![HIKVISION logo]

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 (0.33 ft.)
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 (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 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, FT.P, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP, PPPoE, Bonjour, SFT.P, 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/FT.P 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)

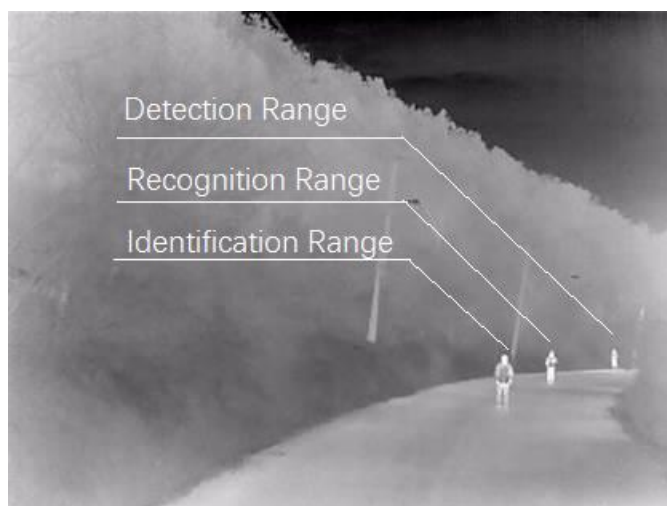| Power Consumption	12 VDC ± 25%: 0.5 A, Max. 6 W
	PoE (802.3af, class 3): 42.5 V to 57 V, 0.14 A to 0.22 A, Max. 6.5 W
Working Temperature/Humidity	Temperature: -40°C to 65°C (-40°F to 149°F)
	Humidity: 95% or less
Protection Level	IP66 Standard
	TVS 6000V lightning protection, surge protection, voltage transient protection
Dimensions	138.3 mm × 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.

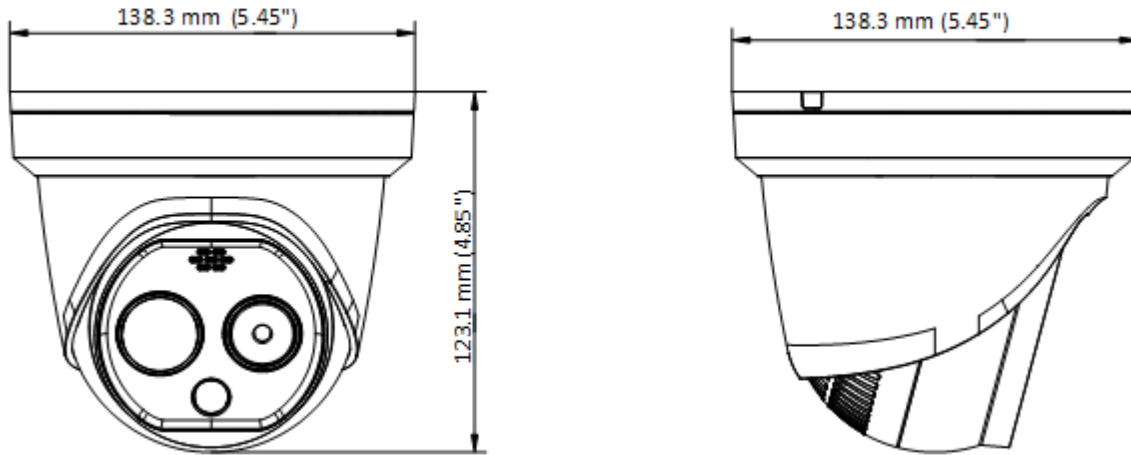| Detection Range (Vehicles: 1.4 × 4.0 m)	Detection Range (Humans: 1.8 × 0.5 m)	Recognition Range (Vehicles: 1.4 × 4.0 m)	Recognition Range (Humans: 1.8 × 0.5 m)	Identification Range (Vehicles: 1.4 × 4.0 m)	Identification Range (Humans: 1.8 × 0.5 m)
268 m (879 ft.)	88 m (288 ft.)	67 m (219 ft.)	22 m (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 (Object: 0.2 × 0.2 m)	Temperature Measurement (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-2TD1228-2/QA

▪**Dimension**

Unit: mm [Inch]

▪ **Accessory**

▪**Optional**

PC140	**WML**	**PM**	**CM**	**CB135**
140mm Pendant Cap	Long Wall Mount w/Back Box	Pole Mount	Corner Mount	Conduit Base
Requires WML	**Requires PC140**	**Requires WML**	**Requires WML**	

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 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.

HIKVISION®

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 Europe** T +31-23-5542770 sales.eu@hikvision.com	**Hikvision UK & Ireland** T +01628-902140 sales.uk@hikvision.com	**Hikvision UAE** T +971-4-4432090 salesme@hikvision.com	**Hikvision Russia** T +7-495-669-67-99 saleru@hikvision.com
Hikvision Australia T +61-2-8599-4233 salesau@hikvision.com	**Hikvision Italy** T +39-0438-6902 info.it@hikvision.com	**Hikvision South Africa** Tel: +27 (10) 0351172 sale.africa@hikvision.com	**Hikvision Singapore** T +65-6684-4718 sg@hikvision.com	**Hikvision Korea** T +82-(0)31-731-8817 sales.korea@hikvision.com
Hikvision India T +91-22-28469900 sales@pramahikvision.com	**Hikvision Brazil** T +55 11 3318-0050 Latam.support@hikvision.com	**Hikvision France** T +33(0)1-85-330-450 info.fr@hikvision.com	**Hikvision Spain** T +34-91-737-16-55 info.es@hikvision.com	**Hikvision Poland** T +48-22-460-01-50 info.pl@hikvision.com
Hikvision Canada T +1-866-200-6690 sales.canada@hikvision.com	**Hikvision Turkey** T +90 (216)521 7070- 7074 sales.tr@hikvision.com	**Hikvision Kazakhstan** T +7-727-9730667 nikia.panfilov@hikvision.ru	**Hikvision Tashkent** T +99-87-1238-9438 uzb@hikvision.ru	**Hikvision Indonesia** T +62-21-2933759 Sales.Indonesia@hikvision.com
Hikvision Thailand T +662-275-9949 sales.thailand@hikvision.com	**Hikvision Malaysia** T +601-7652-2413 sales.my@hikvision.com	**Hikvision Vietnam** T +84-974270888 sales.vt@hikvision.com	**Hikvision Hong Kong** T +852-2151-1761 info.hk@hikvision.com	**Hikvision Colombia** sales.colombia@hikvision.com