

Hikvision Thermal Temperature screening Solutions



Follow us @ Hikvision Oceania



2020/4/7

Hikvision Oceania

1

Why use thermographic Temperature screening System

Increasing Demand on Temperature Screening System



High efficiency



- Multiple targets
- Less man power

Low risk



- Non-contact
- Rapid response

Data archiving



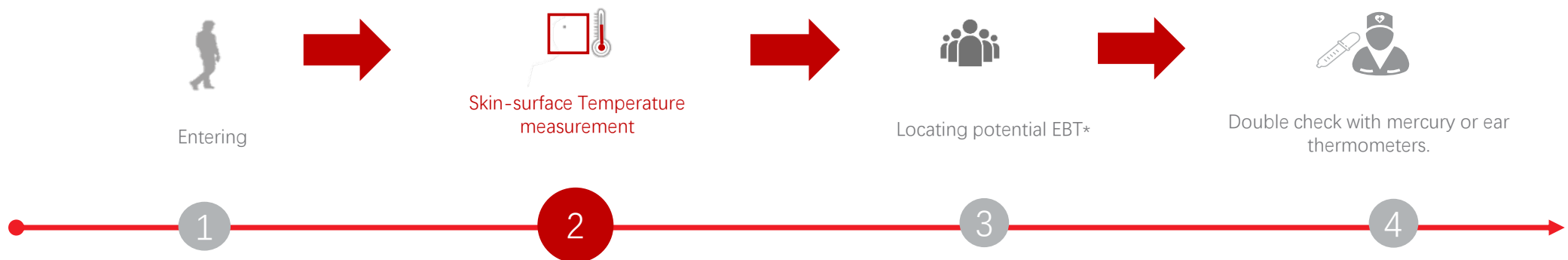
- Contact history tracing
- Data analysis

2020/4/7

Hikvision Oceania

2

Solutions Overview



* Elevated skin-surface temperature

Hikvision Oceania

3

Solutions Overview

Solution 1 Temperature Screening with Rapid Deployment



- Entrances with short-term requirements
- Avoid complicated wiring and installation

1-1 Temperature Screening & Security Surveillance



Visualized Bi-spectrum Live View
With Thermographic Camera

1-2 Wireless Temperature Screening



Easy Connection, Cable-free
With Handheld Thermographic Camera

Solution 2 Temperature Screening on Patrol



- Indoor open space without wind
- Patrolling without a fixed route



Anytime, anywhere. Just one click.



With Handheld Thermographic Camera

Solution 3 Group Temperature Screening

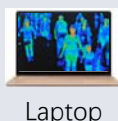
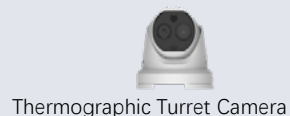
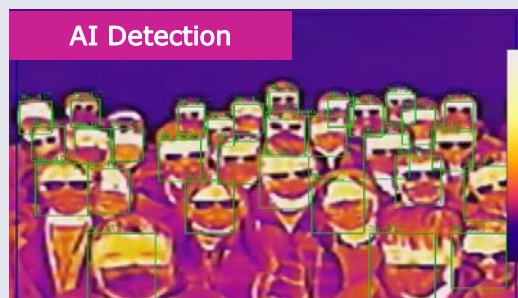
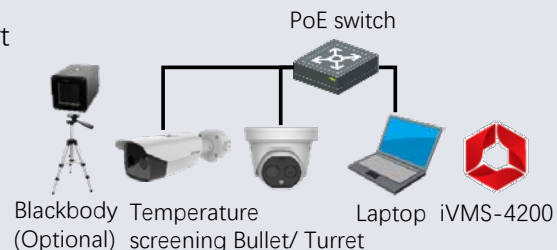
2020/4/7

Hikvision Oceania

4

Solution Introduction

- For building entrances, elevator foyers, airport security checks, etc.
- Indoor space without wind
- Route for passenger flow is recommended

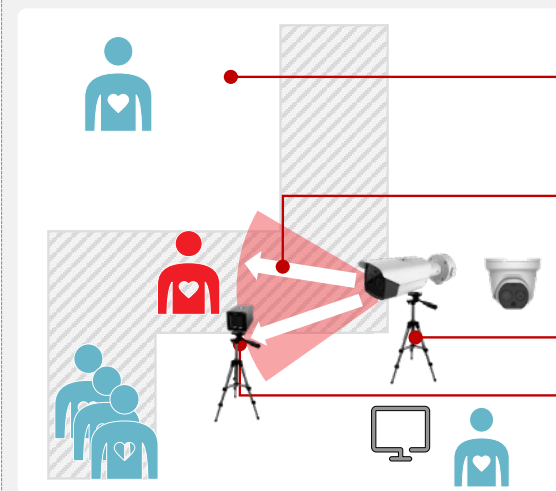


Product Design



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: $\pm 0.5^{\circ}\text{C}$ ($\pm 0.3^{\circ}\text{C}$ with black body)
- Measurement range: 30-45 $^{\circ}\text{C}$
- Working Temperature : 10-35 $^{\circ}\text{C}$
- Embedded audio alarm for abnormal Temperature s
- AI detection reducing false alarms by other heat resources



Double check by mercury thermometer, ear thermometer etc.

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

Installation height is 1.5 m

Where black body Temperature reference unit is used, the distance between camera and black body is 1 m (3 mm lens), 2 m (6 mm lens). Keep the Black Body in the upper left / upper right corner of the camera's view

2020/4/7

Hikvision Oceania

5

Solution Introduction



- For building entrances, elevator foyer, airport security checks, etc.
- **Wireless** deployment without cables (by the app or the iVMS-4200 client)
- **Indoor space** without wind
- **Route for passenger flow is recommended**



Tripod



Handheld thermographic camera



Hik-Thermal app



Laptop



iVMS-4200



Hotspot



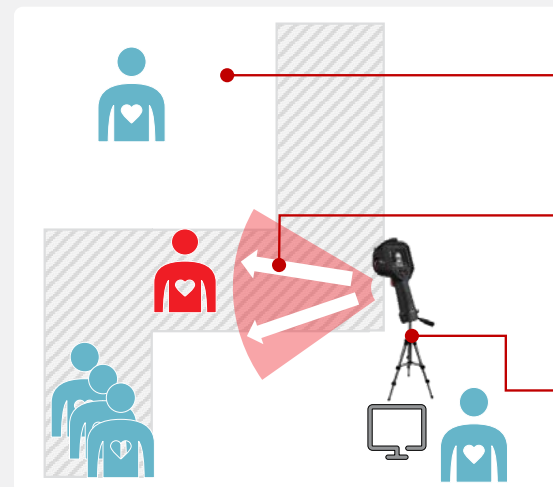
Handheld thermographic camera

Product Design



DS-2TP21B-6AVF/W

- Thermal resolution: 160 × 120 ;
- **Accuracy: $\pm 0.5^{\circ}\text{C}$**
- Measurement range: 30-45 $^{\circ}\text{C}$
- 3.5" LCD touch screen
- Supports **Wi-Fi hotspot**, live view on PC or mobile client for less eye fatigue
- Supports real-time audio alarm and automatic uploading of screen captures



Double check by **mercury thermometer, ear thermometer etc.**

Distance between camera and people: **1 - 2m**

Installation height is **1.5 m**

2020/4/7

Hikvision Oceania

6

What is black body?

Blackbody is a standard heat source, the thermographic cameras are able to calibrate based on the Temperature of a blackbody calibrator.



Is black body a must for thermal Temperature measurement?

With advanced technology improving the accuracy of Temperature reading, Hikvision thermal camera could achieve $\pm 0.5^{\circ}\text{C}$ accuracy without blackbody calibration, enough for most scenarios. Meanwhile save the cost on blackbody and time to setup/calibrate the blackbody.

Solution Introduction

- For preliminary Temperature screening by spot-checking inspectors (**indoor**)
- Temperature screening without disturbing a person



Product Design

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



DS-2TP21B-6AVF/W



2020/4/7

1 m - 2 m



If abnormal

Hikvision Oceania



Double check



8

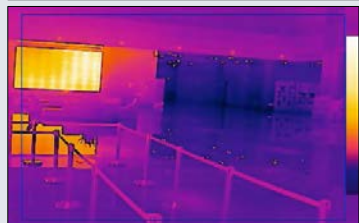
3

Group Temperature Screening

High-risk Group Screening with High Efficiency

Solution Introduction

- Temperature screening of crowd with high efficiency (indoor), simultaneous Temperature screening of multiple people (up to 30 people), especially in airport, railway station
- The Black Body calibrator is used to improve the accuracy to $\pm 0.3^{\circ}\text{C}$
- Centralized management for CCTV with Temperature record



Thermographic Bullet Camera



Wall Mounted Bracket



AI Detection



PoE switch



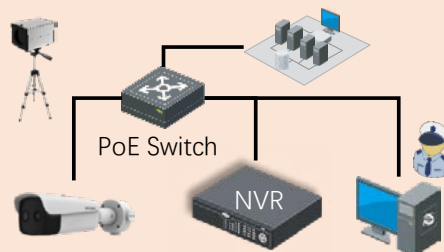
HikCentral Professional



Black Body + Tripod (optional)

Black Body + Tripod (optional)

HikCentral Professional



Thermographic Bullet Camera

PoE Switch

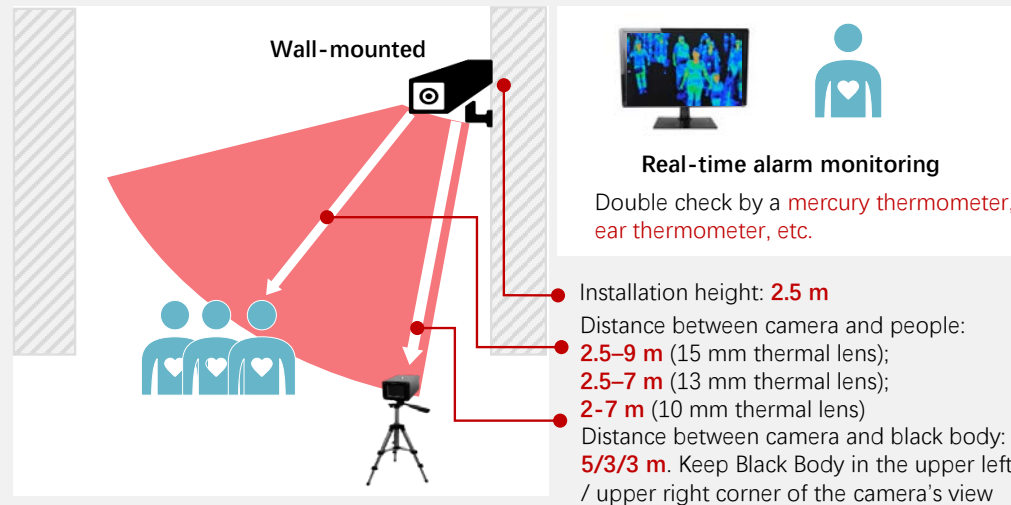


Product Design

- Thermal: 384×288 , lens: 10/13/15 mm
- Optical: 2688×1520 , lens: 4/6/6 mm
- **Accuracy: $\pm 0.5^{\circ}\text{C}$**
- Measurement range: $30-45^{\circ}\text{C}$
- Working Temperature : $10-35^{\circ}\text{C}$
- **AI detection to reduce false alarms**

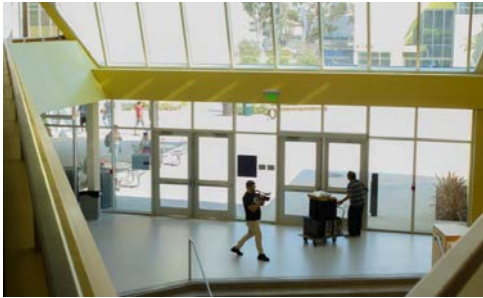


DS-2TD2636B-15/P
DS-2TD2636B-13/P
DS-2TD2637B-10/P



Application Scenarios

School



Entrance of college building



Entrance of dormitory

Retail



Entrance of supermarket



Entrance of restaurant

Office Building



Elevator foyer of parking lot



Entrance of office building

Airport



Security Check at Airport



Entrance of terminal

Recommended for indoor scenarios, as large fluctuations of outdoor Temperature will influence the Temperature measurement accuracy.

10

Application Scenarios



Workshop



Office



Classroom

Recommended for indoor scenarios, as large fluctuations of outdoor Temperature will influence the Temperature measurement accuracy.

11

Hikvision Advantages

AI detection

Hikvision thermographic Temperature screening **Bullet/Turret cameras** provide AI Detection function, locates multiple faces intelligently and measures the Temperature of faces only to **reduce false alarms** from other heat sources.

Onboard Audio Alarm

Hikvision thermographic Temperature screening **Bullet/Turret /handheld cameras** feature onboard audio alarm to notify the operator without the requirement of auxiliary sirens. This **reduces the complexity** of whole solution and makes it easier and quicker to deploy.



Self-developed Detector

Hikvision applies its **self-developed thermal detector** with unique **image processing algorithm**. Greatly reduces the noise to improve the accuracy of the Temperature measurement.
Camera Temperature measurement accuracy can achieve $\pm 0.5^{\circ}\text{C}$.

End-to-end Solution

As the world's leading security solution provider , Hikvision is able to provide a **full one-stop solution** including thermography cameras, surveillance cameras, NVR's , pedestrian barriers, etc.

SAFE

Distant and accurate check without physical contact, reducing cross-infection possibilities.

EFFICIENT

Automatic alarm triggering, reducing manpower invested.

ADAPTABLE

Multiple product types, easy to deploy, and suitable for different scenarios.

TRACEABLE

Combining Temperature , image and face identification for easy management and query.

Installation Notes

Seven tips before determining the installation scenario:

1. **Indoor environment** with stable ambient Temperature (10-35 degrees Centigrade).
2. Follow the **installation instruction** in regard to installation position, height and target person distance.
3. Make sure you **preheat** the device, 5min for handheld, 30min for portable and fixed.
4. One-way screening zone to see clear face image, better to remain stationary for a short period of time when measuring. Where people remain on site for a long period, exit screening may be a consideration.
5. Ensure there are stable and sufficient lighting conditions. High backlight should be avoided where possible.
6. Avoid crowded background, with **no interfering heat source** in it.
7. Give body a bit of time to return to its normal Temperature when coming from outside.

Product Showcase

Thermographic bullet camera

- Thermal: 160 × 120
- Lens: 3 mm / 6 mm
- Optical: 2688 × 1520
- Optical lens: 4 mm / 8 mm
- Video mode: Bi-spectrum image fusion
- Accuracy: $\pm 0.5^{\circ}\text{C}$ ($\pm 0.3^{\circ}\text{C}$ with black body)
- Measurement range: 30-45 $^{\circ}\text{C}$
- Supports audio alarms



DS-2TD2617B-3/6PA

Thermographic turret camera

- Thermal: 160 × 120
- Lens: 3 mm / 6 mm
- Optical: 2688 × 1520
- Optical lens: 4 mm / 8 mm
- Video mode: Bi-spectrum image fusion
- Accuracy: $\pm 0.5^{\circ}\text{C}$ ($\pm 0.3^{\circ}\text{C}$ with black body)
- Measurement range: 30-45 $^{\circ}\text{C}$
- Supports audio alarms



DS-2TD1217B-3/6PA

Black body Calibrator (Optional)

- Temperature resolution: 0.1 $^{\circ}\text{C}$
- Accuracy: $\pm 0.1^{\circ}\text{C}$
- Temperature stability: $\pm 0.1^{\circ}\text{C}/\text{h}$
- Effective emissivity: 0.97 ± 0.02
- Operating Temperature : 0-30 $^{\circ}\text{C}$



DS-2TE127-G4A

Thermographic bullet camera

- Thermal: 384 × 288, lens: 15 mm/13 mm/10 mm
- Optical: 2688 × 1520, lens: 6mm/6mm/4mm
- Accuracy: $\pm 0.5^{\circ}\text{C}$ ($\pm 0.3^{\circ}\text{C}$ with black body)
- Measurement range: 30-45 $^{\circ}\text{C}$
- Working Temperature : 10-35 $^{\circ}\text{C}$
- AI human detection, false alarms reduction
- Simultaneous Temperature screening for multiple people (Up to 30 people)



DS-2TD2636B-15/P
DS-2TD2636B-13/P
DS-2TD2637B-10/P

Handheld thermographic camera

- Thermal resolution: 160 × 120
- Optical resolution: 640 × 480
- Measurement range: 30-45 $^{\circ}\text{C}$
- Touch screen
- Accuracy: $\pm 0.5^{\circ}\text{C}$
- Bi-spectrum image fusion
- Supports Wi-Fi
- Supports audio alarms
- Automatic screenshots & uploading



DS-2TP21B-6AVF/W

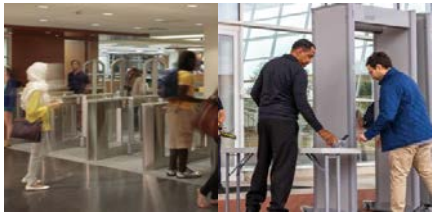
2020/4/7

Hikvision Oceania

14

Solution - Others

Solution 3 Temperature Screening with Access Control



Indoor space without wind
Security control and Temperature screening at the entrance which has a route to guide people flow



Touch-Free, Access is Easier but Safer



- v With Turnstile Control
- Personnel identification & Temperature screening



- v With 3rd Party Turnstile Control
- Reusing existing barrier gates: 3rd party turnstile integration via I/O or Wiegand



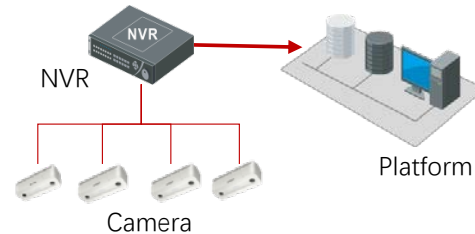
- v With Door Control
- Wall-mount to control the door



- v With Stand Alone Terminal

2020/4/7

Solution 4 People Flow Control



- People counting
- Real-time retention number display
- Over threshold alarm



Easier control



- v People Counting Camera
- People enter/exit counting



- v Network Recorder
- Display real-time number of people in the area, alarms when the number exceeds the threshold.



- v Video management platform
- Central manage multiple areas, display real-time number of people in the area, alarms when the number exceeds the threshold.

Hikvision Oceania

15

Product Showcase

Temperature screening face recognition terminal

- Face identification, Temperature screening, mask detection
- Voice reminder of not-wearing masks, and no-mask entrance is prohibited
- Face capacity: 50,000
- Temperature accuracy: $\pm 0.5^{\circ}\text{C}$, range: 30~45 $^{\circ}\text{C}$
- Face Recognition Duration(1:N) $\leq 0.2\text{s}$
- Face Recognition Distance: 0.3m ~ 2m



DS-K1T671TM-3XF
(for wall mounted)



DS-K5604A-3XF/V
(for barrier gate)



DS-K5604A-3XF/V
(standalone)

Turnstile

- 650-1100 mm width left/middle/right lane
- Speed of throughput: up to 60 people/min
- 12 pairs of IR light detectors
- Build-in controller & IC card reader
- SUS304 stainless steel pedestal & acrylic swing
- Compatible with face recognition terminal & Temperature measuring with installation



DS-K3B601 Series

People Counting Camera

- People counting
- 1920 × 1080 @ 30fps
- Dual channels colorful images
- Deep learning algorithms
- Reverse alarm



DS-2CD6825G0/C-I(V)(S)

2020/4/7

Hikvision Oceania

16

FAQ

Q: Can the thermal camera trigger alarm?

A: Multiple alarms are supported, including audio alarm and pop up window alarm to raise instant attention, as well as email/mobile notification

Q: What is the battery life and charging time of the handheld camera?

A: Battery life – 5 hours with Wi-Fi, supplement light off and 4 hours with Wi-Fi, supplement light on.

Charging time – around 4 hours

Q: Can I have the handheld camera operating and charging at the same time?

A: YES, the handheld camera comes with power adaptor, it supports charging and operating at the same time to realize continuous use.

Q: Can the handheld device record the footage?

A: Yes, the handheld device comes with a built-in memory to store picture and video, picture and video could be uploaded to Hik-Thermal mobile app or iVMS-4200 software.

Q: Does the camera integrate temperature data with other VMS systems?

A: The camera support display/ overwrite temperature on video stream, thus any VMS could display the temperature information on the video stream.

Q: Does the camera have alarm output interface?

A: All the cameras (bullet\turrets) except the handheld one have alarm outputs.

Q: How is the face detection function related to the thermal measurement?

A: The thermal camera has one optical lens and one thermal lens, optical lens support detect face and locate the face, then thermal camera would only measure the temperature in that face area, thus to reduce the false alarm if people is holding other heat source like hot coffee, mobile phone etc.



Thanks

See far, go further