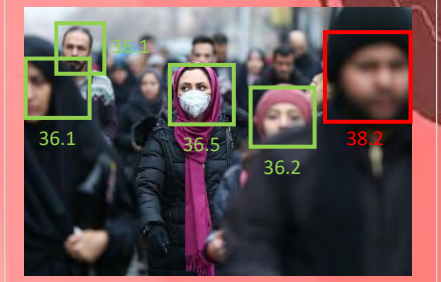


CORONAVIRUS

ATS2020 SERIES

ARTIFICIAL INTELLIGENCE + THERMAL CAMERAS FOR RAPID FEVER SCREENING
FOR HIGH ACCURACY IN CROWDED SPACES

MOST ADVANCE ONVIF & AI BASED THERMAL CAMERAS, SOCIAL DISTANCING & VIDEO ANALYTIC SOLUTIONS

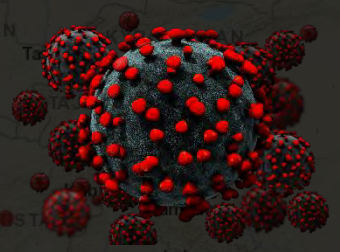
V028.03

CURRENT STATUS

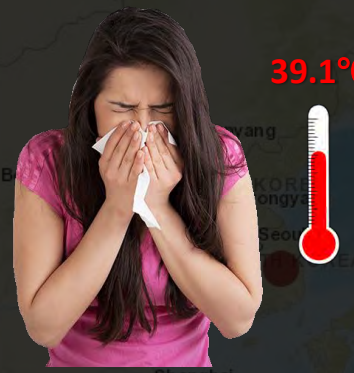
NOVEL CORONAVIRUS STATUS

12,849,435 Confirmed Cases
567,783 Deaths
7,484,280 Recovered
Last Update: 11:56 AM 12th Jul. 2020

KEY SYMTPOMS



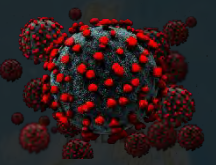
CORONAVIRUS



FEVER

MAIN PURPOSES OF TAKING BODY TEMPERATURE

Effective screening of possible fever that could be related to the infectious virus



Make sure the area is free of infection and for segregation of possible carriers

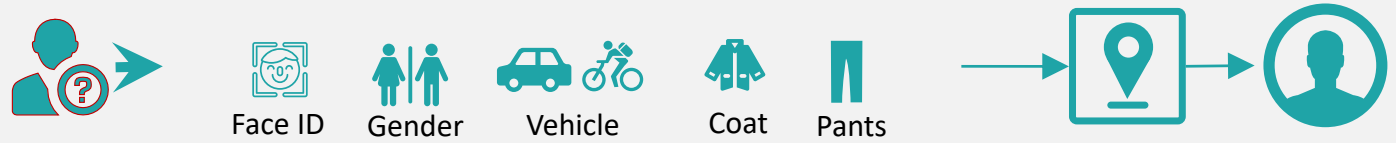
The Solution of (virus carrier) Suspect Track

SOLUTION INTRODUCTION

Coronavirus disease (COVID-19) outbreak, The intelligence tracking solution of virus carriers (or suspect) based on video artificial intelligence, big data analysis and cloud computing technology can effectively help the epidemic management Org. to identify the contacted people and suspected area.

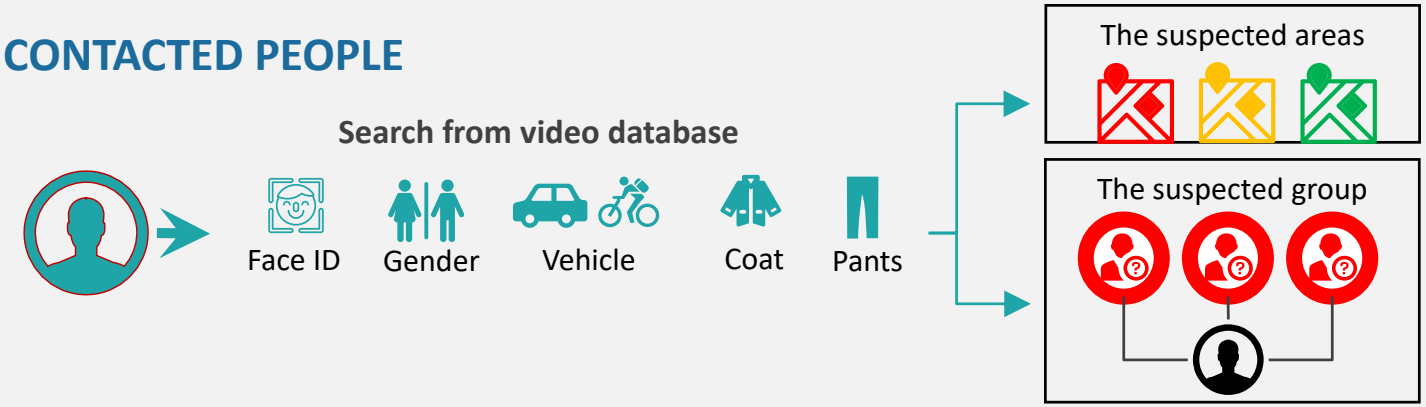
APPLICATION SCENARIOS

Scenario Description: When the virus carried suspect disappeared, positioning the location and scope of the suspect



SCENARIO-2 TRACK THE ACTIVITY AREAS AND THE CONTACTED PEOPLE

Scenario Description: When the virus carried suspect has effectively diagnosed , identifying the suspected area and the contacted people visited by the suspect



Why Thermography is the Best Solution?

IN EARLY WARNING HUMAN FEVER DETECTION

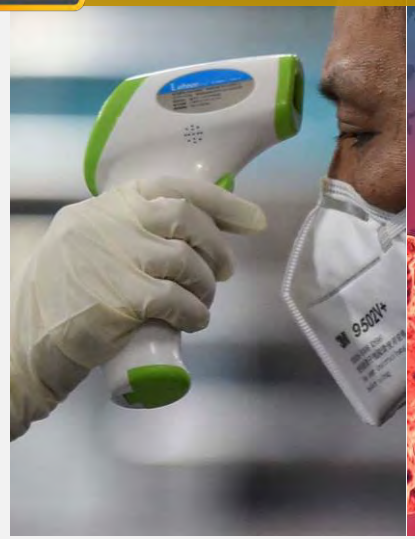
The aim of this presentation is to inform those considering using VNS Infrared Thermographic imaging as a mass screening system for fever detection through remote Infrared Thermography. These solutions are recommended for crowded areas that needs to be screened for the presence of fever related to COVID19.

VNS Thermographic cameras measure the infrared energy emitted by the Human Body remotely and consequently with operation simplicity as **NO PHYSICAL CONTACT** with the sensor or personnel presence is necessary.

Why Thermography is the Best Solution?

IN EARLY WARNING HUMAN FEVER DETECTION

POTENTIAL THREATS



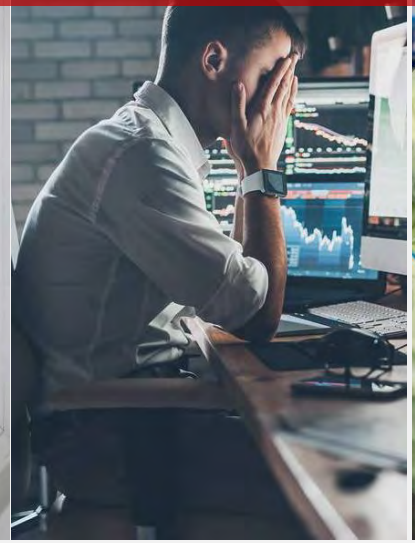
Virus Infected individuals

Travelers from High Risk countries

Unscreened groups of people

CAN CAUSE

Quarantine and Isolation Situations



Business and Revenue Loss

Loss of Human Life

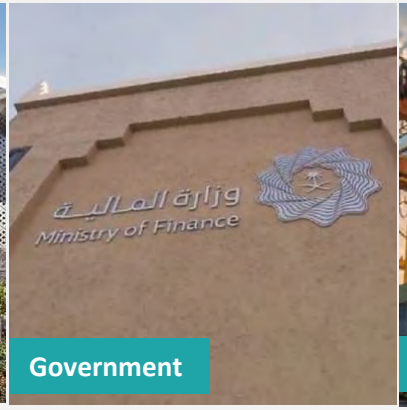
Live Monitoring

FOR EARLY WARNING FEVER DETECTION CAN BE APPLIED IN…

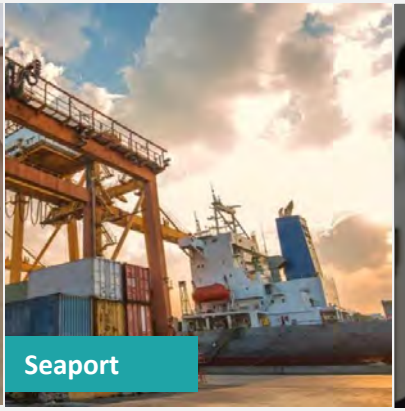

Enterprise Suits


Educational Institutes


Transportation Hubs



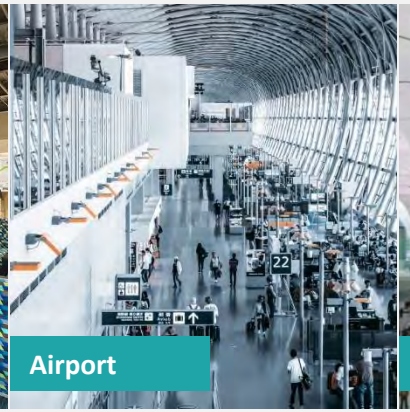
Government


Seaport

- Government
- Office Buildings
- Hospitals & Hotels
- Banks
- Stadiums
- Large Logistic Centers –Industrial sites
- Military Installations
- Religious Places


Factory


Bank


Airport


Railway

CHALLENGE

1

Manual inspection require manpower consumption

2

Easy to cause stagnation and cross infection

3

No accumulated data for tracking & process improvement

TRADITIONAL SOLUTION

Mercury Thermometer

Electronic Thermometer

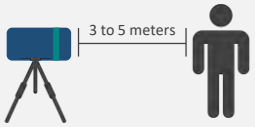
Infrared Thermometer

In-ear Thermometer

Stellar Series Fever Detection System

THERMAL CAMERA

Up to 16 multiple targets Simultaneously



Measurement distance 3 to 5 meters

Accuracy ±0.3°C

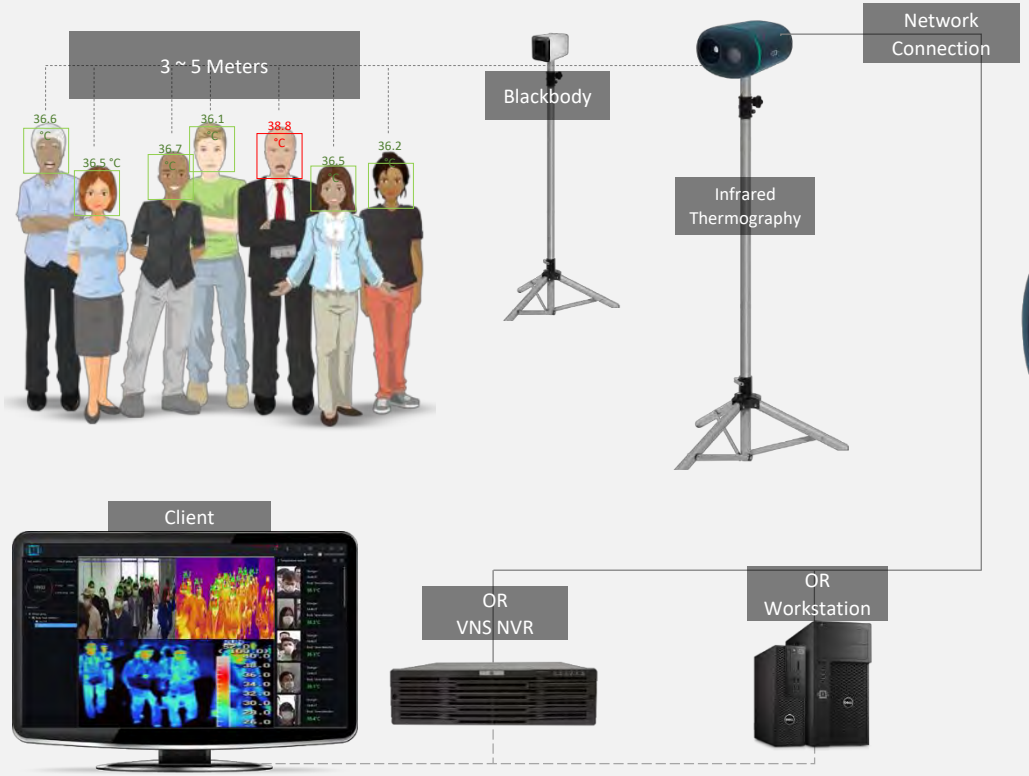
Response Time 30ms

Support mask detection and face identification with mask

Over Temperature Alarm Function

ONVIF Compliant

One IP address, two channels for thermal and visible streams



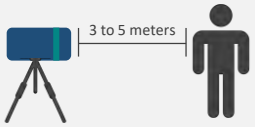
- On-board temperature detection AI algorithm
- Effective thermal pixels 400×300
- Effective visible pixels 1920x1080
- Thermal: 8mm Fixed lens, Visible: 2.7-12mm motorized lens
- Networkable enterprise solution
- Record & manage via compatible AI powered NVR
- Integration option with VMS via SDK
- Windows workstation recording option

Uncooled IRFPA Microbolometer, Sensor Pixels 400(H) ×300(V), Pixel Size 17um, NETD 40mK @F1.0, Spectral Range, 8~14um, 8mm Thermal Lens@F1.0, Angle of View H: 46°, V: 35.3° 1/1.9" Sony CMOS 2MP Network Camera Visible: 2.7-12mm motorized lens 120db DC12V IP66

Sterling Series Fever Detection System

THERMAL CAMERA

Up to 16 multiple targets Simultaneously



Measurement distance 3 to 5 meters

Accuracy ±0.5°C

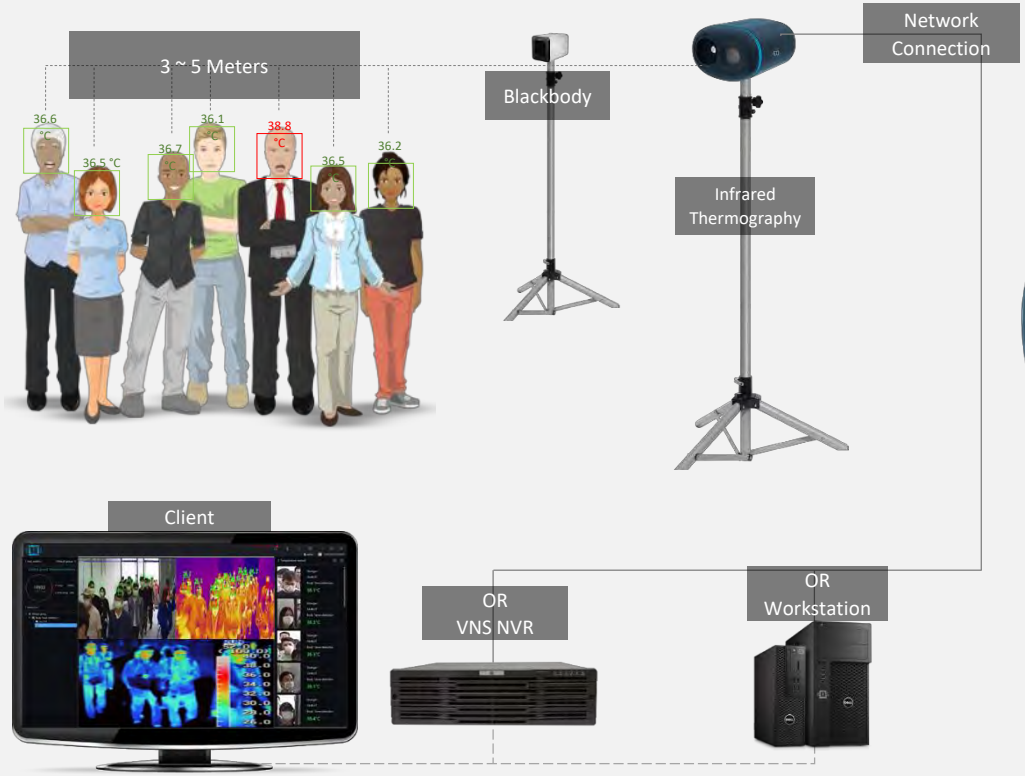
Response Time 50ms

Support mask detection and face identification with mask

Over Temperature Alarm Function

ONVIF Compliant

One IP address, two channels for thermal and visible streams



- On-board temperature detection AI algorithm
- Effective thermal pixels 320×240
- Effective visible pixels 1920x1080
- Thermal: 8mm Fixed lens, Visible: 2.7-12mm motorized lens
- Networkable enterprise solution
- Record & manage via compatible AI powered NVR
- Integration option with VMS via SDK
- Windows workstation recording option

Uncooled IRFPA Microbolometer, Sensor Pixels 320(H) ×240(V), Pixel Size 17um, NETD 40mK @F1.0, Spectral Range, 8~14um, 8mm Thermal Lens@F1.0, Angle of View H: 46°, V: 35.3° 1/1.9" Sony CMOS 2MP Network Camera Visible: 2.7-12mm motorized lens 120db DC12V IP66

Demo of System in Operation

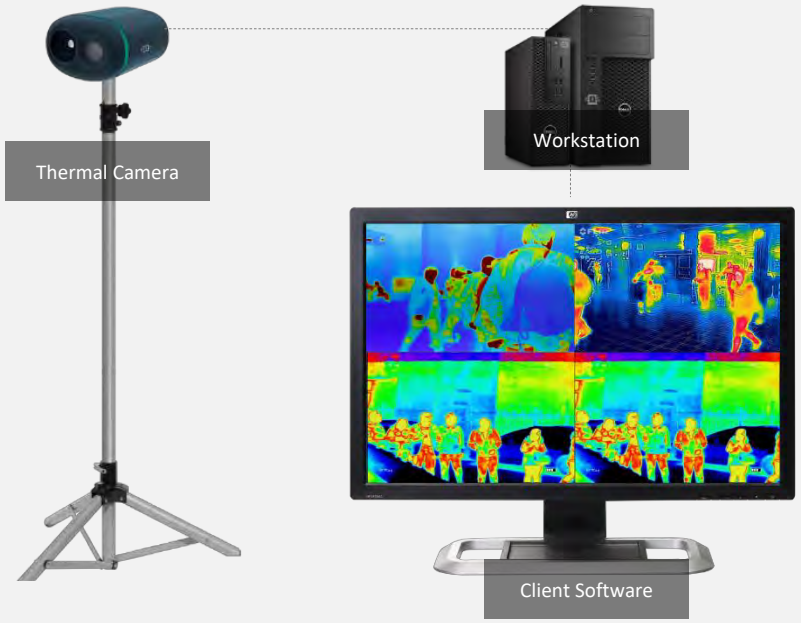
Watch on YouTube

Testing Thermal in VNS office - Graphic User Interface

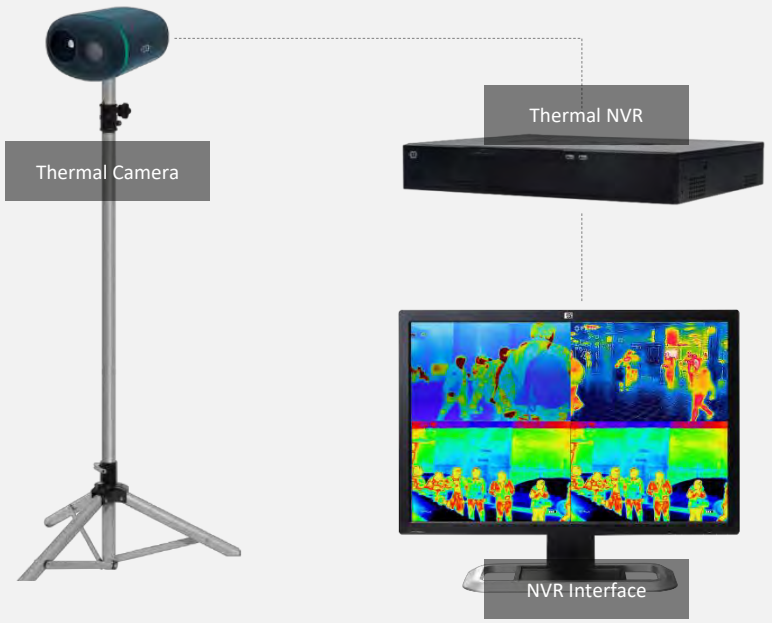
Stellar or Sterling Series Camera Configuration

THERMAL CAMERA

SINGLE POINT APPLICATION



THERMAL CAMERA

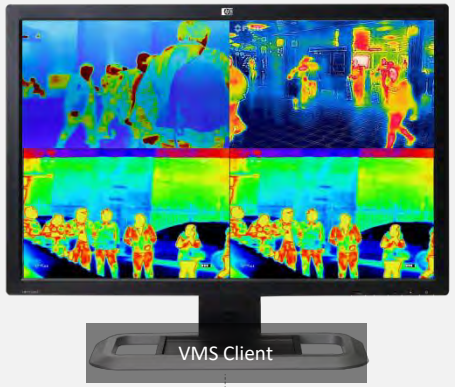


SMART THERMAL NVR

Stellar or Sterling Series Camera Configuration

THERMAL CAMERA

ENTERPRISE & LARGE SCALE APPLICATIONS



VMS Client

netavis

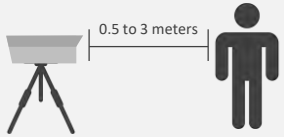
VMS Server with Netavis or any compatible VMS

Any numbers of Thermal Camera *

Basic Series Networked & Standalone Fever Detection System

THERMAL CAMERA

Up to 10 multiple targets Simultaneously



Measurement distance 0.5 to 3 meters

Accuracy ±0.4°C
±0.3°C with blackbody

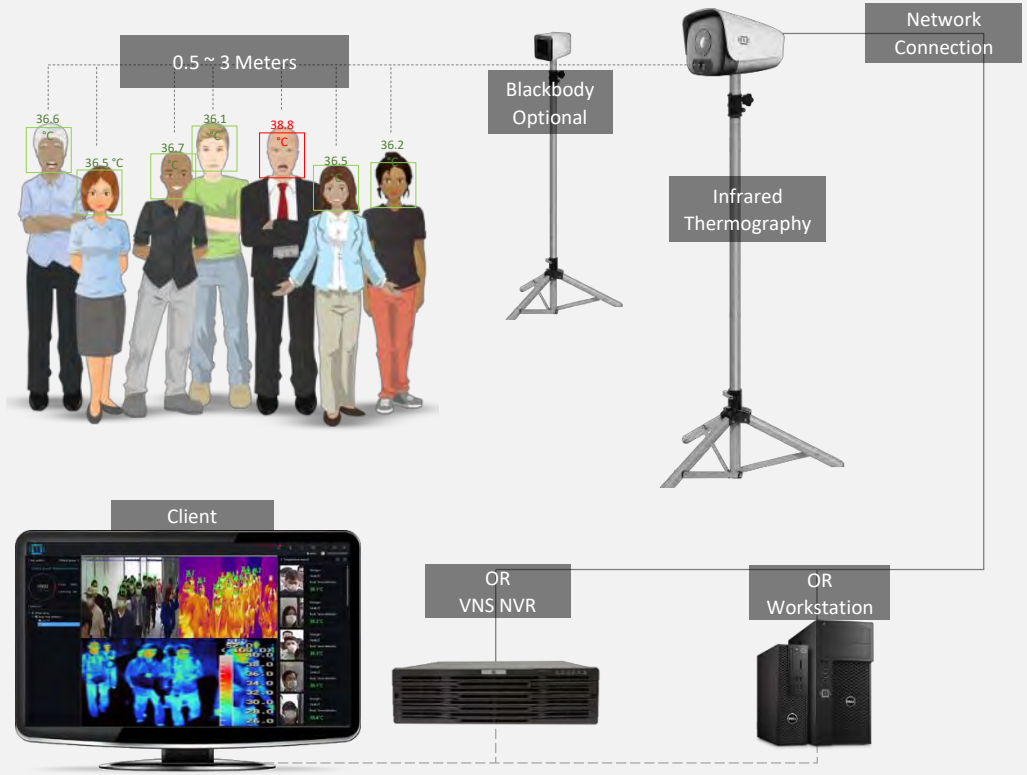
Response Time 30ms

Support mask detection and face identification with mask

Over Temperature Alarm Function

ONVIF Compliant

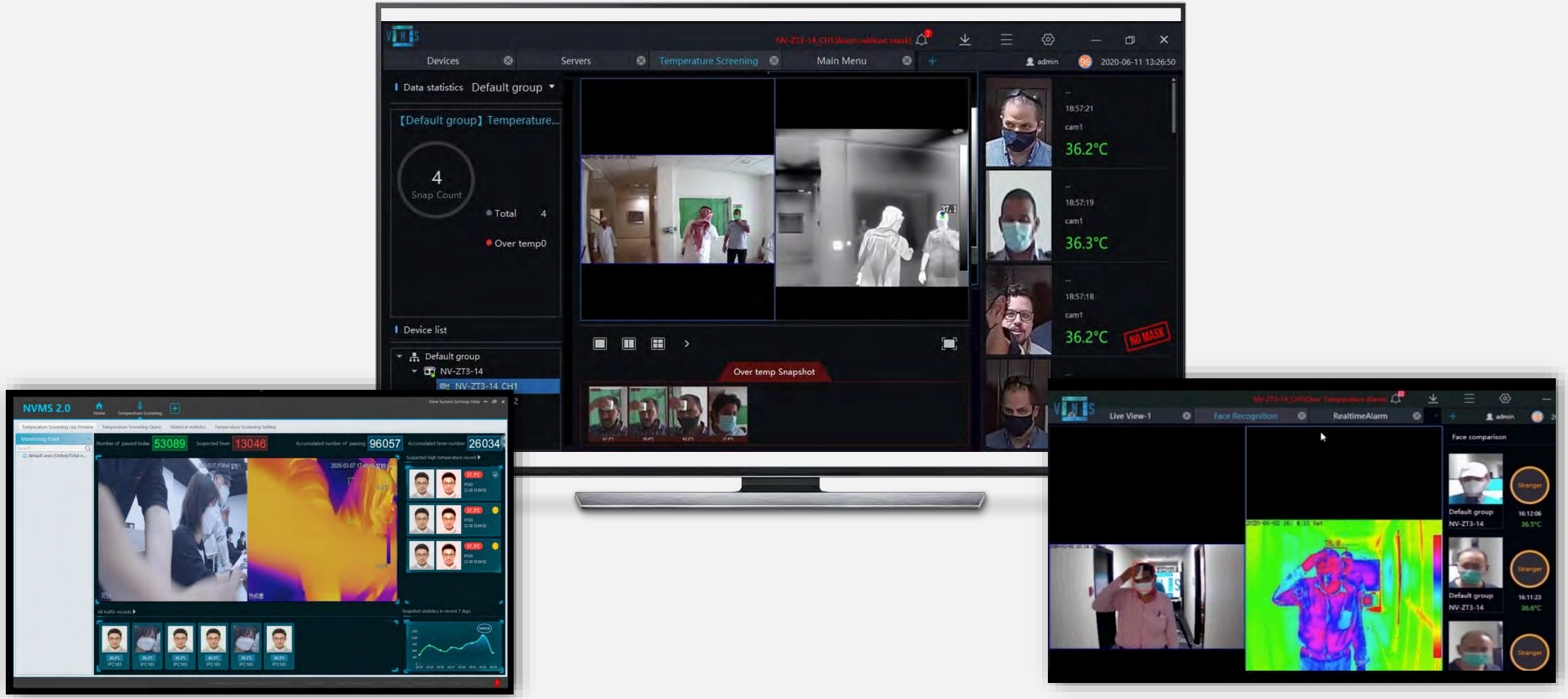
Simultaneous temperature display of visible and infrared thermal imaging



- On-board temperature detection AI algorithm
- Effective thermal pixels 256x192
- Effective visible pixels 2560×1440
- Thermal: 3.2mm Fixed lens, Visible: 4.0mm fixed lens
- Networkable enterprise solution
- Record & manage via windows workstation
- Real time thermal imaging, multi-target automatic temperature measurement
- Support historical alarm record query

Vanadium Oxide Uncooled Focal Plane Arrays, Resolution 256×192, 17µm, Waveband 8 µm to 12 µm, NETD 50mK, Range 30°C (86°F) to 45°C (113°F) FOV Horizontal 51°, 1/2.8" CMOS, 4MP, WDR 120dB, ONVIF (PROFILE S), SDK, CGI, DC12V±/PoE, IP67.

Examples of Thermal Graphic User Interface

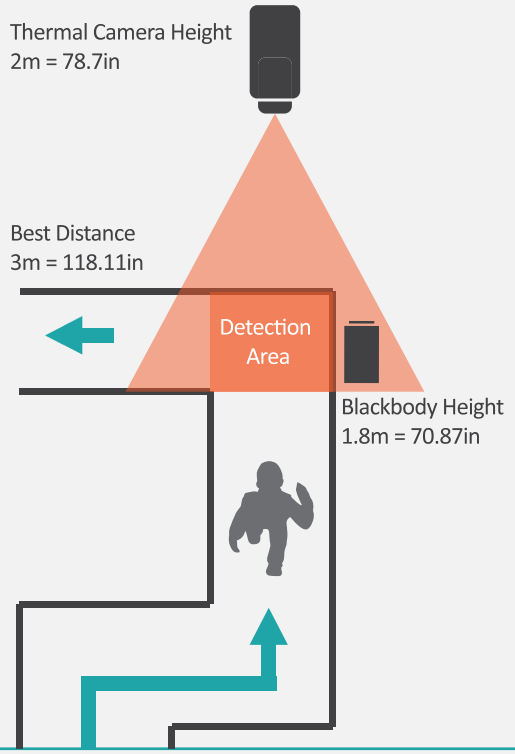


Typical Screening Process Recommend for all Models

Quick Inspection Channel

INSTALLATION DIAGRAM

Create a traffic flow with Social Distancing



SET UP A QUICK CHANNEL

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

THERMAL CAMERA QUICK SCREENING

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

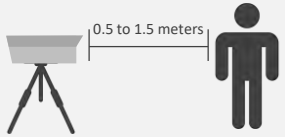
THERMOMETER SECONDARY CHECK

For the person who is showing high temperature and possible fever symptoms, an FDA approved thermometer should be used for secondary check is necessary.

Seek Scan Fever Detection System

FEVER DETECTION

Manufactured in United States of America



Measurement distance 0.5 to 1.5 meters

± 0.3°C (0.5°F) between 36°C to 40°C (96°F to 104°F)

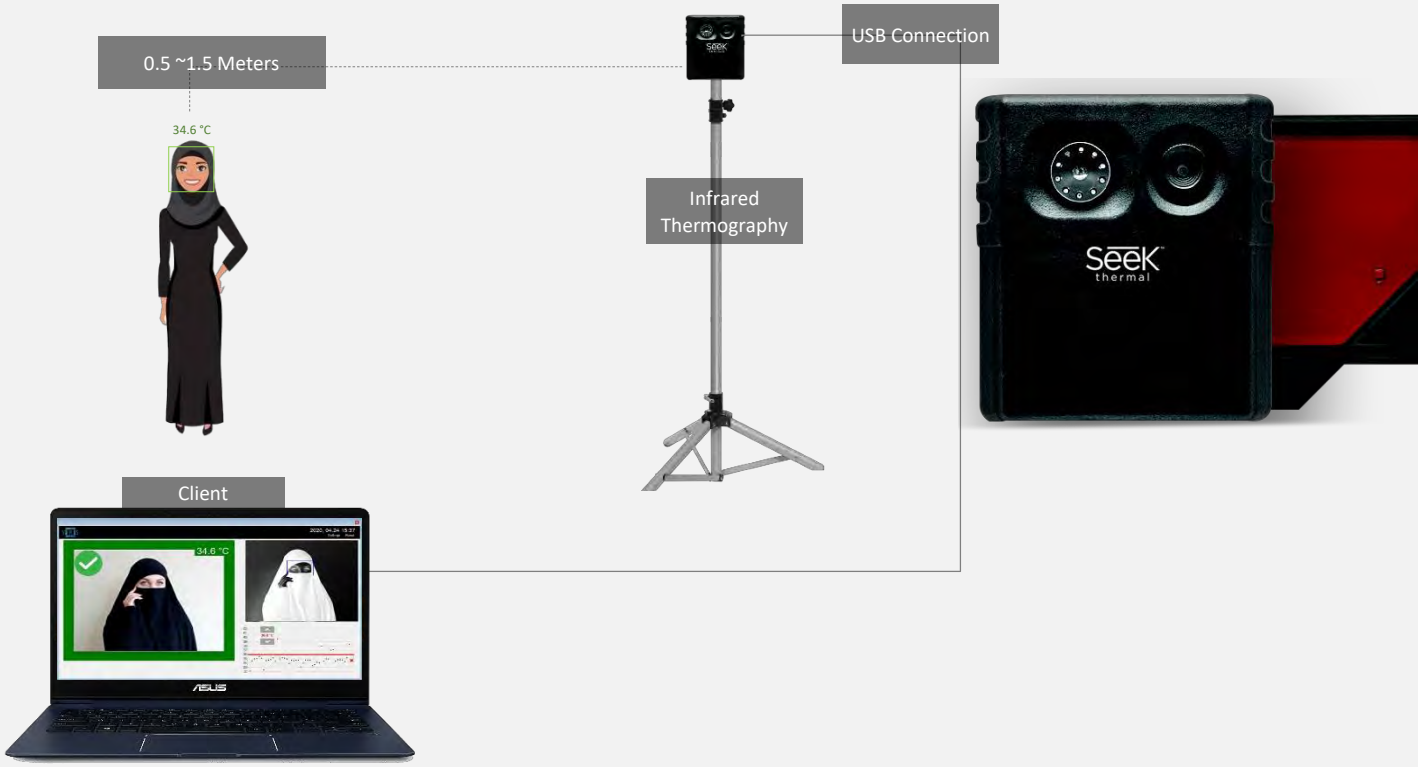
Response Time 2s - 4s

One Target At A Time

Over Temperature Alarm Function

Easy to use and manage via Windows workstation

Simultaneous temperature display of visible and infrared thermal imaging



- Accurate, automated and affordable
- Specifically designed and calibrated for skin temperature measurement
- Enables social distancing
- Perfect for offices, lobbies, hallways, shops and other key access points
- Set a customizable alarm temperature and start screening in minutes
- Set up Seek Scan in minutes using two tripods and a Windows PC.
- Priced significantly lower than other thermal screening solutions

Thermal Sensor Resolution 206 (h) x 156 (v), Visible Light Camera Resolution 640 x 480, Horizontal / Vertical Field of View 35° (h) / 26° (v), Lens Focal Length / F-Number 4.0mm / f/1.20, Frame Rate <9Hz, Power USB 5V (Plugs into Computer USB-A port), Dimensions (L x W x H) & Weight 3 x 8 x 9 cm / 140 g, Tripod Mount 1/4"-20 Standard Camera Tripod Mount, Sensor Sensitivity 40 mK (typical), <50 mK (max) @ 25°C (Post Signal Processing)

Examples of Seek Scan Thermal Graphic User Interface

System in Operation

Watch on YouTube

Rapid Face Recognition & Fever Detection Terminal

Smart Face Terminal is a multi-functional health, safety & security system that combines different detection technologies. It can detect face in real time with and without mask and provide authorized access. It is a low cost but high value suitable solutions for screening for possible presence of fever and it can integrate with time & attendance and access control systems. Best for offices and retail applications.

FACE DETECTION TERMINAL

- Built-in Microphone and speaker with soft white light
- 2MP Full HD dual-lens sensor for accurate recognition
- The face wearing masks can be recognized
- High accuracy body temperature measurement

ENTRY-19 SOCIAL DISTANCE SOLUTION

Do you know how many people are in your building right now?

Do you need to set limits on the number of people in one place?

Due to the COVID-19 crisis, many Governments around the world are putting restrictions and limits on the number of people that can gather in one place, such as a supermarkets, shops, pharmacies or public facilities.

These measures are designed to keep everyone safe and ensure people have enough room to distance themselves from other people nearby.

But how can you ensure you comply?

You may already be tasked with finding a solution.

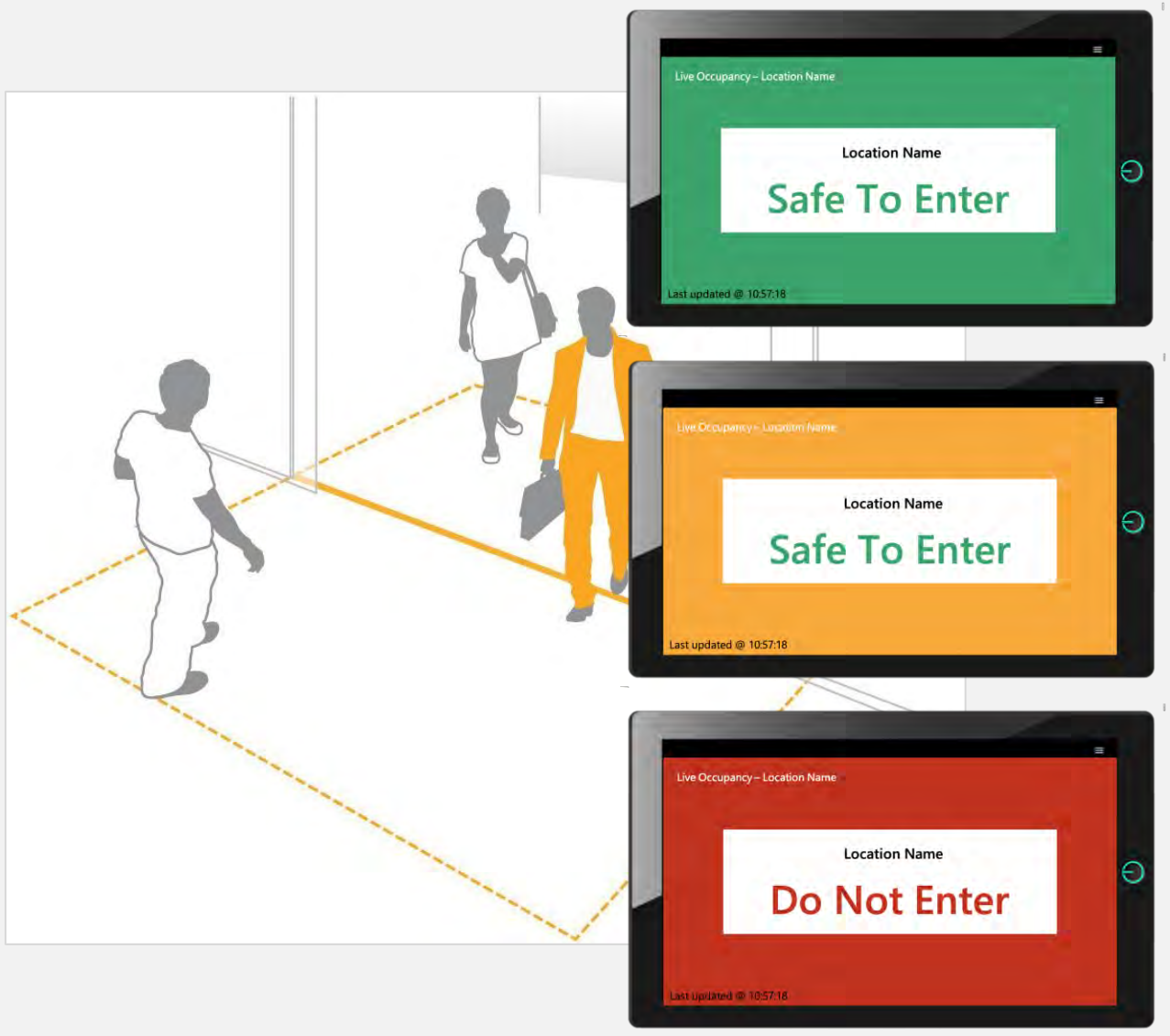
We have a solution.

netavis

ENTRY-19 Social Distancing Solution

- Live occupancy data with visual warnings and alerts when limits are approached or exceeded
- Location specific occupancy limits
- Anonymously and without recording video
- Options to exclude staff
- Data can be downloaded for further analysis.

99% Accuracy In real time Conformity with GDPR



How SafeCount Works?

Watch on YouTube

Strategic Benefits of using Artificial Intelligence

1. AI-based analytics are more reliable than human operators.
2. Smart rule engine can trigger automatic responses based on analytics-based alerts.
3. Automated data collection provides input for process improvements.
4. AI systems will improve and provide new functionalities in the future.
5. Automated optional dashboards and reports for security management.

Development Roadmap

- Social Distancing AI – Releasing May FY2020
- COVID-19 Patient Monitoring - Releasing Q2 FY2020
- Smart Security & IoT Solutions – Releasing Q2 FY2020
- Deep learning (DL) – Releasing Q3 FY2020
- 3D Facial Recognition Systems – Releasing Q3 FY2020

- Drone Detection Technologies such as Ground Radar
- VSaaS / Cloud Surveillance
- Cognitive Platforms
- Deep learning (DL) – Releasing FY2020
- Forensic video analytics as a service

Why should you choose VNS Solutions?

- High quality and precision USA, European & Global components, for high accuracy and smooth operations.
- High level customer satisfaction due to high accuracy, efficiency and ease of use.
- Most extensive portfolio of professional IP CCTV, fever detection & social distancing solutions using Artificial Intelligence – Thermographic Cameras, Smart Gates with integrated Temperature & Face Recognition Terminals, Access Control Face Recognition & Temperature Detection Terminals, Touchless Wrist based Temperature Detection Terminal with Face Detection Camera and Enterprise Thermographic cameras, that are high performance and field proven.
- Proven effective in real working environment with excellent results.
- Excellent pre and post sales technical and engineering support.
- Last but not the least, competitively priced yet high in value for excellent ROI.

THANK YOU

Disclaimer: The VNS product described in this presentation are not FDA approved medical devices, for use to accurately measure human body fever. Our solutions are auxiliary AI based tools to identify possible hazards in a fast- paced environment. All positive detections and alarms above the threshold should be further investigated using FDA approved thermometers to verify presence of fever that may be related to any virus, including COVID-19