

Svenska Kyrkans Ingenjörsförening

Fastighetsdagarna 2022

Hikvision – Alexander Ånfalk, Calle Hernodh

ADI Global – Göran Lövgren

Bravida Sverige – Gert Sandler

CONTENTS

- **Background**
- Product Introduction
- Applications
- Rules and Regulations

Background

- An average of 1,300 church fires are reported each year, causing millions in property losses
- One of The leading cause of church fires is arson
- The other is leading reasons are the result of mechanical/electrical failures. Faulty wiring and improperly functioning heating systems are often at fault, perhaps because they are in older structures and have not been brought up to local fire codes
- Of churches that reported fires, 65% had no smoke alarms and 96% had no sprinkler system.

Sources: NFPA and NFIRS



Fire at Notre Dame Cathedral, 2019

Background

- As the global price of commodities such as copper spiked in the spring of 2008, grave robbers discovered that cemeteries were a fertile ground for theft
- Grave robbers, a curse of burial grounds for centuries, are back for new valuables: metal ornaments that can be melted down for quick cash as copper and other metal prices climb
- Vandalism is another large problem



Cemetery secured by cameras

CONTENTS

- Background
- **Product Introduction**
- Applications
- Rules and Regulations

First Thermal

Infrared was discovered in 1800 by [Sir William Herschel](#) as a form of radiation beyond red light. These "infrared rays" (infra is the Latin prefix for "below") were used mainly for thermal measurement. There are four basic laws of IR radiation: [Kirchhoff's law of thermal](#)

The first infrared camera was **built in 1929**. It was a motion camera used by the British army for anti-aircraft operations following WWI. The military adopted the cameras quickly, and soon the technology was a vital part of defense strategy on both sides of the Atlantic.





What is thermal camera?

Any object with a temperature above absolute zero (-273°C) emits a detectable amount of thermal radiation. The higher an object's temperature, the more infrared radiation is emitted.

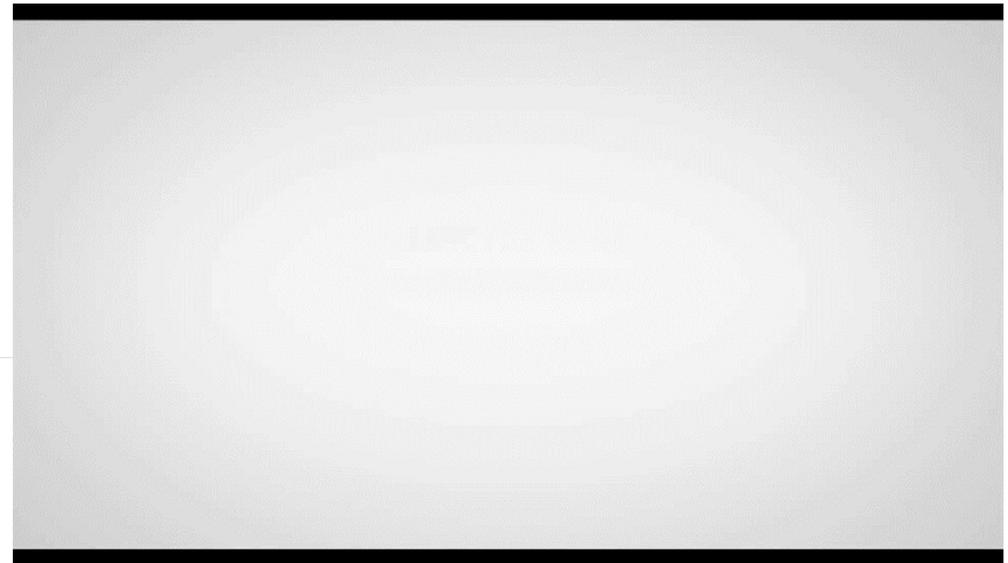
Although invisible to the human eye, the thermal radiation can only be detected by thermal cameras, which will produce images (thermogram) using temperature differences.



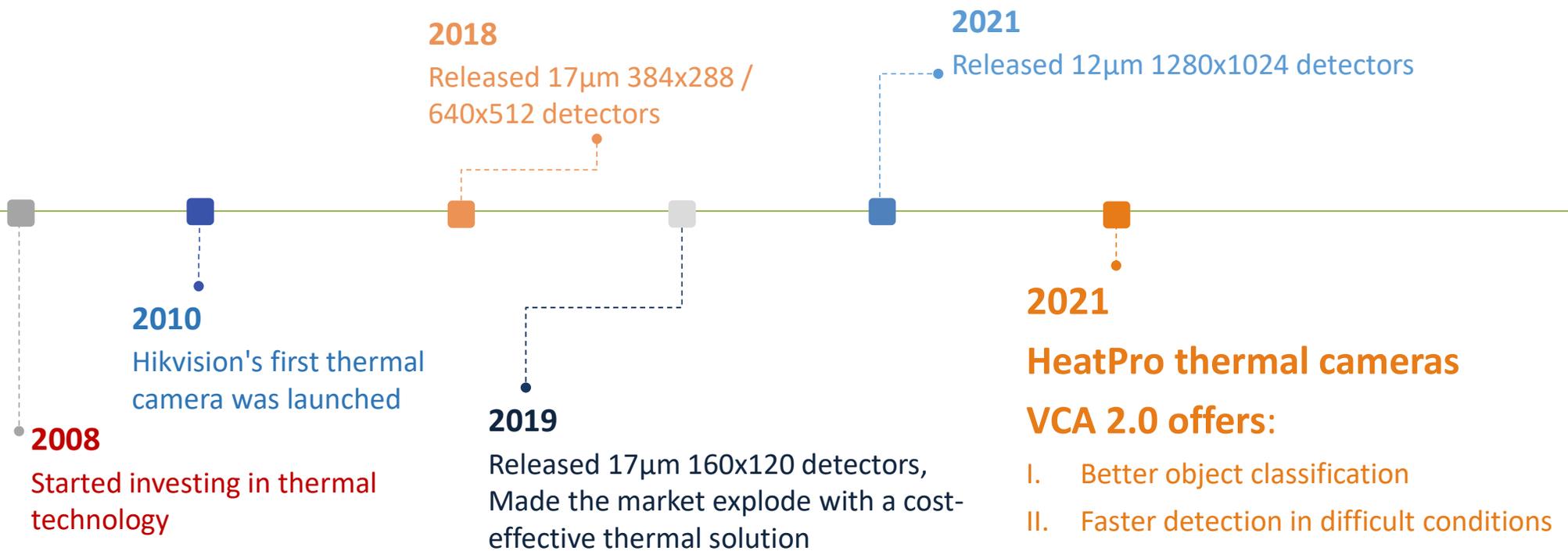
Why do we use thermal cameras?

Thermal cameras can see through :

- Total darkness
- Smoke / haze / smog
- Backlighting / Shadows / Reflections / Headlights / Blooming
- Rain / snow / fog



Milestones in Hikvision's thermal development





Accurate Object Classification

Accurate recognition of man and vehicle, strong reduction false alarms.

Why Thermal?

False Alarm Filter

For the best accuracy, we recommend a multi-line configuration to reduce false alarms:

Draw multiple lines like the example
Configure a maximum and minimum box for each line



See Far, Go Further

HeatPro Installation instructions:

Under the lower angle of 45 degrees;
Installation height 2.5m-4.5m 5x focal length within the effective distance, animals do not frequently appear this version of animal false positives have an increase, but the promotion is limited, for the distant animal pixels are relatively few, or not in the algorithm library of animal types, may also lead to false positives; Usually do not need, if there are more animals in the scene, you can filter

Why Thermal?

- No Backlighting



See Far, Go Further

Why Thermal?

- More accurate alarms



See Far, Go Further

Why Thermal?

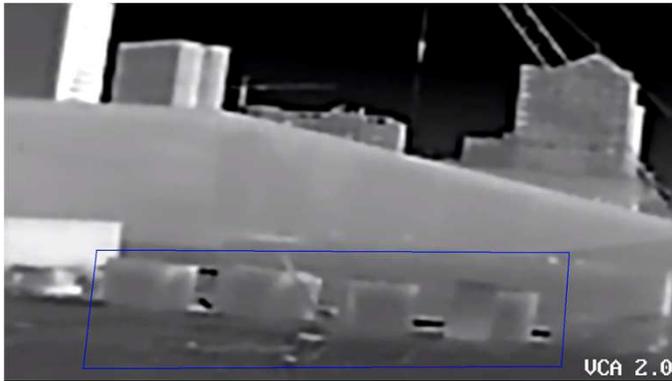
- Detect hidden people



Why Thermal?

- More detailed images

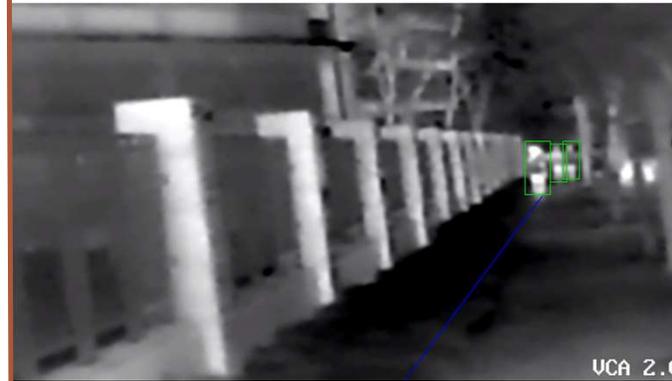




Construction Site

HeatPro thermal cameras accurately and instantly detect perimeter break-ins, enabling security personnel to react swiftly to minimize loss.

See Far, Go Further

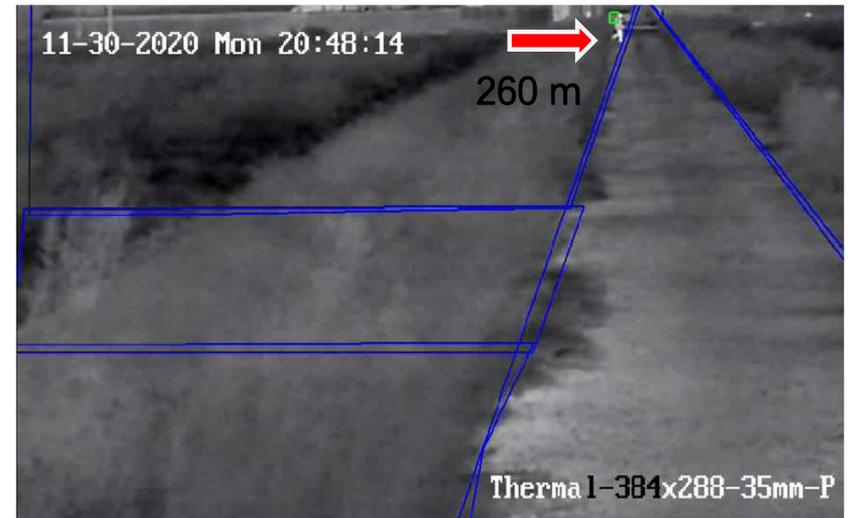


Community

With better accuracy than traditional security solutions, thermal solution reduced security costs and losses, contributing to increased profits.

Why Thermal?

- See Further:



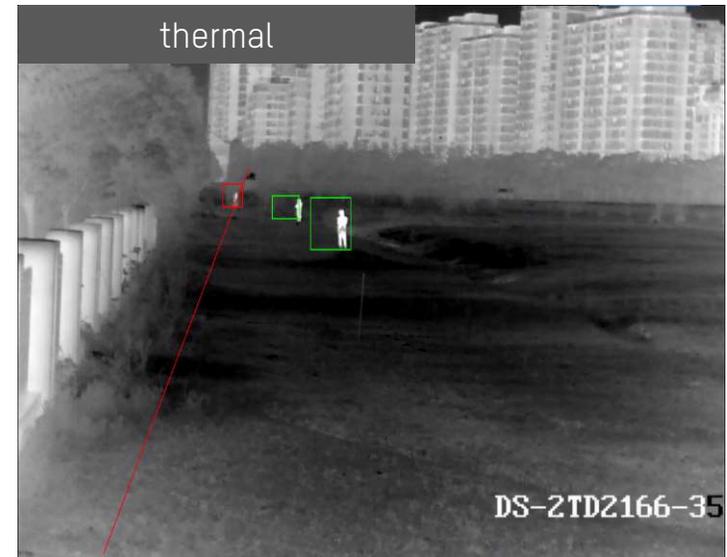
See Far, Go Further

Why Thermal?

- See Further:



Visible camera

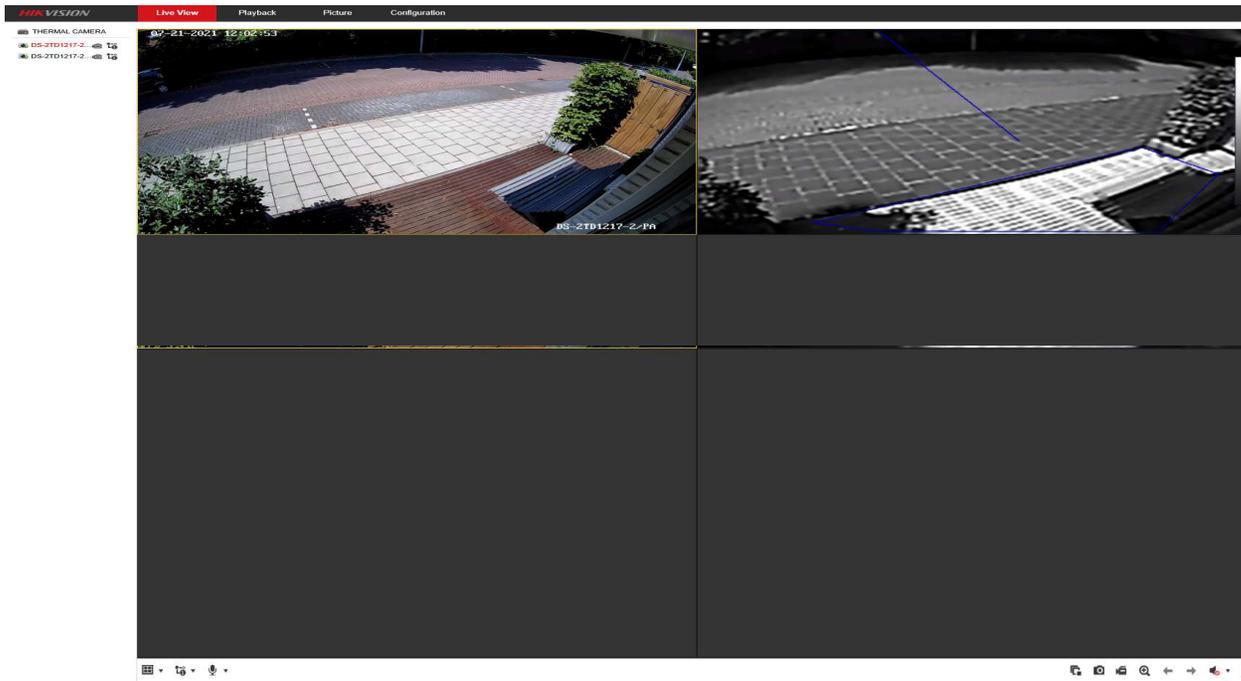


Thermal camera

See Far, Go Further

Thermal For Swedish Church

Bi Spectrum – Multisensor camera



See Far, Go Further



Visualized Temperature Measurement

Detect object temperature and trigger alarm to protect property

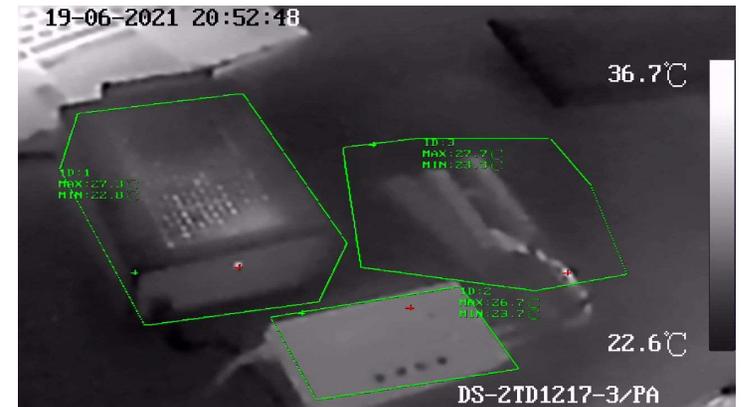
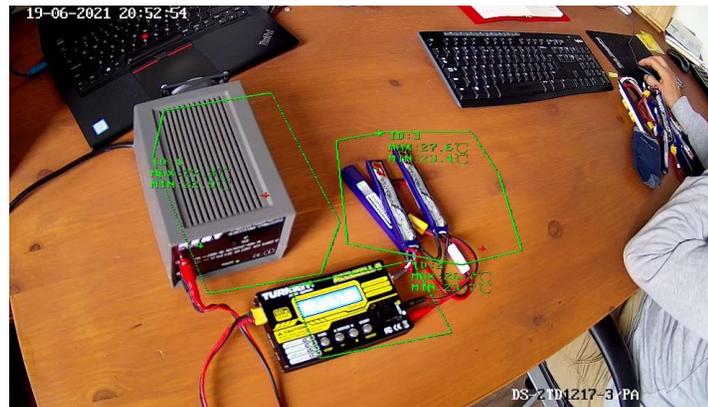
Temperature measurement

- **Early warning**
Monitoring temperature change and triggering pre-alarm before the fire breaks out and help to protect property
- **Visualized**
Visualized temperature helps to double verify problems

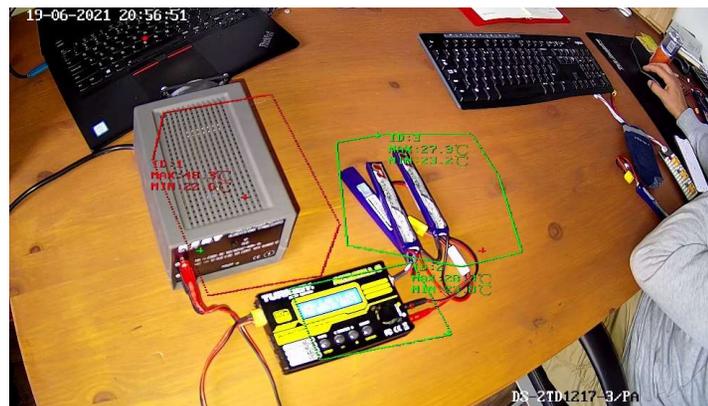


Temperature measurement

- Normale situation



- Temperature deviation detected



HeatPro Camera VS Smoke Sensor

HIKVISION



	HeatPro Series Camera	Smoke Sensor
Model	DS-2TD1217-3/PA	Independent photoelectric smoke sensor
Distance [Fire Source]	4 m (H)	1.8 m (Vertical)
Detecting Duration	4 s	123 s

See Far, Go Further



The requirement of kitchen security has changed gradually from conventional video surveillance to intelligent management.

Along with the development of Hikvision AI open platform technology, thermal camera can provide an intelligent fire detection solution although there is no one in the kitchen.



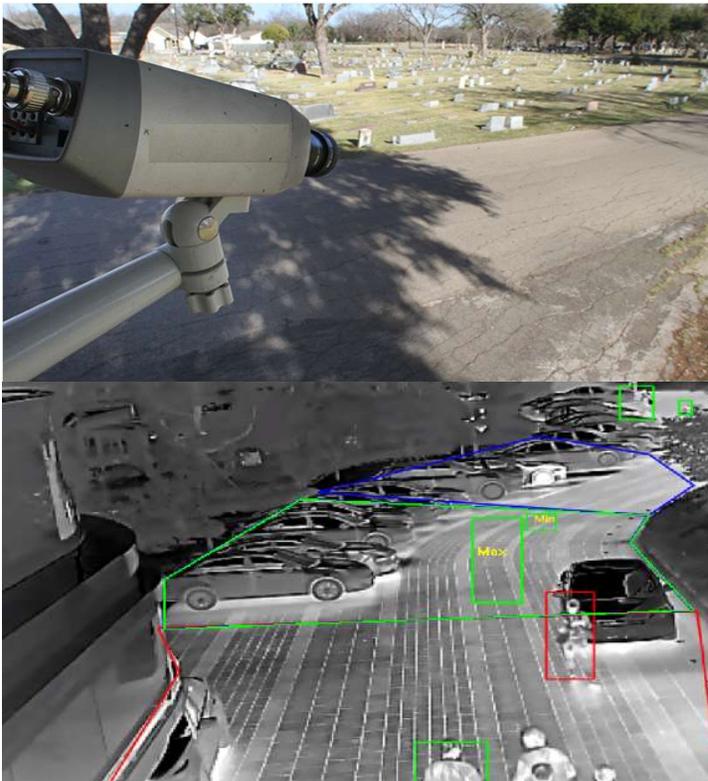
How is this solution implemented?

Bi-spectrum thermal camera optical channel detect whether there is anyone in the kitchen area, if not, thermal channel will measure temperature, and trigger an early warning fire alarm.

CONTENTS

- Background
- Product Introduction
- **Applications**
- Rules and Regulations

Cemetery protection



See Far, Go Further

Benefits



GDPR Free



Accurate VCA
with human/vehicle
classification

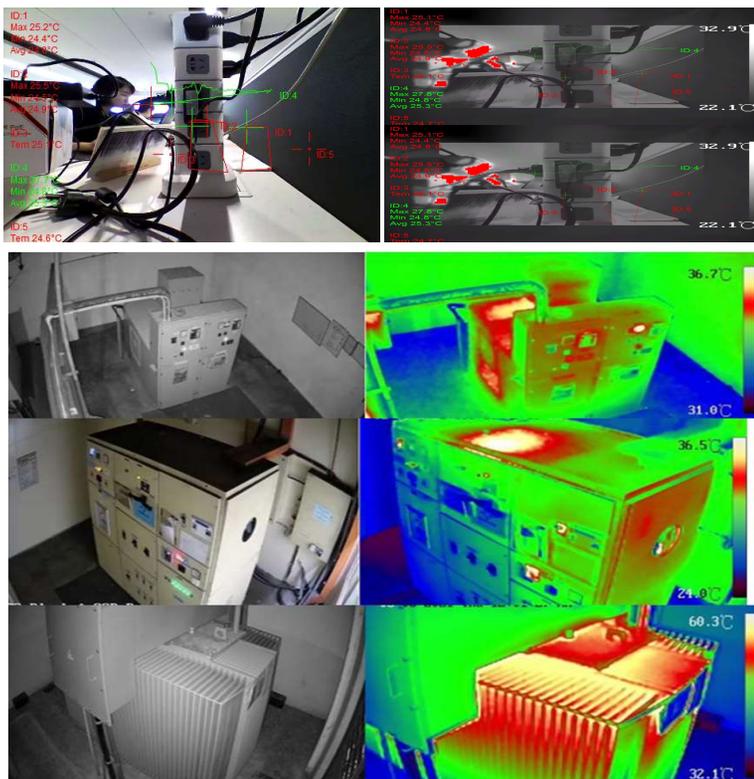


No need for extra
light supplement



Instant Alarm

Fire protection



Benefits



Non-contact
temperature
measurement



Visualized temperature
measurement



Locate abnormal
temperature rise area
before fire appears



Wide range detection
Day & night 7*24

Security camera family

Short-range



160 x 120
256 x 192

VCA 50M
 DS-2TD1217-x/QA DS-2TD2617-x/QA
 Human (Object: 0.5 x 1.8 m)

VCA 77M
 DS-2TD1228-x/QA DS-2TD2628-x/QA DS-2TXS2628
 DS-2TD4228-10/W
 Human (Object: 0.5 x 1.8 m)

Medium-range



384 x 288
640 x 512

VCA Distance 250M
 Single Lens DS-2TD2138/QY DS-2TD21x7/PY
 Bi-Spectrum DS-2TD26x7/PY
 Human (Object: 0.5 x 1.8 m)

Long-range



384 x 288
640 x 512

VCA Distance 700M
 Single Lens DS-2TD2367/PY
 Smart Linkage Tracking System DS-2TX3742-A(P)/Q
 Human (Object: 0.5 x 1.8 m)

See Far, Go Further

Thermography camera family



Short-range

Temperature Measurement 23M
Temperature Measurement 57M

(Object: 0.2 × 0.2 m)

(Object: 0.5 × 0.5 m)

DS-2TD1228T-x/QA DS-2TD2628T-x/QA DS-2TXS2628
 DS-2TD3017T-V
 DS-2TD4228T-10/W



Medium-range

256 x 192
 384 x 288
 640 x 512

Temperature Measurement 35M

DS-2TD21x7T/P DS-2TD26x7T/P
 DS-2TD2528T/Q DS-2TD2537T/Q

Indoor
 (Object: 0.2 × 0.2 m)

Temperature Measurement 88M

DS-2TD21x7T/P DS-2TD26x7T/P
 DS-2TD2528T/Q DS-2TD2537T/Q

Outdoor
 (Object: 0.5 × 0.5 m)



Long-range

384 x 288
 640 x 512

Temperature Measurement 118M

DS-2TD41x7T-/W DS-2TD4228T-/W
 DS-2TD4237T-/V2 DS-2TD62x7T-/W

Indoor
 (Object: 0.2 × 0.2 m)

Temperature Measurement 300M

DS-2TD41x7T-/W DS-2TD4228T-/W
 DS-2TD4237T-/V2 DS-2TD62x7T-/W DS-2TD65x7T-/W

Outdoor
 (Object: 0.5 × 0.5 m)

See Far, Go Further

Perimeter VCA test

Start time: June 3
End time: June 11

445 alarms
4 False alarms

Basic Information	Time Settings	DST	RS-232	RS-485	About	Unit Settings
Device Name	THERMAL CAMERA					
Device No.	88					
Model	DS-2TD1217-3/PA					
Boot Time	2021-06-07T09:28:43+01:00					
Serial No.	DS-2TD1217-3/PA20210326AAWRF72138032					
Firmware Version	V5.5.34 build 210331					



See Far, Go Further

Thermal For Swedish Church

Visual & Audio Alarm



See Far, Go Further



See Far, Go Further

CONTENTS

- Background
- Product Introduction
- Applications
- **Rules and Regulations**

Regelverk

- Dataskyddsförordningen (GDPR)
- Kamerabevakningslagen
- Datainspektionen är tillståndsgivande myndighet

Behöver man söka tillstånd?

- Ja, aktörer som utför uppgifter av allmänt intresse
- Kameraövervakning på plats dit allmänheten har tillträde
- Bara om bevakningen är regelbunden eller varaktig
- Om plats är stängd under tid för bevakning

När behöver man inte tillstånd?

- Företag, föreningar och andra privata verksamheter
- Rena personalutrymmen
stängselförsedda utrymmen med låsta grindar

Specifikt och berättigat syfte.

Egen bedömning och dokumentation

Skyldigheter

Tydlig skyltning samt dokumentation

- Vilka ni är som kameraövervakar
- Kontaktuppgifter - Integritetspolicy
- De registrerades rättigheter
- Ändamål med kameraövervakningen

Integritetsskydds Myndigheten

www.imy.se

THANKS!