



**Perimeter Protection in All Weather**  
Hikvision Thermal Products



**HIKVISION**<sup>®</sup>



# ABOUT HIKVISION



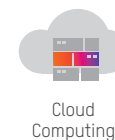
## An Industry Pioneer

Hikvision is an IoT solution provider with video as its core competency. Featuring an extensive and highly skilled R&D workforce, Hikvision manufactures a full suite of comprehensive products and solutions for a broad range of vertical markets. In addition to the security industry, Hikvision extends its reach to smart home tech, industrial automation, and automotive electronics industries to achieve its long-term vision. Hikvision products also provide powerful business intelligence for end users, which can enable more efficient operations and greater commercial success.

## Global Operations

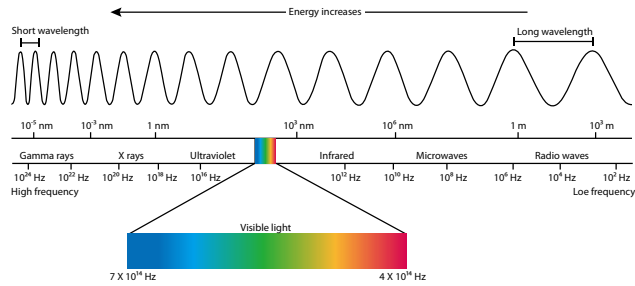
Hikvision has established one of the most extensive regional networks in the industry, comprising 66 international subsidiaries and branch offices to ensure quick responses to the needs of customers, users, and partners.

### Core Technologies



# THE BASICS 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.



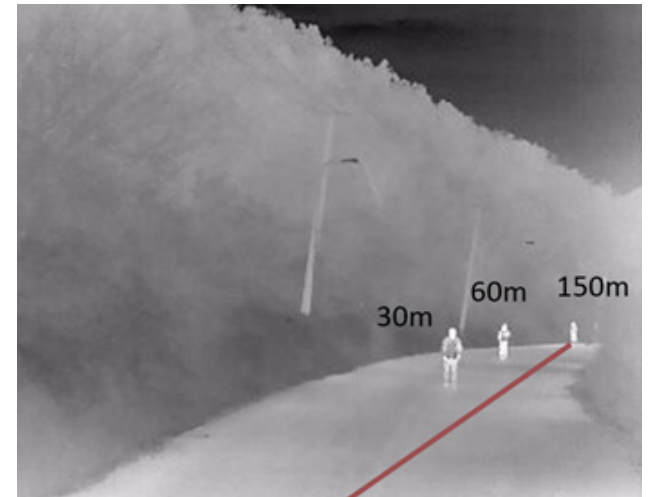
While invisible to human eyes, thermal cameras detect this kind of radiation (from wavelength 8 to 14 μm, or 8,000 – 14,000 nm) and produce images using temperature differences, making it possible to see the environment without visible light.

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.

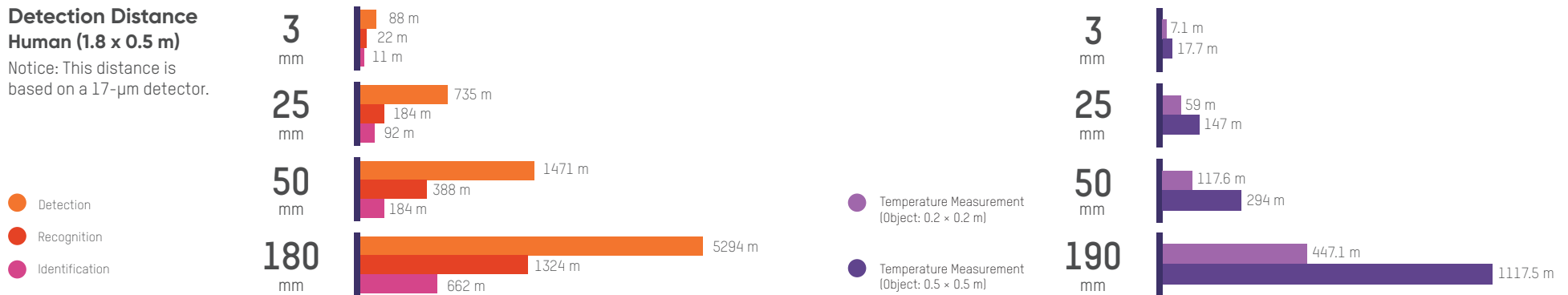
**Identification:** In order to identify the object and describe it in details, the critical dimension must be at least 12 pixels across.

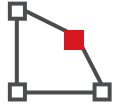


Detection, recognition and identification distances (with 8 mm lens)

## Detection Distance Human (1.8 x 0.5 m)

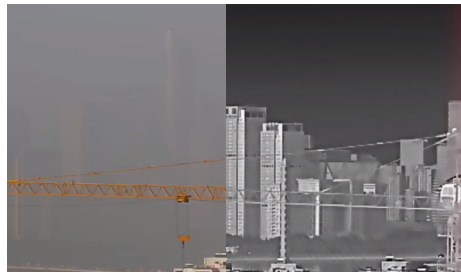
Notice: This distance is based on a 17-μm detector.





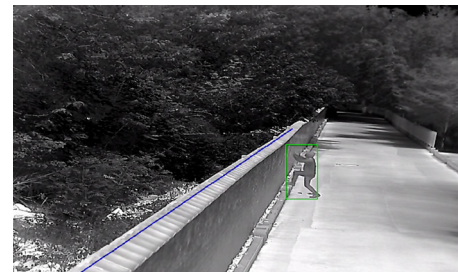
# WHY DO WE USE THERMAL CAMERAS FOR PERIMETER PROTECTION?

## Superior Environmental Adaptability



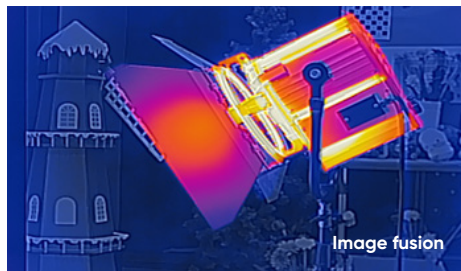
Thermal cameras capture sharp images around-the-clock, regardless of environmental factors such as light levels, contrast, backlighting, shadows, fog, smog, rain, etc.

## High Alarm Accuracy



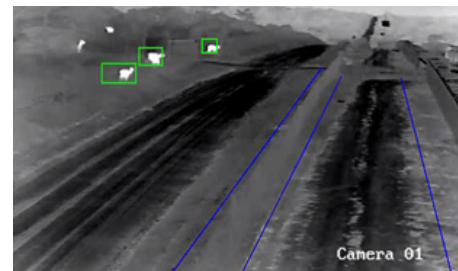
Based on deep learning algorithms, thermal cameras provide ultra-effective detection for line crossing, intrusion, and region entry and exit. False alarms triggered by non-human and non-vehicle objects are vastly reduced.

## Better Visuals



With thermal cameras, you can easily discover objects and potential risks that are invisible to conventional cameras. In addition to thermal images, the built-in visible-light module can provide supplementary recorded evidence – lowering costs for installation.

## Extended Distances



Thermal detection covers much larger distances and requires fewer devices to do it, compared against conventional, optical cameras.

# SHORT-RANGE PROTECTION

## 3-steps VCA

With a 3-step configuration, users can easily set up VCA rules for the camera with no need to calibrate manually.



Enable VCA



Draw a detection area



Set human/vehicle as the target

## Human & Vehicle Classification

Hikvision's VCA 2.0 is an intelligent video content analysis technology based on deep learning algorithms. It detects and classifies targets into human or vehicle types while filtering out the other objects.

### Thermal Lens Detection



### Deep Learning Classification



## Light & Audio Warning

Our cameras detect intrusion threats in a timely manner and trigger the strobe light and customizable audio alarms. You can achieve arm or disarm easily with a few taps via Hik-Connect.

### Rule Determination





# HeatPro

# MEDIUM-RANGE PROTECTION

## 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.



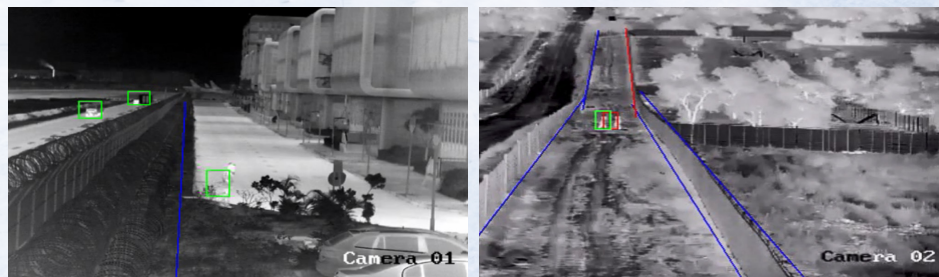


## Smart Tracking Linkage

The Hikvision Thermal Smart Linkage Tracking System is formed by one bi-spectrum bullet camera offering panorama and one optical PTZ camera smartly tracking moving targets.

The bullet camera for all-weather protection offers live view 24/7 of significant passageways, highly accurate detection in specified areas and human & vehicle classifications. The speed dome identifies trespassers with auto or manual tracking for multiple targets and can be zoomed in for more details.

Within the linkage system, it is easy to achieve one-touch connection and automatic alignment between the bi-spectrum bullet camera and optical PTZ camera.

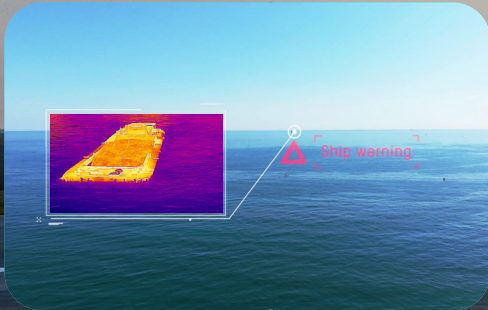


# LONG-RANGE PROTECTION



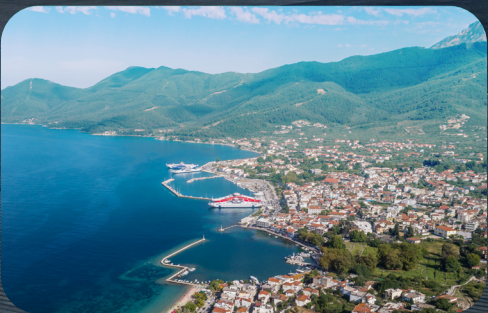
Hikvision's thermal PTZ cameras are tailored for super long detection, providing highly accurate and effective perimeter protection with a smaller number of devices.

These cameras can detect with excellent image performance of moving vehicles within 38 km and humans within 12 km.



Hikvision's thermal cameras for vessel detection use deep learning algorithms, discerning the different heat emissions of various targets.

These cameras provide accurate ship flow and dredger detections, meet or exceed requirements for specific scenarios such as fishery, offshore windfarms, salmon/shrimp farms, ports, offshore oilfields, and more.



In a drone response system, the radar detects unmanned aircraft and sends the location to the PTZ positioning system.

This way, it tracks the targets fast, zooms in for detailed information, and identifies potentially dangerous payloads attached to the drone.



# PRODUCT MODELS

## DS-2TD2628/QA

Thermal Network  
Bullet Camera



Thermal: 256 × 192, 12 μm, Optical: 2688 × 1520  
Lens (thermal): 3 / 7 / 10 mm  
Lens (optical): 4 / 6 / 8 mm  
VCA: Line crossing / Intrusion / Region entry & exit  
Audible Alert and Strobe Light  
Temperature Exception  
Temperature Exception Range: -20 to 150°C  
Temperature Accuracy: ±8°C  
Working Temperature: -40 to 65°C (-40° F to 149° F)  
IP67

## DS-2TD1228/QA

Thermal Network  
Turret Camera



Thermal: 256 × 192, 12 μm, Optical: 2688 × 1520  
Lens (thermal): 2 / 3 / 7 mm  
Lens (optical): 2 / 4 / 6 mm  
VCA: Line crossing / Intrusion / Region entry & exit  
Audible Alert and Strobe Light  
Temperature Exception  
Temperature Exception Range: -20 to 150°C  
Temperature Accuracy: ±8°C  
Working Temperature: -40 to 65°C (-40 to 149° F)  
IP66

## DS-2TD2617/QA

Bi-Spectrum Network  
Bullet Camera



Thermal : 160 x 120, 17 μm, Optical : 2688 x 1520  
Lens (thermal) : 3 / 6 / 10 mm  
Lens (optical): 4 / 8 mm  
VCA : Line crossing / Intrusion / Region entry & exit  
Region exiting Audible Alert and Strobe Light  
Temperature Exception  
Temperature Exception Range : -20 to 150°C  
Temperature Accuracy : ±8°C  
Working Temperature : -40 to 65°C (-40 to 149°F)  
IP67

## DS-2TD1217/QA

Thermal Network  
Turret Camera



Thermal: 160 x 120, 17 μm, Optical: 2688 x 1520  
Lens (thermal): 2 / 3 / 6 mm  
Lens (optical): 2 / 4 / 6 mm  
VCA: Line crossing / Intrusion / Region entry & exit  
Audible Alert and Strobe Light  
Temperature Exception  
Temperature Exception Range: -20 to 150°C  
Temperature Accuracy: ±8°C  
Working Temperature: -40 to 65°C (-40 to 149°F)  
IP66

## DS-2TD2628/QA/GLT

Bi-Spectrum Network  
4G Bullet Camera



Thermal: 256 x 192, 12 μm, Optical: 2688 x 1520  
Lens (thermal): 3 / 7 / 10 mm  
Lens (optical): 4 / 6 / 8 mm  
VCA: Line crossing / Intrusion / Region entry & exit  
Audible Alert and Strobe Light  
Temperature Exception  
Temperature Exception Range: -20 to 150°C  
Temperature Accuracy: ±8°C  
Working Temperature: -40 to 65°C (-40 to 149°F)  
IP67

## DS-2TXS2628/QA/GLT/CH30S80

Solar-powered  
Thermal Camera Kit



Thermal: 256 x 192, 12 μm, Optical: 2688 x 1520  
Lens (thermal): 3 / 7 / 10 mm  
Lens (optical): 4 / 6 / 8 mm  
VCA: Line crossing / Intrusion / Region entry & exit  
80 W photovoltaic panel, 30 Ah chargeable lithium battery  
LTE-TDD/LTE-FDD/WCDMA 4G wireless network  
transmission, support Micro SIM card  
Audible Alert and Strobe Light  
Temperature Exception  
Temperature Exception Range: -20 to 150°C  
Temperature Accuracy: ±8°C  
Working Temperature: -40 to 65°C (-40 to 149°F)  
IP67

## DS-2TD2137/PY

Thermal Network  
Bullet Camera



Thermal: 384 × 288, 17 μm  
Lens: 4 mm  
4 mm: 90.0° × 65.3°  
VCA: Line crossing / Intrusion / Region entry & exit  
Temperature Exception Range: -20 to 150°C  
Temperature Accuracy: ±8°C  
Alarm Input: 2-ch inputs (0-5 VDC)  
Alarm Output: 2-ch relay outputs, alarm response actions configurable  
Working Temperature: -40 to 65°C (-40 to 149° F)  
IP67

## DS-2TD2138/QY

Thermal Network  
Bullet Camera



Thermal: 384 × 288, 12 μm  
Lens : 4 / 7 / 10 / 13 / 15 / 25 / 35 mm  
4mm: 60.0°x 45.0° / 7 mm: 42.0° × 32.0° / 10 mm: 26.0° × 20.0° / 13mm: 20.0°x 15.0° / 15 mm: 17.0° × 13.0°/25 mm: 11.0° × 8.0° / 35mm: 7.5°x 5.6°  
VCA: Line crossing / Intrusion / Region entry & exit  
Temperature Exception Range: -20 to 150°C  
Temperature Accuracy: ±8°C  
Alarm Input: 2-ch inputs (0-5 VDC)  
Alarm Output: 2-ch relay outputs, alarm response actions configurable  
Working Temperature: -40 to 65°C (-40 to 149° F)  
IP67

### DS-2TD2637/QY

#### Bi-Spectrum Network Bullet Camera



Thermal: 384 × 288, 17 μm, Optical: 2688 × 1520  
Lens (thermal): 7 / 10 / 25 / 35 mm  
7mm: 60.0° × 44.1° / 10mm: 37.5° × 28.5° / 15mm: 24.5° × 18.5° / 25mm: 14.9° × 11.2° / 35mm: 10.7° × 8.0°  
Lens (optical): 4 / 12 mm  
VCA: Line crossing / Intrusion / Region entry & exit  
Temperature Exception  
Temperature Exception Range: -20 to 150°C  
Temperature Accuracy: ±8°C  
Working Temperature: -40 to 65°C (-40° to 149°F)  
Anti-corrosion Coating  
IP67

### DS-2TD2167/PY

#### Thermal Network Bullet Camera



Thermal: 640 × 512, 17 μm  
Lens: 7 / 15 / 25 / 35 mm  
7 mm: 88.5° × 73.2° / 15 mm: 42.5° × 33.6° / 25 mm: 24.55° × 19.75° / 35 mm: 17.67° × 14.18°  
VCA: Line crossing / Intrusion / Region entry & exit  
Temperature Exception Range: -20 to 150°C  
Temperature Accuracy: ±8°C  
Alarm Input: 2-ch inputs (0-5 VDC)  
Alarm Output: 2-ch relay outputs, alarm response actions configurable  
Working Temperature: -40 to 65°C (-40 to 149° F)  
IP67

### DS-2TD2367/PY

#### Thermal Network Bullet Camera



Thermal: 640 × 512, 17 μm  
Lens: 50 / 75 / 100 mm  
50 mm: 12.4° × 10° / 75 mm: 8.3° × 6.6° / 100 mm: 6.22 × 4.96  
VCA: Line crossing / Intrusion / Region entry & exit  
Temperature Exception Range: -20 to 150°C  
Temperature Accuracy: ±8°C  
Alarm Input: 2-ch inputs (0-5 VDC)  
Alarm Output: 2-ch relay outputs, alarm response actions configurable  
Working Temperature: -40 to 65°C (-40 to 149° F)  
IP67

### DS-2TX3742-A(P)/Q

#### Bi-Spectrum Network Smart Linkage System



Thermal: 384 × 288, 12 μm, Optical: 2688 × 1520  
Lens (thermal): 10 / 15 / 25 / 35 mm  
10mm: 37.5° × 28.5° / 15mm: 24.5° × 18.5° / 25mm: 14.9° × 11.2° / 35mm: 10.7° × 8°  
Lens (optical): 6.0-252 mm  
VCA: Line crossing / Intrusion / Region entry & exit  
Temperature Exception  
Temperature Exception Range: -20 to 150°C  
Temperature Accuracy: ±8°C  
Working Temperature: -40 to 65°C (-40 to 149° F)  
Anti-corrosion Coating

### DS-2TD2637-15/P(B)

#### Bi-Spectrum Network Bullet Camera



Thermal: 384 × 288, 17 μm, Optical: 2688 × 1520  
Lens (thermal): 15 mm  
15mm: 24.5° × 18.5°  
Lens (optical): 6 mm  
VCA: Line crossing / Intrusion / Region entry & exit  
Temperature Exception  
Temperature Exception Range: -20 to 150°C  
Temperature Accuracy: ±8°C  
Working Temperature: -40 to 65°C (-40 to 149° F)  
IP67

### DS-2TD2667/PY

#### Bi-Spectrum Network Bullet Camera



Thermal: 640x512, 17 μm, Optical: 2688 × 1520  
Lens (thermal): 15 / 25 / 35 mm  
15mm: 42.5° × 33.6° / 25mm: 24.55° × 19.75° / 35mm: 17.67° × 14.18°  
Lens (optical): 4 / 6 / 8 mm  
VCA: Line crossing / Intrusion / Region entry & exit  
Temperature Exception  
Temperature Exception Range: -20 to 150°C  
Temperature Accuracy: ±8°C  
Working Temperature: -40 to 65°C (-40 to 149° F)  
Anti-corrosion Coating (PY)  
IP67

### DS-2TD4228-10/W

#### Network Bi-Spectrum Speed Dome



Thermal: 256 × 192 12 μm, Optical: 1920 × 1080  
Lens (thermal): 10 mm; Optical: 4.8-153 mm  
FOV: 10mm: 18° × 13.5°  
VCA : Line crossing / Intrusion / Region entry & exit  
Temperature Exception  
Temperature Exception Range: -20 to 150°C  
Temperature Accuracy: ±8°C  
Working Temperature: -40 to 65°C (-40 to 149° F)  
IP66

### DS-2TD4137W(Y)

#### Network Bi-Spectrum Speed Dome



Thermal: 384 × 288, 17 μm, Optical: 2688 × 1520  
Lens (thermal): 25 / 50 mm; Optical: 6-252 mm  
25 mm: 14.9° × 11.2° , 50 mm: 7.5° × 5.6°  
VCA: Line crossing / Intrusion / Region entry & exit  
Temperature Exception  
Temperature Exception Range: -20 to 150°C  
Temperature Accuracy: ±8°C  
Working Temperature: -40 to 65°C (-40 to 149° F)  
Anti-corrosion Coating  
IP66

**DS-2TD4167W(Y)**

**Network Bi-Spectrum  
Speed Dome**



Thermal: 640 × 512, 17 μm, Optical: 2688 × 1520  
 Lens (thermal): 25 / 50 mm; Optical: 6-252 mm  
 FOV: 25 mm : 24.5° × 19.7°, 50 mm : 7.5° × 5.6°  
 VCA: Line crossing / Intrusion / Region entry & exit  
 Temperature Exception  
 Temperature Exception Range: -20 to 150°C  
 Temperature Accuracy: ±8°C  
 Working Temperature: -40 to 65°C (-40 to 149° F)  
 Anti-corrosion Coating (Y)  
 IP66

**DS-2TD6237-H4L/W(Y)**

**Network Bi-Spectrum  
Speed Dome**



Thermal: 384 × 288, 17 μm, Optical: 1920 × 1080  
 Lens (thermal): 50 / 75mm; Optical: 4.8-153 mm  
 FOV: 10 mm: 37.7° × 28.7°, 25 mm: 14.88° × 11.19°  
 VCA: Line crossing / Intrusion / Region entry & exit  
 Temperature Exception  
 Temperature Exception Range: -20 to 150°C  
 Temperature Accuracy: ±8°C  
 Working Temperature: -40 to 65°C (-40 to 149° F)  
 IP66

**DS-2TD6267-H4L/W(Y)**

**Network Bi-Spectrum  
Positioning System**



Thermal: 640 × 512, 17 μm, Optical: 2688 × 1520  
 Thermal: 50 / 75 / 100 mm  
 Optical: H (6-240 mm) / C (6-336 mm)  
 VCA: Line crossing / Intrusion / Region entry & exit  
 Temperature Exception  
 Temperature Exception Range: -20 to 150°C  
 Temperature Accuracy: ±8°C  
 Working Temperature: -40 to 65°C (-40 to 149° F)  
 Anti-corrosion Coating (Y)  
 IP66

**DS-2TD8167-Z(C/E/G)F(L)W(Y)(B)**

**Network Bi-Spectrum  
Positioning System**



Thermal : 640 × 512, 17 μm  
 Optical: -C: 2688 × 1520 / -E/G: 1920 × 1080  
 Lens (thermal): 150 / 190 / 230 mm  
 Lens (optical): C (6.7-330 mm) / E (10-780 mm) / G (16.7-1000 mm)  
 FOV: 150 mm: 20.56° × 16.51° / 190 mm: 17.19° × 13.79° / 230 mm: 26.61° × 21.43°  
 VCA: Line crossing / Intrusion / Region entry & exit  
 Temperature Exception  
 Temperature Exception Range: -20 to 150°C  
 Temperature Accuracy: ±8°C  
 Working Temperature: -40 to 65°C (-40 to 149° F)  
 Anti-corrosion Coating (Y)  
 IP66

**DS-2TD95C8-Z(E/K)FL/W**


**Bi-Spectrum  
Thermal Sphere PTZ  
Camera**



Thermal: 1280 × 1024, 12 μm  
 Optical: 150mm: 2688 × 1520; 190 / 300mm: 1920 × 1080  
 Lens (thermal) : 150 / 190 / 230 mm; Optical: 10-800 mm  
 FOV: 150mm: 5.9° × 4.7°; 190mm: 4.6° × 3.7°; 300 mm: 2.9° × 2.4°;  
 VCA: Line crossing / Intrusion / Region entry & exit  
 Temperature Exception  
 Temperature Exception Range: -20 to 150°C  
 Temperature Accuracy: ±8°C  
 Working Temperature: -40 to 70°C (-40 to 158° F)  
 Anti-corrosion Coating  
 IP67

## Effective Coverage Short Range (20-70 m)

HeatPro Series Cameras


 VCA Range  
(Humans: 1.8 x 0.5 m)

 VCA Range  
(Vehicles: 1.4 x 4.0 m)

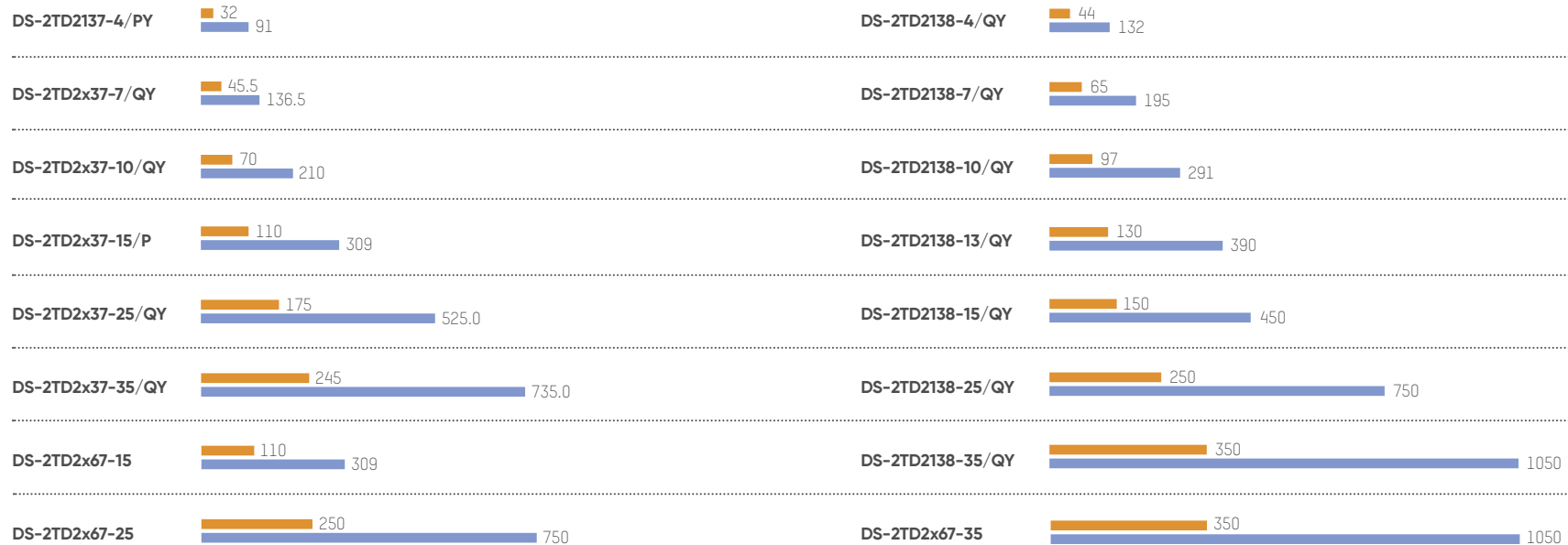


## Effective Coverage Medium Range (70-350 m)

Industrial Fixed Cameras

 VCA Range  
(Humans: 1.8 x 0.5 m)

 VCA Range  
(Vehicles: 1.4 x 4.0 m)



DS-2TD2167-7/P 48 134


DS-2TD4237-10 73.5 205.9

DS-2TD4228-10 80 240

DS-2TD4237-25 183.8  
DS-2TD41x7-25 514.7

## Effective Coverage Long Range (over 350 m)

Industrial Fixed Cameras

 VCA Range  
(Humans: 1.8 × 0.5 m)

 VCA Range  
(Vehicles: 1.4 × 4.0 m)

DS-2TD23X7-50



DS-2TD23x7-75



DS-2TD23x7-100



DS-2TD41x7-50  
DS-2TD62x7-50



DS-2TD62x7-75



DS-2TD6267-100



DS-2TD8167-150



DS-2TD8167-190



DS-2TD8167-230



DS-2TD95C8-150



DS-2TD95C8-190



DS-2TD95C8-300





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