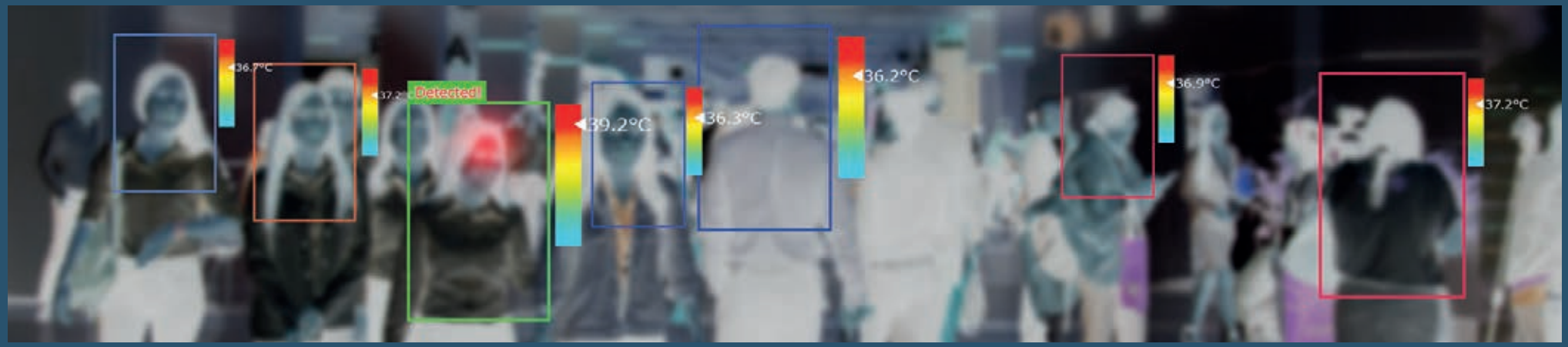
Temperature Screening Thermal Solutions and Products



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THERMAL

Principle

Thermal principle introduction

Process

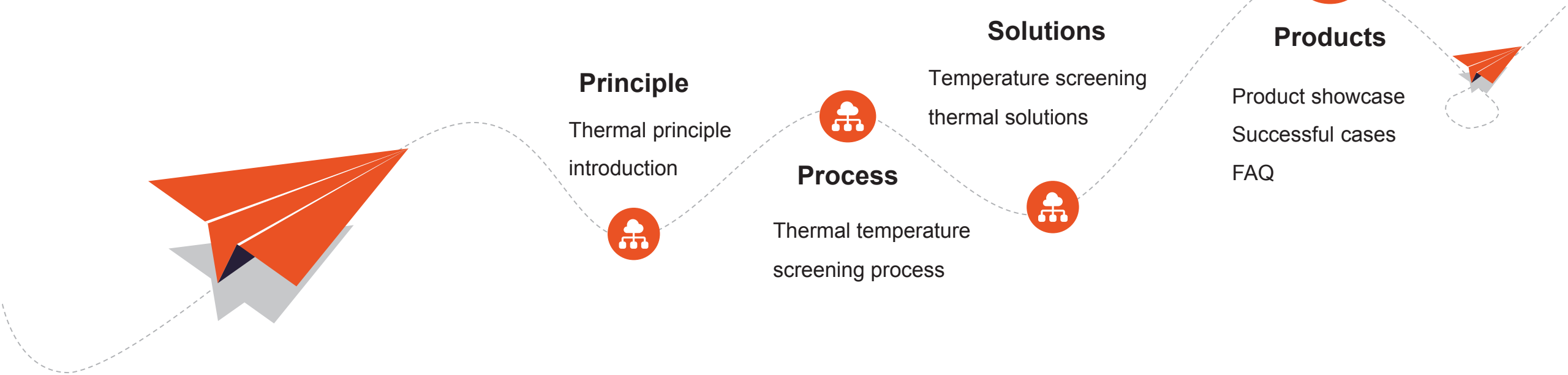
Thermal temperature screening process

Solutions

Temperature screening thermal solutions

Products

Product showcase
Successful cases
FAQ



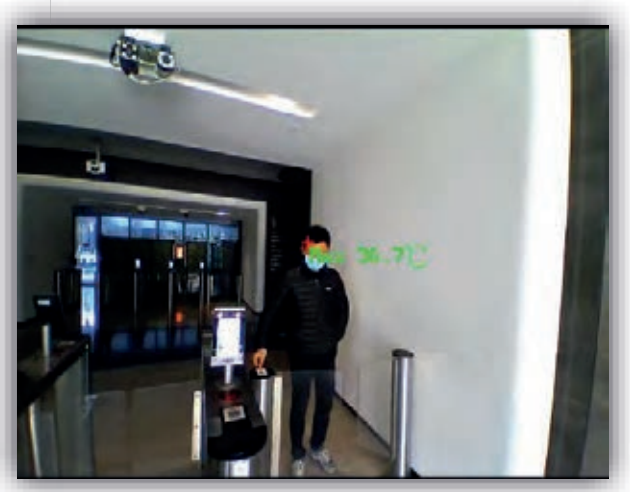
What is Thermal

Principle

Any object with temperatures above absolute zero emits a detectable amount of radiation. A thermal camera converts IR radiation into grayscale values, and matches grayscale values to temperature values through an algorithm model.

Application

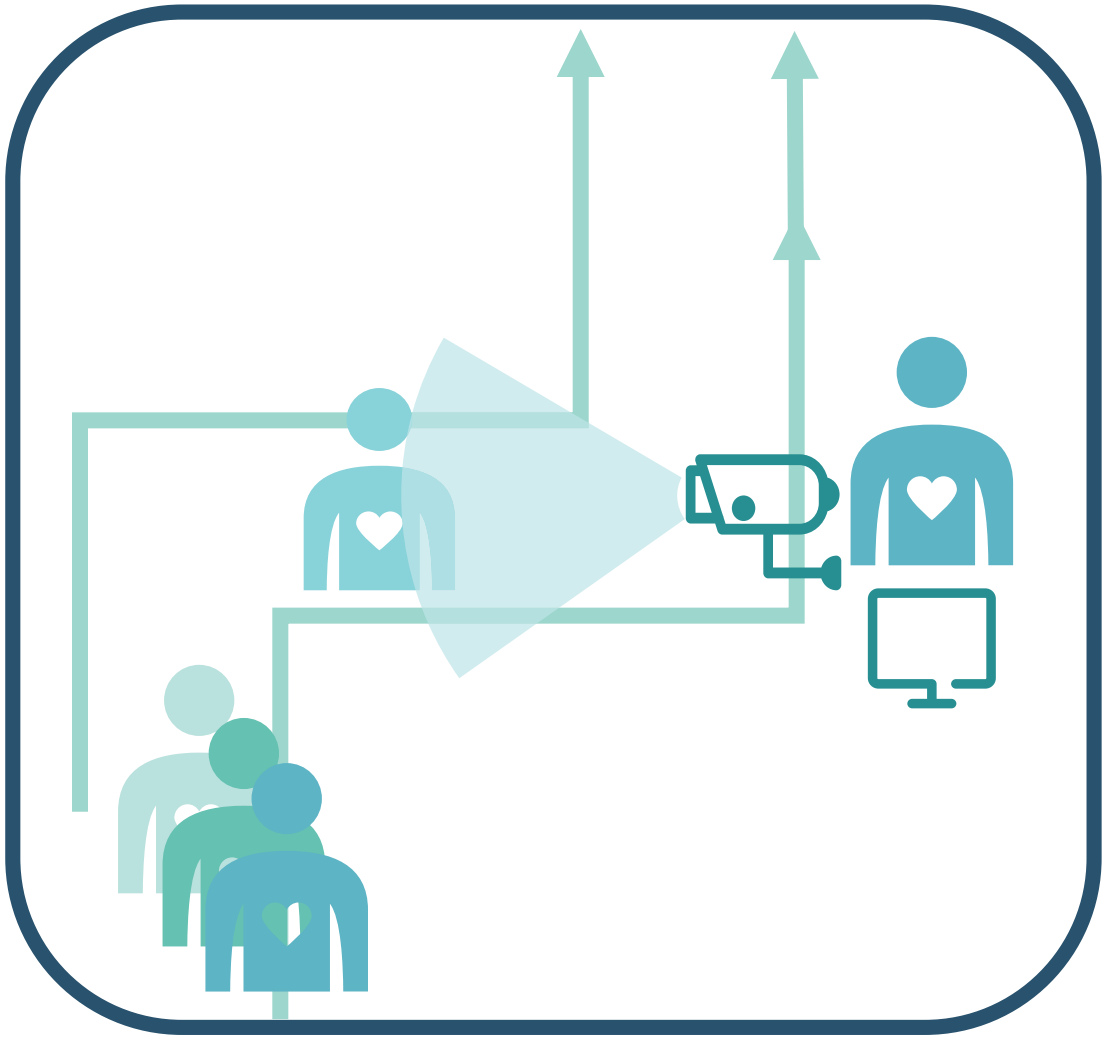
Thermal cameras with high temperature accuracy can help detect elevated skin temperatures which may indicate the presence of a fever. Thermal cameras can be used on travellers, shoppers and office workers.



Advantages

1. **High Efficiency:** It takes only one second for a thermal camera to detect temperature of a person, thus allows screening of large numbers of people at a time.
2. **Safety:** Thermal cameras feature non-contact temperature measurement from about one meter away, avoiding unnecessary physical contact.

Temperature Screening Thermal Process



1. Set up a screening channel

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

2. Thermal camera quick screening

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

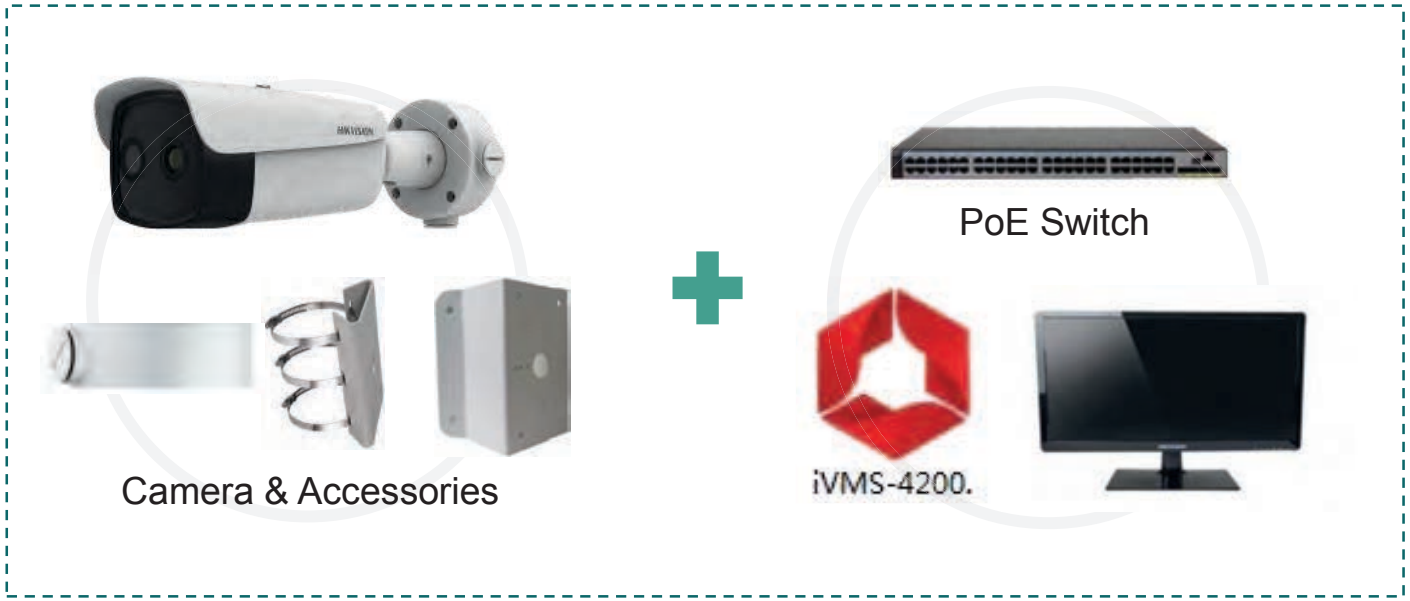
3. Thermometer secondary check

For a person identified with a fever, **use a thermometer to double-check**.

Professional Temperature Screening Thermal Solution

Solution Components

HD Bullet Thermographic Camera +
Accessories + iVMS-4200 + PoE Switch

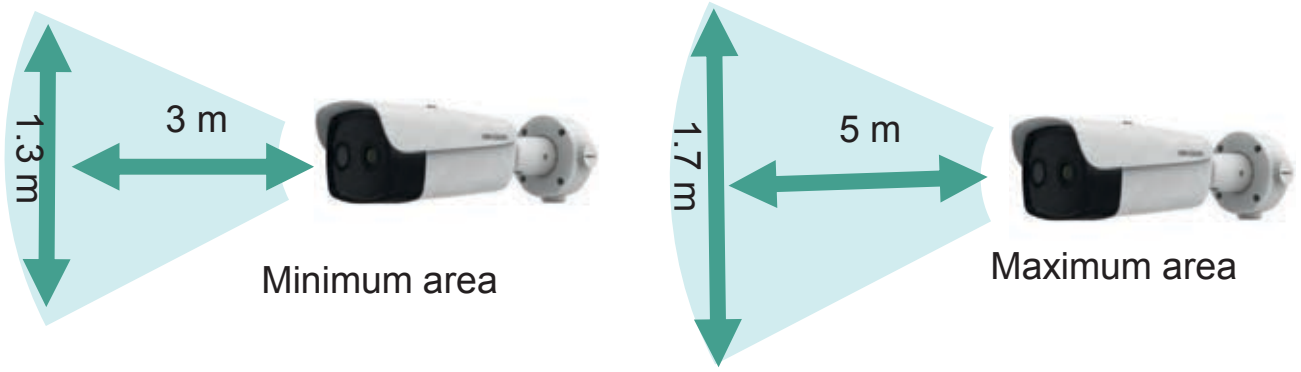


Solution Advantages

- Thermal resolution **of 384*288**, providing more image detail and wider coverage for temperature measurement
- The 15 mm thermal lens provides a screening range of **3 to 5 meters, fitting for long-range use,** can be used with handheld thermographic camera
- Fixed solution not only for temporary use but also for **long-term use**
- Accuracy is **± 0.5ºC** , satisfying preliminary screening requirements
- Supports **4 MP optical channel,** satisfying regular monitoring requirements

Installation Tips

- Recommend to install in a stable **indoor** environment without wind

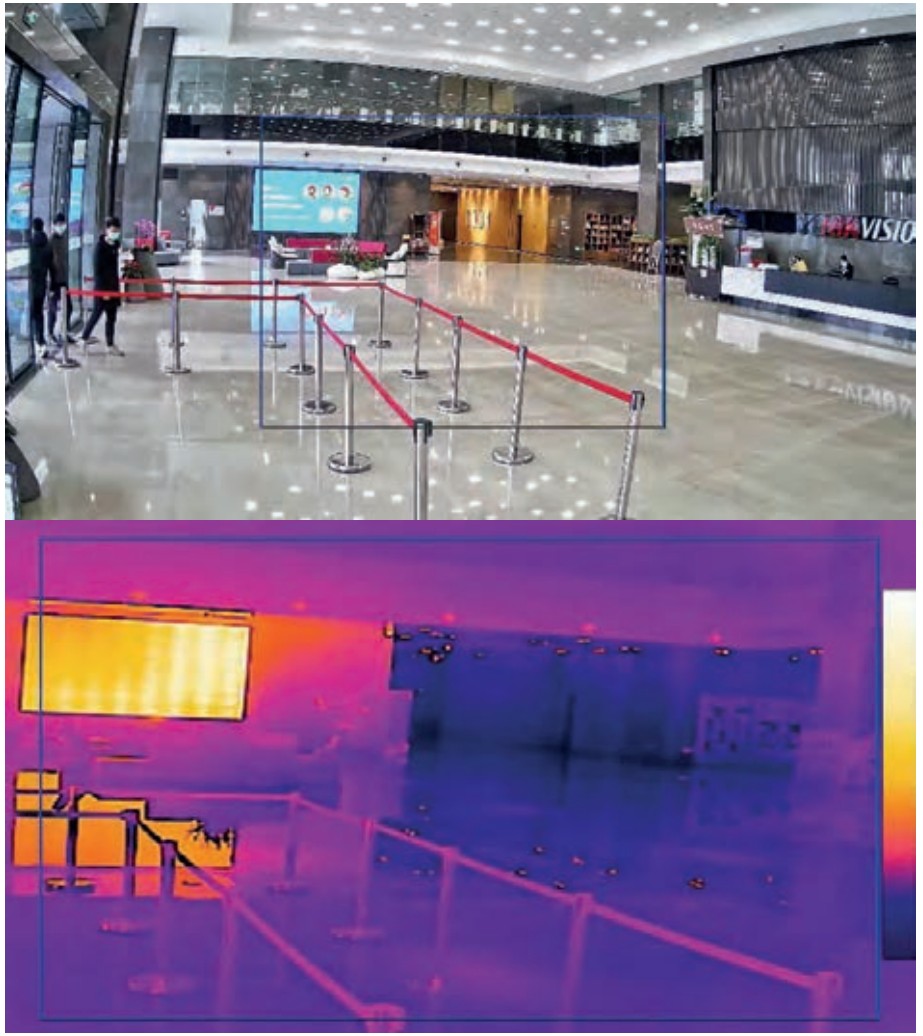


Thermographic camera coverage area

Professional Temperature Screening Thermal Solution

Temporary Installation & Monitoring Scheme

Video Of The Thermal & Optical Channels



Handheld Temperature Screening Thermal Solution

iVMS-4200.

Hik-thermal

Solution Components

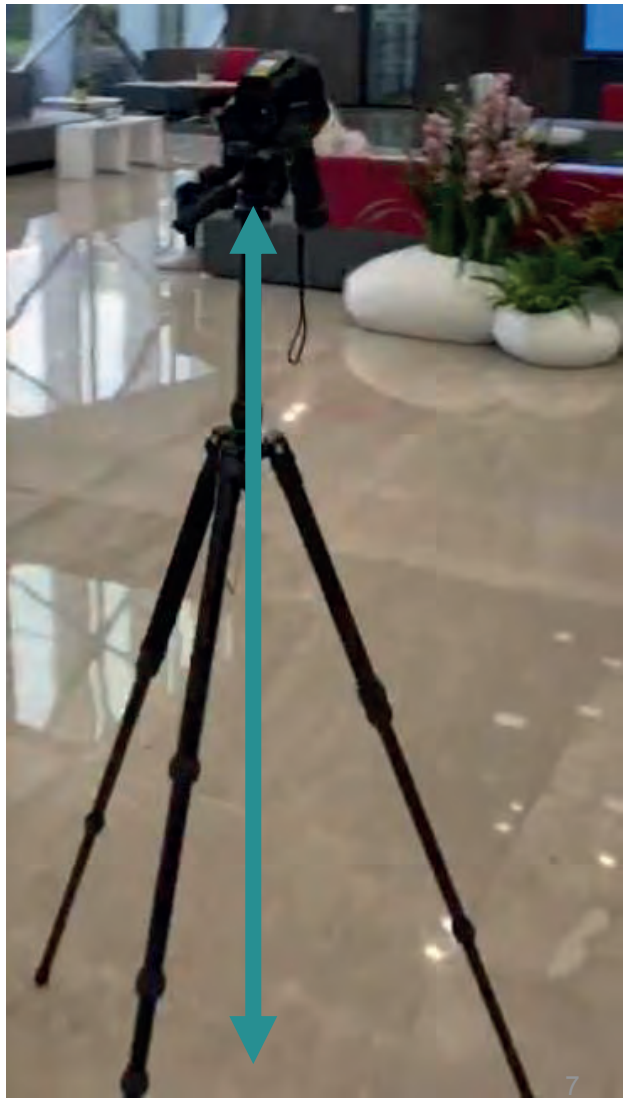
Professional handheld thermographic camera + Tripod (optional) + **iVMS-4200 (PC) / Hik-Thermal (Mobile app)**

Solution Advantages

- Thermographic handheld camera **supports Wi-Fi**, can integrate with a PC / Mobile client, and supports **real-time audio alarm and automatic uploading of screen captures**.
- Touch screen to ensure user experience
- Supports flexible temperature measurement areas
- Accuracy is **± 0.5ºC** , satisfy preliminary screening requirements

Installation Tips

- The camera is recommended to install at a height of **1.5 meters**, keeping the distance between the targets and the camera at **1.5 to 2 meters**
- Recommend to install in a stable **indoor** environment without wind
- People pass by the thermographic camera one by one



Handheld Temperature Screening Thermal Solution

Field Performance

Handheld Temperature Screening Thermal Solution

VS

Forehead Thermometer

Distance : 0.01-0.03 m

Speed : 1-5 seconds

Display: Numeric only

Efficiency: 12 persons / minute

Information storage: No

Handheld Thermographic Camera

Distance : 1.5 m

Speed : Real-time

Display: Thermal images

Efficiency: 60 persons / minute

Information storage: Screenshots / Video

Wi-Fi supported

Thermographic Camera Advantages

- Secures a distance between the operator and the target persons, avoiding unnecessary physical contact
- Higher efficiency, more suitable for flow of fast moving crowds
- Easy to use and operate, only needs to read the maximum value on the screen
- Able to save screenshots of potentially risky persons as an evidence
- Can integrate with a PC/Mobile Client, as a flexible solution

Economical Temperature Screening Thermal Solution

Solution Components

Bullet/Turret Thermographic Camera + Tripod adaptor
+ VMS-4200+ PoEiSwitch

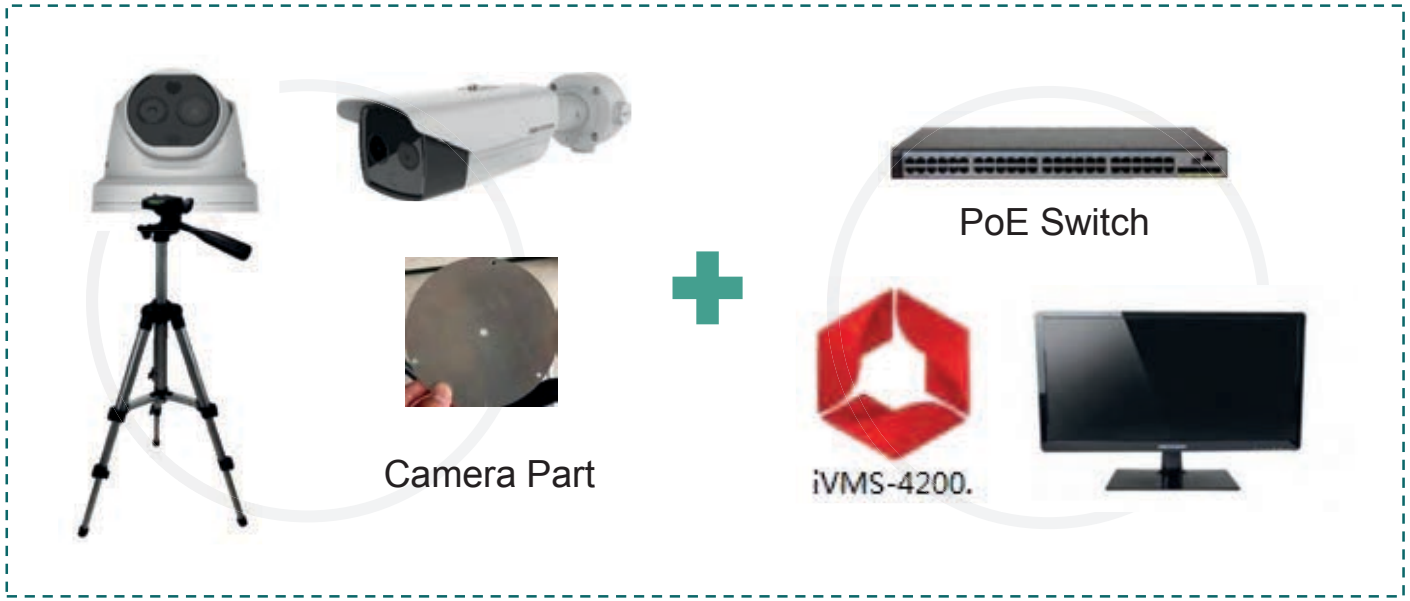
Solution Advantages

- Bullet/Turret Thermographic Camera supports temperature-exception **audio alarms** to notify the operator in time
- Supports **AI human body detection**, screening multiple targets at the same time, with reduced false alarms
- Accuracy is **± 0.5ºC** , satisfying preliminary screening requirements
- Supports **4 MP optical channel,** satisfying regular monitoring requirements
- Easy installation and simple configuration

Installation Tips

The camera is recommended to install at a height of **1.5 meters**, keeping the distance between the targets and the camera at **0.8 to 1.5 m (3 mm camera) or 1.5 to 2 m (6 mm camera)**

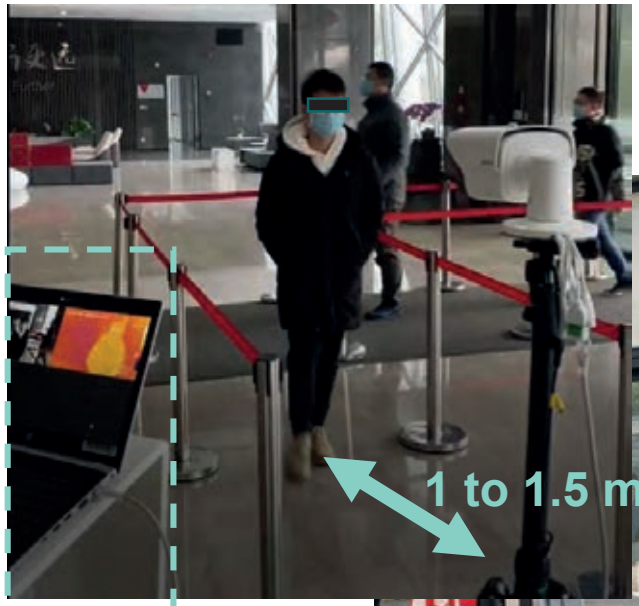
- Recommend to install in a stable **indoor** environment without wind



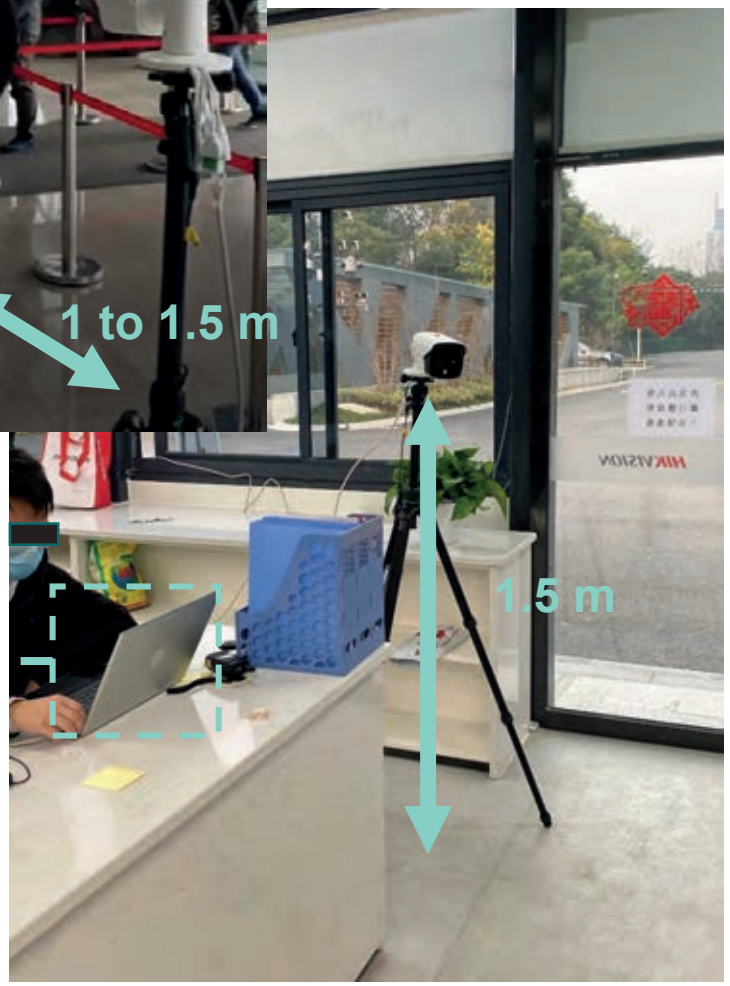
Thermographic camera coverage area

Economical Temperature Screening Thermal Solution

Field Performance



Monitoring
in real time
on the VMS



Economical Temperature Screening Thermal Solution

Multi-person Screening

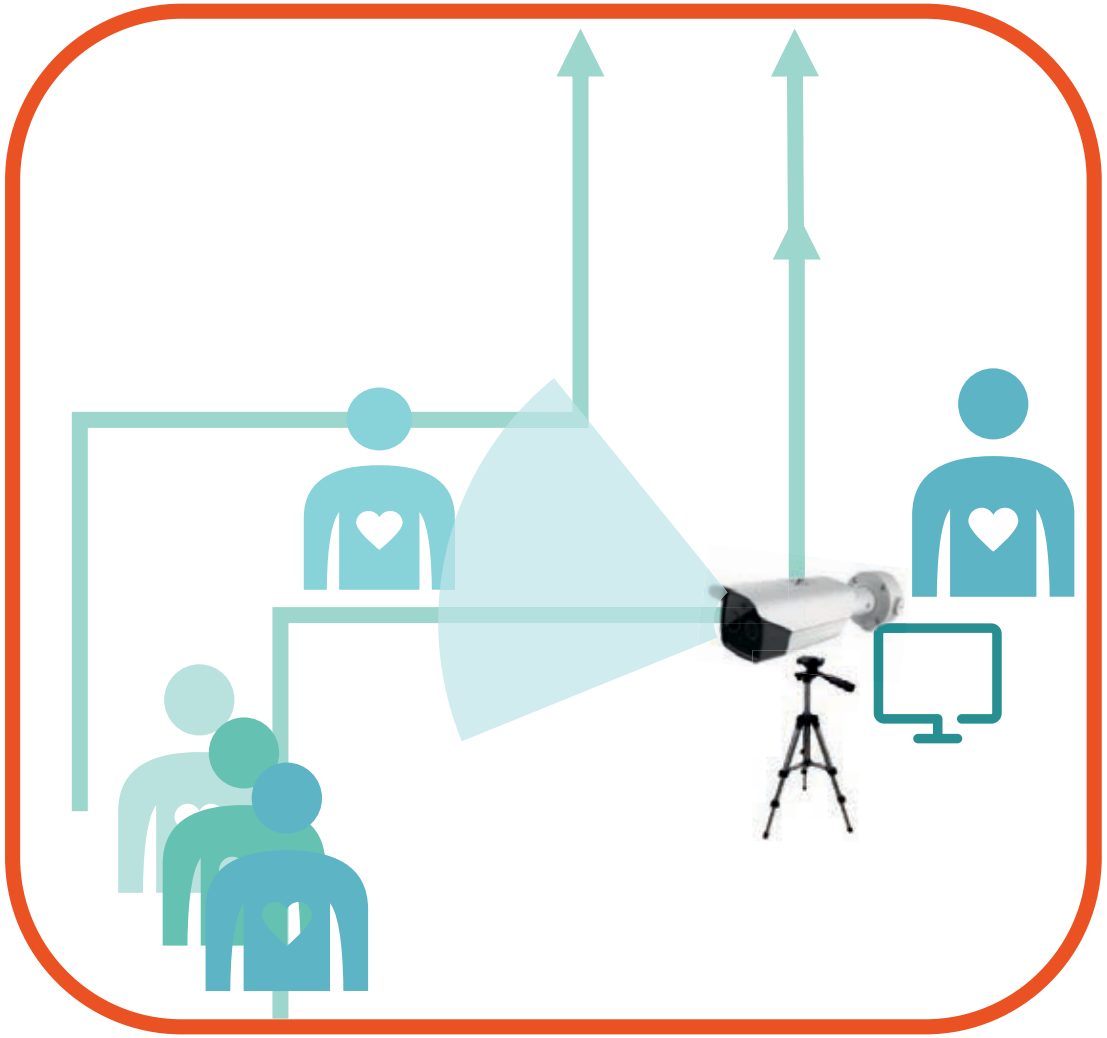
- Reduce false alarms triggered by AI body detection
- Detection of up to 30 persons at a time
- Recommended distance between targets and camera is 0.8 to 1.5 m for a 3 mm thermal lens

Optical channel

Thermal channel

*In this footage, a person places a bottle of warm water on his forehead to simulate abnormal body temperature and the system alarms.

High-End Temperature Screening Thermal Solution



Solution Components

Bullet/Turret Screening Thermographic Camera
+ Tripod + Tripod adaptor + iVMS-4200 + PoE Switch

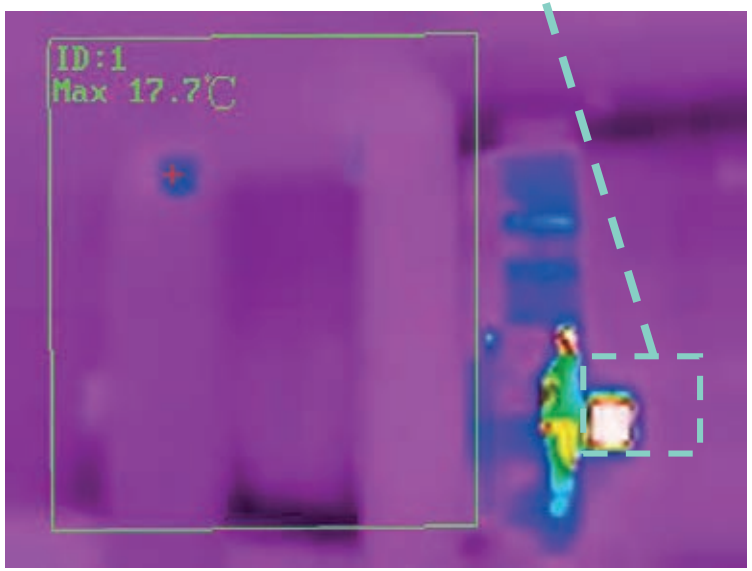
Solution Advantages

- With higher accuracy **± 0.5ºC** , the solution can reduce understated missing alarms

Installation Tips

- The camera is recommended to install at a height of **1.5 meters**, keeping the distance between targets and camera at **1 to 1.5 m (1217B/2617B) or 3 to 5 m (2637/B)**
- Recommend to install in a stable **indoor** environment without wind

High-End Temperature Screening Thermal Solution



Video Of The Thermal & Optical Channels

Temporary Installation & Monitoring Scheme

Long-term Installation Scheme

Applications

Hospital

Shop

Station

Airport

Railway

Office

School

Factory

Product Showcase - High End Thermal Products

DS-2TD2636B-15/P

- Thermal: 384 × 288；
- Lens: 15 mm；
- Optical: 2688 × 1520；
- Optical lens: 6 mm；
- Accuracy: ±0.5ºC
- Range: 30-45ºC

DS-2TP21B-6AVFW

- Thermal resolution: 160 × 120 ;
- Optical resolution: 640 × 480 ;
- Accuracy: ±0.5ºC
- Range: 30-45ºC
- Touch screen
- Bi-spectrum image fusion
- Supports Wi-Fi
- Supports audio alarms
- Automatic screen capture & upload

Product Showcase - Economical Thermal Products

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℃
- 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℃
- Range: 30-45℃
- Supports audio alarms

Accessories

Tripod

- UNC 1/4”-20 tripod connection
- It is recommended to purchase the tripod at local to meet the standards

Tripod Adaptor

- Required for bullet/turret camera to be fit on a tripod
- DS-2908ZJ for Turret camera
- DS-2909ZJ for bullet camera

Advantages of Your Choice Temperature Screening Thermal Solutions

AI Human Body Detection

Hikvision Bullet/Turret Thermographic Cameras feature AI human body detection to fix the measurement areas to human bodies, thus reducing false alarms caused by other heat sources.

Embedded Audio Alarms

With a built-in audio module, Hikvision Bullet/Turret Thermographic Cameras can trigger alarms to notify operators immediately when a person with an elevated skin temperature passes by.

Unique Self-developed Algorithm

Benefitting from Hikvision's self-developed temperature measurement algorithm and big data obtained by lots of cases, the accuracy of temperature measurement is highly reliable.

One-Stop Solution

As a world's leading security solution provider, Hikvision offers a rich product portfolio including thermographic cameras, NVR, switches, etc., which is easier for clients to set up a complete and professional solution.

FAQ

Q: Can the thermographic camera be installed outdoors?

A: **Outdoor wind and sun can easily affect the surface temperatures of human bodies** and the working status of the camera, which results in a deviation between the measured body surface temperature and the actual body temperature. To ensure the accuracy, we strongly recommend applying the solutions indoors.

Q: Can the accuracy of thermographic cameras reach ±0.1ºC?

A: No. At present, cameras with accuracy higher than ±0.5ºC require real-time calibration with a blackbody and intelligent compensation. The accuracy of a blackbody calibrator is currently ±0.1ºC. So it is impossible to achieve ±0.1ºC accuracy by the cameras. Solutions with higher accuracy ±0.3ºC are available.

Q: Can the camera detect human bodies for temperature measurement

A: The camera detects human bodies when screening. It supports up to 30 persons at a time. But still we recommend to carry out temperature measurement person by person.

Q: Will other heat sources (such as tea cups, kettles, etc.) cause false alarms?

A: The cameras are able to use human body detection technology, so other heat sources **will not cause false alarms.**

Q: When can I use the temperature screening thermal function after a camera is turned on?

A: The cameras need to be warmed up before using. Turn them on and wait for **5 minutes** (handheld camera), **30 minutes** (bullet / turret camera).

Q: Does a handheld thermographic camera support the alarm function by default? And does it support VMS linkage?

A: Only supported by **high-end models (TP21B).** Not supported by economical models (TP31B).

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For further information or to discuss your requirements;

t; **01977 277242**

e; sales@yourchoicefireandsecurity.co.uk

w; www.yourchoicefireandsecurity.co.uk

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