



SN-TPC1604CV-F

Thermal Imaging Turret Network Camera



Key Features

- 160 × 120 resolution, 17 μm , VOx UFPA, NETD ≤ 50 mK
- Supports human and vehicle detection
- Intelligent Analytics: Smart motion detection, intrusion detection, single/double line crossing, loitering, wrong-way detection, entry/exit detection, fall detection, smoking detection, fire spot detection, and people counting.
- Supports audio detection and voice wake-up alarm
- Supports 3 types of temperature measurement rules: spot, line, and area
- Temperature monitoring & alarm: -20°C to 150°C (-4°F to 302°F), with $\pm 8^{\circ}\text{C}$ accuracy
- Built-in microphone, speaker, and red/blue warning lights; supports sound and light alarm linkage
- Built-in Micro SD card slot, supports up to 1TB
- IP66, IK10-rate housing



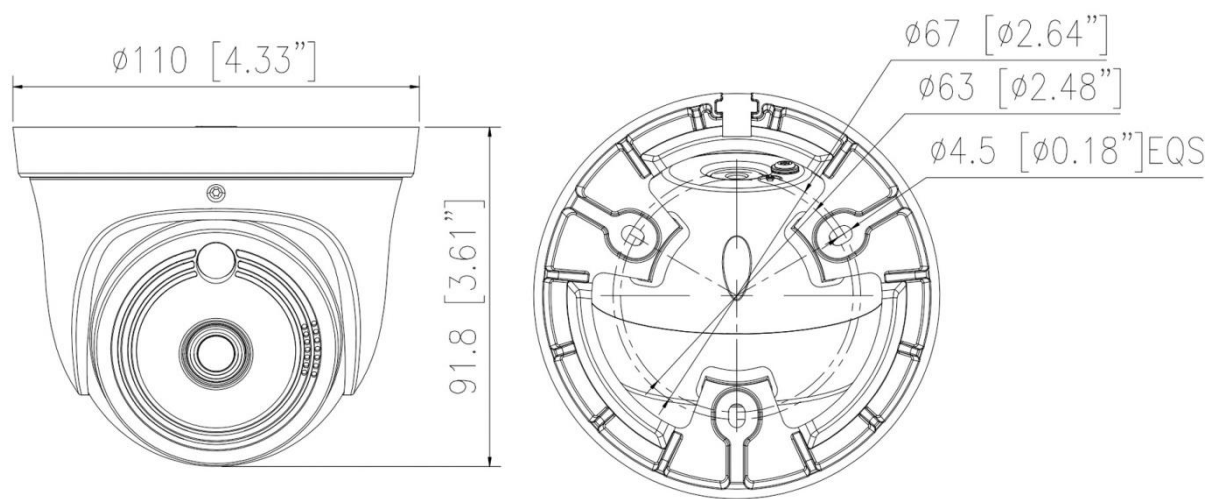
Specification

Camera	
Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays
Max. Resolution	160(H) × 120(V) , Image can be scaled up to 704 × 576
Pixel Pitch	17μm
Spectral Range	8 to 14μm
NETD	≤ 50mK
Lens	
Lens Type	Fixed lens
Focal Length	1.5 mm, 2.1 mm (optional)
Max. Aperture	F1.0
Field of View (FOV)	1.5 mm, H: 114°, V: 82° 2.1 mm, H: 90°, V: 64°
Focus Control	Focus-free
Intelligent Analytics	
AI Multi-Target	Human and vehicle detection
Intelligent Analysis	Smart motion detection, intrusion detection, single/double line crossing, loitering, wrong-way detection, entry/exit area detection, and fall detection. - Supports accurate target classification (human/vehicle)
Smoking Detection	Supported
Fire Spot Detection	Supported
People Counting	Supported
Video and Audio	
Main Stream	D1 (704×576)
Sub Stream	CIF, 256×192
Frame Rate	Up to 25/30fps
Bit Rate Control	CBR/VBR
Bit Rate	Main Stream: 100 Kbps to 6 Mbps, Sub Stream: 10 Kbps to 1.5 Mbps
Smart Encode	Supported
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 Setting	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
Thermal Function	
Temperature Range	-20°C to 150°C (-4°F to 302°F)
Accuracy	±8°C (depending on emissivity, distance, ambient temperature settings, etc.)
Temperature Detection	Supports 3 rule types (spot, line, area); up to 20 rules in total, including 1 full-screen and 19 spot/line/area rules
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
Event	
Alarm Triggers	IVS, Temperature anomaly, Motion detection, Alarm Input, Disk alarm, Network alarm, Audio detection, Voice wake up alarm
Event Actions	Alarm out, Alarm record, SMTP, FTP upload, Red and blue light alarm, Audible alarm output
Network	
Protocols	IPv4, IPv6, TCP/IP, UDP, ICMP, ARP, HTTP, HTTPS, FTP, SMTP, SNMP, NTP, DNS, DDNS, TLS, RTSP, RTP, RTCP, DHCP, IGMP, UPnP, QoS, 802.1X
Application Programming Interface	ONVIF (Profile S/T/G/M), CGI, SDK
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 × RJ45 10/100Base-T Ethernet port
Built-in Microphone	Supported
Built-in Speaker	Supported
Alarm Interface	1ch input, 1ch output
Control Interface	1ch RS-485

CVBS Output	Supported	
SD Card Slot	Built-in Micro SD 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 / PoE (802.3af)	
Power Consumption	Max. 4 W	
Operating Temperature	-40°C to 60°C (-40°F to 140°F)	
Operating Humidity	Up to 90% RH, non-condensing	
Certifications	CE-EMC - EN 55032, EN IEC 61000-6-4, EN IEC 61000-3-2, EN 61000-3-3, EN 55035, EN 50130-4 FCC 47 CFR Part 15 Subpart B	
Ingress Protection	IP66, IK10	
Material	Metal	
Dimensions	φ110 × 91.8 mm (4.33 × 3.61 inch)	
Net Weight	Approx. 650 g (1.43 lb)	
Thermal DRI Distance		
Thermal Lens	1.5 mm	2.1 mm
Detection (Human: 1.8×0.5 m)	44.1 m (144.7 ft)	61.6 m (202.0 ft)
Detection (Vehicle: 4×1.5 m)	135.4 m (444.1 ft)	189.5 m (621.7 ft)
Recognition (Human: 1.8×0.5 m)	11.0 m (36.1 ft)	15.4 m (50.5 ft)
Recognition (Vehicle: 4×1.5 m)	33.9 m (111.2 ft)	47.4 m (155.6 ft)
Identification (Human: 1.8×0.5 m)	5.5 m (18.0 ft)	7.7 m (25.3 ft)
Identification (Vehicle: 4×1.5 m)	16.9 m (55.4 ft)	23.7 m (77.8 ft)
Note: The table is only for reference and the performance may vary according to different environment. Note: The optimal detection, recognition, and identification distances are calculated according to Johnson’s Criteria. Detection Range: In order to distinguish an object from the background, the object must be covered by 1.5 or more pixels. Recognition Range: In order to classify the object (animal, human, vehicle, etc.), the object must be covered by 6 or more pixels. Identification Range: In order to identify the object and describe it in details, the object must be covered by 12 or more pixels.		
Thermal Smart Detection		
Temperature Measurement (1×1 m)	17.6 m (57.7 ft)	24.7 m (81.0 ft)
Temperature Measurement (0.2×0.2 m)	3.5 m (11.5 ft)	4.9 m (16.1 ft)
Fire Detection (0.2×0.2 m)	8.8 m (28.9 ft)	12.4 m (40.7 ft)
Note: The table is for reference only. The distances within it are subject to actual conditions including atmospheric conditions, target size, the installation site, and more.		

Dimensions (mm)



Accessories

Optional:



SN-CBK656B
Junction Box



SN-CBK201A
Pendant Cap



SN-CBK402
Pendant Mount



SN-CBK501
Wall Mount



SN-CBK502
Wall Mount



SN-CBK101
Pole Mount



SN-CBK102
Corner Mount