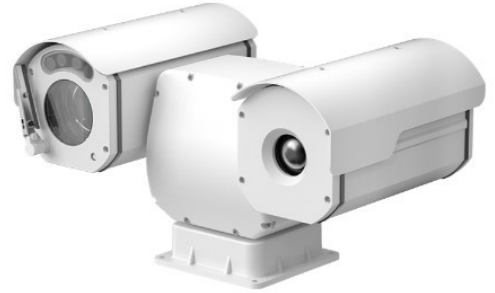


## MS-7TPT4234QZ-F

Thermal & Optical Bi-spectrum Mini PTZ Camera



### Key Features

- Bi-spectrum: 384 × 288 thermal and 5 MP visible sensor
- Sensor: 17 μm VOx uncooled thermal sensor, NETD ≤ 40 mK
- Optional fixed thermal lenses: 9 / 15 / 25 mm; 30x optical zoom visible lens
- Supports human/vehicle detection; smoking, smoke and flame detection, and fire spot detection
- Intelligent analytics: intrusion, smart motion detection, single/double line crossing, loitering, wrong-way detection, enter/leave area, and people counting, EPP
- Temperature monitoring and exception alarms
- Temperature measurement: spot, line, and area
- Temperature range: -20 °C to 150 °C; accuracy: ±2 °C / ±2%
- NDAA compliant / FIPS140-3
- IP66



## Specifications

Camera		
Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays	1/2.8" SRAVIS CMOS
Max Resolution	Sensor is 384×288, Image can be scaled up to 1280×1024	2592 (H)×1944 (V), 5MP
Pixel Pitch	17 μm	N/A
Spectral Range	8 to 14 μm	N/A
NETD	≤ 40mK	N/A
Shutter Speed	N/A	1/5 to 1/100,000s
Min Illumination	N/A	Color: 0.005 Lux @(F1.6, AGC ON), B/W: 0.0001 Lux (F1.6, AGC ON), 0 Lux with illuminator on
Day & Night	N/A	Auto (ICR)
Lens		
Lens Type	Fixed lens	Motorized zoom lens
Focal Length	9 mm, 15 mm, 25 mm optional	5.3 to 159 mm, 30x optical zoom
Max. Aperture	F1.0	F1.6 to F4.4
Field of View (FOV)	9 mm, H: 37°, V: 28°; 15 mm, H: 28°, V: 21°; 25 mm, H: 14°, V: 11°	H: 56.8° to 2.6°, V: 42.7° to 2.0°
Focus Control	Focus-free	Auto / Manual
Illuminator		
Type	Warm light	
Distance	Up to 30 m (98.4 ft)	
Control	Auto / Manual	
Intelligent Analytics		
AI Multi-Target	Supports human / vehicle detection.	Supports face, human, and vehicle detection & capture. Supports human and vehicle attribute detection
Attribute Extraction	N/A	- Human Attributes: Gender, age, glasses, hat, bag, upper clothing color & style, lower clothing color & style, reflective vest. - Vehicle Attributes: Type, color, brand, orientation.
Intelligent Analysis	Intrusion detection, smart motion detection, single line crossing, double line crossing, loitering, wrong-way detection, enter/leave area detection.	Intrusion detection, smart motion detection, single line crossing, double line crossing, loitering, wrong-way detection, area people limit, perimeter detection, illegal parking, running detection, fall detection, fight, EPP

	- Supports accurate target classification (human/vehicle)	detection. - Supports accurate target classification (human/vehicle)
Smoke and Flame Detection	N/A	Supported
People Counting	Supported	Supported
Smoking Detection	Supported	N/A
Fire Spot Detection	Supported	N/A
<b>Video &amp; Audio</b>		
Resolution	Stream1: 1280×1024, 1280×720, 384×288, Stream2: D1, CIF	Stream1: 2592×1944, 2592×1520, 1920×1080, 1280×720 Stream2: D1, VGA, CIF Stream3: VGA, CIF, QVGA
Frame Rate	Up to 25fps	Up to 25/30fps
Bit Rate Control	CBR/VBR	CBR/VBR
Bit Rate	Main stream: 100 Kbps to 8 Mbps, Sub stream: 10 Kbps to 6 Mbps	Stream1: 200 kbps to 12 Mbps, Stream2: 100 kbps to 6 Mbps Stream3: 100 kbps to 3 Mbps
Smart Encoding	Supported	Supported
Region of Interest (ROI)	N/A	Supported
Audio Compression	N/A	G.711 A-law, G.711 $\mu$ -law, RAW_PCM
Audio Bit Rate	N/A	64 Kbps (G.711), 128 Kbps (RAW_PCM)
<b>Image</b>		
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
Day/Night Setting	N/A	Auto / Day / Night / Timer
Noise Reduction	2D/3D DNR	2D/3D DNR
Image Enhancement	N/A	WDR, HLC, BLC, Defog, Anti-shake
Wide Dynamic Range	N/A	True WDR(120dB)
Privacy Masking	Supported	Supported
<b>Thermal Function</b>		
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	Supports threshold alarm, temperature difference alarm, range alarm, and 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 20°/s, preset speed: 20°/s
Tilt Speed	Tilt: 0.01° to 10°/s, preset speed: 10°/s
Preset Accuracy	± 0.1°
Preset	400
Track	6 tracks
Scan	8 scans
Tour	12 tours, up to 32 presets per patrol
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, Temperature anomaly, Motion detection, Alarm Input, Disk alarm, Network alarm
Event Actions	Alarm output, 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
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, Secure boot, 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		
Supply Chain Security	SBOM		
<b>Interface</b>			
Network Interface	RJ-45 Ethernet (10/100BASE-T)		
Built-in Speaker	Supported (visible)		
Alarm Interface	1 input, 1 output (thermal)		
Control Interface	RS-485		
CVBS Output	BNC (visible)		
SD Card Slot	MicroSD card slot (max. 1 TB) *Memory card must be factory pre-installed and is not field-installable.		
<b>General</b>			
Language	English, Chinese, Traditional Chinese, Polish, Italian, Portuguese, Spanish, Russian, French, Czech, Hungarian, Japanese, Korean. Default: English		
Power Supply	12 VDC		
Power Consumption	Typical: 18 W, Max 36 W		
Operating Temperature	-40°C to 60°C (-40°F to 140°F)		
Operating Humidity	≤ 95% RH (non-condensing)		
Ingress Protection	IP66		
Wiper	Supported		
Certifications	CE-EMC - EN 55032, EN IEC 61000-6-4, EN IEC 61000-3-2, EN 61000-3-3, EN 55035, EN 50130-4 FCC 47 CFR Part 15 Subpart B, FIPS 140-3		
Material	Metal		
Dimensions	348 × 200 × 200 mm (13.7 × 7.87 × 7.87 inch)		
Net Weight	Approx. 5 kg (11.0 lb)		
<b>DORI Distance (EN62676-4 standard)</b>			
Detect	103 to 3,090 m (337.93 to 10,137.8 ft)		
Observe	41.2 to 1,236 m (135.17 to 4,055.1 ft)		
Recognize	20.6 to 618 m (67.59 to 2,027.6 ft)		
Identify	10.3 to 309 m (33.79 to 1,013.8 ft)		
<b>Thermal DRI Distance</b>			
Thermal Lens	9 mm	15 mm	25 mm
Detection (Human: 1.8×0.5 m)	265 m (869.4 ft)	441 m (1,446.9 ft)	735 m (2,411.4 ft)
Detection (Vehicle: 4×1.5 m)	812 m (2,664.0 ft)	1,353 m (4,439.0 ft)	2,255 m (7,398.3 ft)
Recognition (Human: 1.8×0.5 m)	66 m (216.5 ft)	110 m (360.9 ft)	184 m (603.7 ft)



Recognition (Vehicle: 4x1.5 m)	203 m (666.0 ft)	338 m (1,108.9 ft)	564 m (1,850.4 ft)
Identification (Human: 1.8x0.5 m)	33 m (108.3 ft)	55 m (180.5 ft)	92 m (301.8 ft)
Identification (Vehicle: 4x1.5 m)	101 m (331.4 ft)	169 m (554.5 ft)	282 m (925.2 ft)

**Note:**

*Distances are calculated based on Johnson's Criteria.*

*Detection: Object must be covered by  $\geq 1.5$  pixels.*

*Recognition: Object must be covered by  $\geq 6$  pixels.*

*Identification: Object must be covered by  $\geq 12$  pixels.*

Thermal Smart Detection			
Lens	9 mm	15 mm	25 mm
Temperature Measurement (1 x1 m)	106 m (347.8 ft)	176 m (577.4 ft)	294 m (964.6 ft)
Temperature Measurement (0.2x0.2 m)	21 m (68.9 ft)	35 m (114.8 ft)	59 m (193.6 ft)
Fire Detection (1x1 m)	265 m (869.4 ft)	441 m (1,446.9 ft)	735 m (2,411.2 ft)
Fire Detection (0.2x0.2 m)	53 m (173.9 ft)	88 m (288.7 ft)	147 m (482.3 ft)

**Note:**

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

Ordering Info	
Model	Description
MS-7TPT4234QZ-F09-ZSE30	Thermal Focal Length: 9 mm Visible Focal Length: 5.3 to 159 mm, 30x optical zoom
MS-7TPT4234QZ-F15-ZSE30	Thermal Focal Length: 15 mm Visible Focal Length: 5.3 to 159 mm, 30x optical zoom
MS-7TPT4234QZ-F25-ZSE30	Thermal Focal Length: 25 mm Visible Focal Length: 5.3 to 159 mm, 30x optical zoom

**Dimensions**

