



# 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"> <li>▪ Color sensor (day): 0,1 lx @ 1/60s; 0,005 lx @ 1s</li> <li>▪ BW sensor (night): 0,02 lx @ 1/60s; 0,001 lx @ 1s</li> </ul>
Exposure control	Manual and automatic mode 1 s to 1/16,000 s
Video codecs	<ul style="list-style-type: none"> <li>▪ H.264, H.265 with Triple Streaming</li> <li>▪ MxPEG+</li> <li>▪ MJPEG</li> </ul>
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 <a href="#">Connector Box LSA / Connector Box RJ45, p. 13</a>
Microphone/Speaker	<ul style="list-style-type: none"> <li>■ Functional audio module, max. 4.5 Watt (see <a href="#">Functional Modules, p. 12</a>)</li> <li>■ Microphone Sensitivity: -35 +/-4 dB (0 dB = 1 V/pa, 1 kHz)</li> <li>■ Speaker: 0.9 W at 8 Ohm</li> </ul>
Passive infra-red sensor (PIR)	Available with functional module, max. 4.5 Watt (see <a href="#">Functional Modules, p. 12</a> )
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"> <li>■ Ethernet 1000BaseT</li> <li>■ miniUSB / USB2.0 High-Speed (<math>V_{out} = 5,1V</math>, <math>I_{out} = 0,9A</math>, <math>P_{out} = 4,5W</math>)</li> </ul>
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"><li>3 Transport plugs</li><li>1 blind module (must be installed when using only two sensor modules)</li><li>1 Mounting plate with wall sealing (installed), to standard plugs (installed), and inserted connector box</li><li>1 Ethernet patch cable, 50 cm/19.7 in with sealing (RJ45 variant only)</li><li>1 SD card 8 GB (installed)</li><li>1 Important Safety Information</li><li>1 Sticker with EAN number of camera</li><li>1 Sticker with IP address of camera</li><li>1 Connector box RJ45 or LSA black with rubber plug black, rubber plug single-wire white, USB plug blue (installed)</li><li>1 Protective cover for connector box polystyrene white (installed)</li><li>1 Rubber plug black (installed)</li><li>1 Rubber plug single-wire white (installed)</li><li>1 Rubber plug cable dia. 3.5 mm white (to replace C.5)</li><li>1 USB plug connector box blue (installed)</li><li>1 Module wrench (gray)</li><li>1 Lens wrench blue</li><li>3 housing plugs silicone white</li><li>3 Security clips plastic red</li><li>2 Cable tie black</li><li>1 Allen wrench 5 mm</li><li>1 Allen wrench 2.5 mm</li><li>1 TORX wrench TX20</li><li>1 TORX wrench TX10</li><li>1 Screw driver yellow</li><li>4 Washers dia. 6.4 mm plastic white</li><li>4 Wood screws 4.5 x 60 mm</li><li>4 Dowels S8</li><li>3 Oval head screws with shank 2.5x6.5 mm, stainless steel black</li><li>2 Covers for screw plastic white</li></ul>
Tiltability of camera	<p>Horizontal: 2 x 180 degrees</p> <p>Vertical: 110 degrees</p>

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Feature	Properties
Detailed technical documentation	<a href="http://www.mobotix.com">www.mobotix.com</a> > <a href="#">Support</a> > <a href="#">Download Center</a> > <a href="#">Marketing &amp; Documentation</a>
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"> <li>▪ One sensor: 4K UHD, 3840x2160 (8MP)</li> <li>▪ Both sensors (dual image): 2x 4K UHD, 7680x2160 (16MP)</li> </ul>
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"> <li>▪ H.264, H.265 Multistreaming</li> <li>▪ Multicast stream via RTSP</li> <li>▪ Digital pan, tilt, zoom/vPTZ (up to 8x zoom)</li> <li>▪ Genetec protocol integration</li> <li>▪ Custom exposure zones</li> <li>▪ Snapshot recording (pre/post-alarm images)</li> <li>▪ Continuous recording</li> <li>▪ Event recording</li> <li>▪ Time-controlled flexible event logic</li> <li>▪ Weekly schedules for recordings and actions</li> <li>▪ Event video and image transfer via FTP and email</li> <li>▪ Playback and QuadView via web browser</li> <li>▪ Animated logos on the image</li> <li>▪ Master/Slave functionality</li> <li>▪ Privacy zone scheduling</li> <li>▪ Remote alarm notification (network message)</li> <li>▪ Programming interface (HTTP-API)</li> <li>▪ MOBOTIX MessageSystem</li> </ul>
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 <a href="http://www.mobotix.com">www.mobotix.com</a> > <a href="#">Support</a> > <a href="#">Download Center</a> > <a href="#">Software Downloads</a>
MxManagementCenter	Yes (MxMC 2.2 and higher) <a href="http://www.mobotix.com">www.mobotix.com</a> > <a href="#">Support</a> > <a href="#">Download Center</a> > <a href="#">Software Downloads</a>
MOBOTIX LIVE App	Yes Available in Android and iOS App Stores.

# Sensor Modules

## 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

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For a complete list of lenses for MOBOTIX cameras, please see the Lens Table document for MOBOTIX 7 models on [www.mobotix.com](http://www.mobotix.com) > [Support](#) > [Download Center](#) > [Marketing & Documentation](#) > [Lens Table](#).

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## 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

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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 $\mu$ m																				
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	17 $\mu$ m																				
Field of view	<table><thead><tr><th>Sensor Module</th><th>FoV</th></tr></thead><tbody><tr><td>336 xx 100</td><td>45° x 35°; 2.27mr, focal 7.5mm, f/1.25</td></tr><tr><td>336 xx 150</td><td>25° x 19°; 1.31mr, focal 13mm, f/1.25</td></tr><tr><td>336 xx 280</td><td>17° x 13°; 0.90mr, focal 19mm, f/1.25</td></tr><tr><td>336 xx 500</td><td>9° x 7°; 0.486mr, focal length 35mm, f/1.5</td></tr><tr><td>640 xx 050</td><td>90° x 69°; 2.27mr, focal 7.5mm, f/1.4</td></tr><tr><td>640 xx 080</td><td>69° x 56°; 1.89mr, focal 9mm, f/1.4</td></tr><tr><td>640 xx 100</td><td>45° x 37°; 1.31mr, focal 13mm, f/1.25</td></tr><tr><td>640 xx 150</td><td>32° x 26°; 0.90mr, focal 19mm, f/1.25</td></tr><tr><td>640 xx 280</td><td>18°x14°; 0.486mr, focal length 35mm, f/1.5</td></tr></tbody></table>	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
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640 xx 280	18°x14°; 0.486mr, focal length 35mm, f/1.5																				
Operating temperature	$-40^{\circ}$ to $+65^{\circ}$ C / $40^{\circ}$ to $149^{\circ}$ F; 5% to 95% non-condensing																				

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

## Features ECO Thermal Image Sensor

Feature	Properties
Thermal sensitivity	Typ. 65 mK, IR range 7.8 to 14 $\mu$ 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 $\mu$ 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

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Feature	Properties
Material	PBT-30GF (housing); Chalcogenide (lens)
Software (included)	Video management software MxManagementCenter

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## 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.

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## 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>0.14mm<sup>2</sup> - 0.5mm<sup>2</sup></td> </tr> <tr> <td>Flexible</td> <td>0.14mm<sup>2</sup> - 0.5mm<sup>2</sup></td> </tr> <tr> <td>Flexible with ferrule</td> <td>0.25mm<sup>2</sup> - 0.34mm<sup>2</sup></td> </tr> </table>	AWG	20 - 26	Rigid	0.14mm <sup>2</sup> - 0.5mm <sup>2</sup>	Flexible	0.14mm <sup>2</sup> - 0.5mm <sup>2</sup>	Flexible with ferrule	0.25mm <sup>2</sup> - 0.34mm <sup>2</sup>
AWG	20 - 26								
Rigid	0.14mm <sup>2</sup> - 0.5mm <sup>2</sup>								
Flexible	0.14mm <sup>2</sup> - 0.5mm <sup>2</sup>								
Flexible with ferrule	0.25mm <sup>2</sup> - 0.34mm <sup>2</sup>								
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"> <li>▪ Contact Closure (no galvanic isolation necessary) or up to 50V AC/DC</li> <li>▪ max. length for cables: 50m</li> </ul> <p>OUTPUT</p> <ul style="list-style-type: none"> <li>▪ requires pull-up resistor and external power supply (10mA / max. 50V DC - no AC)</li> <li>▪ Output may be loaded with max. 50mA</li> <li>▪ max. length for cables: depends on loop impedance of the connected cable.</li> </ul>								

## Dimensions

**NOTE!** Download the drilling template from the section or on the MOBOTIX website: [www.mobotix.com](http://www.mobotix.com) > Support > Download Center > Marketing & Documentation > Drilling Templates.

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

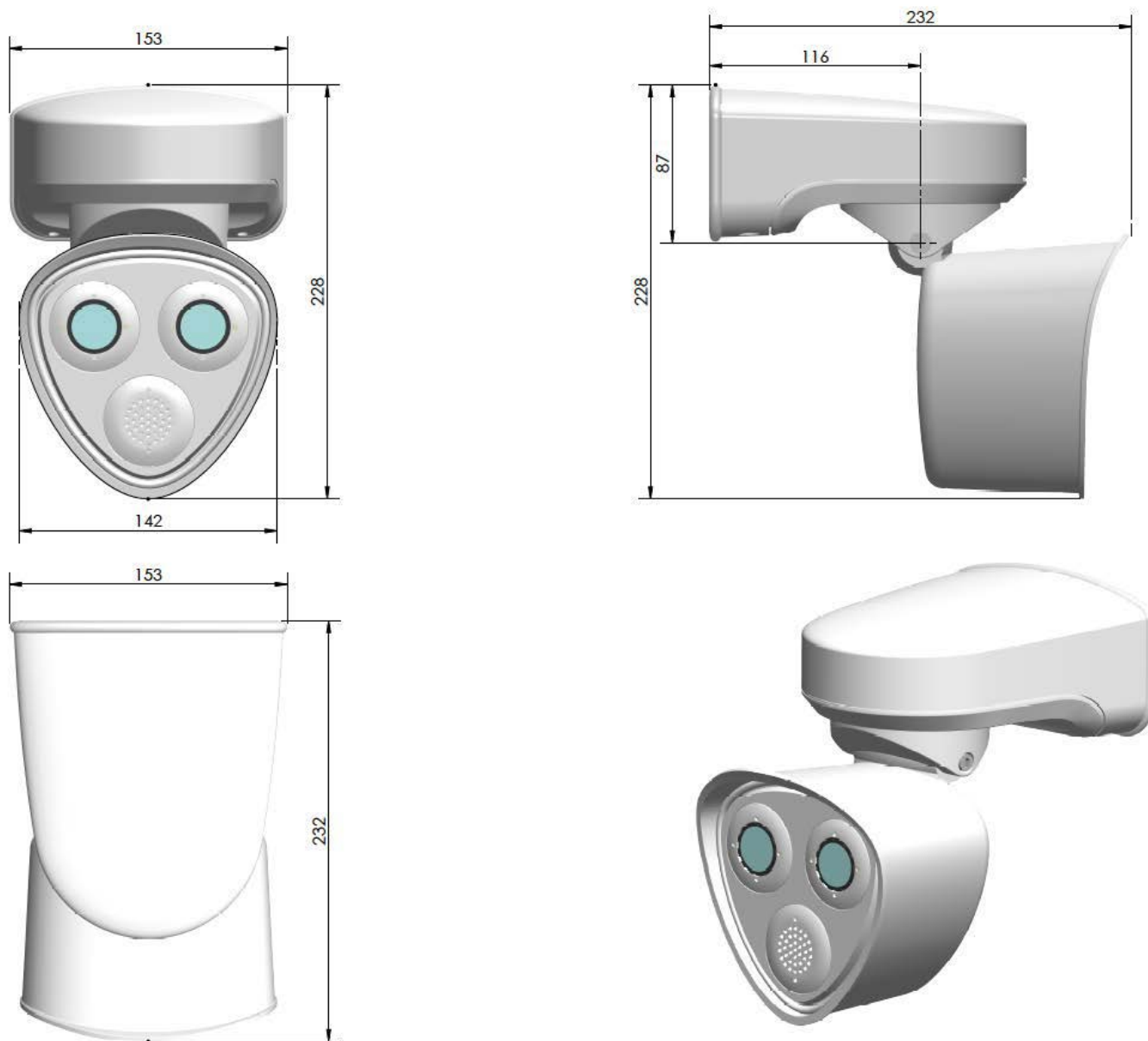


Fig. 1: MOBOTIX M73: All measurements in mm

# MOBOTIX

BeyondHumanVision

[EN\\_10/22](#)

MOBOTIX AG • Kaiserstrasse • D-67722 Langmeil • Tel.: +49 6302 9816-103 • [sales@mobotix.com](mailto:sales@mobotix.com) • [www.mobotix.com](http://www.mobotix.com)

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