

**DS-2TD4137T-9/W****Thermographic Thermal & Optical Bi-spectrum Network Speed Dome**

Hikvision DS-2TD4137T-9/W Thermographic Thermal & Optical Bi-spectrum Network Speed Dome is applied to manufacture process supervision of pyrophoric materials in factories, electric substation, and hydropower station. The accurate temperature measurement system sends you alarms to protect you from property loss.

- Behavior analysis function, based on deep learning algorithm: line crossing, intrusion, region entrance and exit
- Temperature exception alarm for fire prevention
- Fire detection algorithm
- 384 × 288 (the resolution of output image is 1920 × 1080) resolution 17  $\mu\text{m}$ , VOx UFPA, NETD  $\leq 35 \text{ mK}$  (25 °C, F# = 1.1)
- Image processing technology: Liner, histogram, and self-adaptive thermal AGC mode, DDE, 3D DNR
- High quality detector with 10 years guarantee
- Smart tracking: Panorama tracking, Event tracking and Multi-scene patrol tracking
- Smart tracking linkage: thermal view and optical view
- Thermal channel supports EIS, conflicted with intelligent function
- Smoke detection for fire prevention

## ▪ Specification

| Thermal Module         |                                                                                                                             |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Image Sensor           | Vanadium Oxide Uncooled Focal Plane Arrays                                                                                  |
| Resolution             | 384 × 288 (the resolution of output image is 1920 × 1080)                                                                   |
| Pixel Interval         | 17 μm                                                                                                                       |
| Response Waveband      | 8 μm to 14 μm                                                                                                               |
| NETD                   | ≤ 35 mK (@25° C, F# = 1.0)                                                                                                  |
| Focal Length           | 9 mm                                                                                                                        |
| Focus Mode             | Athermalized                                                                                                                |
| IFOV                   | 1.89 mrad                                                                                                                   |
| Aperture               | F1.0                                                                                                                        |
| Field of View          | 37.9° × 28.7° (H × V)                                                                                                       |
| Min. Focusing Distance | 1 m                                                                                                                         |
| Digital Zoom           | ×2, ×4, ×8                                                                                                                  |
| Optical Module         |                                                                                                                             |
| Image Sensor           | 1/1.8" Progressive Scan CMOS                                                                                                |
| Resolution             | 2688 × 1520, 4 MP                                                                                                           |
| Min. Illumination      | Color: 0.005 Lux @ (F1.3, AGC ON), B/W: 0.001 Lux @ (F1.3, AGC ON)                                                          |
| Field of View          | 56.6° × 33.7° (H × V) to 1.8° × 1.0° (H × V)                                                                                |
| Focal Length           | 6-240 mm, 40x                                                                                                               |
| Aperture (Range)       | F1.3-F4.6                                                                                                                   |
| Focus Mode             | Auto/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                                                                                   |
| PTZ                    |                                                                                                                             |
| Movement Range         | Pan: 360° Continuous Rotate; Tilt: From -20° to + 90° (auto flip)                                                           |
| Pan Speed              | Configurable, From 0.1°/s to 200°/s, Preset Speed: 240°/s                                                                   |
| Tilt Speed             | Configurable, From 0.1°/s to 105°/s, Preset Speed: 200°/s                                                                   |
| Proportional Zoom      | Yes                                                                                                                         |
| Presets                | 300 in total, 273 are configurable.                                                                                         |
| Patrol Scan            | 8; Up to 32 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             | Up to 200 m                                                                                                                                                                                                                                               |
| IR Intensity and Angle  | Automatically adjusted                                                                                                                                                                                                                                    |
| <b>Smart Function</b>   |                                                                                                                                                                                                                                                           |
| 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 550° C (- 4° F to 1022° F)                                                                                                                                                                                                                     |
| Temperature Accuracy    | Max ( $\pm 2^{\circ}$ C, $\pm 2\%$ )                                                                                                                                                                                                                      |
| Fire Detection          | Dynamic fire detection, up to 10 fire points detectable.                                                                                                                                                                                                  |
| <b>Video and Audio</b>  |                                                                                                                                                                                                                                                           |
| Main Stream             | Optical channel<br>50 Hz:25 fps (2688 × 1520, 1920 × 1080, 1280 × 960, 1280 × 720)<br>60 Hz:30 fps (2688 × 1520, 1920 × 1080, 1280 × 960, 1280 × 720)<br>Thermal channel<br>50 fps (1920 × 1080, 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>50 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                                                                                                                                                                                                                     |
| <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 G) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR)                                                                                                                                             |
| API                     | ISAPI, HIKVISION SDK, third-party management platform, ONVIF profile S,T,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 access control, IP address filtering                                                                                                                            |
| Client                  | iVMS-4200, Hik-Connect                                                                                                                                                                                                                                    |
| 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             | 7-ch inputs (0-5 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 - 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 Self-adaptive Ethernet interface.<br>1, RS-485 interface                                                                                                                                                                                                                                                                  |
| Analog Video Output          | 1.0 V [p-p]/75 $\Omega$ , BNC for thermal channel                                                                                                                                                                                                                                                                                            |
| <b>General</b>               |                                                                                                                                                                                                                                                                                                                                              |
| Web Client 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                 | 24V AC $\pm$ 20%, 36V DC $\pm$ 20%, 48V DC $\pm$ 20%                                                                                                                                                                                                                                                                                         |
| Power Consumption            | 65W Max                                                                                                                                                                                                                                                                                                                                      |
| Working Temperature/Humidity | From - 40° C to 65° C (- 40° F to 149° F);<br>95% or less                                                                                                                                                                                                                                                                                    |
| Wiper                        | Yes                                                                                                                                                                                                                                                                                                                                          |
| Protection Level             | IP66 Standard; TVS 6000V Lightning Protection, Surge Protection and Voltage Transient Protection                                                                                                                                                                                                                                             |
| Dimension                    | 266.6 mm $\times$ 410 mm $\times$ 198.6 mm (10.5" $\times$ 16.15" $\times$ 7.82")                                                                                                                                                                                                                                                            |
| Weight                       | Approx. 9 kg (19.84 lb)                                                                                                                                                                                                                                                                                                                      |

## ▪ Range Table

| VCA Range<br>(Vehicles: 1.4 $\times$<br>4.0 m) | VCA Range<br>(Humans: 1.8 $\times$<br>0.5 m) | Temperature<br>Measurement<br>(Object: 2 $\times$ 2<br>m) | Temperature<br>Measurement<br>(Object: 1 $\times$ 1<br>m) | Fire Detection<br>(Object: 2 $\times$ 2<br>m) | Fire Detection<br>(Object: 1 $\times$ 1<br>m) |
|------------------------------------------------|----------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| 189 m                                          | 63 m                                         | 212 m                                                     | 106 m                                                     | 529 m                                         | 265 m                                         |

## ▪ DORI

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

Detection Range: In order to distinguish an object from the background, the image must be covered by 1.5 or more pixels.

Recognition Range: In order to classify the object (animal, human, vehicle, etc.), the image must have at least 6 pixels across its critical dimension.

Identification Range: In order to identify the object and describe it in details, the critical dimension must have be least 12 pixels across

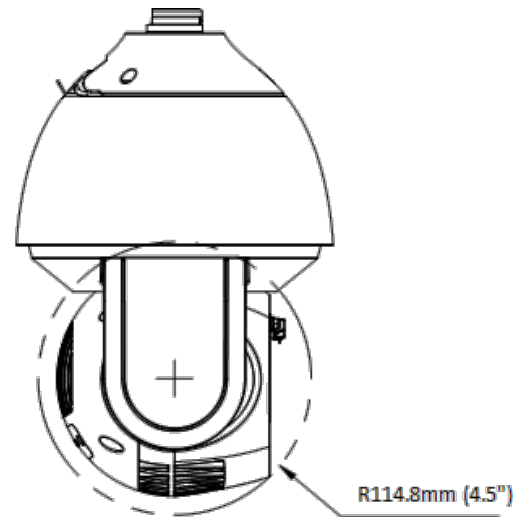
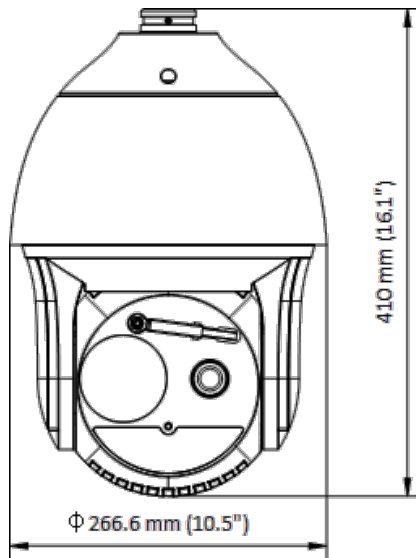
| Detection<br>Range<br>(Vehicles: 1.4 $\times$<br>4.0 m) | Detection<br>Range<br>(Humans: 1.8 $\times$<br>0.5 m) | Recognition<br>Range<br>(Vehicles: 1.4 $\times$<br>4.0 m) | Recognition<br>Range<br>(Humans: 1.8 $\times$<br>0.5 m) | Identification<br>Range<br>(Vehicles: 1.4 $\times$<br>4.0 m) | Identification<br>Range<br>(Humans: 1.8 $\times$<br>0.5 m) |
|---------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|
| 812 m                                                   | 265 m                                                 | 203 m                                                     | 66 m                                                    | 101 m                                                        | 33 m                                                       |

## ▪ Available Model

DS-2TD4137T-9/W

DS-2TD4137T-9/W(B)

▪ **Dimension**



▪ **Accessory**

▪ **Optional**

| DS-1603ZJ<br>Wall Mount                                                             | DS-1604ZJ-box<br>Wall Mount                                                         | DS-1602ZJ-Pole<br>Vertical pole mount                                                 |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |

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