

## DS-2TD1228-3/QA

### Thermal & Optical Bi-spectrum Network Turret Camera



Hikvision DS-2TD1228-3/QA Thermal & Optical Bi-spectrum Network Turret Camera can be applied to villas, communities, parking lots, warehouses, construction sites, waste incineration plants, manufacturing workshops, etc. The accurate temperature measurement device sends temperature exception alarms for loss prevention.

- 256 × 192 resolution, 12  $\mu\text{m}$ , VOx UFPA, NETD < 40 mK (25°C, F1.0)
- Video content analysis: vehicle/human classification
- Temperature exception alarm for fire prevention, -20°C to 150°C (-4°F to 302°F),  $\pm 8^\circ\text{C}$  ( $\pm 14.4^\circ\text{F}$ )
- Image processing technology: linear, histogram, self-adaptive thermal AGC mode, DDE, 3D DNR
- High quality detector with 10 years guarantee
- Support smoking detection algorithm
- Support sun-reflection filter

## • 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, F1.1)                                                                                                                                                                       |
| Focal Length             | 3.6 mm                                                                                                                                                                                    |
| IFOV                     | 3.33 mrad                                                                                                                                                                                 |
| Field of View            | 50.0° × 37.3° (H × V)                                                                                                                                                                     |
| Min. Focusing Distance   | 0.4 m                                                                                                                                                                                     |
| Aperture                 | F1.0                                                                                                                                                                                      |
| Digital Zoom             | ×2, ×4                                                                                                                                                                                    |
| Optical Module           |                                                                                                                                                                                           |
| Image Sensor             | 1/2.7" Progressive Scan CMOS                                                                                                                                                              |
| Resolution               | 2688 × 1520                                                                                                                                                                               |
| Min. Illumination        | 0.0089Lux @(F1.6,AGC ON) ,0 Lux with IR                                                                                                                                                   |
| Shutter Speed            | 1 s to 1/100,000 s                                                                                                                                                                        |
| Focal Length             | 4.3 mm                                                                                                                                                                                    |
| Field of View            | 84.0°(H) x43.1°(V)                                                                                                                                                                        |
| Aperture (Range)         | F1.6                                                                                                                                                                                      |
| WDR                      | 120 dB                                                                                                                                                                                    |
| Image Effect             |                                                                                                                                                                                           |
| Target Coloration        | Yes. Supported in white hot and black hot mode.                                                                                                                                           |
| Illuminator              |                                                                                                                                                                                           |
| IR Distance              | Up to 15 m                                                                                                                                                                                |
| IR Intensity and Angle   | Automatically adjusted                                                                                                                                                                    |
| Audible and Visual Alarm |                                                                                                                                                                                           |
| White Light Range        | Up to 30 m                                                                                                                                                                                |
| Visual Alarm             | Yes. White light alarm with adjustable flashing frequencies                                                                                                                               |
| Audio alarm              | Yes, for two types of audible alarm (VCA and Temperature Exception)<br>2 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 150°C (-4°F to 302°F)                                                                                                                                                            |
| Temperature Accuracy     | ±8°C (±14.4°F)                                                                                                                                                                            |
| General Function         | Fire detection, smoking detection, sun-reflection filter                                                                                                                                  |

| Video and Audio         |                                                                                                                                                                                             |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                                                                                                                                 |
| Network                 |                                                                                                                                                                                             |
| 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, TLS                                |
| Network Storage         | MicroSD/SDHC/SDXC card (up to 256 G) local storage, NAS (NFS, SMB/CIFS), Auto Network Replenishment (ANR)                                                                                   |
| API                     | ISAPI, HIKVISION SDK, ISUP, and third-party management platform, Open Network Video Interface, ONVIF (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(EAP-MD5, EAP-TLS), 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 +                              |
| Interface               |                                                                                                                                                                                             |
| Alarm Input             | 1, alarm input (0-5 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 - 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 (half duplex)                                                                                                   |

| General                      |                                                                                                                                                                                                                                                                                                                                           |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Web Client 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             | IP67 Standard<br>TVS 6000V lightning protection, surge protection, voltage transient protection                                                                                                                                                                                                                                           |
| Dimensions                   | 138.3 mm $\times$ 138.3 mm $\times$ 123.1 mm (5.45" $\times$ 5.45" $\times$ 4.85")                                                                                                                                                                                                                                                        |
| Weight                       | 940 g (2.07 lb)                                                                                                                                                                                                                                                                                                                           |

## ▪ Range Table

| VCA Range<br>(Vehicles: 1.4 $\times$ 4.0 m) | VCA Range<br>(Humans: 1.8 $\times$ 0.5 m) | Temperature Measurement<br>(Object: 0.2 $\times$ 0.2 m) | Temperature Measurement<br>(Object: 1 $\times$ 1 m) | Fire Detection<br>(Object: 0.2 $\times$ 0.2 m) | Smoking Detection |
|---------------------------------------------|-------------------------------------------|---------------------------------------------------------|-----------------------------------------------------|------------------------------------------------|-------------------|
| 75.6 m                                      | 28.4m                                     | 11.7 m                                                  | 58.3 m                                              | 43.2m                                          | 5.4m              |

## ▪ DORI

\* 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.

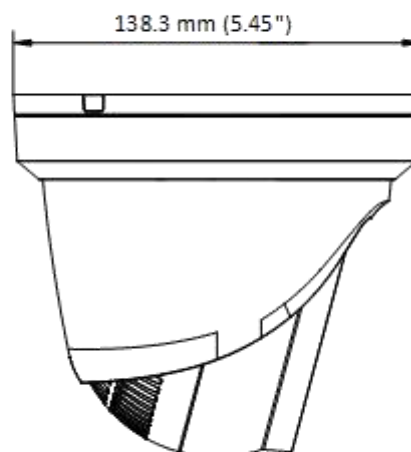
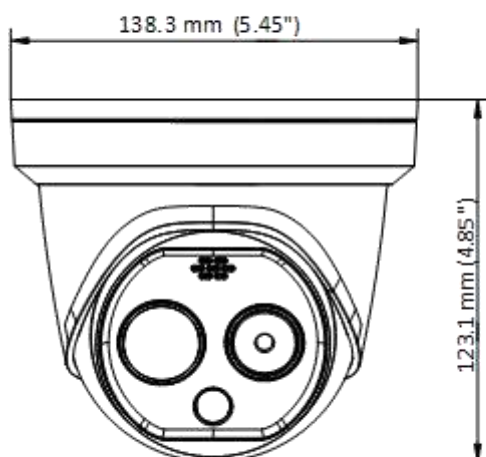
| Detection Range<br>(Vehicles: 1.4 $\times$ 4.0 m) | Detection Range<br>(Humans: 1.8 $\times$ 0.5 m) | Recognition Range (Vehicles: 1.4 $\times$ 4.0 m) | Recognition Range (Humans: 1.8 $\times$ 0.5 m) | Identification Range (Vehicles: 1.4 $\times$ 4.0 m) | Identification Range (Humans: 1.8 $\times$ 0.5 m) |
|---------------------------------------------------|-------------------------------------------------|--------------------------------------------------|------------------------------------------------|-----------------------------------------------------|---------------------------------------------------|
| 460 m                                             | 150 m                                           | 112 m                                            | 38 m                                           | 56 m                                                | 19 m                                              |

## ▪ Available Model

DS-2TD1228-3/QA

DS-2TD1228-3/QA(U)

## ▪Dimension



## ▪ Accessory

### ▪ Optional

| DS-1273ZJ-140<br>Wall mount                                                         | DS-1273ZJ-140B<br>Wall mount                                                        | DS-1271ZJ-140<br>Pendant Mount                                                      | DS-1275ZJ-SUS<br>Vertical pole mount                                                  | DS-1276ZJ-SUS<br>Corner mount                                                         |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |
| DS-1280ZJ-DM21<br>Junction box                                                      | DS-1273ZJ-140(BLACK)<br>Wall mount                                                  |                                                                                     |                                                                                       |                                                                                       |
|  |  |                                                                                     |                                                                                       |                                                                                       |

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 Wassenaar Arrangement. Please consult your professional legal or compliance expert or local government authorities for any necessary export license requirements if you intend to transfer, export, re-export the thermal series products between different countries.

**Headquarters**  
No.555 Qianmo Road, Binjiang District,  
Hangzhou 310051, China  
+86-571-8807-5008  
[www.hikvision.com](http://www.hikvision.com)



Follow us on social media to get the latest product and solution information:



HIKVISION



HIKVISION



HIKVISION



HIKVISION



HIKVISION  
Corporate Channel



HIKVISION