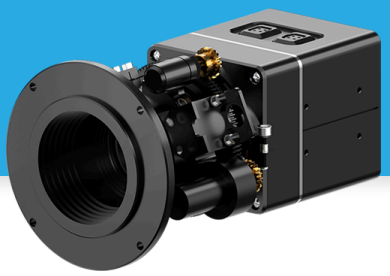
SN-TPC6404VT-M

Thermal Imaging Box Network Camera



Key Features

- 640 × 512 resolution, 12 µm, VOx UFPA, NETD ≤20 mK
- 25/50/75/100 mm motorized focus 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℃ to 150℃ (-4℉ to 302℉)
- Accuracy: ±2℃ / ±2%
- Built-in microSD card slot, supports up to 1TB
- NDAA Compliance

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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	Fixed lens
Focal Length	25 mm, 50 mm, 75 mm, 100 mm optional
Max. Aperture	F1.0
Field of View (FOV)	25 mm, H: 17°, V: 14° 50 mm, H: 8°, V: 7° 75 mm, H: 6°, V: 5° 100 mm, H: 4.3°, V: 3.5°
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

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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℃ 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, 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	

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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	25 mm	50 mm	75 mm	100 mm
Detection (Human: 1.8×0.5 m)	1,042 m (3,418.6 ft)	2,083 m (6,834.0 ft)	3,125 m (10,252.6 ft)	4,167 m (13,671.3 ft)
Detection (Vehicle: 4×1.5 m)	3,194 m (10,479 ft)	6,389 m (20,961.3 ft)	9,583 m (31,440.3 ft)	12,778 m (41,922.6 ft)
Recognition (Human: 1.8×0.5 m)	260 m (853 ft)	521 m (1,709.3 ft)	781 m (2,562.3 ft)	1,042 m (3,418.6 ft)
Recognition (Vehicle: 4×1.5 m)	799 m (2,621.4 ft)	1,597 m (5,239.5 ft)	2,396 m (7,860.9 ft)	3,194 m (10,479.0 ft)
Identification (Human: 1.8×0.5 m)	130 m (426.5 ft)	260 m (853 ft)	391 m (1,282.8 ft)	521 m (1,709.3 ft)
Identification (Vehicle: 4×1.5 m)	399 m (1,309.1 ft)	799 m (2,621.4 ft)	1,198 m (3930.5 ft)	1,597 m (5,539.5 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	25 mm	50 mm	75 mm	100 mm

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VCA Detection (Human: 1.8×0.5 m)	280 m (918.6 ft)	480 m (1,574.8 ft)		
Temperature Measurement (1 ×1 m)	417 m (1,368.1 ft)	833 m (2,732.9 ft)	1,250 m (4,101.1 ft)	1,667 m (5,469.2 ft)
Temperature Measurement (0.2×0.2 m)	83 m (272.3 ft)	167 m (547.9 ft)	250 m (820.2 ft)	333 m (1,092.5 ft)
Fire Detection (1×1 m)	1,042 m (3,418.6 ft)	2,083 m (6,834.0 ft)	3,125 m (10,252.6 ft)	4,167 m (13,671.3 ft)
Fire Detection (0.2×0.2 m)	208 m (682.4 ft)	417 m (1,368.1 ft)	625 m (2,050.5 ft)	833 m (2,732.9 ft)

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

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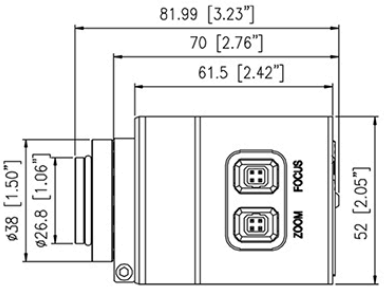
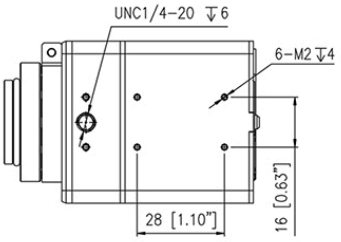
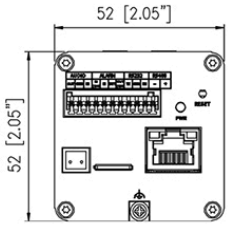
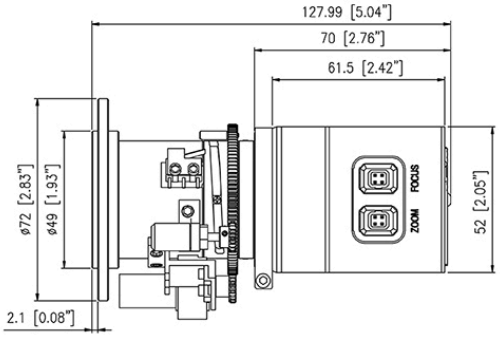
Dimensions (mm)



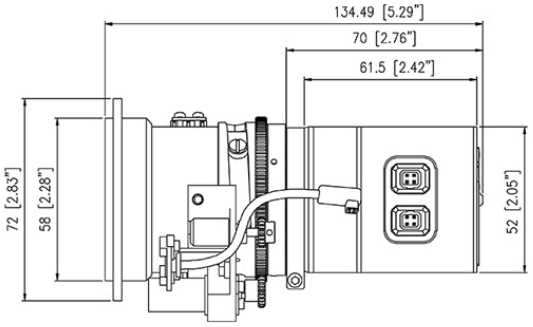




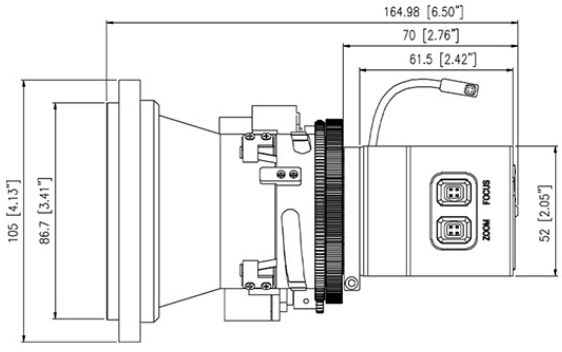
M25 mm Lens



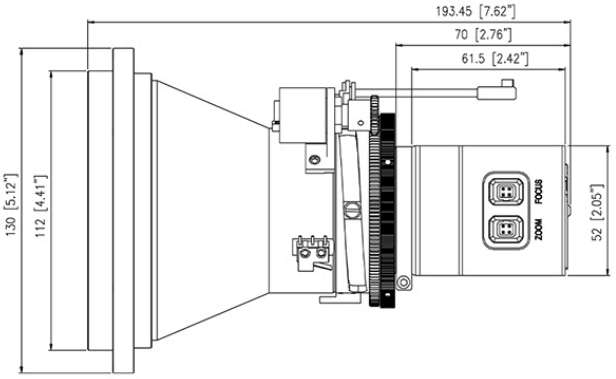
M50 mm Lens



M75 mm Lens



M100 mm Lens



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