



Technical Specifications

MOBOTIX ONE M1A-S (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



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Order Information

| | |
|------|---------------------------------|
| Name | MOBOTIX ONE M1A-S (FIX & VARIO) |
|------|---------------------------------|

| | |
|-------------|---------------------|
| Order Code: | Mx-ONE-M1A-S-8XXXXX |
|-------------|---------------------|

Hardware

Feature

Properties

| |
|------------------------------------|
| Image sensor (color or B&W sensor) |
|------------------------------------|

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|--------------------------------------|
| up to 4K UHD 3840x2160, 16:9, 1/1,8" |
|--------------------------------------|

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|------------------|
| Available Lenses |
|------------------|

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|---|
| Varifocal Wide (4.3-9.3mm F/1.3/112-47°), |
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|--|
| Varifocal Tele (11-29mm F/1.7/42-15°), |
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|---|
| Fixed lens (see Supported Lenses and Sensor, p. 8) |
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|--------------|
| Optical zoom |
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|----------------------------|
| Yes (for varifocal models) |
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|-------------------|
| Light sensitivity |
|-------------------|

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|---|
| ▪ Color sensor (day): 0,1 lx @ 1/60s; 0,005 lx @ 1s |
|---|

| |
|---|
| ▪ BW sensor (night): 0,02 lx @ 1/60s; 0,001 lx @ 1s |
|---|

| Feature | Properties |
|-----------------------------------|---|
| Exposure control | Manual and automatic mode 1 s to 1/16,000 s |
| IK protection class | IK10 (housing except lens) |
| IP / NEMA protection class | IP66 / NEMA 4X |
| Intended use | Not use in hazardous areas (Ex area) |
| Operating temperature range | -40 to 65 °C/-40 to 149 °F |
| Min. cold start temperature | -25 °C/-22 °F |
| Relative Humidity | 95 % non-condensing |
| Internal DVR Storage | Internal microSD card (SDHC/SDXC), 64 GB out of the box, max. 1 TB. |
| I/Os | <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"> ▪ 2x Dry contact, form A (AC/DC, up to 50V / 60 W/ 2A) |
| Microphone/Speaker | <ul style="list-style-type: none"> ▪ 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) |
| Shock detector (tamper detection) | Yes |
| Max. power consumption | max. 12,95 W (average may be significantly lower) |
| Electrical surge protection | Overvoltage Protection Box (not part of the scope of delivery) |
| PoE standard | PoE (802.3af-2003)/Class 3 |

Technical Specifications

Feature

Interfaces

Properties

- Ethernet 1000BaseT (RJ45 according to EIA/TIA-568B)
- USB 2.0 via USB-C connector
- 12-24VDC power supply
- Input / Output
- Ext. Speaker

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

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 EAN number of camera
1 Sticker with IP address of camera
1 Module wrench (yellow) *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 > [Support](#) > [Download Center](#) > [Marketing & Documentation](#)

| Feature | Properties |
|-----------------------|---|
| 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 |
| 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 | <ul style="list-style-type: none"> ▪ H.264, H.265 ▪ MxPEG+ ▪ MJPEG |
| Image resolutions | VGA 640x360, XGA 1024x576, HD 1280x720, FullHD 1920x1080, QHD 2560x1440, 4K UHD 3840x2160 |
| Max. image resolution | 4K UHD 3840x2160 (8MP) |
| Multi streaming | H.264, H.265 |
| Multicast stream via RTSP | Yes |
| Max. frame rate | MxPEG: 20@4K, H.264: 30@4K, H.265: 30@4K |

General Software Features

| Feature | Properties |
|------------------------------|---|
| 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▪ 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 | <ul style="list-style-type: none">▪ 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 |

| Feature | Properties |
|---------------------------|--|
| Camera and data security | User and group management, SSL connections, IP-based access control, IEEE 802.1X, intrusion detection, digital image signature |
| Digitally signed firmware | Yes (to prevent firmware file tampering) |

Video Analysis

| Feature | Properties |
|------------------------|---|
| Video motion detection | Yes |
| MxActivitySensor | Version 1.0, 2.1, 3.0 (incl. AI Motion and Loitering Detection) |
| MOBOTIX App support | Yes with a later FW release |

Video Management Software

| Feature | Properties |
|------------------------|---|
| MOBOTIX HUB | Yes www.mobotix.com > Support > Download Center > Software Downloads |
| MxManagementCenter | Yes (latest version recommended) www.mobotix.com > Support > Download Center > Software Downloads |
| MOBOTIX Cloud | Streaming & Events supported |
| 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 |

Supported Lenses and Sensor

| Lens | Sensor |
|--|---|
| Fixed lens (120°, 95°, 60°, 45°, 30°, 15°) | 4K Sensor as D/N IR cut / Night Version |
| Varifocal Tele Lens 42°-15° | 4K Sensor as D/N IR cut / Night Version |
| Varifocal Wide Lens 112°-47° | 4K Sensor as D/N IR cut / Night Version |

Order Information

Varifocals

| | |
|----------------------|---|
| Mx-ONE-M1A-S-8DNTELE | M1A-S with 4K DN Tele Varifocal (Day/Night), 42° - 15° |
| Mx-ONE-M1A-S-8DNWIDE | M1A-S with 4K DN Wide Varifocal (Day/Night), 112° - 47,5° |

Fix Lenses

| | |
|---------------------|---|
| Mx-ONE-M1A-S-8DN040 | M1A-S with 4K DN040 (Day/Night), 120°x60° |
| Mx-ONE-M1A-S-8DN050 | M1A-S with 4K DN050 (Day/Night), 95°x50° |
| Mx-ONE-M1A-S-8DN080 | M1A-S with 4K DN080 (Day/Night), 60°x33° |
| Mx-ONE-M1A-S-8DN100 | M1A-S with 4K DN100 (Day/Night), 45°x25° |
| Mx-ONE-M1A-S-8DN150 | M1A-S with 4K DN150 (Day/Night), 30°x17° |
| Mx-ONE-M1A-S-8DN280 | M1A-S with 4K DN280 (Day/Night), 15°x8,5° |
| Mx-ONE-M1A-S-8N040 | M1A-S N with 4K N040 (Night) 120° |
| Mx-ONE-M1A-S-8N050 | M1A-S N with 4K N050 (Night), 95° |
| Mx-ONE-M1A-S-8N080 | M1A-S N with 4K N080 (Night), 60° |
| Mx-ONE-M1A-S-8N100 | M1A-S N with 4K N100 (Night), 45° |
| Mx-ONE-M1A-S-8N150 | M1A-S N with 4K N150 (Night), 30° |
| Mx-ONE-M1A-S-8N280 | M1A-S N with 4K N280 (Night), 15° |

Mounts

| | |
|-----------------------------|--------------------------------|
| Mx-MH-SecureFlex-ESWS (TBC) | Pole mount for M1x, M2x, M1A-S |
| MX-M-CM-M1 | Ceiling Mount |

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!

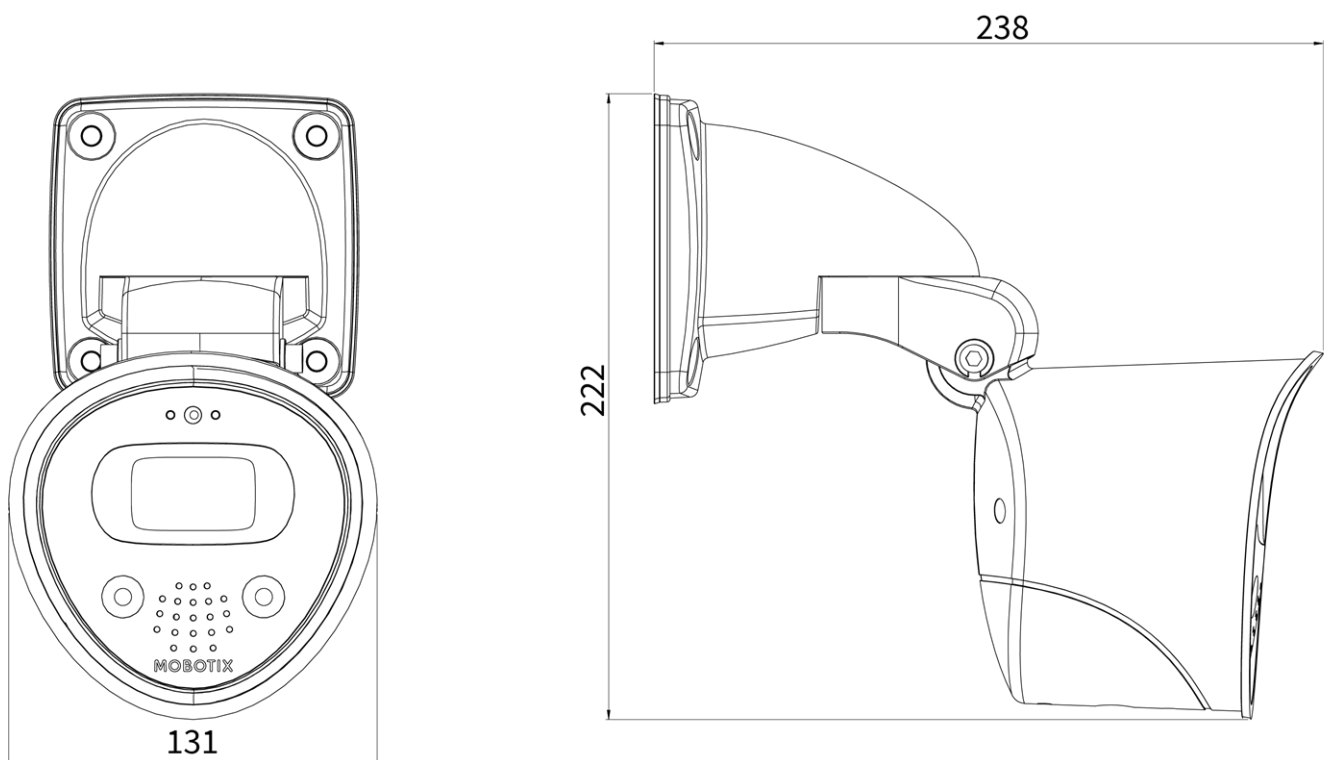


Fig. 1: MOBOTIX ONE M1A-S (FIX & VARIO): All measurements in mm

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