

DS-2TD2617-10/PAI Thermal & Optical Bi-spectrum Network Bullet Camera

# **DeepinView**



Hikvision DS-2TD2617-10/PAI Thermal & Optical Bi-spectrum Network Bullet Camera, equipped with built-in GPU which supports intelligent behavior analysis algorithm, can realize high-precision VCA detection and real-time alarm. It is applied to perimeter defense and fire-prevention purposes in critical infrastructures such as community, villa, construction site, factory, 4S stores, and so on. The pre-alarm system helps you discover unexpected events immediately and protects your property.

#### **Smart Function (Thermal Imaging)**

- Image processing technology: adaptive AGC, DDE, 3D DNR, NETD ≤ 40 mk (@25 °C,F# = 1.1)
- Behavior analysis function, based on deep learning algorithm: line crossing, intrusion, region entrance & exit
- Temperature alarm for fire prevention
- Fire detection algorithm
- Bi-spectrum image fusion, picture in picture preview
- Strobe light and audio alarm

#### **Thermal Imaging Module Function**

- 160 × 120 (the resolution of output image is 320 × 240) resolution sensor, and high sensitivity sensor
- 3D DNR, 15 palettes of color adjustable, image detail enhancement, and contrast adjustment
- Mirror image, digital zoom ×2, ×4, ×8





## Specification

Image SensorVanadium Oxide Uncooled Focal Plane ArraysMax. Resolution160 × 120 (the resolution of output image is 320 × 240)Pixel Interval17µmResponse Waveband8 µm to 14 µmNETD (Noise Equivalent Temperature Difference)< 40 mk (@25 °C,F# = 1.1)Temperature Difference)9.7 mmIFOV2.74 mradField of View15.96° × 12° (H × V)Min. Focusing Distance1.2 mApertureF 1.1Optical ModuleMax. Image Resolution2688 × 1520Image Sensor1/2.7° Progressive Scan CMOSMin. IlluminationColor: 0.0089 Lux @(F1.6, AGC ON), B/W: 0.0018 Lux @(F1.6, AGC ON)Shutter Speed1 s to 1/100,000 sLens (Focal Length)8 mmField of View39.42° × 22.14° (H × V)WDR120 dBDay & NightIR cut filter with auto switchImage FunctionDisplay the details of optical channel on thermal channelPicture in PictureDisplay partial image of thermal channel on the full screen of optical channelSmart Function4 VCA rule types (line crossing, intrusion, region entrance, and region exiting), up to 8 VCA rules in total.Start Function3 temperature measurement rule types, 21 rules in total (10 points, 10 areas, and 1 line).Temperature Range20° C to ± 150° C (-4° F to ± 302°F)Temperature Range20° C to to 50 (268 × 1520, 1520 × 1080, 1280 × 720)Temperature Range20° C to to 00 mIR Intensity and AngleAutomaticaliy adjustedInformeUp to 40 m<	Thermal Module						
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Response Waveband   8 µm to 14 µm     NETD (Noise Equivalent Temperature Difference)   \$ 40 mk (@25 °C, Fil = 1.1)     Lens (Focal Length)   9.7 mm     IFOV   2.74 mrad     Field of View   15.96° x 12° (H × V)     Min. Focusing Distance   1.2 m     Aperture   F 1.1     Optical Modue	Max. Resolution	$160 \times 120$ (the resolution of output image is $320 \times 240$ )					
NETD (Noise Equivalent Temperature Difference)\$ 40 mk (@25 °C,F# = 1.1)Lens (Focal Length)9.7 mmIFOV2.74 mradIFOV2.74 mradField of View15.96 ° x 12° (H × V)Min. Focusing Distance1.2 mApertureF 1.1Optical ModuleOptical Colspan="2">Optical Colspan="2">Optical Colspan="2">Optical Colspan="2">Optical Colspan="2">Optical Colspan="2">Optical Colspan="2">Optical Colspan="2">Optical Colspan="2">Optical ModuleOptical ModuleOptical ModuleOptical Colspan="2">Optical Colspan="2">Optical Colspan="2">Optical Colspan="2">Optical Colspan="2">Optical Colspan="2">Optical Colspan="2"Optical ModuleOptical ModuleOptical ModuleOptical Sol ptical Colspan="2">Optical Colspan="	Pixel Interval	17µm					
Temperature Difference)   \$40 mk (@25 *C,F# = 1.1)     Lens (Focal Length)   9.7 nm     IFOV   2.74 mrad     Field of View   15.96* × 12* (H × V)     Min. Focusing Distance   1.2 m     Aperture   F.1.1     Optical Module   568 × 1520     Max. Image Resolution   2688 × 1520     Image Sensor   1/2.7" Progressive Scan CMOS     Min. Illumination   Color: 0.0089 Lux @(F1.6, AGC ON), B/W: 0.0018 Lux @(F1.6, AGC ON)     Shutter Speed   1 s to 1/100,000 s     Lens (Focal Length)   8 mm     Field of View   39.42* × 22.14" (H × V)     WDR   120 dB     Day & Night   IR cut filter with auto switch <b>Image Function</b> 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     Smart Function   VCA (Video Content Analysis)   VCA rule types (line crossing, intrusion, region entrance, and region exiting), up to 8 V/CA rules in total.     Temperature Measurement   1 temperature measurement rule types, 21 rules in total (10 points, 10 areas, and 1 line).     Temperature Range   20 °C tot + 150	Response Waveband	8 μm to 14 μm					
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Aperture   F 1.1     Optical Module   2688 × 1520     Max. Image Resolution   2688 × 1520     Image Sensor   1/2.7" Progressive Scan CMOS     Min. Illumination   Color: 0.0089 Lux @(F1.6, AGC ON), B/W: 0.0018 Lux @(F1.6, AGC ON)     Shutter Speed   1 s to 1/100,000 s     Lens (Focal Length)   8 mm     Field of View   39.42" × 22.14" (H × V)     VDR   120 dB     Day & Night   120 dB     Day & Night   R cut filter with auto switch     Image Function   Display the details of optical channel on thermal channel     Picture in Picture   Display the details of optical channel on the full screen of optical channel     VCA (Video Content Analysis)   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 ine).     Temperature Ange   -20 °C to + 150 °C (-4 °F to + 302 °F)     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.	Field of View	15.96° × 12° (H × V)					
Optical Module     Max. Image Resolution   2688 × 1520     Image Sensor   1/2.7" Progressive Scan CMOS     Min. Illumination   Color: 0.0089 Lux @(F1.6, AGC ON), B/W: 0.0018 Lux @(F1.6, AGC ON)     Shutter Speed   1 s to 1/100,000 s     Lens (Focal Length)   8 mm     Field of View   39.42* × 22.14* (H × V)     WDR   120 dB     Day & Night   IR cut filter with auto switch     Image Function   Display the details of optical channel on thermal channel     Picture in Picture   Display the details of optical channel on the full screen of optical channel     Picture in Picture   Display the details of optical channel on the full screen of optical channel     VCA (Video Content Analysis)   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 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.     Infrared<	Min. Focusing Distance	1.2 m					
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Infrared IR Distance Up to 40 m   IR Intensity and Angle Automatically adjusted   Network Optical: 50 Hz: 25 fps (2688 × 1520, 1920 × 1080, 1280 × 720) 60 Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720)	Temperature Accuracy	± 8 °C (± 14.4 °F)					
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Optical: 50 Hz: 25 fps (2688 × 1520, 1920 × 1080, 1280 × 720)Main Stream60 Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720)	IR Intensity and Angle	Automatically adjusted					
Main Stream   60 Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720)	Network						
[hermal: 25 tps (1280 $\times$ /20, 704 $\times$ 576, 640 $\times$ 480, 352 $\times$ 288, 320 $\times$ 740)	Main Stream						



	Optical: 50 Hz: 25 fps (704 × 576, 352 × 288, 176 × 144)					
Sub-stream	60 Hz: 30 fps (704 × 480, 352 × 240, 176 × 120)					
	Thermal: 25 fps(704 × 576, 352 × 288, 320 × 240)					
Video Compression	H.265/H.264/MJPEG					
Audio Compression	G.711u/G.711a/G.722.1/MP2L2/G.726/PCM					
Protocols	IPv4/IPv6, HTTP, HTTPS, 802.1x, Qos, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP, PPPoE					
Simultaneous Live View	Up to 20					
User/Host Level	Up to 32 users, 3 levels: Administrator, Operator, User					
Security Measures	User authentication (ID and PW), MAC address binding, HTTPS encryption, IEEE 802.1x access control, IP address filtering					
interface						
Alarm Input	1-ch inputs (0-5 VDC)					
Alarm Output	1-ch relay outputs, alarm response actions configurable					
Alarm Action	SD recording/relay output/smart capture/FTP upload/email linkage/audio alarm/white light alarm					
Audio Input	1, 3.5 mm Mic in/Line in interface. Line input: 2 to 2.4 V [p-p], output impedance: 1 K $\Omega$ ± 10%					
Audio Output	Linear level, impedance: 600 Ω					
Reset	1, Reset Button					
Communication Interface	1, RJ45 10M/100M self-adaptive Ethernet interface.					
SD Memory Card	Built-in micro SD card slot, support Micro SD/SDHC/SDXC card (up to 256 GB) Supports manual/alarm recording					
Application Programming	Open-ended API, support ISAPI, HIKVISION SDK and third-party management platform ONVIF (Profile S, Profile G, Profile T)					
Client	iVMS-4200, Hik-Connect					
Web Browser	IE 8-11, Chrome 41-44, Firefox 30-51					
General						
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	12 VDC± 25%, two-core terminal block PoE (802.3af, class 3)					
Power Consumption	9 VDC to 15 VDC: 0.65A, max. 7.5 W PoE (802.3af, class 3): 42.5 V to 57 V, 0.14 A to 0.22 A, max. 8.0 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	354 mm × 144.1 mm × 156.7 mm (13.94" × 5.67" × 6.17")					
Weight	Approx. 1.76 kg (3.88 lb)					

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### **Detection Range Table**

\* The table is only for reference and the performance may vary from camera to camera.

#### **Smart Functions Range**

Different targets trigger the VCA events within different range limits.

VCA Range (Vehicles: 1.4 × 4.0 m)	VCA Range (Humans: 1.8 × 0.5 m)	Temperature Measurement (Object: 2 × 2 m)	Temperature Measurement (Object: 1 × 1 m)	Fire Detection (Object: 2 × 2 m)	Fire Detection (Object: 1 × 1 m)
210 m	70 m	235 m	118 m	588 m	294 m

#### Wide Range Coverage

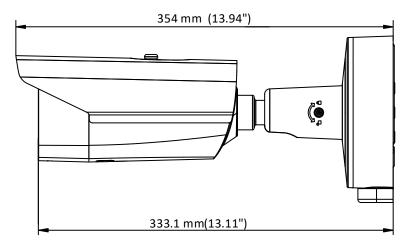
There is range limit for detecting, recognizing, and identifying human/vehicle targets.

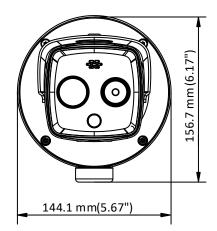
Detection Range	Detection Range	Recognition	Recognition	Identification	Identification
(Vehicles: 1.4 ×	(Humans: 1.8 ×	Range (Vehicles:	Range (Humans:	Range (Vehicles:	Range (Humans:
4.0 m)	0.5 m)	1.4 × 4.0 m)	1.8 × 0.5 m)	1.4 × 4.0 m)	1.8 × 0.5 m)
875 m	285 m	219 m	71 m	109 m	36 m

#### **Available Model**

DS-2TD2617-10/PAI

#### Dimension







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