

KM-FD4566APT-MS

Thermal Network Multi-spectral Pan & Tilt Camera

Design and specifications are subject to change without notice. Pictures in the document are for reference only, and the actual product shall prevail.



- Vanadium oxide uncooled focal plane detector.
- 1/1.8" 4 Megapixel progressive scan CMOS.
- Visible lens offers 56x optical zoom.
- Offers various AI functions such as heat detection, smoke detection, tripwire, intrusion, boat detection, human/vehicle classification.
- Optical Image Stabilization.
- Optical defog.
- Up to 300 presets, 5 auto scan, 8 tour, 5 pattern.
- 7/2 alarm in/out.
- Micro SD memory, IP66.
- Laser illumination distance \geq 800 m

Technical Specification

General

Appearance	Thermal Network Multi-spectral Pan & Tilt Camera
Type	Security

Thermal

Detector Type	Vanadium oxide uncooled focal plane detector			
Effective Pixels	400 (H) \times 300 (V)			
Pixel Pitch	17 μ m			
Spectral Range	8 μ m–14 μ m			
Sensitivity (NETD)	\leq 35 mK			
Focal Length	50 mm			
Field of View	50 mm	H: 7.8°; V: 5.8°		
Focus Control	Auto; Manual			
Aperture	50 mm	F1.0		
DRI Distance Human (1.8 m \times 0.5 m) Vehicle (4 m \times 1.4 m)	Focal Length	Detection Distance	Recognition Distance	Identification Distance
	50 mm	Vehicle: 3,922 m (12,867.45 ft) Human: 1,471 m (4,826.12 ft)	Vehicle: 980 m (3,215.22 ft) Human: 378 m (1,240.16 ft)	Vehicle: 490 m (1,607.61 ft) Human: 189 m (620.08 ft)

Digital Detail Enhancement (DDE)	Yes
Image Stabilization	Electronic Image Stabilization (EIS)
Digital Zoom	19 levels
AGC	Auto; Manual
Noise Reduction	2D NR; 3D NR
Image Flip	180°
Color Palettes	18 (white hot; black hot; fusion; rainbow; globow; ironbow1; ironbow2; sepia; color1; color2; icefire; rain; red hot; green hot; spring; summer; autumn; winter)

Visible

Image Sensor	1/1.8" CMOS
Max. Resolution	2688 (H) \times 1520 (V)
Pixel	4 MP
Min. Illumination	Color: 0.005 lux Black & white: 0.0005 lux 0 lux (IR on)
AGC	Auto; Manual
Noise Reduction	2D NR; 3D NR
S/N Ratio	$>$ 55 dB
White Balance	Auto; manual; indoor; outdoor; tracking; sodium lamp; street lamp; natural
Defog	Optical defog
Image Stabilization	Optical Image Stabilization
Electronic Shutter Speed	1 s–1/30,000 s (auto/manual)
BLC	Yes

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WDR	Yes
HLC	Yes
Digital Zoom	Yes
Day/Night	Auto (ICR); Color; B/W
Image Flip	180°
Exposure Compensation	Yes
Focus Control	Auto; semi-auto; manual
Focal Length	6 mm–336 mm
Zoom Speed	<3.5 s
Field of View	H: 64.4°–1.28° V: 38.37°–0.72°
Close Focus Distance	0.1 m–5 m (0.33 ft–16.4 ft)
Optical Zoom	56x
Aperture	F1.5–F5.3
IR Illumination Distance	150 m (492.13 ft)
IR Illuminator On/Off Control	Auto; Manual

Audio and Video

Video Compression	H.265; H.264H; H.264
Resolution	Thermal: Main stream: 1280 × 1024; 1280 × 960; 1280 × 720; 400 × 300; 1280 × 960 (default) Sub stream: 640 × 512; 640 × 480; 400 × 300; 400 × 300 (default) Visible: Main stream: 2688 × 1520; 1920 × 1080; 1280 × 720; 704 × 576; 2688 × 1520 (default) Sub stream: 704 × 576; 352 × 288; 352 × 288 (default)
Video Frame Rate	Thermal (50 Hz): Main stream: 1 fps–25 fps, 25 fps by default Sub stream: 1 fps–25 fps, 15 fps by default Visible (50 Hz): Main stream: 1 fps–25 fps, 25 fps by default Sub stream: 1 fps–25 fps, 15 fps by default Thermal (60 Hz): Main stream: 1 fps–30 fps, 30 fps by default Sub stream: 1 fps–30 fps, 15 fps by default Visible (60 Hz): Main stream: 1 fps–30 fps, 30 fps by default Sub stream: 1 fps–30 fps, 15 fps by default
Audio Encoding	G.711a; G.711mu; PCM
Image Encoding Format	JPEG

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: –45° to +90°
Manual Control Speed	Pan: 0.1°/s–140°/s Tilt: 0.1°/s–50°/s
Preset Speed	Pan: 0.1°/s–140°/s Tilt: 0.1°/s–50°/s
Preset	300
Tour	8 (up to 32 presets per tour)
Pattern	5
Scan	5
Power-off Memory	Yes
Privacy Masking	4 blocks
Idle Motion	Preset; auto pattern; auto tour; pan; progressive scan
Timing Task	Preset; auto pattern; auto tour; pan; progressive scan
Position Display	ON/OFF
Preset Video Freeze	Yes
Telephoto Speed Limit	Yes
Positioning Accuracy	± 0.1°
Wiper	Manual/Auto. Supports setting wiper running times, frequency, and period
3D Positioning	Yes

Laser Illumination (Optional)

Laser Illumination Consumption	Laser 800 m 4.2 ± 0.4 W
Laser Illumination Wavelength	Laser 800 m 850 ± 10 nm
Laser Illumination Distance	≥800 m (2,624.67 ft); ≥500 m (1,640.42 ft)
Angle of Laser Illuminator	2° to 70° adjustable
Laser Zoom Speed	<5 s
Brightness Setting for Laser Illumination	Auto; Manual

Function

Two-way Audio	Yes
Network Protocol	HTTP; HTTPS; TCP; ARP; RTSP; RTP; UDP; RTCP; SMTP; FTP; DHCP; DNS; DDNS; PPPoE; IPv4/v6; SNMP; QoS; UPnP; NTP; Multicast; SFTP; 802.1x
Region of Interest (RoI)	Yes (customizable)

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Storage	FTP; Micro SD card (256 G, hot swapping)
Interoperability	ONVIF; CGI; DaHuaSDK
Browser	IE: IE8 and later (includes the browsers with IE kernel, such as 360 Explorer, Sougou Explorer) Chrome: 42 and earlier Firefox: 42 and earlier
User/Host	Up to 12 (total bandwidth: 64 MB)
Security	Authorized username and password; attached MAC address; encrypted HTTPS; IEEE 802.1x; controlled network access
User Management	Up to 20 users; supports multi-level user permissions (2 levels): management group and user group
Malfunction Detection	Network disconnection detection; IP conflict detection; memory card state detection; memory space detection
PIP	Yes

Intelligence

Heat Detection	Yes. Marks the detected anomaly.
Cold/Hot Spot Trace	Yes
Perimeter Protection	Yes. Supports tripwire and intrusion.
Target Distinction	Human/Vehicle Classification
Target Filtering	Yes
Target Tracking	Yes
Smoke Detection	Yes
Boat Detection	Yes

Port

Analog Output	1 × CVBS output; BNC port
Network Port	1 × RJ-45 (10/100 Base-T)
Alarm Input	7
Alarm Output	2
Alarm Event	No SD card; low SD card space; SD card error; network disconnection; IP conflict; motion detection; video tampering; intrusion; tripwire; audio detection; defocus on thermal channel
Audio Input	1
Audio Output	1
RS-485	1

Power

Power Supply	Wide input voltage 24–57 VDC
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Power Consumption	Laser 800 m	Basic: 39 W (illuminator off, heater off) Max: 66 W (illuminator on, heater off); 89 W (illuminator on, heater on)
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Environment

Operating Temperature	−40 °C to +70 °C (−40 °F to +158 °F)
Operating Humidity	≤95%
Storage Temperature	−40 °C to +70 °C (−40 °F to +158 °F)

Physical Characteristics

Protection	IP66
Product Dimensions	520 mm × 266 mm × 427 mm (20.47" × 10.47" × 16.81") (L×W×H)
Packaging Dimensions	722 mm × 675 mm × 443 mm (28.43" × 26.57" × 17.44") (L×W×H)
Net Weight	≤22 kg (48.50 lb)
Gross Weight	≤25 kg (55.12 lb)
Installation	Desk mount
Power Adapter	Included
Lens	Included
PTZ Outlet	Side

Dimensions (mm [inch])

