



# Technical Specifications

## MOBOTIX S74 EN54

### EN 54-10 certified MOBOTIX thermal technology

When it comes to building security, the EN 54-10 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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**MOBOTIX**

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## Order Information

	<b>Order Code:</b>	<b>Camera Type / Bundle</b>
20.102.719- 01	Mx-S74TA-B336R100- EN54	S74 TR Camera (B) CIF (45°)
20.102.720- 01	Mx-S74TA-B336R150- EN54	S74 TR Camera (B) CIF (25°)
20.102.721- 01	Mx-S74TA-B336R280- EN54	S74 TR Camera (B) CIF (17°)
20.102.722- 01	Mx-S74TA-B640R050- EN54	S74 TR Camera (B) VGA (90°)
20.102.723- 01	Mx-S74TA-B640R080- EN54	S74 TR Camera (B) VGA (69°)
20.102.724- 01	Mx-S74TA-B640R100- EN54	S74 TR Camera (B) VGA (45°)
20.102.725- 01	Mx-S74TA-B640R150- EN54	S74 TR Camera (B) VGA (32°)

# Hardware

Feature	Properties
Image sensor (color or B&W sensor)	up to 4K UHD 3840x2160, 16:9, 1/1,8"
Light sensitivity	<ul style="list-style-type: none"> <li>▪ Color sensor (day): 0,1 lx @ 1/60s; 0,005 lx @ 1s</li> <li>▪ BW sensor (night): 0,02 lx @ 1/60s; 0,001 lx @ 1s</li> </ul>
Exposure control	Manual and automatic mode 1 s to 1/16,000 s
IK protection class	IK10 (housing)
IP / NEMA protection class	IP66 / NEMA 4X
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), 8 GB out of the box, max. 1 TB.
I/Os	<a href="#">S74 IO Slide in Board, p. 12</a> required
Microphone/Speaker	<a href="#">S74 IO Slide in Board, p. 12</a> required
Passive infra-red sensor (PIR)	Available with functional module, max. 4.5 Watt (see <a href="#">Functional Modules</a> )
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)
Max. power consumption	max. 25 W
Electrical surge protection	<a href="#">S74 Network Slide in Board with RJ45 and VDC power supply - A (pre-installed), p. 13</a> required
PoE standard	PoE Plus (802.3at-2009)/Class 4 (Network slide in Board required. See <a href="#">Interface Slide in Boards, p. 12</a> )

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Feature	Properties
Interfaces	4 sensor / functional modules USB-C 2 Slots for slide in boards (Network, IOs etc.)
Mounting Options	Wall-mountable
Dimensions (height x width x depth)	36 x 232 x 110 mm
Weight without sensor modules	1.130g
Housing	Aluminum, PBT-30GF
Standard accessories	1 SD card 8 GB (installed) 1 Important Safety Information 1 Sticker with EAN number of camera 1 Sticker with IP address of camera 1 Module wrench (gray) 1 Lens wrench blue 4 Wood screws 4.5 x 60 mm 4 Dowels S8 2 Covers for screw plastic white
Detailed technical documentation	<a href="http://www.mobotix.com">www.mobotix.com</a> > <a href="#">Support</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
Protocols	DHCP (client and server), DNS, ICMP, IGMP v3, IPv4, IPv6, HTTP, HTTPS, FTP, FTPS, 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

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## Average Power Consumption

System	Modules	Average power consumption
S74 - Body	Body only	8.1 W

## 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
Max. image H.264 resolution	<ul style="list-style-type: none"> <li>▪ One thermal sensor: VGA, 640x480</li> <li>▪ Two thermal sensors: 2xVGA, 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
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, (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"> <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>

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
MxAnalytics	Yes with a later FW release
MOBOTIX App support	Yes with a later FW release

## Video Management Software

Feature	Properties
MOBOTIX HUB	Yes <a href="http://www.mobotix.com">www.mobotix.com</a> > <a href="#">Support</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="#">Support</a> > <a href="#">Download Center</a> > <a href="#">Software Downloads</a>
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

# Sensor Modules

## Dimensions of Sensor Modules

Dimensions (height x width)	58 x 42,5 (50 mm)
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## Weight of Sensor Modules

Sensor Module	Weight
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Standard Sensor Modules	max. 150g
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Functional Modules	max. 150g
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Thermal Sensor Module	380g
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PTMount Thermal	890g
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## Supported Image Sensor Modules

Sensor Module	Order Code
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Sensor module with standard 45° lens	Mx-O-M7SA-8DN100*
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	Mx-O-M7SA-8D100
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	Mx-O-M7SA-8N100*
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	Mx-O-M7SA-4DN100
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Sensor module with tele lens 30°	Mx-O-M7SA-8DN150*
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	Mx-O-M7SA-8D150
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	Mx-O-M7SA-8N150*
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	Mx-O-M7SA-4DN150
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	Mx-O-M7SA-8L150
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<b>Sensor Module</b>	<b>Order Code</b>
Sensor module with tele lens 15°	Mx-O-M7SA-8DN280*
	Mx-O-M7SA-8D280
	Mx-O-M7SA-8N280*
	Mx-O-M7SA-4DN280
	Mx-O-M7SA-8L280
Sensor module with tele lens 8°	Mx-O-M7SA-8D500
	Mx-O-M7SA-8N500
	Mx-O-M7SA-8L500
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
	Mx-O-M7SA-8L040
Sensor module with hemispheric lens 180° 12MP	Mx-O-M7SA-12DN016*

\*also available in black.

**NOTE!** Please consider any lens-related restrictions. For example, license plate recognition is not possible with a hemispheric lens.

For a complete list of lenses for MOBOTIX cameras, please see the Lens Table document for MOBOTIX 7 models on [www.mobotix.com](http://www.mobotix.com) > [Support](#) > [Download Center](#) > [Marketing & Documentation](#) > [Lens Table](#).

## Supported Thermal Sensor Modules

**CAUTION!** Do not remove or replace the pre-installed thermal sensor module included in the scope of delivery. Otherwise, the camera will lose the EN54 certification.

Sensor Module	Order Code
CIF Thermal Radiometry 45° x 35°	Mx-O-M7SB-336RS100
CIF Thermal Radiometry 25° x 19°	Mx-O-M7SB-336RS150
CIF Thermal Radiometry 17° x 13°	Mx-O-M7SB-336RS280
VGA Thermal Radiometry 90° x 69°	Mx-O-M7SB-640RS050
VGA Thermal Radiometry 69° x 56°	Mx-O-M7SB-640RS080
VGA Thermal Radiometry 45° x 37°	Mx-O-M7SB-640RS100
VGA Thermal Radiometry 32° x 26°	Mx-O-M7SB-640RS150

The **Thermal Radiometry (TR)** 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 High Sensitivity: -40 to 170 °C/-40 to 320 °F -- Low Sensitivity: -40 to 550 °C/-40 to 1022 °F .

## Features Thermal Image Sensors

Feature	Properties
Thermal sensitivity	Typ. 50 mK, IR range 7.5 to 13.5 µm
Temperature measurement range (adjustable)	High Sensitivity: -40 to 170 °C/-40 to 320 °F -- Low Sensitivity: -40 to 550 °C/-40 to 1022 °F

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Feature	Properties	
Thermal image sensor	Uncooled microbolometer, CIF: 336 x 256 pixels / VGA: 640 x 480	
Dimensions	PT mount Thermal 336/640: 98.5mm x 106mm diam, 620g (including PT Mount Sensor module alone: 73mm (+4.4mm front glass) x 57mm diam (63mm front glass), 310g	
Max. image size	Can be scaled up to 3072 x 2048 (6MP), automatically scaled to size of MX sensor module	
Max. frame rate	9fps	
Pixel pitch	17µm	
Field of view	<b>Sensor Module</b>	<b>FoV</b>
	336 xx 100	45° x 35°; 2.27mr, focal 7.5mm, f/1.25
	336 xx 150	25° x 19°; 1.31mr, focal 13mm, f/1.25
	336 xx 280	17° x 13°; 0.90mr, focal 19mm, f/1.25
	640 xx 050	90° x 69°; 2.27mr, focal 7.5mm, f/1.4
	640 xx 080	69° x 56°; 1.89mr, focal 9mm, f/1.4
	640 xx 100	45° x 37°; 1.31mr, focal 13mm, f/1.25
	640 xx 150	32° x 26°; 0.90mr, focal 19mm, f/1.25
Operating temperature	-40° to +65°C / 40° to 149°F; 5% to 95% non-condensing	
Power consumption	CIF: 1W VGA: 1.2W	
MTBF	80,000 hours	
IP rating	IP67	
IK rating	IK04	
Material	PBT-30GF (housing); Germanium (lens)	
Software (included)	Video management software MxManagementCenter	

## Supported Functional Modules

Functional Module	Order Code	Remark
Functional MultiSense module (pre installed)	Mx-F-MSA	with PIR sensor, temperature sensor, illumination sensor and status LED

## Interface Slide in Boards

### S74 IO Slide in Board

Order Code	Mx-F-S7A-INT01
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Terminal	Remark
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
Line In	Standard Line In: (0dB) Vrms=1V
SPK	0,9W at any 8 Ohm speaker. MOBOTIX Audio module: 0,9W at 8 Ohm
MIC	Passive microphone to connect (for best results). R_Bias for the microphone is 2.2 kOhm (included on the camera). Microphone impedance < 2.2 kOhm, Operating voltage of the microphone is 2V. Sensitivity of the MOBOTIX Audio Module: -35 +/-4dB (0dB = 1V/pa, 1kHz)
IN	<ul style="list-style-type: none"> <li>▪ Contact Closure (no galvanic isolation necessary) or up to 50V AC/DC</li> <li>▪ max. length for cables: 50m</li> </ul>
OUT	<ul style="list-style-type: none"> <li>▪ requires pull-up resistor and external power supply (10mA / max. 50V DC - no AC)</li> <li>▪ Output may be loaded with max. 50mA</li> <li>▪ max. length for cables: depends on loop impedance of the connected cable.</li> </ul>

**Allowed cable dimensions for cables connected to the PCB terminals**

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>

## **S74 Network Slide in Board with RJ45 and VDC power supply - A (pre-installed)**

Order Code	Mx-F-S7A-RJ45-VDC
Power Supply	12-24 V DC only - recommended 2,5-1,5A 24Volt power supply unit required
Network	RJ45 / Ethernet 1000Base-T

**Allowed cable dimensions for cables connected to the PCB terminals**

AWG	26 - 20
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>

## **S74 Network Slide in Board with RJ45 and VDC power supply - B (pre-installed)**

Order Code	Mx-F-S7B-RJ45-VDC
Power Supply	12-24 V DC only - recommended 2,5-1,5A 24Volt power supply unit required
Network	RJ45 / Ethernet 1000Base-T

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#### Allowed cable dimensions for cables connected to the PCB terminals

AWG	26 - 14
Rigid	0.14mm <sup>2</sup> - 2.5mm <sup>2</sup>
Flexible	0.14mm <sup>2</sup> - 1.5mm <sup>2</sup>
Flexible with ferrule	0.25mm <sup>2</sup> - 1.5mm <sup>2</sup>

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# Dimensions

**NOTE!** Download the drilling template from the section or on the MOBOTIX website: [www.mobotix.com](http://www.mobotix.com) > [Support > Download Center > Marketing & Documentation > Drilling Templates.](#)

**CAUTION!** Always print or copy the drilling template at 100% of the original size!

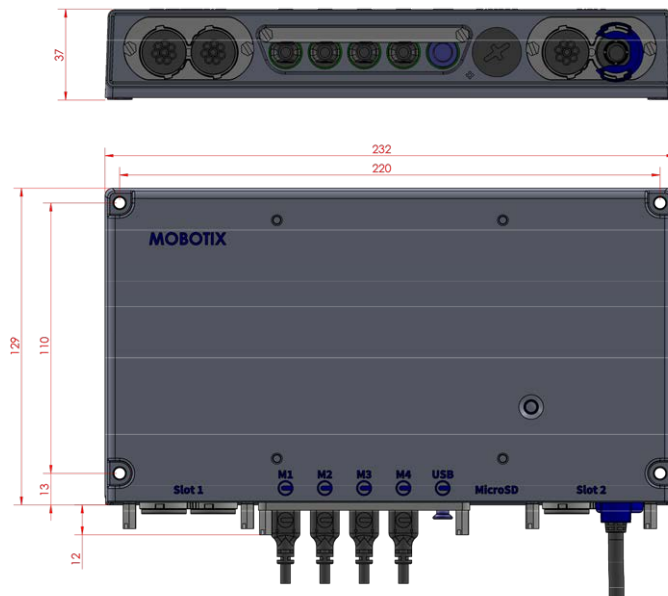


Fig. 1: MOBOTIX S74 EN54: All measurements in mm

# MOBOTIX

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[EN\\_08/24](#)

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