HM-TD8167-190ZE2F/WY(B)
Thermal & Optical Bi-spectrum Network Stable PTZ

HIKMICRO HM-TD8167-190ZE2F/WY Thermal & Optical Bi-spectrum Network Stable PTZ equipped with built-in GPU which supports intelligent perimeter protection algorithm, can realize high-precision VCA detection and real-time alarm. It is applied to perimeter protection scenes, such as airport, railway, farm, large parking lot. The pre-alarm system helps you discover unexpected events immediately and protects your property.

- Perimeter protection function, based on intelligent algorithm: line crossing, intrusion, region entrance and exit
- Temperature exception alarm for fire prevention
- Fire detection algorithm, Smoke detection algorithm
- 640 × 512 (the resolution of output image is 1920 × 1080) resolution 17 μm, VOx UFPA, NETD ≤ 35 mK (25 °C, F# = 1.0)
- High quality detector with 10 years guarantee
- Image processing technology: Liner, histogram, and self-adaptive thermal AGC mode, DDE, 3D DNR
- NEMA-4X Standard
- Smart tracking: Panorama tracking, Event tracking and Multi-scene patrol tracking
- Smart tracking linkage: thermal view and optical view
- Thermal channel and optical channel supports EIS, conflicted with intelligent function
- Support vessel detection like dredger, fishing boat and ship flow detection

· Specification

Thermal Module

Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays
Resolution	640 × 512 (the resolution of output image is 1920 × 1080)
Pixel Interval	17 μm
Response Waveband	8 μm to 14 μm
NETD	Less than 35 mK (@25 °C,F#=1.0)
Focal Length	36 to 190 mm
Focus Mode	Semi-auto & Manual
IFOV	0.47 to 0.09 mrad
Aperture	F0.8 to F1.2
Field of View	17.19° × 13.79° (H × V) to 3.46° × 2.77° (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	32.13° × 18.4° (H × V) to 0.53° × 0.3° (H × V)
Focal Length	10-780 mm, 78x
Aperture (Range)	F1.8 to F6.0
Focus Mode	Semi-auto/Manual
Shutter Speed	1s to 1/30,000s
WDR	120 dB
Digital Zoom	×2, ×4, ×8, ×16
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 -45° to + 45° (auto flip)
Pan Speed	Configurable, From 0.01°/s to 40°/s, Preset Speed: 240°/s
Tilt Speed	Configurable, From 0.01°/s to 20°/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

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 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 50 fps (1920 × 1080, 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 50 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

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 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 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, 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 Supply	48 VDC ± 20%, two-core terminal block
Power Consumption	Basic: <190 W; Max: <270 W (Heater on)
Work Temperature/Humidity	From -40 °C to 65 °C (-40 °F to 149 °F); Humidity: 95% or Less
Wiper	Yes
Protection Level	IP66 Standard; TVS 6000V Lightning Protection, Surge Protection and Voltage Transient Protection
Dimension	649 mm × 444 mm × 668 mm (25.6 " × 17.5 " × 26.3 ")
Weight	Approx. 60 kg (132.3 lb)

▪ Range Table

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)
3990 m	1330 m	4471 m	2235 m	11176 m	5588 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 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)
17137 m	5588 m	4284 m	1397 m	2142 m	699 m

▪ Available Model

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▪Dimension