RTPT6436HZ-Z5-ZSD60

Thermal & Optical Bi-spectrum Heavy Duty Network PTZ Camera

- 640 × 512 resolution, 12 μm, VOx UFPA, NETD ≤ 40 mK
- Thermal: 30 to 150mm motorized lens; Visible: 60x 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 3 temperature measurement rule types (spot, line, area)
- Temperature monitoring & alarm: -20°C to 150°C (-4°F to 302°F), Accuracy: ±2°C / ±2%
- Power off self-locking, strong wind resistance
- Anti-frozen, IP66

Onvif

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Thermal & Optical Bi-spectrum Heavy Duty Network PTZ Camera

Technical Specification

Camera	Thermal	Visible
Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays	1/1.8" CMOS
Resolution	Sensor is 640×512, Image can be scaled up to 1280×1024	2688 (H)×1520 (V), 4MP
Pixel Pitch	12µm	
Spectral Range	8 to 14µm	
NETD	≤ 40mK	
Min. Illumination		Color: 0.0005 Lux @(F1.35, AGC ON), B/W: 0.0001 Lux @(F1.35, AGC ON)
Shutter Speed		1/25 to 1/100,000s
Lens Type	Motorized lens	60x optical zoom
Focal Length	30 to 150mm	6.4 to 384 mm
Max Aperture	F1.2	F1.35 to F4.6
Focus Control	Motorized focal	Auto/Manual/Semi-automatic
Field of View (FoV)	H: 14.5° to 2.9°, V: 11.6° to 2.3°	H: 61.3° to 1.4°

IVS

AI multi-target	Human and vehicle detection (ship detection optional)	
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)	
Smoke & Flame Detection	Support	
Smoke and Flame Detection	Support	
People Counting	Support	

Video & Audio

Main Stream	1280×1024, 1280×720, 640×512 @25fps	2688×1520, 1920×1080, 1280×960, 1280×720 @25/30fps
Sub Stream	D1, CIF @25/30fps	704×576, 640×480, 352×288 @25/30fps
Bit Rate Control	CBR/VBR	CBR/VBR
Bit Rate	Main Stream: 100Kbps to 8Mbps Sub Stream: 10Kbps to 6Mbps	32 Kbps to 16 Mbps
Smart Encode	Support	Support
Audio Compression	G.711 A-law, G.711 µ-law, RAM PCM	G.711 A-law, G.711 µ-law, RAM 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	
Exposure Mode		Auto Exposure / Aperture Priority / Shutter Priority / Manual Exposure
Defog		Optical Defog
Day/Night		Auto / Manual / Time / Alarm
Noise Reduction	2D/3D DNR	3D DNR
Privacy Masking	Up to 4 areas	

Thermal Function

Temperature Range	-20°C to 150°C (-4°F to 302°F)	Temperature Range
Accuracy	±2°C / ±2%	Accuracy
Temperature Detection	3 temperature measurement rule types, 20 rules in total, 1 full screen, 19 others (spot, areas, line)	Temperature Detection
Temperature Display	Display in the lower left corner; follow the cursor display of the highest temperature, lowest temperature or average temperature	Temperature Display
Image Fusion	Fusion view of thermal view and overlaid details of the optical channel	Image Fusion

Event

Alarm Triggers	IVS, Temperature anomaly, Motion detection, Alarm Input, Disk alarm, Network alarm
Alarm Events	Alarm out, Audio alarm, Alarm record, SMTP, FTP upload

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

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
Interoperability	ONVIF (Profile S/T/G/M), SDK, CGI
User/Host Level	Up to 10 users, 3 levels: Administrator, Operator, Media user
Security	IP address filter, encrypted 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 input, 2ch output
Alarm Interface	3ch input, 3ch output
RS-485	Support
SD Card Slot	Built-in, up to 256GB
Reset Button	Built-in

General

Power Supply	DC36V
Power Consumption	Max 150W
Working Temperature & Humidity	-40°C to 60°C (-40°F to 140°F) Less than 90% RH
Certifications	CE-EMC (EN 55032:2015+A1:2020, EN 55035:2017+A11:2020, EN 50130-4:2011+A1:2014, EN 61000-6-3:2007+A1:2011+AC:2012, EN IEC 61000-3-2:2019, EN 61000-3-3:2013+A1:2019)) FCC (FCC 47 CFR 15, Subpart B, ANSI C63.4-2014)
Ingress Protection	IP66
Material	Metal
Dimensions	730 × 443 × 636mm (28.74×17.44×25.04")
Net Weight	≤ 48Kg (105.8lb)

Ordering Information

Model	Description
RSN-TPT6436HZ-Z5-ZSD60	Thermal Focal Length: 30 to 150 mm Visible Focal Length: 6.4 to 384 mm, 60x optical zoom

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.

Focal Length	30mm to 150mm
Detection Distance (Humans: 1.8×0.5m)	1,250 to 6,250 m (4101.1 to 20,505.3 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 1,563 m (1,023.6 to 5,128.0 ft)
Recognition Distance (Vehicles: 4×1.5m)	958 to 4,792 m (3,143 to 15,721.8 ft)
Identification Distance (Humans: 1.8×0.5m)	156 to 781 m (511.8 to 2,562.3 ft)
Identification Distance (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.

Focal Length	30mm to 150mm
VCA Detection Distance (Human: 1.8×0.5m)	Up to 705 m (2,313.0 ft)
VCA Detection Distance (Front/Rear of Vehicle: 4×1.5m)	Up to 1,200 m (3,937.0 ft)

Dimensions (mm)