Spectrum S-TP384-T07-Z40

Thermal & Optical Bi-spectrum Network Speed Dome Camera



Key Features

- Dual-Spectrum imaging with 384 × 288 thermal and 4 MP visible sensors
- 12 µm VOx uncooled thermal sensor, NETD ≤ 30 mK
- Optional fixed thermal lenses: 5 mm / 7 mm / 15 mm; 40× optical zoom visible lens
- Supports human and vehicle detection; smoking detection, smoke and flame detection, and fire spot detection
- Intelligent analytics: intrusion, smart motion detection, line crossing, loitering, wrong-way detection, enter area, leave area, and people counting
- Temperature monitoring and exception alarms
- Supports temperature measurement rules: spot, line, and area
- Temperature measurement range: -20 °C to 150 °C or 0 °C to 550 °C; accuracy: ±2 °C /±2%
- Smart tracking: hot/cold spot tracking and human/vehicle auto tracking
- Smart IR illumination up to 300 m
- FIPS 140-3 Level 3 certified secure element
- Smart rain-sensing wiper; NDAA compliant, IP66-rated

NDAA Compliant | 5 YEAR WARRANTY | ONVIF | GMST

Description

The Spectrum S-TP384-T07-Z40 is an outdoor bi-spectrum network thermal speed dome (PTZ) camera combining a 384×288 thermal sensor (equipped with a 7mm fixed lens) and a 4MP visible-light sensor with a powerful 40x optical zoom module. It provides continuous 360° pan-and-tilt tracking alongside precision industrial temperature monitoring (-20°C to 150°C or up to 550°C) with exception alarms. This speed dome heavily utilizes edge AI for hot/cold spot tracking, perimeter safety analytics, and early-stage fire, smoke, or smoking detection

Optional Accessory



S-PTZ-PM-HD
Pole Mount

- Compatible with S-TP384 PTZ camera brackets
- Fits poles from Φ100–178 mm (3.94–7.01 in)

Specifications

Spectrum S-TP384-T07-Z40

Camera	Thermal	Optical
Image Sensor	VOx uncooled focal plane array	1/1.8" CMOS
Max Resolution	384 × 288 thermal resolution, upscaled output up to 1280 × 720	4MP, 2688(H) × 1520(V)
Pixel Pitch	12 μm	N/A
Spectral Range	8–14 μm	N/A
NETD	≤ 30 mK	N/A
Shutter Speed	N/A	1/5 to 1/20,000s
Min Illumination	N/A	Color: 0.001 Lux @(F1.5, AGC ON), B/W: 0.0005 Lux @(F1.5, AGC ON), 0 Lux with IR on
Day & Night	N/A	Auto (ICR)

Lens	Thermal	Optical
Lens Type	Fixed lens	Motorized zoom lens
Focal Length	5 mm / 7 mm / 15 mm (optional)	6.27-251 mm (40x optical zoom)
Max. Aperture	F1.0	F1.5 - F4.8
Field of View (FOV)	5 mm: H: 56°, V: 40° 7 mm: H: 44°, V: 33° 15 mm: H: 21°, V: 16°	H: 60.7° - 2.33°, V: 36.8° - 1.38°
Focus Control	Focus-free	Auto / Manual

IR Illuminator	Thermal	Optical
Type	IR	
IR Wavelength	850 nm	
Distance	Up to 300 m (984.25 ft)	
Control	Auto / Manual	

PTZ	
Pan/Tilt Range	Pan: 0° to 360° endless, Tilt: -25° to +90° (auto-flip)
Pan Speed	Pan speed: 0.1° to 300°/s, preset speed: 300°/s
Tilt Speed	Tilt speed: 0.1° to 240°/s, preset speed: 240°/s
Preset Accuracy)	≤ 0.2°
Preset	400
Track	6 Track
Scan	12 Scan
Tour	12 Tour (up to 32 presets each tour)
Intelligent Tracking	Hot/cold spot tracking; Human/Vehicle auto tracking
Power-Off Memory	Supported
3D Positioning	Supported
PTZ Status Display	Supported
Idle Motion	The time can be set (1-240 minutes), and functions such as preset positions, patrols, scans, and tracks can be run.

Video & Audio	Thermal	Optical
Resolution	Stream 1: 1280 × 720, D1, 384 x 288 Stream 2: D1, 384 × 288, CIF	Stream 1: 2688 × 1520, 2560 × 1440, 2304 × 1296, 1920 × 1080, 1280 × 720 Stream 2: D1, VGA
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: 100 Kbps to 16 Mbps Stream 2: 100 Kbps to 6 Mbps
Smart Encoding	Supported	Supported
Audio Compression	G.711 A-law, G.711 μ-law, RAW_PCM	
Audio Bit Rate	64 Kbps (G.711), 128 Kbps (RAW_PCM)	

Image	Thermal	Optical
Image Adjustment	Brightness, Contrast, Sharpness	Brightness, Saturation, Contrast, Sharpness
Scene Mode	Mirror	Indoor, Outdoor, 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
Exposure Mode	N/A	Auto / Manual
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, Defog, WDR
Wide Dynamic Range	N/A	True WDR (120 dB)
Privacy Masking	Supported	Supported

Intelligent Analytics	Thermal	Optical
AI Multi-Target Detection	Supports human and vehicle 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)	
Smoke and Flame Detection	N/A	Supported
People Counting	Supported	Supported
Smoking Detection	Supported	N/A
Fire Spot Detection	Supported	N/A

Specifications

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Thermal Function

Temperature Range	-20 °C to 150 °C (-4 °F to 302 °F), or 0 °C to 550 °C (32 °F to 1022 °F)
Accuracy	±2 °C or ±2% (whichever is greater)
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
Image Fusion	Thermal and optical image fusion

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, flashing light alarm, and 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
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
Security	SBuilt-in FIPS 140-3 Level 3 Certified Secure Element

Interface

Network Interface	1 × RJ45 10/100 Mbps Ethernet port
Audio Interface	1 input (RCA), 1 output (RCA)
Alarm Interface	7 inputs, 2 outputs
RS-485	1 × RS-485
CVBS Output	1 × BNC
SD Card Slot	Built-in microSD card slot (up to 1 TB)

Dori Distance (EN 62676-4 Standard)

Detect	95–3,515 m (311.68–11,532.15 ft)
Observe	38–1,406 m (124.67–4,612.86 ft)
Recognize	19–703 m (62.34–2,306.43 ft)
Identify	9.5–351.5 m (31.17–1,153.22 ft)

Thermal DRI Distance

Thermal Lens	5 mm	7 mm	15 mm
Detection (Human: 1.8×0.5 m)	208 m (682.4 ft)	292 m (958 ft)	625 m (2050.5 ft)
Detection (Vehicle: 4×1.5 m)	639 m (2096.5 ft)	894 m (2933.1 ft)	1917 m (6289.4 ft)
Recognition (Human: 1.8×0.5 m)	52 m (170.6 ft)	73 m (239.5 ft)	156 m (511.8 ft)
Recognition (Vehicle: 4×1.5 m)	160 m (524.9 ft)	224 m (734.9 ft)	479 m (1571.5 ft)
Identification (Human: 1.8×0.5 m)	26 m (85.3 ft)	36 m (118.1 ft)	78 m (255.9 ft)
Identification (Vehicle: 4×1.5 m)	80 m (262.5 ft)	112 m (367.5 ft)	240 m (787.4 ft)

Thermal Smart Detection

Lens	5 mm	7 mm	15 mm
VCA Detection (Human: 1.8×0.5 m)	45 m (147.6 ft)	65 m (213.3 ft)	110 m (360.9 ft)
VCA Detection (Vehicle: 4×1.5 m)	50 m (164 ft)	80 m (262.5 ft)	140 m (459.3 ft)
Temperature Measurement (1 ×1 m)	83 m (272.3 ft)	117 m (383.9 ft)	250 m (820.2 ft)
Temperature Measurement (0.2×0.2 m)	17 m (55.8 ft)	23 m (75.5 ft)	50 m (164 ft)
Fire Detection (1×1 m)	208 m (682.4 ft)	292 m (958 ft)	625 m (2050.5 ft)
Fire Detection (0.2×0.2 m)	42 m (137.8 ft)	58 m (190.3 ft)	125 m (410.1 ft)

General

Materials	Aluminum alloy
Weight	**Approx. 6 Kg (13.2 lb)**
Power Supply	24 VAC / 36 VDC / PoE++ (802.3bt), Standard Equipped: 36 VDC
Power Consumption	Max. 45 W
Operating Conditions	-40 °C to 60 °C (-40 °F to 140 °F) Humidity ≤ 95% RH (non-condensing)
IP Rating	IP66
Wiper	Supported
Language	English, Chinese, Traditional Chinese, Polish, Italian, Portuguese, Spanish, Russian, French, Czech, Hungarian, Japanese, Korean. Default: English
Warranty	5-year warranty - with registration
Certifications	CE-EMC: EN 55032, EN IEC 61000-6-4, EN IEC 61000-3-2, EN 61000-3-3, EN 55035, EN 50130-4 CE-LVD: EN IEC 62368-1 FCC: 47 CFR Part 15, Subpart B
Dimensions	Φ226 × 363 mm (Φ8.9 × 14.29 in)