DS-2TD95C8-300ZK2FL/W

Thermal & Optical Bi-spectrum Network Sphere Positioning System

Hikvision DS-2TD95C8-300ZK2FL/W Thermal & Optical Bi-spectrum Network Sphere Positioning System equipped with built-in GPU which supports intelligent perimeter protection algorithm with vehicle/human classification, can realize high-precision VCA detection and real-time alarm. It is applied to perimeter protection scenes, also airport, railway, port, large parking lot and other scenarios. The pre-alarm system helps you discover unexpected events immediately and protects your property.

Key Feature

- Perimeter protection function, based on intelligent algorithm: line crossing, intrusion, region entrance and exit
- Temperature exception alarm for fire prevention
- Fire detection algorithm
- 1280 × 1024 resolution 12 μm, VOx UFPA, NETD ≤ 35 mK (25°C, F# = 1.0)
- Image processing technology: Liner, histogram, and self-adaptive thermal AGC mode, DDE, 3D DNR
- High quality detector with 10 years guarantee
- Smart wiper, automatically turns on when it rains
- NEMA-4X Standard, Anti-corrosion coating

▪ Specification

Thermal Module	
Image Sensor	VOx Uncooled Focal Plane Arrays
Resolution	1280 × 1024
Pixel Pitch	12 μm
Spectral Range	8 μm to 14 μm
NETD	≤ 35 mK (@ 25°C,F# = 1.0)
Focal Length	30 to 300 mm
Focus Mode	Semi-auto & Manual
IFOV	0.4 to 0.04 mrad
Aperture	F0.85 to F1.35
Field of View	28.7° × 23.2° (H × V) to 2.9° × 2.4° (H × V)
Min. Focusing Distance	3 m
Digital Zoom	× 2, × 4, × 8
Optical Module	
Image Sensor	1/1.8" Progressive Scan CMOS
Resolution	1920 × 1080, 2 MP
Min. Illumination	Color: 0.005 Lux @ (F3.5, AGC ON), B/W: 0.0005 Lux @ (F3.5, AGC ON)
Field of View	31.2° × 17.8° (H × V) to 0.41° × 0.23° (H × V)
Focal Length	10 to 1000 mm, 100x
Aperture (Range)	F3.0 to F11.5
Focus Mode	Semi-auto & Manual
Digital Zoom	× 2, × 4, × 8, × 16
Shutter Speed	1 s to 1/30,000 s
WDR	120 dB
Optical Defog	Yes
Image Effect	
Picture in Picture	Display partial image of thermal channel on the full screen of optical channel
Target Coloration	Supported in white hot and black hot mode
Image Stabilization	Thermal channel: Built-in gyroscope to improve EIS performance(conflicted with intelligent function); Optical channel: Optical Image Stabilization (OIS)
PTZ	
Movement Range	Pan: 360° Continuous Rotate; Tilt: From -45° to +45° (auto flip)
Pan Speed	Configurable, From 0.01°/s to 120°/s, Preset Speed: 120°/s
Tilt Speed	Configurable, From 0.01°/s to 80°/s, Preset Speed: 80°/s
Proportional Zoom	Yes
Presets	300 in total, 273 are configurable.
Patrol Scan	8; Up to 256 Presets Per Patrol
Pattern Scan	4; More Than 10 Minutes Per Pattern
Power Off Memory	Yes
Park	Preset/Pattern Scan/Patrol Scan/Auto Scan/Tilt Scan/Random Scan/Frame Scan/Panorama Scan
PT Status	Turn On/Turn Off
Scheduled Task	Preset/Pattern Scan/Patrol Scan/Auto Scan/Tilt Scan/Random Scan/Frame Scan/Panorama Scan/Doom Reboot/Doom Adjust/Aux Output

Illuminator	
IR Distance	Laser 3,000 m
IR Intensity and Angle	Automatically adjusted
Smart Function	
Basic Event	motion detection, video tampering alarm, alarm input and output, audio exception detection, scene change detection
VCA	Support 4 VCA rule types (Line Crossing, Intrusion, Region Entrance, and Region Exiting), up to 10 scenes and 8 VCA rules for each scene
Temperature Measurement	Support 3 temperature measurement rule types, 273 presets as scene, 21 rules of each scene (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)
Fire Detection	Dynamic fire point detection, up to 10 fire points detectable.
Video and Audio	
Main Stream	Optical channel 50 Hz: 25 fps (1920 × 1080, 1280 × 960, 1280 × 720) 60 Hz: 30 fps (1920 × 1080, 1280 × 960, 1280 × 720) Thermal channel 25 fps (1920 × 1080, 1280 × 1024, 1280 × 960, 1280 × 720, 704 × 576, 640 × 512, 384 × 288)
Sub-stream	Optical channel 50 Hz: 25 fps (704 × 576, 352 × 288) 60 Hz: 30 fps (704 × 576, 352 × 288) Thermal channel 25 fps (704 × 576, 640 × 512, 384 × 288)
Video Compression	Main stream: H.265+/H.265/H.264+/H.264 Sub-stream: H.265/H.264/MJPEG
Audio Compression	G.711u/G.711a/G.722.1/MP2L2/G.726/PCM/AAC
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
Network Storage	MicroSD/SDHC/SDXC card (up to 256 GB) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR)
API	ISAPI, HIKVISION SDK, Open Network Video Interface (Profile S, Profile G, Profile T)
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, Hik-Central
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	2-ch inputs (0 to 5 VDC)
Alarm Output	2-ch relay outputs, alarm response actions configurable

Alarm Action	Preset/Patrol Scan/Pattern Scan/SD Card Record/Relay Output/Smart capture/FTP upload/Email linkage
Audio Input	1, 3.5 mm Mic in/Line in interface. Line input: 2 to 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/1000 M Self-adaptive Ethernet interface. 1, RS-485 interface
Analog Output	1.0 V [p-p]/75 Ω, BNC for thermal channel
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 Supply	48 VDC ± 20%, 4-pin Aviation Connector
Power Consumption	180 W; Max. 460 W with deicing heating
Working Temperature/Humidity	From -40°C to 70°C (-40°F to 158°F); Humidity: 90% ± 3% (no condensation)
Wiper	Manual & Scheduled & Smart Wiper
Protection Level	IP67 Standard; TVS 6000V Lightning Protection, Surge Protection and Voltage Transient Protection
Dimensions	578.3 mm × 571 mm × 955.7 mm (22.8” × 22.5” × 37.6”)
Weight	Approx. 100 kg (220.5 lb)

DRI Range Table

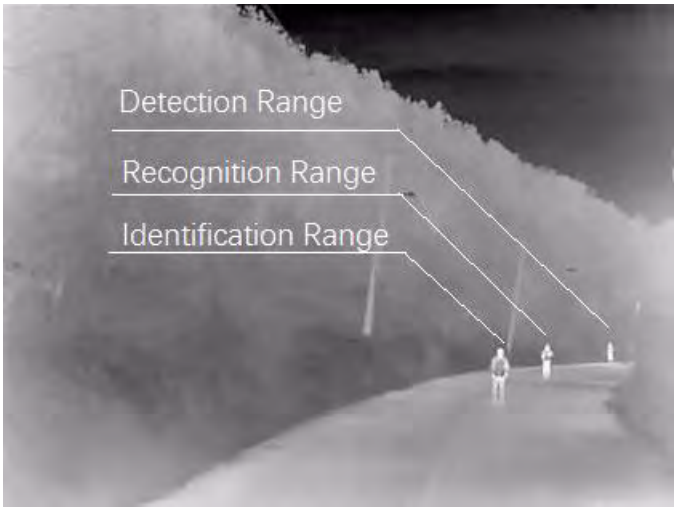
** The table is only for reference and the performance may vary according to different environment.*

** 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)
38333 m	12500 m	9583 m	3125 m	4792 m	1563 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: 2 × 2 m)	Temperature Measurement (Object: 1 × 1 m)	Fire Detection (Object: 2 × 2 m)	Fire Detection (Object: 1 × 1 m)
8900 m	2950 m	10000 m	5000 m	25000 m	12500 m

▪ Available Model

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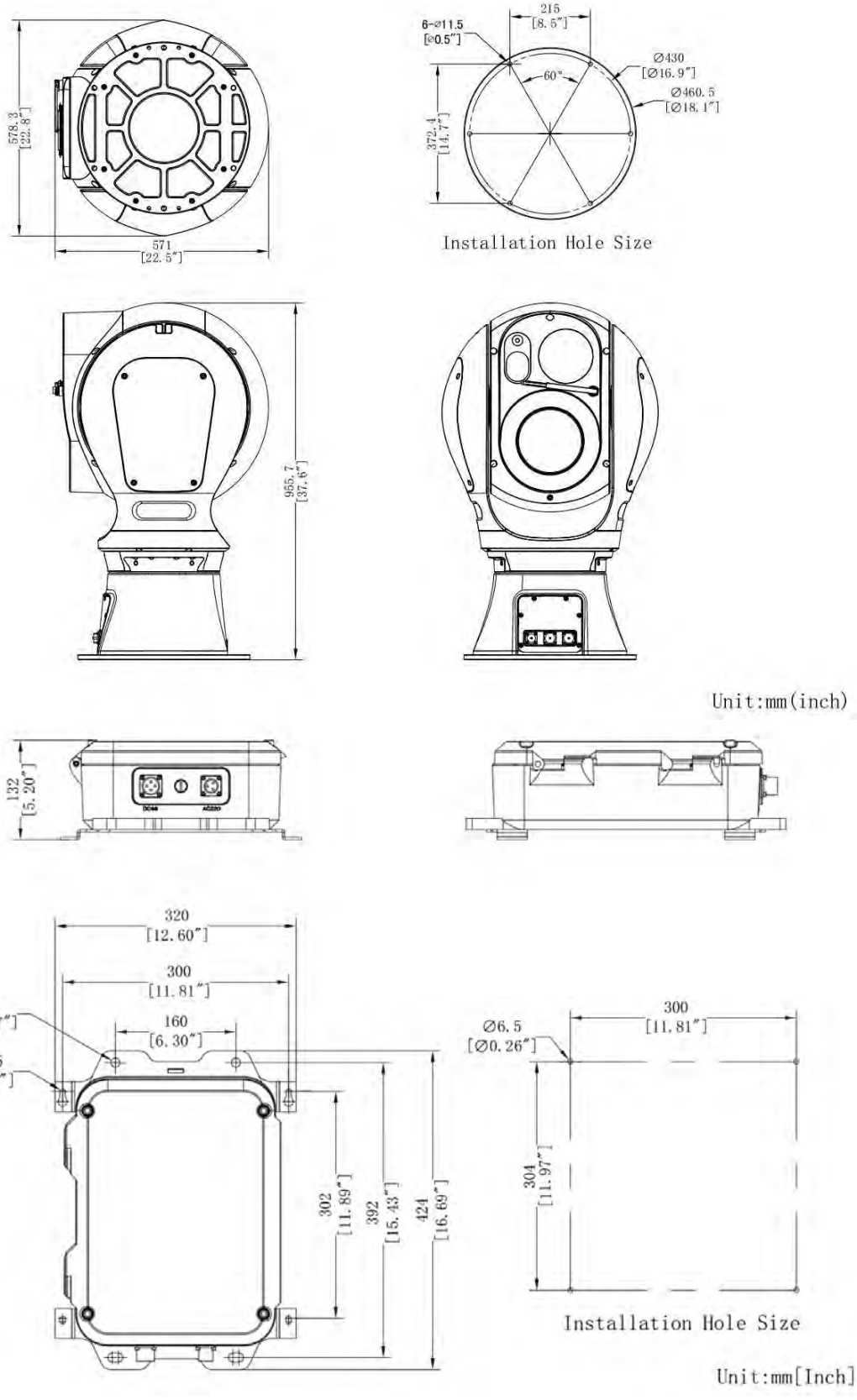
▪Dimension



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