

SN-TPC4233DJT-F

Thermal & Optical Bi-spectrum Bullet Network Camera



Key Features

- 400 × 300 resolution, 17 μm, VOx UFPA, NETD ≤40 mK
- Thermal : 8/15/25/35/50mm lens optional; Visible: 5 to 50mm motorized lens
- Detection Capabilities: Human/vehicle, smoking, smoke & flame, 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 Monitoring & Alarm: -20°C to 150°C (-4°F to 302°F), accuracy: ±2°C / ±2%
- Smart IR range up to 100m
- IP66

Specifications

Camera		
	Thermal	Visible
Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays	1/2.8" CMOS
Max Resolution	Sensor is 400×300. Image can be scaled up to 704×576	1920(H) × 1080(V)
Pixel Pitch	17 μm	N/A
Spectral Range	8 to 14 μm	N/A
NETD	≤ 40mK	N/A
Shutter Speed	N/A	1/5 to 1/20,000s
Min Illumination	N/A	Color: 0.1Lux @(F2.0, AGC ON), B/W: 0.01Lux @(F2.0, AGC ON), 0Lux with IR on
Day & Night	N/A	Auto (ICR)
Lens		
	Thermal	Visible
Lens Type	Fixed lens	Varifocal lens
Focal Length	8 mm, 15 mm, 25 mm, 35 mm, 50 mm optional	5 to 50 mm
Max. Aperture	F1.0	F2.0
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°	H: 50.85° to 7.67°, V: 27.78° to 4.36°
Focus Control	Manual focus	Motorized focus
Intelligent Analytics		
	Thermal	Visible
AI Multi-Target	Supports human/vehicle detection.	Human and 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)	Intrusion, single line crossing, double line crossing, loitering, wrong-way detection, enter area, and leave area. - Supports accurate target classification (human/vehicle)
Smoke and Flame Detection	N/A	Supported
People Counting	Supported	Supported
Smoking Detection		N/A
Fire Spot Detection	Supported	N/A

Video & Audio		
	Thermal	Visible
Main Stream	704×576 @25/30fps	1920×1080, 1280×720
Sub Stream	CIF @25/30fps	D1, VGA, 640×360, CIF, QVGA
Frame Rate		Up to 25/30fps
Bit Rate Control	CBR/VBR	CBR/VBR
Bit Rate	Main stream: 100 Kbps to 6 Mbps, Sub stream: 10 Kbps to 1.5 Mbps	Main Stream: 100 Kbps to 12 Mbps Sub Stream: 10 Kbps to 6 Mbps
Smart Encoding	Supported	Supported
Audio Compression	G.711 A-law, G.711 μ -law, RAW_PCM	G.711 A-law, G.711 μ -law, RAW_PCM
Audio Bit Rate	64 Kbps (G.711), 128 Kbps (RAW_PCM)	64 Kbps (G.711), 128 Kbps (RAW_PCM)

Image		
	Thermal	Visible
Image Adjustment	Brightness, Contrast, Sharpness	Brightness, Saturation, Contrast, Sharpness
Scene Mode	Mirror	Indoor, Outdoor, 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)	N/A
FFC Control	Auto / Manual	N/A
Exposure Mode	N/A	Auto / Manual
White Balance	N/A	Auto / Tungsten / Fluorescent / Daylight / Shadow / Manual
Day/Night Setting	N/A	Auto / Day / Night / Timer
Noise Reduction	2D/3D DNR	Auto, Day, Night, Timer
Image Enhancement	N/A	HLC, BLC, Defog, WDR
Wide Dynamic Range	N/A	True WDR 120dB
OSD	Up to 8 OSD	Up to 8 OSD
Privacy Masking	Up to 4 areas	Up to 4 areas

Thermal Function	
Temperature Range	-20°C to 150°C (-4°F to 302°F)
Accuracy	$\pm 2^\circ\text{C}$ / $\pm 2\%$
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	$\leq 30\text{ms}$

Image Fusion	Fusion view of thermal view and overlaid details of the optical channel
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
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 / PoE+ (802.3at)
Power Consumption	Without heating: Max 10W, Including heating: Max 24W
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	(244.8 to 274.8) × 180.5 × 126.8 mm (9.64 to 10.82 × 7.11 × 4.99 inch)
Net Weight	2.5 Kg (5.51 lb)

DORI Distance (EN62676-4 standard)

Detect	88 to 530 m (288.7 to 1,738.8 ft)
Observe	35.2 to 212 m (115.5 to 695.5 ft)
Recognize	17.6 to 106 m (57.7 to 347.8 ft)
Identify	8.8 to 53 m (28.9 to 173.9 ft)

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