

Smart Thermal Product Guide



**Perimeter
Protection**



**Fire
Prevention**



**Temperature
Measuring**



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Smart Thermal Product Family

DSI/Sunell Company Profile

DSI/Sunell Technology is a leading provider of intelligent video solutions worldwide, with a European headquarter in Leipzig and multiple offices worldwide. In 2012, Sunell Technology launched its first thermal imaging camera and now has several product lines, including 640 x 512/400 x 300/256 x 192. Sunell's thermal imaging cameras not only meet the needs of high-precision temperature measurements, but also support various in-depth learning processes algorithms to meet the requirements for perimeter intrusion and fire prevention indoors and outdoors, achieving true multi-functional use.

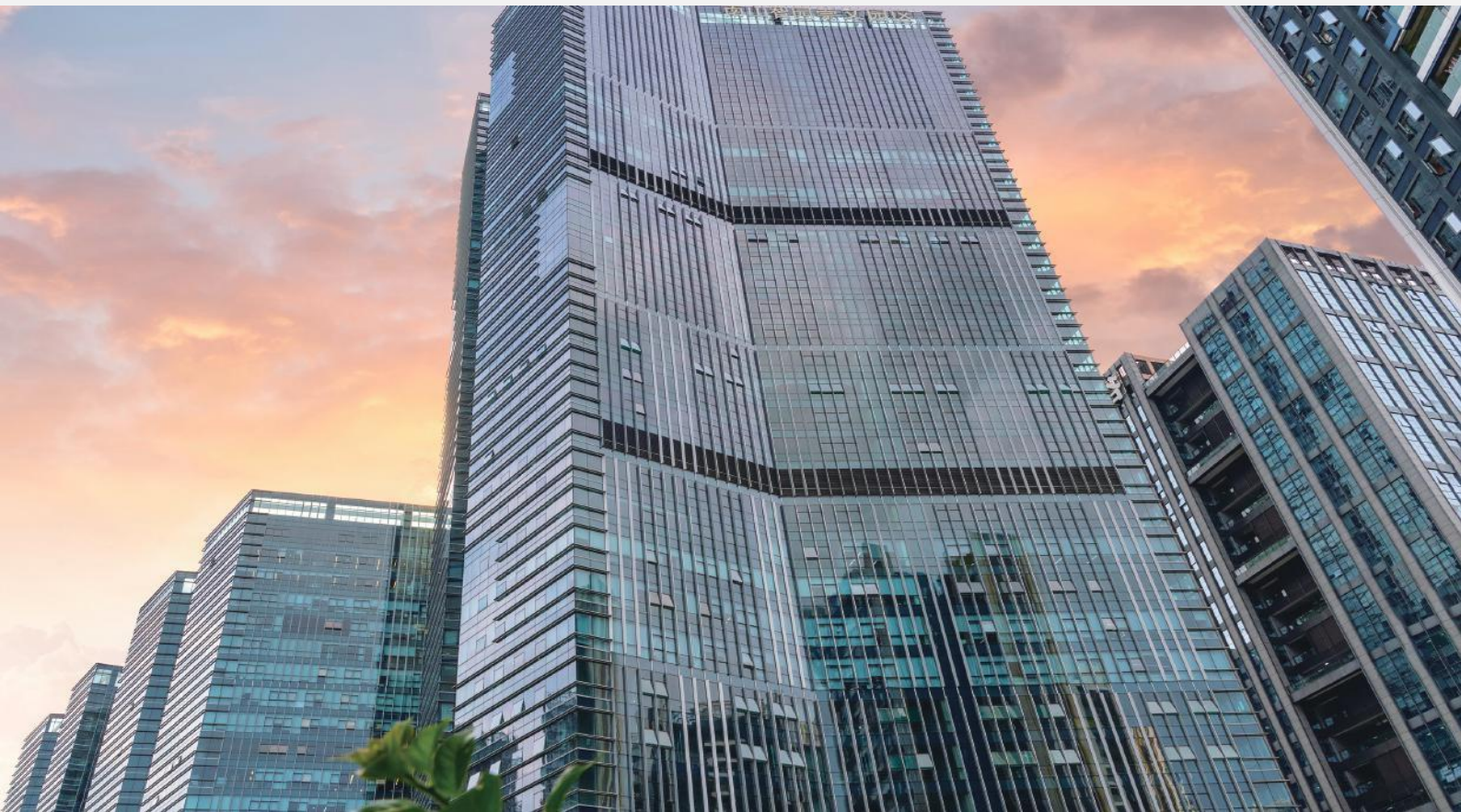
Our Bi-spectrum and a range of Thermal cameras are VdS3189, CNPP and NEN 2535 certified.

For large-scale project requirements, Sunell has powerful management platform software that can offer customers various industry-specific solutions. Furthermore, the cameras are integrated into various VMS and PSIM platforms. The cameras from the Thermal and Bispectral series are specially designed to work and display images under all conditions. The cameras have a thermal and/or visual lens on board with different sizes.

The cameras can recognize heat and smoke over a distance of 292 meters (1x1 m), as well as vehicles and people. In addition to these analytical matters, there are 8 other AI solutions on board.

Ideal for recycling companies but also for solar parks that are often not insured against fire and/or theft incidents. But petrol stations and parking garages also often use this camera to monitor the charging stations of electric cars and to receive a timely alarm in the event of a temperature increase.

DSI/Sunell, "AI + Bi-spectrum" provider of intelligent video solutions!



Sunell Thermal Specials and Certificates

All our camera's will be delivered with a full 7 year warranty, have a malwaretag(firm- and software checked for malware), SRTTP encryption on board.

The products are produced without any chinese supplier. We are using the following Suppliers: **NXP SOC**, **OPHIR** Optronics Lenses, The housing is made from **Dillux Steel** and painted with **Sikkens** Rubol Paint. Our power and PoE materials are from **AAEON**. We have our own Microbolometer.



But thats not all.

We are proud of our products and know from experience that they are reliable and safe. In addition to our experiences, we have also had the products tested by third parties and looked at which certificates are important in the world we operate in.

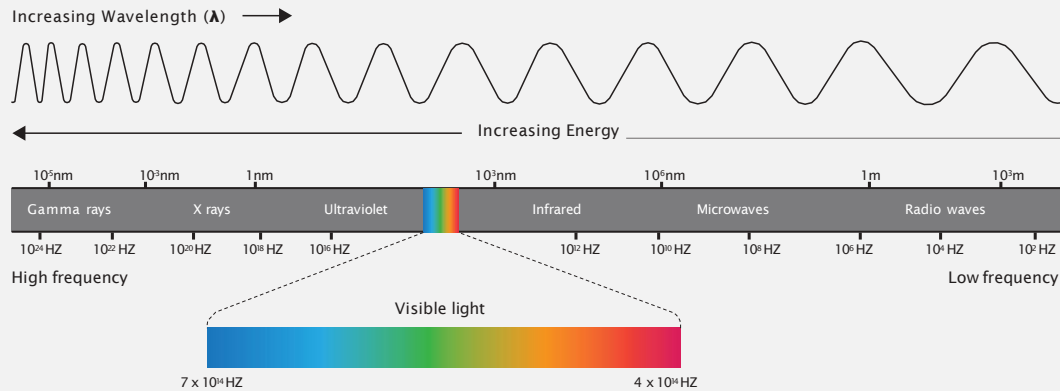
With these certifications you know that our product is safe because the mold and software have been tested by third parties.

Do our products meet the requirements set worldwide or desired in a specific segment? In short, you are assured of a reliable and safe product in the United States and Germany.



Thermal Imaging

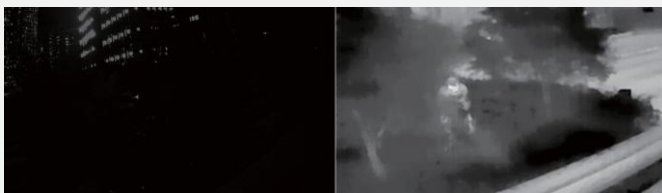
Any object with a temperature above absolute zero(-273.15°C) emits a detectable amount of infra-red (IR) radiation, also called heat radiation. The higher an object's temperature, the higher intensity of emitted IR. Though human eyes cannot see it, the thermal imager is able to detect IR radiation of 8~14μm and make the invisible IR "visible". The difference in image details corresponds to thermal distribution on the object's surface, which is "thermal imaging".



Features

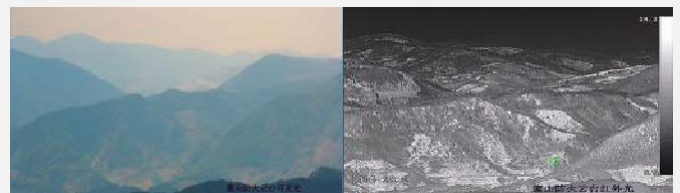
Sharp Image without Light Source

The thermal imager forms an image without any visible light with heat radiation from the environment. Long-distance target is detected by it clearly all day.



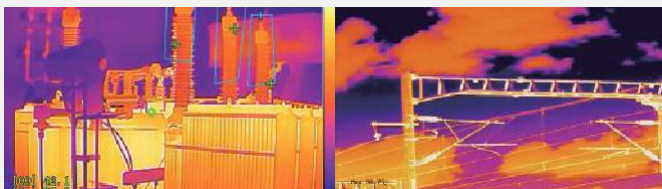
Excellent Cloud-and-Mist Penetration

Infrared thermal radiation has better penetration of rain, snow and haze than visible light, so it can take clear images even in bad weather.



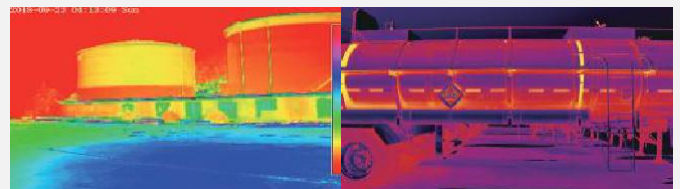
Non-contact Temperature Measurement

Thermal cameras measure accurately the surface temperature of the object by quantifying IR heat radiation without physical contact between sensor and the target.



Fault and Defect Detection

If there is malfunction occurred on the target, thermal imagers will find it out in a direct way using non-contact and long-distance temperature measurements.



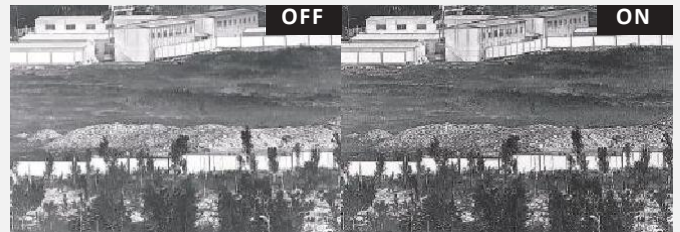
Core Technology

Excellent Image

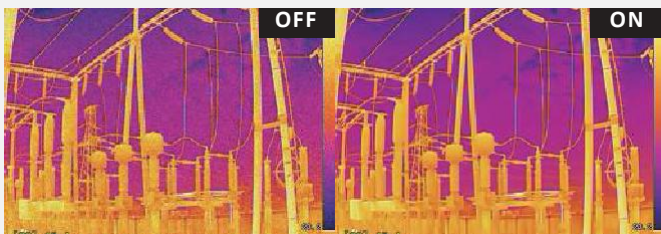
AGC (Automatic Gain Control)



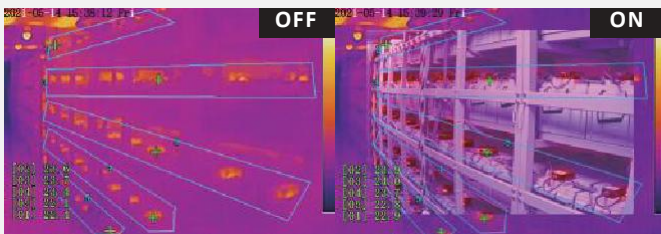
DDE (Digital Detail Enhancement)



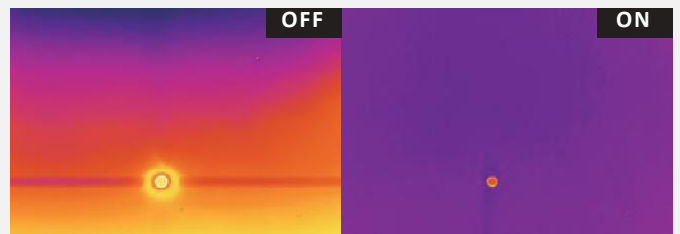
3D DNR (3D Digital Noise Reduction)



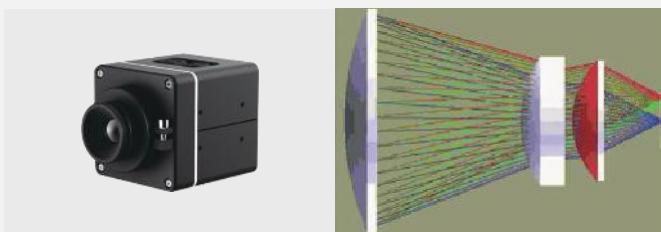
Bi-spectrum Image Fusion



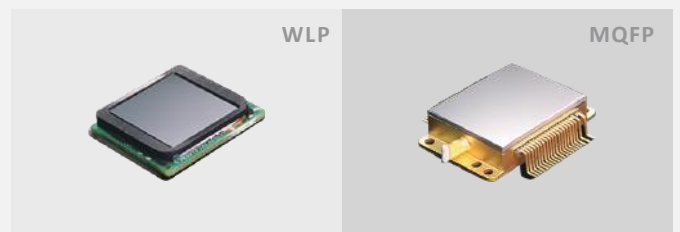
Auto Burning Prevention



Passive Athermalization

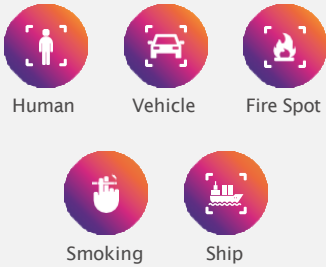


High-sensitivity Vox Detector



Intelligent Application

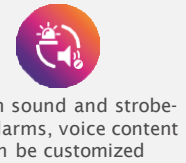
Deep Learning



Smart Event



Active Deterrence



Multiple-scenarios application



Compatibility

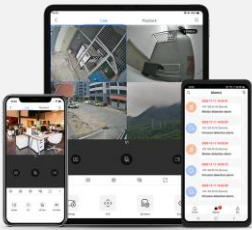


CGI

SDK



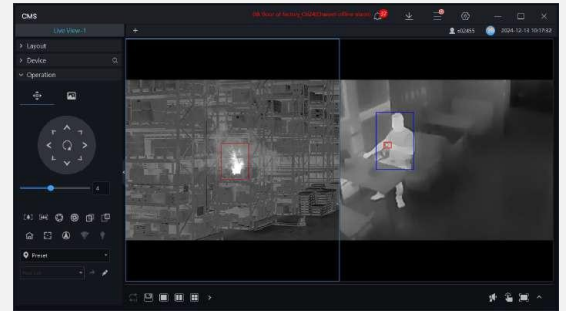
System Structure



Mobile Client

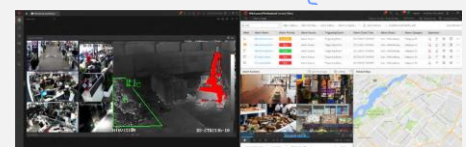
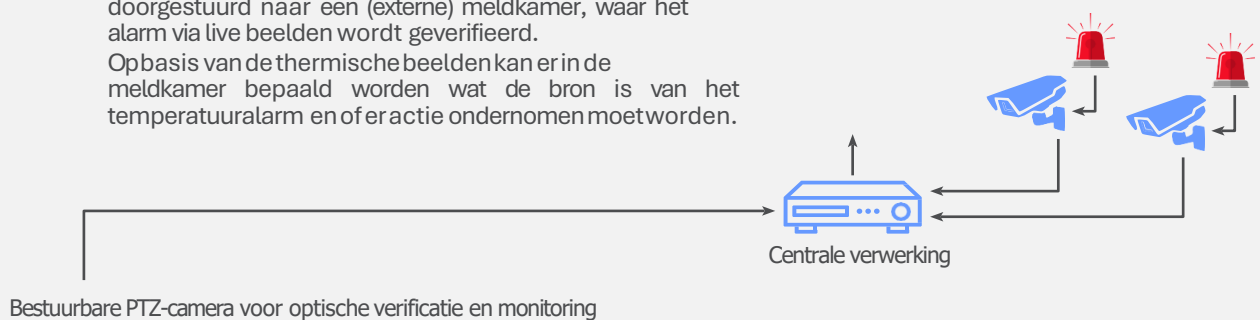


Beheerder



Onder werktijd kan de verantwoordelijke in de controlekamer temperatuuralarmen ontvangen en ze direct verifiëren via camerabeelden. Dit wordt geregeld door het VMS pakket of onze eigen VMS Pakket Sunview. Dankzij deze link kunnen alle alarmen en videobeelden ook op een mobiele telefoon of tablet ontvangen worden.

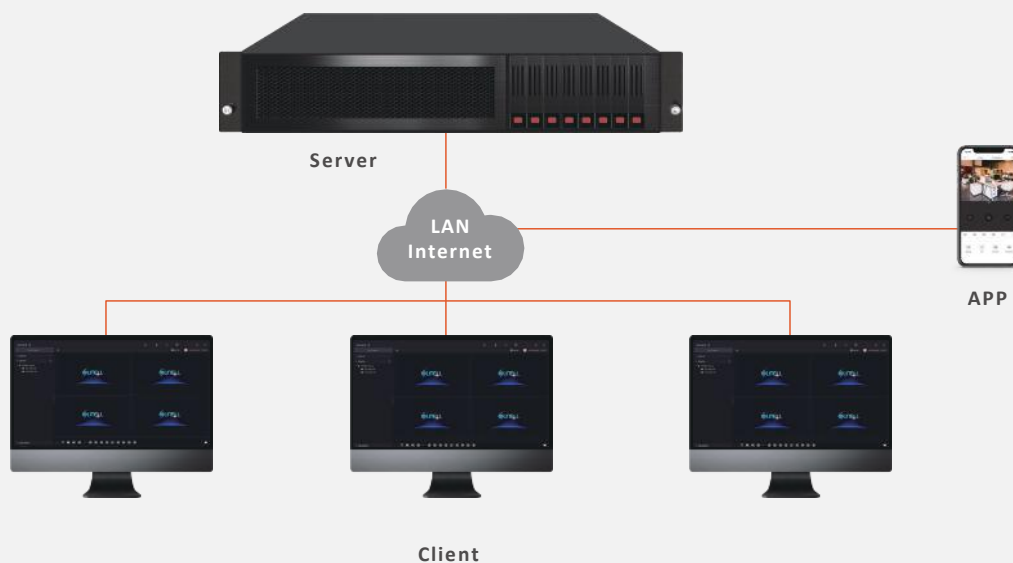
Buiten werktijd worden temperatuuralarmen doorgestuurd naar een (externe) meldkamer, waar het alarm via live beelden wordt geverifieerd. Opbasis van de thermische beelden kan er in de meldkamer bepaald worden wat de bron is van het temperatuuralarm en of er actie ondernomen moet worden.



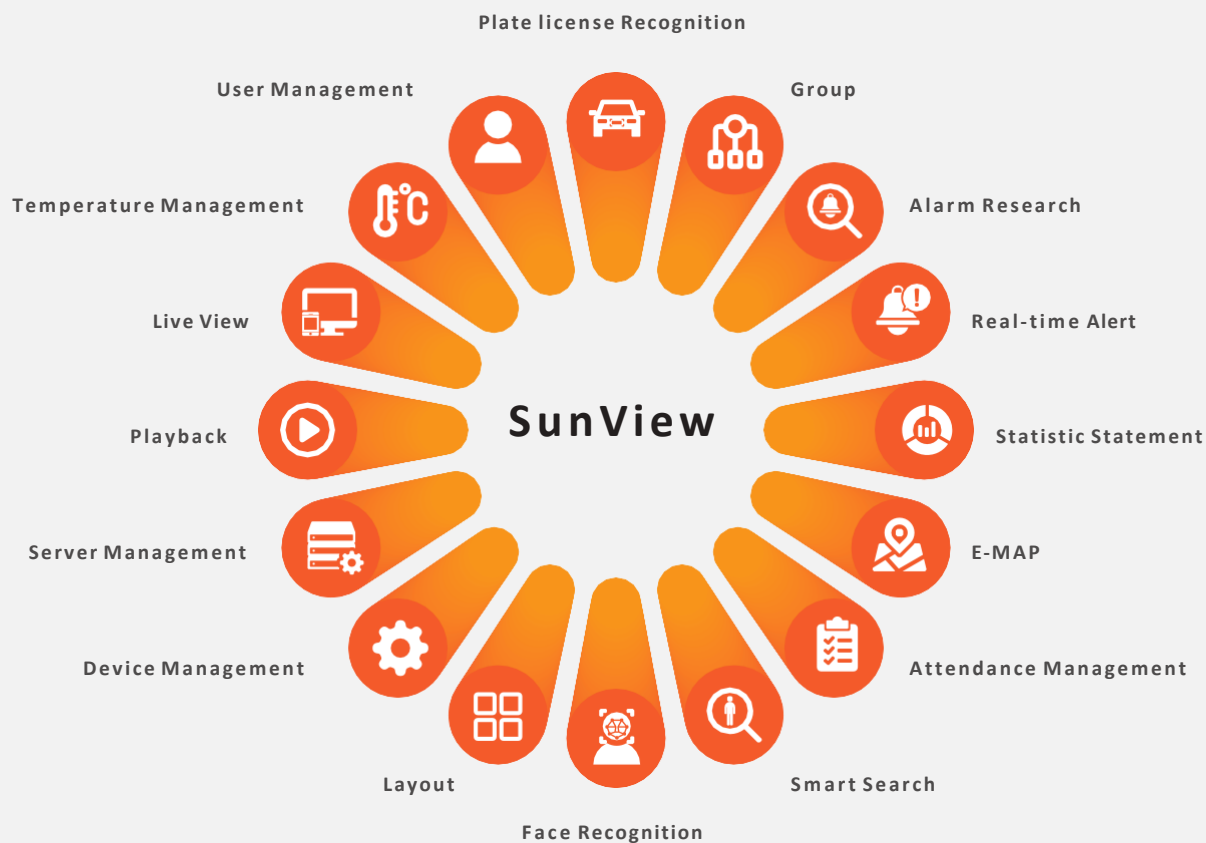
Buiten werktijd worden alarmen doormeldkamer geverifieerd

SunView Management Platform

SunView Composition



SunView Function Module



Integration with Third Party VMS and PSIM Suppliers



V21.12

IPC: 21.12, Profile S/Profile T/Profile G/Profile M
NVR: 21.12, Profile S/Profile T

Third Party Integration

avigilon™
THE BEST EVIDENCE

Digifort®
IP Surveillance System



advancis

AXIS®
COMMUNICATIONS

DW
DIGITAL WATCHDOG

MIRASYS

CNL

axxonsoft
EXPERIENCE THE NEXT®

exacq®
Technologies

nuuo
The Intelligent Surveillance Solution

MAXESS

BOSCH
Invented for life

Genetec

SEENERGY
Software. Service. Solution

nedap

CH&KT
Professional Video Monitoring

immix

TELESTE

NICE

DIGIEVER

Luxriot

TRASSIR®

winguard
always retain control

But there are more integration already done.

More than 462 integrations with all kind of suppliers of software, convoyer, recyclingpartners etc.

Perimeter Monitoring

- ✓ Human & vehicle detection
- ✓ Wildlife protection
- ✓ Bird Perching Detection
- ✓ Sound and light alarm



Photovoltaic Panel Inspection

- ✓ Foreign object blockage
- ✓ Appearance damage
- ✓ Backflow



Photovoltaic Step-Up Station

- ✓ Transformer online temperature monitoring



Fire Detection

- ✓ Smoke detection
- ✓ Fire point detection



Inverter and Combiner Box

- ✓ Temperature monitoring



Photovoltaic Storage Cabinet

- ✓ Temperature monitoring
- ✓ Smoke detection



Perimeter Protection



Solution Value

Thermal cameras are able to achieve all-weather monitoring for perimeter intrusion detection. Even in rain, snow, or fog weather, a target from a long distance does not easily hide from it. Built-in deep learning algorithm enables fewer thermal cameras to perform smart perimeter protection of large coverage and long range.



High Accuracy

With a built-in deep learning algorithm, thermal cameras can accurately detect humans, vehicles, and ships, and effectively reduce false alarms caused by animals, vegetation, and weather.



Hidden Target Detection

Thermal cameras effectively detect a target behind the vegetation or in the dark.



Bi-spectrum IVS

AI+ Bi-spectrum meets real all-weather monitor without blind spots.



Wider Range

Compared with optical lenses, thermal imaging does not require supplemental light. Therefore it is not affected by bad weather, making coverage wider and range longer.



Active Deterrence

There are alarm lights and speakers inside thermal cameras; Voice customizable; Real-time sound and light alarms to deter intruders.



Complete Category

Thermal product category is complete to meet short, medium and long perimeter.

Application Scenarios

Short Distance (within 100 m)

High cost-effective; Bi-spectrum: 256 x 192 Thermal+ HD optical;
All-weather smart perimeter protection; Accurate human and vehicle detection; Real-time sound and light alarm



SN-TPC2552CT



SN-TPC2553DRT



Apartments



Parking Lots



Factories



Warehouses

Medium Distance (100~ 500 m)

400 x 300 / 640 x 512 high thermal resolution; Flexible mix: One/
Dual/PTZ thermal cameras optional; Large coverage and all-
weather smart perimeter protection



SN-TPC4203KT
SN-TPC6406KT



SN-TPC4203KT



SN-TPT4233LZ
SN-TPT6436LZ



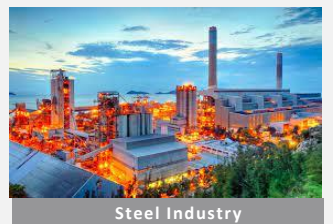
Photovoltaic Power Stations



Rivers



Railways



Steel Industry

Long Distance (over 500 m)

All-weather accurate monitor on large and beyond visual
range coverage when deployed at commanding heights; Big
scene, but also HD close-up target identification



SN-TPT4233ZZ
SN-TPT6436ZZ



SN-TPT4233HZ
SN-TPT6436HZ



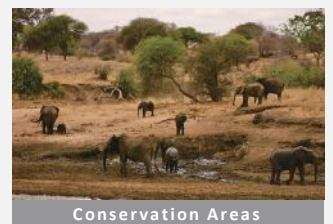
Airports



Reservoirs



Basements



Conservation Areas

Fire Prevention



Solution Value

With Fire Spot, Fire/Smoke, Temperature Threshold, and other temperature alarms, Sunell thermal cameras can give timely alerts to prevent the occurrence, development, or spread of a fire hazard. By giving an early warning signal, a fire hazard can be effectively avoided and the loss caused by it can be reduced.



Fire Spot Detection (Thermal)

By Fire Spot alarm algorithm, thermal cameras can locate fire spots in time and prevent fire from occurrence.



Fire/Smoke Detection (Optical)

Intelligent Fire/Smoke detection allows thermal cameras to activate the alarm as soon as possible when fire or smoke is identified.



Temp Anomalies Detection

Online temperature monitoring can detect the hot spot or quick temperature rising, effectively avoiding fires.



Smoking Detection

Thermal cameras detect cigarette smoking behavior and activate smoking alarms, lowering the fire risk.



Real-time Sound and Light Alarm

There are built-in alarm lights and speakers to notify the temperature alarm; Voice customizable.



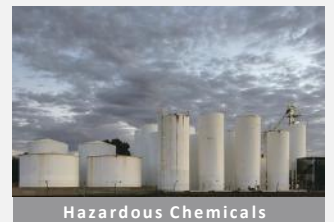
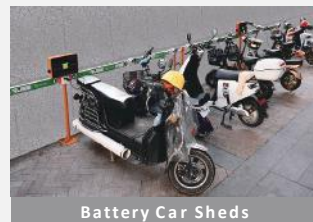
Complete Category

Thermal product category is complete to meet short, medium and long fire prevention.

Application Scenarios

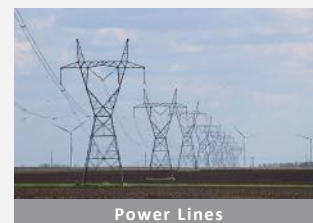
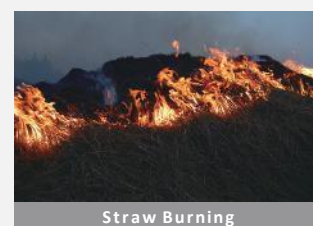
Short Distance

Multiple algorithms are supported by one of the above cameras, such as Fire Spot Detection, Fire/Smoke Detection, and Smoking Detection. It can also activate Temperature Threshold and Temperature Rise alarms. In this way, the occurrence of fires can be prevented in time.

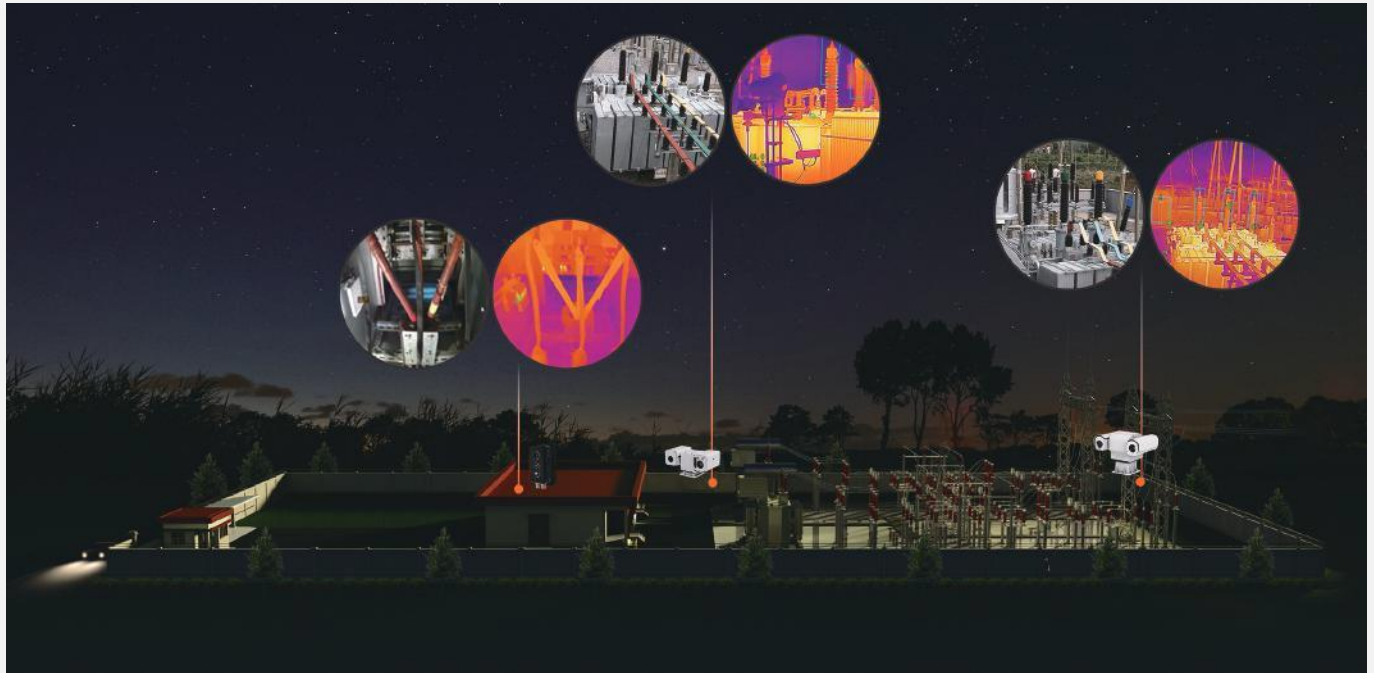


Medium and Long Distance

Fires usually happen suddenly and are destructive, which are detrimental to the environment, therefore making fire extinction and rescue hard to proceed. Bi-spectrum PTZ thermal cameras can detect fire spots from a medium and long distance. The administrators can be notified in time with alarms before fires get developed and spread.



Temperature Measuring (Electrical Industry)



Solution Value

Most of the abnormalities and failures of power equipment are caused by the Heating Effect of Electric Current. If no measures are taken, it is very likely to cause safety accidents. Sunell thermal cameras are widely used in all aspects of electricity generation, transformation, transmission, and distribution in the electrical industry.



Temperature Accuracy

$\pm 2^{\circ}\text{C}$ ($\pm 3.6^{\circ}\text{F}$) / $\pm 2\%$



Temperature Range Customizable

Default: $-20^{\circ}\text{C} \sim 150^{\circ}\text{C}$ ($-4^{\circ}\text{F} \sim 302^{\circ}\text{F}$)
Customizable: $\leq 900^{\circ}\text{C}$ (1652°F)



Temperature Areas

Support 3 temperature measurement rule types (spot, line, area)



Temperature Alarm Types

Temperature Threshold/Difference/Rise



Worm Gear and Worm Drive PTZ

Thermal PTZ cameras can always locate the position accurately. It will not be affected by external power.



Preset Temperature Monitoring

Thermal PTZ series can monitor the temperature of preset points, which meets the requirement of multi-object temperature measuring in a big scenario.



Inspection Plan

Configure thermal imaging inspection plan, retrieve inspection records, generate inspection report, etc.



Temperature Curve

Sunell SunView platform can retrieve historical data of thermal imaging cameras and area temperature measurements in curves, which provides a basis for judging the operating status of equipment.

Application Scenarios

Transformer Substation

Online detection of common faults such as lack of oil in transformer bushings, poor contact of isolating switches and circuit breaker contacts, heating of transformers, capacitors, and lightning arrester joints, etc.



D2/D2L



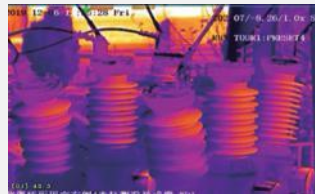
SNTPC6406KT



SNTPC4233DJT



Transformers



Circuit Breakers



Mutual Inductors



Isolating Switches

Electricity Generation

Online temperature measurement in coal yards, conveyor belts, coal mills, pulverized coal pipelines, transformers, etc.



Thermal Power



Hydropower



Wind Power



Photovoltaic Power



D2/D2L



SNTPC2552CT



SNTPC4233DJT



SNTPC4233LZ
SNTPC6436LZ

Online temperature measurement of engine room generator set, variable pressure, high voltage switch cabinet, etc.

Online temperature measurement of combiner boxes, inverters, booster stations, and other equipment, hot spot detection of photovoltaic modules.

Electricity Transmission

Detection of the thermometer abnormality caused by oxidation and corrosion of metal fittings or wire clips, loose bolts, poor contact, etc.



SNTPC4233QF
SNTPC6436QF



High-voltage Transmission Lines

Electricity Distribution

Online temperature measurement of high-voltage switchgear busbars, cable joints, etc.



D2/D2L



SNTPC2552CT



SNTPC4233QF
SNTPC6436QF



Electricity Distribution Room



High-voltage Switch Cabinets

Photovoltaic Power

Solution Value

Photovoltaic power stations occupy a large area, which is generally located in remote areas and have relatively high operation and maintenance costs. By deploying Sunell thermal imaging cameras, management efficiency effectively improves, and long-distance fire points and perimeter intruders can be quickly found. By conducting online temperature measurements, Sunell thermal cameras can detect potential safety hazards of key equipment such as combiner boxes, inverters, transformers, and energy storage cabinets in a timely manner.



Application Scenarios

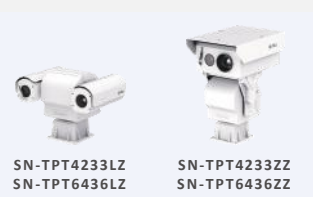
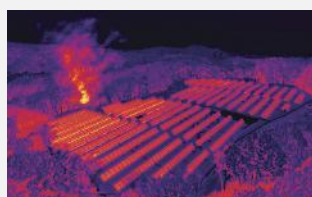
Perimeter Protection

Sunell thermal cameras can detect intruders (human, animal, etc.) in a long distance by sound and light alarms.



Fire Prevention

With Bi-spectrum PTZ series deployed in photovoltaic power stations where there are lots of weeds and trees, fire points can be found swiftly, the detection distance is long and the accuracy is high.



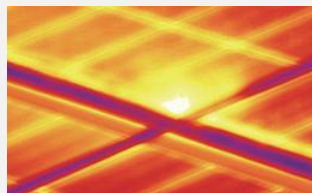
Real-time Temperature Measuring

By conducting online temperature measurements, Sunell thermal cameras can detect potential safety hazards of key equipment such as combiner boxes, inverters, transformers, and breakers in a timely manner.



Hot Spot Detection

The thermal imaging PTZ series automatically inspects and captures photos. By temperature difference alarm or manual review, it can help judge the hot spot situation.



Petrochemical Industry

Solution Value

The industrial chain of the petrochemical industry is very large, including oil exploration, pipelines, chemical plants, oil depots, gas stations, etc. Many places in this industry are characterized by high temperature, high pressure, flammability, and explosion. Sunell thermal imaging is able to monitor the status of equipment online, detect potential safety hazards of equipment in a more timely manner and play an important role in reducing the occurrence of accidents.



Application Scenarios

Perimeter Protection

Theft detection in oil fields and pipelines, etc.
Intrusion detection to prevent accidents in High-risk areas.



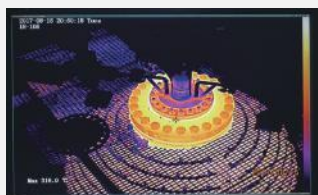
Fire Prevention

Real-time Fire Spot and Smoking alarms to find the potential fire risk and fire situation in hazardous chemical warehouses with raw materials and finished products, non-smoking factory areas, oil depot areas, oil tank areas, gas stations, and other scenarios.



Real-time Temperature Measuring

Online accurate temperature measurement of refining and chemical equipment, pipelines, station valve hall equipment, electrical equipment, etc.



Fault and Defect Detection

Oil storage tank liquid level line, fouling, tank damage, etc. detection.
Detection of pipeline corrosion, leakage, blockage, etc.



Metallurgical Industry

Solution Value

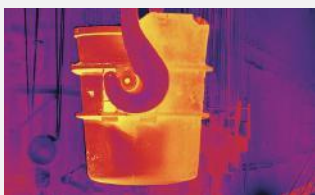
Temperature is an important indicator in many production chains in the metallurgical industry. Sunell Thermal cameras can perform real-time temperature measuring to monitor whether there is any abnormality in the production status. Hidden dangers of equipment can be quickly found by thermal imaging analysis, effectively ensuring normal production and increasing production efficiency.



Application Scenarios

Real-time Steel Ladle Protection

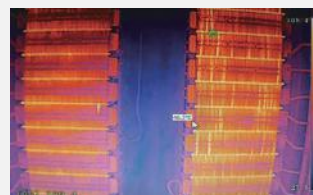
The thermal imager accurately measures the temperature of the steel ladle, and take clear thermal images, which can visually judge the defects of the ladle lining and analyze the degree of the defect.



SNTPH4203DA

Electrolyzer Temp. Rise Monitor

Simultaneous temperature measurement of multiple groups of electrolytic cells; Online temperature changes monitoring of the electrolyte and the plate; Sound and light alarm linkage.



SNTPH4203DA
SNTPH6406DA

Detection of Hidden Dangers

Sunell thermal camera is able to detect hidden dangers of smoldering coal piles and high-temperature anomalies of conveyor belts, which can be linked with spraying for cooling.



SNTPH4203DA

Electrical Equipment Temp. Measuring

Online temperature measurement of electrical equipment such as power transformation and distribution.



D2/D2L



SNTPC6406KT

New Energy Industry

Solution Value

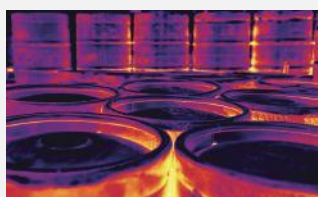
The proportion of sales of new energy vehicles is getting higher and higher, followed by more rapid expansion of power battery-related industrial chains and more frequent occurrence of spontaneous combustion accidents. Safety issues are becoming increasingly prominent. Thermal imaging cameras can increase the safety of upstream and downstream enterprises in the new energy industry chain.



Application Scenarios

Raw Material

The electrolyte is volatile and flammable while Sunell explosion-proof thermal imaging is able to perform the fire prevention.



SNTPH4203DA
SNTPH6406DA



SNTPT4233PAR
SNTPT6436PAR

Factories

During the charging and discharging process of the power battery, it may spontaneously ignite due to problems such as the quality of the battery cell and the PACK process. It is very important to know the temperature in real-time. Sunell thermal imager is applicable in production, aging, storage, and other chains to find battery quality defects in time.



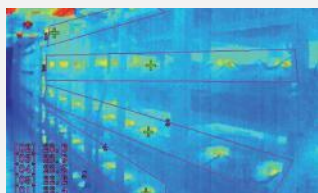
SNTPC2553DRT



SNTPT4233QF
SNTPT6436QF

BESS

Real-time simultaneous temperature monitoring of the positive and negative poles of multiple sets of batteries to find abnormal batteries in time.



D2/D2L



SNTPC2552CT

Charging & Battery Swap Stations

Electric vehicle fires frequently occur in areas with huge losses caused by them.

When abnormalities are found by real-time temperature monitoring, Sunell thermal imager can activate the alarm in time.



SNTPC2552CT

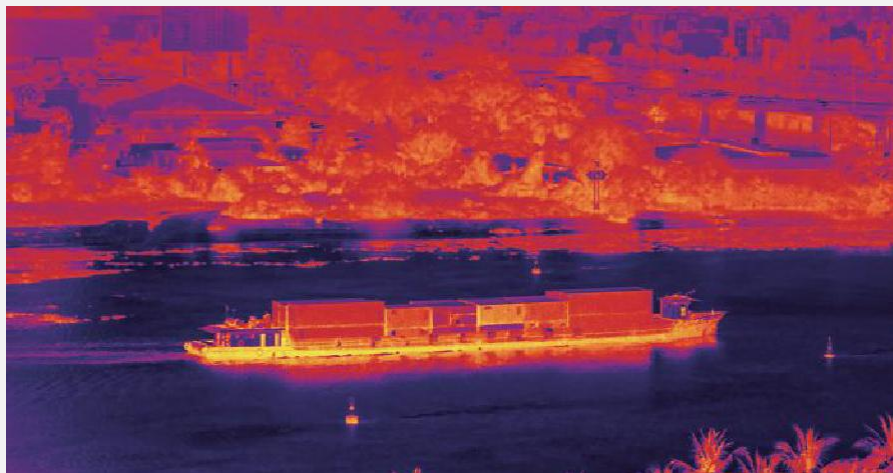


SNTPC2553DRT

Water Conservancy Industry

Solution Value

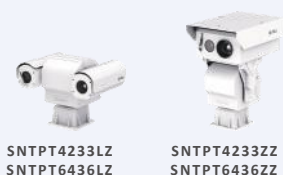
Rivers and lakes are an important part of the natural ecology. The personnels can manage rivers better at night or in bad weather with the help of Sunell thermal cameras to stop environmental damage and crimes in a timely manner.



Application Scenarios

Illegal Intrusion

Ship illegal intrusion active deterrence for gates and other waters where ships are prohibited from traveling and stopping.



Illegal Sand Mining

Illegal sand mining destroys the ecology of the river channel. Sand mining causes uneven river beds and even affects the safety of flood control dams. Sunell thermal imaging can detect illegal mining at night. The detection distance is up to more than 5 kilometers.



Illegal Fishing

Sunell thermal imaging is suitable for monitoring dangerous or illegal activities, such as illegal fishing during fishing bans, fishing and swimming in reservoirs, etc.



Illegal Rubbish Dumping

Real-time monitoring of illegal activities such as dumping garbage on the river bank at night. Real-time alarms of vehicles entering the defense area by vehicle shape algorithm.

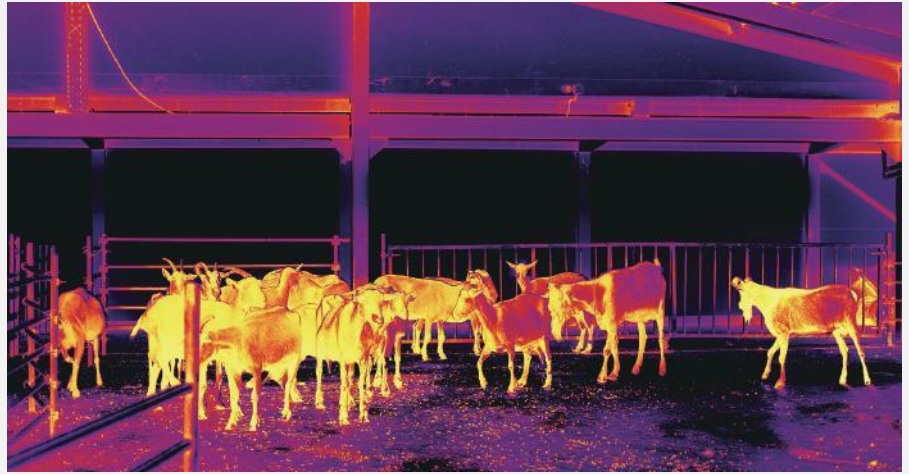


Livestock & Poultry Industry

Solution Value

With the heat distribution pattern on the body surface of the individual obtained by Sunell thermal imager, it is helpful to analyze and judge the lesion location and lesion degree.

Non-contact temperature measurement helps avoid individual stress reactions.



Application Scenarios

Swine Fever Virus

Acute swine fever virus has the characteristics of a short incubation period, high fever, and rapid death. Sunell thermal cameras can monitor pig herd temperature on a daily basis, which can be seen as an early diagnostic tool for swine fever infection.



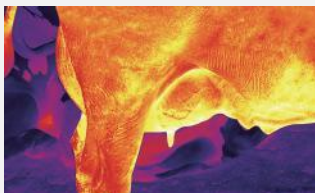
Foot-and-Mouth Disease(FMD)

Foot-and-mouth disease is an acute, febrile, and highly contagious infectious disease common to pigs, cattle, sheep, and other animals, with more than 70 susceptible animals. The disease spreads quickly through many routes. Sunell thermal imaging is believed to be able to detect FMD early by observing hyperthermia.



Bovine Mastitis Disease

Bovine mastitis is a major problem faced by the dairy industry, accounting for more than 40% of cattle morbidity. The disease leads to hypofunction of the mammary glands of dairy cows and even loss of the function of lactation. However, Sunell's thermal imaging camera can detect the disease at an early stage.



Bovine Respiratory Disease (BRD)

The bovine respiratory disease causes serious harm to the cattle industry every year. When the disease occurs, the temperature of the bull's eye will rise. Sunell thermal cameras can measure the temperature and monitor this disease.



Thermal & Optical Bi-Spectrum Network Cube Camera

SND2L

256×192



Super Wide Angle



Temperature Accuracy



White LED



Dual Image Fusion



IP66

- Thermal: 256×192, 12 μ m, 2.0 mm, H: 90°, V: 65°
- Optical: 2MP, 1600×1200, 2.3 mm, H: 100°, V: 75°
- Dual Image Fusion
- White LED
- Temp. Accuracy: $\pm 2^{\circ}\text{C}$ / $\pm 2\%$
- Temp. Pre-alarm & Alarm
- Temp. Threshold/Difference/Rise Alarm
- Support 3 temperature measurement rule types (spot, line, area)
- Temp. Range: $-20^{\circ}\text{C}\sim 150^{\circ}\text{C}$
- Interface: 1Alarm In/Out, RS485/232, Micro SD card
- DC10~30V/POE(802.3af)
- IP67

Application Scenarios

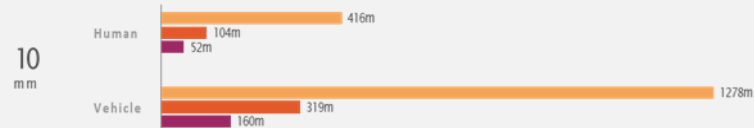
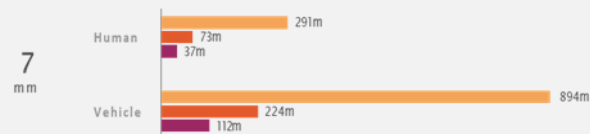
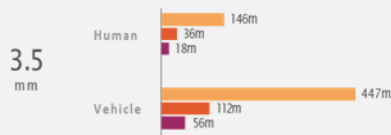
High voltage switch cabinet and other industrial temperature measurement scenarios with narrow space.

256×192

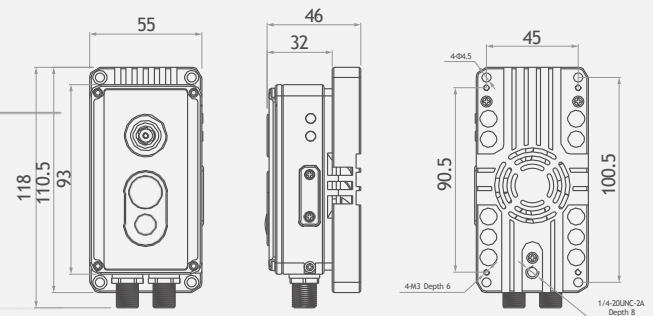
12 μ m

Human: 1.8×0.5 m
Vehicle: 4×1.5 m
Fire: 1×1 m

● Detection ● Recognition ● Identification



Dimensions (mm)



Accessories



Gimbal Mount Bracket

Thermal & Optical Bi-Spectrum Network Turret Camera



SNTPC2553CT
SNTPC2552CT

Parameters vary according to device models.

256×192



Human
Detection



Vehicle
Detection



Active
Deterrence



Smoke/Fire
Detection



Smoking
Detection



Temperature
Accuracy

- Thermal: 256×192, 12μm, 3.5 mm
- Optical: 5MP, 2880×1620, 4 mm
- Deep Learning: Human/Vehicle/Fire & Smoke/Fire Spot/ Smoking
- IVS: Intrusion, Single/Double Line Crossing, Loitering, Wrong-way, Enter Area, Leave Area, People Counting
- Built-in Microphone
- Built-in speaker & alarm light
- 35 m IR
- Temp. Accuracy: $\pm 2^{\circ}\text{C}$ / $\pm 2\%$
- Temp. Range: $-20^{\circ}\text{C} \sim 150^{\circ}\text{C}$
- Interface: 1Audio In/Out, 1Alarm In/Out, RS485, HDMI, Micro SD Card
- DC12V/DC24V/POE(802.3af)
- IP66

Application Scenarios

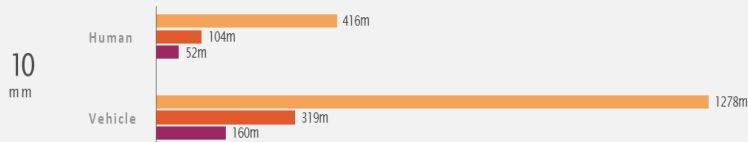
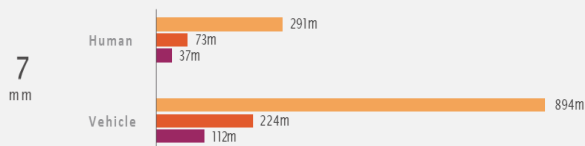
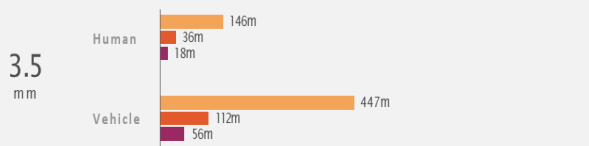
Perimeter Protection, Indoor Fire Prevention, Industrial Temperature Measuring...

256x192

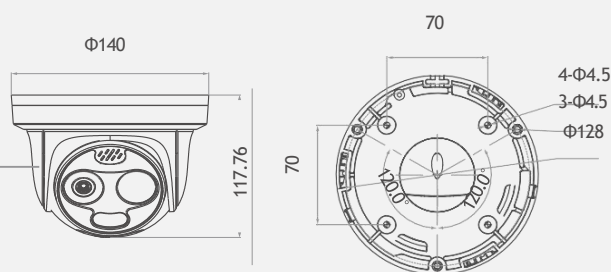
12μm



● Detection ● Recognition ● Identification



Dimensions (mm)



Accessories



Junction
Box
SNCBK645D



Bracket Mount
Adapter
SNCBK206



Pendant Mount
Bracket
SNCBK402



Wall Mount
Bracket
SNCBK501



Wall Mount
Bracket
SNCBK502



Pole Mount
Bracket
SNCBK101



Corner Mount
Bracket
SNCBK102

Thermal & Optical Bi-Spectrum Network Bullet Camera



SNTPC2553DRT

256×192



Human Detection



Vehicle Detection



Active Deterrence



Smoke/Fire Detection



Smoking Detection



Temperature Accuracy

- Thermal: 256×192, 12μm, 7/10 mm
- Optical: 4MP, 2880×1620, 8 mm
- Deep Learning: Human/Vehicle/Fire & Smoke/Fire Spot/ Smoking
- IVS: Intrusion, Single/Double Line Crossing, Loitering, Wrong-way, Enter Area, Leave Area, People Counting
- Built-in speaker & alarm light
- LED Temperature Display
- 35-55 m IR
- Temp. Accuracy: $\pm 2^{\circ}\text{C}$ / $\pm 2\%$
- Temp. Range: $-20^{\circ}\text{C} \sim 150^{\circ}\text{C}$
- Interface: 1Audio In/Out, 2 Alarm In/Out, RS485, Micro SD card
- DC12V/DC24V/POE (802.3af)
- IP66

Application Scenarios

Perimeter Protection, Indoor/Outdoor Fire Prevention, Industrial Temperature Measuring...

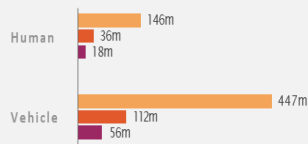
256x192

12μm

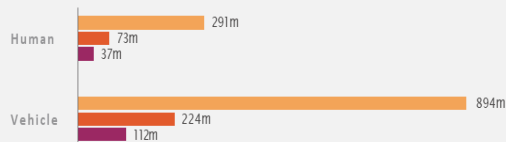


● Detection ● Recognition ● Identification

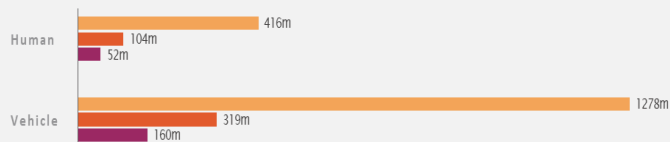
3.5 mm



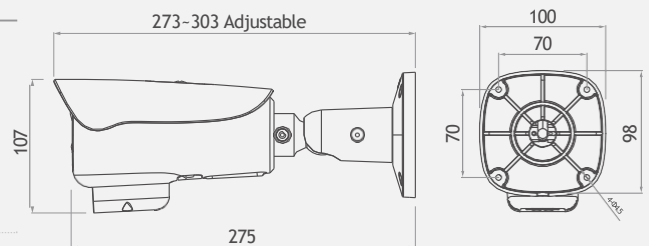
7 mm



10 mm



Dimensions (mm)



Accessories



Junction Box
SNCBK649B



Pole Mount Bracket
SNCBK627D

Thermal & Optical Bi-Spectrum Network Bullet Camera



SNTPC4233DJT

400×300



Human
Detection



Vehicle
Detection



Smoke/Fire
Detection



Smoking
Detection



POE+

- Thermal: 400×300, 17μm, 8/15/25/35/50 mm
- Optical: 2MP, 1920×1080, Motorized Lens : 5~50 mm
- Deep Learning: Human/Vehicle/Fire & Smoke/Fire Spot/Smoking
- IVS: Intrusion, Single/Double Line Crossing, Loitering, Wrong-way, Enter Area, Leave Area, People Counting
- 100 m IR
- Temp. Accuracy: $\pm 2^{\circ}\text{C}$ / $\pm 2\%$
- Temp. Pre-alarm & Alarm
- Temp. Threshold/Difference/Rise Alarm
- Support 3 temperature measurement rule types (spot, line, area)
- Temp. Range: -40°C ~ 150°C , Customizable
- Interface: 1Audio In/Out, 2 Alarm In/Out, RS485
- DC12V/POE+ (802.3at)
- IP66

Application Scenarios

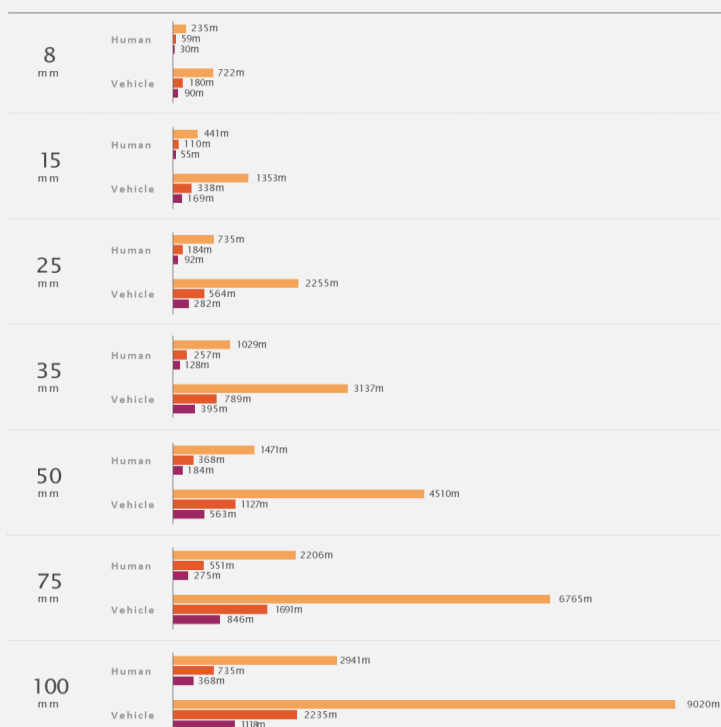
Perimeter Protection, Indoor/Outdoor Fire Prevention, Industrial Temperature Measuring...

400×300

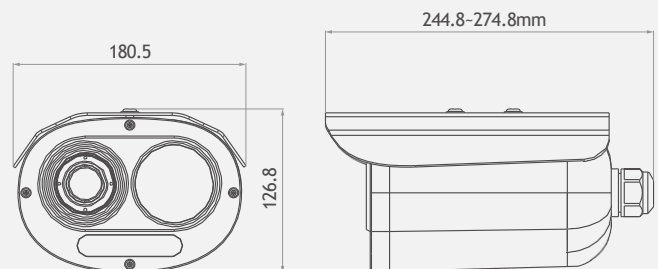
17μm

Human: 1.8×0.5 m Vehicle: 4×1.5 m

● Detection ● Recognition ● Identification



Dimensions (mm)



Accessories



Wall Mount Bracket

SNBK346



Pendant Mount Bracket

SNBK350



Thermal Network Bullet Camera

SNTPC4207KT

Parameters vary according to device models.

400×300



Human Detection



Vehicle Detection



IVS



Temperature Accuracy



POE

- Thermal: 400×300, 704×576, 17μm, 9/15/25/35/50 mm
- Deep Learning: Human/Vehicle/Fire Spot/Smoking
- IVS: Intrusion, Single/Double Line Crossing, Loitering, Wrong-way, Enter Area, Leave Area, People Counting
- Temp. Accuracy: $\pm 2^{\circ}\text{C}$ / $\pm 2\%$
- Temp. Pre-alarm & Alarm
- Temp. Threshold/Difference/Rise Alarm
- Support 3 temperature measurement rule types (spot, line, area)
- Temp. Range: $-40^{\circ}\text{C} \sim 150^{\circ}\text{C}$, Customizable: $\leq 900^{\circ}\text{C}$
- Interface: 1Audio In/Out, 2 Alarm In/Out, RS485, Micro SD Card
- DC12V/POE (802.3af)
- IP66

Application Scenarios

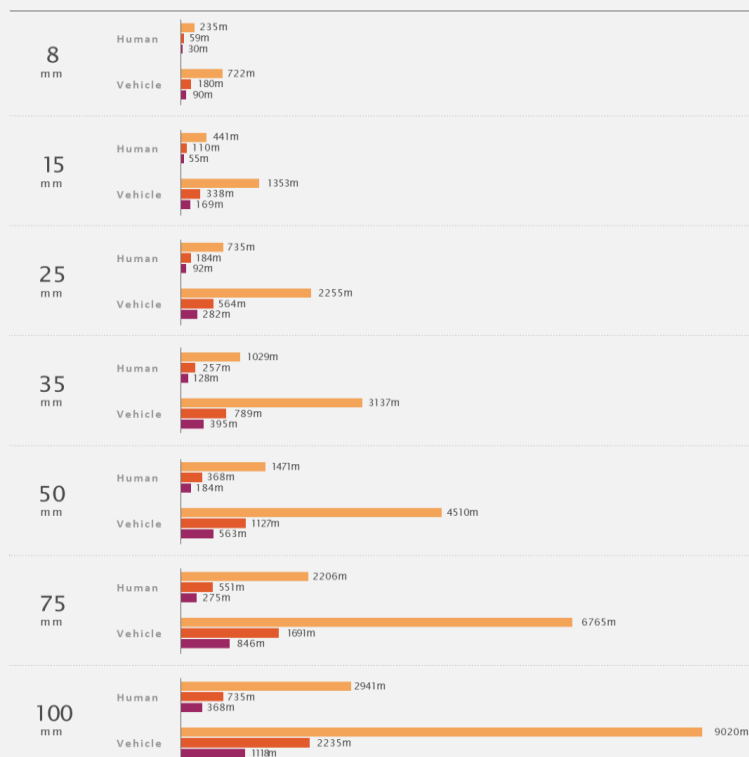
Perimeter Protection, Industrial Temperature Measuring...

400×300

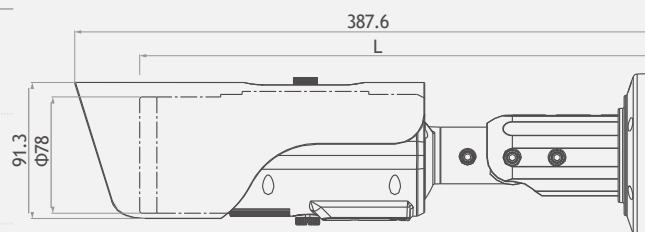
17μm

Human: 1.8×0.5 m
Vehicle: 4×1.5 m

• Detection • Recognition • Identification



Dimensions (mm)



Accessories



Junction Box
SNCKB649B



Pole Mount Bracket
SNCKB627D



Thermal Network Bullet Camera

SNTPC6406KT

640×512



Human
Detection



Vehicle
Detection



Fire Spot



Temperature
Accuracy



POE



- Thermal: 640×512, 12μm, 9/15/25/35/50 mm
- Deep Learning: Human/Vehicle/Fire Spot/Smoking
- IVS: Intrusion, Single/Double Line Crossing, Loitering, Wrong-way, Enter Area, Leave Area, People Counting
- Temp. Accuracy: $\pm 2^{\circ}\text{C}$ / $\pm 2\%$
- Temp. Pre-alarm & Alarm
- Temp. Threshold/Difference/Rise Alarm
- Support 3 temperature measurement rule types (spot, line, area)
- Built-in Microphone
- Temp. Range: $-20^{\circ}\text{C}\sim 150^{\circ}\text{C}$, Customizable: $\leq 550^{\circ}\text{C}$
- Interface: 1Audio In/Out, 2 Alarm In/Out, CVBS, RS485, Micro SD Card
- DC12V/AC24V/POE (802.3af)
- IP66

Application Scenarios

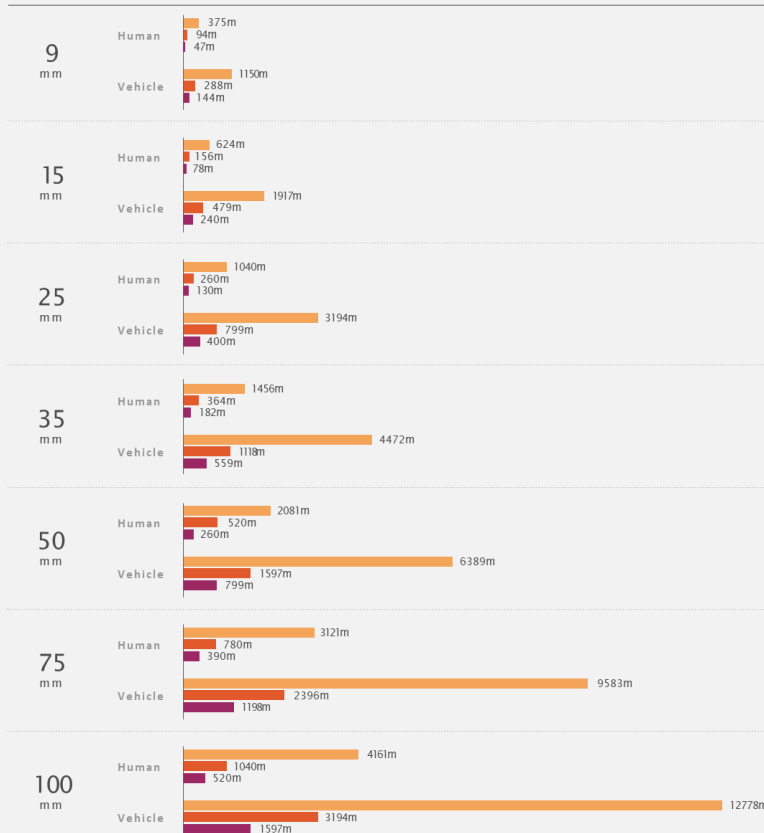
Perimeter Protection, Industrial Temperature Measuring...

640×512

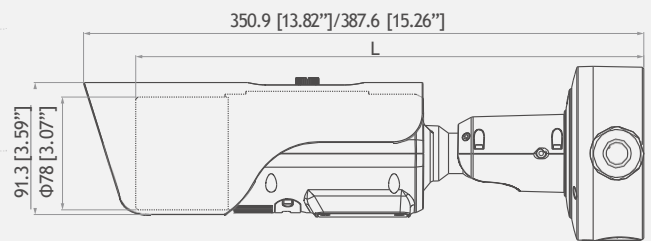
12 μm

Human: 1.8×0.5 m
Vehicle: 4×1.5 m

● Detection ● Recognition ● Identification



Dimensions (mm)



Accessories



Junction Box
SNCBK649B

Thermal & Optical Mini Bi-Spectrum PTZ Camera



SNTPT6436QF
SNTPT4233QF

640×512/400×300



Human
Detection



Vehicle
Detection



Smoke/Fire
Detection



Temperature
Accuracy



White LED

- Thermal: 640×512/400×300, 8/9/15/25 mm; Motorized Lens: 25 mm
- Optical: 4MP, 2592×1520, 30X, 5.3~159 mm
- Deep Learning: Human/Vehicle/Fire & Smoke/Fire Spot/Smoking
- IVS: Intrusion, Single/Double Line Crossing, Loitering, Wrong-way, Enter Area, Leave Area, People Counting
- Worm Gear and Worm Drive PTZ; Power off Self-locking
- Anti-frozen
- Pan: 360° Tilt: +90°~ -90°
- White LED: 30 m
- Support 3 temperature measurement rule types (spot, line, area)
- Preset Point Temperature Measuring
- Temp. Accuracy: $\pm 2^{\circ}\text{C}$ / $\pm 2\%$
- Temp. Range: -20°C ~ 150°C , Customizable
- Interface: 1Audio In/Out, 1Alarm In/Out, CVBS, RS485
- DC24V
- IP66

Application Scenarios

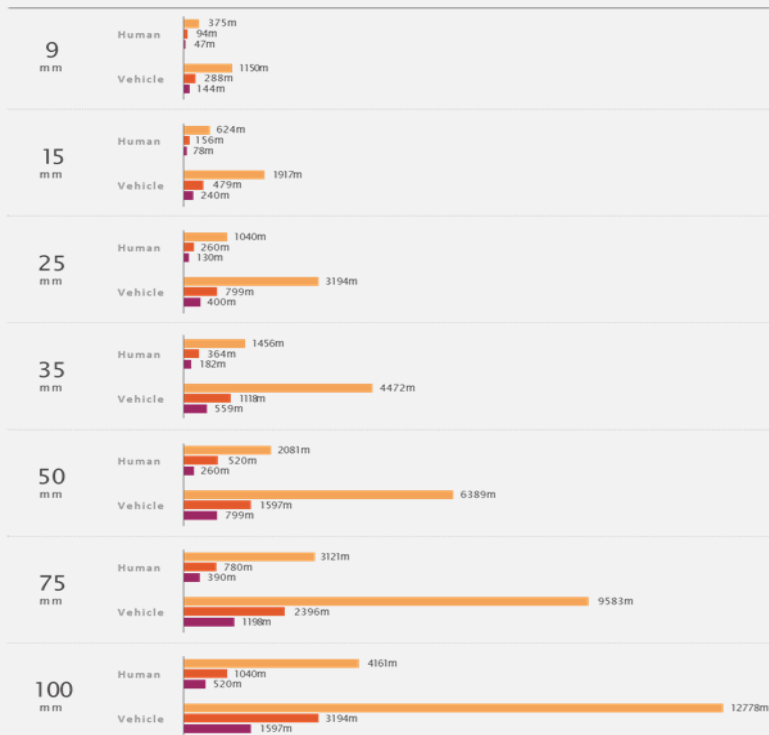
Perimeter Protection, Indoor Fire Prevention, Industrial Temperature Measuring...

640×512

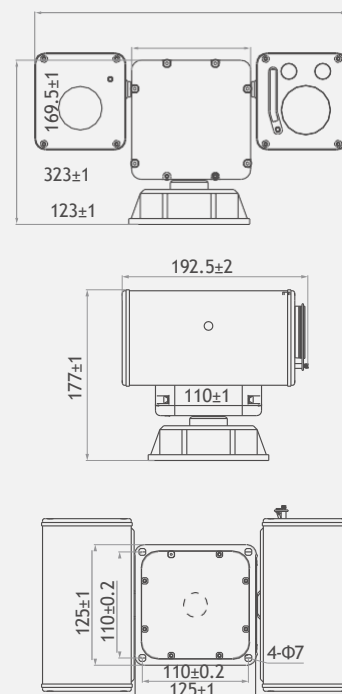
12 μm

Human: 1.8×0.5 m Vehicle: 4×1.5 m

● Detection ● Recognition ● Identification



Dimensions (mm)



Thermal & Optical Medium Bi-Spectrum PTZ Camera



SN-TPT6436LZ

SN-TPT4233LZ



Human
Detection



Vehicle
Detection



Ship
Detection



Smoke/Fire
Detection



Wiper

640×512/400×300

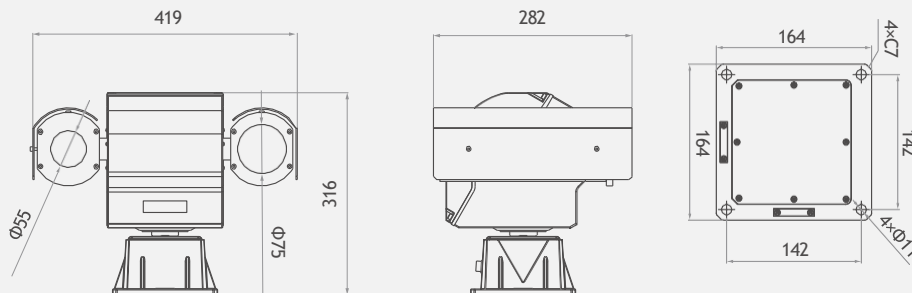


- Thermal: 640×512/400×300, 8/9/15/25/35/50 mm, Motorized Lens: 25/50 mm
- Optical: 4MP, 2592×1520, 30X, 5.3~159 mm
- Deep Learning: Human/Vehicle/Fire & Smoke/Fire Spot/Smoking
- IVS: Intrusion, Single/Double Line Crossing, Loitering, Wrong-way, Enter Area, Leave Area, People Counting
- Worm Gear and Worm Drive PTZ; Power off Self-locking
- Anti-frozen
- Pan: 360° Tilt: +90°~-90°
- Support 3 temperature measurement rule types (spot, line, area)
- Preset Point Temperature Measuring
- Temp. Accuracy: $\pm 2^{\circ}\text{C}$ / $\pm 2\%$
- Temp. Range: -20°C ~ 150°C , Customizable
- Interface: 2 Audio In/Out, 9 Alarm In/4 Alarm Out, CVBS, RS485
- DC36V
- IP66

Application Scenarios

Perimeter Protection, Indoor Fire Prevention, Industrial Temperature Measuring...

Dimensions (mm)



Thermal & Optical Medium Bi-Spectrum PTZ Camera

SNTPT4233LPZ

400×300



Human
Detection



Vehicle
Detection



Ship
Detection



Smoke/Fire
Detection



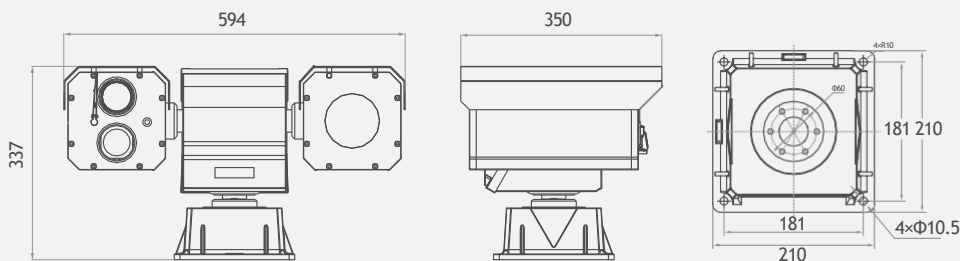
Laser IR

- Thermal: 400×300, Motorized Lens: 75/100 mm
- Optical: 5MP, 2560×1920, 40x, 4.98~199.2 mm
- Deep Learning: Human/Vehicle/Fire & Smoke/Fire Spot/Ship
- IVS: Intrusion, Single/Double Line Crossing, Loitering, Wrong-way, Enter Area, Leave Area, People Counting
- Worm Gear and Worm Drive PTZ; Power off Self-locking
- Anti-frozen
- Pan: 360° Tilt: +90°~-90°
- 800m IR
- Support 3 temperature measurement rule types (spot, line, area)
- Preset Point Temperature Measuring
- Temp. Accuracy: $\pm 2^{\circ}\text{C}$ / $\pm 2\%$
- Temp. Range: -40°C ~ 150°C , Customizable
- Interface: 2 Audio In/Out, 9 Alarm In/4 Alarm Out, CVBS, RS485
- DC36V
- IP66

Application Scenarios

Medium Perimeter Protection, Fire Prevention...

Dimensions (mm)



Thermal & Optical Medium Bi-Spectrum PTZ Camera

SN-TPT6436ZZ

SN-TPT4233ZZ

640×512/400×300



Human
Detection



Vehicle
Detection



Ship
Detection



Smoke/Fire
Detection



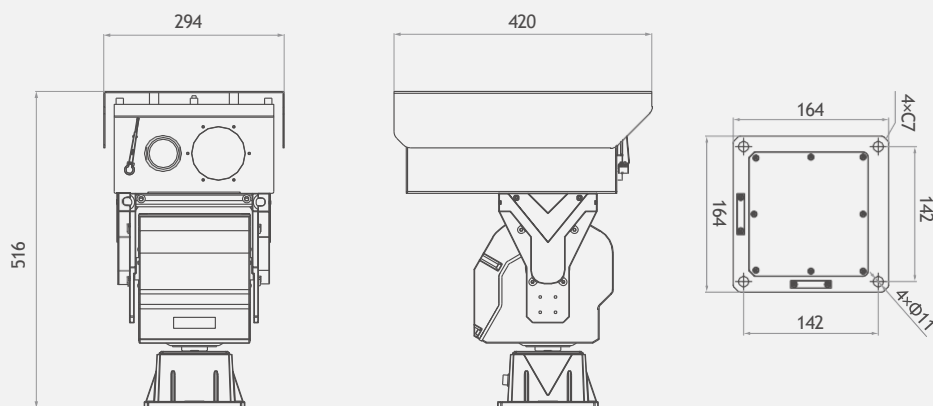
Wiper

- Thermal: 640×512/400×300, Motorized Lens: 50/75/100 mm
- Optical:
2MP, 1920×1080, 37X, 6~222 mm
4MP, 2592×1520, 40X, 4.98~199.3 mm
- Deep Learning: Human/Vehicle/Fire & Smoke/Fire Spot/Ship
- IVS: Intrusion, Single/Double Line Crossing, Loitering, Wrong-way, Enter Area, Leave Area
- Worm Gear and Worm Drive PTZ; Power off Self-locking
- Anti-frozen
- Pan: 360° Tilt: +40°~75°
- Interface: 2 Audio In/Out, 9 Alarm In/4 Alarm Out, CVBS, RS485
- DC36V
- IP66

Application Scenarios

Medium Perimeter Protection, Fire Prevention...

Dimensions (mm)



Thermal & Optical Large Bi-Spectrum PTZ Camera

SN-TPT6436HZ

SN-TPT4233HZ

Parameters vary according to device models.



Human
Detection



Vehicle
Detection



Ship
Detection



Smoke/Fire
Detection



Wiper

640×512/400×300

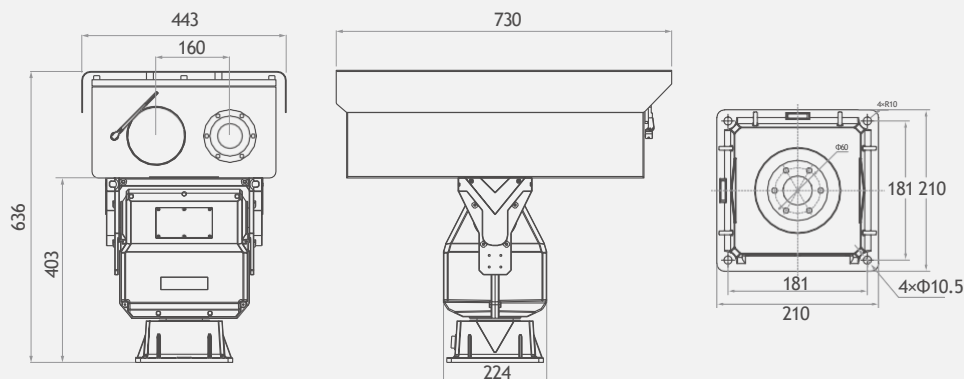


- Thermal: 640×512/400×300, Motorized Lens: 75/100mm, 30~150mm
- Optical:
 - 4MP, 2592×1520, 32X, 12.5~400 mm
 - 4MP, 2592×1520, 32X, 15.6~500 mm
 - 4MP, 2592×1520, 60X, 12.5~750 mm
 - 4MP, 2592×1520, 60X, 16.7~1000 mm
 - 4MP, 2592×1440, 86X, 10~860mm
- Deep Learning: Human/Vehicle/Fire & Smoke/Fire Spot/Ship
- IVS: Intrusion, Single/Double Line Crossing, Loitering, Wrong-way, Enter Area, Leave Area
- Worm Gear and Worm Drive PTZ; Power off Self-locking
- Anti-frozen
- Pan: 360° Tilt: +40°~45°
- Interface: 2 Audio In/Out, 3 Alarm In/Out, CVBS, RS485
- DC36V
- IP66

Application Scenarios

Medium Perimeter Protection, Fire Prevention...

Dimensions (mm)



Thermal & Optical Large Bi-Spectrum PTZ Camera

SN-TPT6436MZ

SN-TPT4233MZ

Parameters vary according to device models.



Human
Detection



Vehicle
Detection



Ship
Detection



Smoke/Fire
Detection



Thermal
30-150mm

640×512/400×300

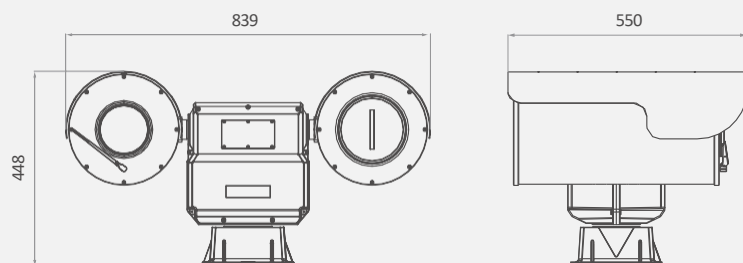


- Thermal: 640×512/400×300, Motorized Lens: 30~150 mm
- Optical: 4MP, 2560×1440, 86X, 10~860 mm
- Deep Learning: Human/Vehicle/Fire & Smoke/Fire Spot/Ship
- IVS: Intrusion, Single/Double Line Crossing, Loitering, Wrong-way, Enter Area, Leave Area
- Worm Gear and Worm Drive PTZ; Power off Self-locking
- Anti-frozen
- Pan: 360° Tilt: +40°~75°
- Interface: 2 Audio In/Out, 6 Alarm In/ 4 Alarm Out, CVBS, RS485
- DC48V, Max 300W
- IP66

Application Scenarios

Medium Perimeter Protection, Fire Prevention...

Dimensions (mm)



Explosion-proof Bullet Camera

SN-TPH6406DA

SN-TPH4203DA

Parameters vary according to device models.



Explosion Proof



Material



IVS



Temperature
Accuracy



IP68

640×512/400×300

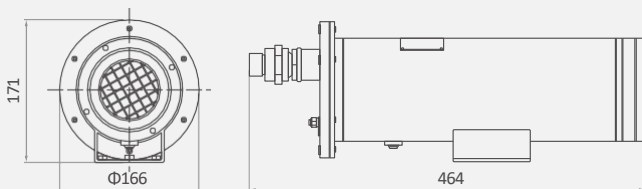


- 316L Stainless Steel
- Ex d IIC T6 Gb / Ex tD A21 IP68 T80°C W
- Thermal: 640×512/400×300, 8/9/15/25/35/50 mm
Motorized Lens: 25/50 mm
- Deep Learning: Human/Vehicle/Fire Spot/Smoking
- IVS: Intrusion, Single/Double Line Crossing, Loitering, Wrong-way, Enter Area, Leave Area, People Counting
- Temp. Pre-alarm & Alarm
- Support 3 temperature measurement rule types (spot, line, area)
- Temp. Accuracy: $\pm 2^{\circ}\text{C}$ / $\pm 2\%$
- Temp. Range: $-20^{\circ}\text{C} \sim 150^{\circ}\text{C}$ ($-4^{\circ}\text{F} \sim 302^{\circ}\text{F}$), Customizable
- IP68

Application Scenarios

Perimeter Protection, Indoor/Outdoor Fire Prevention, Industrial Temperature Measuring...

Dimensions (mm)



Accessories



Wall Mount Bracket
SN-BK401-SS



Junction Box
SN-BK400



Flexible Tube



Gland Box

Explosion-proof Bi-spectrum PTZ Camera

SN-TPT6436PA

SN-TPT4233PA

Parameters vary according to device models.



Explosion Proof



Material



IVS



Temperature
Accuracy



IP68

640×512/400×300

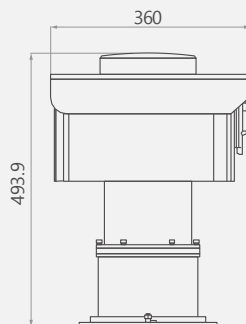
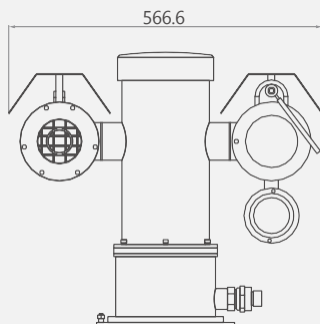


- 316L Stainless Steel
- Ex d IIC T6 Gb / Ex tD A21 IP68 T80°C
- Thermal: 640×512/400×300, 8/9/15/25/35/50 mm
Motorized Lens: 25/50 mm
- Optical: 4MP, 2592×1520, 30X, 5.3 mm -159 mm
- Deep Learning: Human/Vehicle/Smoke & Fire/Fire Spot/Smoking
- IVS: Intrusion, Single/Double Line Crossing, Loitering, Wrong-way, Enter Area, Leave Area, People Counting
- Pan: 360° Tilt: +90°~-90°
- IR: 200 m
- Temp. Pre-alarm & Alarm
- Support 3 temperature measurement rule types (spot, line, area)
- Temp. Accuracy: $\pm 2^{\circ}\text{C}$ / $\pm 2\%$
- Temp. Range: -20°C ~ 150°C (-4°F ~ 302°F), Customizable
- IP68

Application Scenarios

Perimeter Protection, Indoor/Outdoor Fire Prevention, Industrial Temperature Measuring...

Dimensions (mm)



Accessories



Wall Mount Bracket
SN-BK402-SS



Junction Box
SN-BK400



Flexible Tube



Gland Box

Small Intelligent Thermal Module

SN-TPC6406VT

Human
DetectionVehicle
DetectionShip
DetectionSmoke/Fire
Detection

Anti-burning

640 × 512

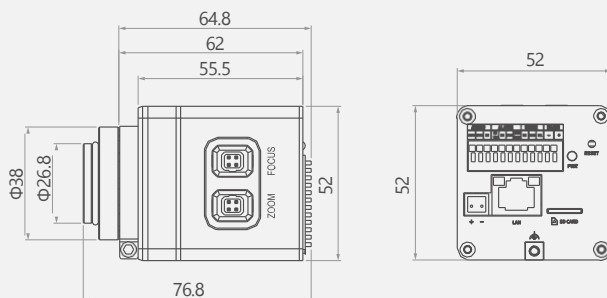


- Thermal: 640 × 512, 12 μ m, 8-14 μ m, 9/15/25/35/50 mm
- Motorized Lens: 25/50/75/100 mm
- Motorized Zoom Optional
- Deep Learning: Human/Vehicle/Smoke & Fire/Fire Spot/Smoking/Ship
- IVS: Intrusion, Single/Double Line Crossing, Loitering, Wrong-way, Enter Area, Leave Area, People Counting
- Focus-free (Fixed Lens)
- Anti-burning
- Temp. Pre-alarm & Alarm
- Support 3 temperature measurement rule types (spot, line, area)
- Temp. Accuracy: $\pm 2^{\circ}\text{C}$ / $\pm 2\%$
- Temp. Range: $-20^{\circ}\text{C} \sim 150^{\circ}\text{C}$ ($-4^{\circ}\text{F} \sim 302^{\circ}\text{F}$) Customizable: $\leq 550^{\circ}\text{C}$ (1022°F)
- Interface: Alarm I/O, Audio I/O, RS485, Micro SD card
- 64.8 × 52 mm (2.55 × 2.05 × 2.05 inch) without lens
- DC12V

Application Scenarios

Suitable for equipment integration such as shields/ptz, inspection robots, track robots, etc.

Dimensions (mm)



Small Intelligent Thermal Module

SN-TPC4201VT



Long Wave



Pixel Pitch



Temperature Accuracy



Anti-burning



Auto Focus

400 × 300

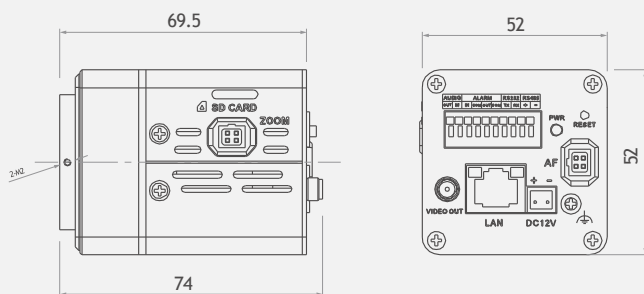


- Thermal: 400 × 300, 17μm, 8/9/15/25/35/50 mm
- Motorized Lens: 25/50/75/100 mm
- IVS: Intrusion, Single/Double Line Crossing, Loitering, Wrong-way, Enter Area, Leave Area, People Counting
- Anti-burning
- Temp. Pre-alarm & Alarm
- Support 3 temperature measurement rule types (spot, line, area)
- Temp. Accuracy: $\pm 2^{\circ}\text{C}$ / $\pm 2\%$
- Temp. Range: $-20^{\circ}\text{C} \sim 150^{\circ}\text{C}$ ($-4^{\circ}\text{F} \sim 302^{\circ}\text{F}$)
- Customizable: $\leq 900^{\circ}\text{C}$ (1652°F)
- Interface: Alarm I/O, Audio I/O, RS485, CVBS, Micro SD card
- 74 × 52 × 52 mm (2.91 × 2.05 × 2.05 inch)
- DC12V

Application Scenarios

Suitable for equipment integration such as shields/ptz, inspection robots, track robots, etc.

Dimensions (mm)



Intelligent Thermal Module



SN-TPC4203AT
SN-TPC4201AT



Human
Detection



Vehicle
Detection



Ship
Detection



Smoke/Fire
Detection



Anti-burning

400×300

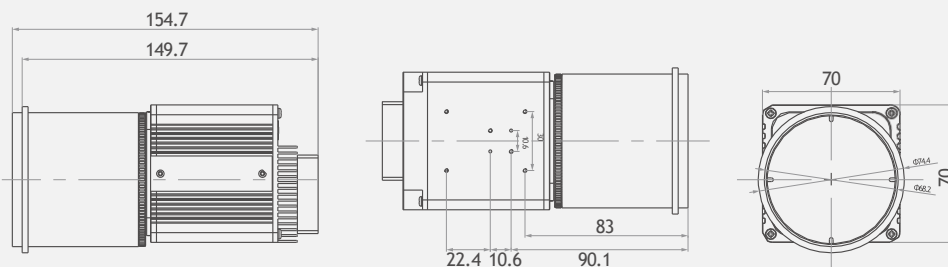


- Thermal: 400 × 300, 17μm, 8~14 μm, 8/15/25/35/50 mm
- Motorized Lens: 25/50/75/100 mm
- Deep Learning: Human/Vehicle/Smoke & Fire/Fire Spot/Smoking/Ship
- IVS: Intrusion, Single/Double Line Crossing, Loitering, Wrong-way, Enter Area, Leave Area
- People Counting
- Anti-burning
- Temp. Pre-alarm & Alarm
- Support 3 temperature measurement rule types (spot, line, area)
- Temp. Accuracy: $\pm 2^{\circ}\text{C}$ / $\pm 2\%$
- Temp. Range: $-20^{\circ}\text{C} \sim 150^{\circ}\text{C}$ ($-4^{\circ}\text{F} \sim 302^{\circ}\text{F}$)
- Customizable: $\leq 900^{\circ}\text{C}$ (1652°F)
- Interface: Alarm I/O, Audio I/O, RS485, Micro SD card
- DC12V

Application Scenarios

Suitable for equipment integration such as shields/PTZ, inspection robots, track robots, etc.

Dimensions (mm)



Effective Coverage

The Johnson Criterion is the field of infrared thermography used to determine the minimum resolution required to detect objects. The Johnson Criteria levels for infrared thermography are as follows:

- Detection:** At least 15 pixels are required to distinguish objects in the background and in the image.
- Recognition:** At least 6 pixels are required to classify objects (people, vehicles, animals, etc.).
- Identification:** At least 12 pixels are required to identify an object and its features, for example, a human holding a wooden stick.

256x192

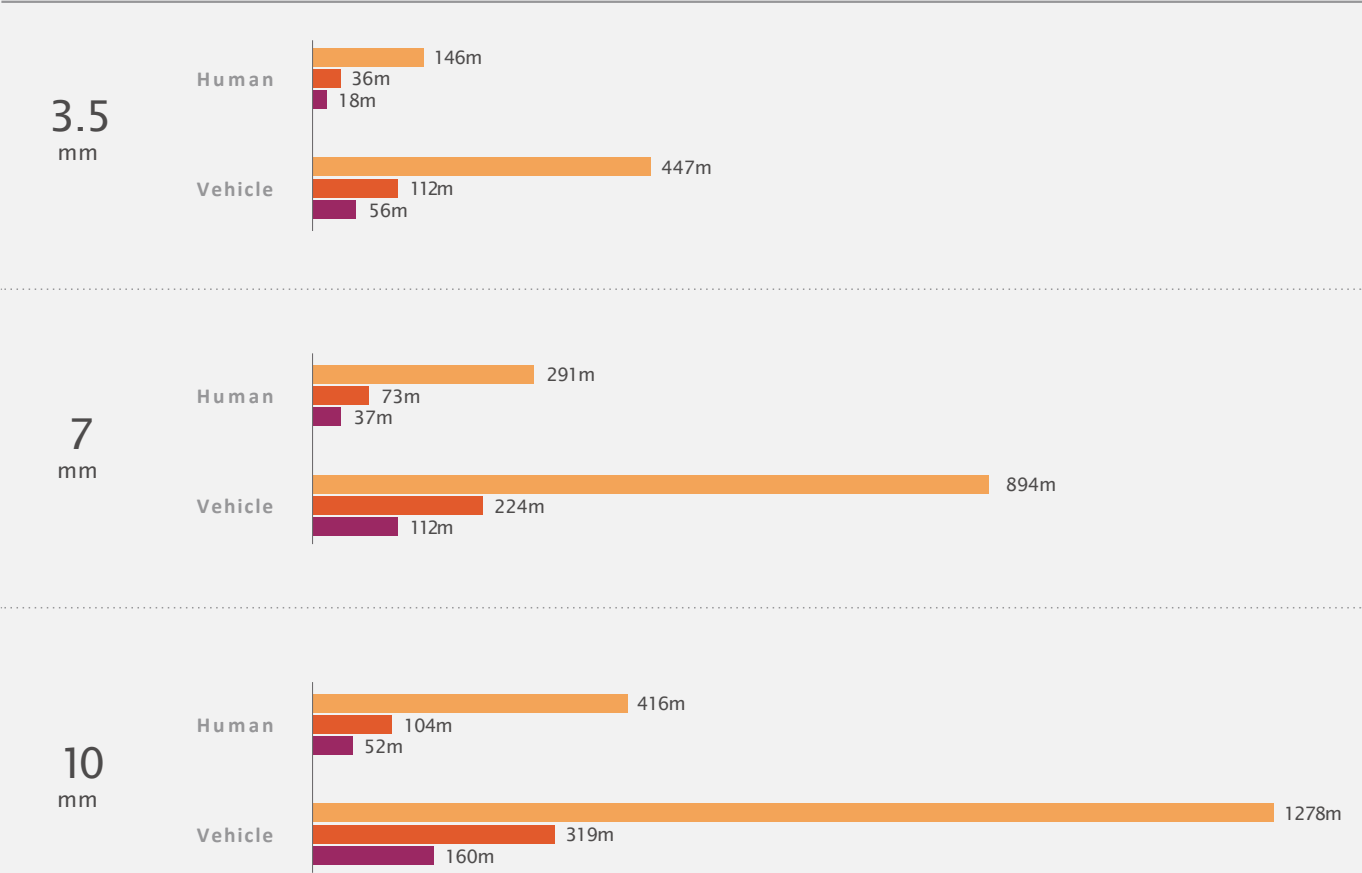
12 μm

 Human:
1.8×0.5 m

 Vehicle:
4×1.5 m

 Fire:
1×1 m

Detection Recognition Identification



400x300

17 μ m

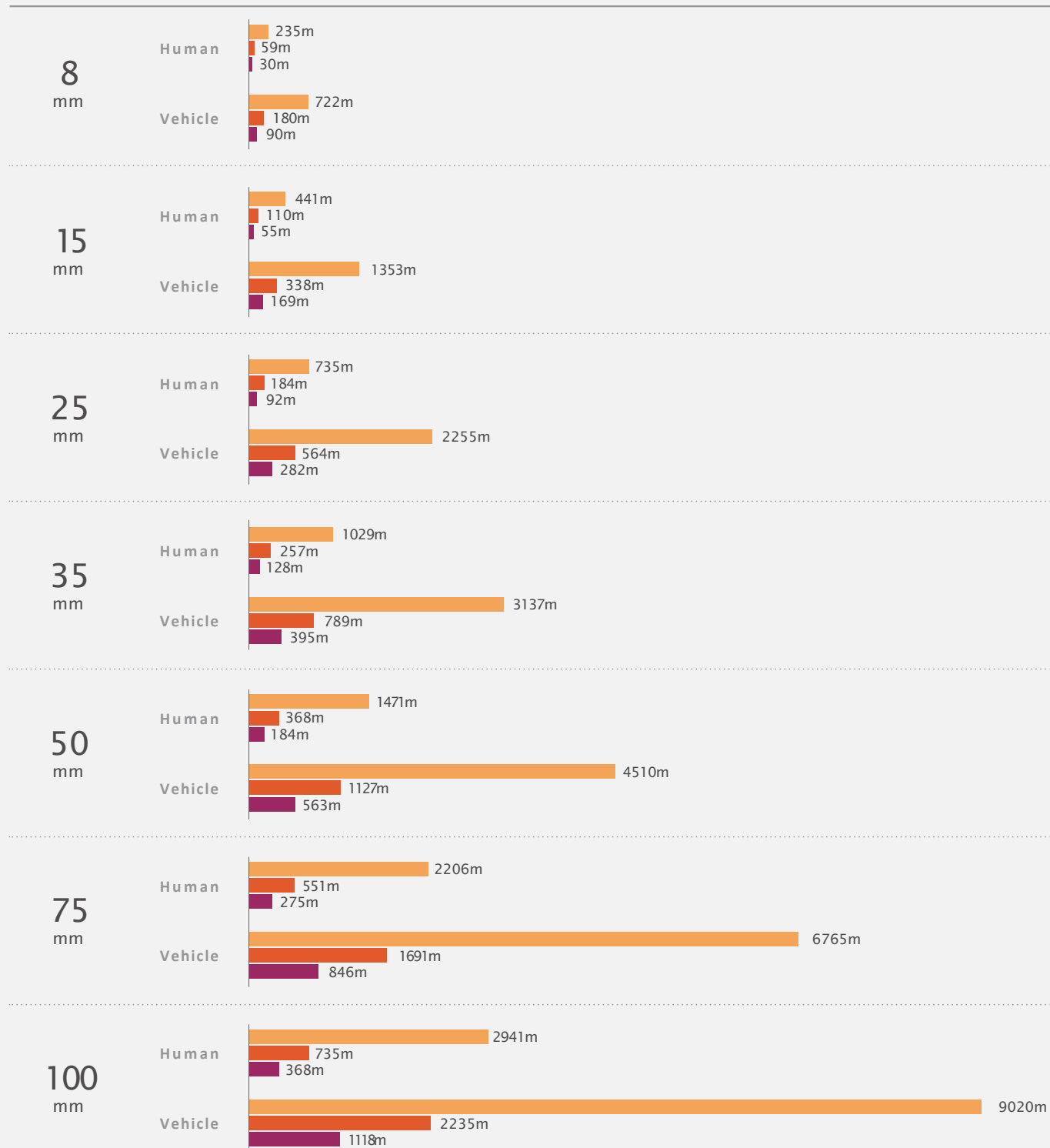


Human:
1.8×0.5 m



Vehicle:
4×1.5 m

● Detection ● Recognition ● Identification



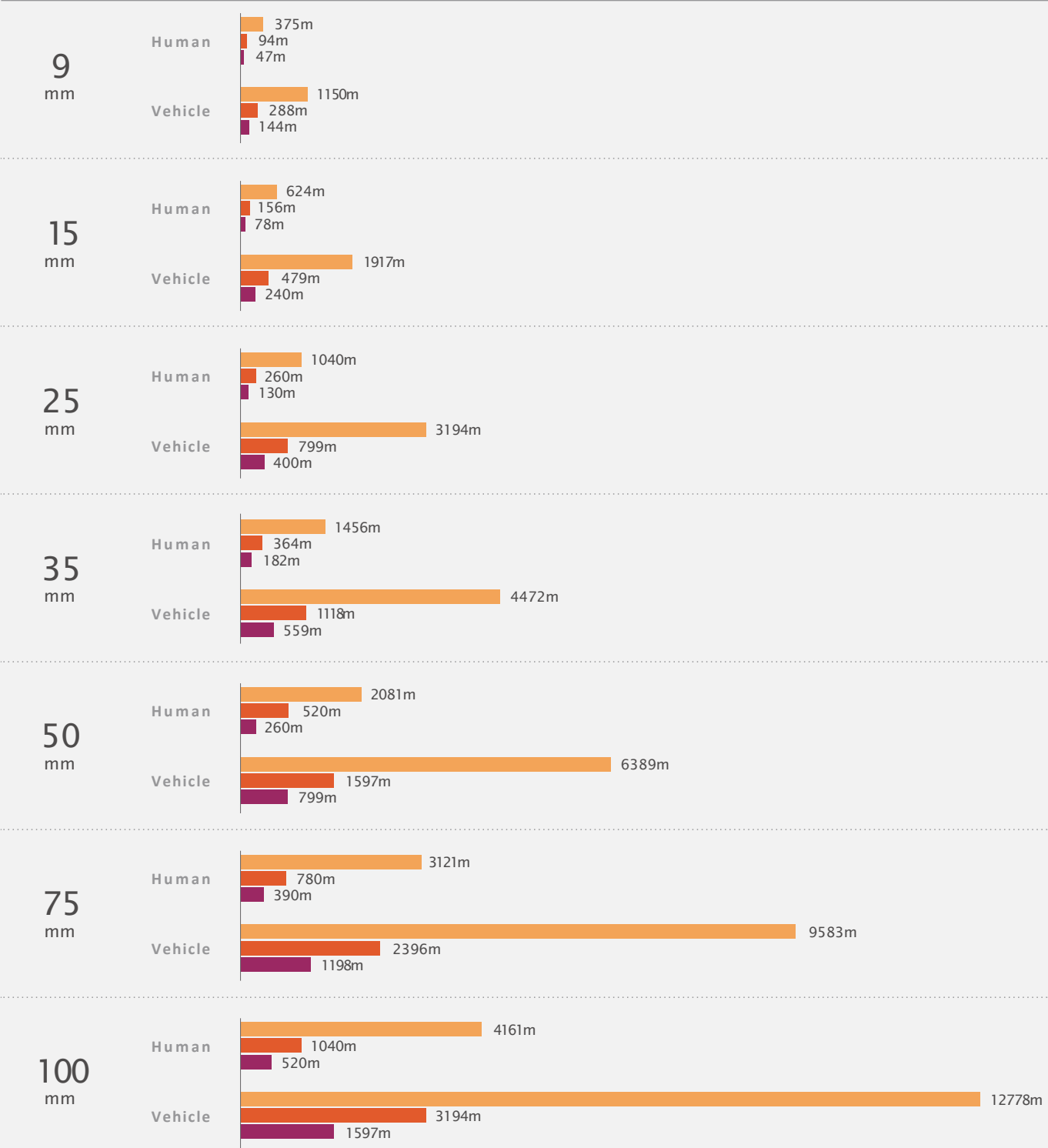
640x512

12 μm

Human:
1.8×0.5 m

Vehicle:
4×1.5 m

Detection Recognition Identification





Fire Spot:

1x1 m

● Detection

● Recognition

256x192

12 μ m

3.5
mm

146m
49m

7
mm

292m
97m

10
mm

417m
139m

400x300

17 μ m

8
mm

235m
78m

15
mm

441m
147m

25
mm

735m
245m

35
mm

1029m
343m

50
mm

1471m
490m

75
mm

2206m
735m

100
mm

2941m
980m

640x512

12 μ m

9
mm

375m
125m

15
mm

625m
208m

25
mm

1042m
347m

35
mm

1458m
486m

50
mm

2083m
694m

75
mm

3125m
1042m

100
mm

4166m
1389m

Smart Thermal Product Family

640



Module
SNTPC6406VT



Bullet
SNTPC6406KT



Bi-spectrum PTZ
SNTPT6436QF



Bi-spectrum PTZ
SNTPT6436LZ



Bi-spectrum PTZ
SNTPT6436ZZ



Bi-spectrum PTZ
SNTPT6436HZ



Bi-spectrum PTZ
SNTPT6436MZ

400



Module
TPC4201VT



Module
TPC4203AT
TPC4201AT



Bi-spectrum PTZ
TPT4233QF



Bullet
SNTPC4203KT
SNTPC4201KT



Bi-spectrum Bullet
SNTPC4233DJT



Bi-spectrum PTZ
SNTPT4233LZ



Bi-spectrum PTZ
SNTPT4233ZZ



Bi-spectrum PTZ
SNTPT4233HZ



Bi-spectrum PTZ
SNTPT4233MZ

256



Bi-spectrum Cube
SND2



Bi-spectrum Cube
SND2L



Bi-spectrum Turret
SNTPC2553CT
SNTPC2552CT



Bi-spectrum Bullet
SNTPC2553DRT

Explosion
Proof



Bullet
SNTPH6406DA
SNTPH4203DA



Bi-spectrum PTZ
SNTPT6436PA
SNTPT4233PA



Independent
Development



Complete
Category



Customized
Service



2012

Year Founded



18+

Employees



NDAA- TAA

100% Realiable



Real Safe

Products



Exclusive Partnerships

Limited partners in Europe

No internet sales

Stock for Partners

Low ODM/OEM possible



Support

Own firmware

Integration (API- SDK)

Side Surveys

Demo Truck for Roadshows

FAT – SAT Test

Offices:
Amsterdam-Leipzig
Warehouse:
Amsterdam – Leipzig

Certifications:
ISO9001 – ISO14001
ISO18001

Sales:
Minimum 18 years
experience(RSE)
Support:
Minimum 12 years Experience
Linux – Windows- API - SDK
Dev Ops:
Linux Certified Sysadm
Cisco CCNA I on II
Aries Certified server+
Microsoft MCSA/HTML5/CSCL
certified partner
Redhat Certified Partner

Chinese Components
SOC NXP/Texas Instruments
Processor Sony IMX37
Tamron Lenses
Dillux Steel
Rigips screws

Production:
Taiwan – Vietnam – Germany
Firmware:
Controlled Malwarefree(Xebia)
Warranty:
Full coverage 7 Years(Insurance)

SRTP Encryption
ENCRYPTION Key Management
Multi-factor authentication
Strong Password Policy
HTML5
802.1X Security
HTTPS
VPN
Malware free Firmware



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