

# SN-TPT6458WZ-Z

Thermal & Optical Bi-spectrum PTZ Camera



## Key Features

- 640 × 512 resolution, 17 μm, VOx UFPA, NETD ≤ 40 mK
- Thermal: 5x / 6x / 9x motorized lens; Visible: 37x / 80x lens optional
- Detection capabilities: Human/vehicle, , smoke & flame, fire point detection
- Intelligent analytics: Intrusion, single/double line crossing, loitering, wrong-way, enter/leave area detection, smart motion detection.
- Power off self-locking, strong wind resistance
- Anti-frozen, NDAA Compliance, IP66

## Specifications

Camera		
	Thermal	Visible
Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays	1/1.8" CMOS
Max Resolution	Sensor is 640×512, Image can be scaled up to 1920×1080	4MP, 2560 (H)×1440 (V)
Pixel Pitch	17μm	N/A
Spectral Range	8 to 14μm	N/A
NETD	≤ 40mK	N/A
Shutter Speed	N/A	1/25 to 1/100,000s
Min Illumination	N/A	Color: 0.005 Lux (F2.1, AGC ON), B/W: 0.0001 Lux (F2.1, AGC ON), 0 Lux with light
Day & Night	N/A	Day mode / Night mode / Time
Lens		
	Thermal	Visible
Lens Type	Varifocal lens	Varifocal lens
Focal Length	30 to 150 mm, 30 to 180 mm, 25 to 225 mm optional	21 to 775 mm / 12.5 to 1000 mm
Max. Aperture	F0.95 to F1.13 / F0.8 to F1.2 / F1 to F1.5	F3.9 to T540 / F3.5 to F16
Field of View (FOV)	30 to 150 mm: - H: 20.56° to 4.15°, V: 16.51° to 3.32° 30 to 180 mm: - H: 20.56° to 3.46°, V: 16.51° to 2.77° 25 to 225 mm: - H: 24.55° to 2.77°, V: 19.75° to 2.22°	21 to 775 mm: - H: 18.9° to 0.55°, V: 14.2° to 0.41° 12.5 to 1000 mm: - H: 33.9° to 0.46°, V: 19.5° to 0.26°
Focus Control	Motorized focal	Motorized focus
Illuminator		
Type	Laser	
IR wavelength	1535 nm ± 10 nm	
Distance	Up to 3 km (9,842.5 ft)	
Control	Auto / Manual	
Intelligent Analytics		
	Thermal	Visible
AI Multi-Target	Human / vehicle / ship detection	Human / vehicle / ship detection

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, Illegal parking Smart Motion Detection Support alarm triggering by specified target types (human and vehicle)
Smoke and Flame Detection	N/A	Supported
Fire Spot Detection	Supported	N/A
Video & Audio		
	Thermal	Visible
Main Stream	1920×1080, 1280×1024, 1280×720, 640×512	2560×1440, 1920×1080, 1280×720
Sub Stream	D1, VGA, 640×512, CIF	704×576, 640×480, 352×288
Frame Rate	Up to 25fps	Up to 25/30fps
Bit Rate Control	CBR/VBR	CBR/VBR
Bit Rate	Main Stream: 100 Kbps to 12 Mbps, Sub Stream: 100 Kbps to 6 Mbps	Main Stream: 32 Kbps to 16 Mbps Sub Stream: 32 Kbps to 8 Mbps
Audio Compression	G.711 A-law, G.711 μ-law, RAW_PCM	G.711 A-law, G.711 μ-law, RAW_PCM
Audio Bit Rate	64 Kbps (G.711), 128 Kbps (PCM)	64 Kbps (G.711), 128 Kbps (PCM)
Image		
	Thermal	Visible
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)	N/A
FFC Control	Auto / Manual	N/A
White Balance	N/A	Auto / Tungsten / Fluorescent / Daylight / Shadow
Noise Reduction	2D/3D DNR	2D/3D DNR
Image Enhancement	N/A	WDR, HLC, BLC, Optical Defog
OSD	Up to 8 OSD	Up to 8 OSD
Gain Control	N/A	Auto / Manual
Mirror	Horizontal / Vertical / Horizontal+Vertical	Horizontal / Vertical / Horizontal+Vertical
Privacy Masking	Up to 4 areas	Supported
Thermal Function		
Temperature Range	-20°C to 150°C (-4°F to 302°F)	
Accuracy	±8°C	
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
<b>PTZ</b>	
Pan/Tilt Range	Pan: 0° to 360° endless, Tilt: -90° to 90°
Pan Speed	Pan: 0.01° to 60°/s,
Tilt Speed	Tilt: 0.01° to 30°/s,
Preset Accuracy	±0.1°
Preset	400
Track	6 tracks
Scan	12 scans
Tour	12 tours, up to 32 presets per tour
Power-Off Memory	Supported
3D Positioning	Supported
Idle Motion	The time can be set (1-240 minutes), and functions such as preset positions, patrols, scans, and tracks can be run.
<b>Event</b>	
Alarm Triggers	IVS, Motion detection, Alarm input, Network alarm, Disk alarm, Abnormal sound detection
Event Actions	Alarm out, Alarm record, SMTP, FTP upload, Audible alarm output
<b>Network</b>	
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
<b>Security</b>	
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

General			
Language	English, Chinese, Polish, Italian, Portuguese, Spanish, Russian, French, Czech, Hungarian. Default: English		
Power Supply	48 VDC ±20%		
Power Consumption	Max 270 W		
Operating Temperature	-40°C to 70°C (-40°F to 158°F)		
Operating Humidity	Less than 90% RH		
Ingress Protection	IP66		
Wiper	Supported		
Material	Metal		
Dimensions	839 × 581.25 × 705 mm (33.03 × 22.88 × 27.76 inch)		
Net Weight	Approx. 82 kg (180.78 lb)		
DORI Distance (EN62676-4 standard)			
Detect	21 to 775 mm: 290 to 10,690 m; 12.5 to 1000 mm: 172 to 13,793 m		
Observe	21 to 775 mm: 117 to 4,310 m; 12.5 to 1000 mm: 70 to 5,562 m		
Recognize	21 to 775 mm: 58 to 2,138 m; 12.5 to 1000 mm: 34 to 2,759 m		
Identify	21 to 775 mm: 29 to 1,069 m; 12.5 to 1000 mm: 17 to 1,379 m		
Thermal DRI Distance			
Thermal Lens	30 to 150 mm	30 to 180 mm	25 to 225 mm
Detection (Human: 1.8×0.5 m)	882 to 4,412 m	882 to 5,294 m	735 to 6,618 m
Detection (Vehicle: 4×1.5 m)	2,706 to 13,529 m	2,706 to 16,235 m	2,255 to 20,294 m
Recognition (Human: 1.8×0.5 m)	221 to 1,103 m	221 to 1,324 m	184 to 1,654 m
Recognition (Vehicle: 4×1.5 m)	676 to 3,382 m	676 to 4,059 m	564 to 5,074 m
Identification (Human: 1.8×0.5 m)	110 to 551 m	110 to 662 m	92 to 827 m
Identification (Vehicle: 4×1.5 m)	338 to 1,691 m	338 to 2,029 m	282 to 2,537 m
<div>Note: Distances are calculated based on Johnson's Criteria. Detection: Object must be covered by ≥1.5 pixels. Recognition: Object must be covered by ≥6 pixels. Identification: Object must be covered by ≥12 pixels.</div>			

## Dimensions (mm)

