

## MS-7TPC6457VM-F

Rugged Vehicle Mounted Network Dual Optical and Thermal Camera with Fusion Vision Technology



### Key Features

- 640 × 512 resolution, 12 μm, VOx UFPA, NETD < 30 mK
- 7mm fixed thermal lens; 2.8mm visible lens
- Supports human/vehicle detection and smoke, flame, and fire-point detection.
- Intelligent analytics including intrusion, smart motion detection, line crossing (single/double), loitering, wrong-way detection, enter/leave area detection, and people counting.
- Support 3 temperature measurement rule types (spot, line, area)
- Temperature monitoring & alarm: -20°C to 150°C; accuracy: ±2°C or ±2%.
- Built-in microphone and 1ch audio output
- Support 12VDC/PoE power supply
- IP66



## Specification

| Camera                    | Thermal  | Visible  |
|---------------------------|--|--|
| Image Sensor              | Vanadium Oxide Uncooled Focal Plane Arrays   | 1/1.8" CMOS  |
| Max. Resolution           | Sensor is 640×512, Image can be scaled up to 1920×1080   | 4MP, 2592 (H)×1520 (V)   |
| Pixel Pitch               | 12μm   | N/A  |
| Spectral Range            | 8 to 14μm  | N/A  |
| NETD                      | < 30mK   | N/A  |
| Shutter Speed             | N/A  | 1/5 to 1/20,000s   |
| Min. Illumination         | N/A  | Color: 0.005 Lux (F1.6, AGC ON),<br>B/W: 0.001 Lux (F1.6, AGC ON)  |
| Day & Night               | N/A  | Auto (ICR)   |
| Lens                      |  |  |
| Lens Type                 | Fixed lens   | Fixed lens   |
| Focal Length              | 7 mm   | 2.8 mm   |
| Max. Aperture             | F1.0   | F1.6   |
| Field of View (FOV)       | H: 63°, V: 50°   | H: 112°, V: 58°  |
| Focus Control             | Free-focus   | Fixed  |
| Intelligent Analytics     |  |  |
| AI Multi-Target           | Human and vehicle detection  | Human and vehicle detection  |
| Intelligent Analysis      | Intrusion, smart motion detection, single/double line crossing, loitering, wrong-way detection, and enter/leave area detection.<br>- Supports accurate target classification (human/vehicle) | Intrusion, smart motion detection, single/double line crossing, loitering, wrong-way detection, and enter/leave area detection.<br>- Supports accurate target classification (human/vehicle) |
| Smoke and Flame Detection | N/A  | Supported  |
| Smoking Detection         | Supported  | N/A  |
| Fire Spot Detection       | Supported  | N/A  |
| Video and Audio           |  |  |
| Resolution                | Stream1: 1920×1080, 1280×1024, 1280×720, 640×512<br>Stream2: D1, VGA, 640×512, CIF   | Stream1: 2688×1520, 2560×1440, 2304×1296, 1920×1080, 1280×720<br>Stream2: D1, VGA  |
| Frame Rate                | Up to 25fps  | Up to 25/30fps   |
| Bit Rate Control          | CBR/VBR  | CBR/VBR  |
| Bit Rate                  | Stream1: 100 Kbps to 12 Mbps,<br>Stream2: 100 Kbps to 6 Mbps   | Stream1: 100 kbps to 12 Mbps<br>Stream2: 100 kbps to 6 Mbps  |
| Smart Encoding            | Supported  | Supported  |

# MoviSight

|                                   |  |  |
|-----------------------------------|--|--|
| Region of Interest                | N/A  | Supported  |
| Audio Compression                 | G.711 A-law, G.711 $\mu$ -law, RAW_PCM   | G.711 A-law, G.711 $\mu$ -law, RAW_PCM                     |
| Audio Bit Rate                    | 64 Kbps (G.711), 128 Kbps (RAW_PCM)  | 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  |
| White Balance                     | N/A  | Auto / Tungsten / Fluorescent / Daylight / Shadow / Manual |
| Day/Night                         | N/A  | Auto / Day mode / Night mode / Timer                       |
| Noise Reduction                   | 2D/3D DNR  | 2D/3D DNR  |
| Image Enhancement                 | N/A  | WDR, HLC, BLC, Defog                                       |
| Wide Dynamic Range                | N/A  | True WDR(120dB)  |
| OSD                               | Up to 8 OSD  | Up to 8 OSD  |
| Privacy Masking                   | Supported  | Supported  |
| <b>Thermal Function</b>           |  |  |
| Temperature Range                 | -20°C to 150°C (-4°F to 302°F)   |  |
| Accuracy                          | $\pm 2^\circ\text{C}$ / $\pm 2\%$  |  |
| 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                     | $\leq 30\text{ms}$   |  |
| Image Fusion                      | Fusion view of thermal view and overlaid details of the optical channel  |  |
| <b>Event</b>                      |  |  |
| Alarm Triggers                    | IVS, Temperature anomaly, Motion detection, Disk alarm, Network alarm, Abnormal sound detection  |  |
| Event Actions                     | Alarm record, SMTP, FTP upload, Audible alarm  |  |
| <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, SDK  |  |

# MoviSight

|                             |  |
|-----------------------------|--|
| 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, 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   |
| Secure Storage              | SDcard partition encrypt(AES-256), Secure element  |
| Supply Chain Security       | SBOM   |
| <b>Interface</b>            |  |
| Network Interface           | 1 × Ethernet (10/100 Base-T), RJ-45 connector  |
| Built-in Microphone         | Supported  |
| Audio Interface             | 1ch input  |
| CVBS Output                 | Supported  |
| <b>General</b>              |  |
| Language                    | English, Chinese, Traditional Chinese, Polish, Italian, Portuguese, Spanish, Russian, French, Czech, Hungarian, Japanese, Korean. Default: English |
| Power Supply                | 12 VDC / PoE (802.3af)   |
| Power Consumption           | Max. 6 W   |
| Operating Temperature       | -40°C to 60°C (-40°F to 140°F)   |
| Operating Humidity          | Less than 95% RH (no condensation)   |
| Certifications              | CE / FCC   |
| Ingress Protection          | IP66   |
| Material                    | Aluminum alloy   |
| Dimensions                  | 151 × 130 × 135 mm (5.94 × 5.12 × 5.31 inch)   |
| Net Weight                  | Approx. 1.77 Kg (3.9 lb)   |
| <b>Thermal DRI Distance</b> |  |

# MoviSight

|   |                   |
|---|-------------------|
| Thermal Lens                                  | 7 mm              |
| Detection Distance<br>(Humans: 1.8×0.5m)      | 292 m (958.0 ft)  |
| Detection Distance<br>(Vehicles: 4×1.5m)      | 894 m (2933.1 ft) |
| Recognition Distance<br>(Humans: 1.8×0.5m)    | 73 m (239.5 ft)   |
| Recognition Distance<br>(Vehicles: 4×1.5m)    | 224 m (734.9 ft)  |
| Identification Distance<br>(Humans: 1.8×0.5m) | 36 m (118.1 ft)   |
| Identification Range<br>(Vehicles: 4×1.5m)    | 112 m (367.5 ft)  |

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.

## Thermal Smart Detection

|   |                  |
|---|------------------|
| Temperature Measurement<br>(Object: 1 × 1m)     | 117 m (383.9 ft) |
| Temperature Measurement<br>(Object: 0.2 × 0.2m) | 23 m (75.5 ft)   |
| Fire Detection<br>(Object: 1 × 1m)              | 292 m (958 ft)   |
| Fire Detection<br>(Object: 0.2 × 0.2m)          | 58 m (190.3 ft)  |

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