

DS-2TD4137-50/W

Thermal and Optical Bi-spectrum Network Speed Dome



Hikvision DS-2TD4137-50/W Thermal and Optical Bi-spectrum Network Speed Dome equipped with built-in GPU which supports intelligent behavior analysis algorithm, can realize high-precision VCA detection and real-time alarm. It is applied for perimeter defense and fire-prevention in critical infrastructures such as railway, airport, parking lot, factory, and so on. The pre-alarm system helps you discover unexpected events immediately and protects your property.

Key Feature

- 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 resolution 17 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.



Specification

| Thermal Module | |
|------------------------|--|
| Image Sensor | Vanadium Oxide Uncooled Focal Plane Arrays |
| Resolution | 384 × 288 |
| Pixel Interval | 17 μm |
| Response Waveband | 8 μm to 14 μm |
| NETD | ≤ 35 mK (25 °C, F#=1.0) |
| Focal Length | 50 mm |
| Focus Mode | Athermalized |
| IFOV | 0.34 mrad |
| Aperture | F1.0 |
| Field of View | 7.5° × 5.6° (H × V) |
| Min. Focusing Distance | 50 m |
| Digital Zoom | ×2, ×4, ×8, ×16 |
| Optical Module | |
| Image Sensor | 1/1.8" Progressive Scan CMOS |
| Resolution | 2688 × 1520 |
| 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 |
| Shutter Speed | 1s 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/Dome Reboot/Dome Adjust/Aux Output |
| Illuminator | |
| IR Distance | Up to 200 m |
| IR Intensity and Angle | Automatically adjusted |
| Smart Function | |
| VCA | 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 | 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 detection, up to 10 fire points detectable. |
| Video and Audio | |
| Main Stream | Optical channel 50 Hz:25 fps (2688 × 1520, 1920 × 1080, 1280 × 960, 1280 × 720) 60 Hz:30 fps (2688 × 1520, 1920 × 1080, 1280 × 960, 1280 × 720) Thermal channel 25 fps (1920 × 1080, 1280 × 960, 1280 × 720, 704 × 576, 640 × 480, 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 × 480, 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 |
| 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 G) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR) |
| API | ISAPI, HIKVISION SDK, third-party management platform, ONVIF (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 PW), 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 | 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 Ω \pm 10% |
| Audio Output | Linear Level; Impedance: 600 Ω |
| Communication Interface | 1, RJ45 10 M/100 M Self-adaptive Ethernet interface. 1, RS-485 interface |
| Analog Video Output | 1.0 V [p-p]/75 Ω , BNC for thermal channel |
| 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 | 24 VAC \pm 25% Hi-PoE |
| Power Consumption | 24V AC \pm 25%: 5 A, max. 60 W Hi-PoE: Max. 60 W |
| Work Temperature/Humidity | From -40 $^{\circ}$ C to 65 $^{\circ}$ C (-40 $^{\circ}$ F to 149 $^{\circ}$ F) 95% or Less |
| Wiper | Yes |
| Protection Level | IP66 Standard TVS 6000 V 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) |

DRI Range Table

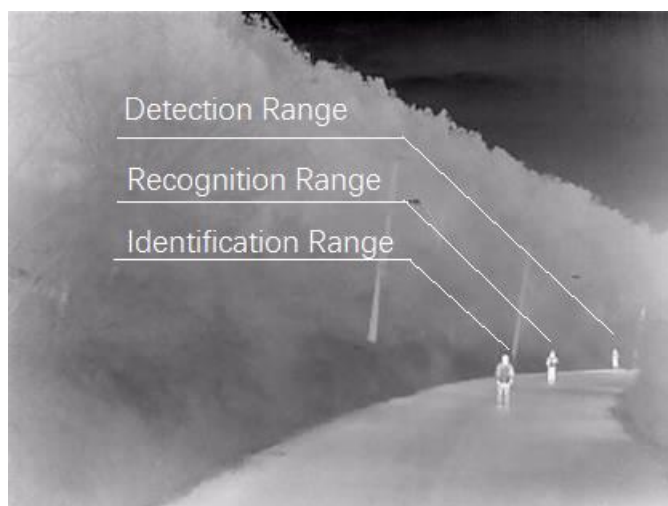
* The table is only for reference and the performance may vary according to different environment.

* The optimal human 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) |
|---|---|---|---|--|--|
| 4510 m | 1470m | 1127m | 368m | 564m | 184m |

Smart Function Table

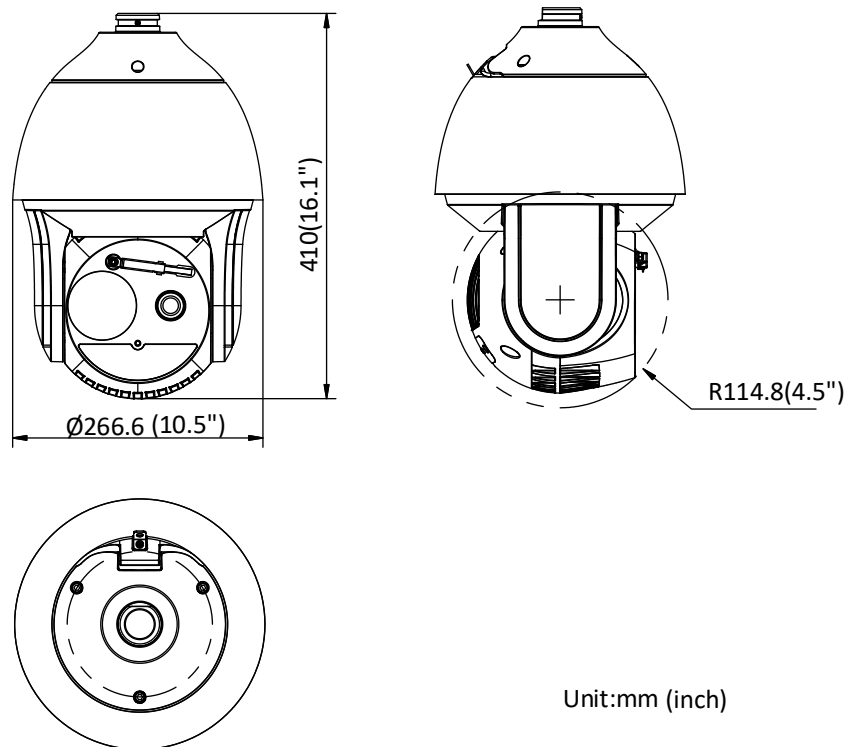
* The table is only for reference and the performance may vary according to different environment.

| 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) |
|---|---------------------------------------|---|---|-------------------------------------|-------------------------------------|
| 1029 m | 368 m | 1170 m | 590 m | 2940 m | 1470 m |

Available Model

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Dimension



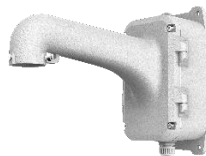
Accessory



DS-1602ZJ-Pole
Vertical Pole Mount



DS-1602ZJ
Wall Mount



DS-1604ZJ-box
Box

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