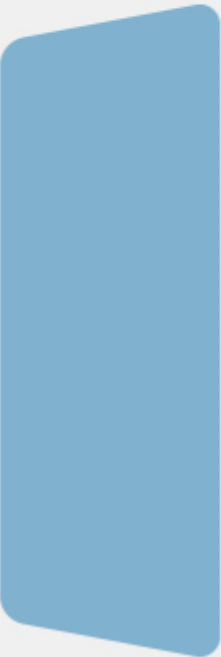




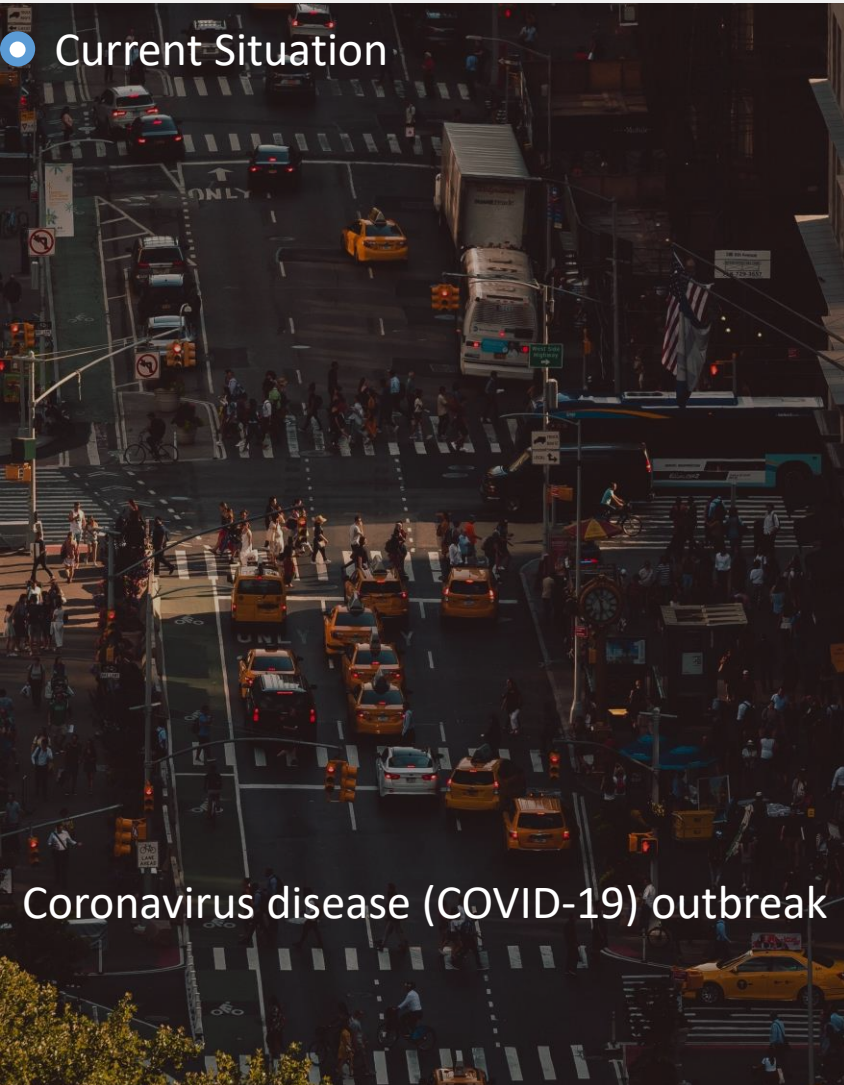
UNV
Thermographic Fever Screening System
USS-TIC500



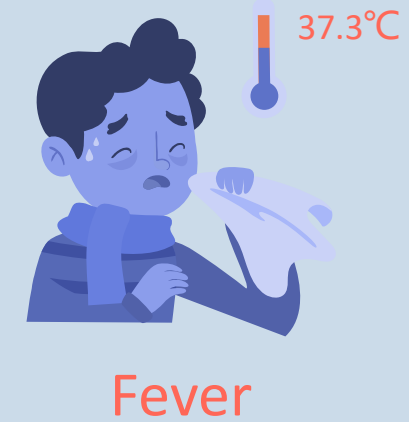
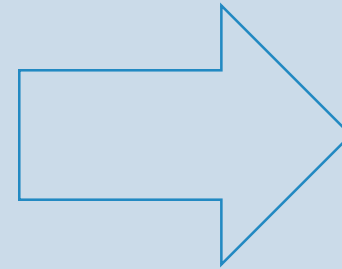
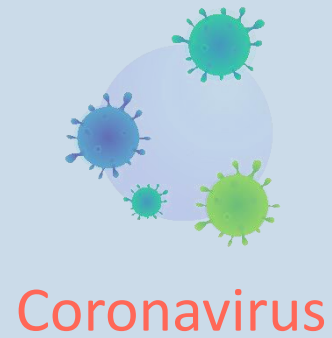
01

Thermographic Fever Screening System

Background



Key Symptom



Main Purposes of Taking Body Temperature



Effective screening of patients with fever



Make sure the area is free of infection

Challenge

Mercury
thermometer



Infrared
thermometer



Traditional
Solution

Electronic
thermometer



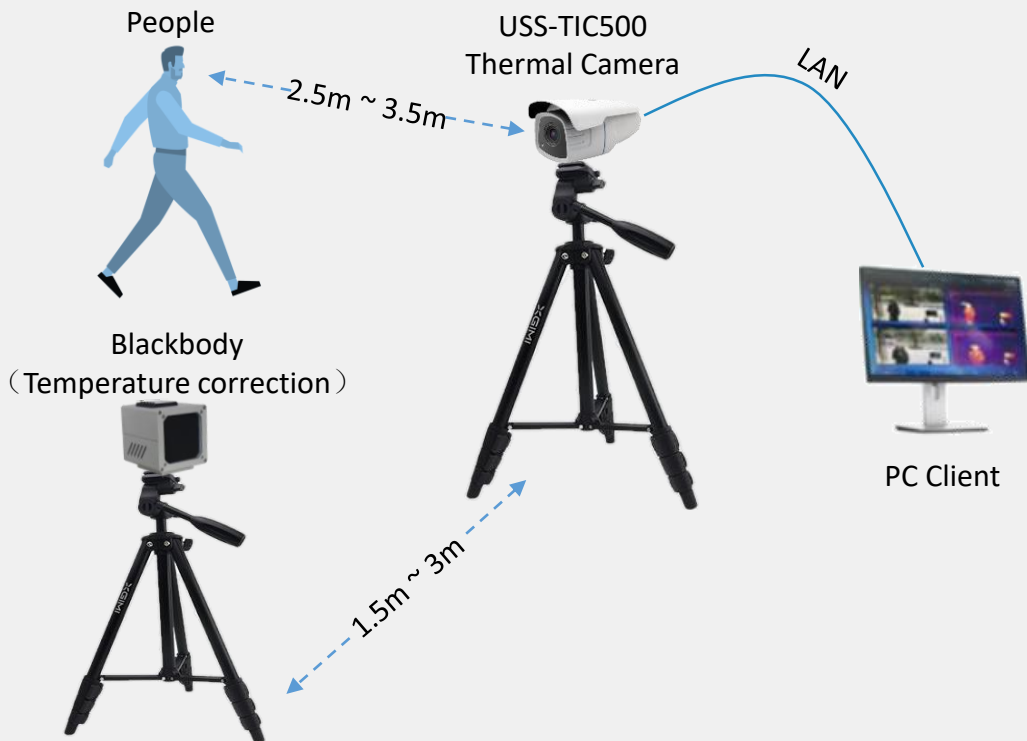
In-ear
thermometer



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

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

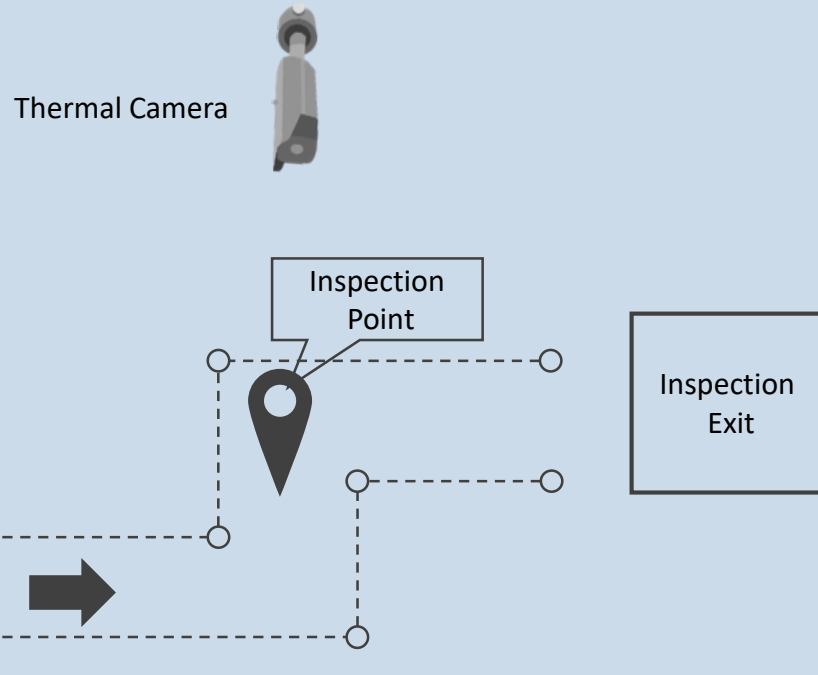
- High accuracy with blackbody, only $\pm 0.3^{\circ}\text{C}$ deviation.
- Easy installation and simple configuration.
- Support **AI face detection**, multiple targets screening at the same time.

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.

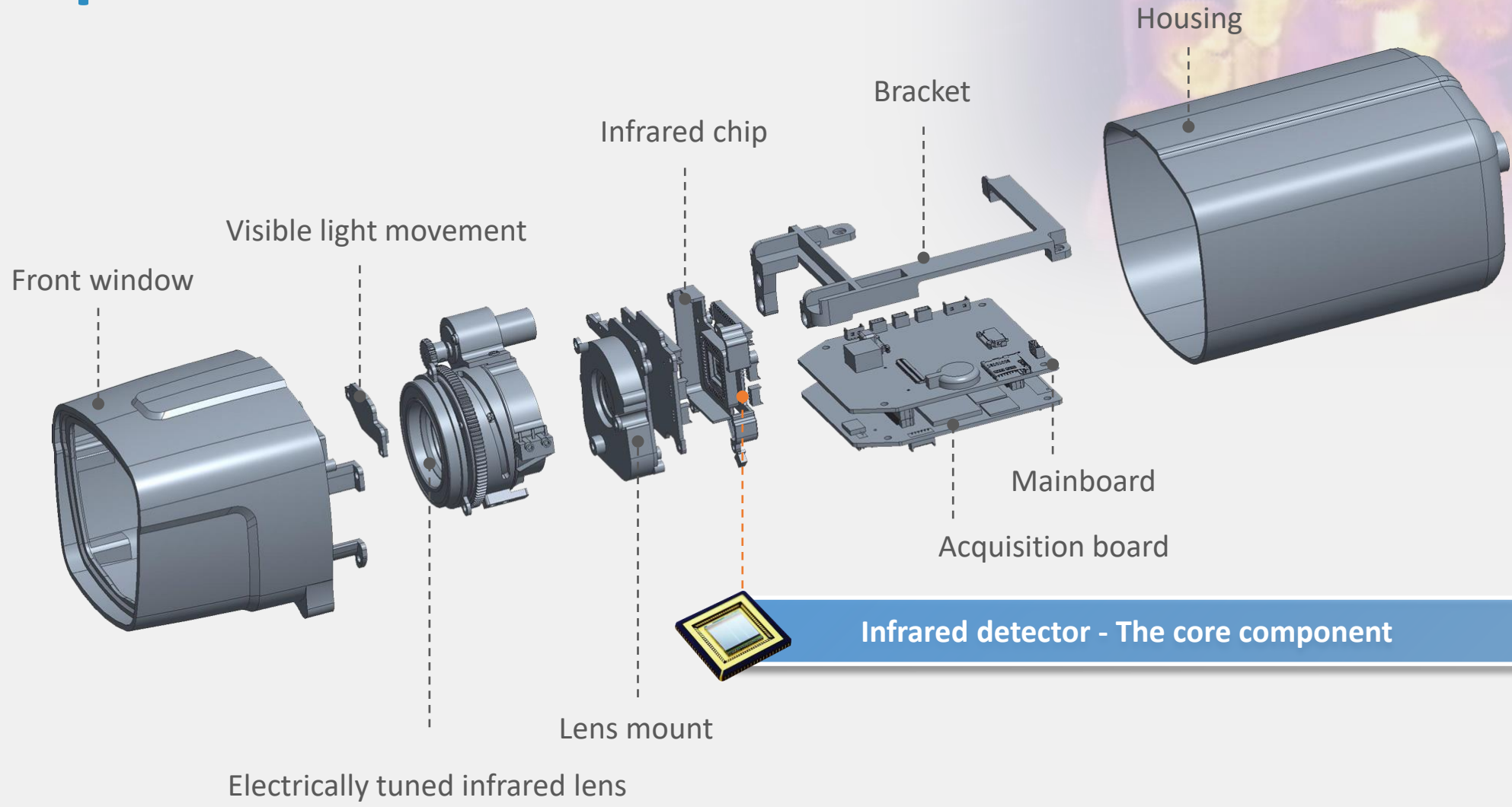
2 Thermal camera quick screening

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.

Principle



The thermal equipment passively absorbs the infrared radiation of the target, conducts "photoelectric conversion" through the infrared detector, and then obtains the corresponding temperature data through the advanced algorithm.

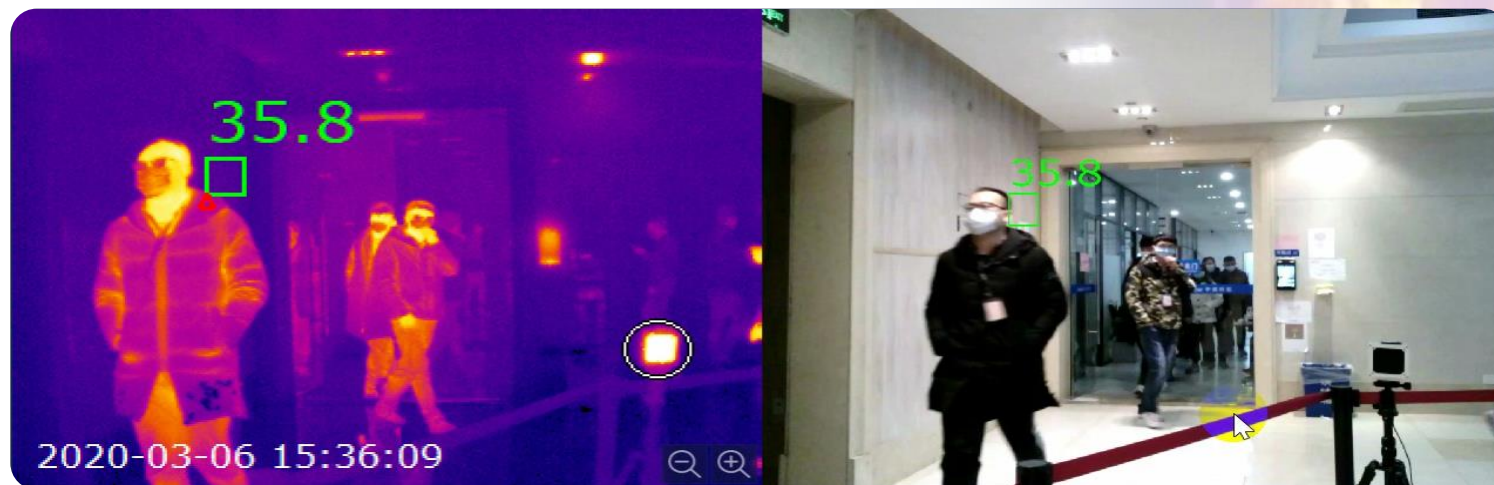
Better Component

	Inlet Infrared detector	Home-made detector
Material source	Polysilicon, imported from France Ulis	Vanadium oxide
Temperature measurement accuracy	$\pm 0.3^{\circ}\text{C}$ (with black body) $\pm 0.5^{\circ}\text{C}$ (without black body)	$\pm 0.4^{\circ}\text{C}$ (with black body) $\pm 0.7^{\circ}\text{C}$ (without black body)
Temperature measurement uniformity	Good	
Response time	4ms	
Cost	Expensive	
Application field	Human body temperature measurement, Laboratory temperature measurement, Precision process control high precision temperature measurement...	Warehouse fire prevention, forest fire prevention, general industrial temperature measurement...

**UNV Adopts
Ulis high-end detector**

Professional infrared detector, more suitable for accurate temperature measurement of human body

Highlight Function



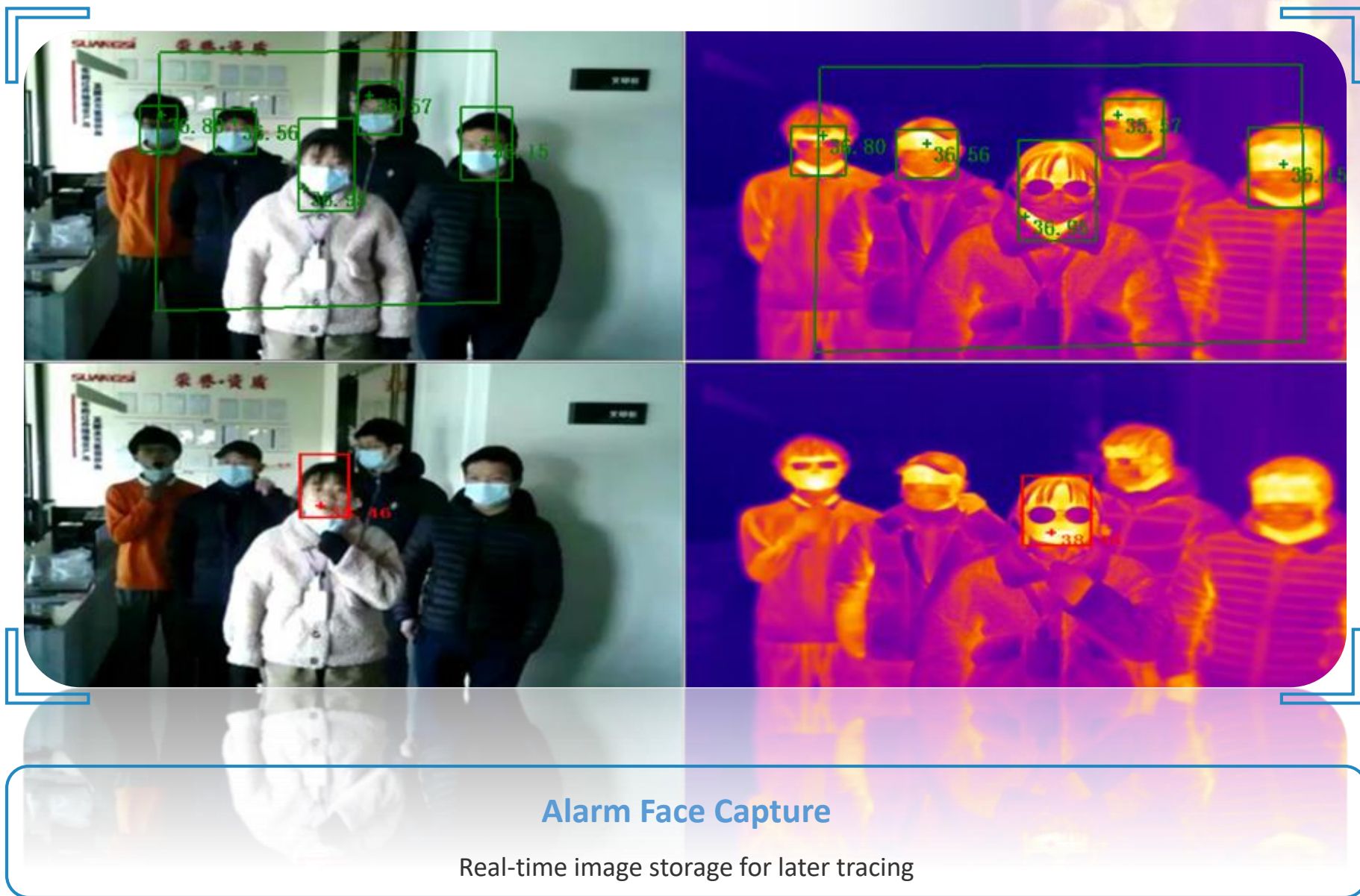
Optimized AI algorithm

Support detect faces wearing masks.

Multi-target Face Detection

Quick screening and reduce false alarm caused by other objects.

Highlight Function



Scenario

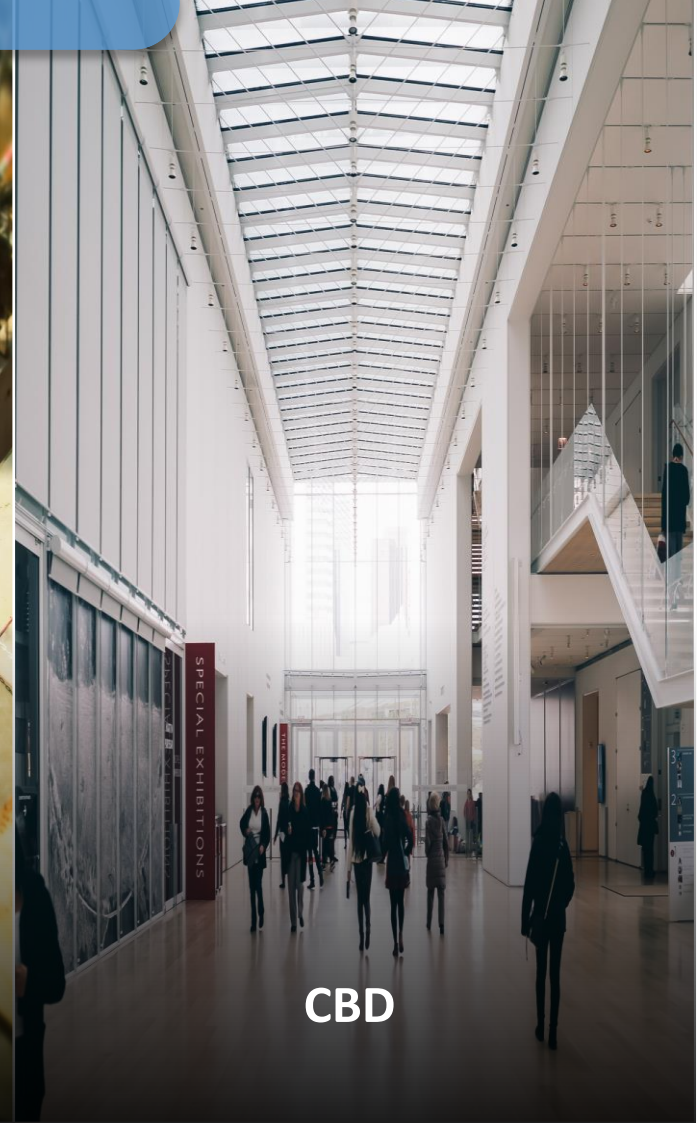
Crowded Area



Campus



Factory



CBD

Scenario

Transit Area



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.