SNTPT6436PAF

Explosion-proof Bi-spectrum PTZ Camera

Key Features

- 640 × 512 resolution, 12 µm, VOx UFPA, NETD ≤ 40 mK

- Thermal: 9/15/25/35/50mm fixed lens optional; Visible: 30x optical zoom module

- Detection capabilities: Human/vehicle, smoker, smoke & flame, fire point detection

- Intelligent analytics: Intrusion, single/double line crossing, loitering, wrong-way, enter/leave area detection, smart motion detection, 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

Specification

Camera	Thermal	Visible
Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays	1/2.8" STARVIS CMOS
Resolution	Sensor is 640×512. Image can be scaled up to 1280×1024	2592 (H)×1944 (V), 5MP
Pixel Pitch	12 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	9 mm, 15 mm, 25 mm, 35 mm, 50 mm optional	5.3 to 159 mm
Max. Aperture	F1.0	F1.6
Focus Control	Free focus	Auto/Manual/Semi-automatic
Field of View (FOV)	9 mm: H: 48°, V: 38° 15 mm: H: 29°, V: 23° 25 mm: H: 17°, V: 14° 35 mm: H: 12°, V: 10° 50 mm: H: 8°, V: 7°	H: 56.3° to 2.7°, V: 42.4° to 2.0°

Intelligent Analytics		
AI Multi-Target	Human and 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
Smoker Detection	Support	
Fire Spot Detection	Support	
People Counting	Support	Support

Video and Audio		
Stream/Frame Rate	Stream1: 1280×1204, 1280×720, 704×576 @25fps Stream2: D1, CIF @25fps	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 8 Mbps, Stream2: 100 Kbps to 6 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 μ-law, PCM	G.711 A-law, G.711 μ-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	±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	

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	≤ 0.2°	
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
Cyber Security	Network protocols IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS 2, TLS3 , HTTP/ QoS Layer 3 / DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP ® , SNMP v1/v2c/v3 (MIB II), DNS/DNSv6, DDNS, NTP, PTP, NTS, RTSP, RTP, SRTP, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, SSH, LLDP, CDP, MQTT v3.1.1, Secure syslog (RFC 3164/5424, UDP/TCP/TLS), Link-Local address (ZeroConf)"

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 512 GB

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)

Ordering Information	
Model	**Description**
SN-TPT6436PA-F09-ZSE30	Thermal Focal Length: 9mm, Optical Focal Length: 5.3 to 159mm
SN-TPT6436PA-F15-ZSE30	Thermal Focal Length: 15mm, Optical Focal Length: 5.3 to 159mm
SN-TPT6436PA-F25-ZSE30	Thermal Focal Length: 25mm, Optical Focal Length: 5.3 to 159mm
SN-TPT6436PA-F35-ZSE30	Thermal Focal Length: 35mm, Optical Focal Length: 5.3 to 159mm
SN-TPT6436PA-F50-ZSE30	Thermal Focal Length: 50mm, Optical Focal Length: 5.3 to 159mm

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.
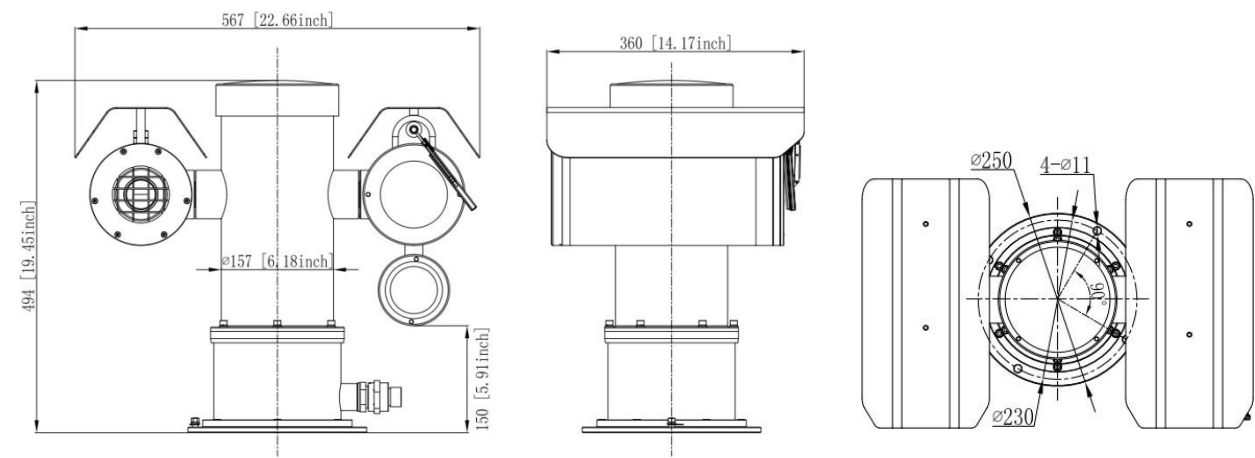
DRI Distance Table					
Focal Length	**9 mm**	**15 mm**	**25 mm**	**35 mm**	**50 mm**
Detection Distance (Humans: 1.8×0.5m)	375 m (1230.3 ft)	625 m (2,050.5 ft)	1,042 m (3,418.6 ft)	1,458 m (4,783.5 ft)	2,083 m (9,196.2 ft)
Detection Distance (Vehicles: 4×1.5m)	1,150 m (3,773 ft)	1,917 m (6,289.3 ft)	3,194 m (10,479 ft)	4,472 m (14,672 ft)	6,389 m (20,961 ft)
Recognition Distance (Humans: 1.8×0.5m)	94 m (308.4 ft)	156 m (511.8 ft)	260 m (853 ft)	365 m (1,197.5 ft)	521 m (1,709.3 ft)
Recognition Distance (Vehicles: 4×1.5m)	288 m (944.9 ft)	479 m (1,571.5 ft)	799 m (2,621.4 ft)	1,118 m (3,668 ft)	1,597 m (5,239.5 ft)
Identification Distance (Humans: 1.8×0.5m)	47 m (154.2 ft)	78 m (255.9 ft)	130 m (426.5 ft)	182 m (597.1 ft)	260 m (853 ft)
Identification Range (Vehicles: 4×1.5m)	144 m (472.4 ft)	240 m (787.4 ft)	399 m (1,309 ft)	559 m (1,834 ft)	799 m (2,621.4 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	**9 mm**	**15 mm**	**25 mm**	**35 mm**	**50 mm**
VCA Detection Distance (Human: 1.8 × 0.5 m)	40 m (131.2 ft)	65 m (213.3 ft)	101 m (331.4 ft)	160 m (524.9 ft)	235 m (771 ft)
VCA Detection Distance (Front/Rear of Vehicle: 4×1.5 m)	75 m (246.1 ft)	130 m (426.5 ft)	230 m (754.6 ft)	320 m (1,049.9 ft)	400 m (1,312.3 ft)
Temperature Measurement (Object: 0.2 × 0.2m)	30 m (94.4 ft)	50 m (164 ft)	83 m (272.3 ft)	117 m (383.9 ft)	167 m (547.9 ft)
Fire Detection (Object: 0.2 × 0.2m)	75 m (246.1 ft)	125 m (410.1 ft)	208 m (682.4 ft)	292 m (958 ft)	417 m (1,368.1 ft)

Dimensions (mm)

Accessories

Optional:

SN-BK402A-SS
Wall Mount

SN-BK404
Pole Mount

SN-BK405-SS
Corner Mount

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

SN-CPL10A-SS
Washing Tank

Flexible Tube