



Technical Specifications

MOBOTIX M73

Flexible. Modular. Unique.

Weatherproof and robust, the latest generation of our successful M camera models features increased modularity as well as the latest MOBOTIX 7 system platform with intelligent Plug-In App concept. The result is a system completely unrivaled in terms of performance, functionality and design.

- Platform with the most flexible codec support: H.264, H.265, MxPEG+ and MJPEG
- ONVIF Profile G, S, T conformity guarantees utmost interoperability
- Increased modularity with flexible usage of a combination of up to three sensor or functional modules
- 2 x 4K UHD resolution
- Can optionally be used with an exchangeable CIF/VGA thermal sensor module
- Wide Dynamic Range (WDR) with up to 120 dB
- Easy Plug quick-mounting system
- Robust in any environment: -40 to 65 °C/-40 to 149 °F, IP66, and IK10



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Hardware

| Feature | Properties |
|------------------------------------|--|
| Image sensor (color or B&W sensor) | up to 4K UHD 3840x2160, 16:9, 1/1,8" |
| Light sensitivity | <ul style="list-style-type: none"> ▪ Color sensor (day): 0,1 lx @ 1/60s; 0,005 lx @ 1s ▪ BW sensor (night): 0,02 lx @ 1/60s; 0,001 lx @ 1s |
| Exposure control | Manual and automatic mode 1 s to 1/16,000 s |
| Video codecs | <ul style="list-style-type: none"> ▪ H.264, H.265 with Triple Streaming ▪ MxPEG+ ▪ MJPEG |
| IK protection class | IK10 (housing) |
| IP protection class | IP66 |
| Operating temperature range | -40 to 65 °C / -40 to 149 °F |

| Feature | Properties |
|--|---|
| Min. cold start temperature | -30 °C/-22 °F |
| Relative Humidity | 95 % non-condensing |
| Internal DVR, out of the box | MicroSD card (8 GB), MxPEG+ recording only |
| I/Os | see Connector Box LSA / Connector Box RJ45, p. 13 |
| Microphone/Speaker | <ul style="list-style-type: none"> ■ Functional audio module, max. 4.5 Watt (see Functional Modules, p. 12) ■ Microphone Sensitivity: -35 +/-4 dB (0 dB = 1 V/pa, 1 kHz) ■ Speaker: 0.9 W at 8 Ohm |
| Passive infra-red sensor (PIR) | Available with functional module, max. 4.5 Watt (see Functional Modules, p. 12) |
| Infra-red illumination | Three functional modules for wide-angle, standard, and tele lenses |
| Range of infra-red illumination | Up to 30 m/100 ft (may be more depending on scene) |
| Shock detector (tamper detection) | Yes |
| Max. power consumption | max. 25 W |
| Electrical surge protection | integrated with Connector Box LSA (not part of the scope of delivery) |
| PoE standard | PoE Plus (802.3at-2009)/Class 4 |
| Interfaces | <ul style="list-style-type: none"> ■ Ethernet 1000BaseT ■ miniUSB / USB2.0 High-Speed ($V_{out} = 5,1V$, $I_{out} = 0,9A$, $P_{out} = 4,5W$) |
| Mounting Options | Wall- or pole-mountable (with Pole Mount accessory) |
| Dimensions (height x width x depth) | 228 x 153 x 232 mm |
| Weight without sensor modules | Approx. 2.5 kg/5.5 lb |
| Housing | Aluminum, PBT-30GF |

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| Feature | Properties |
|-----------------------|--|
| Standard accessories | <ul style="list-style-type: none">3 Transport plugs1 blind module (must be installed when using only two sensor modules)1 Mounting plate with wall sealing (installed), to standard plugs (installed), and inserted connector box1 Ethernet patch cable, 50 cm/19.7 in with sealing (RJ45 variant only)1 SD card 8 GB (installed)1 Important Safety Information1 Sticker with EAN number of camera1 Sticker with IP address of camera1 Connector box RJ45 or LSA black with rubber plug black, rubber plug single-wire white, USB plug blue (installed)1 Protective cover for connector box polystyrene white (installed)1 Rubber plug black (installed)1 Rubber plug single-wire white (installed)1 Rubber plug cable dia. 3.5 mm white (to replace C.5)1 USB plug connector box blue (installed)1 Module wrench (gray)1 Lens wrench blue3 housing plugs silicone white3 Security clips plastic red2 Cable tie black1 Allen wrench 5 mm1 Allen wrench 2.5 mm1 TORX wrench TX201 TORX wrench TX101 Screw driver yellow4 Washers dia. 6.4 mm plastic white4 Wood screws 4.5 x 60 mm4 Dowels S83 Oval head screws with shank 2.5x6.5 mm, stainless steel black2 Covers for screw plastic white |
| Tiltability of camera | <p>Horizontal: 2 x 180 degrees</p> <p>Vertical: 110 degrees</p> |

| Feature | Properties |
|----------------------------------|---|
| Detailed technical documentation | www.mobotix.com > Support > Download Center > Marketing & Documentation |
| MTBF | 80,000 hours |
| Certificates | EN 50121-4:2015, EN 50581:2012, EN 55032:2012+AC:2013, EN 55035:2017, FprEN 61000-6-1:2015, EN 61000-6-2:2015, EN 61000-6-3:2007+A1:2011+AC:2012, EN 61000-6-4:2007+A1:2011, EN 62368-1:2014 + AC: 2015 + A11: 2017 + AC: 2017, IEC 60950-22:2016, AS/NZS CISPR32:2015, 47 CFR Part 15b |
| Protocols | DHCP (client and server), DNS, ICMP, IGMP v3, IPv4, IPv6, HTTP, HTTPS, FTP, FTPS, NFS, NTP (client and server), RTP, RTCP, RTSP, SIP (client and server), SMB/CIFS, SNMP, SMTP, SSL/TLS 1.3, UDP, VLAN, VPN, Zeroconf/mDNS |
| Manufacturer warranty | 5 years |

Image Formats, Frame Rates, Image Storage

| Feature | Properties |
|---------------------------|---|
| Available video codecs | MxPEG+/MJPEG/H.264/H.265 |
| Image resolutions | VGA 640x360, XGA 1024x576, HD 1280x720, FullHD 1920x1080, QHD 2560x1440, 4K UHD 3840x2160 |
| H.264 multi streaming | Triple Streaming |
| Multicast stream via RTSP | Yes |
| Max. image resolution | <ul style="list-style-type: none"> ▪ One sensor: 4K UHD, 3840x2160 (8MP) ▪ Both sensors (dual image): 2x 4K UHD, 7680x2160 (16MP) |
| Max. frame rate | MxPEG: 20@4K, H.264: 30@4K, H.265: 30@4K |

General Features

| Feature | Properties |
|--------------------------------------|--|
| WDR | Up to 120 dB |
| Software features | <ul style="list-style-type: none"> ▪ H.264, H.265 Multistreaming ▪ Multicast stream via RTSP ▪ Digital pan, tilt, zoom/vPTZ (up to 8x zoom) ▪ Genetec protocol integration ▪ Custom exposure zones ▪ Snapshot recording (pre/post-alarm images) ▪ Continuous recording ▪ Event recording ▪ Time-controlled flexible event logic ▪ Weekly schedules for recordings and actions ▪ Event video and image transfer via FTP and email ▪ Playback and QuadView via web browser ▪ Animated logos on the image ▪ Master/Slave functionality ▪ Privacy zone scheduling ▪ Remote alarm notification (network message) ▪ Programming interface (HTTP-API) ▪ MOBOTIX MessageSystem |
| ONVIF compatibility | Profile S, T |
| Master/Slave functionality | Yes |
| Remote alarm notification | email, network message (HTTP/HTTPS), SNMP, MxMessageSystem |
| DVR/storage management (MxPEG+ only) | Within the camera via microSD card, on external USB and NAS devices, different streams for live image and recording, MxFFS with buffered archive, pre- and post-alarm images, storage monitoring with error reporting |
| Camera and data security | User and group management , SSL connections, IP-based access control, IEEE 802.1X, intrusion detection, digital image signature |

Video Analysis

| Feature | Properties |
|------------------------|--|
| Video motion detection | Yes |
| MxActivitySensor | Version 1.0, 2.1 and object-based MxAnalytics AI |
| ONVIF compatibility | Profile S, T |
| MxAnalytics | Heatmap, people counting & object-based counting |
| MOBOTIX App support | Yes |

Video Management Software

| Feature | Properties |
|--------------------|--|
| MOBOTIX HUB | Yes www.mobotix.com > Support > Download Center > Software Downloads |
| MxManagementCenter | Yes (MxMC 2.2 and higher) www.mobotix.com > Support > Download Center > Software Downloads |
| MOBOTIX LIVE App | Yes Available in Android and iOS App Stores. |

Sensor Modules

Features ECO Thermal Image Sensor

| Feature | Properties |
|-------------------------------|---|
| Thermal sensitivity | Typ. 65 mK, IR range 7.8 to 14 μ m |
| Temperature measurement range | -40 to 330°C/ -40 to 626 °F |
| Field of view | T040: 105 x 75°; 5,23mr, focal 2.2mm, f/1.05 T080: 56 x 42°; 3,00mr, focal 4.0mm, f/1.00 |
| Thermal image sensor | Uncooled microbolometer, CIF: 320 x 240 pixels |
| Dimensions | 58 x 42.5 mm (dia. 50 mm), 65g |
| Pixel pitch | 12 μ m |
| Max. image size | Can be scaled up to 3072 x 2048 (6MP), automatically scaled to size of Mx Sensor module |
| Max. frame rate | 9 fps (when displaying an Mx Sensor module and a thermal sensor module, the overall frame rate of the camera is reduced to 9 fps) |
| Operating temperature | -40° to +65°C / 40° to 149°F; 5% to 95% non-condensing |
| Power consumption | 600mW |
| IP rating | IP66 |
| IK rating | IK04 |
| Material | PBT-30GF (housing); Chalcogenide (lens) |
| Software (included) | Video management software MxManagementCenter |

Supported Sensor Modules

| Sensor Module | Order Code |
|--|------------------|
| Sensor module with standard 45° lens | Mx-O-M7SA-8DN100 |
| | Mx-O-M7SA-8D100 |
| | Mx-O-M7SA-8N100 |
| | Mx-O-M7SA-4DN100 |
| Sensor module with tele lens 30° | Mx-O-M7SA-8DN150 |
| | Mx-O-M7SA-8D150 |
| | Mx-O-M7SA-8N150 |
| | Mx-O-M7SA-4DN150 |
| Sensor module with tele lens 15° | Mx-O-M7SA-8DN280 |
| | Mx-O-M7SA-8D280 |
| | Mx-O-M7SA-8N280 |
| | Mx-O-M7SA-4DN280 |
| Sensor module with wide angle lens 60° | Mx-O-M7SA-8DN080 |
| | Mx-O-M7SA-8D080 |
| | Mx-O-M7SA-8N080 |
| | Mx-O-M7SA-4DN080 |
| Sensor module with super wide angle lens 95° | Mx-O-M7SA-8DN050 |
| | Mx-O-M7SA-8D050 |
| | Mx-O-M7SA-8N050 |
| | Mx-O-M7SA-4DN050 |
| Sensor module with ultra wide angle lens 120° 4K | Mx-O-M7SA-8DN040 |
| | Mx-O-M7SA-8D040 |
| | Mx-O-M7SA-8N040 |
| | Mx-O-M7SA-4DN040 |

For a complete list of lenses for MOBOTIX cameras, please see the Lens Table document for MOBOTIX 7 models on www.mobotix.com > **Support** > **Download Center** > **Marketing & Documentation** > **Lens Table**.

Supported Thermal Sensor Modules (Pre-mounted on Thermal Front Plate)

| Sensor Module | Order Code |
|---------------------------------------|--------------------------|
| CIF Thermal 45° x 35° | MX-O-M73TB-336T100 |
| CIF Thermal 25° x 19° | Mx-O-M73TB-336T150 |
| CIF Thermal 17° x 13° | Mx-O-M73TB-336T280 |
| CIF Thermal Radiometry 45° x 35° | Mx-O-M73TB-336R100 |
| CIF Thermal Radiometry 25° x 19° | Mx-O-M73TB-336R150 |
| CIF Thermal Radiometry 17° x 13° | Mx-O-M73TB-336R280 |
| CIF Thermal Radiometry 9,3° x 7,1° | Mx-O-M73TB-336R500 (BTO) |
| VGA Thermal 90° x 69° | Mx-O-M73TB-640T050 |
| VGA Thermal 69° x 56° | Mx-O-M73TB-640T080 |
| VGA Thermal 45° x 37° | Mx-O-M73TB-640T100 |
| VGA Thermal 30° x 26° | Mx-O-M73TB-640T150 |
| VGA Thermal Radiometry 90° x 69° | Mx-O-M73TB-640R050 |
| VGA Thermal Radiometry 69° x 56° | Mx-O-M73TB-640R080 |
| VGA Thermal Radiometry 45° x 37° | Mx-O-M73TB-640R100 |
| VGA Thermal Radiometry 30° x 26° | Mx-OM73TB-640R150 |
| VGA Thermal Radiometry 18° x 14° | Mx-O-M73TB-640R280 (BTO) |

The **Thermal Radiometry (TR)** variants automatically alarm when the temperature exceeds or falls below defined limits. This is crucial for the detection of fire or heat sources. Up to 20 different temperature events

can be configured simultaneously in so-called TR windows or over the complete sensor image over a temperature range of -40 to 550 °C/-40 to 1022 °F .

The **Thermal (non-TR)** variants only measure in the center of the image (Thermal spot, 2x2 pixel).

Features Thermal Image Sensors

| Feature | Properties | |
|-------------------------------|---|--|
| Thermal sensitivity | Typ. 50 mK, IR range 7.5 to 13.5 μm | |
| Temperature measurement range | -40 to 550 °C/-40 to 1022 °F | |
| Thermal image sensor | Uncooled microbolometer, CIF: 336 x 256 pixels / VGA: 640 x 480 | |
| Dimensions | 336/640: 48,5x48,5x70 170g without front plate / 265g with front plate | |
| Max. image size | Can be scaled up to 3072 x 2048 (6MP), automatically scaled to size of MX sensor module | |
| Max. frame rate | 9fps (-FAST version 25/30fps on request) | |
| Pixel pitch | 17μm | |
| Field of view | Sensor Module | FoV |
| | 336 xx 100 | 45° x 35°; 2.27mr, focal 7.5mm, f/1.25 |
| | 336 xx 150 | 25° x 19°; 1.31mr, focal 13mm, f/1.25 |
| | 336 xx 280 | 17° x 13°; 0.90mr, focal 19mm, f/1.25 |
| | 336 xx 500 | 9° x 7°; 0.486mr, focal length 35mm, f/1.5 |
| | 640 xx 050 | 90° x 69°; 2.27mr, focal 7.5mm, f/1.4 |
| | 640 xx 080 | 69° x 56°; 1.89mr, focal 9mm, f/1.4 |
| | 640 xx 100 | 45° x 37°; 1.31mr, focal 13mm, f/1.25 |
| | 640 xx 150 | 32° x 26°; 0.90mr, focal 19mm, f/1.25 |
| | 640 xx 280 | 18°x14°; 0.486mr, focal length 35mm, f/1.5 |
| Operating temperature | -40° to +65°C / 40° to 149°F; 5% to 95% non-condensing | |

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| Feature | Properties |
|---------------------|--|
| Power consumption | CIF: 1W VGA: 1.2W |
| IP rating | IP67 |
| IK rating | IK04 |
| Material | PBT-30GF (housing); Germanium (lens) |
| Software (included) | Video management software MxManagementCenter |

Functional Modules

| Functional Module | Order Code | Remark |
|------------------------------|------------|---|
| Audio module | Mx-F-AUDA | Audio module with microphone and speaker |
| Functional MultiSense module | Mx-F-MSA | with PIR sensor, temperature sensor, illumination sensor |
| Functional IR Light modules | Mx-F-IRA-W | for Super Wide-Angle Lens Sensor Modules 95° |
| | Mx-F-IRA-S | for Standard & Wide-Angle Lens Sensor Modules 45° and 60° |
| | Mx-F-IRA-T | for Tele Lens Sensor Modules 15° and 30° |
| White Light Modules | Mx-F-WLA-W | for Super Wide-Angle Lens Sensor Modules 95° |
| | Mx-F-WLA-S | for Standard & Wide-Angle Lens Sensor Modules 45° and 60° |
| | Mx-F-WLA-T | for Tele Lens Sensor Modules 15° and 30° |
| | | Power consumption IR Light Modules: 4,2 W at 100% brightness. |
| | | Power consumption White Light Modules: 3,2 W at 100% brightness. |

Connector Box LSA / Connector Box RJ45

| Interface | Properties | | | | | | | | |
|--|---|-----|---------|-------|--|----------|--|-----------------------|---|
| Network | 100/1000 Mbps | | | | | | | | |
| Allowed cable dimensions for cables connected to the PCB terminals | <p><i>Conductor cross section</i></p> <table border="0"> <tr> <td>AWG</td> <td>20 - 26</td> </tr> <tr> <td>Rigid</td> <td>0.14mm² - 0.5mm²</td> </tr> <tr> <td>Flexible</td> <td>0.14mm² - 0.5mm²</td> </tr> <tr> <td>Flexible with ferrule</td> <td>0.25mm² - 0.34mm²</td> </tr> </table> | AWG | 20 - 26 | Rigid | 0.14mm ² - 0.5mm ² | Flexible | 0.14mm ² - 0.5mm ² | Flexible with ferrule | 0.25mm ² - 0.34mm ² |
| AWG | 20 - 26 | | | | | | | | |
| Rigid | 0.14mm ² - 0.5mm ² | | | | | | | | |
| Flexible | 0.14mm ² - 0.5mm ² | | | | | | | | |
| Flexible with ferrule | 0.25mm ² - 0.34mm ² | | | | | | | | |
| Line In | Standard Line In: (0dB) Vrms=1V | | | | | | | | |
| Line Out | <p>Headphones with 20mW @ 16 Ohm or 32 Ohm.</p> <p>Audio inputs as a Line Out function to 10k Ohm impedance of receiver. Audio level while connected to 10k Ohm equals -10dbV</p> | | | | | | | | |
| IN / OUT | <p>INPUT</p> <ul style="list-style-type: none"> ▪ Contact Closure (no galvanic isolation necessary) or up to 50V AC/DC ▪ max. length for cables: 50m <p>OUTPUT</p> <ul style="list-style-type: none"> ▪ requires pull-up resistor and external power supply (10mA / max. 50V DC - no AC) ▪ Output may be loaded with max. 50mA ▪ max. length for cables: depends on loop impedance of the connected cable. | | | | | | | | |

Dimensions

NOTE! Download the drilling template from the section or on the MOBOTIX website: www.mobotix.com > Support > Download Center > Marketing & Documentation > Drilling Templates.

CAUTION! Always print or copy the drilling template at 100% of the original size!

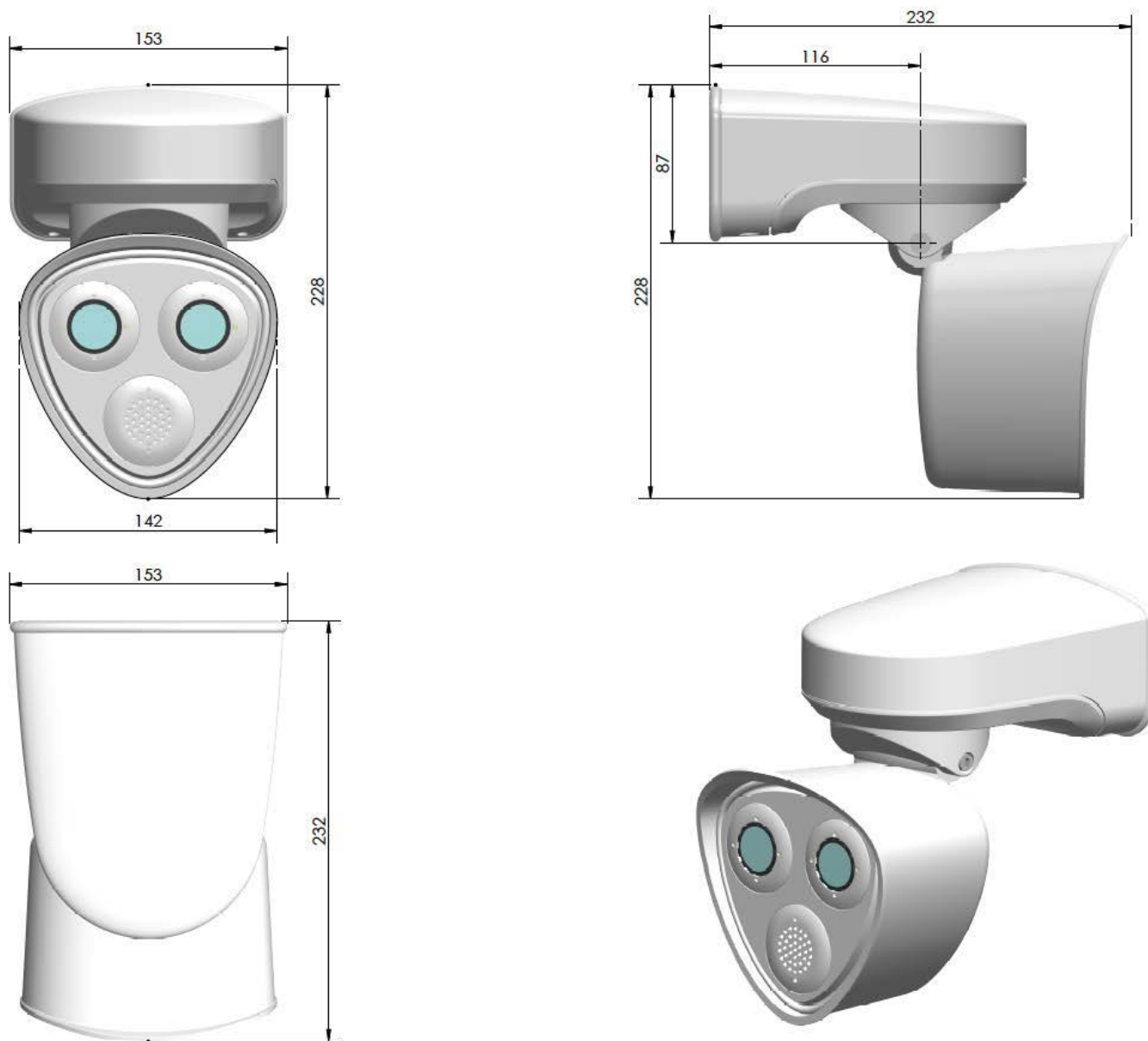


Fig. 1: MOBOTIX M73: All measurements in mm

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BeyondHumanVision

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