HM-TD4168-50/G0/T2Y
Thermal & Optical Bi-spectrum Network Speed Dome





Hikmicro Thermal and Optical Bi-spectrum Network Speed Dome equipped with built-in GPU which supports intelligent perimeter protection algorithm, can realize high-precision VCA detection and real-time alarm. It is applied for perimeter protection and fire-prevention 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.

- 640× 512 resolution 12 μm, NETD≤ 25mK (25 °C, F# = 1.0)
- Perimeter protection function, based on intelligent algorithm: line crossing, intrusion, region entrance and exit
- Temperature exception alarm for fire prevention
- Fire detection and smoke detection algorithm
- Built-in TPM2.0 encryption module for cybersecurity
- Added one fixed lens overlaid on optical PTZ channel for wide-angle monitoring
- High quality detector with 10 years guarantee
- NEMA-4X Standard, Anti-corrosion coating

▪ Specification

Thermal Module	
Image Sensor	VOx Uncooled Focal Plane Arrays
Resolution	640 × 512
Pixel Interval	12 μm
Response Waveband	8 μm to 14 μm
NETD	Less than 25 mK (@25°C,F#=1.0)
Focal Length	50 mm
Focus Mode	Athermalized
IFOV	0.24 mrad
Aperture	F1.2
Field of View	8.8°(H) × 7°(V)
Min. Focusing Distance	28m
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	Fixed lens:89.5°(H)x47.9°(V) PTZ:55.2°(H)*31.84°(V)~1.84°(H)*1.04°V)
Focal Length	Fixed lens:4mm PTZ : 6-336mm
Aperture (Range)	Fixed lens： F1.3-F4.6 PTZ : F1.0
Focus Mode	Auto/Semi-auto/Manual
Digital Zoom	×2, ×4, ×8, ×16
Shutter Speed	1s to 1/30,000s
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 supports EIS. Optical channel supports OIS
PTZ	
Movement Range	Pan: 360° Continuous Rotate; Tilt: From -5° to + 90° (auto flip)
Pan Speed	Configurable, From 0.1°/s to 160°/s, Preset Speed: 240°/s
Tilt Speed	Configurable, From 0.1°/s to 125°/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
Illuminator	
Laser Distance	150m
IR Intensity and Angle	Automatically adjusted
Smart Function	
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 detection, up to 10 fire points detectable.
Smoke Detection	Up to 6km detection ability with 5m*5m smoke
Video and Audio	
Main Stream	Thermal channel 25fps(1920 × 1080, 1280 × 960, 1280 × 720, 704×576, 640×512, 384×288) Optical channel 50Hz:25fps(2688 × 1520, 1920 × 1080, 1280 × 960, 1280 × 720) 60Hz:30fps(2688 × 1520, 1920 × 1080, 1280 × 960, 1280 × 720)
Sub-stream	Thermal channel 25fps(704×576, 640×512, 384×288) Optical channel 50Hz:25fps(704 × 576, 352 × 288) 60Hz:30fps(704 × 576, 352 × 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
Video and Image	
Color Palettes	15 palettes (White hot, Black hot, Fusion 1, Rainbow, Fusion 2, Ironbow 1, Ironbow 2, Sepia, Color 1, Color 2, Icefire, Rain, Red hot,Green hot, Dark blue)
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 (1T) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR)
API	ISAPI, ISUP, HIKVISION SDK, third-party management platform, ONVIF (Profile S, Profile G, Profile T, Profile M)
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 access control, IP address filtering, TPM2.0 (FIPS-140-2 level), TLS1.1,TLS1.2, TLS1.3
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 KΩ ± 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
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 Supply	24V AC ± 20%, 36V DC ± 20%, 48V DC ± 20%, Hi-PoE
Power Consumption	70W Max
Work Temperature/Humidity	From -40°C to 70°C (-40°F to 158°F); Humidity: 95% or Less
Wiper	Yes
Protection Level	IP66 Standard; TVS 6000V Lightning Protection, Surge Protection and Voltage Transient Protection
Dimension	266.6*266.6*433.3mm (10.5 " × 10.5 " × 17.06 ")
Weight	Approx. 9.3 kg (20.5 lb)

Detection Range Table	
VCA Range for Humans	750 m
VCA Range for Vehicles	1500 m
Approval	
EMC	CE-EMC (EN 55032: 2015, EN 61000-3-2:2019, EN 61000-3-3: 2013+A1:2019, EN50130-4: 2011+A1: 2014); RCM (AS/NZS CISPR 32: 2015); IC (ICES-003: Issue 7)
Safety	CB: IEC 62368-1: 2014+A11; CE-LVD: EN 62368-1: 2014/A11: 2017; BIS: IS 13252 (Part 1): 2010/ IEC 60950-1: 2005
Environment	CE-RoHS：2011/65/EU, WEEE: 2012/19/EU, Reach：Regulation(EC) No 1907/2006
Protection	IP66: IEC 60529-2013
Anti-Corrosion Protection	NEMA 4X (NEMA 250-2018)

▪ Model Description

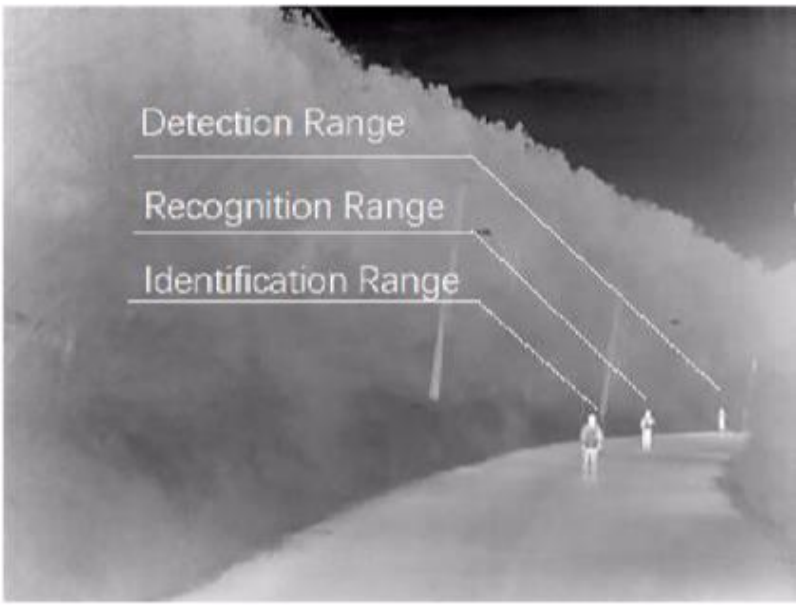
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▪ Range Table

VCA Range (Vehicles: 1.4 × 4.0 m)	VCA Range (Humans: 1.8 × 0.5 m)	VCA Range (Vessels: 10 × 5 m)	Temperature Measurement (Object: 1 × 1 m)	Fire Detection (Object: 1 × 1 m)	Smoke Detection (Object: 5 × 5 m)
1500m	750m	2000m	833m	4000m	6000m

▪ 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 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)
6389 m	2083 m	1597 m	521 m	799 m	260 m

▪ Typical Application

HIKMICRO products are classified into three levels according to their anti-corrosion performance. Refer to the following description to choose for your using environment.

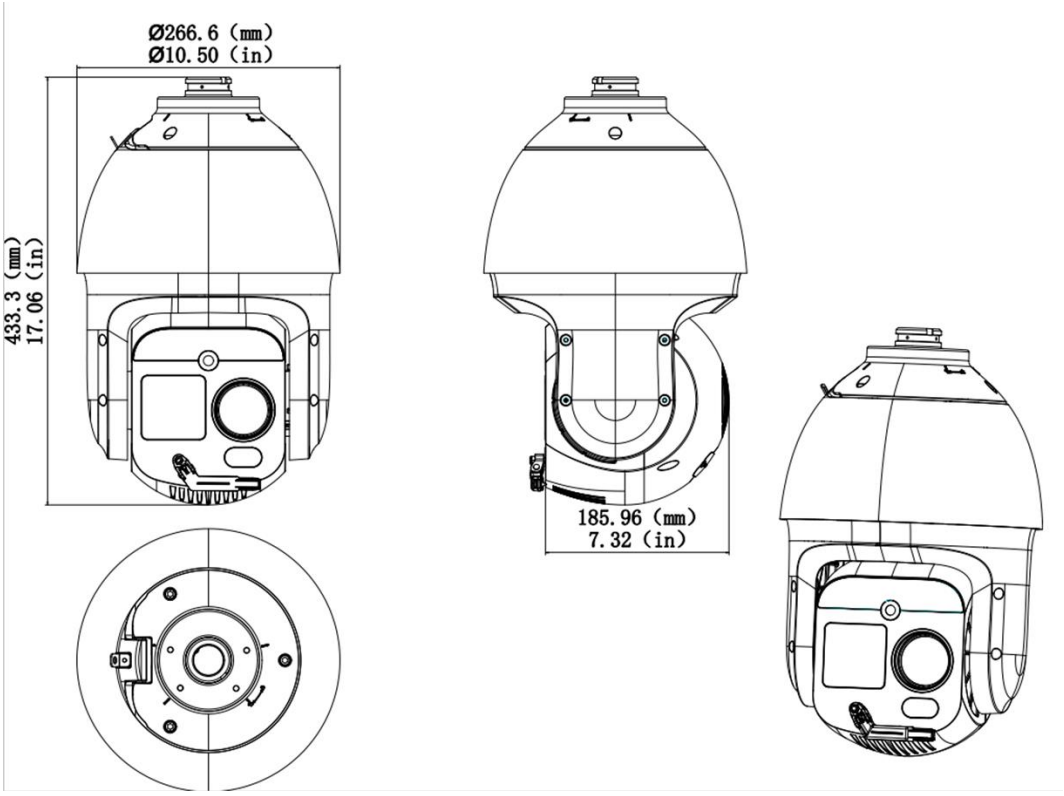
No products could be used under HYDROGEN FLUORIDE environment. This model has MODERATE PROTECTION.

Level	Description
Top-level Protection	HIKMICRO products at this level are equipped for use in areas where professional anti-corrosion protection is a must. Usually it is used in salt-spray and sulfur dioxide (with a concentration volume ratio of less than 0.67%) environment, such as chemical plants and coastal lines.
Moderate Protection	HIKMICRO products at this level are equipped for use in areas with moderate anti-corrosion demands. Typical application scenarios include coastal areas about 2 kilometers (1.24 miles) away from coastlines, as well as areas affected by acid rain.
No Specific Protection	HIKMICRO products at this level are equipped for use in areas where no specific anti-corrosion protection is needed.

▪ Available Model

HM-TD4168-50/G0/T2Y

▪ Dimension



▪ Accessory

▪ Optional

DS-4612ZJ-PA Pendant Mount	DS-4603ZJ-PA Wall mount	DS-1684ZJ-P-Y Vertical pole mount	DS-1673ZJ-P-Y Horizontal pole mount
			

HIKMICRO

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