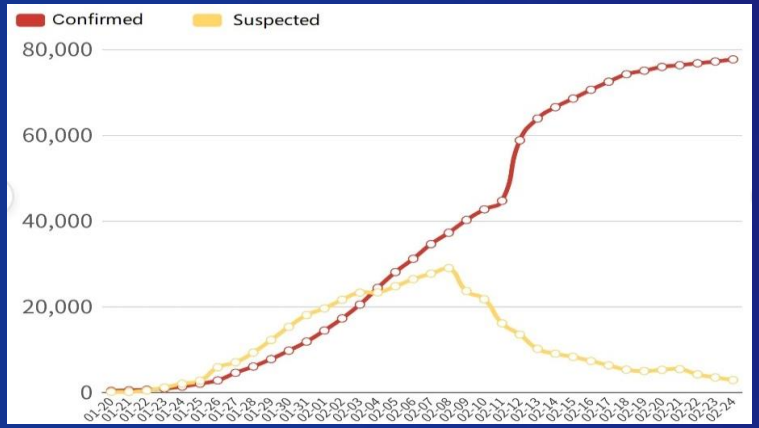
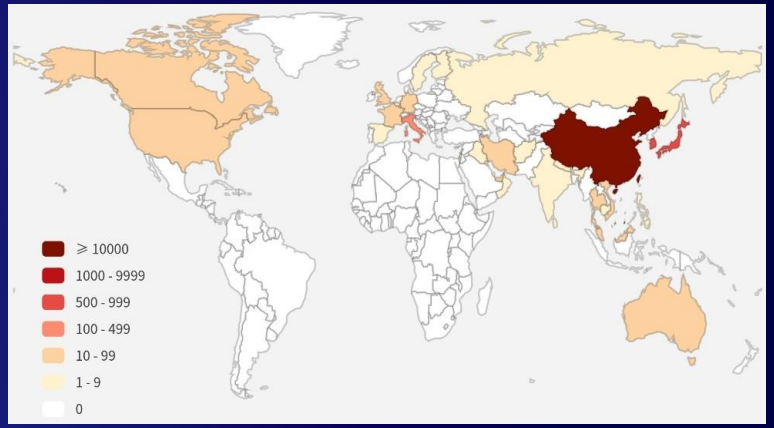
Thermal Body Temperature Measurement Solution

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.



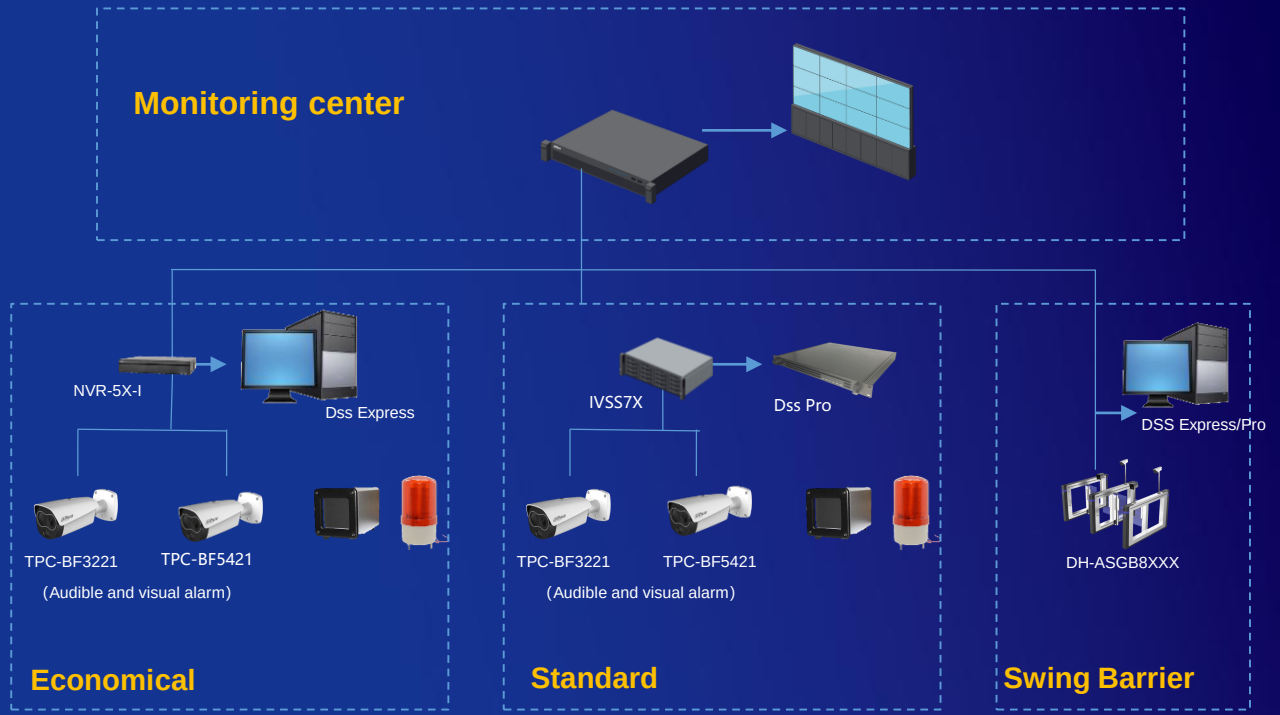


Status Analysis

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

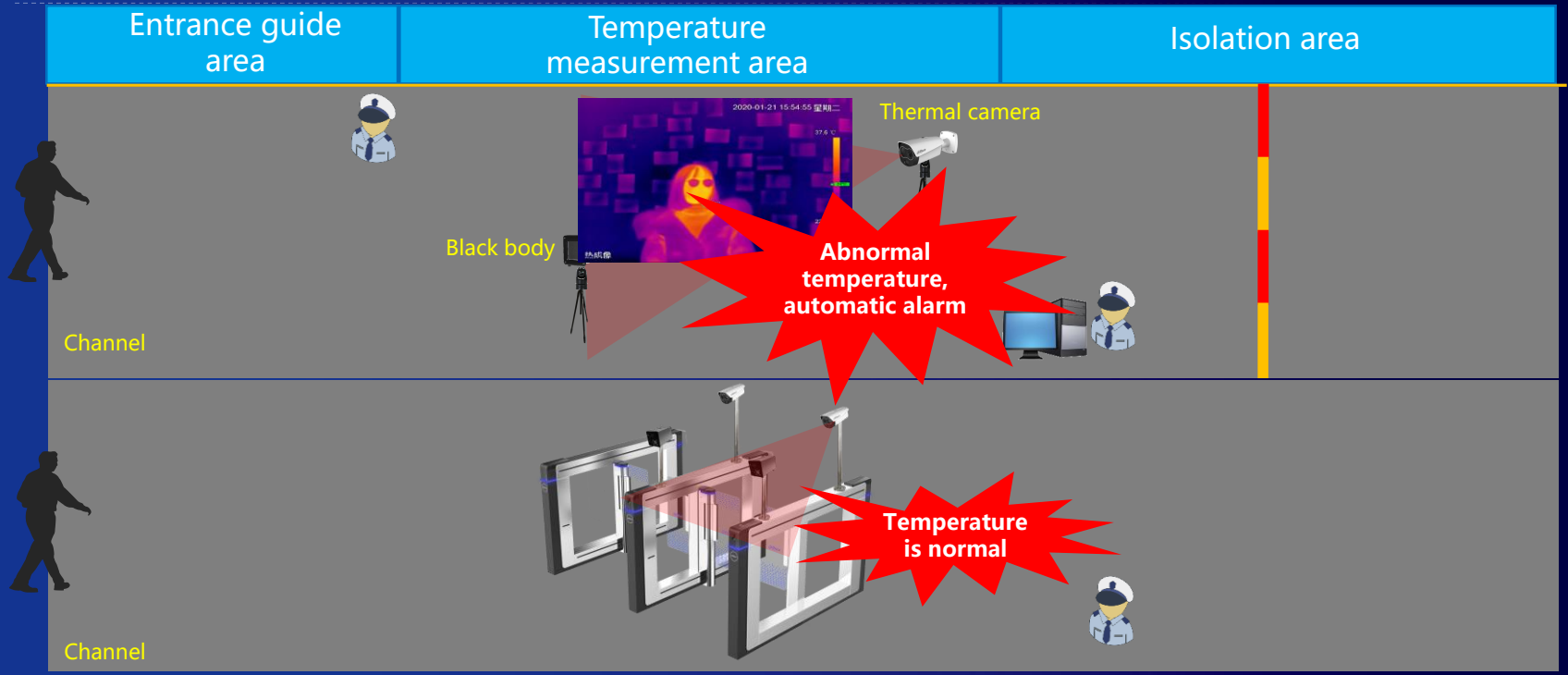
Non-contact temperature measurement

Manual review

Abnormal confirmation

Activate emergency plan

Solution | Process



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

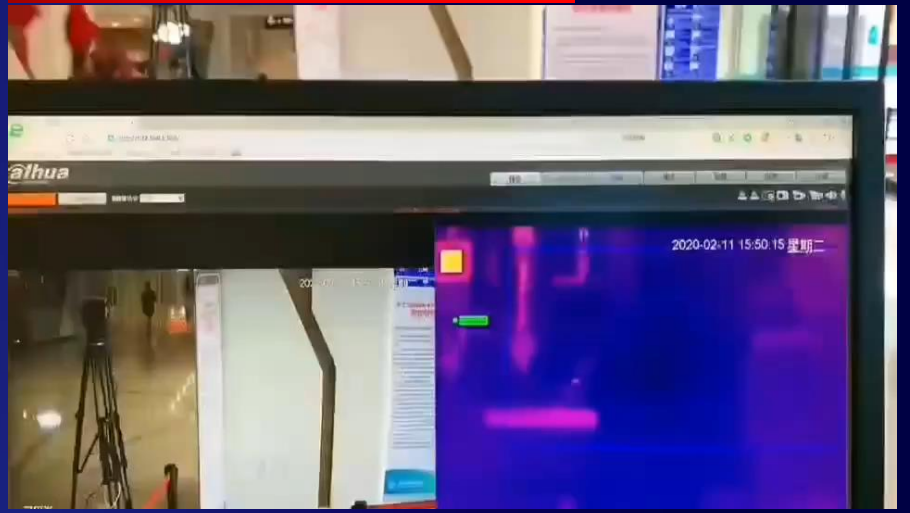
Visible + thermal algorithm with human body and face detection technology, reduce the false alarm rate

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

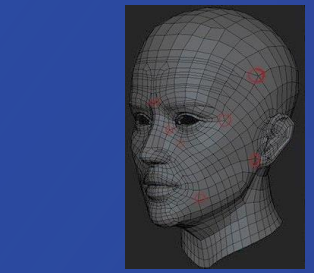
- **Traditional forehead thermometer**

  3 s/person，total 4.2 hours

- **Thermal**

  3 person/s，total 30 minutes

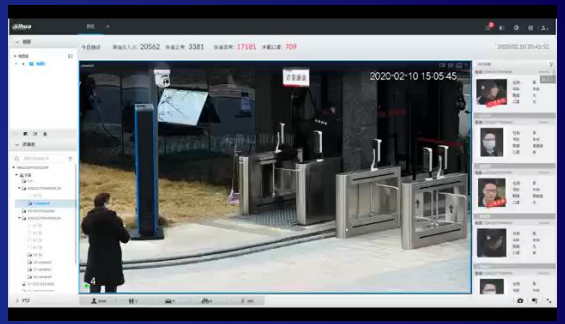
Solution | Face recognition + mask recognition



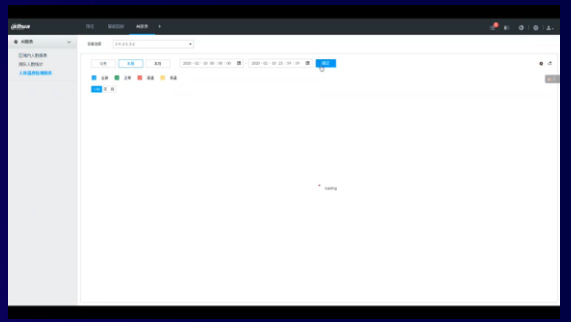
IVSS

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

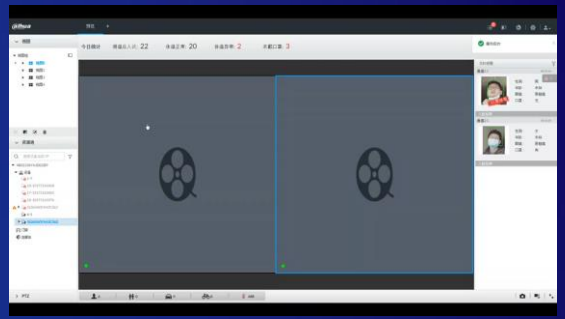
Mask recognition



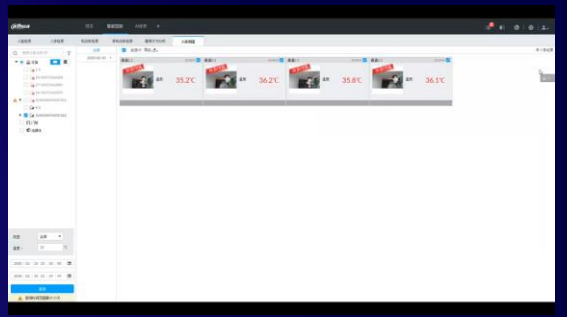
Data statistics



Face recognition



Report export



Configuration

Temp measurement part

Blackbody

TPC-BF3221

TPC-BF5421

Optional

Accessories part

Camera power

Tripod

Connector

Storage & analysis part

DHI-NVR5X-I

DHI-IVSS7X

Optional

Display part

22-inch 1080P Plastic
DHL22-F600-S

27/43/50/55-inch 4K Plastic
LM27/43/50/55-F410

49/55-inch 4K Metal
LM49/55-S400

Optional

Products

Thermal Network Value Hybrid Bullet Camera
DH-TPC-BF3221

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

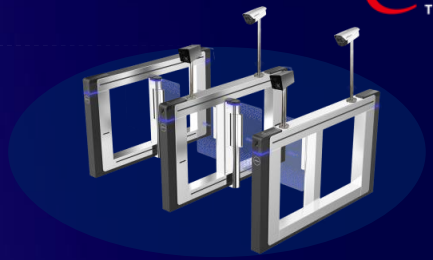
Thermal Network Hybrid Bullet Camera
DH-TPC-BF5421

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
JQ-D70Z

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



Temperature measurement turnstiles
DH-ASGB8XXX

Human temperature measurement module：
Temperature measurement range：30℃～45℃,
Temperature measurement accuracy：
±0.3℃，with blackbody
±1℃，without blackbody
Features: face detection, face temperature measurement, sound and light warning

Turnstiles module：
Pedestal material：304 stainless steel, thickness 2.0mm
Motor type：Servo motor
IR Light Detectors: 30 pairs
Lane width ： 600mm~1000mm
Barrier material: Acrylic glass
Features: face recognition, IC card, qr code, fingerprint and other optional
Power: AC 100-240V/50~60HZ

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

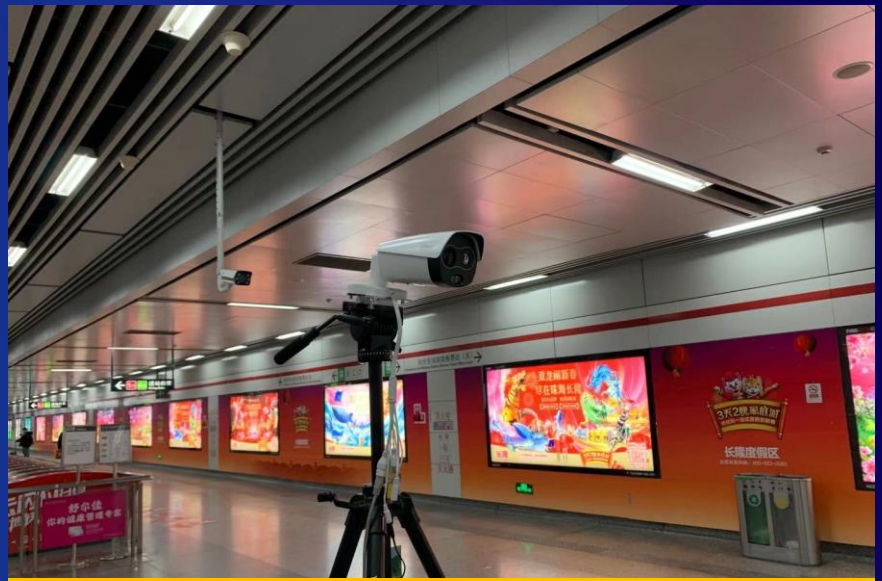
Realize the historical data backtracking, data analysis and so on combined with the platform

Scenarios

Epidemic Period

General Period

Success Case



Hangzhou Metro

Hangzhou metro line 1 adopts Dahua thermal human temperature measurement solution at Hangzhou east railway station, one of the largest transportation hubs in Asia, realizing remote non-contact temperature measurement with high temperature measurement accuracy (±0.3°).

Success Case

Shanghai railway station

Dahua thermal human temperature measurement solution helps Shanghai railway station, one of the busiest railway station in the world, to realize rapid human body temperature measurement with dense crowds and find people with abnormal body temperature timely.