



SN-TPT6436HZ-Z

Thermal & Optical Heavy Duty PTZ Camera



Key Features

- 640 × 512 resolution, 12 μm , VOx UFPA, NETD ≤ 40 mK
- Thermal: 30 to 150 mm varifocal lens; Visible: 86x optical zoom module
- Detection capabilities: Human/vehicle, and fire point detection
- Intelligent analytics: Intrusion, single/double line crossing, loitering, wrong-way, enter/leave area detection, smart motion detection, and people counting
- Support 3 temperature measurement rule types (spot, line, area)
- Temperature range: -20°C to 150°C (-4°F to 302°F), Accuracy: $\pm 2^{\circ}\text{C}$ / $\pm 2\%$
- Power off self-locking, strong wind resistance
- Anti-frozen, IP66

Specification

Camera	Thermal	Visible
Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays	1/1.8" STARVIS CMOS
Resolution	Sensor is 640×512, Image can be scaled up to 1280×1024	2560 (H)×1440 (V), 4MP
Pixel Pitch	12μm	
Spectral Range	8 to 14μm	
NETD	≤ 40mK	
Min. Illumination		Color: 0.005 Lux @(F2.1, AGC ON), B/W: 0.0001 Lux (F2.1, AGC ON)
Shutter Speed		1/25 to 1/100,000s
Lens Type	Varifocal lens	86x optical zoom
Focal Length	30 to 150 mm	10 to 860 mm
Max. Aperture	F1.2	F2.1 to F11.2
Focus Control	Motorized focus	Auto/Manual/Semi-automatic
Field of View (FOV)	H: 14.5° to 2.9°, V: 11.6° to 2.3°	H: 38.4° to 0.48°
IVS		
AI Multi-Target	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, Line Crossing, Loitering, Crowd detection
Fire Spot Detection	Support	
People Counting	Support	
Video and Audio		
Stream/Frame Rate	Stream1: 1280×1204, 1280×720, 704×576 @25fps Stream2: D1, CIF @25fps	Stream1: 2560×1440, 1920×1080, 1280×720 @25/30fps Stream2: 704×576, 640×480, 352×288 @25/30fps Stream3: 704×576, 640×480, 352×288 @25/30fps
Bit Rate Control	CBR/VBR	CBR/VBR
Bit Rate	Stream1: 100 Kbps to 8 Mbps, Stream2: 100 Kbps to 6 Mbps	Stream1: 32 kbps to 16 Mbps Stream2: 32 kbps to 8 Mbps Stream3: 32 kbps to 8 Mbps
Region of Interest	Off/On (8 Zone, Rectangle)	Support
Audio Compression	G.711 A-law, G.711 μ-law, PCM	G.711a/G.711u/G.722.1/G.726/MP2L2/AAC/PCM
Audio Bit Rate	64 Kbps (G.711), 128 Kbps (PCM)	64Kbps (G.711) / 16Kbps (G.722.1) / 16Kbps (G.726) / 32 to 192Kbps (MP2L2) / 16 to 64Kbps (AAC)
Image		
Image Setting	Brightness, Contrast, Sharpness	Brightness, Saturation, Contrast, Sharpness

Mirror	Horizontal / Vertical / Horizontal+Vertical	Support
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 / Manual
Day/Night		Auto / Day mode / Night mode / Timer
Noise Reduction	2D/3D DNR	2D/3D DNR
Image Enhancement		WDR, HLC, BLC, Optical Defog
Wide Dynamic Range		True WDR
OSD	Up to 8 OSD	Support
Privacy Masking	Support	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	
PTZ		
Pan/Tilt Range	Pan: 0° to 360° endless, Tilt: +45° to -45°	
Pan/Tilt Speed	Pan: 0.01° to 30°/s, Tilt: 0.01° to 15°/s	
Wiper	Support	
Preset Accuracy	± 0.1°	
Presets	400	
Scan	8 scans, up to 32 presets per scan	
Patrol	12 patrols, up to 32 presets per scan	
Track	6 tracks	
3D Positioning	Support	
Speed Setup	Auto/Manual (0-8)	
Power Off Memory	Support	
Idle Motion	It can activate Preset/ Scan/Tour/Pattern if there is no command in the specified period	
Event		
Alarm Triggers	IVS, Temperature anomaly, Motion detection, Alarm Input, Disk alarm, Network alarm, Abnormal sound detection	

Events Actions	Alarm out, Alarm record, SMTP, FTP upload, Audible alarm
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
Compatible Integration	ONVIF (Profile S/T/G/M), CGI, SDK
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	2ch Audio In, 2ch Audio Out
Alarm Interface	3ch Alarm In, 3ch Alarm Out
RS-485	1
BNC Interface	1 (CVBS output for visible)
SD Card Slot	Built-in, up to 512 GB
Reset Button	Built-in
General	
Language	English, Chinese, Traditional Chinese, Polish, Italian, Portuguese, Spanish, Russian, French, Czech, Hungarian, Japanese, Korean. Default: English
Power Supply	36 VDC
Power Consumption	Max 150 W
Working Temperature / Humidity	-40°C to 60°C (-40°F to 140°F) Humidity: Less than 90% RH
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	IP66
Material	Metal
Dimensions	730 × 443 × 636 mm (28.74 × 17.44 × 25.04 inch)
Net Weight	≤ 48 Kg (105.8 lb)
Ordering Information	
Model	Description
SN-TPT6436HZ-Z5-ZSD86	Thermal Focal Length: 30 to 150 mm Optical Focal Length: 10 to 860 mm

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	30 to 150 mm
Detection Distance (Humans: 1.8×0.5m)	1,248 to 6,242 m (4,094.5 to 20,479 ft)
Detection Distance (Vehicles: 4×1.5m)	3,833 to 19,167 m (12,575.5 to 62,883.9 ft)
Recognition Distance (Humans: 1.8×0.5m)	312 to 1,560 m (1,023.6 to 5,118.1 ft)
Recognition Distance (Vehicles: 4×1.5m)	958 to 4,792 m (3,143.0 to 15,721.8 ft)
Identification Distance (Humans: 1.8×0.5m)	156 to 780 m (511.8 to 2,559.1 ft)
Identification Range (Vehicles: 4×1.5m)	479 to 2,396 m (1,571.5 to 7,860.9 ft)

Thermal Smart Detection 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	30 to 150 mm
VCA Detection Distance (Human: 1.8 × 0.5 m)	Up to 705 m (2,313.0 ft)
VCA Detection Distance (Front/Rear of Vehicle: 4×1.5 m)	Up to 1,200 m (3,937.0 ft)
Temperature Measurement (Object: 0.2 × 0.2m)	100 to 500 m (328.1 to 1,640.4 ft)
Fire Detection (Object: 0.2 × 0.2m)	250 to 1,250 m (820.2 to 4,101 ft)

Dimensions (mm)

