



Technical Specifications

MOBOTIX M ONE (FIX & VARIO)

MOBOTIX M ONE (FIX & VARIO) - The One-of-a-Kind Video Security System

A robust maintenance-free German IP video system with outstanding design and high-quality components: glass fiber-reinforced, salt water-resistant housing, high-end processors, image sensors for excellent quality, and cyber-secure firmware by MOBOTIX with integrated AI for top-level perimeter protection and intrusion detection.

- Comprehensive codec support: H.264, H.265, MxPEG+, and MJPEG
- Wide range of optics with application-oriented fixed and varifocal lenses
- 4K UHD resolution for crisp and detailed images at day and night
- Two integrated IR LED lights (near and long distance)
- Wide Dynamic Range (WDR) with up to 120 dB
- Internal DVR including 64 GB microSD card (up to 1 TB supported)
- Integrated MOBOTIX ActivitySensor with AI-based object recognition
- Robust in all environmental conditions: -40 to 65 °C, IP66, NEMA 4X, and IK10
- 'Quick&Easy' installation with integrated bracket, concealed cabling, and varifocal optics



BeyondHumanVision

MOBOTIX

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Order Information

Name	MOBOTIX M ONE (FIX & VARIO)
Order Code:	Mx-ONE-M1A-S-8XXXXX

Hardware

Feature	Properties
Image sensor (color or B&W sensor)	Up to 4K UHD 3840x2160, 16:9, 1/1,8"
Available Lenses	Varifocal Wide (4.3-9.3mm; f/1.3; 112-47°), Varifocal Tele (11-29mm; f/1.7; 42-15°), Fixed lens (see Sensormodules Standard (4K Day & Night), p. 6)
Optical zoom	Yes (for varifocal models)
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
IK protection class - Sensor Module	N/A
IK protection class - Body	IK10
IP / NEMA protection class	IP66 / NEMA 4X / NEMA 4X
Intended use	Not intended for use in hazardous areas (Ex areas)

Feature	Properties								
Operating temperature range	-40 to 65 °C/-40 to 149 °F								
Min. cold start temperature	-30 °C/-22 °F								
Relative Humidity	95 % non-condensing								
Internal DVR Storage	Internal microSD card (SDHC/SDXC), 64 GB out-of-the-box, max. 2 TB.								
Allowed cable dimensions for cables connected to the PCB terminals	<i>Conductor cross section</i> <table> <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								
Input	Contact Closure (no galvanic isolation necessary) or up to 30 Vrms AC / 50V DC Switching thresholds - Input >1.6V results in detected HIGH - Input <0.9V results in detected LOW (after a HIGH) Max. length for cables: 50m								
Output	2x dry contact, form A (max 30 Vrms / max, 50V DC/ 60 W/ 2A DC)								
Microphone/Speaker	- Embedded - Microphone Sensitivity: -35 +/-4 dB (0 dB = 1 V/pa, 1 kHz) 1 Embedded Speaker: 0.9 W at 8 Ohm 1 External Speaker optional								
Integrated illumination	2 x embedded IR LEDs, 850nm, up to 30 m/100 ft (may be more depending on scene)								
Tampering Detection	Integrated Shock Sensor								
Max. power consumption	Max. 12.95 W/270 mA (average can be significantly lower)								
Electrical surge protection	Overvoltage Protection Box (not part of the scope of delivery)								
PoE standard	PoE (802.3af-2003) / Class 3								
Interfaces	- Ethernet 1000BaseT (RJ45 according to EIA/TIA-568B) - USB 2.0 via USB-C connector 12-24VDC power supply - Input / Output - Ext. Speaker								
Status LED	multicolor (8 color)								
Mounting Options	Wall-mountable (default) Ceiling- or pole-mountable (with accessory, compatible with M26)								
Dimensions (height x width x depth)	222 x 131 x 238 mm								
Weight	Approx. 0,973 kg/2,15 lbs								

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Feature	Properties
Housing	PBT-30GF
Standard accessories	1 Ethernet patch cable, 50 cm/19.7 in (installed) 1 SD card 64 GB (installed) 1 Important Safety Information 1 Sticker with IP address of camera 1 Camera connection flyer 1 Module wrench *M1A-S FIX only 1 Sealing ring for VarioFlex and wall mounts) 5 Screw caps plastic white 1 5mm Allen wrench 4 Stainless steel washers Ø5.3 mm 4 Wood screws 4.5x60 mm 4 Dowels S8 1 Tweezers for replacing the SD card
Tiltability of camera	■ Wall & pole mounted Horizontal: 180° Vertical: 110° ■ Ceiling mounted Horizontal: 360° Vertical: 110°
Detailed technical documentation	www.mobotix.com > Services > Download Center > Marketing & Documentation
MTBF	100,000 hours
Certificates	EN 55032, EN 55035, EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 62368-1, EN 63000, AS/NZS CISPR32, 47 CFR Part 15b, NRTL
Protocols	DHCP (client and server), DNS, ICMP, IGMP v3, IPv4, IPv6, HTTP, HTTPS, FTP, FTPS, NFS, NTP (client and server), MQTT, RTP, RTCP, RTSP, SFTP, SIP (client and server), SMB/CIFS, SNMP, SMTP, SSL/TLS 1.3, TCP, UDP, VLAN, VPN, Zeroconf/mDNS
Manufacturer warranty	5 years

Image and Video Properties

Feature	Properties
Available video codecs	H.264, H.265, MxPEG+, MJPEG
Image resolutions	VGA 640x360, XGA 1024x576, HD 1280x720, FullHD 1920x1080, QHD 2560x1440, 4K UHD 3840x2160 (8MP)

Feature	Properties
Multi streaming	H.264, H.265 with triple streaming
Multicast stream via RTSP	Yes
Max. frame rate	MxPEG: 20@4K, H.264: 30@4K, H.265: 30@4K

General Software Features

Feature	Properties
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 ■ Programmable 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) ■ MxMessageSystem
ONVIF compatibility	Profile G, S, T, (M with later firmware release)
Master/Slave functionality	Yes
Remote alarm notification	Email, network message (HTTP/HTTPS), SNMP, MxMessageSystem, MQTT
DVR/image storage management	■ On internal microSD card ■ On external USB and NAS devices ■ Different streams for live image and recording ■ MxPEG+ only ■ 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
Firmware Tampering Detection	Digital Signature

Video Analysis

Feature	Properties
Video motion detection	Yes
MxActivitySensor	Version 1.0, 2.1
MxActivitySensorONE	Motion and Loitering Detection of Person and Vehicles

Video Management Software

Feature	Properties
MOBOTIX HUB	Yes Services > Download Center > Software Downloads">www.mobotix.com > Services > Download Center > Software Downloads
MxManagementCenter	Yes (latest version recommended) Services > Download Center > Software Downloads">www.mobotix.com > Services > Download Center > Software Downloads
MOBOTIX LIVE App	Yes (available in Google Play Store (Android) and Apple App Store (iOS)).
3rd Party VMS Software	See ONVIF Profile S, T and G specification

Sensormodules Standard (4K Day & Night)

NOTE!

Lenses or sensors are not part of the scope of delivery.

Lens	Sensor	Order Code
Fixed lens 120° WIDE	4K Sensor as D/N IR Cut / Microphone	Mx-ONE-SMA-8DN040
Fixed lens 95° WIDE	4K Sensor as D/N IR Cut / Microphone	Mx-ONE-SMA-8DN050
Fixed lens 60° WIDE	4K Sensor as D/N IR Cut / Microphone	Mx-ONE-SMA-8DN080
Fixed lens 45° STANDARD	4K Sensor as D/N IR Cut / Microphone	Mx-ONE-SMA-8DN100
Fixed lens 30° TELE	4K Sensor as D/N IR Cut / Microphone	Mx-ONE-SMA-8DN150
Fixed lens 15° TELE	4K Sensor as D/N IR Cut / Microphone	Mx-ONE-SMA-8DN280

Dimensions

NOTE!

Drilling template: www.mobotix.com > Services > Download Center > Marketing & Documentation > Drilling Templates.

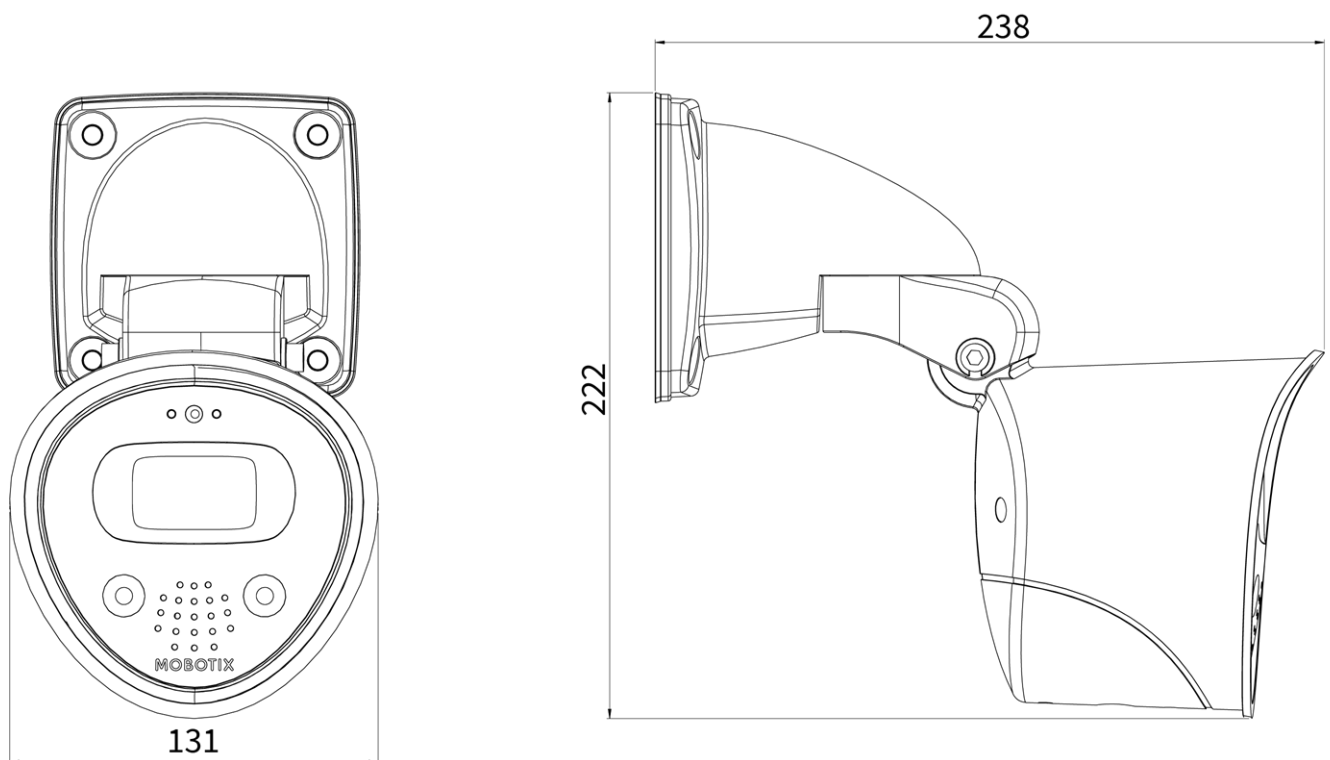


Fig. 1: MOBOTIX M ONE (FIX & VARIO): All measurements in mm



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