

## 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                              |

| <b>Illuminator</b>      |  |
|-------------------------|--|
| IR Distance             | Laser 3,000 m  |
| IR Intensity and Angle  | Automatically adjusted   |
| <b>Smart Function</b>   |  |
| 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.   |
| <b>Video and Audio</b>  |  |
| Main Stream             | Optical channel<br>50 Hz: 25 fps (1920 × 1080, 1280 × 960, 1280 × 720)<br>60 Hz: 30 fps (1920 × 1080, 1280 × 960, 1280 × 720)<br>Thermal channel<br>25 fps (1920 × 1080, 1280 × 1024, 1280 × 960, 1280 × 720, 704 × 576, 640 × 512, 384 × 288) |
| Sub-stream              | Optical channel<br>50 Hz: 25 fps (704 × 576, 352 × 288)<br>60 Hz: 30 fps (704 × 576, 352 × 288)<br>Thermal channel<br>25 fps (704 × 576, 640 × 512, 384 × 288)   |
| Video Compression       | Main stream: H.265+/H.265/H.264+/H.264<br>Sub-stream: H.265/H.264/MJPEG  |
| Audio Compression       | G.711u/G.711a/G.722.1/MP2L2/G.726/PCM/AAC  |
| <b>Network</b>          |  |
| 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<br>Live view (plug-in free): Chrome 57.0 +, Firefox 52.0 +<br>Local service : Chrome 57.0+, Firefox 52.0 +   |
| <b>Interface</b>        |  |
| 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 K $\Omega$ $\pm$ 10%   |
| Audio Output                 | Linear Level; Impedance: 600 $\Omega$  |
| Communication Interface      | 1, RJ45 10 M/100 M/1000 M Self-adaptive Ethernet interface.<br>1, RS-485 interface   |
| Analog Output                | 1.0 V [p-p]/75 $\Omega$ , BNC for thermal channel  |
| <b>General</b>               |  |
| Menu Language                | 32 languages<br>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 $\pm$ 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% $\pm$ 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 $\times$ 571 mm $\times$ 955.7 mm (22.8" $\times$ 22.5" $\times$ 37.6")   |
| Weight                       | Approx. 100 kg (220.5 lb)  |

## DRI Range Table

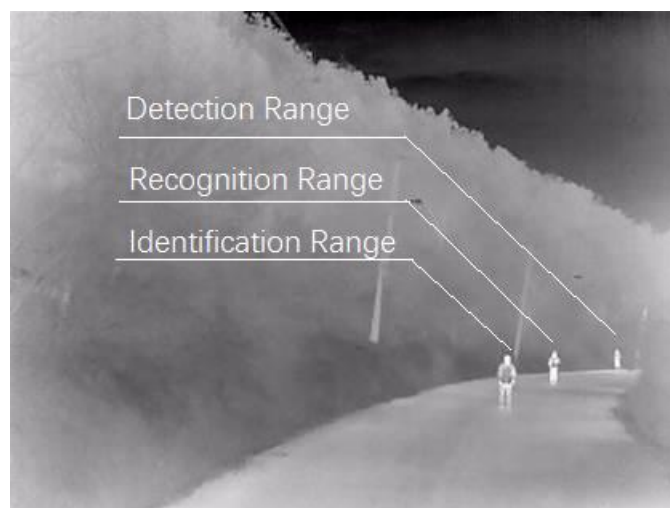
\* The table is only for reference and the performance may vary according to different environment.

\* 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<br>(Vehicles: 1.4 ×<br>4.0 m) | Detection Range<br>(Humans: 1.8 ×<br>0.5 m) | Recognition<br>Range (Vehicles:<br>1.4 × 4.0 m) | Recognition<br>Range (Humans:<br>1.8 × 0.5 m) | Identification<br>Range (Vehicles:<br>1.4 × 4.0 m) | Identification<br>Range (Humans:<br>1.8 × 0.5 m) |
|---|---|---|---|--|--|
| 38333 m                                       | 12500 m                                     | 9583 m  | 3125 m  | 4792 m   | 1563 m   |

## Smart Function Table

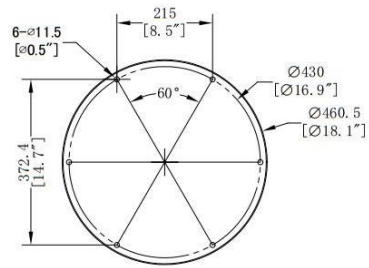
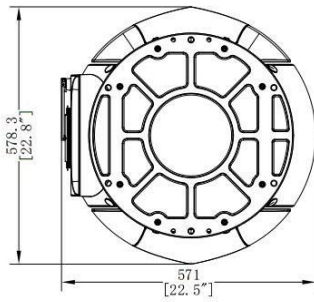
\* The table is only for reference and the performance may vary according to different environment.

| VCA Range<br>(Vehicles: 1.4 ×<br>4.0 m) | VCA Range<br>(Humans: 1.8 ×<br>0.5 m) | Temperature<br>Measurement<br>(Object: 2 × 2 m) | Temperature<br>Measurement<br>(Object: 1 × 1 m) | Fire Detection<br>(Object: 2 × 2 m) | Fire Detection<br>(Object: 1 × 1 m) |
|---|---------------------------------------|---|---|-------------------------------------|-------------------------------------|
| 8900 m                                  | 2950 m                                | 10000 m   | 5000 m  | 25000 m                             | 12500 m                             |

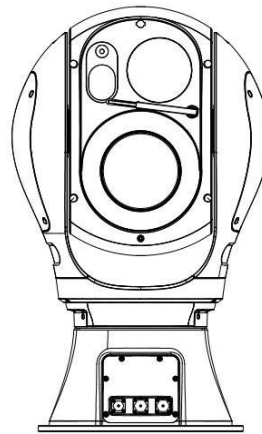
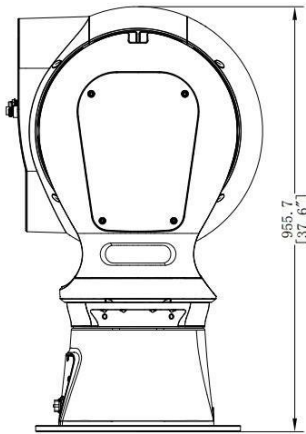
### ▪ Available Model

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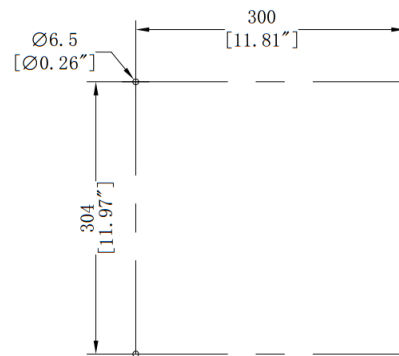
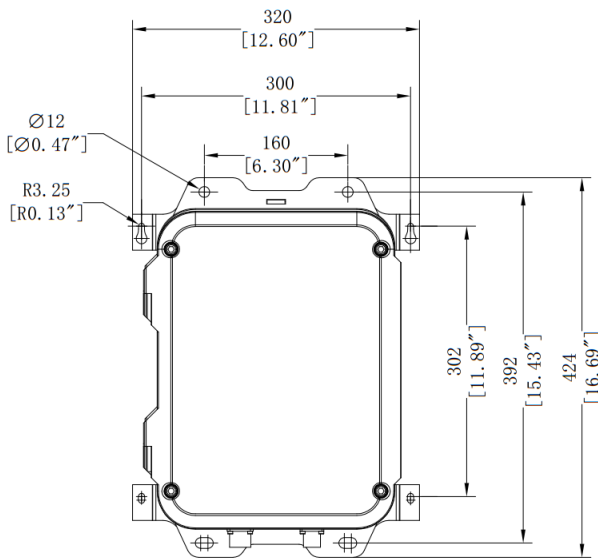
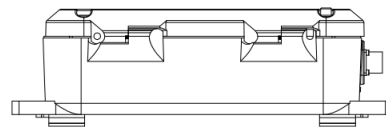
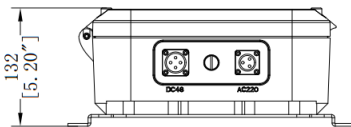
▪ Dimension



Installation Hole Size



Unit:mm (inch)



Installation Hole Size

Unit:mm [Inch]

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.

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