

## Explosion-proof Bi-spectrum PTZ Camera



# SN-TPT4233PA-F

### Key Features

- + VOx uncooled focal plane detector with 400x300 resolution
- + NETD  $\leq$  40mK
- + Thermal: 8/15/25/35/50mm fixed lens optional; Visible: 30x optical zoom module
- + Detection capabilities: Human/vehicle, smoke & flame, and fire point detection
- + Intelligent Analytics: Intrusion, single/double line crossing, loitering, wrong-way, enter/leave area detection, smart motion detection, 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:  $\pm$ 2°C /  $\pm$ 2%
- + Material: 316L Stainless steel
- + NDAA Compliance, IP68

Camera	Thermal	Visible
Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays	1/2.8" STARVIS CMOS
Resolution	Sensor is 400×300. Image can be scaled up to 704×576	2592 (H)×1944 (V), 5MP
Pixel Pitch	17 μm	
Spectral Range	8 to 14 μm	
NETD	≤ 40mK	
Min. Illumination		Color: 0.07 Lux @(F1.6, AGC ON), B/W: 0.007 Lux (F1.6, AGC ON)
Shutter Speed		1/5 to 1/100,000s
Lens Type	Fixed lens	30x optical zoom
Focal Length	8 mm, 15 mm, 25 mm, 35 mm, 50 mm optional	5.3 to 159 mm
Max. Aperture	F1.0	F1.6
Focus Control	Manual focus	Auto/Manual/Semi-automatic
Field of View (FOV)	8 mm: H: 46°, V: 35.3° 15 mm: H: 25.5°, V: 19.2° 25 mm: H: 15.4°, V: 11.6° 35 mm: H: 11°, V: 9° 50 mm: H: 7.7°, V: 5.8°	H: 56.3° to 2.7°, V: 42.4° to 2.0°

### Intelligent Analytics

AI Multi-Target	Human / vehicle detection	Face / Human / Vehicle detection and capture
Intelligent Analysis	Intrusion, Single Line Crossing, Double Line Crossing, Loitering, Wrong-Way Detection, Enter Area, Leave Area, Smart Motion Detection  Support alarm triggering by specified target types (human and vehicle)	Intrusion, Single Line Crossing, Double Line Crossing, Loitering, Wrong-Way Detection, Smart Motion Detection  Support alarm triggering by specified target types (human and vehicle)
Smoke and Flame Detection		Support
Fire Spot Detection	Intrusion, Single line crossing, Double line crossing, Loitering, Wrong-way detection, Enter area, Leave area	
People Counting	Support	Support

### Video and Audio

Stream/Frame Rate	Stream1: 704×576 @25/30fps Stream2: CIF @25/30fps	Stream1: 2592×1944, 2592×1520, 1920×1080, 1280×720 @25/30fps Stream2: D1, VGA, CIF @25/30fps Stream3: VGA, CIF, QVGA @25/30fps
Bit Rate Control	CBR/VBR	CBR/VBR
Bit Rate	Stream1: 100 Kbps to 6 Mbps, Stream2: 10 Kbps to 1.5 Mbps	Stream1: 200 kbps to 12 Mbps Stream2: 100 kbps to 6 Mbps Stream3: 100 kbps to 3 Mbps
Region of Interest	Off/On (8 Zone, Rectangle)	Support

Audio Compression	G.711 A-law, G.711 $\mu$ -law, PCM	G.711 A-law, G.711 $\mu$ -law, PCM
Audio Bit Rate	64 Kbps (G.711), 128 Kbps (PCM)	64 Kbps (G.711), 128 Kbps (PCM)

## Image

Image Setting	Brightness, Contrast, Sharpness	Brightness, Saturation, Contrast, Sharpness
Mirror	Horizontal / Vertical / Horizontal+Vertical	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	
White Balance		Auto / Tungsten / Fluorescent / Daylight / Shadow / Manual
Day/Night		Auto / Day mode / Night mode / Timer
Noise Reduction	2D/3D DNR	2D/3D DNR
Image Enhancement		WDR, HLC, BLC, Defog
Wide Dynamic Range		True WDR
OSD	Up to 8 OSD	Up to 8 OSD
Privacy Masking	Support	Support
Illuminator		IR Range: Up to 100 m (328.08 ft.)

## Thermal Function

Temperature Range	-20°C to 150°C (-4°F to 302°F)
Accuracy	$\pm 2^\circ\text{C}$ / $\pm 2\%$
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	$\leq 30\text{ms}$

## PTZ

Pan/Tilt Range	Pan: 0° to 360° endless, Tilt: +90° to -90°
Pan/Tilt Speed	Pan: 0.1° to 30°/s, Tilt: 0.1° to 20°/s
Wiper	Support
Preset Accuracy	$\leq 0.2^\circ$
Presets	400



Scan	8 scans
Patrol	12 patrols, up to 32 presets per patrol
Track	6 tracks
3D Positioning	Support
Speed Setup	Auto/Manual (0-8)
Power Off Memory	Support
Idle Motion	The time can be set (1-240 minutes), and functions such as preset positions, patrols, scans, and tracks can be run.

## 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 input, 1ch output
Alarm Interface	5ch input, 1ch output
RS-485	Support
BNC Interface	1 BNC (CVBS output of Visible)
Reset Button	Built-in
SD Card Slot	Built-in Micro SD card slot, up to 256GB

## 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 75 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	567 × 360 × 494mm (22.66 × 14.17 × 19.45 inch)
Net Weight	52 kg (114.64 lb)

### DRI Distance Table

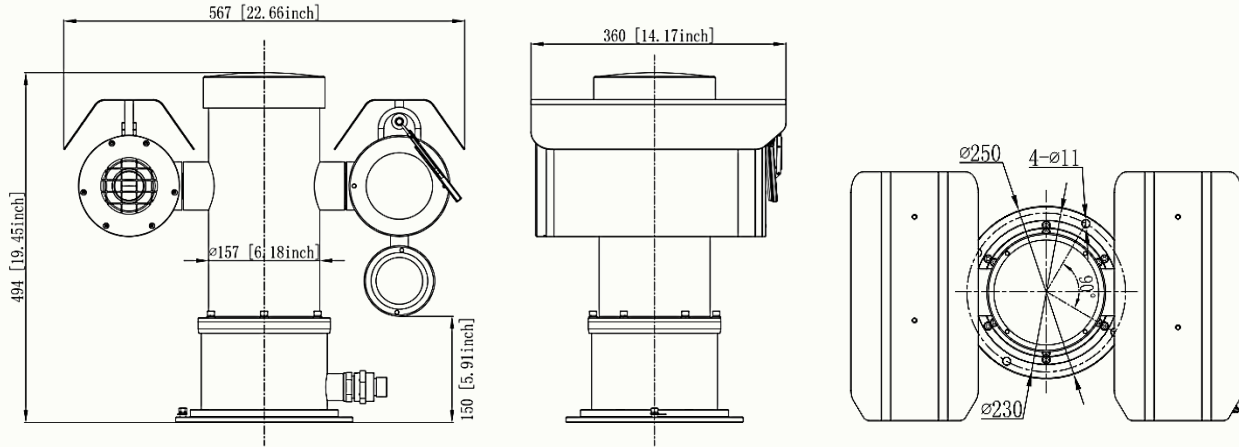
Focal Length	8mm	15mm	25mm	35mm	50mm
Detection Distance (Humans: 1.8×0.5m)	235 m (771.7 ft)	441 m (1,446.9 ft)	735 m (2,411.4 ft)	1,029 m (3,376.0 ft)	1,471 m (4,826.1 ft)
Detection Distance (Vehicles: 4×1.5m)	722 m (2,368.8 ft)	1,353 m (4,439 ft)	2,255 m (7,398.3 ft)	3,157 m (10,357.6 ft)	4,510 m (14,796.6 ft)
Recognition Distance (Humans: 1.8×0.5m)	59 m (193.6 ft)	110 m (360.9 ft)	184 m (603.7 ft)	257 m (843.2 ft)	368 m (1,207.4 ft)
Recognition Distance (Vehicles: 4×1.5m)	180 m (590.6 ft)	338 m (1,109 ft)	564 m (1,850.4 ft)	789 m (2,588.6 ft)	1,127 m (3,697.5 ft)
Identification Distance (Humans: 1.8×0.5m)	29 m (95.1 ft)	55 m (180.4 ft)	92 m (301.8 ft)	129 m (423.2 ft)	184 m (603.7 ft)
Identification Range (Vehicles: 4×1.5m)	90 m (295.3 ft)	169 m (554.5 ft)	282 m (925.2 ft)	395 m (1,296 ft)	564 m (1,850.4 ft)

### Detection Range Table

Focal Length	8mm	15mm	25mm	35mm	50mm
VCA Detection Distance (Human: 1.8 × 0.5 m)	50 m (164.0 ft)	92 m (301.8 ft)	105 m (344.5 ft)	210 m (689.0 ft)	284 m (931.8 ft)
VCA Detection Distance (Front/Rear of Vehicle: 4×1.5 m)	100 m (328.1 ft)	120 m (393.7 ft)	200 m (656.2 ft)	350 m (1,148.3 ft)	450 m (1,476.4 ft)
Temperature Measurement (Object: 0.2 × 0.2m)	19 m (62.3 ft)	35 m (114.8 ft)	59 m (193.6 ft)	82 m (269 ft)	118 m (616.8 ft)
Fire Detection (Object: 0.2 × 0.2m)	47 m (154.2 ft)	88 m (288.7 ft)	147 m (482.3 ft)	206 m (675.9 ft)	294 m (964.6 ft)



## Dimensions (mm)



## Accessories

Optional:



Wall Mount



Pole Mount



Corner Mount



Junction Box



Washing Tank



Flexible Tube

