



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 S and T conformity guarantees utmost interoperability
- Increased modularity with flexible usage of a combination of up to three sensor or functional modules
- 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

Image sensor (color or B&W sensor)	4K UHD 3840x2160, 16:9, 1/1,8"
Light sensitivity	- Color sensor (day): 0,1 lx @ 1/60 s; 0,005 lx @ 1 s - BW sensor (night): 0,02 lx @ 1/60 s; 0,001 lx @ 1 s
Exposure control	Manual and automatic mode 1 s to 1/16,000 s
Video codecs	H.264, H.265 with Triple Streaming MxPEG+ MJPEG
IK protection class	IK10 (housing)
IP protection class	IP66
Ambient temperature (range, including housing)	-40 to 65 °C/-40 to 149 °F/95 % rel. humidity (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. 10
Microphone/Speaker	Functional audio module, max. 4.5 Watt (see Supported Functional Modules, p. 10) 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 Supported Functional Modules, p. 10)
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	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 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 228 x 153 x 232 mm
(height x width x depth)

Weight without sensor modules- Approx. 2.5 kg/5.5 lb

Housing Aluminum, PBT-30GF

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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 TORX wrench TX81 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
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Tiltability of camera	Horizontal: 2 x 180 degrees Vertical: 110 degrees
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Detailed technical documentation	www.mobotix.com > Support > Download Center > Marketing & Documentation
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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	3 years

Image Formats, Frame Rates, Image Storage

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 (dual image of both sensors)	4K UHD 3840x2160 (8MP)
Max. frame rate	MxPEG: 20@4K, H.264: 30@4K, H.265: 30@4K

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General Features

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

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

MxManagementCenter	Yes (MxMC 2.2 and higher) www.mobotix.com > Support > Download Center > Software Downloads
MxBell	Yes www.mobotix.com > Support > Download Center > Software Downloads

Dimensions of Sensor Modules

Dimensions (height x width)	58 x 42.5 mm (dia. 50 mm)
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Weight of Sensor Modules

Standard Sensor Modules	max. 150 g
Thermal Sensor Module with front plate	450 g
Functional Modules	max. 150 g

Features Thermal Sensors

Sensitivity thermal image sensor	Typ. 50 mK, IR range 7.5 to 13.5 μm ; Temperature Measurement Range: -40 to 550 $^{\circ}\text{C}$ / -40 to 1022 $^{\circ}\text{F}$
Image sensor: Thermal image sensor	Uncooled microbolometer, CIF: 336 x 256 pixels / VGA: 640 x 480
Max. image size MX sensor module	Can be scaled up to 3072 x 2048 (6MP), automatically scaled to size of MX sensor module
Max. frame rate Thermal image sensor	9 fps (when displaying an MxSensor module and a thermal sensor module, the overall frame rate of the camera is reduced to 9 fps)
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

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 45° x 35°	Mx-O-M73TA-336T100
CIF Thermal 25° x 19°	Mx-O-M73TA-336T150
CIF Thermal 17° x 13°	Mx-O-M73TA-336T280
CIF Thermal Radiometry 45° x 35°	Mx-O-M73TB-336R100
CIF Thermal Radiometry 45° x 35°	Mx-O-M73TA-336R100
CIF Thermal Radiometry 25° x 19°	Mx-O-M73TA-336R150
CIF Thermal Radiometry 17° x 13°	Mx-O-M73TA-336R280
VGA Thermal 90° x 69°	Mx-O-M37TB-640T050
VGA Thermal 90° x 69°	Mx-O-M73TA-640T050
VGA Thermal 69° x 56°	Mx-O-M73TA-640T080
VGA Thermal 45° x 37°	Mx-O-M73TA-640T100
VGA Thermal 30° x 26°	Mx-O-M73TA-640T150
VGA Thermal Radiometry 90° x 69°	Mx-O-M73TB-640R050
VGA Thermal Radiometry 90° x 69°	Mx-O-M73TA-640R050
VGA Thermal Radiometry 69° x 56°	Mx-O-M73TA-640R080
VGA Thermal Radiometry 45° x 37°	Mx-O-M73TA-640R100
VGA Thermal Radiometry 30° x 26°	Mx-OM73TA-640R150

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The **Thermal Radiometry** 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** variants only measure in the center of the image (2x2 pixel spotmeter).

Supported Functional Modules

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

Connector Box LSA / Connector Box RJ45

Interface

Network	100/1000 Mbps
Line In	Standard Line In: (0dB) Vrms=1V

Interface

Line Out Headphones with 20mW @ 16 Ohm or 32 Ohm.
 Audio inputs as a Line Out function to 10k Ohm impedance of receiver. Audio level while connected to 10k Ohm equals -10dbV

IN / OUT

INPUT

- Contact Closure (no galvanic isolation necessary) or up to 50V AC/DC
- max. length for cables: 50m

OUTPUT

- requires pull-up resistor and external power supply (10mA / max. 50V DC - no AC)
- max. length for cables: depends on loop impedance of the connected cable.

Specs for cables connected to the PCB terminals:

Conductor cross section

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

M73 – 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 at 100% of the original size!

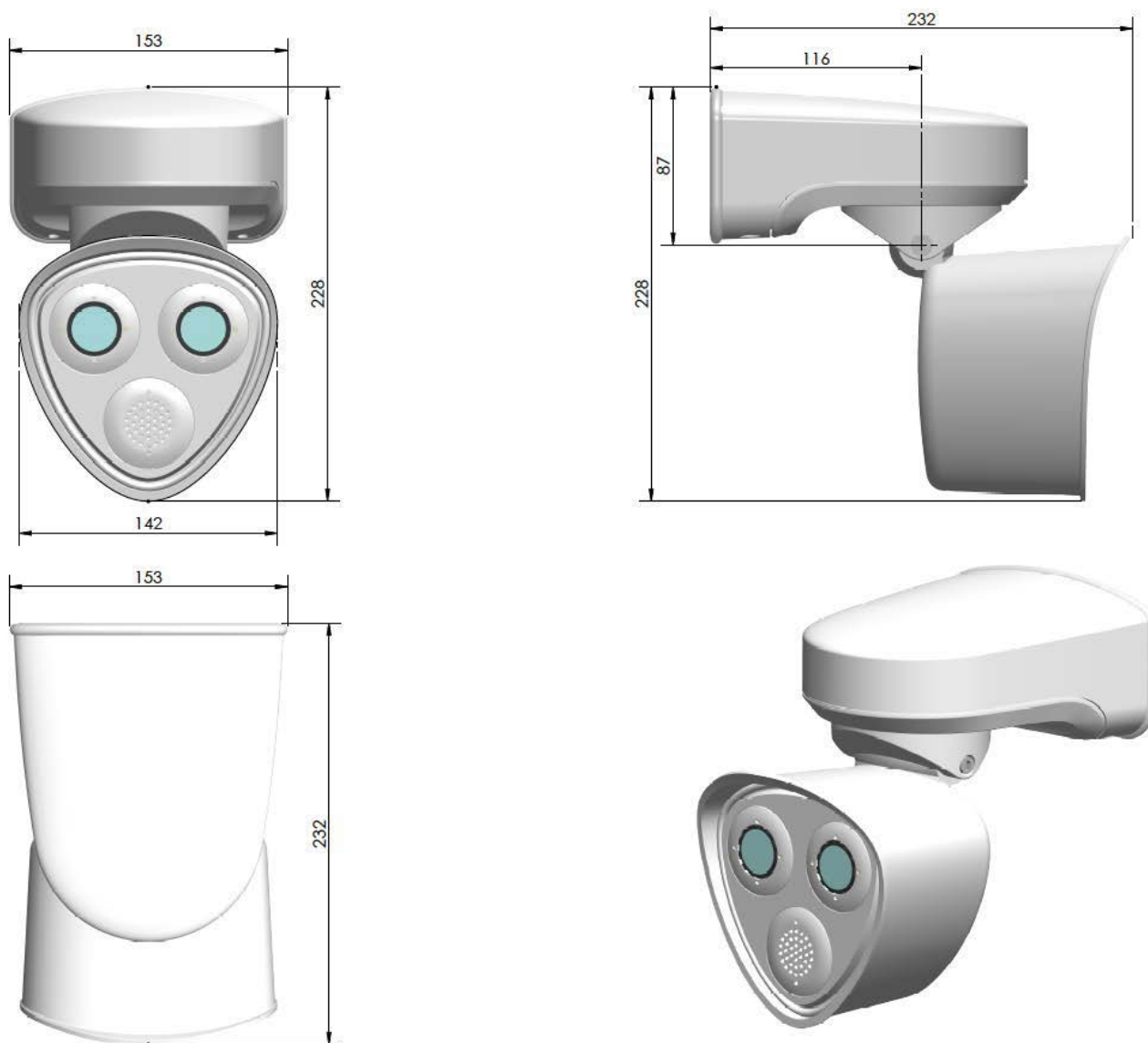


Fig. 1: M73: All measurements in mm

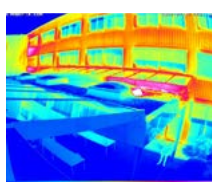
DIN EN 50132-7

As specified in the DIN EN 50132-7 standard, there are six different levels of quality for video surveillance. “Inspect” is the level with the highest demands on image quality, whereas “Monitor” is the one with the lowest. These can be used to determine the maximum distance between camera and surveillance area, the required minimum resolution, and the most suitable camera lens for optimal coverage of the surveillance area.



	B040 Wide	B050 Wide	B080 Standard	B100 Standard	B150 Tele	B280 Tele
Focal Length	4 mm	5 mm	8 mm	10 mm	18 mm	28 mm
Aperture f/	1,8	1,8	1,8	1,8	1,8	1,8
Image angle (horiz. x vertical)	120° x 60°	95° x 50°	60° x 33°	45° x 25°	30° x 17°	15° x 8,5°
Image width/height (dist. 1 m)	3,5 / 1,2 m	2,2 / 0,9 m	1,2 / 0,6 m	0,8 / 0,4 m	0,5 / 0,3 m	0,3 / 0,1 m
Image width/height (dist. 10 m)	34,6 / 11,5 m	21,8 / 9,3 m	11,5 / 5,9 m	8,3 / 4,4 m	5,4 / 3,0 m	2,6 / 1,5 m
Image width/height (dist. 50 m)	173,2 / 57,7 m	109,1 / 46,6 m	57,7 / 29,6 m	41,4 / 22,2 m	26,8 / 14,9 m	13,2 / 7,4 m

Maximum Distances In Meters @ 4K UHD (3840 x 2160)						
Monitor	149,65 m	185,29 m	291,68 m	389,73 m	578,12 m	1.162,65 m
Detect	74,82 m	92,64 m	145,84 m	194,86 m	289,06 m	581,33 m
Observe	29,93 m	37,06 m	58,34 m	77,95 m	115,62 m	232,53 m
Recognize	14,96 m	18,53 m	29,17 m	38,97 m	57,81 m	116,27 m
Identify	7,48 m	9,26 m	14,58 m	19,49 m	28,91 m	58,13 m
Inspect	1,87 m	2,32 m	3,85 m	4,87 m	7,23 m	14,53 m



The MOBOTIX 7 camera M73 can also be equipped with 50 mK thermal sensor modules – even retroactively. You can choose from all thermal sensor variants with CIF resolution (336 x 256) already known from the M16 thermal imaging camera plus additional thermal sensor modules with VGA resolution (640 x 480). Thanks to the increased number of pixels and the extended image angles of up to 90° x 69° with the VGA thermal modules, more scene details can be seen, larger areas can be covered (perimeter protection) and temperature differences can be detected from greater distances than with the CIF variants.

Thermal Sensor Module Variants for M73		
Thermal resolution	Image angle (horiz. x vert.)	TR technology for temperature measurement
CIF: 336 x 256 pixels	17° x 13°	Available with and without TR technology
CIF: 336 x 256 pixels	25° x 19°	Available with and without TR technology
CIF: 336 x 256 pixels	45° x 35°	Available with and without TR technology
VGA: 640 x 480 pixels	32° x 26°	Available with and without TR technology
VGA: 640 x 480 pixels	45° x 37°	Available with and without TR technology
VGA: 640 x 480 pixels	69° x 56°	Available with and without TR technology
VGA: 640 x 480 Pixel	90° x 69°	Available with and without TR technology

