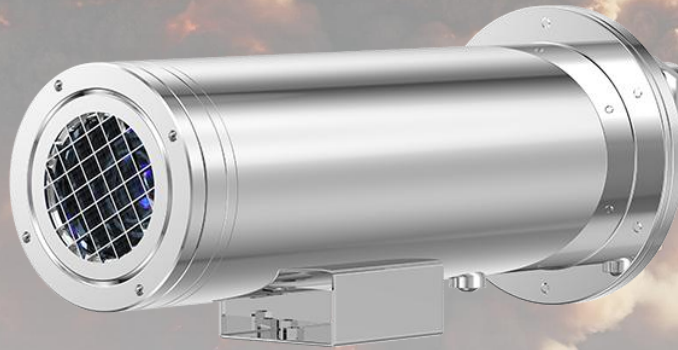


Explosion-proof Bullet Thermal Camera



SN-TPH4204DA-F

Key Features

- ✚ Resolution & Sensor: 384 x 288, 17 μm VOx UFPA, NETD \leq 40 mK
- ✚ Lens: 9/15/25/35/ 50 mm fixed lens optional
- ✚ Detection: Human, vehicle, smoking, and fire point detection
- ✚ Intelligent Analytics: Intrusion, single/double line crossing, loitering, wrong-way, enter/leave area detection, smart motion detection, people counting
- ✚ Temperature Measurement: Spot, line, area; -20°C to 150°C, accuracy: $\pm 2^\circ\text{C}$ / $\pm 2\%$
- ✚ Material: 316L Stainless steel
- ✚ ATEX II 2 G Ex db IIC T6 Gb; II 2 D Ex tb IIIC T80°C Db
- ✚ NDAA Compliance, IP68

Camera

Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays
Max. Resolution	Sensor is 384×288, Image can be scaled up to 1280×720
Pixel Pitch	17µm
Spectral Range	8 to 14µm
NETD	≤ 40mK

Lens

Lens Type	Fixed lens
Focal Length	9 mm, 15 mm, 25 mm, 35 mm, 50 mm optional
Max. Aperture	F1.0
Field of View (FOV)	9 mm, H: 37°, V: 28° 15 mm, H: 28°, V: 21° 25 mm, H: 14°, V: 11° 35 mm, H: 10°, V: 8° 50 mm, H: 7.4°, V: 5.6°
Focus Control	Focus-free

Intelligent Analytics

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

Video and Audio

Resolution	Stream1: 1280×720, 704×576, 384×288 Stream2: 704×576, 384×288, 352×240
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, 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

Event

Alarm Triggers	IVS, Temperature anomaly, Motion detection, Alarm input, Disk alarm, Network alarm
Event Actions	Alarm output, Alarm record, SMTP, FTP upload

Network

Protocols	IPv4/IPv6, HTTP/HTTPS, DNS, DDNS, DHCP, PPPOE, RTSP/RTP/RTCP, TCP/UDP, NTP, ARP, UPnP, FTP, SMTP, QoS, 802.1x, SNMP, Multicast
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, 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
CVBS Output	Supported
SD Card Slot	Built-in microSD slot, supports up to 1TB <i>* If needed, we recommend purchasing the memory card with the product so it can be pre-installed during production.</i>
Reset Button	Supported

General

Language	English, Chinese, Traditional Chinese, Polish, Italian, Portuguese, Spanish, Russian, French, Czech, Hungarian, Japanese, Korean. Default: English
Power Supply	100 to 240 VAC
Power Consumption	Max 36 W
Operating Temperature	-40°C to 60°C (-40°F to 140°F)
Operating Humidity	≤ 95% RH (non-condensing)
Ingress Protection	IP68
Certifications	CE / FCC ATEX: Ex II 2GD Ex db IIC T6 Gb / Ex tb IIIC T80°C Db; IECEX: Ex db IIC T6 Gb / Ex tb IIIC T80°C Db
Material	SUS316L
Dimensions	464 × 166 × 171mm (18.27 × 6.54 × 6.73 inch)
Net Weight	Approx. 10 kg (22.05 lb)

Thermal DRI Distance

Thermal Lens	9 mm	15 mm	25 mm	35 mm	50 mm
Detection (Human: 1.8×0.5 m)	265 m (869.4 ft)	441 m (1,446.9 ft)	735 m (2,411.4 ft)	1,029 m (3,376.0 ft)	1,471 m (4,826.1 ft)
Detection (Vehicle: 4×1.5 m)	812 m (2,664.0 ft)	1,353 m (4,439.0 ft)	2,255 m (7,398.3 ft)	3,157 m (10,357.6 ft)	4,510 m (14,796.6 ft)
Recognition (Human: 1.8×0.5 m)	66 m (216.5 ft)	110 m (360.9 ft)	184 m (603.7 ft)	257 m (843.2 ft)	368 m (1,207.4 ft)
Recognition (Vehicle: 4×1.5 m)	203 m (666.0 ft)	338 m (1,108.9 ft)	564 m (1,850.4 ft)	789 m (2,588.6 ft)	1,127 m (3,697.5 ft)



Identification (Human: 1.8x0.5 m)	33 m (108.3 ft)	55 m (180.5 ft)	92 m (301.8 ft)	129 m (423.2 ft)	184 m (603.7 ft)
Identification (Vehicle: 4x1.5 m)	101 m (331.4 ft)	169 m (554.5 ft)	282 m (925.2 ft)	395 m (1,295.9 ft)	564 m (1,850.4 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.

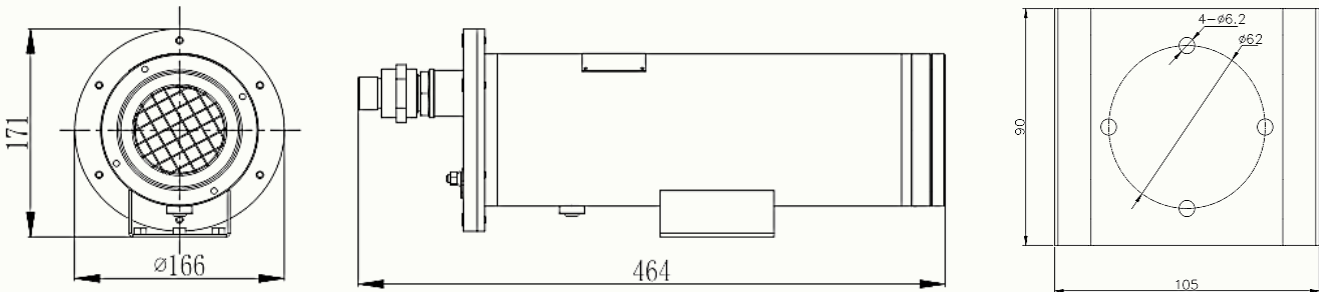
Thermal Smart Distance

Lens	9 mm	15 mm	25 mm	35 mm	50 mm
Temperature Measurement (1 x1 m)	106 m (347.8 ft)	176 m (577.4 ft)	294 m (964.6 ft)	412 m (1,351.7 ft)	588 m (1,929.1 ft)
Temperature Measurement (0.2x0.2 m)	21 m (68.9 ft)	35 m (114.8 ft)	59 m (193.6 ft)	82 m (269.0 ft)	118 m (387.1 ft)
Fire Detection (1x1 m)	265 m (869.4 ft)	441 m (1,446.9 ft)	735 m (2,411.2 ft)	1,029 m (3,376.0 ft)	1,471 m (4,826.1 ft)
Fire Detection (0.2x0.2 m)	53 m (173.9 ft)	88 m (288.7 ft)	147 m (482.3 ft)	206 m (675.9 ft)	294 m (964.6 ft)
Temperature Measurement (1 x1 m)	106 m (347.8 ft)	176 m (577.4 ft)	294 m (964.6 ft)	412 m (1,351.7 ft)	588 m (1,929.1 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-BK401A-SS
Wall Mount



SN-BK406-SS
Pole Mount



SN-BK407-SS
Corner Mount



SN-BK400-SS(P/F)
Junction Box



Flexible Tube