

## DS-2TD8167-190ZE2F/WY

Anti-corrosion Thermal & Optical Bi-spectrum Network Stable PTZ



Hikvision DS-2TD8167-190ZE2F/WY Thermal & Optical Bi-spectrum Network Stable PTZ equipped with built-in GPU which supports intelligent perimeter protection algorithm, can realize high-precision VCA detection and real-time alarm. It is applied to perimeter protection scenes, such as airport, railway, farm, and large parking lot. The pre-alarm system helps you discover unexpected events immediately and protects your property.

### Key Feature

- Perimeter protection function, based on intelligent algorithm: line crossing, intrusion, region entrance and exit
- Temperature exception alarm for fire prevention
- Fire detection algorithm, Smoke detection algorithm
- 640 × 512 (the resolution of output image is 1920 × 1080) resolution 17 μm, VOx UFPA, NETD ≤ 35 mK (25°C, F# = 1.0)
- Image processing technology: Liner, histogram, and self-adaptive thermal AGC mode, DDE, 3D DNR
- NEMA-4X Standard
- High quality detector with 10 years guarantee
- Smart tracking: Panorama tracking, Event tracking and Multi-scene patrol tracking
- Smart tracking linkage: thermal view and optical view
- Thermal channel supports EIS, conflicted with intelligent function



## ▪ Specification

| Thermal Module         |   |
|------------------------|---|
| Image Sensor           | Vanadium Oxide Uncooled Focal Plane Arrays  |
| Resolution             | 640 × 512 (the resolution of output image is 1920 × 1080)   |
| Pixel Interval         | 17 μm   |
| Response Waveband      | 8 μm to 14 μm   |
| NETD                   | Less than 35 mK (@25°C, F# = 1.0)   |
| Focal Length           | 36 to 190 mm  |
| Focus Mode             | Semi-auto & Manual  |
| IFOV                   | 0.47 to 0.09 mrad   |
| Aperture               | F0.8 to F1.2  |
| Field of View          | 17.19° × 13.79° (H × V) to 3.46° × 2.77° (H × V)  |
| Min. Focusing Distance | 3 m   |
| Digital Zoom           | × 2, × 4, × 8   |
| Optical Module         |   |
| Image Sensor           | 1/1.8" Progressive Scan CMOS  |
| Resolution             | 1920 × 1080, 2 MP   |
| Min. Illumination      | Color: 0.005 Lux @ (F3.5, AGC ON), B/W: 0.0005 Lux @ (F3.5, AGC ON)   |
| Field of View          | 32.13° × 18.4° (H × V) to 0.53° × 0.3° (H × V)  |
| Focal Length           | 12.5 to 775 mm, 62x   |
| Aperture (Range)       | F3.5 to F8.2  |
| Focus Mode             | Semi-auto/Manual  |
| Shutter Speed          | 1s to 1/30,000s   |
| WDR                    | 120 dB  |
| Digital Zoom           | × 2, × 4, × 8, × 16   |
| Optical Defog          | Yes   |
| Image Effect           |   |
| Picture in Picture     | Display partial image of thermal channel on the full screen of optical channel  |
| Target Coloration      | Supported in white hot and black hot mode   |
| PTZ                    |   |
| Movement Range         | Pan: 360° Continuous Rotate; Tilt: From -45° to +45° (auto flip)  |
| Pan Speed              | Configurable, From 0.01°/s to 40°/s, Preset Speed: 240°/s   |
| Tilt Speed             | Configurable, From 0.01°/s to 20°/s, Preset Speed: 200°/s   |
| Proportional Zoom      | Yes   |
| Presets                | 300 in total, 273 are configurable.   |
| Patrol Scan            | 8; Up to 32 Presets Per Patrol  |
| Pattern Scan           | 4; More Than 10 Minutes Per Pattern   |
| Power Off Memory       | Yes   |
| Park                   | Preset/Pattern Scan/Patrol Scan/Auto Scan/Tilt Scan/Random Scan/Frame Scan/Panorama Scan                                    |
| PT Status              | Turn On/Turn Off  |
| Scheduled Task         | Preset/Pattern Scan/Patrol Scan/Auto Scan/Tilt Scan/Random Scan/Frame Scan/Panorama Scan/Doom Reboot/Doom Adjust/Aux Output |
| Smart Function         |   |
| VCA                    | Support 4 VCA rule types (Line Crossing, Intrusion, Region Entrance, and Region   |

|                         |   |
|-------------------------|---|
|                         | Exiting), up to 10 scenes and 8 VCA rules for each scene  |
| Temperature Measurement | Support 3 temperature measurement rule types, 273 presets as scene, 21 rules of each scene (10 points, 10 areas, and 1 line)  |
| Temperature Range       | -20°C to 150°C (-4°F to 302°F)  |
| Temperature Accuracy    | ± 8°C (± 14.4°F)  |
| Fire Detection          | Dynamic fire point detection, up to 10 fire points detectable.  |
| <b>Video and Audio</b>  |   |
| Main Stream             | Optical channel<br>50 Hz:25 fps (1920 × 1080, 1280 × 960, 1280 × 720)<br>60 Hz:30 fps (1920 × 1080, 1280 × 960, 1280 × 720)<br>Thermal channel<br>50 fps (1920 × 1080, 1280 × 960, 1280 × 720, 704 × 576, 640 × 512, 384 × 288) |
| Sub-stream              | Optical channel<br>50 Hz:25 fps (704 × 576, 352 × 288)<br>60 Hz: 30 fps (704 × 576, 352 × 288)<br>Thermal channel<br>50 fps (704 × 576, 640 × 512, 384 × 288)   |
| Video Compression       | Main stream: H.265+/H.265/H.264+/ H.264<br>Sub-stream: H.265/H.264/MJPEG  |
| Audio Compression       | G.711u/G.711a/G.722.1/MP2L2/G.726/PCM   |
| <b>Network</b>          |   |
| Protocols               | IPv4/IPv6, HTTP, HTTPS, 802.1x, Qos, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP, PPPoE  |
| Network Storage         | MicroSD/SDHC/SDXC card (up to 256 GB) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR)  |
| API                     | ISAPI, HIKVISION SDK, third-party management platform, ONVIF (Profile S, Profile G, Profile T)  |
| Simultaneous Live View  | Up to 20 channels   |
| User/Host level         | Up to 32 users, 3 levels: Administrator, Operator, User   |
| Security                | User authentication (ID and password), MAC address binding, HTTPS encryption, IEEE 802.1x access control, IP address filtering  |
| Client                  | iVMS-4200, Hik-Connect  |
| Web Browser             | Live view (plug-in allowed): Internet Explorer 11<br>Live view (plug-in free): Chrome 57.0+, Firefox 52.0+<br>Local service: Chrome 57.0+, Firefox 52.0 +   |
| <b>Interface</b>        |   |
| Alarm Input             | 7-ch inputs (0 to 5 VDC)  |
| Alarm Output            | 2-ch relay outputs, alarm response actions configurable   |
| Alarm Action            | Preset/Patrol Scan/Pattern Scan/SD Card Record/Relay Output/Smart capture/FTP upload/Email linkage  |
| Audio Input             | 1, 3.5 mm Mic in/Line in interface. Line input: 2 to 2.4 V [p-p], output impedance: 1 KΩ ± 10%  |
| Audio Output            | Linear Level; Impedance: 600 Ω  |
| Communication Interface | 1, RJ45 10 M/100 M Self-adaptive Ethernet interface.<br>1, RS-485 interface   |
| Analog Video Output     | 1.0 V [p-p]/75 Ω, BNC for thermal channel   |

**General**

|                           |  |
|---------------------------|--|
| Web Client Language       | 32 languages<br>English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil) |
| Power Supply              | 48 VDC $\pm$ 20%, two-core terminal block  |
| Power Consumption         | 48 VDC, 5 A, Max. 220 W  |
| Work Temperature/Humidity | From -40°C to 65°C (-40°F to 149°F); Humidity: 95% or Less   |
| Wiper                     | Yes  |
| Protection Level          | IP66 Standard; TVS 6000V Lightning Protection, Surge Protection and Voltage Transient Protection   |
| Dimension                 | 649.2 mm $\times$ 438 mm $\times$ 668.3 mm (25.6" $\times$ 17.2" $\times$ 26.3")   |
| Weight                    | Approx. 60kg (132.3 lb)  |

## DRI Range Table

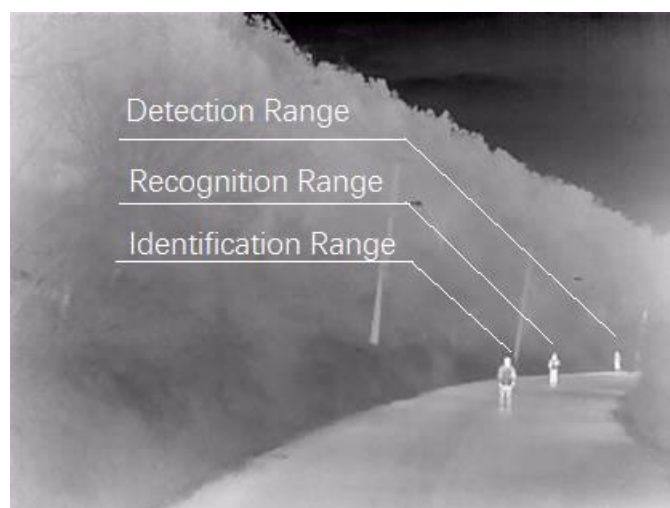
\* The table is only for reference and the performance may vary according to different environment.

\* The optimal human detection, recognition, and identification distances are calculated according to Johnson's Criteria.

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

Recognition Range: In order to classify the object (animal, human, vehicle, etc.), the object must be covered by 6 or more pixels.

Identification Range: In order to identify the object and describe it in details, the object must be covered by 12 or more pixels.



| Detection Range<br>(Vehicles: 1.4 × 4.0 m) | Detection Range<br>(Humans: 1.8 × 0.5 m) | Recognition Range (Vehicles: 1.4 × 4.0 m) | Recognition Range (Humans: 1.8 × 0.5 m) | Identification Range (Vehicles: 1.4 × 4.0 m) | Identification Range (Humans: 1.8 × 0.5 m) |
|--|--|---|---|--|--|
| 17137 m                                    | 5588 m                                   | 4284 m                                    | 1397 m                                  | 2142 m                                       | 699 m                                      |

## Smart Function Table

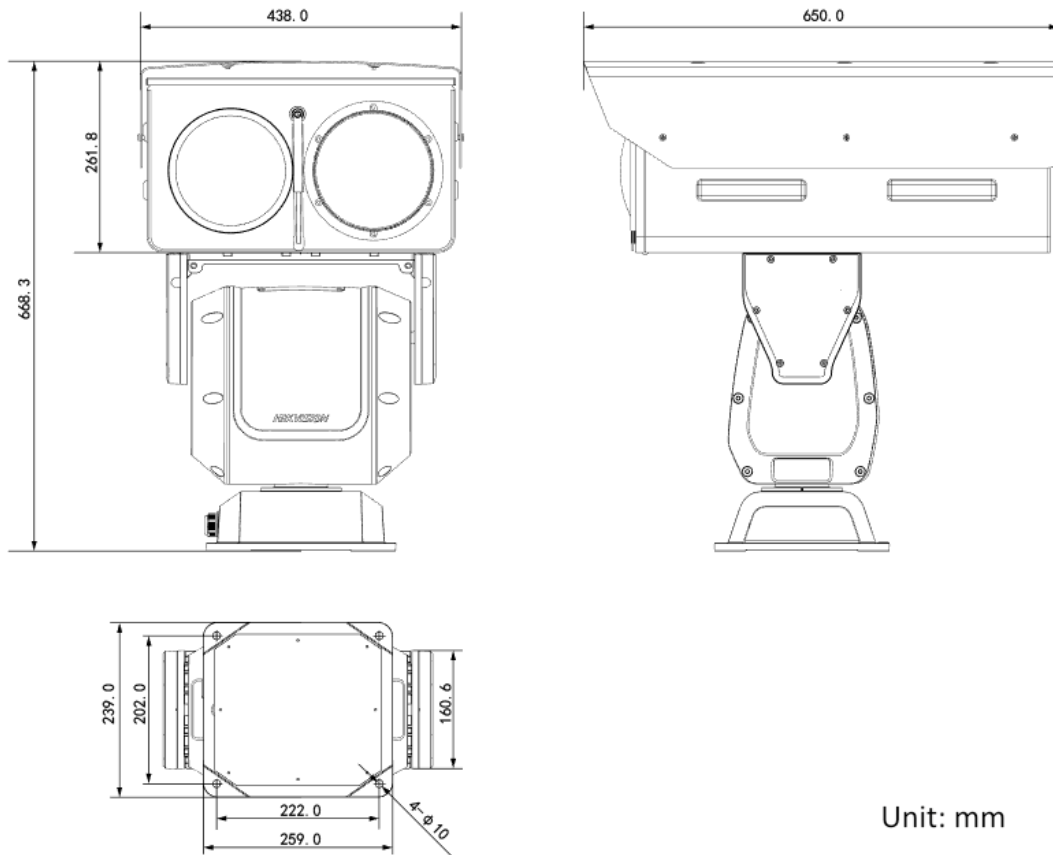
\* The table is only for reference and the performance may vary according to different environment.

| VCA Range<br>(Vehicles: 1.4 × 4.0 m) | VCA Range<br>(Humans: 1.8 × 0.5 m) | Temperature Measurement<br>(Object: 2 × 2 m) | Temperature Measurement<br>(Object: 1 × 1 m) | Fire Detection<br>(Object: 2 × 2 m) | Fire Detection<br>(Object: 1 × 1 m) |
|--------------------------------------|------------------------------------|--|--|-------------------------------------|-------------------------------------|
| 3990 m                               | 1330 m                             | 4471 m                                       | 2235 m                                       | 11176 m                             | 5588 m                              |

## Available Model

DS-2TD8167-190ZE2F/WY

**Dimension**



Unit: mm

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**HIKVISION®****Headquarters**

No.555 Qianmo Road, Binjiang District,  
Hangzhou 310051, China  
T +86-571-8807-5998  
overseasbusiness@hikvision.com

**Hikvision USA**  
T +1-909-895-0400  
sales.usa@hikvision.com

**Hikvision Australia**  
T +61-2-8599-4233  
salesau@hikvision.com

**Hikvision India**  
T +91-22-28469900  
sales@pramahikvision.com

**Hikvision Canada**  
T +1-866-200-6690  
sales.canada@hikvision.com

**Hikvision Thailand**  
T +662-275-9949  
sales.thailand@hikvision.com

**Hikvision Europe**  
T +31-23-5542770  
sales.eu@hikvision.com

**Hikvision Italy**  
T +39-0438-6902  
info.it@hikvision.com

**Hikvision Brazil**  
T +55 11 3318-0050  
Latam.support@hikvision.com

**Hikvision Turkey**  
T +90 (216)521 7070- 7074  
sales.tr@hikvision.com

**Hikvision Malaysia**  
T +601-7652-2413  
sales.my@hikvision.com

**Hikvision UK & Ireland**  
T +01628-902140  
sales.uk@hikvision.com

**Hikvision South Africa**  
Tel: +27 (10) 0351172  
sale.africa@hikvision.com

**Hikvision France**  
T +33(0)1-85-330-450  
info.fr@hikvision.com

**Hikvision Kazakhstan**  
T +7-727-9730667  
nikia.panfilov@hikvision.ru

**Hikvision Vietnam**  
T +84-974270888  
sales.vt@hikvision.com

**Hikvision UAE**  
T +971-4-4432090  
salesme@hikvision.com

**Hikvision Singapore**  
T +65-6684-4718  
sg@hikvision.com

**Hikvision Spain**  
T +34-91-737-16-55  
info.es@hikvision.com

**Hikvision Tashkent**  
T +99-87-1238-9438  
uzb@hikvision.ru

**Hikvision Hong Kong**  
T +852-2151-1761  
info.hk@hikvision.com

**Hikvision Russia**  
T +7-495-669-67-99  
saleru@hikvision.com

**Hikvision Korea**  
T +82-(0)31-731-8817  
sales.korea@hikvision.com

**Hikvision Poland**  
T +48-22-460-01-50  
info.pl@hikvision.com

**Hikvision Indonesia**  
T +62-21-2933759  
Sales.Indonesia@hikvision.com

**Hikvision Colombia**  
sales.colombia@hikvision.com