SN-TPC6457DLT-F (II)

Thermal & Optical Bi-spectrum Bullet Network Camera

Key Features

- Bi-Spectrum: 640 × 512 thermal & 4MP visible sensor

- Sensor: 12 μm VOx UFPA, NETD ≤ 20 mK

- Lens optional: Thermal - 9/15/25/35/50mm fixed; Visible - 4/6/10-30mm lens

- Detection Capabilities: Human/vehicle, smoking, smoke & flame, fire point detection

- Intelligent Analytics: Intrusion, single/double line crossing, loitering, wrong-way, people counting, enter/leave area detection, smart motion detection

- Support 3 temperature measurement rule types (spot, line, area)

- Temperature Monitoring & Alarm: -20℃ to 150℃ (-4℉ to 302℉), accuracy: ±2℃ / ±2%

- Built-in speaker and strobe light; supports sound-light alarm

- Smart IR range up to 100m

- Support 12VDC/24VAC/PoE+ power supply

- IP66

Specifications

Camera

	Thermal	Visible
Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays	1/1.8" CMOS
Max Resolution	Sensor is 640×512, Image can be scaled up to 1920×1080	4MP, 2688(H) × 1520(V)
Pixel Pitch	12 μm	N/A
Spectral Range	8 to 14 μm	N/A
NETD	≤ 20mK	N/A
Shutter Speed	N/A	1/5 to 1/20,000s
Min Illumination	N/A	Color: 0.005 Lux @(F1.6, AGC ON), B/W: 0.001 Lux @(F1.6, AGC ON), 0 Lux with IR on
Day & Night	N/A	Auto (ICR)

Lens

	Thermal	Visible
Lens Type	Fixed lens	4 mm / 6mm: Fixed lens 10 to 30 mm: Varifocal lens
Focal Length	9 mm, 15 mm, 25 mm, 35 mm, 50 mm optional	4 mm / 6mm, 10 to 30mm optional
Max. Aperture	F1.0	F1.6
Field of View (FOV)	9 mm, H: 48°, V: 38° 15 mm, H: 29°, V: 23° 25 mm, H: 17°, V: 14° 35 mm, H: 12°, V: 10° 50 mm, H: 8°, V: 7°	4 mm, - H: 87°, V: 47° 6 mm, - H: H: 55°, V: 30° 10 to 30mm, - H: 43.4° to 15.5°, V: 23.8° to 8.8°
Focus Control	Focus-free	4 mm / 6mm: Fixed focus 10 to 30 mm: Motorized focus

Illuminator

Type	IR
IR wavelength	850 nm
Distance	- 4 mm: Up to 70 m (229.6 ft) - 6 mm: Up to 80 m (262.5 ft) - 10 to 30 mm: Up to 100 m (328.0 ft)
Control	Auto / Manual

Intelligent Analytics

	Thermal	Visible

	Thermal	Visible
AI Multi-Target	Supports human/vehicle detection.	Supports human/vehicle detection.
Intelligent Analysis	Intrusion, smart motion detection, single/double line crossing, loitering, wrong-way detection, and enter/leave area. - Supports accurate target classification (human/vehicle)	Intrusion, smart motion detection, single/double line crossing, loitering, wrong-way detection, and enter/leave area. - Supports accurate target classification (human/vehicle)
Smoke and Flame Detection	N/A	Supported
People Counting	Supported	Supported
Smoking Detection	Supported	N/A
Fire Spot Detection	Supported	N/A

Video & Audio

	Thermal	Visible
Main Stream	1920×1080, 1280×1024, 1280×720, 640×512	2688×1520, 2560×1440, 2304×1296, 1920×1080, 1280×720
Sub Stream	D1, VGA, 640×512, CIF	D1, VGA
Frame Rate	Up to 25fps	Up to 25/30fps
Bit Rate Control	CBR/VBR	CBR/VBR
Bit Rate	Main stream: 100 Kbps to 8 Mbps, Sub stream: 100 Kbps to 6 Mbps	Main Stream: 200 Kbps to 12 Mbps Sub Stream: 100 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	2D/3D DNR
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	4 areas	4 areas

Thermal Function

Temperature Range	-20℃ to 150℃ (-4℉ to 302℉)
Accuracy	±2℃ / ±2%
Temperature Detection	3 temperature measurement rule types, 20 rules in total, 1 full screen, 19 others (spot, areas, line).
Temperature Alarm	Supports threshold alarm, temperature difference alarm, range alarm, and 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
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 output, Alarm record, SMTP, FTP upload, Flashing light alarm, 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, Secure boot, 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
Built-in Microphone	Supported
Built-in Speaker	Supported
Audio Interface	1ch input, 1ch output

Alarm Interface	2ch input, 2ch output
Control Interface	1ch RS-485
CVBS Output	Supported (Thermal imaging or Visible switchable)
SD Card Slot	Built-in MicroSD slot, supports 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+ (802.3at)
Power Consumption	Max 25 W
Operating Temperature	-40℃ to 60℃ (-40℉ to 140℉)
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	(327.4 to 347.4) × 140.04 × 120.72 mm, (12.89 to 13.55) × 5.59 × 4.75 inch)
Net Weight	Approx. 2.0 Kg (4.41 lb) with 50 mm lens

DORI Distance (EN62676-4 standard)

Detect	4 mm: 67.6 m (221.8 ft) / 6 mm: 96.6 m (316.9 ft) / 10 to 30 mm: 150 to 400 m (492.1 to 1,312.3 ft)
Observe	4 mm: 27 m (88.6 ft) / 6 mm: 38.6 m (126.6 ft) / 10 to 30 mm: 60 to 160 m (196.9 ft to 524.9 ft)
Recognize	4 mm: 13.5 m (44.3 ft) / 6 mm: 19.3 m (63.3 ft) / 10 to 30 mm: 30 to 80 m (98.4 to 262.5 ft)
Identify	4 mm: 6.8 m (22.3 ft) / 6 mm: 9.7 m (118.4 ft) / 10 to 30 mm: 15 to 40 m (49.2 to 131.2 ft)

Thermal DRI Distance

Thermal Lens	9 mm	15 mm	25 mm	35 mm	50 mm
Detection (Human: 1.8×0.5 m)	375 m (1,230.3 ft)	625 m (2,050.5 ft)	1,042 m (3,418.6 ft)	1,458 m (4,783.5 ft)	2,083 m (6,834.0 ft)
Detection (Vehicle: 4×1.5 m)	1,150 m (3,773 ft)	1,917 m (6,289.4 ft)	3,194 m (10,479 ft)	4,472 m (14,672 ft)	6,389 m (20,961.3 ft)
Recognition (Human: 1.8×0.5 m)	94 m (308.4 ft)	156 m (511.8 ft)	260 m (853 ft)	365 m (1,197.5 ft)	521 m (1,709.3 ft)
Recognition (Vehicle: 4×1.5 m)	288 m (944.9 ft)	479 m (1,571.5 ft)	799 m (2,621.4 ft)	1,118 m (3,668 ft)	1,597 m (5,239.5 ft)
Identification (Human: 1.8×0.5 m)	47 m (154.2 ft)	78 m (255.9 ft)	130 m (426.5 ft)	182 m (597.1 ft)	260 m (853 ft)
Identification (Vehicle: 4×1.5 m)	144 m (472.4 ft)	240 m (787.4 ft)	399 m (1,309.1 ft)	559 m (1,834 ft)	799 m (2,621.4 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.
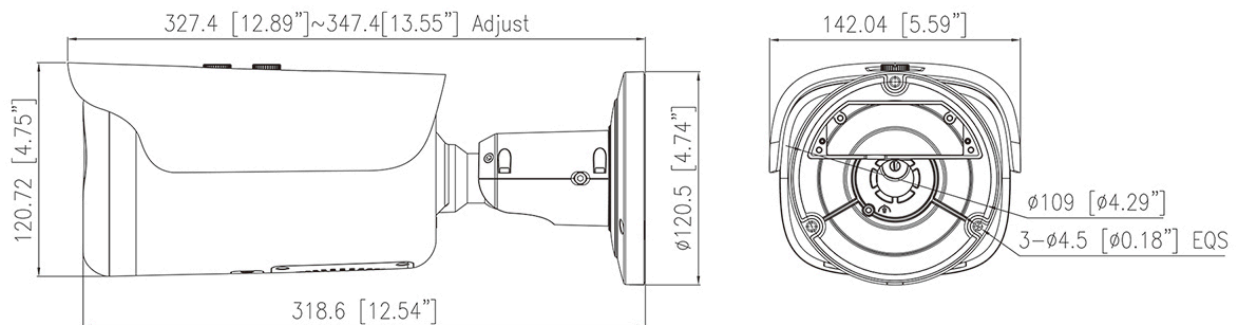*Identification: Object must be covered by ≥12 pixels.*

Thermal Smart Detection

Lens	9 mm	15 mm	25 mm	35 mm	50 mm
VCA Detection (Human: 1.8×0.5 m)	135 m (442.9 ft)	195 m (639.8 ft)	280 m (918.6 ft)	380 m (1,246.7 ft)	480 m (1,574.8 ft)
Temperature Measurement (1 ×1 m)	150 m (492.1 ft)	250 m (820.2 ft)	417 m (1,368.1 ft)	583 m (1,912.7 ft)	833 m (2,732.9 ft)
Temperature Measurement (0.2×0.2 m)	30 m (98.4 ft)	50 m (164 ft)	83 m (272.3 ft)	117 m (383.9 ft)	167 m (547.9 ft)
Fire Detection (1×1 m)	375 m (1,230.3 ft)	625 m (2,050.5 ft)	1,042 m (3,418.6 ft)	1,458 m (4,783.5 ft)	2,083 m (6,834.0 ft)
Fire Detection (0.2×0.2 m)	75 m (246.1 ft)	125 m (410.1 ft)	208 m (682.4 ft)	292 m (958 ft)	417 m (1,368.1 ft)

Note:

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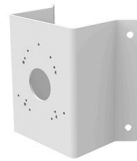
Dimensions (mm)

Accessories

Optional:

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