KX-H0408TPN

Thermal Network Hybrid Speed Dome Camera

· Vanadium oxide uncooled focal plane detector.
· 4Megapixel progressive scan CMOS.
· Offers various AI functions such as intrusion, target filtering, heat detection, smoking detection, and calling detection.
· Temperature measurement range of −20 °C to +550 °C (-4 °F to +1022 °F).
· Built-in white light and speaker that produce light and sound alarms to deter intruders.
· Built-in IR LED, and the max. illumination distance is 35 m.
· Wide monitoring range: Pan: 0° to 360° endless tilt: −15° to +90°.
· Dual image fusion (visible and thermal images).
· 12 VDC ± 20%/PoE+ power supply.
· IP66 rated.

Thermal	
Detector Type	Vanadium oxide uncooled focal plane detector
Effective Pixels	256 (H) × 192 (V)
Pixel Pitch	12 µm
Spectral Range	8 µm–14 µm
Sensitivity (NETD)	≤40 mK@f/1.0
Focal Length	3.5 mm; 7 mm; 10 mm
Field of View	3.5 mm: H: 50.6°; V: 37.8° 7 mm: H: 24°; V: 18° 10 mm: H: 17.3° V: 13.1°
Thermal Focus Control	Fixed-focal
Close Focus Distance	3.5 mm: 0.5 m (1.64 ft) 7 mm: 1 m (3.28 ft) 10 mm: 1 m (3.28 ft)
Detection Distance①	3.5 mm: Vehicle: 389 m (1,276.25 ft); Human: 146 m (479.00 ft) 7 mm: Vehicle: 778 m (2,552.49 ft); Human: 292 m (958.01 ft) 10 mm: Vehicle: 1,111 m (3,645.01 ft); Human: 416 m (1,364.83 ft)
Recognition Distance②	3.5 mm: Vehicle: 97 m (318.24 ft); Human: 38 m (124.67 ft) 7 mm: Vehicle: 194 m (636.48 ft); Human: 75 m (246.06 ft) 10 mm: Vehicle: 277 m (908.79 ft); Human: 107 m (351.05 ft)
Identification Distance③	3.5 mm: Vehicle: 49 m (160.76 ft); Human: 19 m (62.34 ft) 7 mm: Vehicle: 97 m (318.24 ft); Human: 38 m (124.67 ft) 10 mm: Vehicle: 138 m (452.76 ft); Human: 53 m (173.88 ft)

Note:
①**Detection Distance: Detects objects, but cannot recognize their characteristics (objects must cover more than 3.6 pixels of the image).**
②**Recognition Distance: Classifies objects into general categories, such as human, vehicle (the object must cover more than 14 pixels of the image).**
③**Identification Distance: Classifies objects into specific categories based on their characteristics, such as engineering truck, car (the object must cover more than 28 pixels of the image).**

Digital Detail Enhancement (DDE)	Yes
Thermal Image Stabilization	Electronic Image Stabilization (EIS)
Digital Zoom	16 levels
Thermal AGC	Auto/Manual
Thermal Noise Reduction	2D NR/3D NR
Image Flip	180°
Color Palettes	18 (white hot/black hot/fusion/rainbow/golden autumn/midday/iron red/amber/jade/sunset/icefire/painting/pomegranate/emerald /spring/summer/autumn/winter)
Temperature Measurement Range	High temperature mode: 0 °C to +550 °C (+32 °F to +1022 °F) Low temperature mode: −20 °C to +150 °C (−4 °F to +302 °F) Auto mode: −20 °C to +550 °C (−4 °F to +1022 °F)
Temperature Measurement Accuracy	Max. (±2 °C, ±2%); (Temperature: −20 °C to +60 °C)
Temperature Measurement Mode	Spot: 12 Line: 12 Area: 12 Supports 12 rules simultaneously

Visible	
Image Sensor	1/2.7" CMOS
Max. Resolution	2336 (H) × 1752 (V)
Pixel	4 MP
Horizontal Definition	≥1600 TVL
Min. Illumination	Color: 0.05 lux B/W: 0.005 lux 0 lux (IR on)
Visible AGC	Auto/Manual
Visible Noise Reduction	2D NR/3D NR
S/N Ratio	≥55 dB
White Balance	Auto; indoor; outdoor; tracking; manual; natural; street lamp

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Defog	Electronic defog
Electronic Shutter Speed	1 s–1/30,000 s (auto/manual)
BLC	Yes
WDR	DWDR
HLC	Yes
Day/Night	Auto (ICR); Color; B/W
Iris Control	Fixed
Image Flip	180°
Exposure Compensation	Yes
Visible Focus Control	Fixed-focal
Focal Length	4 mm; 8 mm; 12 mm
Field of View	4 mm: H: 71.2°; V: 52° 8 mm: H: 33.4°; V: 25° 12 mm: H: 22° V: 16.6°
Close Focus Distance	4 mm: 1 m (3.28 ft) 8 mm: 2.5 m (8.20 ft) 12 mm: 2.5 m (8.20 ft)
Aperture	4 mm: F1.6 8 mm: F2.0 12 mm: F2.0
Illuminator On/Off Control	Auto/Manual
Illumination Distance	4 mm: ≥35 m (114.83 ft) 8 mm: ≥50 m (164.04 ft) 12 mm: ≥50 m (164.04 ft)

Audio and Video

Video Compression	H.265; H.264; H.264H; H.264B; MJPEG
Resolution	Thermal: Main stream: 1.3M (1280 × 960); XVGA (1024 × 768); VGA (640 ×480/256 × 192); 1280 × 960 (default) Sub stream: VGA (640 ×480/256 × 192); 256 × 192 (default) Visible: Main stream: 2336 × 1752; 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576); 2336 × 1752 (default) Sub stream: 720p (1280 × 720); D1 (704 × 576); CIF (352 × 288); 352 × 288 (default)
Video Frame Rate	Thermal: Main stream: 1 fps–25 fps, 25 fps by default Sub stream: 1 fps–25 fps, 15 fps by default Visible: Main stream: 1 fps–25 fps, 25 fps by default Sub stream: 1 fps–25 fps, 15 fps by default
Audio Compression	G.711a; G.711mu; PCM
Image Encoding Format	JPEG

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: −15° to +90°
Manual Control Speed	Pan: 0.1°/s −200°/s Tilt: 0.1°/s −120°/s
Preset Speed	Pan: 240°/s Tilt: 200°/s
Preset	300
Tour	8 (up to 32 presets per tour)
Pattern	5
Scan	5
Power-off Memory	Yes
Privacy Masking	4 areas in the same view
Idle Motion	Activate Preset/Scan/Tour/Pattern/Pan

Function

Two-way Audio	Yes
Sound and Light Alarm	Yes
Network Protocol	HTTPS; HTTP; TCP; ARP; RTSP; RTP; UDP; RTCP; SMTP; FTP; DHCP; DNS; DDNS; PPPOE; IPv4/v6; SNMP; QoS; UPnP; NTP
Region of Interest (RoI)	Yes
Storage	Micro SD card
Micro SD Card (Max.)	256 GB
Interoperability	ONVIF; CGI; SDK
Browser	IE: IE 9 and later (Edge is not supported) Chrome: 42 and earlier Firefox: 42 and earlier
User/Host	Up to 10 (total bandwidth: 100 MB)
Security	Authorized username and password; attached MAC address; encrypted HTTPS; IEEE 802.1x; controlled network access
User Management	Up to 10 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
Fusion Mode	Warm color; cold color; fuse with iron oxide red
PIP	Yes (Intelligence automatically turns off when PIP is on)

Intelligence

Heat Detection	Yes
Cold/Hot Spot Trace	Yes
IVS (Perimeter Protection)	Yes. Supports tripwire and intrusion.
Target Distinction	Human/Vehicle Classification
Smoking Detection	Yes
Call Detection	Yes

Port

Analog Output	1-ch CVBS output, BNC port
Network Port	1 × RJ-45 (10/100 Base-T)

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Alarm Input	2	
Alarm Output	1	
Audio Input	1	
Audio Output	1	
RS-485	1	
Power		
Power Supply	12 VDC, 2 A ± 20%, PoE+ (802.3at)	
Power Consumption	Basic: <12 W (12 VDC) Max: <24 W (12 VDC, adapter excluded)	
ePoE	Yes	
Environment		
Operating Temperature	−30 °C to +60 °C (−22 °F to +140 °F)	
Operating Humidity	≤95%	
Storage Temperature	−40 °C to +70 °C (−40 °F to +158 °F)	
Physical Characteristics		
Protection	IP66	
Reliability	Surge protection: 6 kV Air discharge of 15 kV Contact discharge of 8 kV	
Structure		
Product Dimensions	295 mm × Φ160 mm (11.61" × Φ6.30")	
Packaging Dimensions	267 mm × 267 mm × 437 mm (10.51" × 10.51" × 17.20") (W × L × H)	
Net Weight	≤3.2 kg (7.05 lb)	
Gross Weight	≤4.7 kg (10.36 lb)	
Temperature Measurement Distance		
Focal Length	3.5 mm	7 mm	10 mm
Temperature Measurement Distance (Min.)	1 m (3.28 ft), target size: 0.1 m × 0.1 m (0.33 ft × 0.33 ft)	3 m (9.84 ft), target size: 0.1 m × 0.1 m (0.33 ft × 0.33 ft)	3 m (9.84 ft), target size: 0.1 m × 0.1 m (0.33 ft × 0.33 ft)

Temperature Measurement Distance (Max.)	5 m (16.40 ft), target size: 0.1 m × 0.1 m (0.33 ft × 0.33 ft)	8 m (26.25 ft), target size: 0.1 m × 0.1 m (0.33 ft × 0.33 ft)	12 m (39.37 ft), target size: 0.1 m × 0.1 m (0.33 ft × 0.33 ft)

Note:
The table displays the measured distances obtained from using the target size 0.1 m x 0.1 m for testing in an environment where the temperature is 23 °C and the relative humidity is below 60%.
The table is for reference only. The distances within it are subject to actual conditions including atmospheric conditions, target size, the installation site, and more.

Dimensions (mm[inch])