



Advanced  
Sensor



Powered  
by GPU



Deep  
Learning



Image  
Fusion



# Intelligent Awareness Any Moment, Any Condition

Hikvision Thermal Products

**HIKVISION**<sup>®</sup>

# ABOUT HIKVISION

## Industry Pioneer

Since 2001, Hikvision has grown from being a single-product supplier to the world's leading provider of security products and solutions. From the early digital age to today's intelligence era, we have seized every opportunity to advance the industry with our innovative technologies. And venturing into new areas of inspiring technology – such as Artificial Intelligence, cloud computing, and the fusion of deep learning and multi-dimensional perception technologies, to name a few – Hikvision leads the security industry as an IoT provider with video as the core competency.

## Global Operations

Hikvision has established one of the most extensive marketing networks in the industry, comprising 44 international subsidiaries and branch offices to ensure quick responses to the needs of customers, users and partners.

### Core Technologies



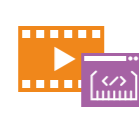
Visual Perception



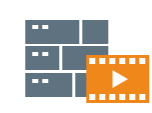
Cloud Storage



Big Data



Video Codec



Audio and Video Data Storage



Cross-Media Perception and Reasoning



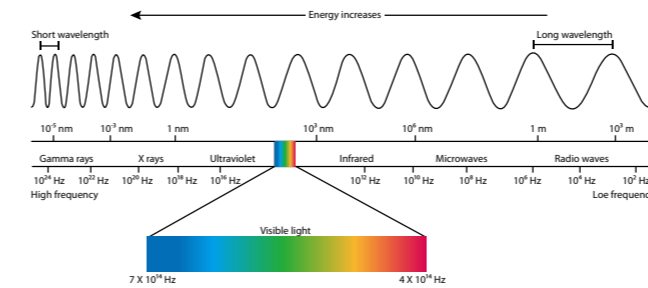
Streaming Media Networking and Management



Embedded Systems Development

# BASIC PRINCIPLES OF THERMAL CAMERAS

Each type of radiation has a unique wavelength. Any object with a temperature above absolute zero can emit a detectable amount of infrared radiation. The higher an object's temperature, the more infrared radiation is emitted.



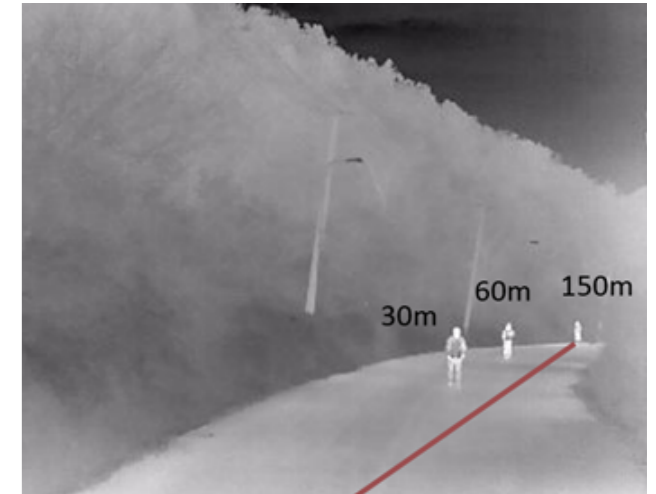
While invisible to human eyes, thermal cameras detect this kind of radiation (from wavelength 8 to 14 μm, or 8,000 – 14,000 nm) and produce images using temperature differences, making it possible to see the environment without visible light.

An infrared camera's effective range is what is meant by "seeing an object". Defined thresholds, known as Johnson's Criteria, refer to the minimum number of pixels necessary to either detect, recognize, or identify targets captured by scene imagers. The lower limits of detection, recognition, and identification (DRI), according to Johnson criteria are:

**Detection:** In order to distinguish an object from the background, the image must be covered by 1.5 or more pixels.

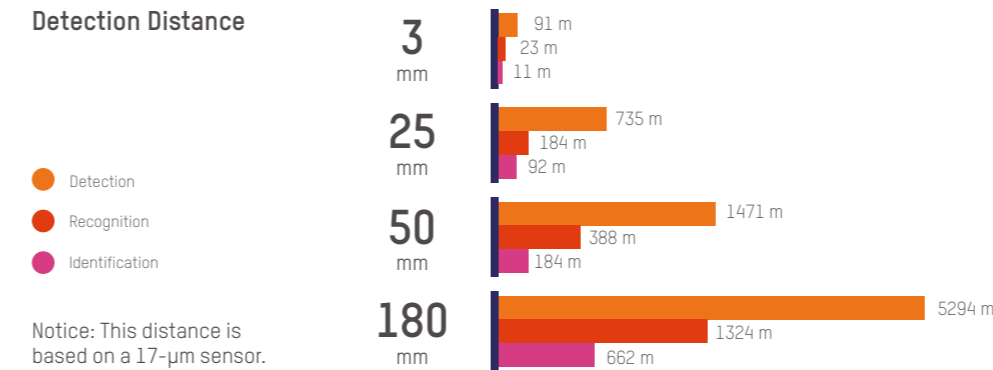
**Recognition:** In order to classify the object (animal, human, vehicle, boat, etc.), the image must have at least 6 pixels across its critical dimension.

**Identification:** In order to identify the object and describe it in details, the critical dimension must have be least 12 pixels across.



Detection, recognition and identification distances (with 8 mm lens)

### Detection Distance

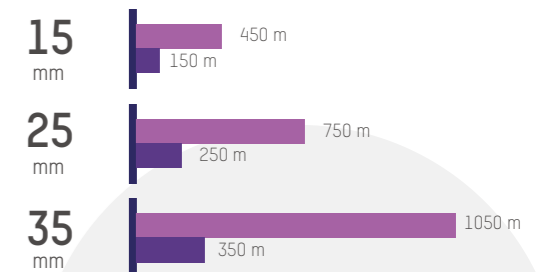


### VCA Distance

VCA rules: line crossing, intrusion, region entrance, region exit

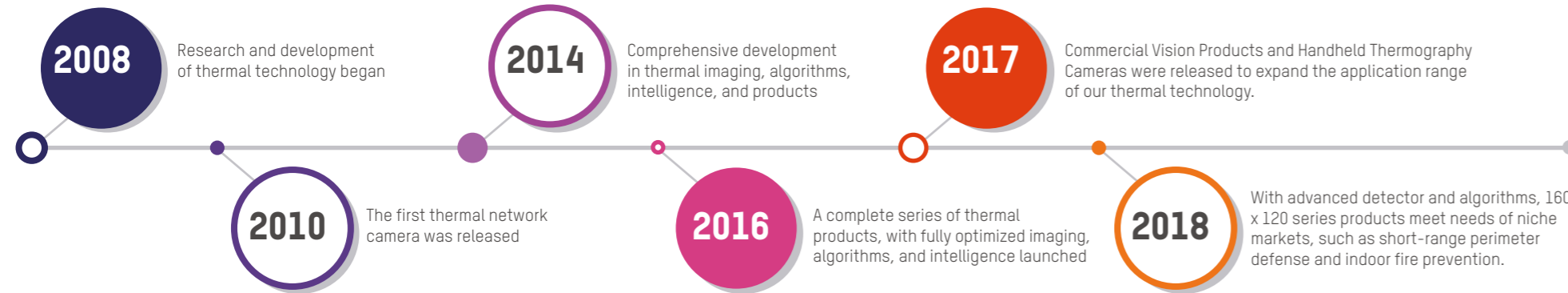
- Vehicle
- Human

Notice: This distance is based on a 17-μm sensor.





# OVERVIEW



## Security Group Products

Integrating technology from Hikvision's image processing and intelligent applications, the security group's thermal products meet the rigorous demands of sophisticated security. These cameras provide superb solutions for fire protection and perimeter defense by combining the advantages thermal imaging and visible image processing.



## Thermography Group Products

Hikvision is devoted to providing easy-to-use, high quality products to the public security market. These temperature measurement products utilize the world's leading imaging technology and intelligent analysis algorithms to create efficient thermometric solutions – solutions that improve industry safety and efficiency.



## Commercial Vision Group Products

Hikvision is devoted to bringing advanced thermal technology to more people – both professional and personal users. With the commercial vision products, we help you to see clearer and to build better.



# ADVANTAGES

## 1 Clear Imaging

With advanced features such as automatic gain control, digital detail enhancement, and 3D digital noise reduction, Hikvision thermal cameras offer crystal clear thermal imaging unparalleled in the industry.



### Auto Gain Control (AGC)

Based on the experience of AGC 2.0 development, AGC 4.0 improves detail of object with low temperature differences, and the abrupt change of image brightness when there comes a high temperature object.

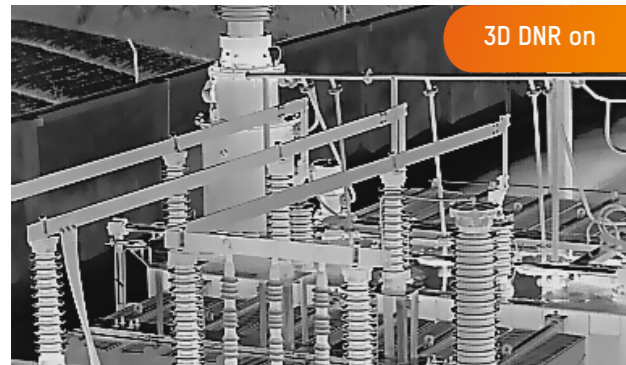
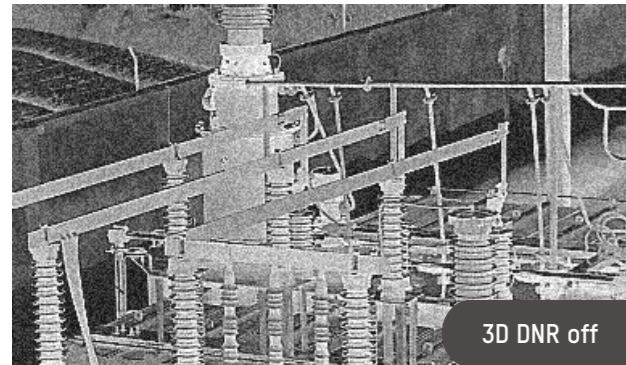


### Digital Detail Enhancement (DDE)

DDE is an advanced technology based on enhanced algorithms. This feature renders details more sharply in low contrast in any given region of interest.

### 3D Digital Noise Reduction (3D DNR)

3D DNR effectively removes the grainy or fuzzy quality in images under low light, rendering much clearer and finer images compared with 2D DNR.



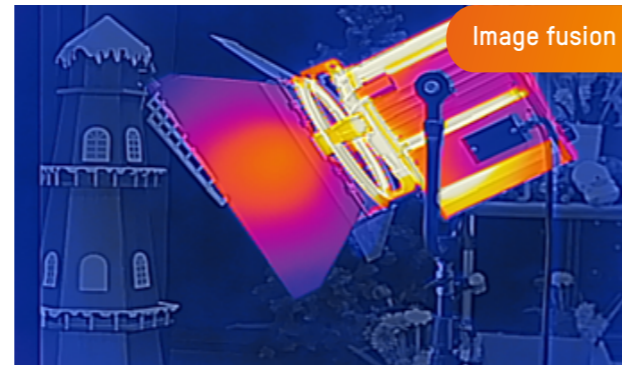
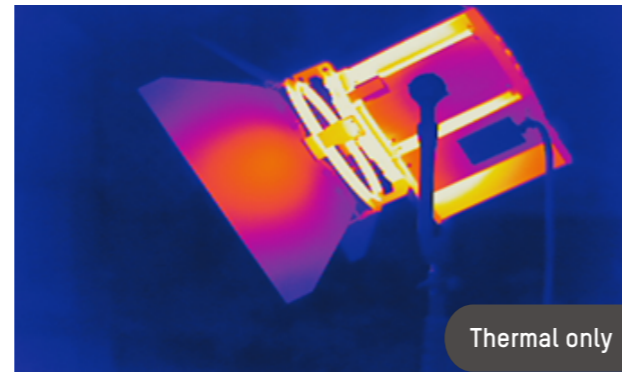
### Region of Interest (ROI)

ROI enhances the image quality of a specified area dramatically.



### Bi-Spectrum Image Fusion

Hikvision's signature thermal technology – bi-spectrum image fusion – combines features from both thermal and optical images, and creates a unique hybrid that provides extra details for more precise detection and decision-making.

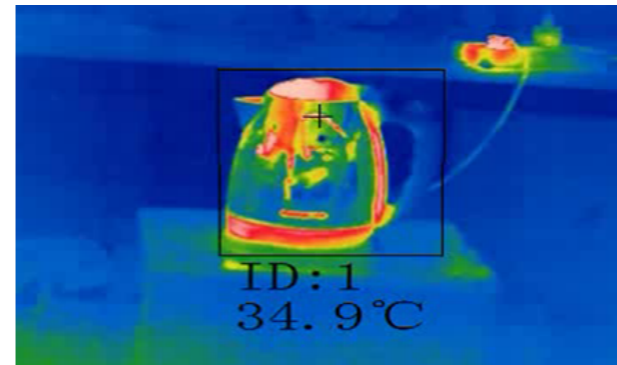


## 2

### Accurate Temperature Measurement

Through strict calibration and standardized testing procedures, Hikvision has established a temperature measurement model that offers great stability and high accuracy – up to  $\pm 2^\circ\text{C}$  or  $\pm 2\%$  (whichever is greater).

In addition, Hikvision thermal products support multiple temperature measurement rules including point, line, and frame measurements. Users can select rules for various scenarios to reach maximum accuracy.

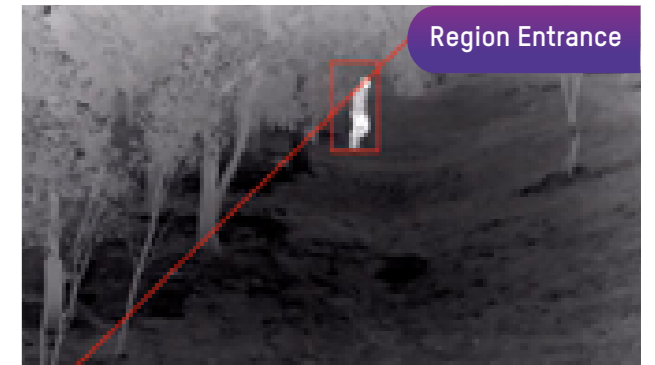
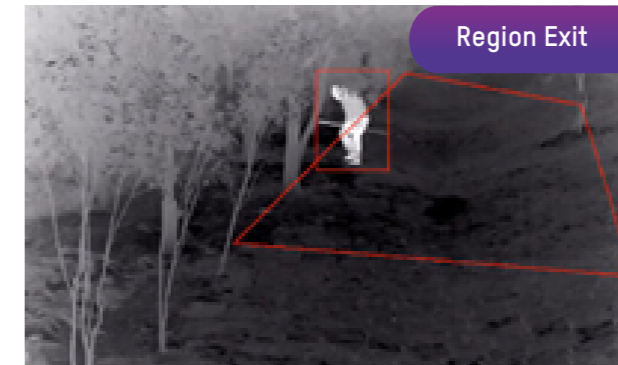


## 3

### Advanced Intelligence

Based on deep learning algorithms, Hikvision's thermal products deliver powerful and accurate behavior analyses, including detections such as line crossing, intrusion, region entrance and exit, and more. The intelligent human/vehicle detection feature helps reduce false alarms caused by animals, camera shake, falling leaves, or other irrelevant objects, significantly improving alarm accuracy.

Deep-learning-based dynamic fire source detection takes advantage of Hikvision's security big data, containing over 100,000 samples of global climate information to provide the highest possible detection accuracy. This front-end device can detect fire based on raw, frame-by-frame data, ensuring firsthand image analysis and rapid alarm triggering.





# APPLICATION SCENARIOS

## Robust Design

**Self-protection mechanism for harsh environments:**  
Proven capability to work under extreme environments (-40° C to 60° C); self-protective temperature control with intelligent heating/cooling adjustment to prevent freezing and fog; non-stop year-round operation.

**Stable long-distance transmission:**  
Normal cameras can only withstand ±10% voltage fluctuation. Hikvision thermal products are specially designed to adapt to as much as ±20% voltage fluctuation and 5% packet loss.

**Easy positioning for visible-light module:**  
For most bi-spectrum products, the visible-light module cannot be accurately positioned, requiring constant manual adjustment. Hikvision's optical & thermal PTZ products are equipped with an axis adjustment technology that ensures both thermal and visible imaging maintain precisely the same view. When the thermal module detects anomalies, the visible module can automatically locate and track relevant details.

**Stable imaging:**  
The integrated design improves device stability and reduces false alarms caused by shaking.

## Perimeter Defense

### Short range (20-70 m)

Recommended product models:  
DS-2TD2117/V1, DS-2TD2617/V1



Residential Car Dealerships Parking Lots

### Medium range (70-350 m)

Recommended product models:  
DS-2TD2137/V1, DS-2TD2166/V1, DS-2TX3636/V1



Farms Solar Power Plants Mines

### Long range (over 350 m)

Recommended product models:  
DS-2TD2366, DS-2TD6266/V2, DS-2TD8166/V2



Borders Railways Airports

### Advantages

**Superior environmental adaptability:**  
Thermal products are capable of capturing images all day and night, regardless of environmental factors such as darkness, bright light, backlight, fog, and haze.

**More accurate alarms:**  
Powerful behavior analyses (line crossing, intrusion, region entrance and exit) are based on a deep learning algorithm, which provides higher alarm accuracy and reduces false alarms.

**Extended distances:**  
Compared to optical cameras, thermal detection covers much longer distances and requires fewer devices to install.

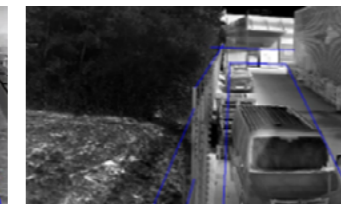
**Better visuals:**  
With thermal cameras, you can easily discover objects and potential risks otherwise invisible to normal cameras. In addition to thermal images, the built-in visible-light module can provide supplementary recorded evidence – lowering costs for installation.

### Success stories

**Farming in South Africa**  
The end user used Hikvision thermal cameras to stop rhinoceros poaching. These cameras can detect heat over long distances, lowering costs and providing high-accuracy perimeter defense.



**BMW Auto Dealership in Europe**  
The end user used Hikvision thermal cameras to prevent theft of auto parts. These cameras use line-crossing and intrusion detections to protect the BMW dealership, 24/7.



**Solar Plant in Italy**  
The end user used more than 200 thermal cameras to protect the entire area of the solar plant to protect valuable equipment and prevent theft.



MORE SUCCESS STORIES ...

# Fire Prevention

## Indoor Fire Prevention

Recommended product models:  
DS-2TD1217/V1



Warehouses    Data Centers    Museums

## Outdoor Fire Prevention

Recommended product models:  
DS-2TD2136, DS-2TD4136, DS-2TD6236



Refuse Areas    Gas Stations    Metallurgy

## Success stories

### Gas Station in France

The end user used Hikvision thermal cameras to detect temperature exceptions of gas tanks in the gas station.



MORE  
SUCCESS  
STORIES  
...

## Advantages

### Temperature anomaly detection:

Detects and reports abnormal temperature in key areas to prevent fires.

### Dynamic fire detection:

For areas where temperatures are undetectable, the dynamic fire detection function can detect fire at early stages.



Temperature exception alarm



Vigilant smoking detection



Video Content Analytics



Picture-in-picture preview



# Temperature Measurement



Recommended product models:  
DS-2TD2166T, DS-2TD4166T, DS-2TP23, DS-2TP31



Substations    Charging Stations    Chemical Plants    Industrial Laundries

## Success stories

### Substation in Eastern Europe

The end user used Hikvision thermal PTZ cameras to detect the temperature of equipment in the substation with high accuracy to ensure secure daily operations.



MORE  
SUCCESS  
STORIES  
...

## Advantages

### Accurate temperature measurement:

Wide measurement range (-20 to 550° C or -4 to 1,022° F) with high accuracy (up to ± 2° C or ± 2%, whichever is greater).

### Easy to operate:

Full screen temperature difference comparison, flexible rule settings (point, line, and frame-based), less manual calibration.

### Fast alarm:

Online, 24-hour, real-time alarm.



Long Measurement Distance



Ergonomic and Compact



Rapid Location Detection



Extremely Cost-efficient



## Handheld Products

### Advantages

**High quality:**  
IP67 protection, -30 to 55° C or -22 to 131° F working temperature range, extreme heat and cold resistance, suitable for harsh environments.

**Advanced detector:**  
All products adopt advanced detector where NETD is smaller than 40 mK.

**Target tracking:**  
Quick detection and tracking of target objects.

**Great user experience:**  
High resolution OLED display and ocular design provides larger field of view, finer images, and better user experience.



Criminal Seizing    Security Patrolling



Wildlife Protection    Hunting

## Thermal Modules

### Advantages

**Great image effect:**  
Hikvision has 16 years accumulation in imaging technologies. Self-developed AGC, DDE, 3D DNR bring great advantages on image effects.

**Shutter-less technology:**  
DS-2TM13/16 Series adopts shutter-less technology, which avoids the risks of losing targets and revealing user's position.

**Low power consumption:**  
DS-2TM03/06 Series power consumption < 1.3 / 1.8 W  
DS-2TM13/16 Series power consumption < 0.8 / 1 W



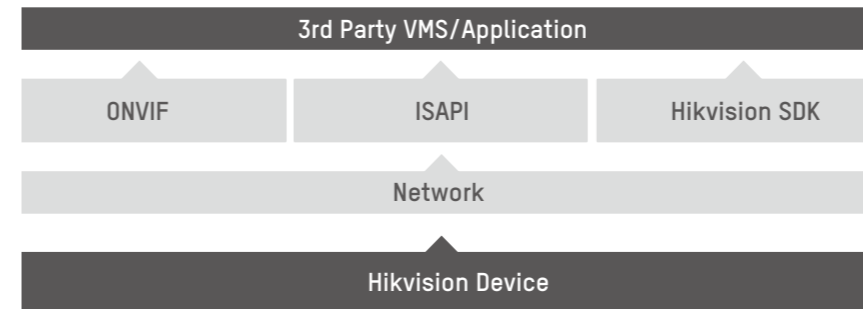
Thermal module with shutter



Shutter-less thermal module

## Integration

Hikvision is dedicated to encouraging third-party integration with existing products. We are continually developing third-party collaboration by offering a range of integrated solutions, providing multiple options for customers and delivering quality integrated service to our partners and customers. A full-fledged member of ONVIF, Hikvision not only fully supports open standard protocols, but also created a dedicated team to focus on building the integration protocol and related development tools. With Hikvision Private SDKs, we provide comprehensive programming sources to help customers developing their own uniquely successful solutions. Additionally, we have released the ISAPI, an open standard protocol that suits any Hikvision Partner, providing even more possibilities for customers.



Thrid Partner Integration Framework

### Open Standard – ONVIF

ONVIF is a leading international standardization initiative for IP-based physical security products. Hikvision closely works with all the ONVIF members across the physical security industry to develop an open standard Eco-System that works effortlessly with third-party manufacturers, delivering fully integrated solutions that propel your business forward.

### Hikvision Open Standard – ISAPI

The ISAPI is an Application Layer Protocol designed by Hikvision. It uses standard format –Http + XML – to allow easy access and control to Hikvision devices. It's an open protocol that suits all Hikvision Partners and offers strong capabilities for development with various software architecture from 3rd-party systems, and it's easy to implement. Additionally, the ISAPI protocol contains Hikvision Smart Events metadata, and allows metadata extraction using standard RTSP.

### Hikvision SDK

The Hikvision SDK is designed for the remote connection and configuration of embedded DVRs, Encoders, IPCs and the other IP devices, Access Control, Alarm products, Video intercom products, and much more. The SDK Hikvision device features on most Hikvision products with comprehensive development programming tools



Security

SHOWCASE PRODUCT

DS-2TD2137V1

Thermal Network Bullet Camera



384 × 288, 17 μm  
 Lens: 7 / 10 / 15 / 25 / 35 mm  
 VCA: Line crossing / Intrusion / Region entrance / Region exiting  
 Fire detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Working temperature: -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

DS-2TD2166V1

Thermal Network Bullet Camera



640 × 512, 17 μm  
 Lens: 7 / 15 / 25 / 35 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exiting  
 Fire detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Working temperature: -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

DS-2TD2137VP

Thermal Network Bullet Camera



384 × 288, 17 μm  
 Lens: 10 / 15 / 25 / 35 mm  
 Support HEOP, integrate with the 3rd party behavioral analysis  
 Fire detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Working temperature: -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

DS-2TD1217V1

Thermal & Optical Bi-spectrum Turret Camera



Thermal: 160 × 120, 17 μm; Optical: 1920 × 1080  
 Thermal: 2 / 3 / 6 mm; Optical: 2 / 4 / 6 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit  
 Bi-spectrum image fusion, picture in picture preview  
 Fire detection  
 Smoking detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Working temperature: -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

DS-2TD1217PA

Thermal & Optical Bi-spectrum Turret Camera



Thermal: 160 × 120, 17 μm; Optical: 2688 × 1520  
 Thermal: 2 / 3 / 6 mm; Optical: 2 / 4 / 6 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit  
 Strobe light & Audio alarm  
 Bi-spectrum image fusion, picture in picture preview  
 Fire detection  
 Smoking detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Working temperature: -40 °C to 60 °C (-40 °F to 140 °F)  
 IP66

DS-2TD2617V1

Thermal & Optical Bi-spectrum Bullet Camera



Thermal: 160 × 120, 17 μm; Optical: 1920 × 1080  
 Thermal: 3 / 6 mm; Optical: 4 / 6 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit  
 Bi-spectrum image fusion, picture in picture preview  
 Fire detection  
 Smoking detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Working temperature: -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

DS-2TD2617PA

Thermal & Optical Bi-spectrum Bullet Camera



Thermal: 160 × 120, 17 μm; Optical: 2688 × 1520  
 Thermal: 3 / 6 / 10 mm; Optical: 4 / 6 / 8 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit  
 Strobe Light & Audio Alarm  
 Bi-spectrum image fusion, picture in picture preview  
 Fire detection  
 Smoking detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Working temperature: -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

DS-2TD2117V1

Thermal Network Bullet Camera



160 × 120, 17 μm  
 Lens: 3 / 6 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit  
 Fire detection  
 Smoking detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Working temperature: -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

DS-2TD2117PA

Thermal Network Bullet Camera



160 × 120, 17 μm  
 Lens: 3 / 6 / 10 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit  
 Strobe light & Audio alarm  
 Fire detection  
 Smoking detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Working temperature: -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

DS-2TD1117PA

Thermal Network Turret Camera



160 × 120, 17 μm  
 Lens: 2 / 3 / 6 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit  
 Strobe light & Audio alarm  
 Fire detection  
 Smoking detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Working temperature: -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

DS-2TD2636

Thermal & Optical Bi-spectrum Bullet Camera



Thermal: 384 × 288, 17 μm; Optical: 1920 × 1080  
 Thermal: 10 / 15 mm; Optical: 6 / 8 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exiting  
 Fire detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Bi-spectrum image fusion, picture in picture preview  
 Working temperature: -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

DS-2TD2836V1

Thermal & Optical Bi-spectrum Bullet Camera



Thermal: 384 × 288, 17 μm; Optical: 1920 × 1080  
 Thermal: 25 / 50 mm; Optical: 13 / 25 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit  
 Fire detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Bi-spectrum image fusion, picture in picture preview  
 Working temperature: -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

DS-2TD2866V1

Thermal & Optical Bi-spectrum Bullet Camera



Thermal: 640 × 512, 17 μm; Optical: 1920 × 1080  
 Thermal: 25 / 50 mm; Optical: 13 / 25 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit  
 Fire detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Bi-spectrum image fusion, picture in picture preview  
 Working temperature: -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

DS-2TX3636V1

Thermal Smart Linkage Tracking System



Thermal: 384 × 288, 17 μm  
 Optical: 1920 × 1080  
 Thermal: 15 / 25 / 35 mm; Optical: 5.7-205.2 mm  
 VCA: Line crossing / Intrusion detection / Smart Linkage Tracking System (Thermal + Optical)  
 Working temperature: -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66



# Thermography

## DS-2TD2466

Anti-corrosion Thermal Network Bullet Camera



640 × 512, 17 μm  
 Lens: 25 / 50 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit  
 Fire detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Working temperature:  
 -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66  
 316L Stainless Steel material

## DS-2TD4136V2

Thermal & Optical Bi-spectrum Speed Dome



Thermal: 384 × 288, 17 μm  
 Optical: 1920 × 1080  
 Thermal: 25 / 50 mm; Optical: 5.7–205.2 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit / Smart Tracking Linkage (Thermal + Optical)  
 Fire detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Working temperature:  
 -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

## DS-2TD4166V2

Thermal & Optical Bi-spectrum Speed Dome



Thermal: 640 × 512, 17 μm  
 Optical: 1920 × 1080  
 Thermal: 25 / 50 mm; Optical: 5.7–205.2 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit / Smart Tracking Linkage (Thermal + Optical)  
 Fire detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Working temperature:  
 -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

## DS-2TD4237V2

Thermal & Optical Bi-spectrum Speed Dome



Thermal: 384 × 288 17 μm  
 Optical: 1920 × 1080  
 Thermal: 10 / 25 mm; Optical: 4.8–153 mm  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit / Smart Tracking Linkage (Thermal + Optical)  
 Fire detection  
 Working temperature:  
 -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

## DS-2TD2136T

Thermal Network Bullet Camera



384 × 288, 17 μm  
 Lens: 10 / 15 / 25 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit  
 Fire detection  
 Temperature measurement range: -20 to 550° C  
 Temperature accuracy: max (±2° C, ±2%)  
 Working temperature:  
 -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

## DS-2TD4136T / DS-2TD4166T

Thermal & Optical Bi-spectrum Speed Dome



Thermal: 384 × 288 / 640 × 512, 17 μm  
 Optical: 1920 × 1080  
 Thermal: 9 / 25 mm; Optical: 5.7–205.2 mm  
 Fire detection  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit / Smart Tracking Linkage (Thermal + Optical)  
 Temperature measurement range: -20 to 550° C  
 Temperature accuracy: max (±2° C, ±2%)  
 Working temperature:  
 -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

## DS-2TD6236T / DS-2TD6266T

Thermal & Optical Bi-spectrum Positioning System



Thermal: 384 × 288 / 640 × 512, 17 μm  
 Optical: 1920 × 1080  
 Thermal: 25 / 50 mm, Optical: H (5.6–208 mm)  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit / Smart Tracking Linkage (Thermal + Optical)  
 Fire detection  
 Temperature measurement range: -20 to 550° C  
 Temperature accuracy: max (±2° C, ±2%)  
 Working temperature:  
 -40 °C to 65 °C (-40 °F to 149 °F)  
 Ingress protection: IP66

## DS-2TP31

Handheld Thermographic Camera



160 × 120, 17 μm  
 Lens: 3 mm  
 320 × 160 @ 25 fps  
 320 × 240 resolution 2.4" LCD display  
 Temperature measurement range: -20 to 550° C  
 Temperature accuracy: max (±2° C, ±2%)  
 8 GB by default, supports up to 128 GB storage  
 Up to 8 hours continuous running  
 IP54

## DS-2TD6236V2

Thermal & Optical Bi-spectrum Positioning System



Thermal: 384 × 288, 17 μm  
 Optical: 1920 × 1080  
 Thermal: 50 / 75 mm  
 Optical: H (5.6–208 mm) / C (6.7–330 mm)  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit / Smart Tracking Linkage (Thermal + Optical)  
 Fire detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Working temperature:  
 -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

## DS-2TD6266V2

Thermal & Optical Bi-spectrum Positioning System



Thermal: 640 × 512, 17 μm  
 Optical: 1920 × 1080  
 Thermal: 50 / 75 / 100 mm  
 Optical: H (5.6–208 mm) / C (6.7–330 mm)  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit / Smart Tracking Linkage (Thermal + Optical)  
 Fire detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Working temperature:  
 -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

## DS-2TD8166V2

Thermal & Optical Bi-spectrum Stable PTZ Camera



Thermal: 640 × 512, 17 μm; Optical: 1920 × 1080  
 Thermal: 75 / 100 / 30–150 / 45–180 mm  
 Optical: H (5.6–208 mm) / C (6.7–330 mm) / E (12.5–775 mm)  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit / Smart Tracking Linkage (Thermal + Optical)  
 Fire detection  
 Temperature measurement range: -20 to 150° C  
 Temperature accuracy: ±8° C  
 Working temperature:  
 -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

## DS-2TD2166T

Thermal Network Bullet Camera



640 × 512 17 μm  
 Lens: 15 / 25 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit  
 Fire detection  
 Temperature measurement range: -20 to 550° C  
 Temperature accuracy: max (±2° C, ±2%)  
 Working temperature:  
 -40 °C to 65 °C (-40 °F to 149 °F)  
 IP66

## DS-2TD2466T

Explosion-Proof Thermal Network Bullet Camera



640 × 512, 17 μm  
 Lens: 25 mm  
 VCA: Line crossing / Intrusion detection / Region entrance / Region exit  
 Fire detection  
 Temperature measurement range: -20 to 550° C  
 Temperature accuracy: max (±2° C, ±2%)  
 Working temperature:  
 -40 °C to 65 °C (-40 °F to 149 °F)  
 IP68  
 316L stainless steel material

## DS-2TA03 / 06

Thermographic Automation Thermal Camera



384 × 288, 17 μm  
 Lens: 7 / 15 mm  
 384 × 288 @ 50 fps  
 Temperature measurement range: -20 to 550° C  
 Temperature accuracy: max (±2° C, ±2%)  
 Dimension Size: 120 × 60 × 60 mm  
 Ethernet: Gigabit Ethernet  
 Working temperature:  
 -20 °C to 50 °C (-4 °F to 122°F)

## DS-2TP23

Handheld Thermographic Camera



Thermal: 384 × 288, 17 μm; Optical: 1920 × 1080  
 Thermal: 10 mm, Optical: 4.9 mm  
 384 × 288 @ 25 fps  
 640 × 480 resolution 3.5" LCD touch display  
 Temperature measurement range: -20 to 550° C  
 Temperature accuracy: max (±2° C, ±2%)  
 Bi-spectrum image fusion, picture in picture preview  
 64 GB SD card  
 Up to 4 hours continuous running  
 Wi-Fi  
 IP54

# Commercial Vision

## DS-2TS03XF

Handheld Thermal Monocula



384 × 288, 17 μm  
 Lens: 15 mm  
 0.39-inch LCOS display @ 720 × 540  
 Hot track, Wi-Fi, Ranging, GPS  
 16 GB SD card  
 Up to 5 hours continuous running  
 (with GPS and Wi-Fi hot spot off)  
 Working temperature:  
 -30 to 55° C (-22 to 131° F)  
 IP67

## DS-2TS03UF

Handheld Thermal Monocular



384 × 288, 17 μm  
 Lens: 15 / 25 / 35 mm  
 0.39-inch OLED display @ 1024 × 768  
 Hot track, Wi-Fi, Ranging, GPS  
 16 GB SD card  
 Up to 5 hours continuous running  
 (with GPS and Wi-Fi hot spot off)  
 Working temperature:  
 -30 to 55° C (-22 to 131° F)  
 IP67

## DS-2TS06XF

Handheld Thermal Monocular



640 × 512, 17 μm  
 Lens: 35 mm  
 0.39-inch OLED display @ 1024 × 768  
 Hot track, Wi-Fi, Ranging, GPS  
 16 GB SD card  
 Up to 8 hours continuous running  
 Working temperature:  
 -30 to 55° C (-22 to 131° F)  
 IP67

## DS-2TR03

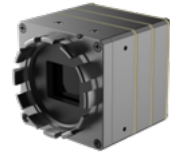
Thermal Scope



384 × 288, 17 μm  
 Lens: 35 / 50 mm  
 0.39-inch OLED display @ 1024 × 768  
 Hot track, Wi-Fi, Ranging, GPS  
 16 GB SD card  
 Up to 8 hours continuous running  
 Working temperature:  
 -30 to 55° C (-22 to 131° F)  
 IP67

## DS-2TM03/06

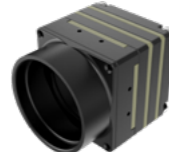
Thermal Module



384 × 288 / 640 × 512, 17 μm  
 NETD < 35 mk @ F1.0, 30°C  
 Power consumption: ≤ 1.3 W / 1.6 W (TYP)  
 Size: 40 x 41 x 49 mm  
 Support lens size M34\*0.75  
 Support CVBS & BT.656  
 Working temperature:  
 -40°C to 65°C (-40 °F to 149 °F)

## DS-2TM13/16

Thermal Module



384 × 288 / 640 × 512, 17 μm  
 NETD < 35 mk @ F1.0, 30°C  
 Power consumption: ≤ 0.8 W / 1.0 W (TYP)  
 Size: 28 x 28 x 34.6 mm  
 Support lens size M25\*0.5  
 Support CVBS & BT.656  
 Working temperature:  
 -40°C to 65°C (-40 °F to 149 °F)  
 Shutterless non-uniformity calibrating technology

## DS-2TS16

Handheld Thermal & Optical Bi-spectrum Binocular



Thermal: 640 × 512, 17 μm, Optical: 1280 × 960  
 Thermal lens: 35 / 50 mm, Optical lens: 12 mm  
 0.39-inch OLED display @ 1024 × 768  
 Wi-Fi, GPS, video recording, picture snapshot, image fusion, object highlight  
 32 GB SD card  
 Up to 7 hours continuous running  
 Working temperature: -30 to 55° C (-22 to 131° F)  
 IP67

## DS-2TS36

Handheld Bi-spectrum Multi-function Binocular



Thermal: 640 × 512, 17 μm; Optical: 1280 × 960  
 Thermal lens: 50 / 75 / 100 mm, Optical lens: 22 mm  
 0.39-inch OLED display @ 1024 × 768  
 Wi-Fi, GPS, Laser rangefinder, video recording, picture snapshot, image fusion, object highlight  
 32 GB SD card  
 Up to 7 hours continuous running  
 Working temperature: -30 to 55° C (-22 to 131° F)  
 IP67

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# Intelligent Awareness, Any Moment, Any Condition

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