

## DS-2TD1228T-2/QA Bi-spectrum Thermography Network Turret Camera

HeatPro



Hikvision DS-2TD1228T-2/QA Bi-spectrum Thermography Network Turret Camera can be applied to warehouses, construction sites, waste incineration plants, manufacturing workshops, etc. The accurate temperature measurement device sends temperature exception alarms for loss prevention.

### ▪ Key Feature

- 256 × 192 resolution, 12 μm, VOx UFPA, NETD < 40 mK (25°C, F1.0)
- Video content analysis: vehicle/human classification
- Temperature exception alarm for fire prevention, -20°C to 550°C (-4°F to 1,022°F), Max. (± 2°C, ± 2%)
- Smoking detection Algorithm
- Image processing technology: linear, histogram, self-adaptive thermal AGC mode, DDE, 3D DNR
- High quality detector with 10 years guarantee



## ▪ Specification

| Thermal Module           |   |
|--------------------------|---|
| Image Sensor             | Vanadium Oxide Uncooled Focal Plane Arrays  |
| Resolution               | 256 × 192   |
| Pixel Pitch              | 12 μm   |
| Spectral Range           | 8 μm to 14 μm   |
| NETD                     | < 40 mK (@ 25°C, F# = 1.0)  |
| Focal Length             | 2.1 mm  |
| IFOV                     | 5.71 mrad   |
| Aperture                 | F1.0  |
| Field of View            | 90.0° × 65.4° (H × V)   |
| Min. Focusing Distance   | 0.1 m (0.33 ft.)  |
| Digital Zoom             | ×2, ×4  |
| Optical Module           |   |
| Image Sensor             | 1/2.7" Progressive Scan CMOS  |
| Resolution               | 2688 × 1520   |
| Min. Illumination        | 0.0176Lux @ (F2.25, AGC ON), 0 Lux with IR  |
| Field of View            | 117.8° × 70.4° (H × V)  |
| Focal Length             | 2.2 mm  |
| Shutter Speed            | 1 s to 1/100,000 s  |
| White Balance            | MWB/AWB1/Locked WB/Fluorescent Lamp/Incandescent Lamp/Warm Light Lamp/Natural Light   |
| Day & Night Mode         | IR Cut Filter with Auto Switch  |
| WDR                      | 120 dB  |
| Aperture                 | F 2.3   |
| Image Effect             |   |
| Bi-spectrum Image Fusion | Display the details of optical channel on thermal channel   |
| Picture in Picture       | Display partial image of thermal channel on the full screen of optical channel  |
| Target Coloration        | Yes. Supported in white hot and black hot mode.   |
| Illuminator              |   |
| IR Distance              | Up to 15 m (49 ft.)   |
| IR Intensity and Angle   | Automatically adjusted  |
| Audible and Visual Alarm |   |
| White Light Range        | Up to 30 m (98 ft.)   |
| Visual Alarm             | Yes. White light alarm with adjustable flashing frequencies   |
| Audio alarm              | Yes, for three types of audible alarm (VCA and Temperature Exception)<br>3 preset voice alerts (one for each)<br>6 importable user-defined voice alerts (6 options shared in the two types) |
| Smart Function           |   |
| VCA                      | 4 VCA rule types (line crossing, intrusion, region entrance, and region exiting), up to 8 VCA rules in total.   |
| Temperature Measurement  | 3 temperature measurement rule types, 21 rules in total (10 points, 10 areas, and 1 line)   |
| Temperature Range        | -20°C to 550°C (-4°F to 1022°F)   |
| Temperature Accuracy     | Max. (± 2°C, ± 2%)  |

| <b>Video and Audio</b>       |   |
|------------------------------|---|
| Main Stream                  | Thermal:<br>25 fps (1280 × 720, 704 × 576, 640 × 512, 320 × 240)<br>Optical:<br>50 Hz: 25 fps (2688 × 1520, 1920 × 1080, 1280 × 720)<br>60Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720)   |
| Sub-stream                   | Thermal:<br>25 fps (704 × 576, 640 × 512, 320 × 240)<br>Optical:<br>50 Hz: 25 fps (704 × 576, 352 × 288)<br>60 Hz: 30 fps (704 × 480, 352 × 240)  |
| Video Compression            | Main Stream: H.265/H.264<br>Sub-Stream: H.265/H.264/MJPEG   |
| Audio Compression            | G.722.1/G.711ulaw/G.711alaw/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, TP, Bonjour, SFTP, SRTP   |
| Network Storage              | MicroSD/SDHC/SDXC card (up to 256 GB) local storage, NAS (NFS, SMB/CIFS), Auto Network Replenishment (ANR)  |
| API                          | ISAPI, HIKVISION SDK, and third-party management platform, Open Network Video Interface (Profile S, Profile G)  |
| 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  |
| <b>Interface</b>             |   |
| Alarm Input                  | 1, alarm input (0 to 5 VDC)   |
| Alarm Output                 | 1, alarm output (alarm response actions configurable)   |
| Alarm Action                 | SD recording/Relay output/Smart capture/FTP upload/Email linkage  |
| Audio Input                  | 1, 3.5 mm Mic in/Line in interface<br>Line input: 2 to 2.4 V [p-p], output impedance: 1 K $\Omega$ $\pm$ 10%  |
| Audio Output                 | Linear level, impedance: 600 $\Omega$   |
| Communication Interface      | 1, RJ45 10 M/100 M Self-adaptive Ethernet interface.<br>1, RS-485 interface (half duplex)   |
| <b>General</b>               |   |
| Menu Language                | 32 languages 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                 | 12 VDC $\pm$ 25%, $\phi$ 5.5 mm coaxial power plug<br>PoE (802.3af, class 3)  |
| Power Consumption            | 12 VDC $\pm$ 25%: 0.5 A, Max. 6 W<br>PoE (802.3af, class 3): 42.5 V to 57 V, 0.14 A to 0.22 A, Max. 6.5 W   |
| Working Temperature/Humidity | Temperature: -40°C to 65°C (-40°F to 149°F)<br>Humidity: 95% or less  |

|                  |   |
|------------------|---|
| Protection Level | IP66 Standard<br>TVS 4000V lightning protection, surge protection, voltage transient protection |
| Dimensions       | 138.3 mm × 138.3 mm × 123.1 mm (5.45" × 5.45" × 4.85")  |
| Weight           | 940 g (2.07 lb)   |

## DRI Range Table

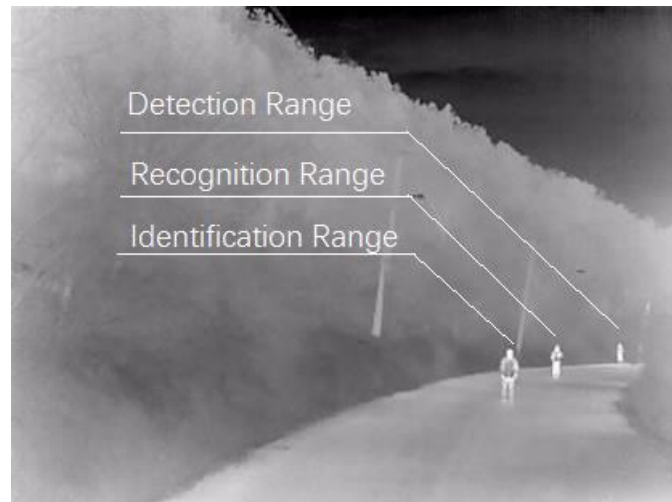
\* The table is only for reference and the performance may vary according to different environment.

\* The optimal 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<br>Range (Vehicles:<br>1.4 × 4.0 m) | Recognition<br>Range (Humans:<br>1.8 × 0.5 m) | Identification<br>Range (Vehicles:<br>1.4 × 4.0 m) | Identification<br>Range (Humans:<br>1.8 × 0.5 m) |
|--|--|---|---|--|--|
| 268 m (879 ft.)                            | 88 m (288 ft.)                           | 67 m (219 ft.)                                  | 22 m (72 ft.)                                 | 34 m (111 ft.)                                     | 11 m (36 ft.)                                    |

## Smart Function Table

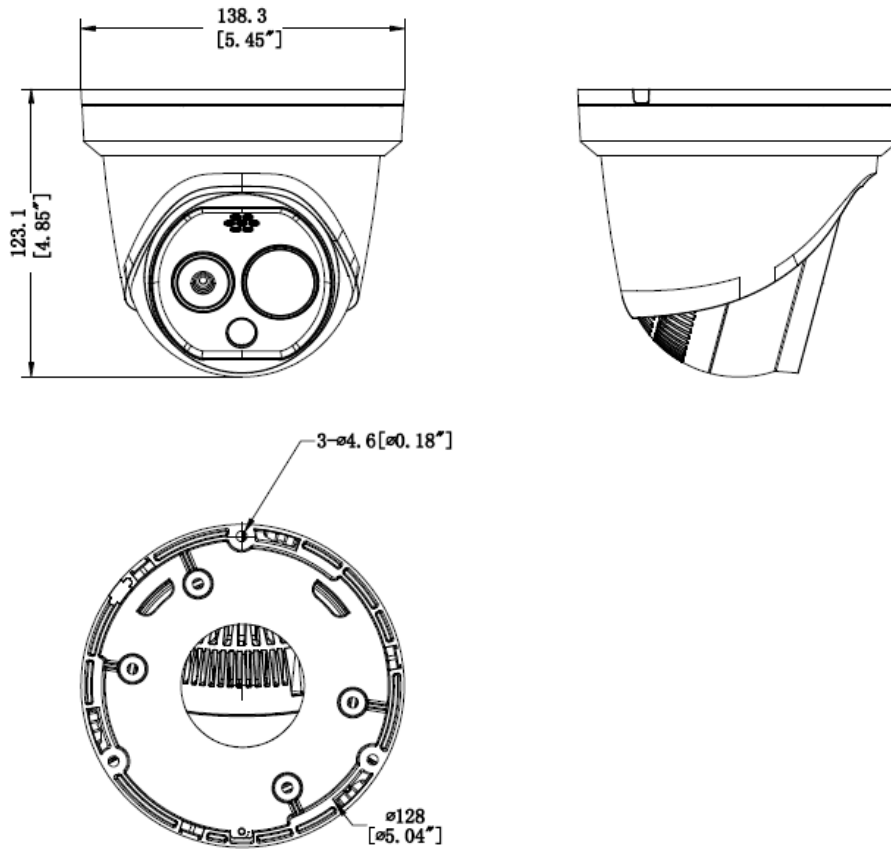
\* The table is only for reference and the performance may vary according to different environment.

| VCA Range (Vehicles: 1.4 × 4.0 m) | VCA Range (Humans: 1.8 × 0.5 m) | Temperature Measurement<br>(Object: 0.2 × 0.2 m) | Temperature Measurement<br>(Object: 1 × 1 m) |
|-----------------------------------|---------------------------------|--|--|
| 50.4 m (165 ft.)                  | 16.8 m (55 ft.)                 | 7 m (23 ft.)                                     | 35 m (115 ft.)                               |

### ▪ Available Model

DS-2TD1228T-2/QA

▪ **Dimension**



Unit:mm[Inch]

▪ **Accessory**

▪ **Optional**



**PC140**  
140mm  
Pendant Cap  
Requires WML



**WML**  
Long Wall Mount  
w/Back Box  
Requires PC140



**PM**  
Pole Mount  
Requires WML



**CM**  
Corner Mount  
Requires WML




**CB135**  
Conduit Base



**CPM**  
Ceiling Pendant  
Mount  
Requires PC140

COMPLIANCE NOTICE: The thermal series products might be subject to export controls in various countries or regions, including without limitation, the United States, European Union, United Kingdom and/or other member countries of the



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