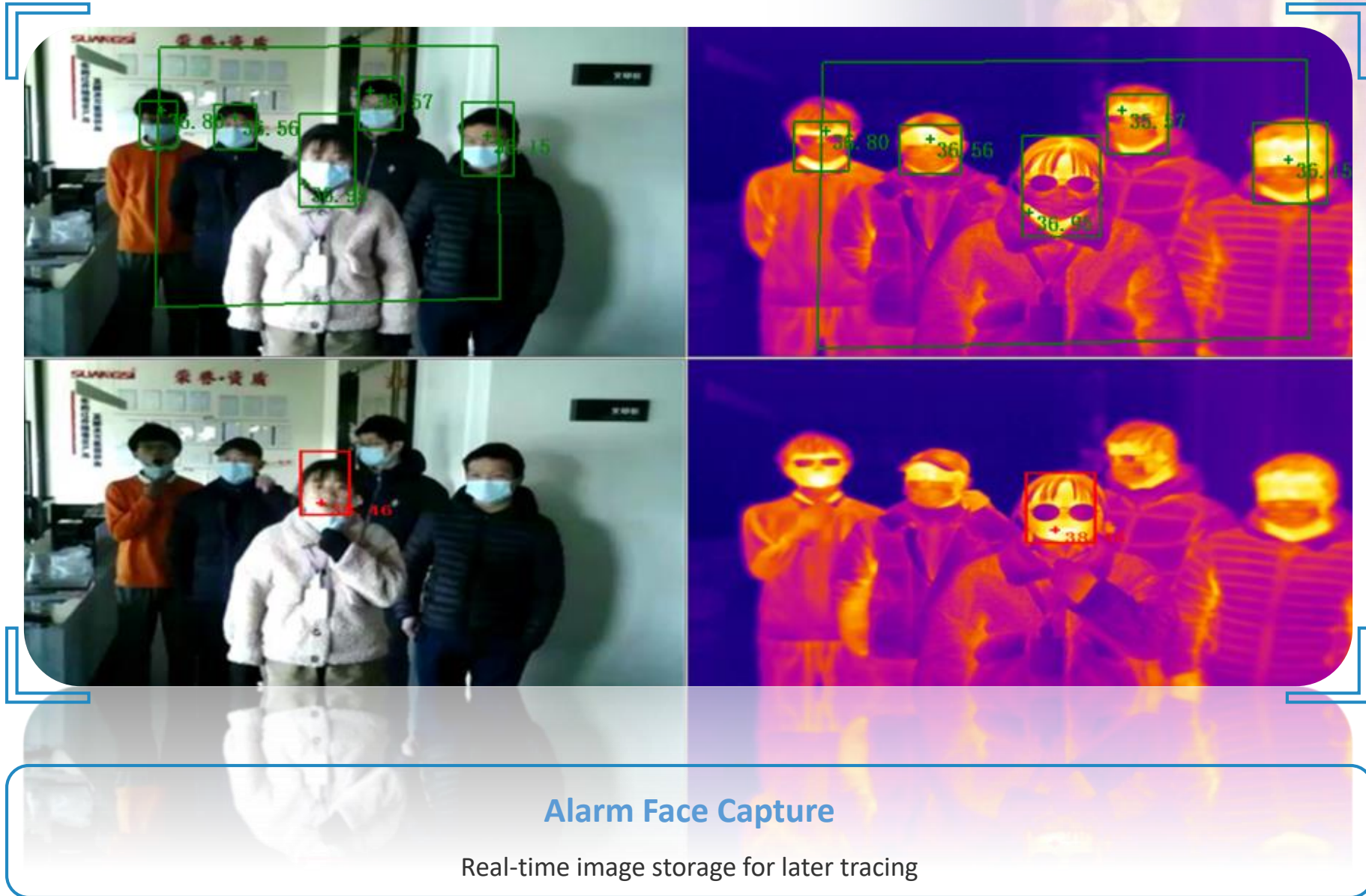
Optimized AI algorithm

Support detect faces wearing masks.

Multi-target Face Detection

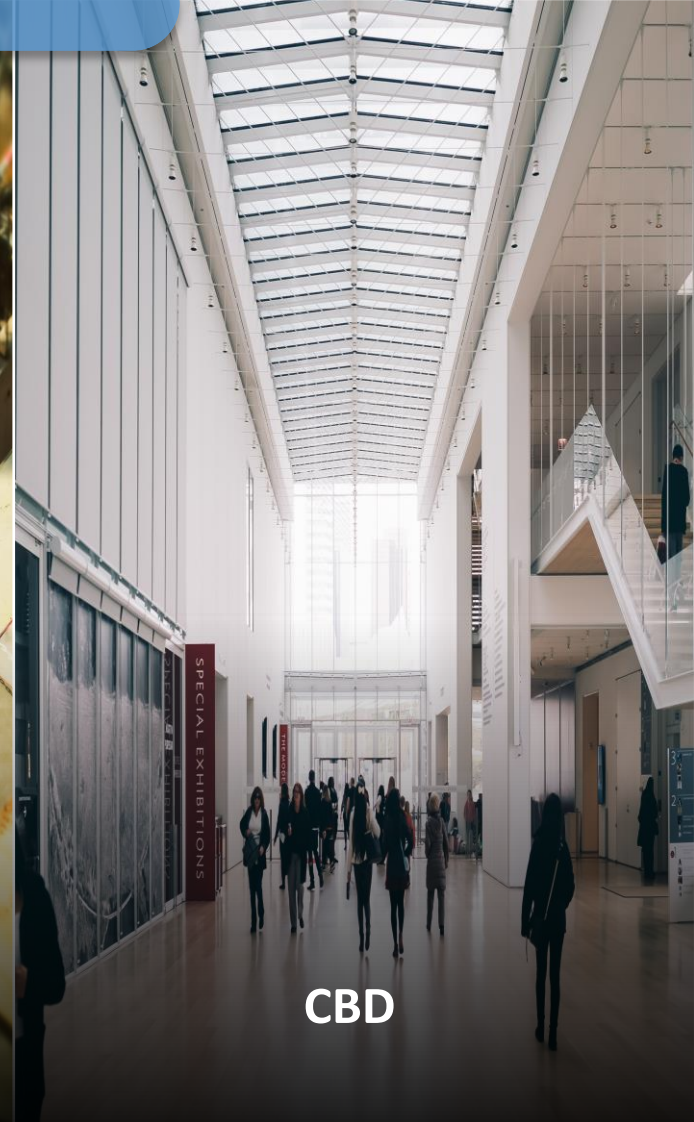
Quick screening and reduce false alarm caused by other objects.

Highlight Function



Scenario

Crowded Area



Scenario

Transit Area



Airport



Railway



Seaport

Q&A

Q: How many people can be measured temperature by TIC500 simultaneously?

A: In principle, within the recommended distance of 2.5m~ 3m, each person in the camera view will be measured temperature by face detection.

Q: Does TIC500 work with UNV NVR or VMS?

A: Currently not support and UNV NVR or VMS applications;TIC500 is only used with own computer client, 1 client only manage 1 camera. Please refer to the datasheet for the recommended requirements of computer.

Q: Can temperature screening equipment be installed outdoors?

A: Recommend to choose a closed environment around the indoor environment. In the temperature measuring area, please avoid the entrance/exit door, air conditioning/heating outlet, glass and other mirror reflectors, heating equipment and other high temperature objects, direct lighting, etc., to avoid drastic temperature changes in the temperature measuring area.

Q&A

Q: What is blackbody?

A: Blackbody is a calibration device and a standard temperature source (accuracy is ± 0.1 °C). The thermal camera with blackbody can be calibrated in real time, which can keep the temperature measurement accuracy at a high level of ± 0.3 °C.

Q: Is infrared thermography harmful to human body?

A: Absolutely not. Thermal imaging equipment is passive detection of infrared radiation, similar to the imaging principle of visible light camera, which will not cause any harm to human body.

02

Temperature Measurement Face Recognition Terminal

Product



OET-213H-BTM32



OET-515H-BTM32



OET-223L-BTM32



OET-523L-BTM32



EP-S31

Terminal

Shell	Plastic	Plastic	Metal	Metal
Screen	7 inch Touch Screen	10 inch Touch Screen	7 inch Non-Touch Screen	7 inch Touch Screen
Camera	Dual 2MP Camera	Dual 2MP Camera	2MP Camera	Dual 2MP Camera
Temperature Measurement	√	√	√	√
Storage Capacity	4GB	16GB	4GB	16GB
Face Capacity	10,000	50,000	10,000	50,000
Installation	wall / floor-stand mounted	wall / floor-stand mounted	turnstile / floor-stand mounted	turnstile / floor-stand mounted

Bracket

Material
Sheet Metal
Weight
6.85Kg
IP Grade
IP54
Dimensions (L×W×H)
280mm×222mm×1158mm

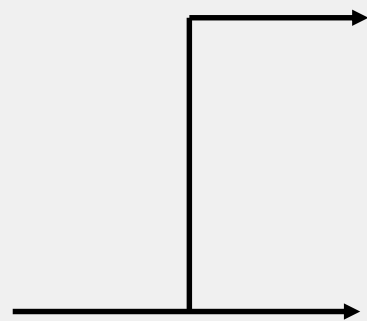
Accessory Guide



OET-213H-BTM32
OET-515H-BTM32



OET-223L-BTM32
OET-523L-BTM32



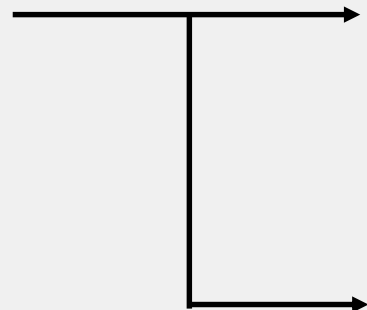
= wall mounted

+



= floor-stand mounted

EP-S31



= turnstile mounted

+



= floor-stand mounted

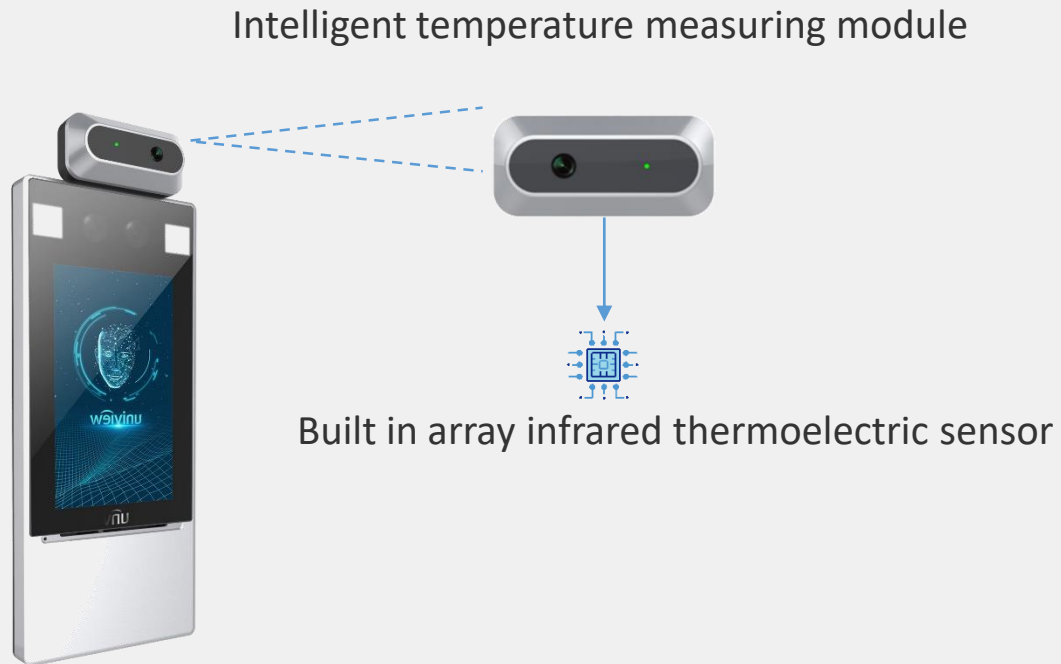
EP-S31



*No power adaptor in delivery package, additional DC12V 2A bare-wire adaptor is required.



Principle

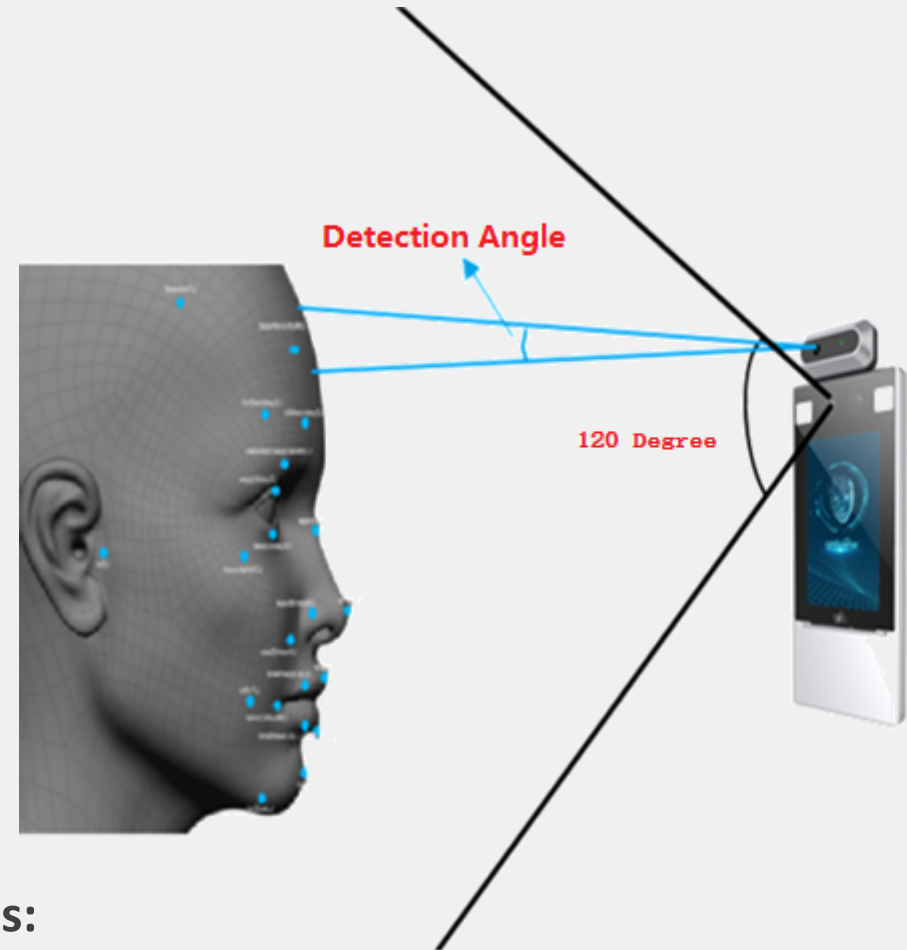


Advantages:

- ✓ Safety, no direct contact with the target.
- ✓ Small size with high reliability.
- ✓ Accurate measurement and support dynamic & static signals detection.
- ✓ High efficiency, support 20-30 people/min.

Notes:

- ✓ The horizontal and vertical detection angles are 33 degrees
- ✓ The maximum temperature measurement distance is 1m
- ✓ The recommended measuring distance is 0.3m - 0.7m



Typical Application Scenario

By automatic face recognition and temperature measurement process, this solution could be applied in various scenarios, such as school, enterprise, community, super market, shopping mall, construction sites and bank, etc.

School



Enterprise



Community

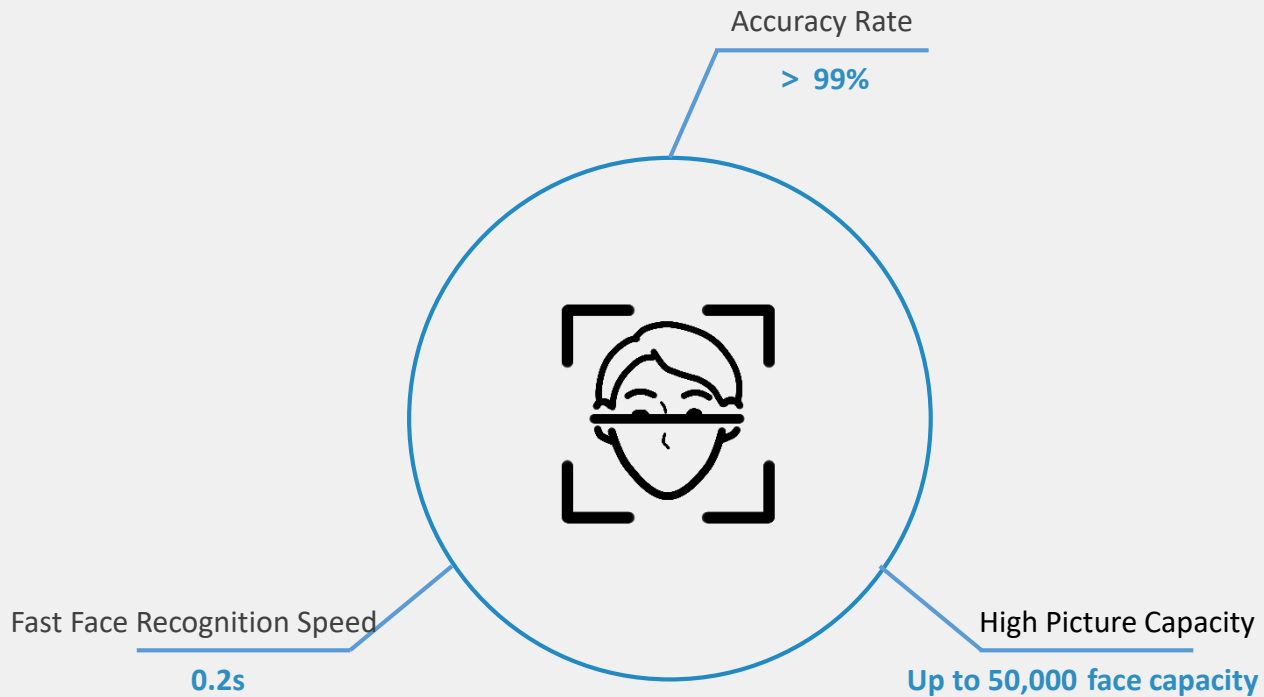


Construction site

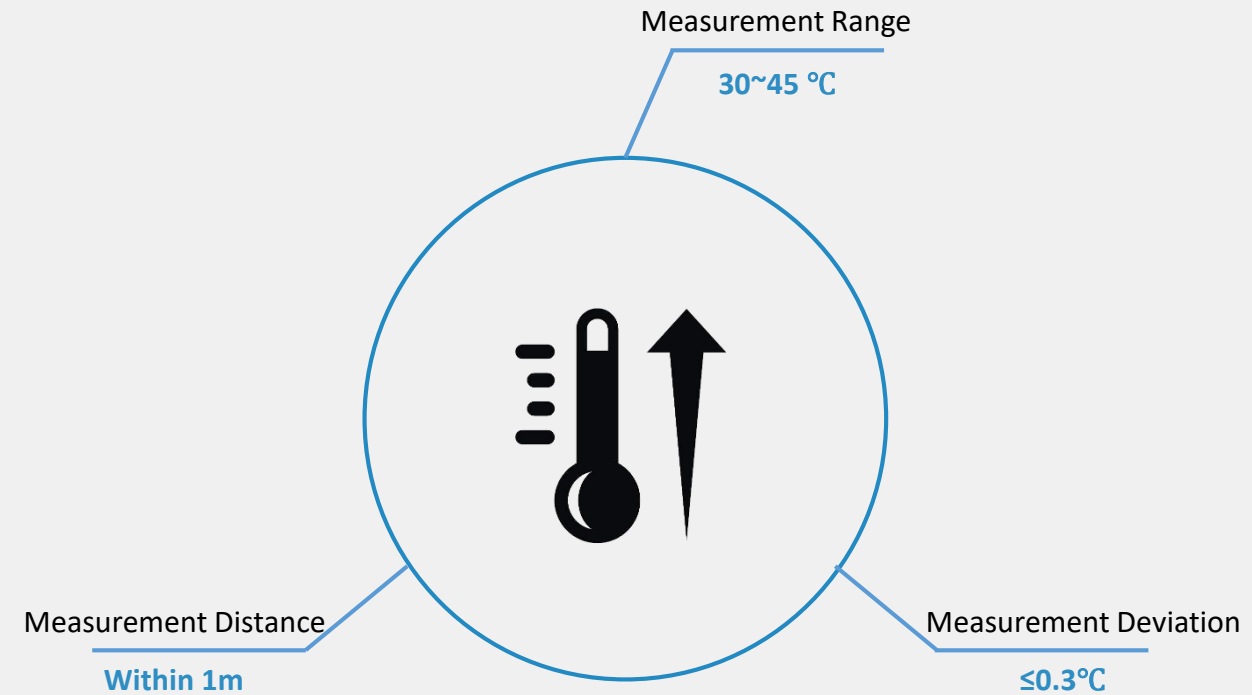


High Performance

Face Recognition



Temperature Measurement



Highlight Feature - Temperature Measurement



Normal temperature with a mask

Abnormal temperature with a mask

Functions

1. Real-time temperature detection and screen display.
2. High temperature **voice alarm**.
3. Snap photos and overlay temperature OSD information.
4. **Privacy mode: Only measure forehead or wrist temperature, not capturing face image**

Highlight Feature - Mask Wearing Detection



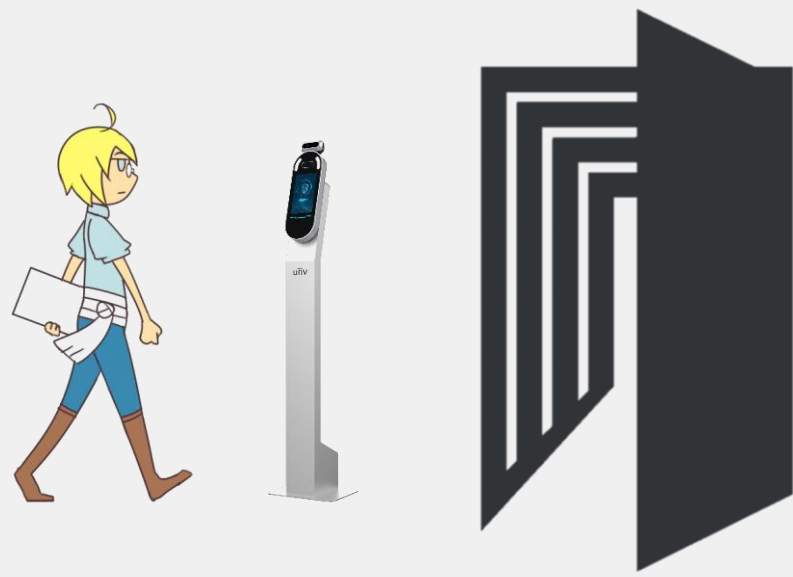
Normal temperature without a mask

Abnormal temperature without a mask

Functions

1. Support face recognition with mask.
2. UI can indicate whether he/she is wearing a mask or not.
3. **Voice alarm** for those who do not wear a mask.

Application mode



Optional Mode	Face Recognition	Temperature	Wearing Mask	Opening door or not	Voice*
	Not enabled	Normal	Yes	Optional	Welcome!
			No		Please wear a mask.
		Abnormal	Yes		Abnormal temperature.
			No		Abnormal temperature.
	Enabled	Normal	Yes		Welcome!
			No		Please wear a mask.
		Abnormal	Yes		Abnormal temperature.
			No		Abnormal temperature.

*Voice & content is optional and can be modified with web upgrade as customs requirement.

Stand-alone Solution



Terminal

Easy to deploy



PC tool (A free .exe, optional), one terminal at a time



User manual

Software functions

- Batch face image import, library management
- Face image collection, add information for personnel
- **Records export with temperature**

The screenshot shows the 'People Import Tool' window with the following sections:

- People Import:** Includes fields for 'Camera IP' and 'Employee Library' (a dropdown menu), an 'Image Path' field with an 'Apply' button, and an 'Import Progress' progress bar.
- Processing:** A label indicating the current status.
- Library Info:** Contains an 'All Library Search' button.
- Personnel Info Collect:** Contains a 'Collect Photo' button.
- Delete Original Library:** Contains a 'Delete Library' button.
- Personnel Info:** Contains a 'Search' button.
- Pass-Thru Records:** Contains a 'Search' button.
- Card Info:** Contains a 'Search' button.
- Authentication Config:** Contains a 'Modify' button.
- Save Snapshot To:** Includes a text field with 'C:\Uniview' and 'Browse' and 'Open' buttons.

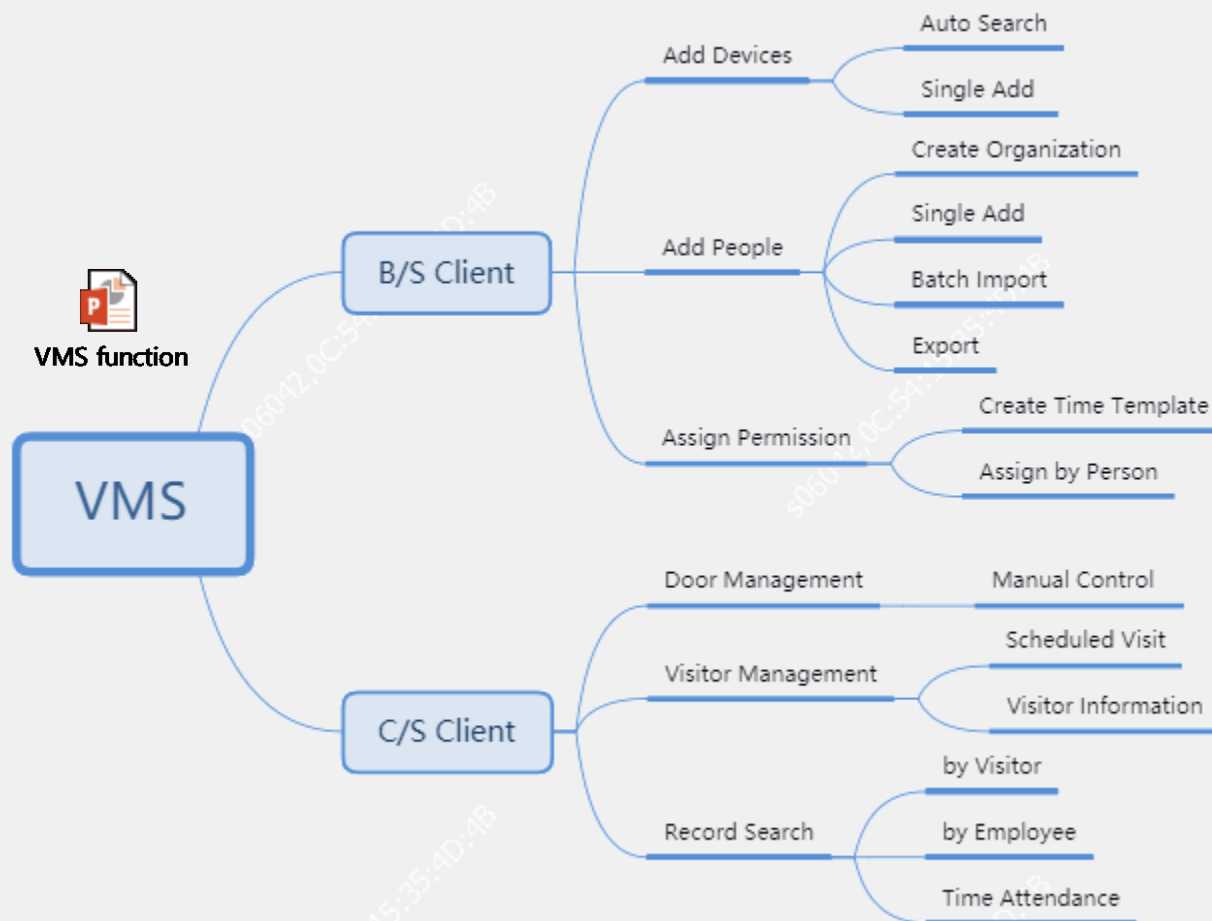
Every face image and pass-through record will be stored at front-end.

Terminal can work standalone, and you can import or export information with a PC software if needed.

VMS solution

Unicorn (firmware ready at middle of March)

VMS-B180-A (firmware ready at end of March) (domestic B180 hardware, customized B180 overseas firmware)

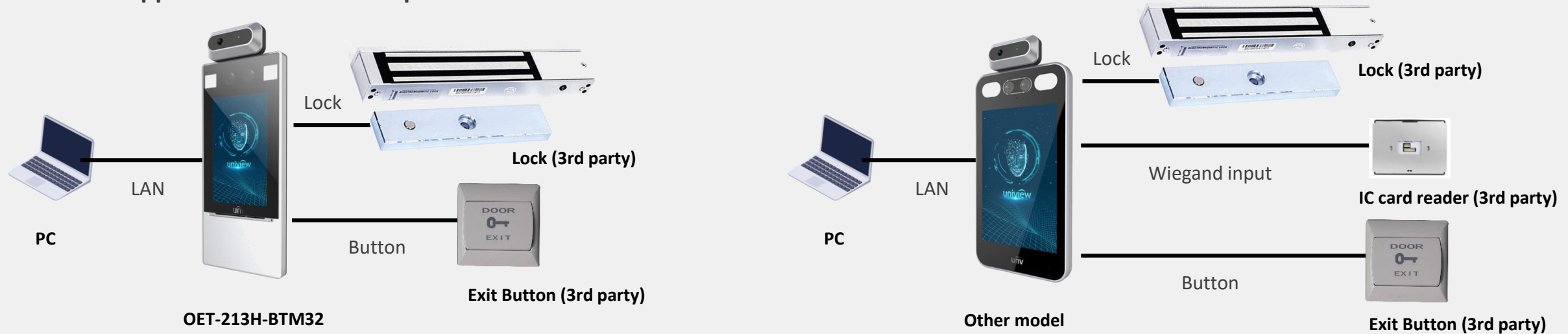


Every face image and pass-through record will be transmitted to back-end VMS.

Unicorn capacity: max 100 records/s with image; VMS-B180-A capacity: max 25 records/s with image.

Integration with Card

First of all, card solution has nothing to do with VMS and temperature measurement at present. Card solution is only suitable for stand-alone application without temperature measurement.



OET-213H-BTM32 has built-in card reader, other model need external 3rd card reader and using Wiegand connection. Mifare card supported only.

Step 1: Swipe the card and get card number with the help of PC tool.

Step 2: Binding the card number with a face image.

Step 3: You can set three verification method. First one, face is in whitelist and temperature is lower than threshold. Second one, only card is in whitelist. Third one, face is in whitelist, and at the same time, card number is right in the database.

Restful API for 3rd Party Software Integration

Restful API interface includes:

- a. Device info, database info, etc.
- b. Create database, delete database.
- c. Add people to database, delete people from database.
- d. Records real-time upload, including captured image.
- e. **Temperature information and whether he/she is wearing a mask**



Q&A

Q: No-brand or logo customization supported?

A: Yes, but except OET-515H-BTM32, the reason is, same as OET-525H, that the logo is not separate from the 10-inch screen.

Q: When will English version demo video be ready?

A: Once the product complete development.

Q: Could FR terminal work with NVR?

A: Yes, but only video will be transmitted to NVR by Onvif. No picture, no temperature, no pass-through record.

Q: Will the alarm be transmitted to VMS when temperature is higher than the threshold?

A: No, only temperature information will be transmitted from terminal to VMS. Alarm from terminal to VMS is still in plan.

Q&A

Q: Since alarm will not be transmitted to VMS, is alarm linkage function supported on the terminal?

A: No, but the function is already in plan. When the temperature is higher than the threshold, an alarm will be triggered and I/O output is available.

Q: What if a man is with a mask?

A: Terminal is able to recognize a man with a mask, accuracy is about **90%**. and if he/she is not with a mask, the door will not open.

Q: Can we sell the temperature measurement module only?

A: Not for now. And if too many requirements, we will consider about it.

Q: How QR code open a door?

A: Need a QR code generator to generate the QR code. And in fact, the QR code is a card number, just replace the IC card with a QR code.

Q: How WiFi works for OET-523L@W-BTM32?

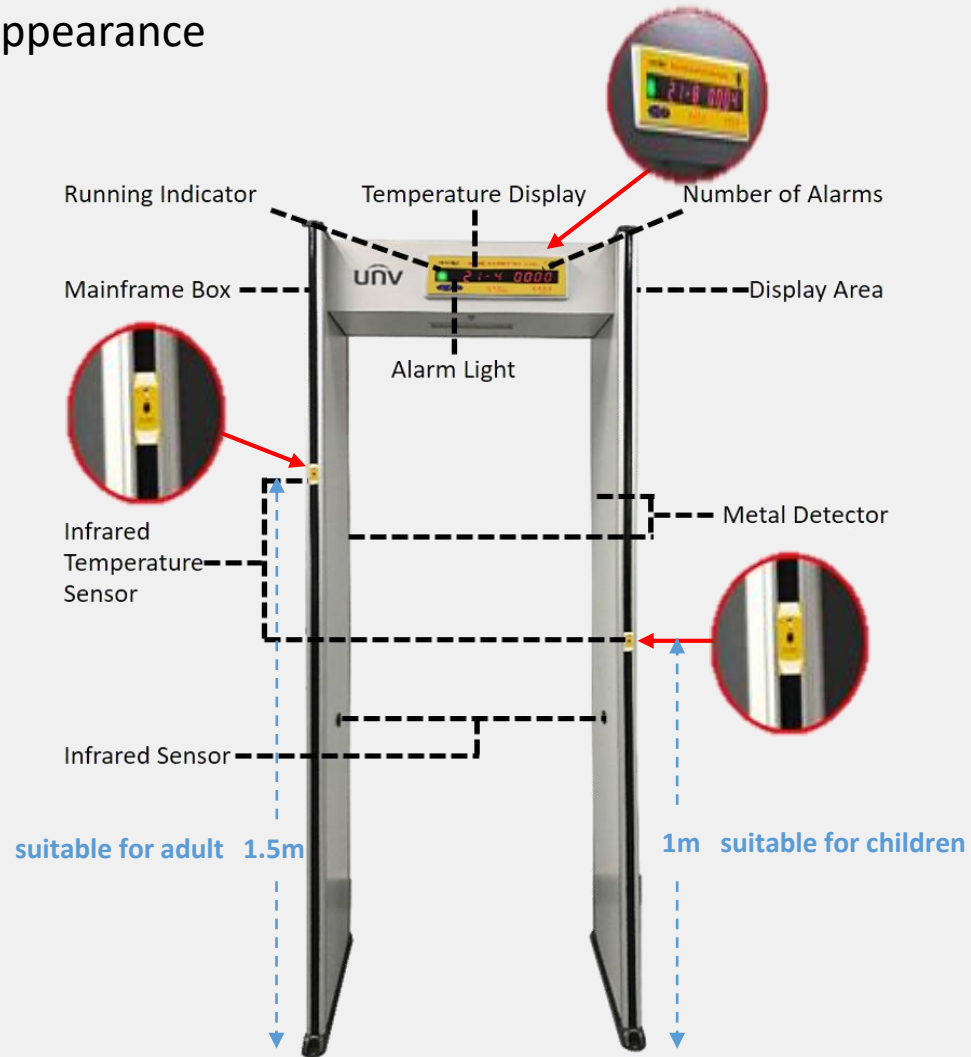
A: WiFi module will be canceled and the model name will be changed to OET-523L-BTM32.

03

Human Body Temperature Measurement Gate


Human Body Temperature Measurement Gate


Appearance



Highlights



 4-8cm, Non-contact body temperature measurement.

 High efficiency for 15-20 people pass per minute.

 Real-time alarm.

 Metal detection for 18 area.

 Temperature measurement for both children and adult.

Human Body Temperature Measurement Gate

USS-SC100A-T-O



- Forehead or wrist temperature measurement
- Measurement Deviation 0.5°C
- Measurement Accuracy 0.02°C
- Measurement Range 0°C~45°C

USS-SC100A-TM-O



- Forehead or wrist temperature measurement
- **Metal detection**
- Measurement Deviation 0.5°C
- Measurement Accuracy 0.02°C
- Measurement Range 0°C~45°C

Recommend
(Still work for metal detection after the outbreak)

When the human body (wrist, forehead) actively measures the temperature, the screen displays the body temperature, if it exceeds 37.3°C (Temperature value can be set), it will alarm and record the number of alarms.

Scenario



Enterprise entrance:

office area, canteen, warehouse



Campus entrance:

teaching building, dormitory, library, canteen



Station entrance:

airport, metro line, seaport



Better Security, Better World