

Hikvision Temperature Screening Solution



Foreword

Human **Skin-Surface temperature** is an important indicator of physical health.

In many scenarios, people with abnormal skin-surface temperature need to be **detected quickly and accurately** in order to take measures to prevent a situation from becoming dangerous.



Current Situation

Traditional methods like using the ear thermometer or mercury thermometer perform well in detecting people with abnormal skin-surface temperature. However, all of these methods have obvious and significant deficiencies:

Close Contact, High Risk

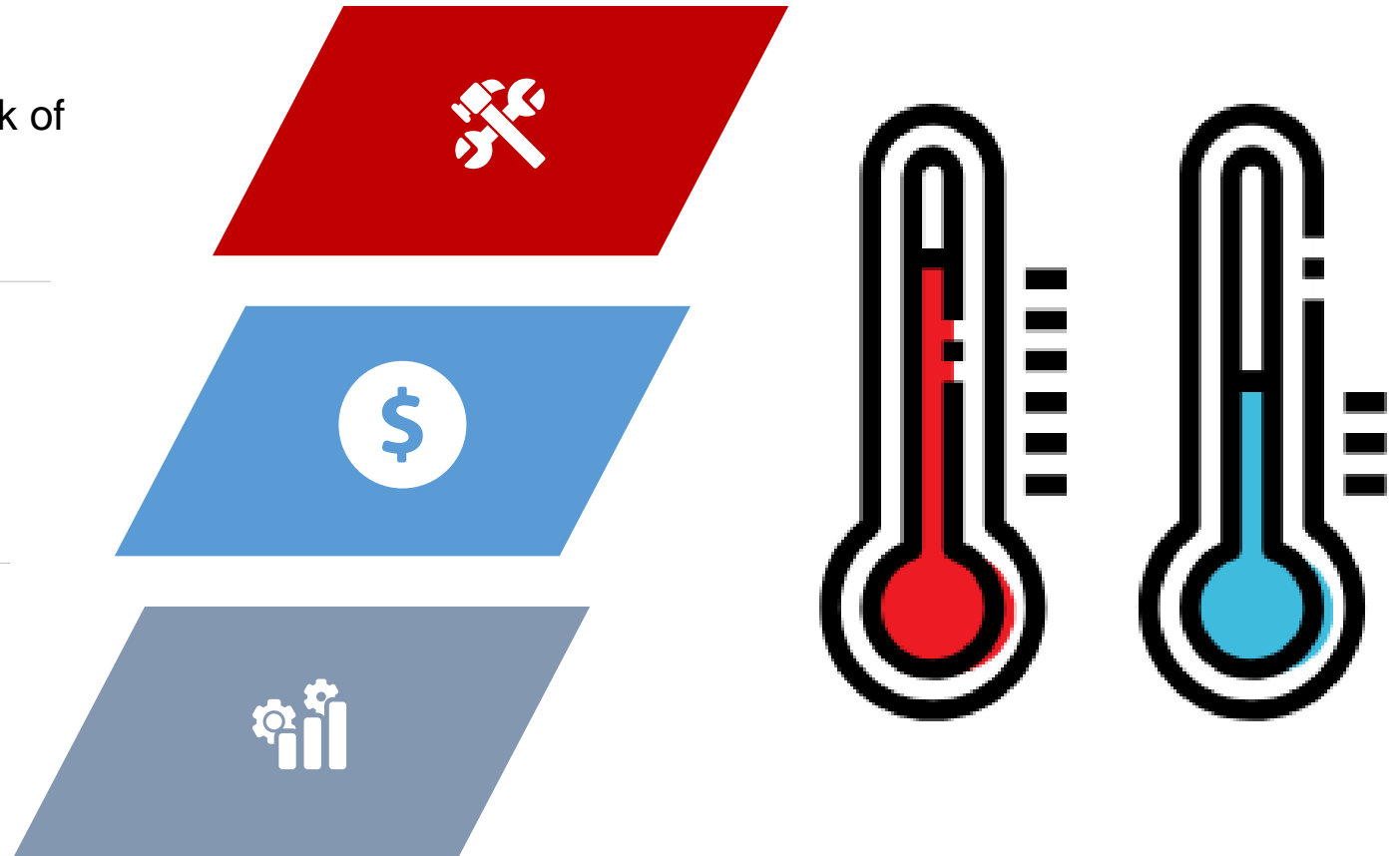
- Close contact among users, leading to high risk of infection.

High Cost, Low Efficiency

- Lots of manpower invested.
- Person-by-person inspection is inefficient.

Difficult to Collect Statistics

- Manual registration is required, which may lead to human error and not so timely feedback.



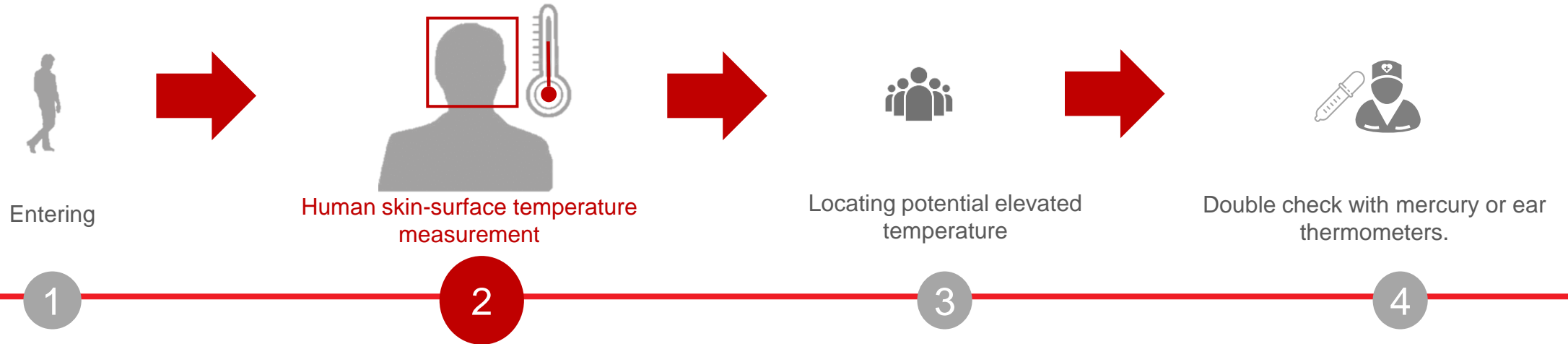
Better Approach

Using machines instead of manpower alone is a much better choice in many aspects.

- Reducing the contact among people. The detection process can be **fast and convenient**, as **imperceptible** as possible, and can minimize the impact on people's daily travel.
- Effectively **reducing manpower** and **the duration** of skin-surface temperature measurement.
- Producing **real-time and accurate temperature** measurement data for management and decision-making.



Solution Business Flow



Fast preliminary temperature screening without contact



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.

Solution Overview

Solution 1

Temperature Screening with Fast Deployment



- ✓ Entrances with short-term requirements
- ✓ Unsuitable for complicated wiring and installation



1-1 Thermographic Cameras

Visualized Bi-spectrum Live View



- With Thermographic Camera



1-2 Wireless Devices

Easy Connection, Cable Free



- With Handheld Thermographic Camera



1-3 Metal Detector Doors

Real-time Sound and Light Alarm



- With Metal Detector Door

Solution Overview

Solution 2 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



- With MinMoe Wall-Mounting Touch-free Temperature Screening Terminal

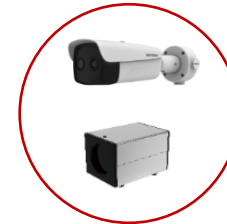
Solution 3 Group Temperature Screening



- ✓ Indoor open space without wind
- ✓ Large people flow
- ✓ Temperature screening on crowds



High-risk Group Screening with High Efficiency



- With Thermographic Bullet Camera

Solution Overview

Solution 4

Temperature Screening on Patrol



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



Anytime, Anywhere, Just one click.



- With Handheld Thermographic Camera

Solution 5

Temperature Screening & Mask Detection



- ✓ Indoor open space without wind
- ✓ Face recognition with mask on



Intuitive Demonstration



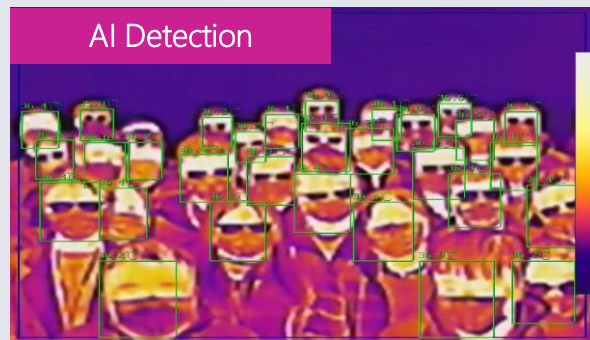
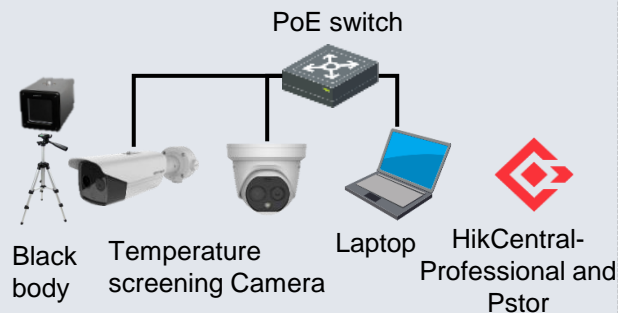
- With Thermographic Camera & DeepinMind NVR

Temperature Screening with Fast Deployment – Thermographic Cameras

Visualized Bi-spectrum Live View

Solution Introduction

- Indoor space without wind
- Route for passenger flow is recommended
- 5 minutes' stay after entrance is recommended
- Use the Black Body calibrator to improve the accuracy to $\pm 0.3^{\circ}\text{C}$
- **Local video storage** with HikCentral & pStor, no need for NVR

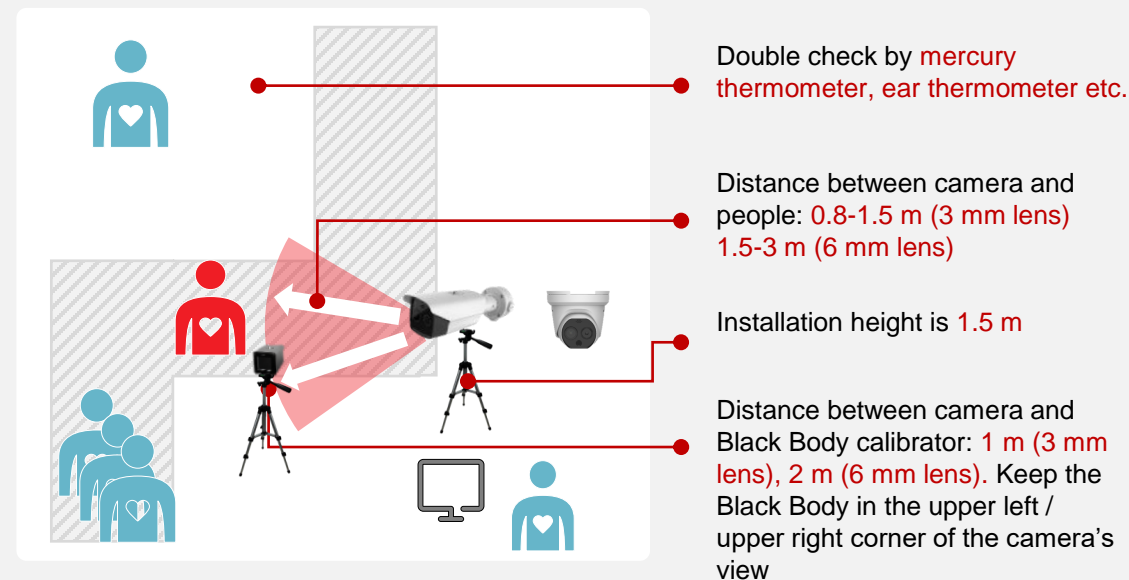


Product Design



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 temperatures
- **AI detection to reduce false alarms by other heat resources**



Temperature Screening with Fast Deployment - Wireless Devices

Easy Connection, Cable Free

Solution Introduction



- 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
- **Route for passenger flow is recommended**
- **5 minutes' stay after entrance is recommended**



Tripod



Handheld thermographic camera



Hik-Thermal app



Laptop



iVMS-4200



Hotspot



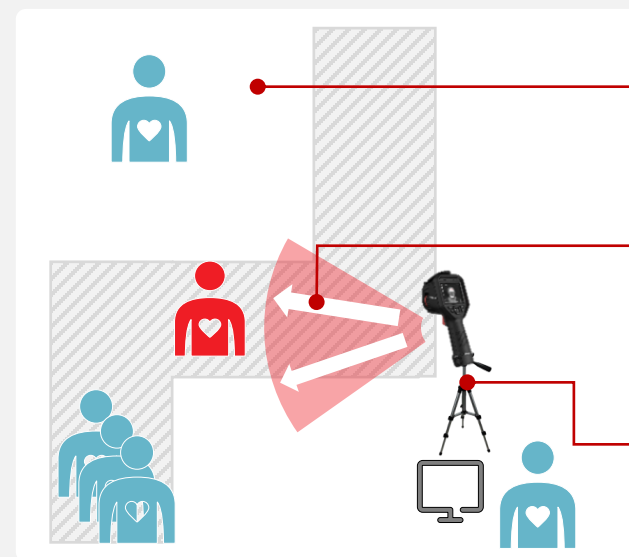
Handheld thermographic camera

Product Design



DS-2TP21B-6AVF/W

- Thermal resolution: 160 × 120 ;
- Optical resolution: 640 × 480 ;
- **Accuracy: ±0.5°C**
- Measurement range: 30-45°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**

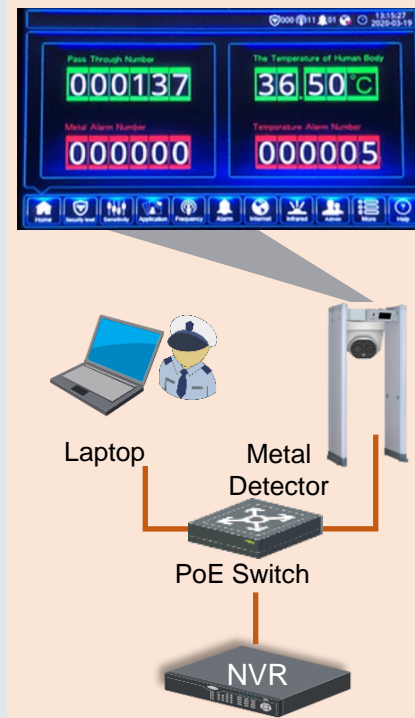
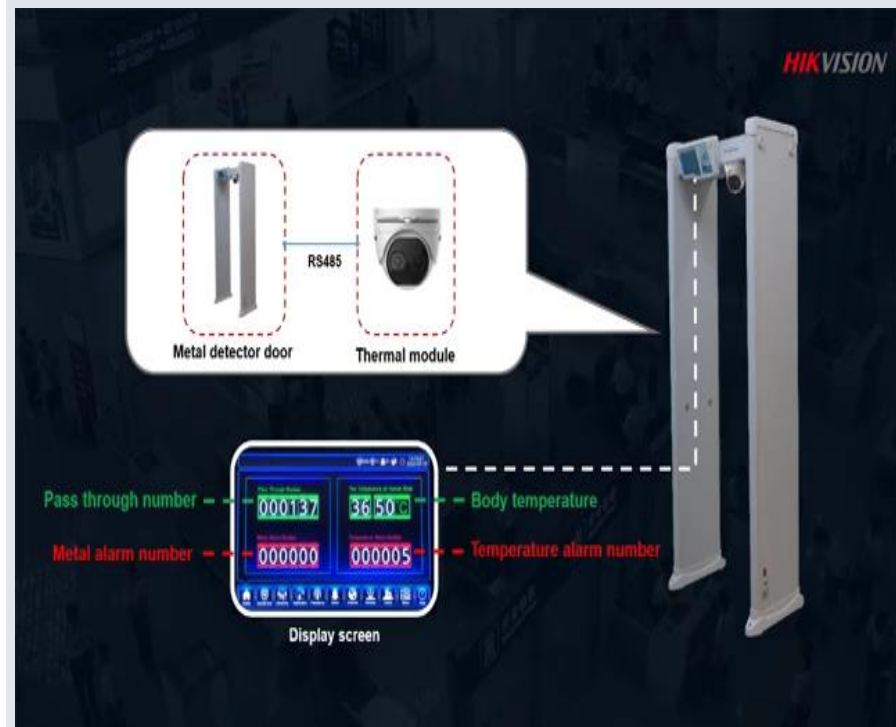
1 - 3

Temperature Screening with Fast Deployment – Metal Detector Doors

Real-time Sound and Light Alarm

Solution Introduction

- Long-term Temperature screening with metal detector door for entrances of police station, subway station, airport security check, etc.
- Indoor space without wind.
- Thermographic turret camera fixed on walk-through metal detector door.

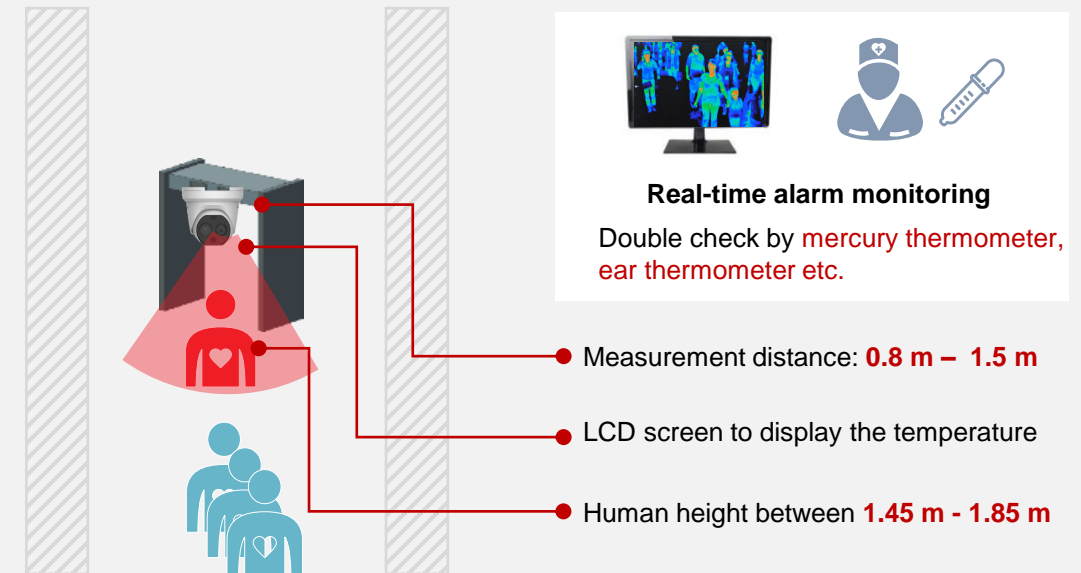


Product Design



ISD-SMG318LT-F

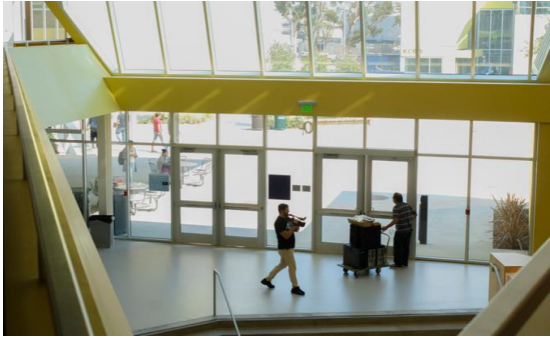
- 18 independent detection zones,
- 7-inch LCD temperature indicator
- 2,200 mm * 850 mm * 480 mm
- Thermal imaging resolution: 160 * 120
- Temperature measurement accuracy: ± 0.5 °C
- Temperature measurement range: 30-45 °C
- Onboard audio alarm for abnormal temperature or metal.



1

Application Scenarios

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



Security Check at Airport



Entrance of terminal

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

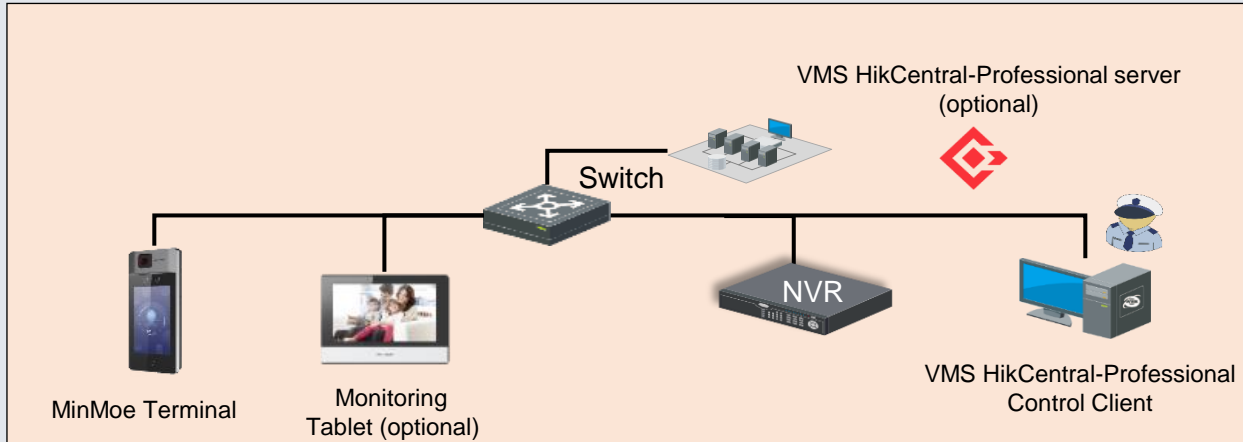
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Temperature Screening with Access Control

Touch-Free, Access is Easier but Safer

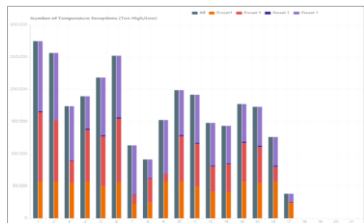
Solution Introduction

- Long-term Temperature screening with access control for building related projects
- Indoor space
- Centralized management for access control with temperature records

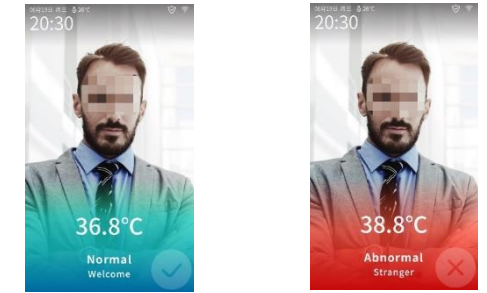
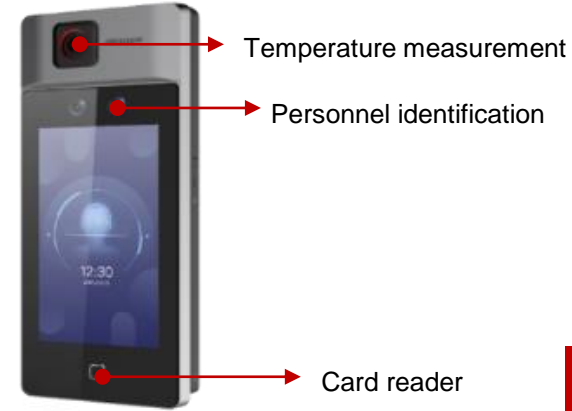


VMS Centralized management for access control system support:

- ① Exportable access records with temperature statistics
- ② Handling real-time Temperature alarms and tracing back records
- ③ Centralized management for multiple screening sites



Batch Access Verification Log									
Basic Information									
Export Time: 2020/02/10 15:01:28									
Exported by: admin									
Export Content: Name, ID, Card Number, Person Group, Device Time, Access Point, Access Result, Access Mode, Body Temperature									
Report Time: 2019/10/22 00:00:00 - 2019/10/22 23:59:59									
Total Number: 86									
Name	ID	Card Number	Person Group	Device Time	Access Point	Access Result	Access Mode	Body Temperature	
John Johnson		345643521232134341	Sales	2019/10/22 20:37:41	605Door_01_Cardreader_01	Succeed	Face Recognition	36.5°C	
Black Griffin		342349182332123343	Sales	2019/10/22 19:56:34	605Door_01_Cardreader_01	Failed	Face Recognition Failed	36.3°C	
Tim Duncan		892184712439278394	Sales	2019/10/22 19:53:22	605Door_01_Cardreader_01	Failed	Temperature higher than threshold	37.7°C	
Roger Federer		212312342456457545	Manager	2019/10/22 18:36:43	605Door_01_Cardreader_01	Succeed	Face Recognition	36.7°C	



Normal temperature Abnormal temperature

Double check by mercury thermometer, ear thermometer etc.

Product Design

- 7-inch LCD touch screen, 2 Mega pixel wide-angle lens
- Built-in Mifare card reading module;
- Max.50,000 faces capacity , Max.50,000 cards;
- **Temperature range: 30-45°C, accuracy: ±0.5°C;**
- Supports 6 attendance status, including check in, check out, break in, break out, overtime in, overtime out
- **Face Recognition Duration(1:N) ≤0.2s**
- Authentication Distance: 0.5m ~ 1.5m



MinMoe Terminal DS-K1T671TM-3XF

Note: The NVR and HikCentral are both customized in this solution.

2

Application Scenarios



Entrance of Office



Entrance of Restriction Area



Entrance of Meeting Room

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

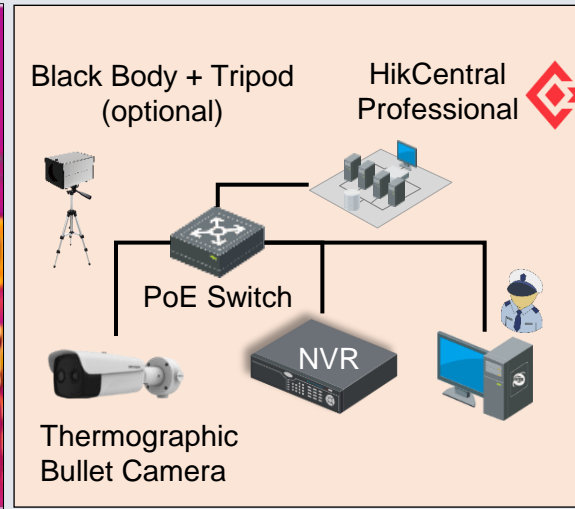
3

Group Temperature Screening

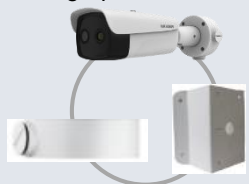
High-risk Group Screening with High Efficiency

Solution Introduction

- Temperature screening of crowd with high efficiency (indoor), simultaneous Temperature screening of multiple people
- 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



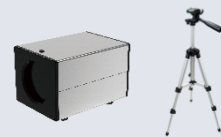
Wall Mounted Bracket



PoE switch



HikCentral Professional



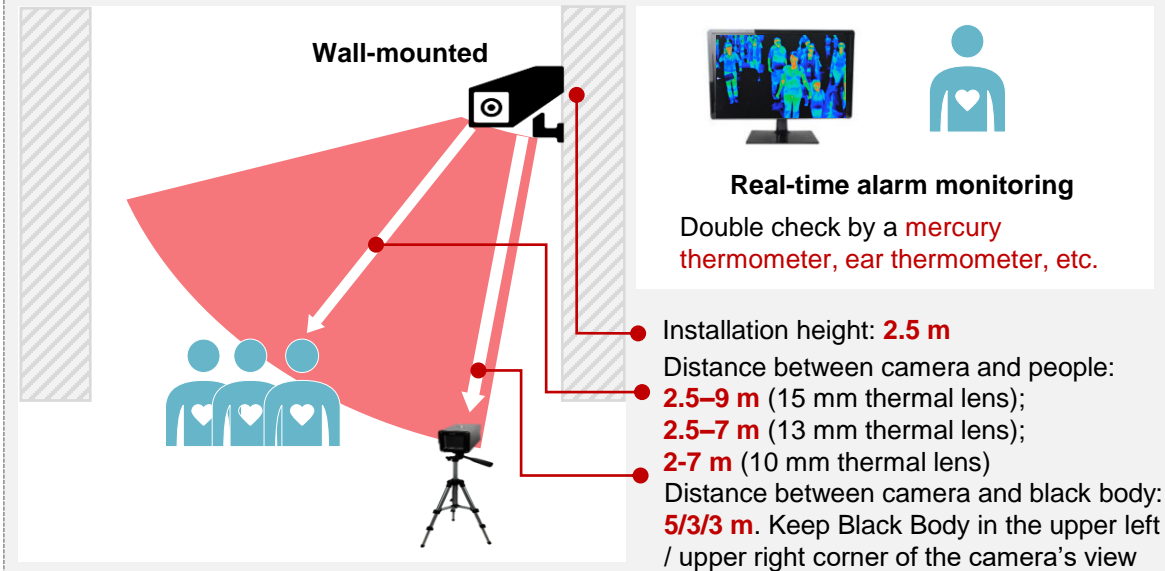
Black Body + Tripod (optional)

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: $30\text{-}45^{\circ}\text{C}$
- Working temperature: $10\text{-}35^{\circ}\text{C}$
- **AI detection to reduce false alarms**



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



Note: The NVR and HikCentral are both customized in this solution.

3

Application Scenarios



Railway Station



Airport



Factory

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

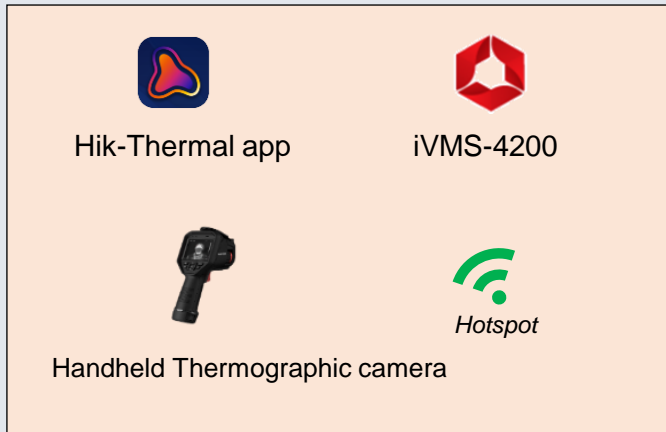
4

Temperature Screening on Patrol

Anytime, Anywhere. Just One Click

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



DS-2TP21B-6AVF/W



1 m - 2 m



If abnormal



Double check



4

Application Scenarios



Workshop



Office



Classroom

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

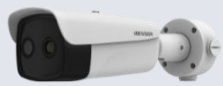
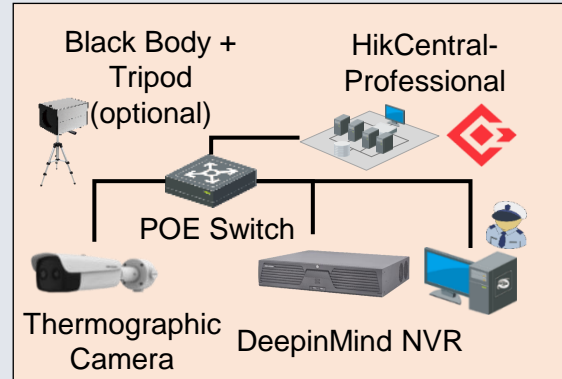
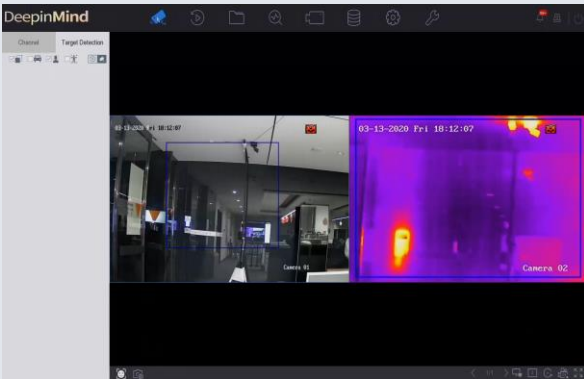
5

Temperature Screening & Mask Detection

Intuitive Demonstration

Solution Introduction

- **Temperature Screening:** Simultaneous Temperature screening for multiple persons (indoor), contact-free
- **Mask Detection:** Detecting whether people wear masks, and timely giving alarms on people without masks
- **Identity Verification & Stranger Alarm:** Confirming identity, **even with mask**, and giving alarms on strangers



Thermographic Camera



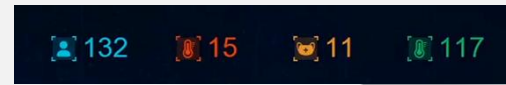
- DS-2TD2617B-3/6PA DS-2TD2637B-10/P
- DS-2TD2636B-15/P DS-2TD1217B-3/6PA
- DS-2TD2636B-13/P



DeepinMind NVR

- iDS-9616(/32)NXI-I8/X(B)(STD)(T)
- iDS-7716(/32)NXI-I4/(16P)/X(B)(STD)(T)
- iDS-6708NXI-I/8F(B)(STD)(T)

Product Design



- **Number of People:** total number, abnormal temperature, no mask, normal temperature



- Temperature Status
- Facial Recognition Results
- Mask Detection

➤ Visualized GUI & Voice Broadcast:

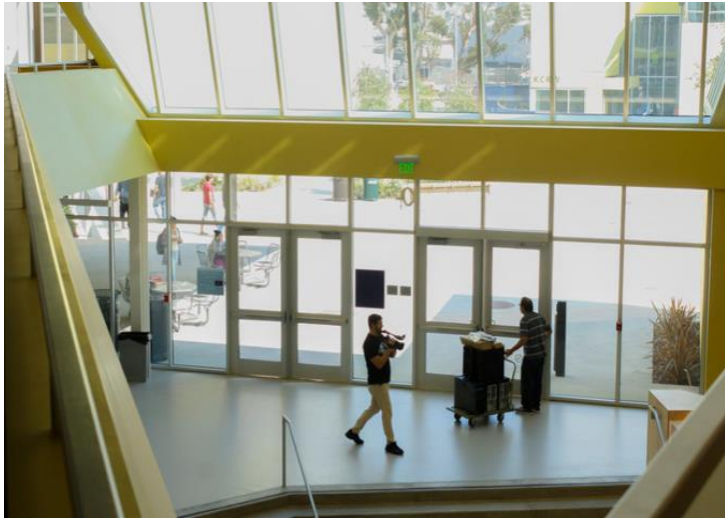
- Special interface in DeepinMind NVR, visually displaying all kinds of information
- Supporting voice broadcast upon mask and temperature status

➤ Efficient Search & Report:

- Fast video search of target people, such as people with abnormal temperatures, without masks and so on;
- Exporting reports with ID, skin-surface temperature and mask status

5

Application Scenarios



College



Office Building



Industry Park

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

Product Showcase

Thermographic bullet camera

- Thermal: 160 × 120
- Lens: 3 mm / 6 mm
- Optical: 2688 × 1520 **DS-2TD2617B-3/6PA**
- 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



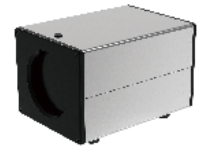
Thermographic turret camera

- Thermal: 160 × 120
- Lens: 3 mm / 6 mm
- Optical: 2688 × 1520 **DS-2TD1217B-3/6PA**
- 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



Black body Calibrator

- 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

Product Showcase

MinMoe Wall-Mounting Touch-free Temperature Screening 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: 0.5m ~ 1.5m



DS-K1T671TM-3XF

Monitoring Tablet

- 7" Touch-Screen Android Indoor Station
- Display resolution: 1024 * 600
- Wi-Fi 802.11b/g/n
- Remote Temperature screening & records checking, real time preview
- Centralized data management, max to 100,000 records
- Abnormal temperature alarm
- Remote access control & video intercom



DS-KC001

Metal detector door

- 18 independent detection zones, LCD screen
- Thermal camera resolution: 160 x 120
- Temperature range: 30~45 $^{\circ}\text{C}$
- Temperature accuracy: $\pm 0.5^{\circ}\text{C}$



ISD-SMG318LT-F

Product Showcase

Monitor

- 1080P, HDMI/VGA input, plastic casing, VESA, base bracket included, 7*24h



DS-D5024FN
(23.8")



DS-D5032QE
(31.5")



DS-D5043QE
(43")

- 1080P, HDMI/VGA input, **build-in speaker**, plastic casing, VESA, base bracket included, 7*24h



DS-D5024FC
(23.8")



DS-D5032FC-A
(31.5")



DS-D5043UC
(43")

DeepinMind NVR

- 8 channels of picture or video streaming; 32-library capacity with up to 100,000 face pictures in total.
- 16 channels of picture or 8 channels video streaming; 32-library capacity with up to 100,000 face pictures in total.



iDS-6708NXI-I/8F(B)(STD)(T)



iDS-7716(/32)NXI-I4/(16P)/X(B)(STD)(T)



iDS-9616(/32)NXI-I8/X(B)(STD)(T)

POE switch

- L2, Unmanaged, 10/100M RJ45 PoE ports, 1 10/100M RJ45 uplink port, 802.3af/at, PoE power budget. 300m long distance transmission, 6KV surge protection



DS-3E0105P-E(B)



DS-3E0109P-E(C)

Product Showcase



HikCentral Professional

- Flexible, scalable, reliable and powerful central surveillance system.
- Supports live view, play back, access control, alarm management, personnel identification, temperature data storage, abnormal temperature trend analysis etc.

Management of Registered Identities

Personnel Access Management & Skin-temperature Measurement

- HikCentral links personnel skin-temperature and corresponding identity;
- Access status and temperature live display / recording on HikCentral;
- Administrators can grant the access remotely

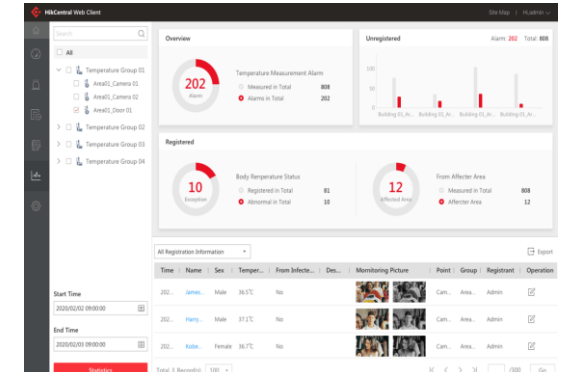
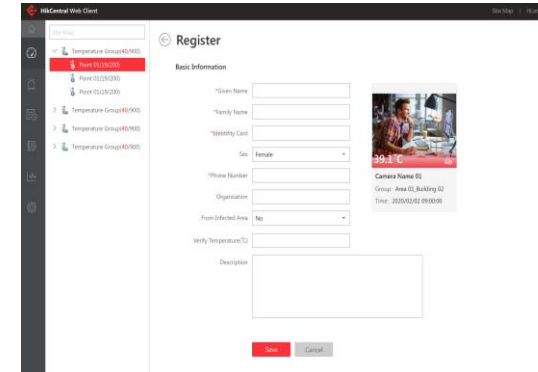
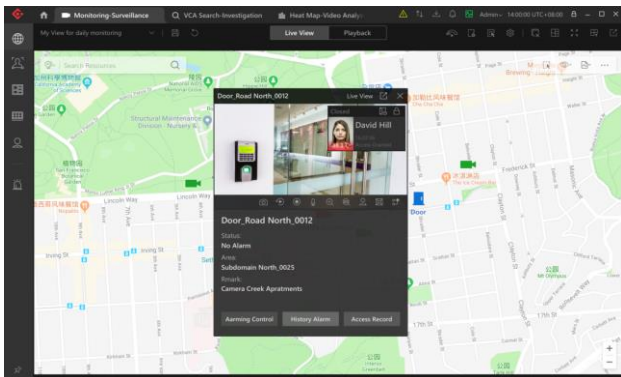
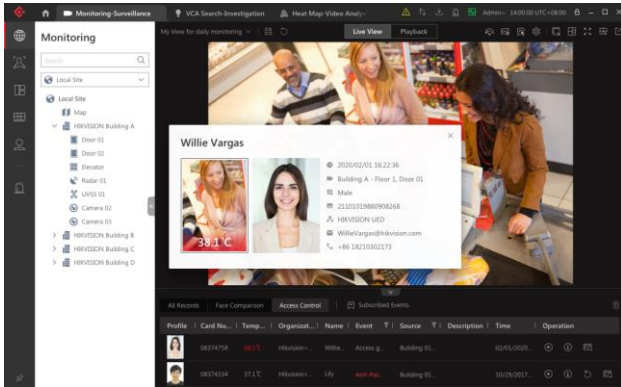
Abnormal Status Management

- Detected abnormal temperature from multiple sites will be centralized into HikCentral and displayed on GIS map / E-map;
- Batch attendance handling of people in quarantine

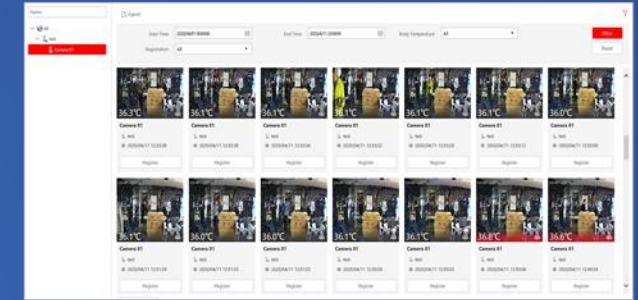
Management of Unregistered Identities

Abnormal Status Registration

- Once abnormal temperature appears, inspectors can type in the identity information and register it to HikCentral;
- All registrations are traceable, and can be easily searched and exported;
- Visualized statistic report helps administrators to assign and adjust manpower;



Interactive Group Temperature Screening with AI



1

Temperature and mask status
Intuitive Local Monitoring

2

Instant & Interactive Alarm
No mask detection or abnormal detection

3

Quick evidencing
Filter by tag 'Abnormal Temperature' and export video

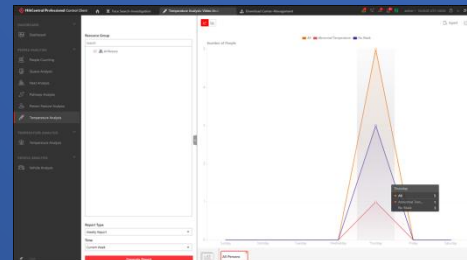
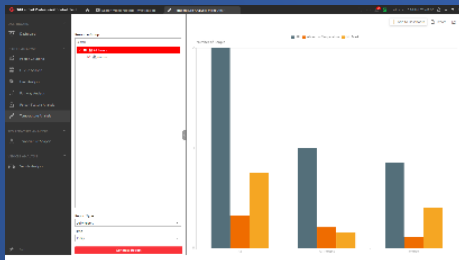
2. AI-based personnel attendance management and statistics dashboard

1

Viewing Statistics & Trends
Temperature statistical trends of staff

2

Records retrieving
Multi-site records available at center



Time	Name	Sex	Temper...	High-risk Areas	Des...	Mornitoring Picture	Point	Group	Registrant	Operation
202...	James...	Male	36.3°C	No			Are...	Site_01	Admin	
202...	Harry...	Male	37.7°C	No			Are...	Site_02	Admin	
202...	Kobe...	Female	38.7°C	No			Are...	Site_01	Admin	

Total 3 Record(s) 100 / 300 Go





Thanks

See far, go further