SN-TPC4207KT-F

Thermal Imaging Network Bullet Camera



Key Features

- 384 × 288 VOx uncooled thermal sensor, 17 µm pixel pitch, NETD ≤ 40 mK
- Optional fixed thermal lenses: 9 mm / 15 mm / 25 mm / 35 mm / 50 mm
- Supports human/vehicle detection, smoking, and fire point detection
- Intelligent analytics: Intrusion, smart motion detection, single-line crossing, double-line crossing, loitering, wrong-way detection, enter area, leave area, and people counting
- Temperature monitoring and exception alarms
- Supports temperature measurement rules: spot, line, and area
- Temperature range: –20 ℃ to 150 ℃ or 0℃ to 550℃; accuracy ±2 ℃ / ±2 %
- Built-in microphone and speaker, two-way audio
- Supports 12 VDC / 24 VAC / PoE power supply
- NDAA compliant, IP66, IK10-rated housing, optional NEMA 4X rating

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Specifications

Camera	
Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays
Max Resolution	Sensor is 384×288. Image can be scaled up to 1280×720
Pixel Pitch	17 μm
Spectral Range	8 to 14 μm
NETD	≤ 40mK
Lens	
Lens Type	Fixed lens
Focal Length	9 mm, 15 mm, 25 mm, 35 mm, 50 mm optional
Max. Aperture	F1.0
Field of View (FOV)	9 mm, H: 37°, V: 28° 15 mm, H: 28°, V: 21° 25 mm, H: 14°, V: 11° 35 mm, H: 10°, V: 8° 50 mm, H: 7.4°, V: 5.6°
Focus Control	Focus-free
Intelligent Analytics	
AI Multi-Target	Supports human/vehicle detection.
Intelligent Analysis	Intrusion, smart motion detection, single-line crossing, double-line crossing, loitering, wrong-way detection, enter area, and leave area. - Supports accurate target classification (human/vehicle)
People Counting	Supported
Smoking Detection	Supported
Fire Spot Detection	Supported
Video & Audio	
Main Stream	1280×720, D1, 384×288
Sub Stream	D1, 384×288, CIF
Frame Rate	Up to 25fps
Bit Rate Control	CBR/VBR
Bit Rate	Main stream: 100 Kbps to 8 Mbps, Sub stream: 100 Kbps to 6 Mbps
Smart Encoding	Supported
Audio Compression	G.711 A-law, G.711 μ-law, RAW_PCM
Audio Bit Rate	64 Kbps (G.711), 128 Kbps (RAW_PCM)

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Image	
Image Adjustment	Brightness, Contrast, Sharpness
Scene Mode	Mirror
Pseudo-color Setting	Up to 17 colors (White-hot / Black-hot / Rainbow / Iron red / HSV /Bone / Cool / Copper / Fire-hot / Pink / Spring / Summer / Autumn / Winter / Jet / Flame / Rose -Bengal)
FFC Control	Auto / Manual
Noise Reduction	2D/3D DNR
OSD	Up to 8 OSD
Privacy Masking	4 areas
Thermal Function	
Temperature Range	-20℃ to 150℃ (-4℉ to 302℉) or 0℃ to 550℃ (32℉ to 1022℉)
Accuracy	±2℃ / ±2%
Temperature Detection	Supports 3 rule types (spot, line, area); up to 20 rules in total, including 1 full-screen and 19 spot/line/area rules
Temperature Alarm	Temperature difference alarm, Threshold alarm, Temperature rise alarm
Temperature Display	Display in the lower left corner; follow the cursor display of the highest temperature, lowest temperature or average temperature
Response Time	≤ 30ms
Event	
Alarm Triggers	IVS, Motion detection, Alarm input, Network alarm, Disk alarm, Abnormal sound detection
Event Actions	Alarm record, Alarm output, FTP upload, SMTP upload, Audible alarm output
Network	
Protocols	IPv4/IPv6, HTTP/HTTPS, DNS, DDNS, DHCP, PPPoE, RTSP/ RTCP/RTP, TCP/UDP, NTP, ARP, UPnP, FTP, SMTP, QoS, ICMP, IGMP, SMTP, 802.1x, SNMP, Multicast
Application Programming Interface	ONVIF (Profile S/T/G/M), SDK, CGI
Max Concurrent Streams	10 channels
User/Host Level	32+ users, 3 levels: Administrator, Operator, Media user
Web Viewer	<IE11, Chrome, Firefox, Microsoft Edge
Security	
OS / Firmware Protect	Encrypted firmware, Signed firmware
User Authentication	Digest authentication, Prevent brute-force attack
Network Authentication	IEEE 802.1X (EAP-TLS)
Secure Communication	HTTPS, WSS (WebSocket Secure), SRTP
Access Control	IP-based access control, Auto logout
Data Protect	Encryption credentials
Audit	Access / System / Event Log management

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Supply Chain Security	SBOM
Interface	
Network Interface	1 × Ethernet (10/100 Base-T), RJ-45 connector
Built-in Microphone	Supported
Built-in Speaker	Supported
Audio Interface	1ch Audio In, 1ch Audio Out
Alarm Interface	2ch Alarm In, 2ch Alarm Out
Control Interface	1ch RS-485
CVBS Output	Supported
SD Card Slot	Built-in, up to 1 TB
Reset Button	Supported
General	
Language	English, Chinese, Traditional Chinese, Polish, Italian, Portuguese, Spanish, Russian, French, Czech, Hungarian, Japanese, Korean. Default: English
Power Supply	12 VDC / 24 VAC / PoE (802.3af)
Power Consumption	Max 4.5 W
Operating Temperature	-40℃ to 60℃ (-40℉ to 140℉)
Operating Humidity	≤95% RH (non-condensing)
Ingress Protection	IP66, IK10-rated housing, NEMA 4X (optional)
Certifications	CE-EMC - EN 55032, EN IEC 61000-6-4, EN IEC 61000-3-2, EN 61000-3-3, EN 55035, EN 50130-4 FCC 47 CFR Part 15 Subpart B
Material	Metal
Dimensions	φ120.5 × 315.9 ~ 352.6 mm (φ4.74” × 12.44” ~ 13.88”)
Net Weight	1.62 kg (3.57 lb) with 9mm lens

Thermal DRI Distance					
Thermal Lens	9 mm	15 mm	25 mm	35 mm	50 mm
Detection (Human: 1.8×0.5 m)	265 m (869.4 ft)	441 m (1,446.9 ft)	735 m (2,411.4 ft)	1,029 m (3,376.0 ft)	1,471 m (4,826.1 ft)
Detection (Vehicle: 4×1.5 m)	812 m (2,664.0 ft)	1,353 m (4,439.0 ft)	2,255 m (7,398.3 ft)	3,157 m (10,357.6 ft)	4,510 m (14,796.6 ft)
Recognition (Human: 1.8×0.5 m)	66 m (216.5 ft)	110 m (360.9 ft)	184 m (603.7 ft)	257 m (843.2 ft)	368 m (1,207.4 ft)
Recognition (Vehicle: 4×1.5 m)	203 m (666.0 ft)	338 m (1,108.9 ft)	564 m (1,850.4 ft)	789 m (2,588.6 ft)	1,127 m (3,697.5 ft)
Identification (Human: 1.8×0.5 m)	33 m (108.3 ft)	55 m (180.5 ft)	92 m (301.8 ft)	129 m (423.2 ft)	184 m (603.7 ft)
Identification (Vehicle: 4×1.5 m)	101 m (331.4 ft)	169 m (554.5 ft)	282 m (925.2 ft)	395 m (1,295.9 ft)	564 m (1,850.4 ft)

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Note:
Distances are calculated based on Johnson's Criteria.
Detection: Object must be covered by ≥1.5 pixels.
Recognition: Object must be covered by ≥6 pixels.
Identification: Object must be covered by ≥12 pixels.

Thermal Smart Detection

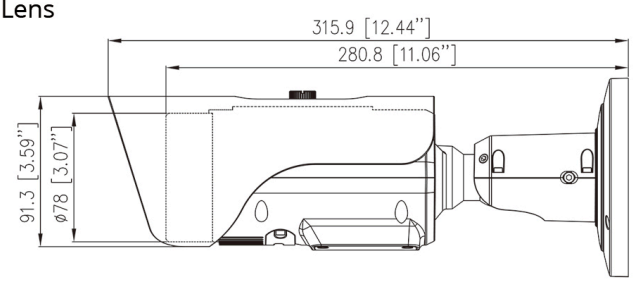
Lens	9 mm	15 mm	25 mm	35 mm	50 mm
VCA Detection (Human: 1.8×0.5 m)	50 m (164.0 ft)	86 m (281.2 ft)	243 m (797.2 ft)	350 m (1,148.3 ft)	500 m (1,640.4 ft)
VCA Detection (Front/Rear of Vehicle: 4×1.5 m)	100 m (328.1 ft)	180 m (590.6 ft)	300 m (984.3 ft)	400 m (1,312.3 ft)	630 m (2,066.9 ft)
Temperature Measurement (1 ×1 m)	106 m (347.8 ft)	176 m (577.4 ft)	294 m (964.6 ft)	412 m (1,351.7 ft)	588 m (1,929.1 ft)
Temperature Measurement (0.2×0.2 m)	21 m (68.9 ft)	35 m (114.8 ft)	59 m (193.6 ft)	82 m (269.0 ft)	118 m (387.1 ft)
Fire Detection (1×1 m)	265 m (869.4 ft)	441 m (1,446.9 ft)	735 m (2,411.2 ft)	1,029 m (3,376.0 ft)	1,471 m (4,826.1 ft)
Fire Detection (0.2×0.2 m)	53 m (173.9 ft)	88 m (288.7 ft)	147 m (482.3 ft)	206 m (675.9 ft)	294 m (964.6 ft)

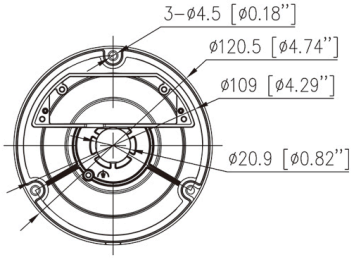
Note:
Values are for reference only. Actual detection range may vary with atmospheric conditions, target size, and installation environment.

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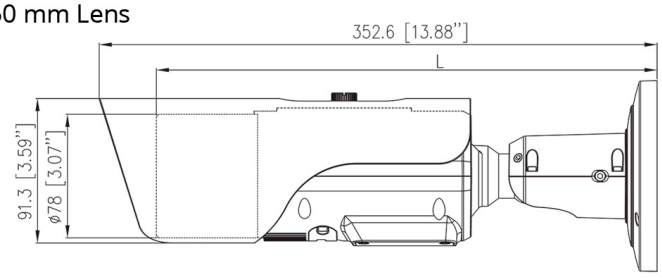
Dimensions (mm)

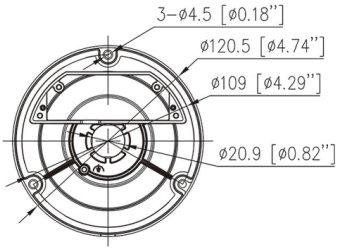
F9 / F15 mm Lens





F25 / F35 / F50 mm Lens





f50 L=316.5mm[12.46"]
f35 L=305.3mm[12.02"]
f25 L=296.8mm[11.69"]

Accessories

Optional:

		
SN-CBK645G Junction Box	SN-CBK101A Pole Mount	SN-CBK102A Corner Mount

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