

SN-TPT6358HZ-M

Thermal & Optical Bi-spectrum Heavy Duty PTZ Camera



Key Features

- Bi-Spectrum: 640 × 512 thermal and 4MP visible sensor
- 12 μm VOx uncooled thermal sensor, NETD ≤ 30 mK
- Optional motorized thermal lenses: 75 / 100 mm; 37x / 80x optical zoom visible lens
- Detection capabilities: Human/vehicle, , smoke & flame, fire point detection
- Intelligent analytics: intrusion, smart motion detection, single-line crossing, double-line crossing, loitering, wrong-way detection, enter area, leave area, and people counting
- Temperature monitoring and exception alarms
- Temperature measurement: spot, line, and area
- Temperature range: -20 °C to 150 °C; accuracy: ±8 °C
- Power off self-locking, strong wind resistance
- Anti-frozen, NDAA compliant, IP66

Specifications

Camera		
	Thermal	Visible
Image Sensor	VOx uncooled focal plane array	1/1.8" STARVIS CMOS
Max Resolution	640 × 512 thermal resolution, upscaled output up to 1280 × 1024	4MP, 2560(H) × 1440(V)
Pixel Pitch	12 μm	N/A
Spectral Range	8–14 μm	N/A
NETD	≤ 30 mK	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)
Day & Night	N/A	Auto (ICR)
Lens		
	Thermal	Visible
Lens Type	Fixed lens	Varifocal lens
Focal Length	75 mm / 100 mm (optional)	21–775 mm / 12.5–1000 mm (optional)
Max. Aperture	F1.0	F3.9–T540 / F3.5–F16
Field of View (FOV)	75 mm, H: 6°, V: 5° 100 mm, H: 4°, V: 3°	21–775 mm: H: 18.9°–0.55°, V: 14.2°–0.41° 12.5–1000 mm: H: 33.9°–0.46°, V: 19.5°–0.26°
Focus Control	Motorized focus	Auto / Manual
Intelligent Analytics		
	Thermal	Visible
AI Multi-Target Detection	Supports human, vehicle, and ship detection	Supports human, vehicle, and ship detection
Intelligent Analysis	Intrusion, smart motion detection, single-line crossing, double-line crossing, loitering, wrong-way detection, enter area, leave area; supports alarm triggering based on specified target types (human/vehicle)	Intrusion, smart motion detection, single-line crossing, double-line crossing, loitering, wrong-way detection, enter area, leave area; supports alarm triggering based on specified target types (human/vehicle)
Smoke and Flame Detection	N/A	Supported
People Counting	Supported	Supported
Fire Spot Detection	Supported	N/A
Video & Audio		
	Thermal	Visible
Resolution	Stream 1: 1280 × 1024, 1280 × 720, 640 × 512 Stream 2: D1, CIF	Stream 1: 2560 × 1440, 1920 × 1080, 1280 × 720 Stream 2: 704 × 576, 640 × 480, 352 × 288

Frame Rate	Up to 25 fps	Up to 25/30 fps
Bit Rate Control	CBR/VBR	CBR/VBR
Bit Rate	Stream 1: 100 Kbps to 8 Mbps, Stream 2: 100 Kbps to 6 Mbps	Stream 1: 32 Kbps to 16 Mbps Stream 2: 32 Kbps to 8 Mbps
Smart Encoding	Supported	Supported
Audio Compression	N/A	G.711 A-law, G.711 μ -law, RAW_PCM
Audio Bit Rate	N/A	64 Kbps (G.711), 128 Kbps (PCM)

Image

	Thermal	Visible
Image Adjustment	Brightness, Contrast, Sharpness	Brightness, Saturation, Contrast, Sharpness
Scene Mode	Mirror	Mirror
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 / Manual
Day/Night Setting	N/A	Auto / Day / Night / Timer
Noise Reduction	2D/3D DNR	2D/3D DNR
Image Enhancement	N/A	HLC, BLC, WDR, Optical Defog
Wide Dynamic Range	N/A	True WDR (120 dB)
Privacy Masking	Supported	Supported

Thermal Function

Temperature Range	-20 °C to 150 °C (-4 °F to 302 °F)
Accuracy	± 8 °C
Temperature Detection	Supports 3 rule types (spot, line, and area); up to 20 rules, including 1 full-screen rule and 19 spot/line/area rules
Temperature Alarm	Temperature difference alarm, temperature threshold alarm, and temperature rise alarm
Temperature Display	Lower-left corner display; cursor-based display of maximum, minimum, and average temperature values
Response Time	≤ 30 ms

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless, Tilt: +45° to -45°
Pan Speed	Pan: 0.01° to 30°/s, preset speed: 30°/s
Tilt Speed	Tilt: 0.01° to 15°/s, preset speed: 15°/s
Preset Accuracy	± 0.1 °
Preset	400

Track	6 tracks
Scan	8 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.

Event

Alarm Triggers	IVS, temperature anomaly, motion detection, alarm input, network alarm, disk alarm, and abnormal sound detection
Event Actions	Alarm recording, FTP upload, SMTP email notification, alarm output, and audible alarm output

Network

Protocols	IPv4/IPv6, HTTP/HTTPS, DNS, DDNS, DHCP, PPPoE, RTSP/ RTPC/RTP, TCP/UDP, NTP, ARP, UPnP, FTP, SMTP, QoS, ICMP, IGMP, SMTP, 802.1x, SNMP, Multicast
Application Programming Interface	ONVIF (Profile S/T/G/M), SDK, CGI
Max Concurrent Streams	10 channels
User/Host Level	32+ users, 3 levels: Administrator, Operator, and Media user
Web Viewer	Chrome, Firefox, Microsoft Edge, IE11 or earlier

Security

OS / Firmware Protect	Encrypted firmware, Signed firmware
User Authentication	Digest authentication, Brute-force attack protection
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, and event logs
Supply Chain Security	SBOM

Interface

Network Interface	1 × RJ45 10/100 Mbps Ethernet port
Audio Interface	1 input, 1 output (visible)
Alarm Interface	7 inputs, 2 outputs
RS-485	1 × RS-485
CVBS Output	BNC (thermal / visible, switchable)
SD Card Slot	Built-in microSD card slot (up to 1 TB) *Memory card must be factory pre-installed and is not field-installable.

General

Language	English, Chinese, Traditional Chinese, Polish, Italian, Portuguese, Spanish, Russian, French, Czech, Hungarian, Japanese, Korean. Default: English
Power Supply	48 VDC $\pm$ 20%
Power Consumption	Max. 200 W
Operating Temperature	-40 °C to 65 °C (-40 °F to 149 °F)
Operating Humidity	$\leq$ 95% RH (non-condensing)
Ingress Protection	IP66
Wiper	Supported
Certifications	CE/FCC
Material	Metal
Dimensions	550 × 425 × 661 mm (21.65 × 16.73 × 26.02 in)
Net Weight	$\leq$ 48 Kg (105.8 lb)

DORI Distance (EN 62676-4 standard)

Detect	21-775 mm: 290-10,690 m 12.5-1000 mm: 172-13,793 m
Observe	21-775 mm: 117-4,310 m 12.5-1000 mm: 70-5,562 m
Recognize	21-775 mm: 58-2,138 m 12.5-1000 mm: 34-2,759 m
Identify	21-775 mm: 29-1,069 m 12.5-1000 mm: 17-1,379 m

Thermal DRI Distance

Thermal Lens	75 mm	100 mm
Detection (Human: 1.8×0.5 m)	3.13 km (10,253 ft)	4.17 km (13,670 ft)
Detection (Vehicle: 4×1.5 m)	9.58 km (31,441 ft)	12.78 km (41,922 ft)
Recognition (Human: 1.8×0.5 m)	0.78 km (2,563 ft)	1.04 km (3,418 ft)
Recognition (Vehicle: 4×1.5 m)	2.40 km (7,860 ft)	3.19 km (10,480 ft)
Identification (Human: 1.8×0.5 m)	0.39 km (1,282 ft)	0.52 km (1,709 ft)
Identification (Vehicle: 4×1.5 m)	1.20 km (3,930 ft)	1.60 km (5,240 ft)

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.

Thermal Smart Detection

Lens	75 mm	100 mm
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Temperature Measurement (1 × 1 m)	1.25 km (4,101 ft)	1.67 km (5,468 ft)
Temperature Measurement (0.2×0.2 m)	0.25 km (820 ft)	0.33 km (1,094 ft)
Fire Detection (1×1 m)	3.13 km (10,253 ft)	4.17 km (13,670 ft)
Fire Detection (0.2×0.2 m)	0.63 km (2,051 ft)	0.83 km (2,734 ft)

Note:

Values are for reference only. Actual detection range may vary with atmospheric conditions, target size, and installation environment.

Ordering Info

Model	SN-TPT6358HZ-M75-CD75A	SN-TPT6358HZ-M100-CD100A
Description	Thermal Focal Length: 75 mm Visible Focal Length: 21–775 mm	Thermal Focal Length: 100 mm Visible Focal Length: 12.5–1000 mm

Dimensions (mm)

