



HIKMICRO

HM-TD816A-360ZK4FD/G0/T2

Bi-spectrum Cooled Thermal Stable PTZ camera



HIKMICRO bi-spectrum cooled thermal stable PTZ realizes continuous monitoring day and night under extreme environment and can be widely used in long-range open area, coastal vessel observation, also used in airports, ports and other critical infrastructures for security protection.

• Features

- MCT Cooled Detector for long-range detection even under haze/thick fog environment
- 640 × 512 resolution 15 μm , NETD $\leq$ 25 mK (25 °C, F# = 1.0)
- Perimeter protection with extended distance based on intelligent algorithm: line crossing, intrusion, region entrance and exit
- Support both ship detection and ship VCA algorithm in thermal channel
- Support heating and de-icing for low-temperature environment
- Support external GPS module by RS485 to provide coordinates
- Added one fixed lens overlaid on optical PTZ channel for wide-angle monitoring
- Built-in TPM2.0 encryption module for cybersecurity
- 20000 hours sterling cryocooler life-span for long-term use
- NEMA-4X Standard, Anti-corrosion coating

▪ Specification

Thermal Module	
Image Sensor	MCT Cooled Focal Plane Array
Resolution	640 x 512
Pixel Pitch	15 μ m
NETD	≤ 25 mK (@25° C, F# = 4.0)
Focal Length	15 to 360 mm
Focus Mode	Motorized zoom, Motorized focus, Auto focus (10m to infinity, full range of temperature is clear)
Aperture	F4.0
Field of View	Wide: 36.1° × 29.1°(H × V); Tele: 1.5° × 1.2°(H × V)
Digital Zoom	×2, ×4, ×8
Spectral Range	3.7 μ m to 4.8 μ m
MRTD	≤ 250 mK(25°C)
Start-up Time	≤ 7 minutes and 30 seconds (under 25°C)
Optical Module	
Image Sensor	1/1.8" Progressive Scan CMOS
Resolution	2688 × 1520, 4 MP
Min. Illumination	Fixed Lens: Color: 0.0005 Lux @ (F1.0, AGC ON) PTZ Lens: Color: 0.002 Lux @ (F3.05, AGC ON), B/W: 0.0002 Lux @ (F3.05, AGC ON)
Field of View	Fixed Lens: 89.46°(H) 47.92°(V) PTZ Lens: 29.89°(H) 17.3°(V)-0.42°(H)0.23°(V)
Focal Length	Fixed Lens: 4mm PTZ Lens: 10-1100mm
Aperture (Range)	Fixed Lens: F1.0 PTZ Lens: F3.0-F11.5
Digital Zoom	×2, ×4, ×8, ×16
Shutter Speed	1s to 1/30,000 s
WDR	120 dB
Optical Defog	PTZ lens support
Focus Mode	PTZ lens: semi-auto/manual
Image Effect	
Image Stabilization	Optical channel: Optical Image Stabilization (OIS) Thermal channel: EIS
PTZ	
Movement Range	Pan: 360° Continuous Rotate; Tilt: From -45° to + 45°
Pan Speed	Configurable, From 0.03°/s to 40°/s
Tilt Speed	Configurable, From 0.02°/s to 15°/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
Acceleration	120°/s ²
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 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 25 fps (704 × 576, 640 × 512, 384 × 288)
Video Compression	Main stream: H.265/ H.264 Sub-stream: H.265/H.264/MJPEG
Audio Compression	G722.1/G.711ulaw/G.711alaw/MP2L2/G.726/AAC/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 1 TB) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR)
API	ISAPI, ISUP, OTAP, Modbus TCP, HIKVISION SDK, Open Network Video Interface (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 Password), MAC address binding, HTTPS encryption, IEEE 802.1x(EAP-MD5, EAP-TLS), access control, IP address filtering, TLS1.3
Client	iVMS-4200, Hik-Connect, Hik-Central
Web Browser	Live view (plug-in allowed) : Internet Explorer 11 Live view (plug-in free) :Chrome 91+, Firefox 88+, Safari 13+
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 to 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
Reset Key	1 reset button built in the motherboard
General	
Menu 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 $\pm$ 20%, two-core terminal block
Power Consumption	Basic: < 190W; Max: < 270W (Heater on)
Working Temperature/Humidity	From -40°C to 60°C; Humidity: $\leq$ 95% (no condensation)
Wiper	Manual & Scheduled & Smart Wiper
Protection Level	IP67 Standard; TVS 6000V Lightning Protection, Surge Protection and Voltage Transient Protection
Dimensions	674 mm $\times$ 543 mm $\times$ 665 mm (26.5 " $\times$ 21.4 " $\times$ 26.2 ")
Weight	Approx. 60kg (132.3 lb)
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;
Environment	CE-RoHS: 2011/65/EU
Protection	IP67: IEC 60529-2013
Anti-Corrosion Protection	NEMA 4X (NEMA 250-2018) C5-ISO 12944-6:1998 C5 Medium & ISO 7253:1996 & ISO 6270-2:2017
Laser	
Laser Ranger Finder Wavelength	1535nm (eye safe)
Effective Distance	50m~10km
Accuracy	$\pm$ 3m

▪ DORI

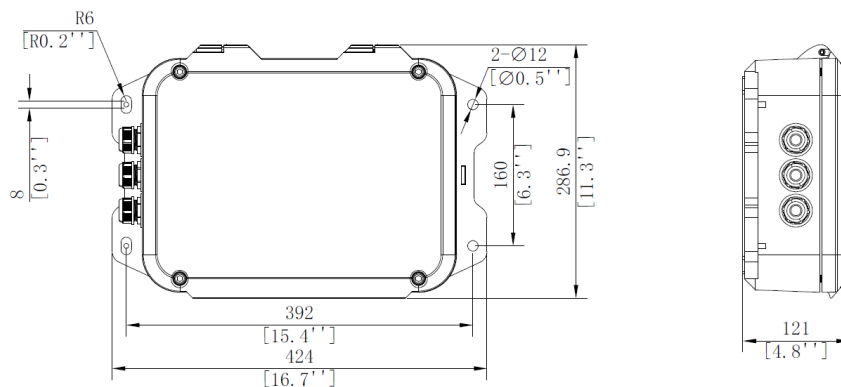
*Effective distance values shown are nominal values and should be used as estimates only. Exact value calculations depend on a wide variety of conditions. These values are calculated according to Stanag 4347 standards.

Effective Distance				
Target type	Human (1.8m*0.5m)	Vehicle(2.3*2.3m)	Ship(10*5m)	Ship(20*5m)
Detection Range	10.4km	16km	22.2km	24km
Recognition Range	2.8km	6.2km	12.8km	18.6km
Identification Range	1.9km	4.3km	9.2km	15.4km

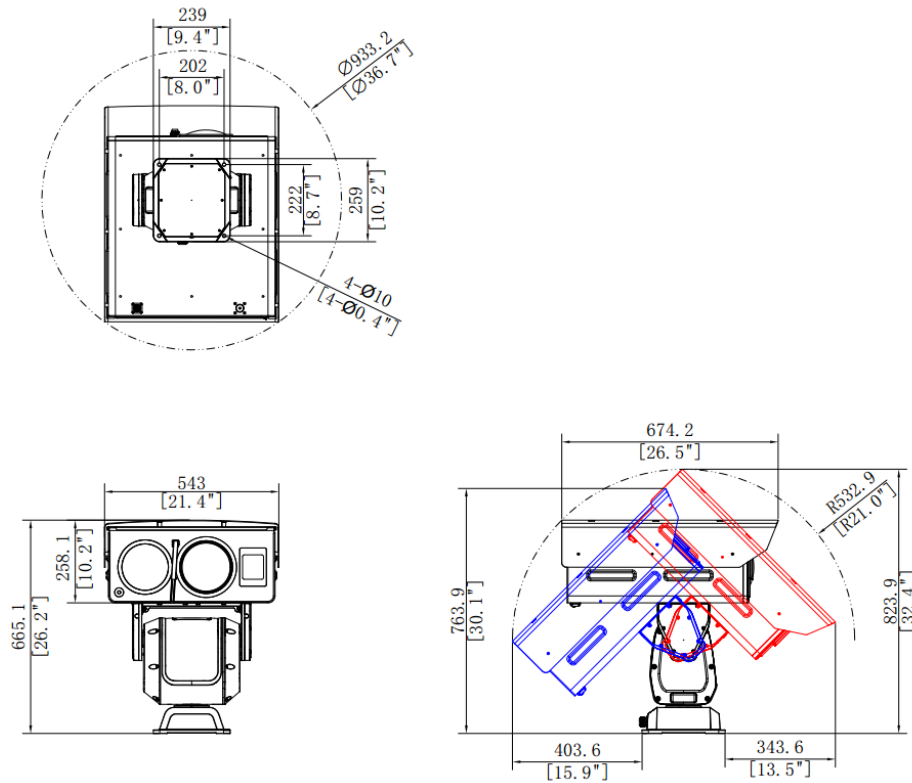
▪ Available Model

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▪ Dimension



Unit:mm [Inch]



Unit:mm[Inch]

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