

# MoviSight

## MS-7TPC6457DLT-F

Thermal & Optical Bi-spectrum Bullet Network Camera



### Key Features

- 640 × 512 resolution, 12 μm, VOx UFPA, NETD ≤ 50 mK
- Lens optional: Thermal - 9/15/25/35/50mm fixed; Visible - 4/6/10 to 30mm lens
- Detection capabilities: Human/vehicle, smoker, smoke & flame, fire point detection
- Intelligent analytics: Intrusion, single/double line crossing, loitering, wrong-way, people counting, enter/leave area detection, smart motion detection
- 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%
- Built-in speaker and strobe light; supports sound-light alarm
- Smart IR range up to 100m
- Support 12VDC/24VAC/PoE+ power supply
- IP66

## 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 1920×1080                                                                                                                                                          | 2688(H) × 1520(V)                                                                                                                                                                                               |
| Pixel Pitch               | 12μm                                                                                                                                                                                                            |                                                                                                                                                                                                                 |
| Spectral Range            | 8 to 14μm                                                                                                                                                                                                       |                                                                                                                                                                                                                 |
| NETD                      | ≤ 40mK                                                                                                                                                                                                          |                                                                                                                                                                                                                 |
| Min. Illumination         |                                                                                                                                                                                                                 | Color: 0.005Lux @(F1.6, AGC ON),<br>B/W: 0.001Lux @(F1.6, AGC ON), 0Lux with IR                                                                                                                                 |
| Shutter Speed             |                                                                                                                                                                                                                 | 1/5 to 1/20,000s                                                                                                                                                                                                |
| Lens Type                 | Fixed                                                                                                                                                                                                           | Fixed                                                                                                                                                                                                           |
| Focal Length              | 9 mm, 15 mm, 25 mm, 35 mm, 50 mm                                                                                                                                                                                | 4mm, 6mm, 10 to 30mm optional                                                                                                                                                                                   |
| Max. Aperture             | F1.0                                                                                                                                                                                                            | F1.6                                                                                                                                                                                                            |
| Focus Control             | Fixed focal                                                                                                                                                                                                     | 4 mm / 6mm: Fixed focal<br>10 to 30 mm: Motorized focal                                                                                                                                                         |
| Field of View (FOV)       | 9 mm: H: 48°, V: 38°<br>15 mm: H: 29°, V: 23°<br>25 mm: H: 17°, V: 14°<br>35 mm: H: 12°, V: 10°<br>50 mm: H: 8°, V: 7°                                                                                          | 4 mm: H: 87°, V: 47°<br>6 mm: H: 55°, V: 30°<br>10 to 30mm: H: 43.4° to 15.5°, V: 23.8° to 8.8°                                                                                                                 |
| IVS                       |                                                                                                                                                                                                                 |                                                                                                                                                                                                                 |
| AI Multi-Target           | Human and vehicle detection                                                                                                                                                                                     | Human and vehicle detection                                                                                                                                                                                     |
| Intelligent Analysis      | Intrusion, Single Line Crossing, Double Line Crossing, Loitering, Wrong-Way Detection, Enter Area, Leave Area, Smart Motion Detection<br>Support alarm triggering by specified target types (human and vehicle) | Intrusion, Single Line Crossing, Double Line Crossing, Loitering, Wrong-Way Detection, Enter Area, Leave Area, Smart Motion Detection<br>Support alarm triggering by specified target types (human and vehicle) |
| Smoker Detection          | Support                                                                                                                                                                                                         |                                                                                                                                                                                                                 |
| Smoke and Flame Detection |                                                                                                                                                                                                                 | Support                                                                                                                                                                                                         |
| Fire Spot Detection       | Support                                                                                                                                                                                                         |                                                                                                                                                                                                                 |
| People Counting           | Support                                                                                                                                                                                                         | Support                                                                                                                                                                                                         |
| Video and Audio           |                                                                                                                                                                                                                 |                                                                                                                                                                                                                 |
| Main Stream               | 1920×1080, 1280×1024, 1280×720, 640×512 @25fps                                                                                                                                                                  | 2688×1520, 1920×1080, 1280×720 @25/30fps                                                                                                                                                                        |
| Sub Stream                | D1, VGA, 640×512, CIF @25fps                                                                                                                                                                                    | D1, 640×360, CIF @25/30fps                                                                                                                                                                                      |
| Bit Rate Control          | CBR/VBR                                                                                                                                                                                                         | CBR/VBR                                                                                                                                                                                                         |
| Bit Rate                  | Main Stream: 100Kbps to 8Mbps,<br>Sub Stream: 100Kbps to 6Mbps                                                                                                                                                  | Main Stream: 200Kbps to 12Mbps<br>Sub Stream: 100Kbps to 6Mbps                                                                                                                                                  |
| 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)                                    |                                                                                                                                                                                                                 |

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|------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| FFC Control            | Auto / Manual                                                                                                                     |                                                                                                                   |
| Gain Control           |                                                                                                                                   | Auto / Manual                                                                                                     |
| White Balance          |                                                                                                                                   | Auto / Tungsten / Fluorescent / Daylight / Shadow                                                                 |
| Day/Night              |                                                                                                                                   | Day mode / Night mode / Time                                                                                      |
| Noise Reduction        | 2D/3D DNR                                                                                                                         | 2D/3D DNR                                                                                                         |
| Image Enhancement      |                                                                                                                                   | WDR, HLC, BLC                                                                                                     |
| Wide Dynamic Range     |                                                                                                                                   | True WDR 120dB                                                                                                    |
| OSD                    | Up to 8 OSD                                                                                                                       | Up to 8 OSD                                                                                                       |
| Privacy Masking        | Up to 4 areas                                                                                                                     | Up to 4 areas                                                                                                     |
| Illuminator            |                                                                                                                                   | IR Range:<br>-4 mm: Up to 70 m (229.6 ft)<br>-6 mm: Up to 80 m (262.5 ft)<br>-10 to 30 mm: Up to 100 m (328.0 ft) |
| Thermal Function       |                                                                                                                                   |                                                                                                                   |
| 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 Display    | Display in the lower left corner; follow the cursor display of the highest temperature, lowest temperature or average temperature |                                                                                                                   |
| Image Fusion           | Fusion view of thermal view and overlaid details of the optical channel                                                           |                                                                                                                   |
| Event                  |                                                                                                                                   |                                                                                                                   |
| Alarm Triggers         | IVS, Temperature anomaly, Motion detection, Alarm Input, Disk alarm, Network alarm, Abnormal sound detection                      |                                                                                                                   |
| Alarm Events           | Alarm out, Audio alarm, Flashing light alarm, Alarm record, SMTP, FTP upload                                                      |                                                                                                                   |
| 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    |                                                                                                                   |
| Compatible Integration | ONVIF (Profile S/T/G/M), CGI, SDK                                                                                                 |                                                                                                                   |
| 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        | 1ch input, 1ch output                                                                                                             |                                                                                                                   |
| Built-in MIC           | Support                                                                                                                           |                                                                                                                   |
| Built-in Speaker       | Support, Alarm sound transmission distance of 150m (492.13ft) (in a wooded environment)                                           |                                                                                                                   |
| Alarm Interface        | 2ch input, 2ch output                                                                                                             |                                                                                                                   |
| Analog Output          | Support (Thermal imaging or Visible switchable)                                                                                   |                                                                                                                   |
| RS-485                 | 1                                                                                                                                 |                                                                                                                   |
| SD Card Slot           | Support Micro SD card, up to 1TB                                                                                                  |                                                                                                                   |
| Reset Button           | Support                                                                                                                           |                                                                                                                   |
| General                |                                                                                                                                   |                                                                                                                   |
| Web Language           | English, Chinese, Polish, Italian, Portuguese, Spanish, Russian, French, Czech, Hungarian. Default: English                       |                                                                                                                   |

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|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Supply                     | 12 VDC/24 VAC/PoE+ (802.3at)                                                                                                                                                                                             |
| Power Consumption                | Max 25W                                                                                                                                                                                                                  |
| Working Temperature and Humidity | -40°C to 60°C (-40°F to 140°F)<br>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))<br>FCC (FCC 47 CFR 15, Subpart B, ANSI C63.4-2014) |
| Ingress Protection               | IP66                                                                                                                                                                                                                     |
| Material                         | Metal                                                                                                                                                                                                                    |
| Dimensions                       | (327.4 to 347.4) × 140.04 × 120.72mm, (12.89 to 13.55) × 5.59 × 4.75 inch)                                                                                                                                               |
| Net Weight                       | 2.0Kg (4.41lb) with 50mm lens                                                                                                                                                                                            |

| Ordering Information |                                                              |
|----------------------|--------------------------------------------------------------|
| Model                | Description                                                  |
| MS-7TPC6457DLT-F9    | Thermal Focal Length: 9mm, Optical Focal Length: 4mm         |
| MS-7TPC6457DLT-F15   | Thermal Focal Length: 15mm, Optical Focal Length: 6mm        |
| MS-7TPC6457DLT-F25   | Thermal Focal Length: 25mm, Optical Focal Length: 10 to 30mm |
| MS-7TPC6457DLT-F35   | Thermal Focal Length: 35mm, Optical Focal Length: 10 to 30mm |
| MS-7TPC6457DLT-F50   | Thermal Focal Length: 50mm, Optical Focal Length: 10 to 30mm |

## 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.

| DRI Distance Table                         |                    |                      |                      |                      |                      |
|--------------------------------------------|--------------------|----------------------|----------------------|----------------------|----------------------|
| Focal Length                               | 9 mm               | 15 mm                | 25 mm                | 35 mm                | 50 mm                |
| Detection Distance (Humans: 1.8×0.5m)      | 375 m (1230.3 ft)  | 625 m (2,050.5 ft)   | 1,042 m (3,418.6 ft) | 1,456 m (4,776.9 ft) | 2,083 m (9,196.2 ft) |
| Detection Distance (Vehicles: 4×1.4m)      | 1,150 m (3,773 ft) | 1,917 m (6,289.3 ft) | 3,194 m (10,479 ft)  | 4,472 m (14,672 ft)  | 6,389 m (20,961 ft)  |
| Recognition Distance (Humans: 1.8×0.5m)    | 94 m (308.4 ft)    | 156 m (511.8 ft)     | 260 m (853 ft)       | 365 m (1,197.5 ft)   | 521 m (1,709.3 ft)   |
| Recognition Distance (Vehicles: 4×1.4m)    | 288 m (944.9 ft)   | 479 m (1,571.5 ft)   | 799 m (2,621.4 ft)   | 1,118 m (3,668 ft)   | 1,597 m (5,239.5 ft) |
| Identification Distance (Humans: 1.8×0.5m) | 47 m (154.2 ft)    | 78 m (255.9 ft)      | 130 m (426.5 ft)     | 182 m (597.1 ft)     | 260 m (853 ft)       |
| Identification Range (Vehicles: 4×1.4m)    | 144 m (472.4 ft)   | 240 m (787.4 ft)     | 399 m (1,309 ft)     | 559 m (1,834 ft)     | 799 m (2,621.4 ft)   |

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## 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.

| Detection Range Table                                      |                    |                    |                      |                      |                      |
|------------------------------------------------------------|--------------------|--------------------|----------------------|----------------------|----------------------|
| Focal Length                                               | 9 mm               | 15 mm              | 25 mm                | 35 mm                | 50 mm                |
| VCA Detection Distance<br>(Human: 1.8 × 0.5 m)             | 47 m (154.2 ft)    | 84 m (275.6 ft)    | 145 m (475.7 ft)     | 188 m (616.8 ft)     | 280 m (918.6 ft)     |
| VCA Detection Distance<br>(Front/Rear of Vehicle: 4×1.5 m) | 110 m (360.9 ft)   | 190 m (623.4 ft)   | 280 m (918.6 ft)     | 380 m (1,246.7 ft)   | 450 m (1,476.4 ft)   |
| Temperature Measurement<br>(Object: 1 × 1m)                | 150 m (492.1 ft)   | 250 m (820.2 ft)   | 417 m (1,368.1 ft)   | 583 m (1,912.7 ft)   | 833 m (2,732.9 ft)   |
| Temperature Measurement<br>(Object: 0.2 × 0.2m)            | 30 m (94.4 ft)     | 50 m (164 ft)      | 83 m (272.3 ft)      | 117 m (383.9 ft)     | 167 m (547.9 ft)     |
| Fire Detection<br>(Object: 1 × 1m)                         | 375 m (1,230.3 ft) | 625 m (2,050.5 ft) | 1,042 m (3,418.6 ft) | 1,458 m (4,783.5 ft) | 2,083 m (9,196.2 ft) |
| Fire Detection<br>(Object: 0.2 × 0.2m)                     | 75 m (246.1 ft)    | 125 m (410.1 ft)   | 208 m (682.4 ft)     | 292 m (958 ft)       | 417 m (1,368.1 ft)   |

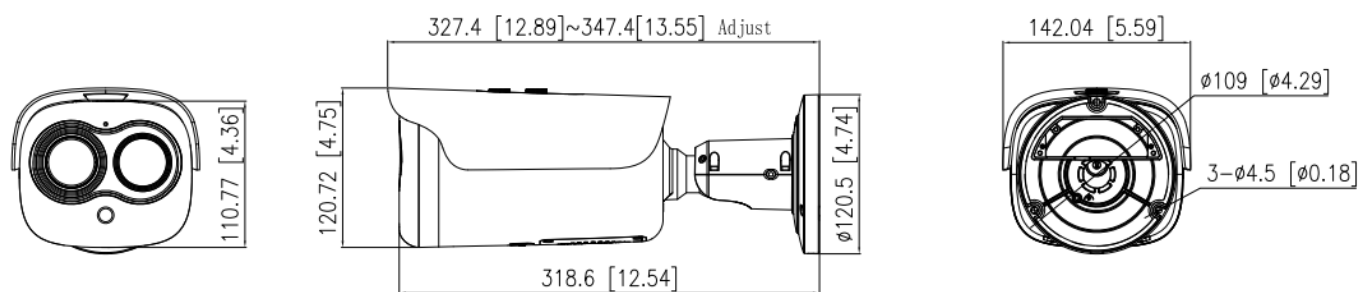
## Visible DORI Range Table

**Note:** DORI (Detect, Observe, Recognize, and Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/project design tool.

| DORI Distance |                   |                   |                                    |
|---------------|-------------------|-------------------|------------------------------------|
| Lens          | 4 mm              | 6 mm              | 10 to 30 mm                        |
| Detect        | 67.6 m (221.8 ft) | 96.6 m (316.9 ft) | 150 to 400 m (492.1 to 1,312.3 ft) |
| Observe       | 27 m (88.6 ft)    | 38.6 m (126.6 ft) | 60 to 160 m (196.9 ft to 524.9 ft) |
| Recognize     | 13.5 m (44.3 ft)  | 19.3 m (63.3 ft)  | 30 to 80 m (98.4 to 262.5 ft)      |
| Identify      | 6.8 m (22.3 ft)   | 9.7 m (118.4 ft)  | 15 to 40 m (49.2 to 131.2 ft)      |

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Dimensions (mm)



## Accessories

Optional:



MS-7CBK645G  
Junction Box



MS-7CBK101A  
Pole Mount



MS-7CBK102A  
Corner Mount