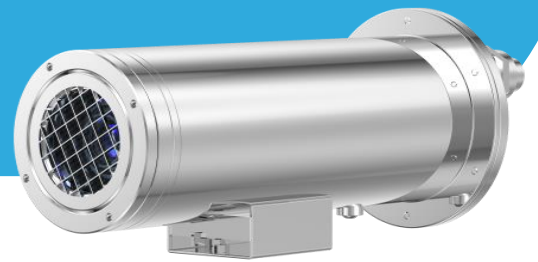# SUNELL

SN-TPH4203DA-M

Explosion-proof Bullet Thermal Camera

Key Features

- VOx uncooled focal plane detector with 400×300 resolution

- NETD ≤ 40mK

- 25/50mm motorized focus lens optional

- Support human/vehicle detection, 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 temperature monitoring and exception alarm

- Support 3 temperature measurement rule types (spot, line, area)

- Temperature range: -20°C to 150°C (-4°F to 302°F), Accuracy: ±2°C / ±2%

- Material: 316L Stainless steel

- NDAA Compliance, IP68

NDAA COMPLIANT   TAA COMPLIANT

Specification

Thermal Module

Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays
Resolution	Sensor is 400×300. Image can be scaled up to 704×576
Pixel Pitch	17 μm
NETD	≤ 40mK
Spectral Range	8 to 14 μm
Focus Control	Fixed lens (Motorized focus)
Focal Length	25 mm, 50 mm
Aperture	F1.0
Field of View (FOV)	25 mm, H: 15.4°, V: 11.6° 50 mm, H: 7.7°, V: 5.8°

Intelligent Analytics

Smart Detection	Human and Vehicle detection, and Fire point detection
Intelligent Analysis	Intrusion, Single line crossing, Double line crossing, Loitering, Wrong-way detection, Enter area, Leave area (these functions support accurate detection of human/vehicles)
People Counting	Support

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	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

Video and Audio

Main Stream	704×576 @25/30fps
Sub Stream	CIF @25/30fps
Bit Rate Control	CBR/VBR
Bit Rate	Main stream: 100 Kbps to 6 Mbps, Sub stream: 10 Kbps to 1.5 Mbps
Region of Interest	Off/On (8 Zone, Rectangle)
Audio Compression	G.711 A-law, G.711 μ-law, PCM
Audio Bit Rate	64 Kbps (G.711), 128 Kbps (PCM)

Image

Image Setting	Brightness, Contrast, Sharpness
Mirror	Horizontal / Vertical / Horizontal + Vertical
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
Event	
Alarm Triggers	IVS, Temperature anomaly, Motion detection, Alarm Input, Disk alarm, Network alarm, Abnormal sound detection
Event Actions	Alarm record, Alarm output, FTP upload, SMTP upload, Audible alarm output
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
Interoperability	ONVIF (Profile S/T/G/M), SDK, CGI
Max Concurrent Streams	10 channels
User/Host Level	32+ users, 3 levels: Administrator, Operator, Media user
Security	IP address filter, HTTPS, Illegal login lock, IEEE 802.1x
Web Viewer	<IE11, Chrome, Firefox, Microsoft Edge
Interface	
Network Interface	1 Ethernet (10/100 Base-T) RJ-45 Connector
Audio Interface	1ch Audio In, 1ch Audio Out
Alarm Interface	2ch Alarm In, 1ch Alarm Out
RS-485	1ch
SD Card Slot	Built-in, up to 512GB
Reset Button	Support
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 25 W
Working Temperature/Humidity	-40°C to 60°C (-40°F to 140°F), Humidity: ≤90% RH (non-condensing)
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
Ingress Protection	IP68
Material	SUS316L
Dimensions	464 × 166 × 171mm (18.27 × 6.54 × 6.73 inch)
Net Weight	10 kg
Ordering Information	
Model	**Description**
SN-TPH4203DA-M25	Focal Length: 25mm
SN-TPH4203DA-M50	Focal Length: 50mm

Thermal DRI Range Table

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.
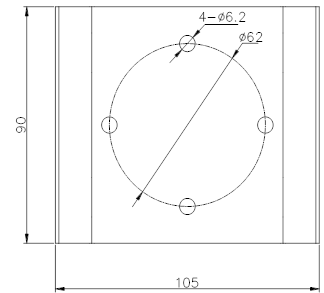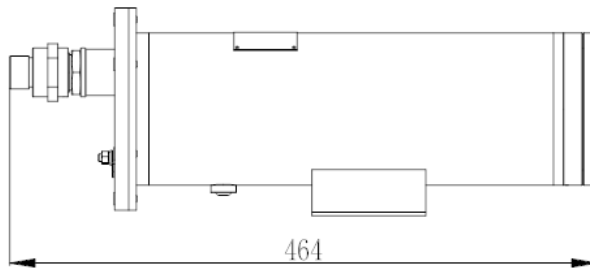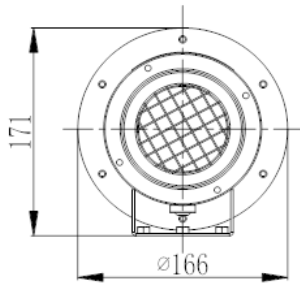
DRI Distance Table		
Focal Length	**25 mm**	**50 mm**
Detection Distance (Humans: 1.8×0.5m)	735 m (2,411.4 ft)	1,471 m (4,826.1 ft)
Detection Distance (Vehicles: 4×1.5m)	2,255 m (7,398.3 ft)	4,510 m (14,796.6 ft)
Recognition Distance (Humans: 1.8×0.5m)	184 m (603.7 ft)	368 m (1,207.4 ft)
Recognition Distance (Vehicles: 4×1.5m)	564 m (1,850.4 ft)	1,127 m (3,697.5 ft)
Identification Distance (Humans: 1.8×0.5m)	92 m (301.8 ft)	184 m (603.7 ft)
Identification Range (Vehicles: 4×1.5m)	282 m (925.2 ft)	564 m (1,850.4 ft)

Thermal Smart Detection Distance Range Table

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.

Detection Range Table		
Focal Length	**25 mm**	**50 mm**
VCA Detection Distance (Human: 1.8 × 0.5 m)	105 m (344.5 ft)	284 m (931.8 ft)
VCA Detection Distance (Front/Rear of Vehicle: 4×1.5 m)	200 m (656.2 ft)	450 m (1,476.4 ft)
Temperature Measurement (Object: 0.2 × 0.2m)	59 m (193.6 ft)	118 m (616.8 ft)
Fire Detection (Object: 0.2 × 0.2m)	147 m (482.3 ft)	294 m (964.6 ft)

Dimensions (mm)

Accessories

Optional:

SN-BK401A-SS
Wall Mount

SN-BK406-SS
Pole Mount

SN-BK407-SS
Corner Mount

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

Flexible Tube