

DS-2TD1228-2/QA Thermal & Optical Bi-spectrum Network Turret Camera



Hikvision DS-2TD1228-2/QA Thermal & Optical Bi-spectrum Network Turret Camera supports video analysis for perimeter protection, and also temperature exception alarm for early fire prevention. With the deep learning algorithm, it can realize high precision VCA detection and real-time alarm. These camera series can be widely applied to villas, communities, parking lots, warehouses, construction sites, waste incineration plants, manufacturing workshops, etc.

▪ 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 150°C (-4°F to 302°F), ± 8°C (± 14.4°F)
- 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, F1.1) |
| Focal Length | 2.1 mm |
| IFOV | 5.71 mrad |
| Field of View | 90.0° × 65.4° (H × V) |
| Min. Focusing Distance | 0.1 m |
| Aperture | F1.0 |
| Digital Zoom | ×2, ×4 |
| Optical Module | |
| Image Sensor | 1/2.7" Progressive Scan CMOS |
| Resolution | 2688 × 1520 |
| Min. Illumination | Color: 0.0176 Lux @ (F2.25, AGC ON), B/W: 0.0035 Lux @ (F2.25, AGC ON) |
| Shutter Speed | 1 s to 1/100,000 s |
| Focal Length | 2.2 mm |
| Field of View | 117.8° × 70.4° (H × V) |
| Aperture (Range) | F2.3 |
| 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) 2 preset voice alerts (one for each) 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) |

| Video and Audio | |
|-------------------------|---|
| Main Stream | Thermal: 25 fps (1280 × 720, 704 × 576, 640 × 512, 320 × 240) Optical: 50 Hz: 25 fps (2688 × 1520, 1920 × 1080, 1280 × 720) 60Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720) |
| Sub-stream | Thermal: 25 fps (704 × 576, 640 × 512, 320 × 240) Optical: 50 Hz: 25 fps (704 × 576, 352 × 288) 60 Hz: 30 fps (704 × 480, 352 × 240) |
| Video Compression | Main Stream: H.265/H.264 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, Bonjour, SFTP, SRTP |
| Network Storage | MicroSD/SDHC/SDXC card (up to 256 G) 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(EAP-MD5, EAP-TLS), access control, IP address filtering |
| Client | iVMS-4200, Hik-Connect |
| Web Browser | Live view (plug-in allowed) : Internet Explorer 11 Live view (plug-in free) : Chrome 57.0 +, Firefox 52.0 + 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 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. 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 ± 25%, ϕ 5.5 mm coaxial power plug PoE (802.3af, class 3) |

| | |
|------------------------------|---|
| Power Consumption | 12 VDC \pm 25%: 0.5 A, Max. 6 W 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) Humidity: 95% or less |
| Protection Level | IP66 Standard 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) |

DRI Range Table

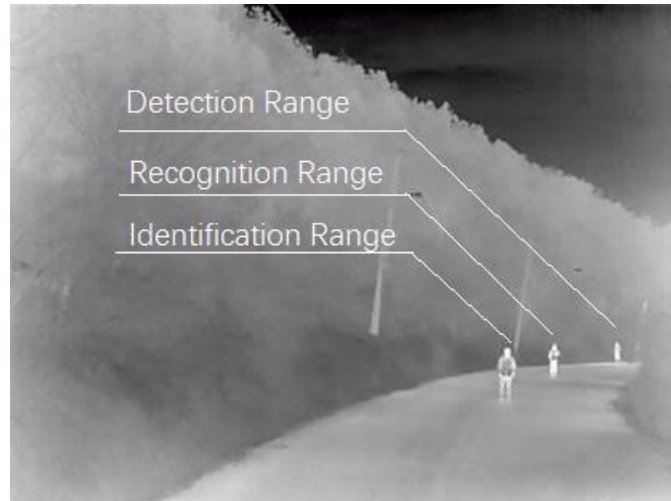
* The table is only for reference and the performance may vary according to different environment.

* 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 (Vehicles: 1.4 × 4.0 m) | Detection Range (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) |
|--|--|---|---|--|--|
| 268 m | 88 m | 67 m | 22 m | 34 m | 11 m |

Smart Function Table

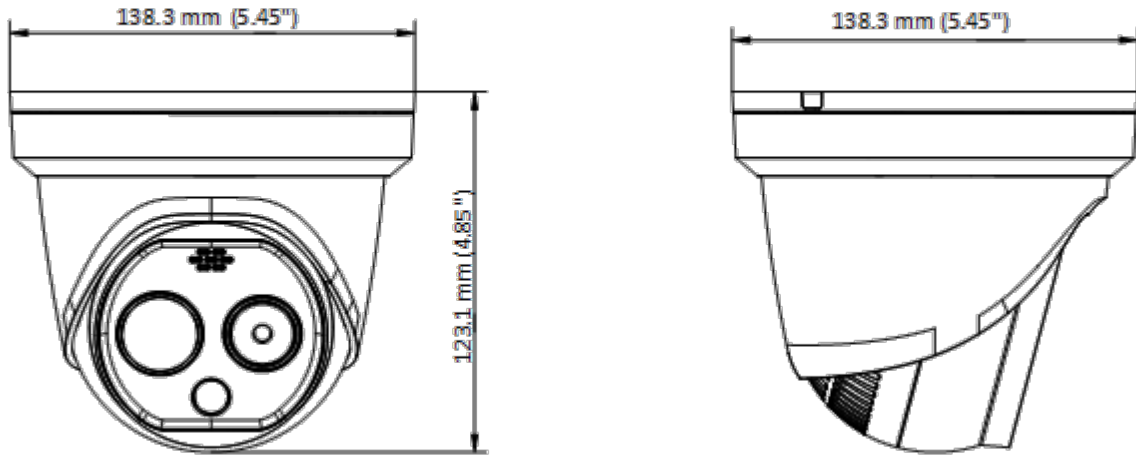
* The table is only for reference and the performance may vary according to different environment.

| VCA Range (Vehicles: 1.4 × 4.0 m) | VCA Range (Humans: 1.8 × 0.5 m) | Temperature Measurement (Object: 0.2 × 0.2 m) | Temperature Measurement (Object: 1 × 1 m) |
|-----------------------------------|---------------------------------|---|---|
| 50.4 m | 16.8 m | 7 m | 35 m |

▪ Available Model

DS-2TD1228-2/QA

▪ **Dimension**



Unit: mm [Inch]

▪ **Accessory**

▪ **Optional**



DS-1280ZJ-DM21
Junction Box



DS-1271ZJ-140
Pendant Mount



DS-1275ZJ-SUS
Vertical Pole Mount



DS-1273ZJ-140B
Wall Mount



DS-1273ZJ-140 (BLACK)



DS-1273ZJ-140
Wall Mount



DS-1276ZJ-SUS
Corner Mount

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