

SN-TPC4203KT-F

Thermal Imaging Network Bullet Camera



Key Features

- 400 × 300 resolution, 17 μm, VOx UFPA, NETD ≤40 mK
- 8/15/25/35/50mm fixed thermal lens optional
- Support human/vehicle detection, and fire point detection.
- Intelligent Analytics: intrusion, single line crossing, double line crossing, loitering, wrong-way detection, enter area, leave area, and people counting.
- Support temperature monitoring and exception alarm
- Support 3 temperature measurement rule types (spot, line, area)
- Temperature measurement range: -20°C to 150°C (-4°F to 302°F)
- Accuracy: ±2°C / ±2%
- Support 12VDC/24VAC/PoE power supply
- NDAA Compliance, IP66

Specifications

Camera	
Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays
Max Resolution	Sensor is 400×300. Image can be scaled up to 704×576
Pixel Pitch	17 μm
Spectral Range	8 to 14 μm
NETD	≤ 40mK
Lens	
Lens Type	Fixed lens
Focal Length	8 mm, 15 mm, 25 mm, 35 mm, 50 mm optional
Max. Aperture	F1.0
Field of View (FOV)	8 mm, H: 46°, V: 35.3° 15 mm, H: 25.5°, V: 19.2° 25 mm, H: 15.4°, V: 11.6° 35 mm, H: 11°, V: 9° 50 mm, H: 7.7°, V: 5.8°
Focus Control	Manual focus
Intelligent Analytics	
AI Multi-Target	Supports human/vehicle detection.
Intelligent Analysis	Intrusion, single line crossing, double line crossing, loitering, wrong-way detection, enter area, and leave area. - Supports accurate target classification (human/vehicle)
People Counting	Supported
Fire Spot Detection	Supported
Video & Audio	
Main Stream	704×576 @25/30fps
Sub Stream	CIF @25/30fps
Bit Rate Control	CBR/VBR
Bit Rate	Main stream: 100 Kbps to 6 Mbps, Sub stream: 10 Kbps to 1.5 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)
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	Up to 4 areas

Thermal Function

Temperature Range	-20°C to 150°C (-4°F to 302°F)
Accuracy	±2°C / ±2%
Temperature Detection	3 temperature measurement rule types, 20 rules in total, 1 full screen, 19 others (spot, areas, line).
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/ RTP/RTCP, 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
Secure Storage	SDcard partition encrypt(AES-256), Secure element
Supply Chain Security	SBOM

Interface	
Network Interface	1 × Ethernet (10/100 Base-T), RJ-45 connector
Audio Interface	1ch Audio In, 1ch Audio Out
Alarm Interface	2ch Alarm In, 2ch Alarm Out
RS-485	1ch
SD Card Slot	Built-in, up to 512 GB
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 5W
Operating Temperature	-40°C to 60°C (-40°F to 140°F)
Operating Humidity	0 to 90% RH (non-condensing)
Ingress Protection	IP66
Certifications	CE-EMC - EN 55032, EN IEC 61000-6-3, EN IEC 61000-3-2, EN 61000-3-3, EN 55035, EN 50130-4 FCC 47 CFR Part 15 Subpart B
Material	Metal
Dimensions	φ110 × 388 mm (φ4.33 × 15.28 inch)
Net Weight	1.8 kg (3.97 lb) with 15mm lens

Thermal DRI Distance					
Thermal Lens	8 mm	15 mm	25 mm	35 mm	50 mm
Detection (Human: 1.8×0.5 m)	235 m (771.0 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)	722 m (2,368.8 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)	59 m (193.6 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)	180 m (590.6 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)	29 m (95.1 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)	90 m (295.3 ft)	169 m (554.5 ft)	282 m (925.2 ft)	395 m (1,295.9 ft)	564 m (1,850.4 ft)

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.

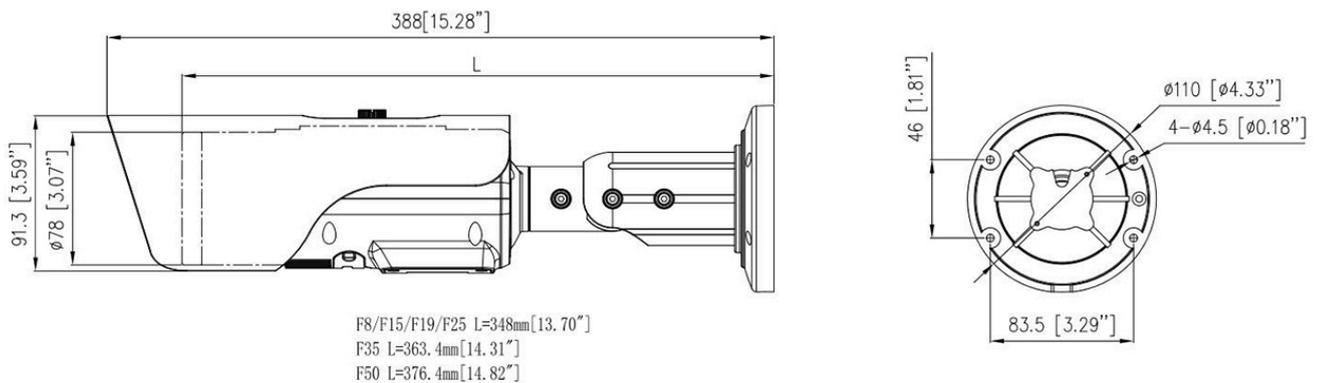
Thermal Smart Detection

Lens	8 mm	15 mm	25 mm	35 mm	50 mm
VCA Detection (Human: 1.8×0.5 m)	50 m (164.0 ft)	92 m (301.8 ft)	105 m (344.5 ft)	210 m (689.0 ft)	284 m (931.8 ft)
VCA Detection (Front/Rear of Vehicle: 4×1.5 m)	100 m (328.1 ft)	120 m (393.7 ft)	200 m (656.2 ft)	350 m (1,148.3 ft)	450 m (1,476.4 ft)
Temperature Measurement (1×1 m)	94 m (308.4 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)	19 m (62.3 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)	235 m (771.0 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)	47 m (154.2 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.

Dimensions (mm)



Accessories

Optional:



SN-CBK645G
Junction Box



SN-CBK101A
Pole Mount



SN-CBK102A
Corner Mount