



# Technical Specifications

## MOBOTIX M73 FM Bundle

### FM-Certified MOBOTIX Thermal Technology

When it comes to building security, the FM-certified MOBOTIX Thermal TR cameras are the first choice. As standalone detectors or integrated into fire alarm systems, the certified systems meet the building safety regulations in accordance with the EU Construction Products Regulation.

- Complies with the EU Construction Products Regulation
- Early fire detection, even before flames arise
- Universally applicable, even outdoors
- Connection to control center/fire alarm systems
- Use of additional optical sensor possible
- Highly flexible: up to 20 measuring windows simultaneously



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## Order Information

**Order Code:****Bundle**

Mx-M73TA-C640R050-FM

M73 FM Bundle VGA (95°)

## Hardware

**Feature****Properties**Image sensor  
(color or B&W)

Up to 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

IK protection class

IK10 (housing)

<b>Feature</b>	<b>Properties</b>
IP / NEMA protection class	IP66 / NEMA 4X
Operating temperature range	-30 to 60 °C/-22 to 140 °F
Min. cold start temperature	-30 °C/-22 °F
Relative Humidity	95 % non-condensing
Internal DVR Storage	Internal microSD card (SDHC/SDXC), 8 GB out-of-the-box, max. 2 TB.
I/Os	Via Mx-F-4IOA; see <a href="#">Interface Boxes, p. 9</a>
Passive infrared sensor (PIR)	Integrated in Mx-F-MSA, max. 4.5 Watt (see <a href="#">Functional Modules, p. 9</a> )
Shock detector (tamper detection)	Yes
Max. power consumption	Max. 25 W/521 mA at 48 V Max. 25 W/1042 mA at 24 V
Electrical surge protection	Optional with MOBOTIX MX-Overvoltage-Protection-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 with sensor modules	Approx. 2.7 kg/6 lb
Housing	Aluminum, PBT-30GF
Standard accessories	<ul style="list-style-type: none"> <li>■ 1 blind module (pre-installed, must be installed when using only two sensor modules)</li> <li>■ 1 Thermal mounting plate with wall sealing (pre-installed), two standard plugs (pre-installed)</li> <li>■ 1 Connector box RJ45 black with rubber plug black, rubber plug single-wire white, USB plug blue (installed)</li> <li>■ 1 Ethernet patch cable, 50 cm/19.7 in with sealing (RJ45 variant only)</li> <li>■ 1 USB cable for connecting camera to Mx-F-4IOA</li> <li>■ 1 Set of mounting supplies for Mx-F-4IOA</li> <li>■ 1 Set of mounting supplies for Mx-F-NPAA</li> <li>■ 1 SD card 8 GB (installed)</li> </ul>

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Feature	Properties
	<ul style="list-style-type: none"><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 Protective cover for connector box polystyrene white (installed, to be removed during installation)</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</li><li>■ 1 USB plug connector box blue (installed)</li><li>■ 1 Module wrench</li><li>■ 1 Lens wrench</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	Horizontal: 2 x 180 degrees Vertical: 110 degrees
Detailed technical documentation	<a href="http://www.mobotix.com">www.mobotix.com</a> > <a href="#">Services</a> > <a href="#">Download Center</a> > <a href="#">Marketing &amp; Documentation</a>
MTBF	80,000 hours
Certificates	EN 50121-4, EN 55032, EN 55035, EN54-10:2002, EN54-10:2002/A1:2005, 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, EN 54-18, FM 3260
Protocols	DHCP (client and server), DNS, ICMP, IGMP v3, IPv4, IPv6, HTTP, HTTPS, FTP, FTPS, MQTT, NFS, NTP (client and server), RTP, RTCP, RTSP, SFTP, SIP (client and server), SMB/CIFS, SNMP, SMTP, SSL/TLS 1.3, TCP, UDP, VLAN, VPN, Zero-conf/mDNS
Manufacturer warranty	5 years

## Average Power Consumption

**CAUTION!** To comply with the requirements of FM 3260, the entire fire detection system (cameras, PoE switch power supplies, alarm systems, etc.) must be protected by uninterruptible power supplies (UPS) or batteries that can bridge power outages of up to 72 hours!

### M73 FM Bundle

Components	Average Power Consumption
<ul style="list-style-type: none"> <li>■ Mx-M73A</li> <li>■ M1: Thermographic sensor module</li> <li>■ M3: Multisense</li> <li>■ Mx-F-4IOA</li> <li>■ Mx-F-NPAA</li> </ul>	<ul style="list-style-type: none"> <li>■ 12.5 W/260 mA at 48 V</li> <li>■ 12.5 W/520 mA at 24 V</li> </ul>

### M73 FM Bundle and D/N Image Module

Components	Average Power Consumption
<ul style="list-style-type: none"> <li>■ Mx-M73A</li> <li>■ M1: Thermographic sensor module</li> <li>■ M2: Day/Night sensor module</li> <li>■ M3: Multisense</li> <li>■ Mx-F-4IOA</li> <li>■ Mx-F-NPAA</li> </ul>	<ul style="list-style-type: none"> <li>■ 13.5 W/281 mA at 48 V</li> <li>■ 13.5 W/562 mA at 24 V</li> </ul>

## Image and Video Properties

Feature	Properties
Available video codecs	<ul style="list-style-type: none"> <li>■ H.264, H.265</li> <li>■ MxPEG+</li> <li>■ MJPEG</li> </ul>
Image resolutions	VGA 640x360, XGA 1024x576, HD 1280x720, FullHD 1920x1080, QHD 2560x1440, 4K UHD 3840x2160
Multi streaming	H.264, H.265 with triple streaming
Multicast stream via RTSP	Yes

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### M73 FM Bundle

Feature	Properties
Max. image H.264 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. image H.264 resolution	<ul style="list-style-type: none"><li>One thermal sensor: VGA, 640x480</li><li>One thermal sensor, one optical sensor: 1xVGA, 640x480, 1x 4K UHD, 3840x2160 (8MP)</li></ul>
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	<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>Programmable 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>MxMessageSystem</li></ul>
ONVIF compatibility	Profile G, S, T
Master/Slave functionality	Yes
Remote alarm notification	Email, network message (HTTP/HTTPS), SNMP, MxMessageSystem, MQTT ModBus TCP* *In combination with MxThermalValidation or MxAdvancedRadiometry apps (optional, requires additional license)

Feature	Properties
DVR/image storage management	<ul style="list-style-type: none"> <li>■ On internal microSD card</li> <li>■ On external USB and NAS devices</li> <li>■ Different streams for live image and recording</li> <li>■ MxPEG+ only</li> <li>■ MxFFS with buffered archive, pre- and post-alarm images, storage monitoring with error reporting</li> </ul>
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)

## Optional MOBOTIX Apps for FM 3260 Fire Detection

- MxAdvancedRadiometry (see [Technical Specifications](#)).
- MxThermalValidation (see [Technical Specifications](#)).

### NOTE!

- Use of these optional apps is based on the specified use cases and subject to acceptance testing by the independent auditor.
- These MOBOTIX apps require additional licensing (30 days free trial included).

## Video Management Software

Feature	Properties
MOBOTIX HUB	Yes <a href="http://www.mobotix.com">www.mobotix.com</a> > <a href="#">Services</a> > <a href="#">Download Center</a> > <a href="#">Software Downloads</a>
MxManagementCenter	Yes (latest version recommended) <a href="http://www.mobotix.com">www.mobotix.com</a> > <a href="#">Services</a> > <a href="#">Download Center</a> > <a href="#">Software Downloads</a>
MOBOTIX Cloud	Streaming & Events supported

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Feature	Properties
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

## Sensor Modules

### Features Thermal Image Sensors – C-Models

Feature	Properties				
Thermal sensitivity	Typ. 30 mK				
Thermal image sensor	Uncooled microbolometer, VGA: 640 x 480 px				
IR range	7.5 to 13.5µm				
Temperature measurement range (adjustable)	High Sensitivity: -40 to 150°C/-40 to 302°F Low Sensivity: -40 to 350°C/-40 to 662°F Default: Automatic (switches between High and Low depending on highest temperatures in FoV)				
Adjustable time delay	Via software ( <b>Setup Menu &gt; Action Group Overview &gt; Edit &gt; Action Dead-time</b> )				
Sources of false stimuli	Avoided through setting up measurement areas (=detection zones) and exclusion zones in thermal radiometry mode as per instruction manual				
Max. image size	Can be scaled up to 3072 x 2048 (6MP), automatically scaled to size of MX sensor module				
Max. frame rate	30 fps				
Pixel pitch	12 µm				
Field of view	<table><thead><tr><th>Sensor Module</th><th>FoV (H x V)</th></tr></thead><tbody><tr><td>640R050</td><td>95° x 76°; focal length 4.9 mm; f/1.1</td></tr></tbody></table>	Sensor Module	FoV (H x V)	640R050	95° x 76°; focal length 4.9 mm; f/1.1
Sensor Module	FoV (H x V)				
640R050	95° x 76°; focal length 4.9 mm; f/1.1				

Feature	Properties
Operating temperature range	-30 to 60 °C/-22 to 140 °F
Relative Humidity	95 % non-condensing
MTBF	80,000 hours
IP rating	IP67
IK rating	IK04
Material	PBT-30GF (housing)

## Functional Modules

Functional Module	Order Code	Remark
Audio module (optional)	Mx-F-AUDA	Audio module with microphone and speaker
MultiSense module (included)	Mx-F-MSA	With PIR sensor, temperature sensor, illumination sensor

## Interface Boxes

### Mx-F-4IOA

Inputs	4 galvanically separated inputs, self powered, up to 30 Vrms AC / 50V DC Switching thresholds: <ul style="list-style-type: none"><li>Input &gt;1.6V leads to a detected HIGH</li><li>Input &lt;0.9V leads to a detected LOW (after a high)</li></ul> max. length for cables: 50m
Outputs	4 Form A relay contacts (max 30 Vrms AC / max, 50V DC/ 60 W/ 2A DC)

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4–20 mA  
Alarm & Fault Relay (SPDT), Trouble Relay (SPST)  
SPDT: 1 A at 30 VDC or 1 A at 30VAC  
LEDs: via included Mx-F-MSA

Wire specifications (terminals)	<i>Conductor cross section</i>	
	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>

Status indicators Multi-color LEDs (Green, Red); refer to Mx-F-4IOA Quick Installation

Mounting Mx-M-OW-M73 (wall mount)  
Mx-M-CM-M73 (ceiling mount)

## Mx-F-NPAA

Input voltage 12 to 24 V (tolerance range 10.71 to 26.4 V)

Output voltage PoE Class 1 to 4 (up to 25 W)

## General Hardware Specifications

Power consumption Typ. 1 W/200 mA

Protection class IP66

Operating temperature -30 to 60 °C/-22 to 140 °F

Certificates CE, EMC, ROHS,  
AS/NZS CISPR 32,  
47 CFR FCC Part 15, Subpart B, Class A,  
ICES-003 Class A

Dimensions 86 x 56 x 31 mm/3.39 x 2.20 x 1.22 in  
(width x height x depth) (without rubber plugs)

Weight 70 g

## Connector Box RJ45

Interface	Properties
Network	100/1000 Mbps
Overvoltage Protection	max. 4 kV on the PoE network cabling
Allowed cable dimensions for cables connected to the PCB terminals	<i>Conductor cross section</i> 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	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

## Dimensions

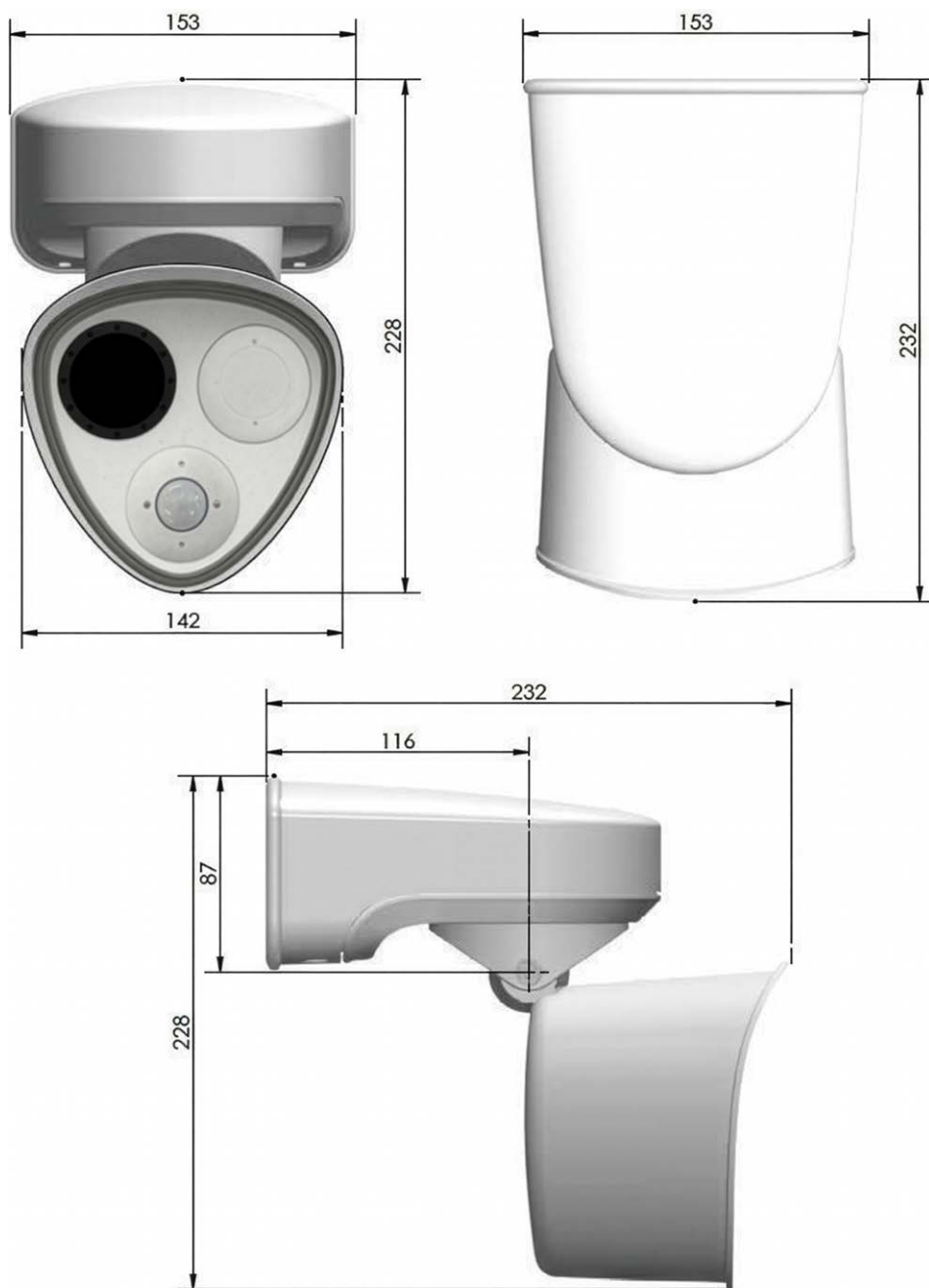


Fig. 1: MOBOTIX M73: All measurements in mm

**NOTE!** Drilling template: [www.mobotix.com](http://www.mobotix.com) > Support > Download Center > Marketing & Documentation > Drilling Templates.

## Dimensions of Interface Boxes

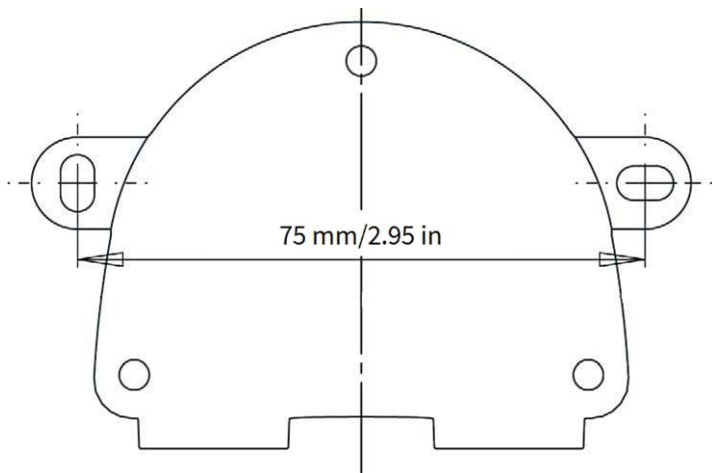


Fig. 2: All measurements in mm

**NOTE!**

When printing this page at 100% of the original size (no scaling) you can use this page as drilling template.

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