HIKVISION
Hikvision
Temperature Screening
Solutions

Why is the thermal camera solution ?

forehead thermometer

Distance : 10-20 cm

Speed : 1-5 seconds

Display: Numeric only

Efficiency: 12 persons / minute

Information preservation: No preserve

What is thermal camera ?

Principle

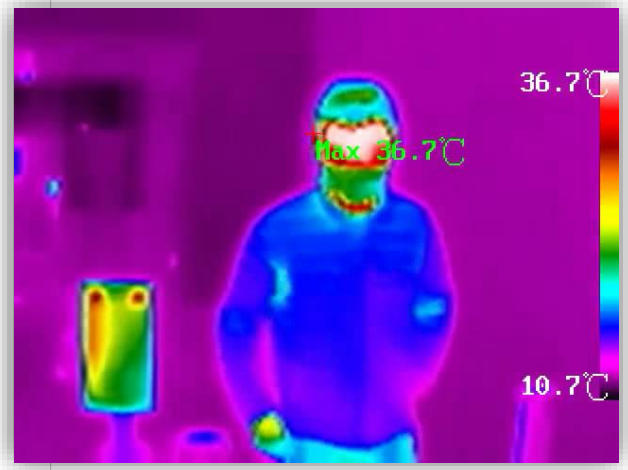
Any object with temperature above absolute zero emits a detectable amount of radiations. Thermal camera converts IR radiations into gray value, and establishes the accurate corresponding relation between gray value and temperature through the temperature measurement algorithm model. The model (Temperature Gray Level Curve) is obtained by black-body calibration.

Application

It is well-known that one major symptom of virus infections is temperature. Therefore, thermal camera with high temperature accuracy can detect the elevated skin-surface temperature to make the preliminary screening. Thermal cameras are advisable to be installed at the places with long queues such as passport control.

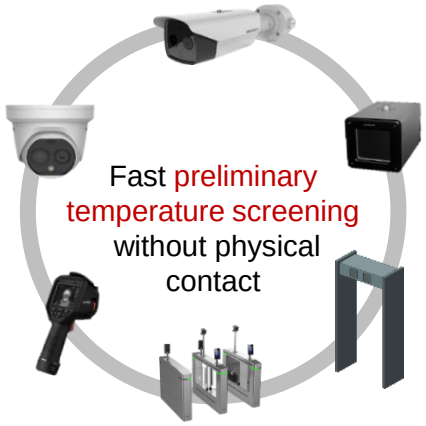
Advantages

1. **High Efficiency:** It takes only one second that thermal camera can detect temperature of each person. Thus, no congestion will be made when passing through the site where temperature needs to check.
2. **Safety:** Thermal camera supports non-contact temperature measurement which can achieve accurately measuring temperature around 1 meter away. That reduces the risk of infection coming from physical contact.



Temperature Screening Process and Typical Application Scenarios

1



Fast preliminary temperature screening without physical contact

2

Identify persons with high temperature

3

Manual measurement by mercury thermometer, ear thermometer, forehead thermometer, etc.

Scenario 1

Long-term temperature screening for crowds in open areas

Scenario 3

Hand held temperature screening by patrolling inspectors

Scenario 2

Short-term temperature screening at entrances

Scenario 4

Duo- protection temperature screening with access control

S SAFE

Non-contact, long range and high accuracy, reducing risks of cross-infection

E EFFICIENT

Efficient, auto alarm triggering, greatly ,up to 60 people per second

A Accurate

High accuracy :up to ±0.3℃ with black body , ±0.5℃ without black body ,

T TRACEABLE

Combining temperature, image and human recognition with AI technology for easy and informed management

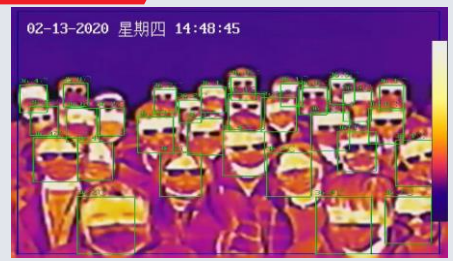
Scenario 1

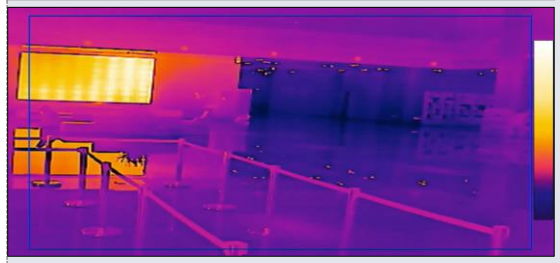
Long-term Temperature Screening for Crowds in Open Areas

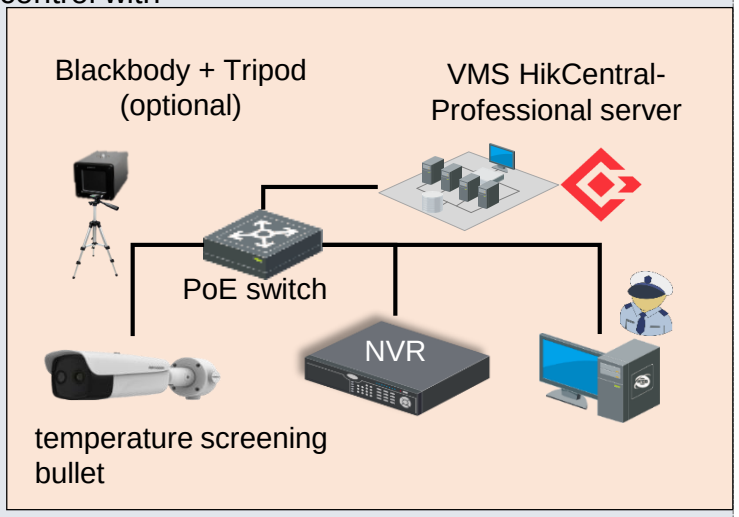
Group Temperature Screening(up to 9meter for the detection)

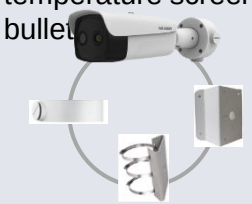
Solution Details

- For long-term preliminary temperature screening of crowds with high efficiency (indoor), simultaneous temperature screening for multiple persons (Up to 30 persons)
- The blackbody is used as a calibrator to improve the accuracy to ±0.3℃
- Centralized management of access control with









PoE switch

Blackbody (optional)

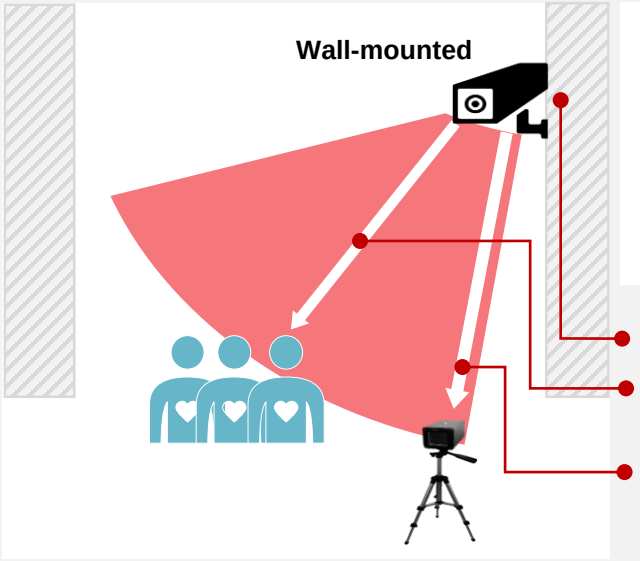
HikCentral Professional

Tripod (optional)

Product Information

- Thermal: 384 × 288, lens: 10/15 mm
- Optical: 2688 × 1520, lens: 4/6 mm
- Simultaneous temperature screening for multiple persons (up to 30 persons)
- **Accuracy: ±0.5℃**
- Measurement range: 30-45℃
- Working temperature: 10-35℃
- **AI detection reduce the false alarms of temperature screening**

DS-2TD2636B-15/P
DS-2TD2637B-10/P



Real-time alarm monitoring

Secondary measurement with a mercury thermometer, ear thermometer, etc.

- Installation height: **1.7–2.6 m**
- Distance between camera and persons: **4.5–9 m** (15mm thermal lens); **3-7m** (10mm thermal lens)
- Distance between camera and blackbody: **5 m**. Keep black body in the upper left / upper right corner of the camera's view

Scenario 1

Application Scenarios(open area)

Note: Indoor installation recommended. The fluctuation in outdoor ambient temperatures influences the accuracy of temperature measurement.

Hospital

The nurse station or information desk is the place where the potential patients will consult and gather. So the fast preliminary temperature screening is quite needed here.

Airport Transport Station

The passenger channels at the airport or other transport stations are the important locations where passengers arrive and need the fast preliminary temperature screening.

Office Building

Corridors of buildings are the regular areas where most of the employees pass through. This location can be a daily internal screening point.

Application Scenarios

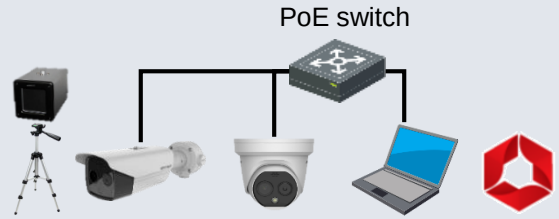
Scenario 2

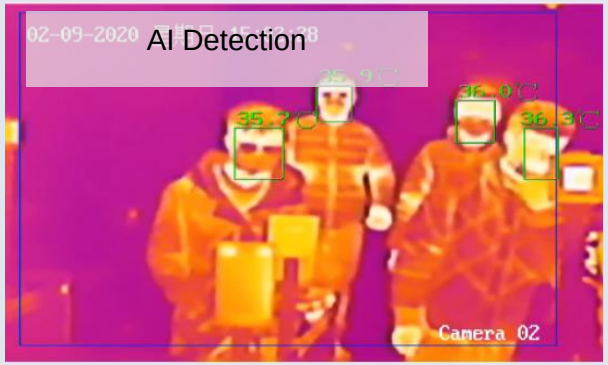
Short-term temperature Screening at Entrances – Bullet/Turret Camera

up to 2meter for the detection

Solution Details

- For building entrances, elevator halls, airport security checks, etc.
- Indoor space without wind
- Recommend to set up a route to guide the flow
- Recommend to do temperature screening 5 min after a person enters the indoor space
- Use the blackbody as a calibrator for screening to improve the accuracy to ±0.3℃





temperature screening bullet

Tripod Adaptor

Blackbody (optional)

PoE Switch

temperature screening turret

Tripod

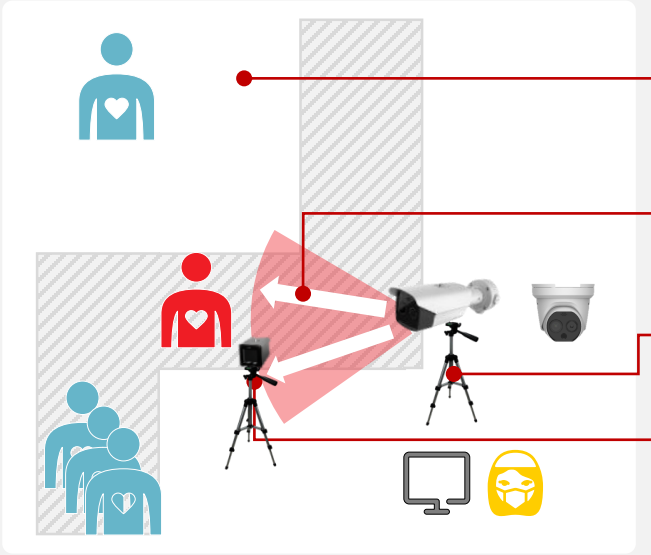
iVMS-4200

Laptop

Product information

DS-2TD1217B-3/6 PA
DS-2TD2617B-3/6 PA

- Thermal: 160 × 120, lens: 3 mm / 6 mm
- Optical: 2688 × 1520, lens: 4 mm / 8 mm
- Accuracy: ±0.5℃ (± 0.3℃ with blackbody)
- Measurement range: 30-45℃
- Working temperature: 10-35℃
- Embedded audio alarm for abnormal temperatures
- AI detection increases the precision of temperature screening



Secondary measurement with a mercury thermometer, ear thermometer, etc.

Distance between camera and persons: 0.8-1.5 m (3 mm lens) 1.5-2 m (6 mm lens)

Installation height is 1.5 m

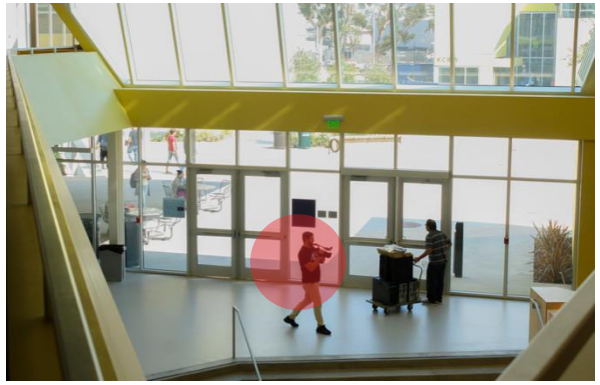
Distance between camera and blackbody calibrator: 1 m (3 mm lens), 2 m (6 mm lens). Keep the blackbody in the upper left / upper right corner of the camera's view

Scenario 2

Application Scenarios(Entrance)

Note: Indoor installation recommended. The fluctuation in outdoor ambient temperatures influences the accuracy of temperature measurement.

School



Entrance of college building

Entrance of dormitory

Retail

Entrance of supermarket

Entrance of restaurant

Office Building

Elevator hall of parking lot

Entrance of office building

Airport

Jet bridge for departure & arrival flight

Entrance of terminal

Scenario 3

Hand held temperature Screening **by Patrolling Inspectors**

Anytime, Anywhere, Just One Click

Solution Details

- For preliminary temperature screening by spot-checking inspectors (indoor)
- temperature screening without disturbing a person occupied with work

Hik-Thermal app

Hotspot

Handheld Thermographic camera

Product Information

DS-2TP21B-6AVF

- Thermal resolution: 160 × 120;
- Optical resolution: 640 × 480;
- **Accuracy: ±0.5℃**
- Measurement range: 30-45℃
- 3.5” LCD touch screen
- Supports **Wi-Fi hotspot**, automatic screenshots of a person with a temperature & uploading to the Mobile Client (Hik-Thermal) as evidence
- Supports real-time **audio alarm**
- Operation time: **4-5 hours**

1 m - 1.5 m

If abnormal

Fast and flexible **preliminary measurement**

Automatic **screenshot** & upload to Thermal app as **evidence**

Secondary manual measurement with a mercury thermometer, ear thermometer, etc.

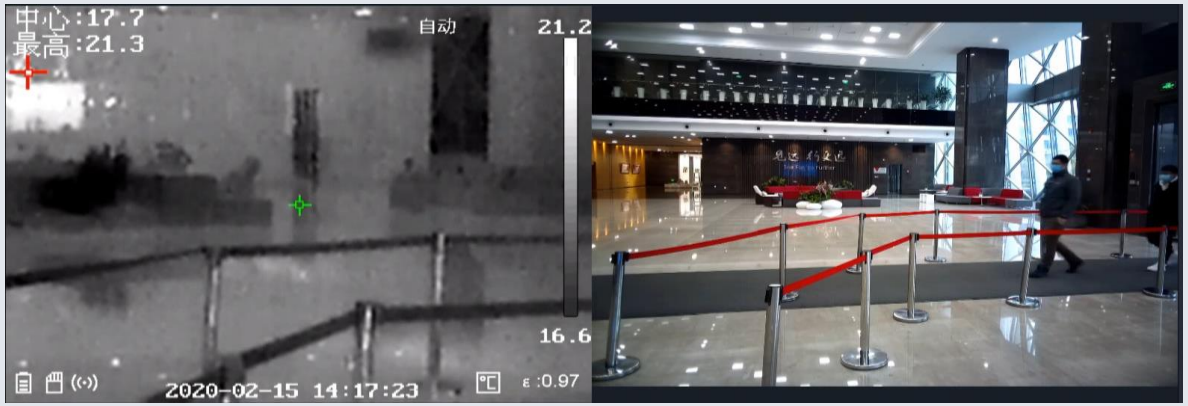
Scenario 3

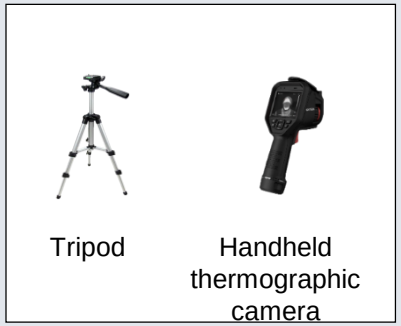
Short-term temperature Screening at Entrances – Handheld Camera

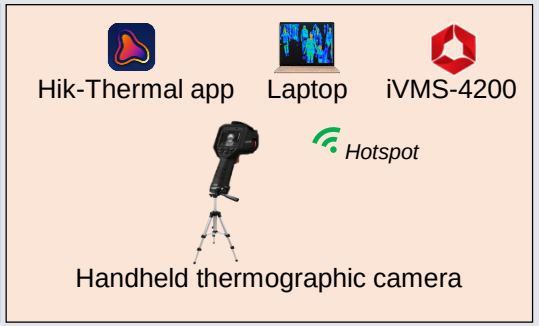
Wireless, Flexible, Fast Deployment

Solution Details

- For building entrances, elevator halls, airport security checks, etc.
- **Wireless** deployment without cables (by the app or the iVMS-4200 client)
- Indoor space without wind
- Recommend to set up a route to guide the flow
- Recommend to do temperature screening 5 min after a person enters the indoor space



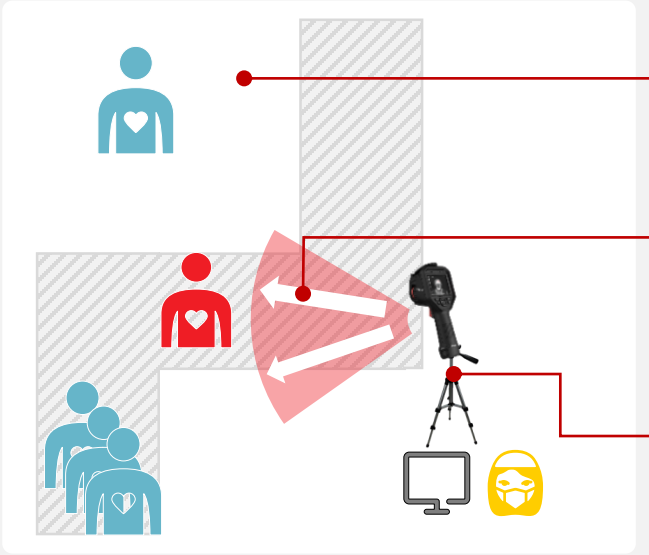




Product Information

DS-2TP21B-6AVF

- Thermal resolution: 160 × 120 ;
- Optical resolution: 640 × 480 ;
- Accuracy: ±0.5℃
- Measurement range: 30-45℃
- 3.5” LCD touch screen
- Supports Wi-Fi hotspot, able to live view on PC or mobile client, relieves eye fatigue
- Supports real-time audio alarm and automatic uploading of screen captures



Secondary measurement with a mercury thermometer, ear thermometer, etc.

Distance between camera and persons: 1.5-2 m

Installation height is 1.5 m

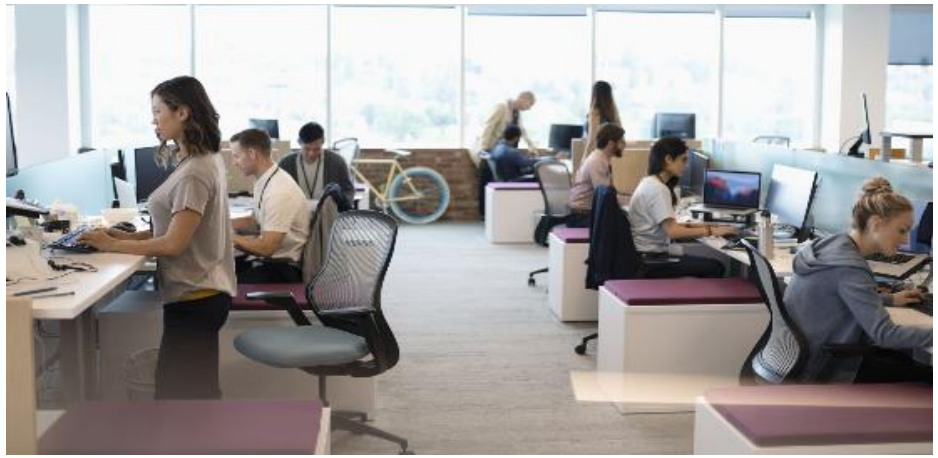
Scenario 3

Application Scenarios

Note: Indoor installation recommended. The fluctuation in outdoor ambient temperatures influences the accuracy of temperature measurement.

Factory Workshop

Office Building Office area



School Entrance of classroom

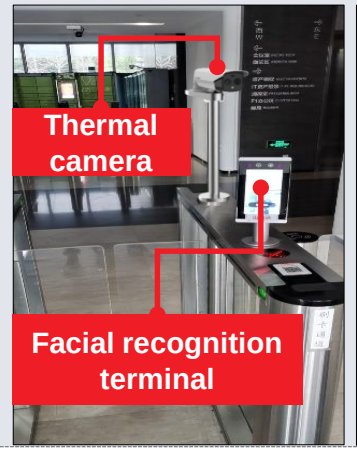
Bank Entrance of branch

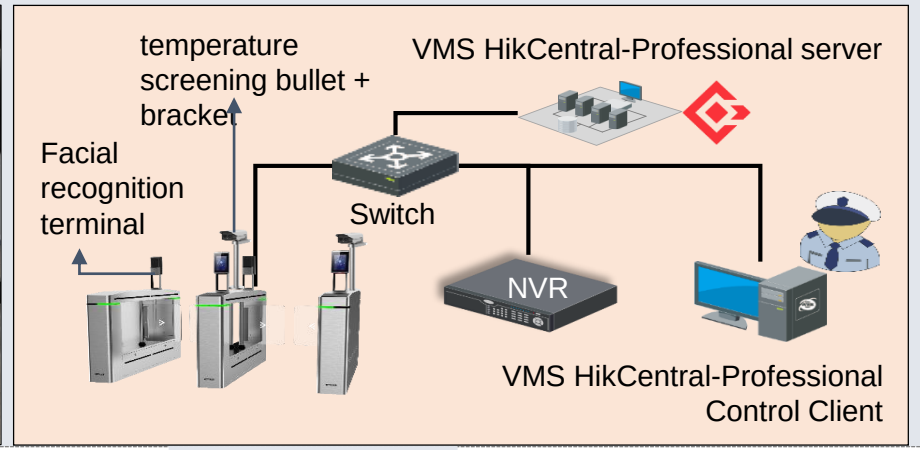
Scenario 4

Duo Protection without Touch
temperature Screening with Access Control

Solution Details

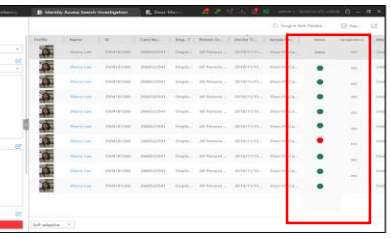
- Long-term temperature screening with access control for building related projects
- Indoor space
- Recommend to do temperature screening 5 min after a person enters the indoor space
- Centralized management of access control with temperature records

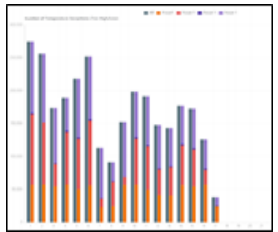


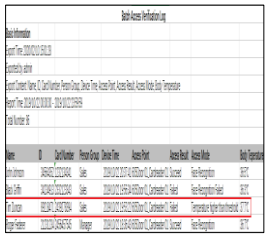


VMS centralized management of the access control system:

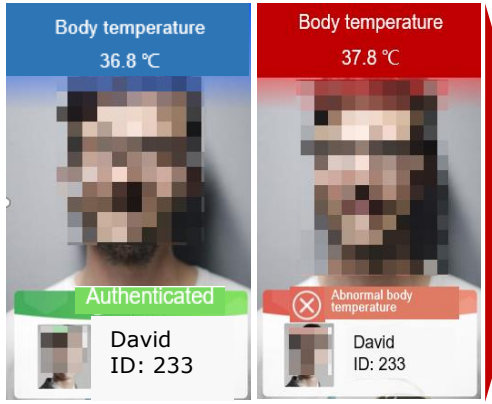
① Access record with temperature statistics, and can be exported as reports
② Real-time temperature alarm handling and tracing back
③ Open ability of access record with temperature information (Open API)







3rd-Party Integration (OA)



Normal skin temperature

Abnormal skin temperature

Secondary measurement with a mercury thermometer, ear thermometer, etc.

Product Information

- Face recognition & skin-surface temperature measurement
- Non-contact fast skin temperature measurement (face detection)
- All in one, fast to deploy
- Voice reminder to broadcast real-time alarms
- Face capacity: 20,000
- Passing speed: up to 60 persons/min
- Measurement range: 30-45℃
- Accuracy: ±0.5℃

Thermographic module

7-inch touch screen

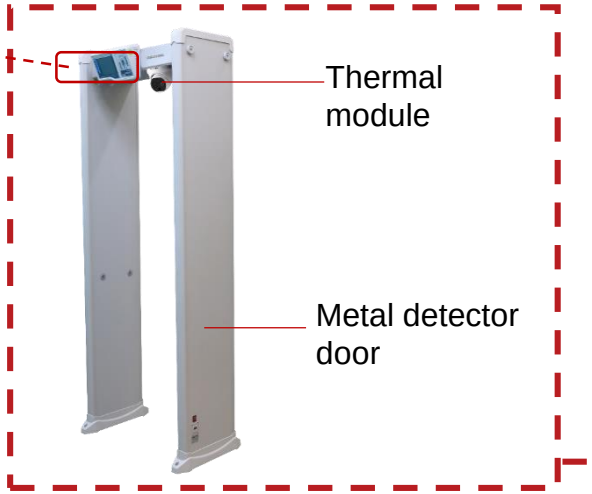
Scenario 4

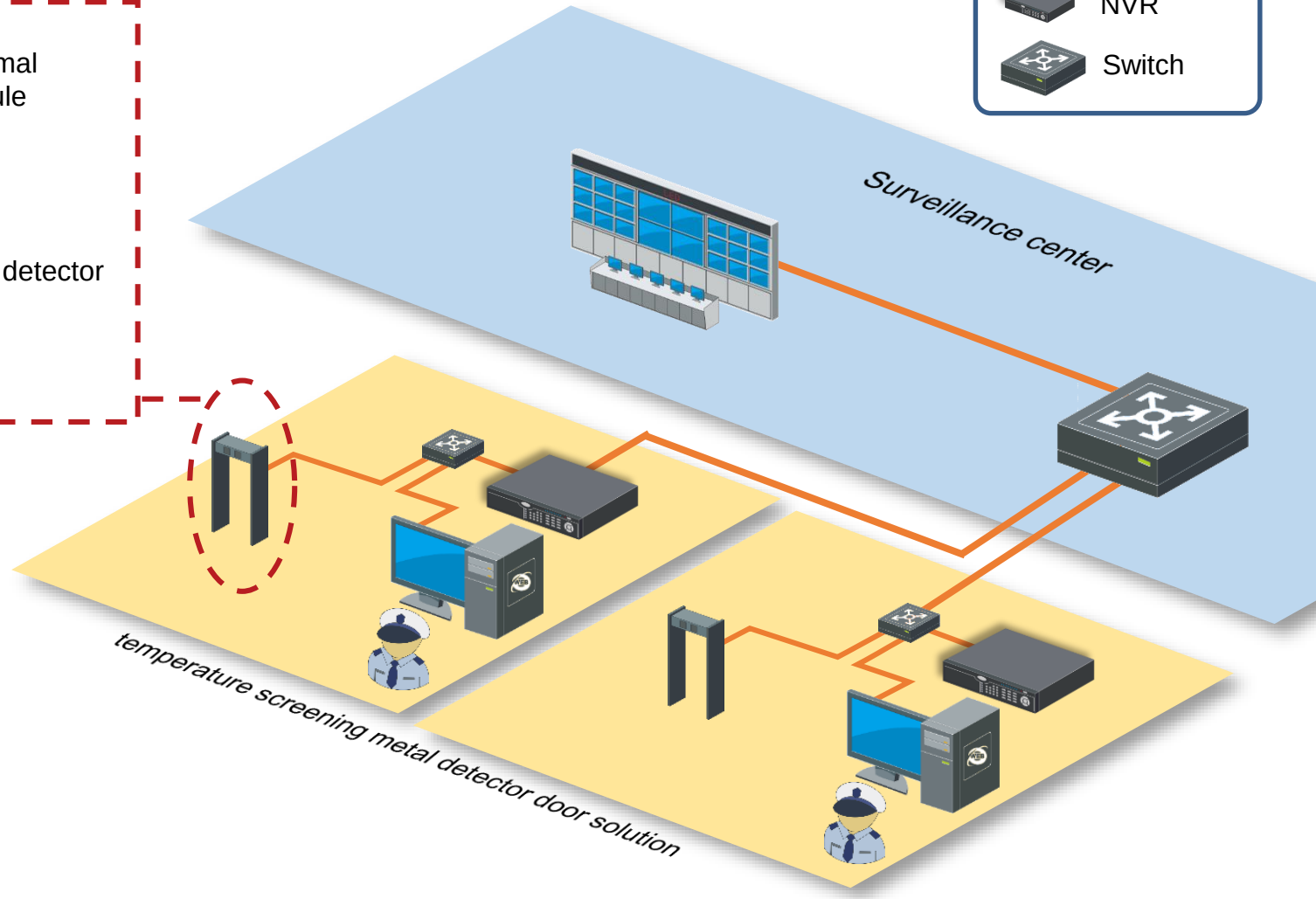
Duo Protection without A Touch
temperature Screening with Metal detector door

HIKVISION

Hikvision temperature screening metal detector door solution

LCD screen





Advantages

- Avoiding infected people entering
- Touch-free fast accessing
- Suitable for various scenarios
- Reducing human resources cost

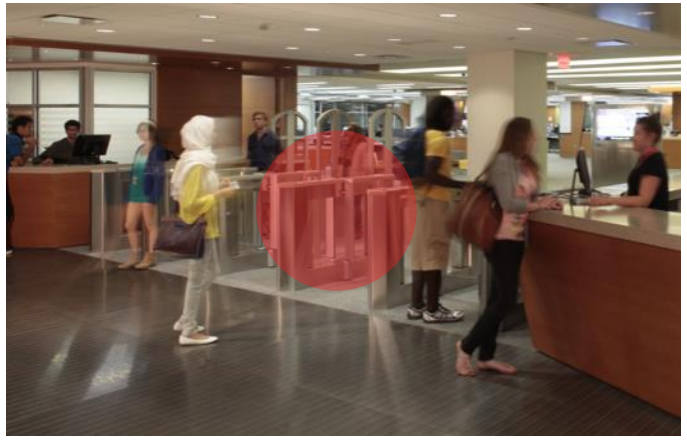
Application Scenarios

Scenario 4

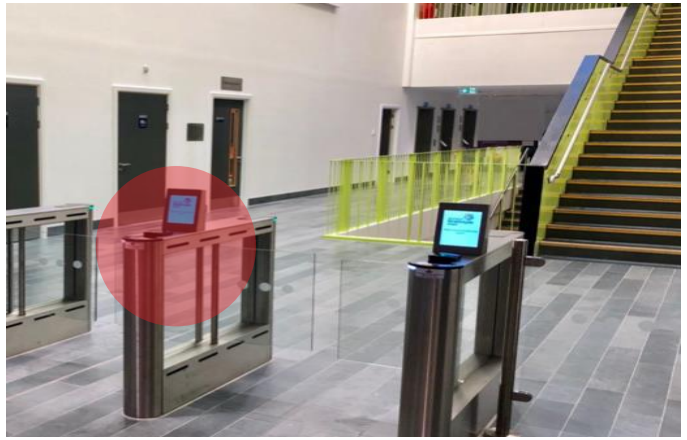
Application Scenarios

Note: Indoor installation recommended. The fluctuation in outdoor ambient temperatures influences the accuracy of temperature measurement.

School



Entrance of library



Entrance of dormitory

Factory

Entrance of factory

Entrance of workshop

Commercial Building

Elevator hall of parking lot

Main entrance of office building

Product List

DS-2TD2636B-15/P & DS-2TD2637B-10/P

- Thermal: 384 × 288, lens: 15 mm/10mm ;
- Optical: 2688 × 1520, lens: 6mm/4mm ;
- Accuracy: ±0.5℃ (± 0.3℃ with blackbody)
- Measurement range: 30-45℃
- Working temperature: 10-35℃
- AI detection, false alarms reduction
- Simultaneous temperature screening for multiple persons (Up to 30 persons)

DS-2TP21B-6AVFW

- Thermal resolution: 160 × 120 ;
- Optical resolution: 640 × 480 ;
- Measurement range: 30-45℃
- Touch screen
- Accuracy: ±0.5℃ (±0.3℃ with blackbody)
- Bi-spectrum image fusion
- Supports Wi-Fi
- Supports audio alarms
- Automatic screenshots & uploading

DS-2TD2617B-3/6PA(B)

- Thermal: 160 × 120 ;
- Lens: 3 mm / 6 mm ;
- Optical: 2688 × 1520 ;
- Optical lens: 4 mm / 8 mm ;
- Video mode: Bi-spectrum image fusion ;
- Accuracy: ±0.5℃ (± 0.3℃ with blackbody)
- Measurement range: 30-45℃
- Supports audio alarms

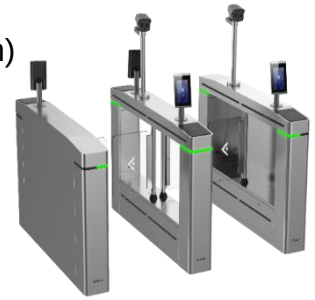
DS-2TD1217B-3/6PA(B)

- Thermal: 160 × 120 ;
- Lens: 3 mm / 6 mm ;
- Optical: 2688 × 1520 ;
- Optical lens: 4 mm / 8 mm ;
- Video mode: Bi-spectrum image fusion ;
- Accuracy: ±0.5℃ (±0.3℃ with blackbody)
- Measurement range: 30-45℃
- Supports audio alarms

Blackbody Calibrator

- Temperature resolution: 0.1℃
- Accuracy: ±0.1℃
- Temperature stability: ±0.1℃/h
- Effective emissivity: 0.97±0.02
- Operating temperature: 0-30℃

- Face recognition & skin-surface temperature measurement
- Non-contact fast skin temperature measurement (face detection)
- All in one, fast to deploy
- Voice reminder to broadcast real-time alarms
- Face capacity: 20,000
- Passing speed: up to 60 persons/min
- Measurement range: 30-45℃
- Accuracy: ±0.5℃



DS-K5671-ZU+DS-2TD2617B-3/6PA(B)
DS-K3B601-L/Mpg-Dp65 or DS-K3B601-M/Mpg-InTtNDp65 or DS-K3B601-R/MpgTtN-Dp65

NP-SG318LT-F

- 18 independent detection zones;
- LCD screen;
- Thermal imaging resolution：160*120
- Temperature measurement accuracy：±0.5℃
- Temperature measurement range：30-45℃
- Video mode: Bi-spectrum image fusion;
- In accordance with the international safety standard, friendly to pregnant woman, people with cardiac pacemaker, etc.

Conclusion for the Key features :

1、What is the advantage for the thermal camera compared with the thermometer?

A. Safe. Non-contact, long range, reducing risks of cross-infection.

B. Efficient. up to 60 people per second .

C. Accurate. High accuracy :up to ±0.3℃ with black body , ±0.5℃ without black body.

D. Traceable. **Combining temperature**, image and human recognition with AI technology for easy and informed management.

2、What is the advantage for the Hikvision thermal camera compared with some other brand ?

A. Intelligent. Support AI detection ,can filter the false alarm .

B. Accurate. High accuracy :up to ±0.3℃ with black body , ±0.5℃ without black body.

C. Automatic. **Some models can trigger the voice alarm when the abnormal temperature people was detected .**

D. Cost effective .

HIKVISION
Thanks
See far, go further