

SN-TPC6404VT-Z

Thermal Imaging Box Network Camera



Key Features

- 640 × 512 resolution, 12 μm, VOx UFPA, NETD ≤20 mK
- 5x (15-75 mm)/4x (26-105 mm)/5x (30-150 mm) motorized lens optional
- Detection: Human, vehicle, 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.
- Supports 3 types of temperature measurement rules: spot, line, and area
- Temperature measurement range: -20°C to 150°C (-4°F to 302°F)
- Accuracy: ±2°C / ±2%
- Built-in microSD card slot, supports up to 1TB
- 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	≤ 20mK
Lens	
Lens Type	Varifocal lens
Focal Length	15 to 75 mm, 26 to 105 mm, 30 to 150 mm optional
Max. Aperture	F1.2 / F1.6 / F0.85 to F1.2
Field of View (FOV)	15 to 75 mm: - H: 29.9° to 5.8°, V: 22.1° to 4.4° 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.
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	
Resolution	Stream1: 1280×1024, 1280×720, 640×512 Stream2: D1, CIF
Frame Rate	Up to 25fps
Bit Rate Control	CBR/VBR
Bit Rate	Stream1: 100 Kbps to 8 Mbps, Stream2: 100 Kbps to 6 Mbps
Smart Encoding	Supported
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°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	Supports threshold alarm, temperature difference alarm, section 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
Event	
Alarm Triggers	IVS, Temperature anomaly, Motion detection, Alarm input, Disk alarm, Network alarm
Event Actions	Alarm record, Alarm output, FTP upload, SMTP upload
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
Alarm Interface	1 × Input, 1 × Output
Control Interface	1 × RS-485, 1 × RS-232
CVBS Output	Supported
SD Card Slot	Built-in microSD slot, supports up to 1TB
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 W
Operating Temperature	-40°C to 60°C (-40°F to 140°F)
Operating Humidity	≤90% RH (non-condensing)
Ingress Protection	N/A
Certifications	CE/FCC
Material	Metal
Dimensions	52 × 52 × 70 mm (2.05 × 2.05 × 2.76 in) without lens
Net Weight	Approx. 0.22 kg (0.49 lb) without lens

Thermal DRI Distance			
Thermal Lens	15 to 75 mm	26 to 105 mm	30 to 150 mm
Detection (Human: 1.8×0.5 m)	Up to 3,125 m (10,252.6 ft)	Up to 4,375 m (14,353.7 ft)	Up to 6,250 m (20,505.3 ft)
Detection (Vehicle: 4×1.5 m)	Up to 9,583 m (31,440.3 ft)	Up to 13,417 m (44,019 ft)	Up to 19,167 m (62,883.9 ft)
Recognition (Human: 1.8×0.5 m)	Up to 781 m (2,562.3 ft)	Up to 1,094 m (3,589.2 ft)	Up to 1,563 m (5,128.0 ft)
Recognition (Vehicle: 4×1.5 m)	Up to 2,396 m (7,860.9 ft)	Up to 3,354 m (11,003.9 ft)	Up to 4,792 m (15,721.8 ft)
Identification (Human: 1.8×0.5 m)	Up to 391 m (1,282.8 ft)	Up to 547 m (1,794.6 ft)	Up to 781 m (2,562.3 ft)
Identification (Vehicle: 4×1.5 m)	Up to 1,198 m (3,930.5 ft)	Up to 1,677 m (5502 ft)	Up to 2,396 m (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	15 to 75 mm	26 to 105 mm	30 to 150 mm

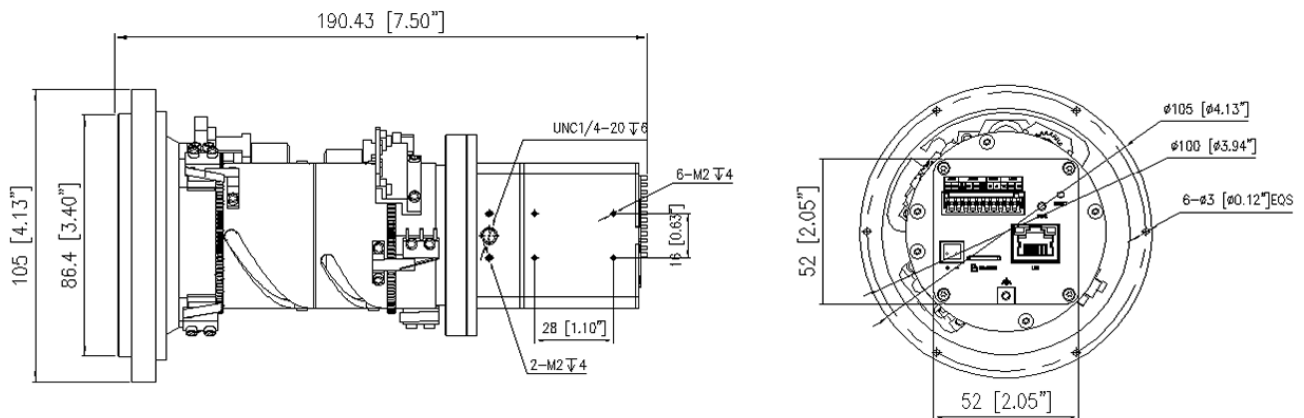
Temperature Measurement (1 ×1 m)	Up to 1,250 m (4,101.1 ft)	Up to 1,750 m (5,741.5 ft)	Up to 2,500 m (8,202.1 ft)
Temperature Measurement (0.2×0.2 m)	Up to 250 m (820.2 ft)	Up to 350 m (1,148.3 ft)	Up to 500 m (1,640.4 ft)
Fire Detection (1×1 m)	Up to 3,125 m (10,252.6 ft)	Up to 4,375 m (14,353.7 ft)	Up to 6,250 m (20,505.3 ft)
Fire Detection (0.2×0.2 m)	Up to 625 m (2,050.5 ft)	Up to 875 m (2,870.7 ft)	Up to 1,250 m (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)

F25 to 105 mm



F30 to 150 mm

