ALTRON
Sense the Difference

alhua TECHNOLOGY

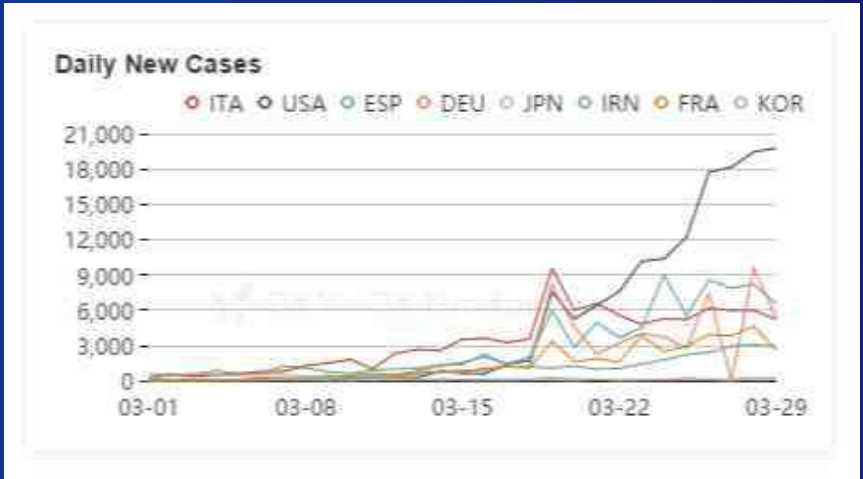
Thermal Body Temperature Measurement Solution

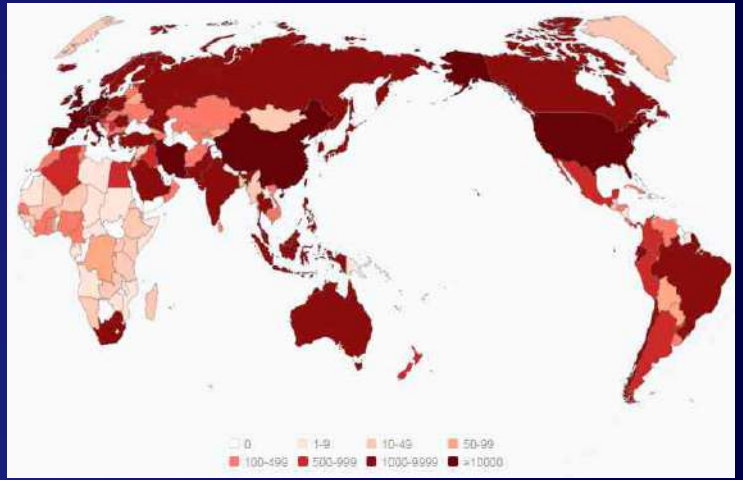
Dahua India

2020.06

Background

At the end of 2019, a new coronavirus outbreak broke out in Wuhan, China, which is characterized by human-to-human transmission, medical staff infection and community transmission. The disease has spread to China and around the world.



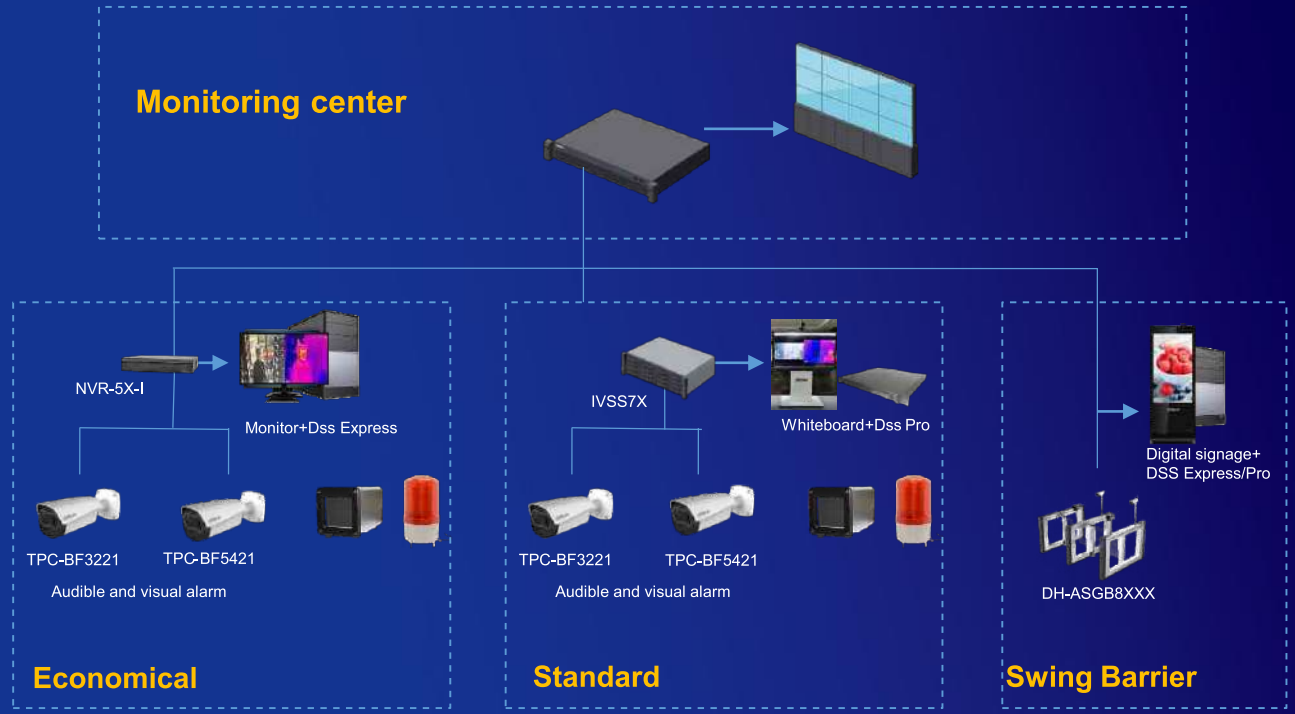


Status Analysis

Human Temperature Measurement

	Preliminary Screening	Temperature Record
Key Function		
Current Status	• Low efficiency of thermometer and infrared detection gun • Manual temperature measurement workload, high risk	• Manual recording is inefficient • Personnel information collection is difficult
Requirement	• Non-contact automatic temperature measurement • Accurate, fast and multi-person detection	• Record abnormal temperature information automatically • Collect abnormal personnel portrait automatically

Solution | Topology



Process

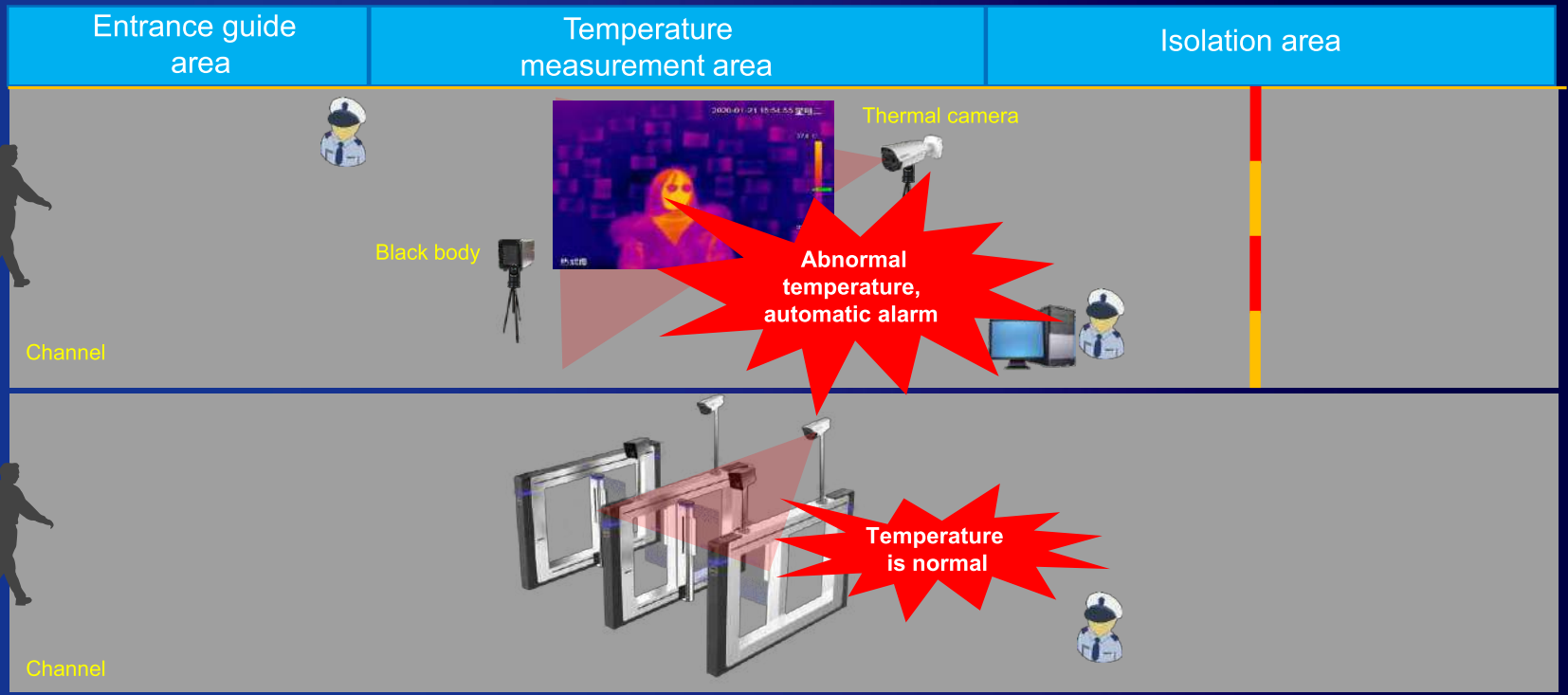
Non - contact temperature measurement

Display screening

Manual review

Abnormal confirmation

Activate emergency plan


Entrance guide area
Temperature measurement area
Isolation area
Thermal camera
Black body
Abnormal temperature, automatic alarm
Channel
Temperature is normal
Channel

Solution | High precision non-contact

Highly reliable

Adopt the most stable, high value detector, and use blackbody for correction to meet the use of different scenarios

Dual lens intelligence

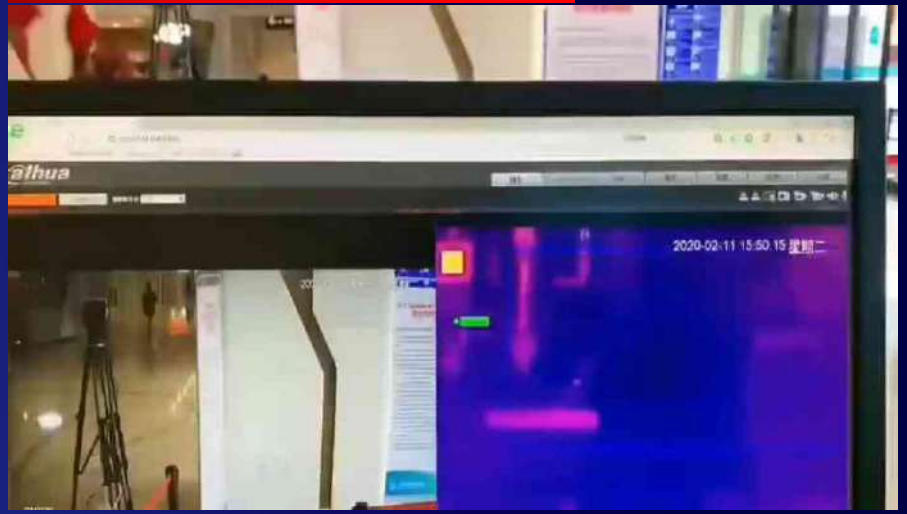
Visible + thermal algorithm with human body and face detection technology, reduce the false alarm rate

Long distance

Focal length 7.5mm 13mm optional

Optimum temperature measurement distance 3m

Medical thermometer VS Thermal



The video was shot at a project site on February 11, 2020.

Solution | Multi-person detection

Temperature measurement speed comparison

5000 person

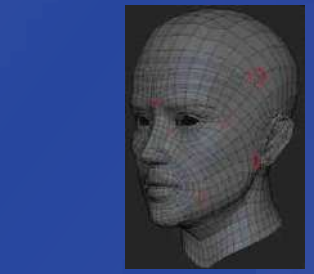
- **Traditional forehead thermometer**

  3 s/person total 4.2 hours

- **Thermal**

  3 person/s total 30 minutes

Solution | Face recognition + mask recognition

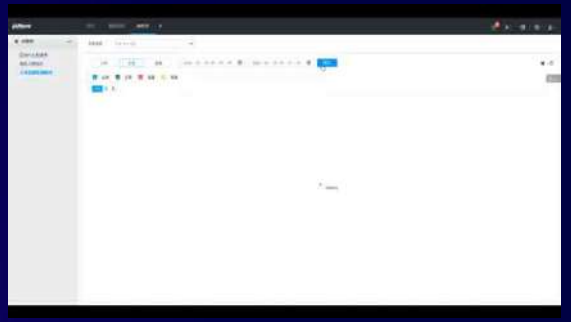


IVSS/NVR5000-I

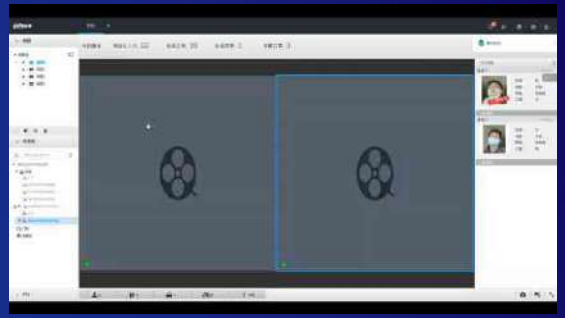
Support mask recognition, face temperature measurement, data statistics/report export and other functions

Mask recognition

Data statistics



Face recognition



Report export

Configuration

Temp measurement part

Blackbody

TPC-BF3221-T

TPC-BF5421-T

Optional

Accessories part

Camera power

Tripod

Connector

Storage & analysis part

DHI-NVR5X-I

DHI-IVSS7X

Optional

Display part

LDV55-SAI200

HiBoard-A65/75/86H

22/24/32-inch 1080P Plastic
LM22-F210
LM24/32-F600

Optional

Products

Thermal Network Value Hybrid Bullet Camera
TPC-BF3221-T

Vox uncooled focal plane detector
Resolution 256*192
Spectral Range 8μm~14μm
Thermal lens 7mm
NETD <50 mK
Visible 1/2.8 CMOS 1080P
Visible lens 8mm
Alarm Built-in white light warning light, horn
Temperature measurement range 30 45
Temperature measurement accuracy 0.3 with blackbody
1 without blackbody

Thermal Network Hybrid Bullet Camera
TPC-BF5421-T

Vox uncooled focal plane detector
Resolution 400*300
Spectral Range 8μm~14μm
Thermal lens 13mm
NETD <40 mK
Visible 1/2.8 CMOS 1080P
Visible lens 8mm
Alarm Built-in white light warning light, horn
Temperature measurement range 30 45
Temperature measurement accuracy 0.3 with blackbody

Products

Blackbody
DH-TPC-HBB-AHW

Working temperature 40.0 environment temperature +5.0 ~ 50.0
Temperature resolution 0.1
Temperature measurement accuracy □0.2 Single point
Temperature stability □(0.1 0.2) /30min
Effective emissivity 0.97□0.02
Power 220VAC 50Hz
Ambient temperature and humidity 0~40 / ≤80%RH

AI NVR
DHI-NVR5832-I

32/64 Channel IP video access
Smart H.265+/H.265/Smart H.264+/H.264/MJPEG
Up to 16 Channel perimeter protection
Up to 4 Channel video stream face recognition
Up to 24 face pictures /sec processing
Up to 20 face databases with 100,000 face images in total

Products | Digital Signage&White board

LDV55-SAI200

- FHD, indoor, floor-standing
- Display mode: Portrait
- Brightness: 400cd/m²
- Viewing angle: 178°/178°
- Built-in Wi-Fi module, speakers
- 24/7 Operation
- Android OS
- Decoding capacity: 1CH@4K or 3CH@1080P
- Metal frame, protective glass

LU□5/75/8□-LT□00
HiBoard-A□5/75/8□H

- High performance
- 4K UHD & wide viewing angle
- Dual system switchable Android/ Windows (optional)
- Wireless projection and interaction
- Multi-points writing -20 points

Values

High Accuracy

□0.3 with blackbody

High Efficiency

Non - contact temperature detection, quick screening
Long distance, wide coverage and multi – person detection

Low Cost

Automatic early warning mechanism, saving a lot of manpower and reduce the risk of cross-infection

Strong Adaptability

Applied to small scenes such as entrances and exits
Large scenes such as airports and railway stations with dense personnel

Dating Back

Realize the historical data backtracking, data analysis and so on combined with the platform

Scenarios

Epidemic Period

General Period

Competitive Analysis----Why choose Dahua

Dahua's own products, will provide customers with the one-stop solution

High Accuracy

Temperature measurement accuracy:
□ 0.3

High Efficiency

Efficiency improved by
800%

Safe & Contactless Measurement

Max. measurement distance:
3m

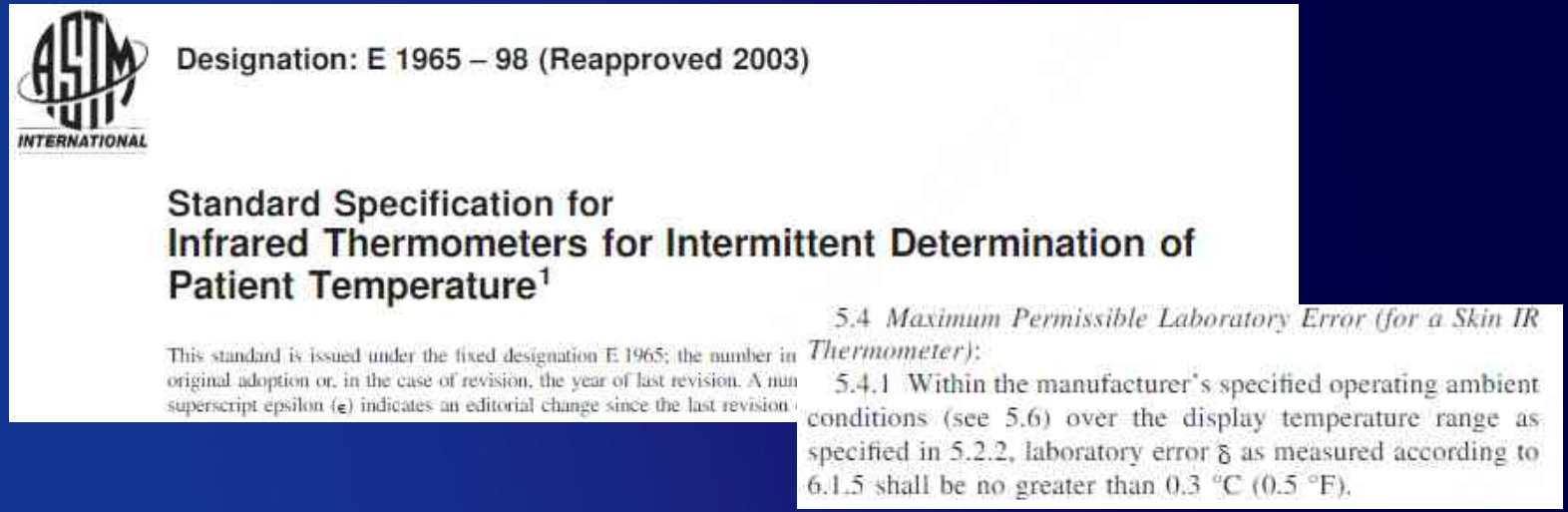
Multi-target Measurement

Up to **30 targets** detection at the same time

Mask Detection& Face Recognition

Detection accuracy:
> 95%

Competitive Analysis----International Standard



Designation: E 1965 – 98 (Reapproved 2003)

Standard Specification for Infrared Thermometers for Intermittent Determination of Patient Temperature[1]

This standard is issued under the fixed designation E 1965; the number in original adoption or, in the case of revision, the year of last revision. A num superscript epsilon (ε) indicates an editorial change since the last revision

5.4 *Maximum Permissible Laboratory Error (for a Skin IR Thermometer)*:

5.4.1 Within the manufacturer's specified operating ambient conditions (see 5.6) over the display temperature range as specified in 5.2.2, laboratory error δ as measured according to 6.1.5 shall be no greater than 0.3 °C (0.5 °F).

- **American Society for Testing and Materials(ASTM) defines electronic instruments intended for intermittent monitoring of patient temperatures**
- **For the measurement error of infrared thermometers should not greater than 0.3**

Competitive Analysis---- Video Surveillance Products ≠ Body Temp. Measurement

Security Group Products

See the World in a New Way

DS-2TD1217-2V1/3V1/6V1	DS-2TD2617-3V1/6V1
	
Vanadium Oxide Uncooled Focal Plane Arrays	Vanadium Oxide Uncooled Focal Plane Arrays
< 40 mK(@25 °C,F# = 1.1)	< 40 mK (@25 °C,F# = 1.1)
17 μm	17 μm
160 × 120	160 × 120
1/2.8" Progressive Scan CMOS	1/2.8" Progressive Scan CMOS
1920 × 1080	1920 × 1080
-20 °C to +150 °C (-4 °F to +302 °F)	-20 °C to +150 °C (-4 °F to +302 °F)
± 8 °C (± 14.4 °F)	± 8 °C (± 14.4 °F)

Products Showcase

Fever Screening Thermal Products:

DS-2TD1217/V1 (C version)

- 160*120 thermal resolution
- NETD <= 40mK
- 3/6mm thermal lens
- 4/6mm optical lens
- Support thermal and optical image fusion
- Temperature measurement range: 30-45℃
- Temperature accuracy: ±0.3℃ with black body ±0.5℃ without black body
- Support AI face detection
- Support audio alarm

DS-2TD2617/V1 (C version)

- 160*120 thermal resolution
- NETD <= 40mK
- 3/6mm thermal lens
- 4/6mm optical lens
- Support thermal and optical image fusion
- Temperature measurement range: 30-45℃
- Temperature accuracy: ±0.3℃ with black body ±0.5℃ without black body
- Support AI face detection
- Support audio alarm

DS-2TP31B-3AUF

- 160*120 thermal resolution
- NETD <= 40mK
- 3 thermal lens
- Temperature measurement range: 30-45℃
- Temperature accuracy: ±0.5℃

- **The camera model is same as the general one for the video surveillance application**
- **The camera wasn't supposed to be T model, now it supports temperature measurement with 0.5 accuracy without any hardware change?**

Competitive Analysis----A certain distance ≠ The safe distance

Solution composition:

Thermographic handheld camera + Tripod (Optional) + Monitor operator

Solution Advantages:

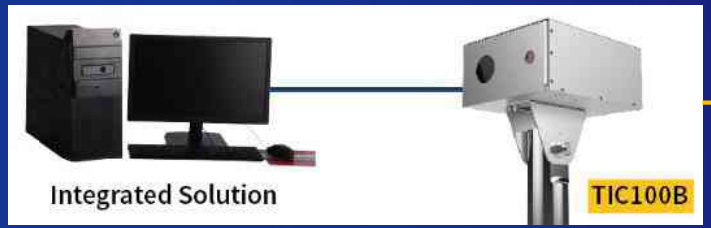
- Flexible and simple to use
- Rapid setting up and adapt to sudden event
- Accuracy is ±0.5 degree, satisfy preliminary fever screening requirement

Set up tips:

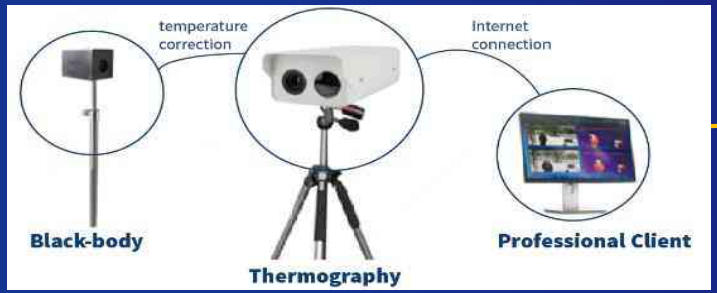
- The camera is recommended to install in 1.5 meter high, keep the distance between target and camera about 1m
- Recommend to install in a stable environment without wind indoors.
- People pass by the thermographic camera one by one , the operator read the maximum value in the screen.

- **Low resolution, small field of view, shorten measuring distance, less than 1m actually**
- **The measuring distance at 1m, which cannot reach a safe distance, increasing the risk of cross-infection**
- **It is just to measure the highest temperature point of the picture, without the face detection as a foundation**
- **Can‘t get the human body value if gets other hot sources in the picture**
- **It can only test one person at one time, Simple screenshot is no meaningful, needs to establishment of abnormal temperature and personnel information**

Competitive Analysis----Provide products ≠ Be professional



- Low resolution
- Poor temp. measurement accuracy without blackbody
- No intelligent function



- High price
- Old detector with MC-Si
- No intelligent function
- Undersupply

Most brands are OEM from other manufacturers' products for epidemic situation, the product quality, after-sales, technical support are going to be a problem. They does not have a dedicated thermal imaging product line, It cannot be fully controlled, Delivery capacity is limited by suppliers.

Competitive Analysis----Dahua Competition strength summary

VS Traditional CCTV Brand

Highlight delivery and accuracy

1. Better thermal cameras performance: 400*300, more details, more accuracy;
2. Safer detection distance(3m), contactless temp measurement.
3. Better stock, supply(Blackbody)
4. Better AI NVR performance: such as face recognition, perimeter protection, SMD Plus, people counting; Better incoming bandwidth(320Mbps VS 80Mbps)
5. Support abnormal human temperature alarm combined with face recognition

VS Dedicated Brand

Highlight delivery and AI functions

1. Higher Efficiency with up to 30 targets detection at the same time
2. More AI functions: such as face recognition, perimeter protection, SMD Plus, people counting and so on
3. More competitive price with similar solution

Dahua Overseas thermal successful cases

Dahua Overseas thermal successful cases

ALTRON
Sense the Difference

alhua TECHNOLOGY

Thermal Body Temperature Measurement Solution

Dahua India

2020.06

Authorised Dealer

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