

# SN-TPC6406VT-Z

Thermal Imaging Box Network Camera



## Key Features

- 640 × 512 resolution, 12 μm, VOx UFPA, NETD ≤40 mK
- 4x (26 to 105 mm)/5x (30 to 150 mm) motorized lens optional
- Supports human and vehicle detection, as well as smoking 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 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%
- NDAA Compliance

## Specifications

Camera	
Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays
Max Resolution	Sensor is 640×512. Image can be scaled up to 1280×1024
Pixel Pitch	12 μm
Spectral Range	8 to 14 μm
NETD	≤ 40mK
Lens	
Lens Type	Motorized lens
Focal Length	26 to 105 mm, 30 to 150 mm optional
Max. Aperture	F1.6 / F0.85 to F1.2
Field of View (FOV)	26 to 105 mm, - H: 16.8° to 4.2°, V: 13.4° to 3.4° 30 to 150 mm, - H: 14.5° to 2.9°, V: 11.6° to 2.3°
Focus Control	Motorized focus
Intelligent Analytics	
AI Multi-Target	Supports human/vehicle detection (ship detection optional).
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
Smoking Detection	Supported
Fire Spot Detection	Supported
Video & Audio	
Main Stream	1280×1024, 1280×720, 640×512 @25fps
Sub Stream	D1, CIF @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
Region of Interest (ROI)	Off/On (8 Zone, Rectangle)
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
<b>Thermal Function</b>	
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
<b>Event</b>	
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
<b>Network</b>	
Protocols	IPv4/IPv6, HTTP/HTTPS, DNS, DDNS, DHCP, PPPoE, RTSP/ RTP/RTCP, TCP/UDP, NTP, ARP, UPnP, FTP, SMTP, QoS, ICMP, IGMP, SNMP, 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
<b>Security</b>	
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	1ch Alarm In, 1ch Alarm Out
Control Interface	1ch RS-485, 1ch RS-232
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 ±25%
Power Consumption	Max 5.6W
Operating Temperature	-40°C to 60°C (-40°F to 140°F)
Operating Humidity	≤90% RH (non-condensing)
Ingress Protection	N/A
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	64.8 × 52 × 52 mm (2.55 × 2.05 × 2.05 inch) without lens
Net Weight	0.2 kg (0.44 lb) without lens

Thermal DRI Distance		
Thermal Lens	26 to 105 mm	30 to 150 m
Detection (Human: 1.8×0.5 m)	1,083 to 4,375 m (3553.2 to 14,353.7 ft)	1,250 to 6,250 m (4101.1 to 20,505.3 ft)
Detection (Vehicle: 4×1.5 m)	3,322 to 13,417 m (10,899 to 44,019 ft)	3,833 to 19,167 m (12,575.5 to 62,883.9 ft)
Recognition (Human: 1.8×0.5 m)	271 to 1,094 m (889.1 to 3,589.2 ft)	312 to 1,563 m (1,023.6 to 5,128.0 ft)
Recognition (Vehicle: 4×1.5 m)	831 to 3,354 m (2,726.4 to 11,003.9 ft)	958 to 4,792 m (3,143 to 15,721.8 ft)
Identification (Human: 1.8×0.5 m)	135 to 547 m (442.9 to 1,794.6 ft)	156 to 781 m (511.8 to 2,562.3 ft)
Identification (Vehicle: 4×1.5 m)	415 to 1,677 m (1361.5 to 5502 ft)	479 to 2,396 m (1,571.5 to 7,860.9 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.

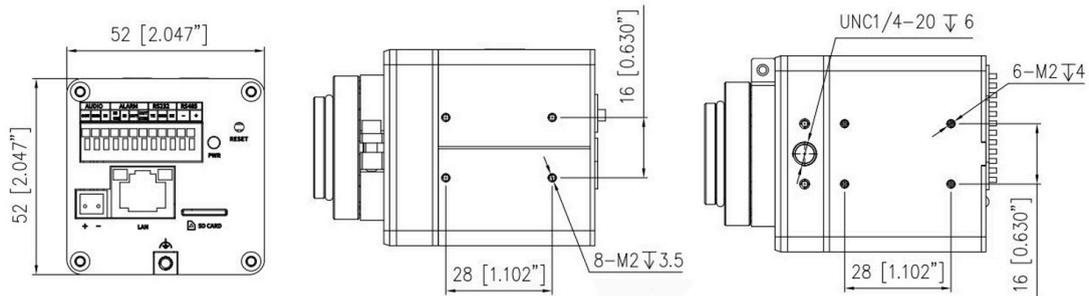
### Thermal Smart Detection

Lens	26 to 105 mm	
VCA Detection (Human: 1.8×0.5 m)	Up to 480 m (1,574.8 ft)	Up to 705 m (2,313.0 ft)
VCA Detection (Front/Rear of Vehicle: 4×1.5 m)	Up to 840 m (2,755.9 ft)	Up to 1,200 m (3,937.0 ft)
Temperature Measurement (1 ×1 m)	433 to 1,750 m (1,420.6 to 5,741.5 ft)	500 to 2,500 m (1,640.4 to 8,202.1 ft)
Temperature Measurement (0.2×0.2 m)	87 to 350 m (285.4 to 1,148.3 ft)	100 to 500 m (328.1 to 1,640.4 ft)
Fire Detection (1×1 m)	1,083 to 4,375 m (3,553.2 to 14,353.7 ft)	1,250 to 6,250 m (4,101 to 20,505.3 ft)
Fire Detection (0.2×0.2 m)	217 to 875 m (712 to 2,870.7 ft)	250 to 1,250 m (820.2 to 4,101.1 ft)

*Note:*

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

## Dimensions (mm)



## 30 to 150 mm Lens

