Technical Specifications

V06_5/18/2020

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

HEVCAdvance™

BeyondHumanVision

Hardware

Image sensor (color or B&W sensor)	4K UHD 3840x2160, 16:9, 1/1,8“
Light sensitivity	- Color sensor (day): 0,1 lx @ 1/60s; 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	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	1 input/1 output (output requires external power supply)
Microphone/Speaker	Functional audio module, max. 4.5 Watt (see Supported functional modules, S. 8)
Passive infra-red sensor (PIR)	Available with functional module, max. 4.5 Watt (see Supported functional modules, S. 8)
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 Watt
PoE standard	PoE Plus (802.3at-2009)/Class 4
Interfaces	Ethernet 1000BaseT miniUSB
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
Standard accessories	
Tiltability of camera	Horizontal: 2 x 180 degrees Vertical: 110 degrees
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	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

General Features

WDR	Up to 120 dB
Software features	- 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**

Sensor module dimensions

Dimensions (height x width)	58 x 42.5 mm (dia. 50 mm)

Features Thermal Sensors

Sensitivity thermal image sensor	Typ. 50 mK, IR range 7.5 to 13.5 µm; Temperature Measurement Range: –40 to 550 °C/–40 to 1022 °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 MX sensor 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 with Super Wide Lens 95°	Mx-O-M7SA-8DN050 Mx-O-M7SA-8D050 Mx-O-M7SA-8N050
Sensor module with Wide Lens 60°	Mx-O-M7SA-8DN080 Mx-O-M7SA-8D080 Mx-O-M7SA-8N080
Sensor module with Standard Lens 45°	Mx-O-M7SA-8DN100 Mx-O-M7SA-8D100 Mx-O-M7SA-8N100
Sensor module with Tele Lens 30°	Mx-O-M7SA-8DN150 Mx-O-M7SA-8D150 Mx-O-M7SA-8N150
Sensor module with Distant Tele Lens 15°	Mx-O-M7SA-8DN280 Mx-O-M7SA-8D280 Mx-O-M7SA-8N280
Sensor module with Super Wide Lens 95°	Mx-O-M7SA-8DN050 Mx-O-M7SA-8D050 Mx-O-M7SA-8N050
Sensor module with Wide Lens 60°	Mx-O-M7SA-8DN080 Mx-O-M7SA-8D080 Mx-O-M7SA-8N080
Sensor module with Standard Lens 45°	Mx-O-M7SA-8DN100 Mx-O-M7SA-8D100 Mx-O-M7SA-8N100
Sensor module with Tele Lens 30°	Mx-O-M7SA-8DN150 Mx-O-M7SA-8D150 Mx-O-M7SA-8N150

Supported thermal sensor modules

Sensor module	Order code
CIF Thermal 45° x 35°	Mx-O-M7SA-336TS100
CIF Thermal 25° x 19°	Mx-O-M7SA-336TS150
CIF Thermal 17° x 13°	Mx-O-M7SA-336TS280
CIF Thermal Radiometry 45° x 35°	Mx-O-M7SA-336RS100
CIF Thermal Radiometry 25° x 19°	Mx-O-M7SA-336RS150
CIF Thermal Radiometry 17° x 13°	Mx-O-M7SA-336RS280
VGA Thermal 90° x 69°	Mx-O-M7SA-640TS050
VGA Thermal 69° x 56°	Mx-O-M7SA-640TS080
VGA Thermal 45° x 37°	Mx-O-M7SA-640TS100
VGA Thermal 30° x 26°	Mx-O-M7TA-640TS150
VGA Thermal Radiometry 90° x 69°	Mx-O-M7TA-640RS050
VGA Thermal Radiometry 69° x 56°	Mx-O-M7TA-640RS080
VGA Thermal Radiometry 45° x 37°	Mx-O-M7SA-640RS100
VGA Thermal Radiometry 30° x 26°	Mx-O-M7SA-640RS150

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 audio module	via IO Interface Board
Functional MultiSense module	Mx-F-MSA PIR sensor, temperature sensor, illumination sensor, microphone
Functional IR Light Module	Mx-F-IRA-W for Super Wide Lens Sensor Modules 95° Mx-F-IRA-S for Standard & Wide Lens Sensor Modules 45° – 60° Mx-F-IRA-T for Tele Lens Sensor Modules 15° – 30°

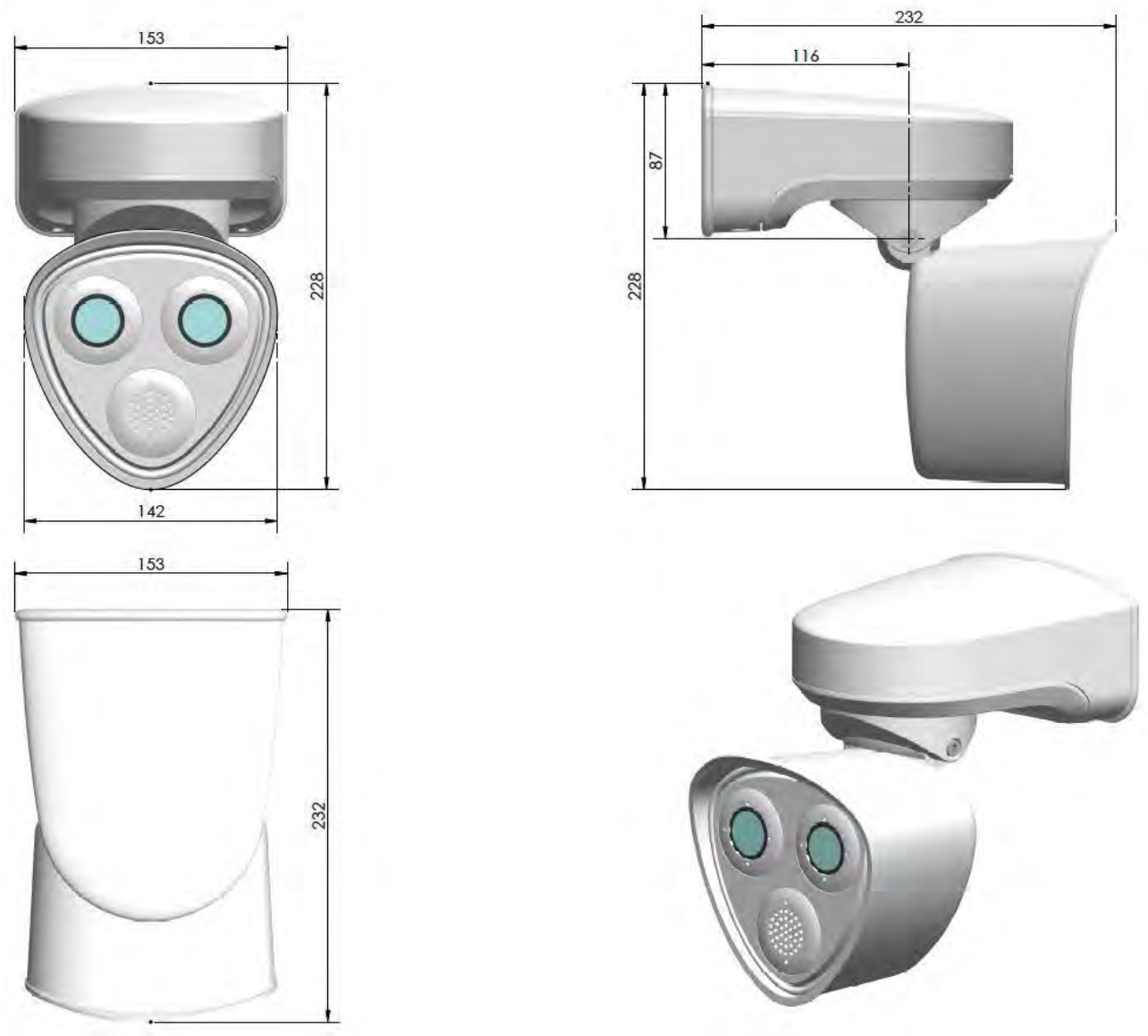

Abb. 1: M73: All measurements in mm

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.

			
	B050 Wide	**B100** Standard	**B280** Tele
Image angle (horizontal)			
Focal Length	5 mm	10 mm	28 mm
Aperture f/	1,8	1,8	1,8
Image angle (horiz. x vertical)	95° x 50°	45° x 25°	15° x 8,5°
Image width/height (dist. 1 m)	2,2 / 0,9 m	0,8 / 0,4 m	0,3 / 0,1 m
Image width/height (dist. 10 m)	21,8 / 9,3 m	8,3 / 4,4 m	2,6 / 1,5 m
Image width/height (dist. 50 m)	109,1 / 46,6 m	41,4 / 22,2 m	13,2 / 7,4 m

Maximum Distances In Meters @ 4K UHD (3840 x 2160)			
Monitor	185,29 m	389,73 m	1.162,65 m
Detect	92,64 m	194,86 m	581,33 m
Observe	37,06 m	77,95 m	232,53 m
Recognize	18,53 m	38,97 m	116,27 m
Identify	9,26 m	19,49 m	58,13 m
Inspect	2,32 m	4,87 m	14,53 m