



# Technical Specifications

## MOBOTIX S74

**Flexible. Modular. Unique.**

Weatherproof and robust, the latest generation of our successful S 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
- 2 x 4K UHD resolution
- 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

 HEVC Advance™

BeyondHumanVision

**MOBOTIX**

# Camera

## Hardware

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
Video codecs	<ul style="list-style-type: none"><li>▪ H.264, H.265 with Triple Streaming</li><li>▪ MxPEG+</li><li>▪ MJPEG</li></ul>
IK protection class	IK10 (housing)
IP protection class	IP66
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, out of the box	MicroSD card (8 GB), MxPEG+ recording only
I/Os	<a href="#">Camera , p. 2</a> required
Microphone/Speaker	<a href="#">Camera , p. 2</a> required
Passive infra-red sensor (PIR)	Available with functional module, max. 4.5 Watt (see <a href="#">Camera , p. 2</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	25 W
Electrical surge protection	<a href="#">Camera , p. 2</a> required
PoE standard	PoE Plus (802.3at-2009)/Class 4 (Network slide in Board required. See <a href="#">Camera , p. 2</a> or <a href="#">Camera , p. 2</a> )

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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 55032:2012AC:2013 Class A, EN 55035:2017, EN 50121-4:2016, EN 61000-6-1:2007, EN 61000-6-2:2015, EN 61000-6-3:2007A1:2011+AC:2012, EN 61000-6-4:2007A1:2011, EN50581:2012, EN 62368-1:2014+AC:2015A11:2017+AC:2017, 47 CFR Part 15b Class A, AS/NZS CISPR 32:2015 Class A
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, UDP, VLAN, VPN, Zeroconf/mDNS
Manufacturer warranty	3 years

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## 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	<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. frame rate	MxPEG: 20@4K, H.264: 30@4K, H.265: 30@4K

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## General Features

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>Custom 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>MOBOTIX MessageSystem</li></ul>
ONVIF compatibility	Profile S, T

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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) <a href="http://www.mobotix.com">www.mobotix.com</a> > <a href="#">Support</a> > <a href="#">Download Center</a> > <a href="#">Software Downloads</a>
MxBell	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>

## Sensor Modules

### Dimensions of Sensor Modules

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

Standard Sensor Modules	max. 150g
Functional Modules	max. 150g
Thermal Sensor Module	380g
PTMount Thermal	890g

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## Features Thermal Image Sensors

Sensitivity	Typ. 50 mK, IR range 7.5 to 13.5 $\mu\text{m}$ ; Temperature Measurement Range: $-40$ to $550$ $^{\circ}\text{C}$ / $-40$ to $1022$ $^{\circ}\text{F}$
Thermal image sensor	Uncooled microbolometer, CIF: 336 x 256 pixels / VGA: 640 x 480
Max. image size	Can be scaled up to 3072 x 2048 (6MP), automatically scaled to size of MX sensor module
Max. frame rate	9 fps (when displaying an MxSensor module and a thermal sensor module, the overall frame rate of the camera is reduced to 9 fps)
Software (included)	Video management software MxManagementCenter

## Features ECO Thermal Image Sensor

Sensitivity	Typ. 65 mK, IR range 7.8 to 14 $\mu\text{m}$ ; Temperature Measurement Range: $-40$ to $330^{\circ}\text{C}$ / $-40$ to $626$ $^{\circ}\text{F}$
Thermal image sensor	Uncooled microbolometer, CIF: 320 x 240 pixels
Max. image size	Can be scaled up to 3072 x 2048 (6MP), automatically scaled to size of MX Sensor module
Max. frame rate	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

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## Supported Sensor Modules

Sensor Module	Order Code
Sensor module with standard 45° lens	Mx-O-M7SA-8DN100
	Mx-O-M7SA-8D100
	Mx-O-M7SA-8N100
	Mx-O-M7SA-4DN100
Sensor module with tele lens 30°	Mx-O-M7SA-8DN150
	Mx-O-M7SA-8D150
	Mx-O-M7SA-8N150
	Mx-O-M7SA-4DN150
Sensor module with tele lens 15°	Mx-O-M7SA-8DN280
	Mx-O-M7SA-8D280
	Mx-O-M7SA-8N280
	Mx-O-M7SA-4DN280
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
Sensor module with standard 45° lens	Mx-O-M7SA-8DN100
	Mx-O-M7SA-8D100
	Mx-O-M7SA-8N100
	Mx-O-M7SA-4DN100

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

Sensor module	Order code
CIF Thermal 45° x 35°	MX-O-M7SB-336T100
CIF Thermal 25° x 19°	Mx-O-M7SB-336TS150
CIF Thermal 17° x 13°	Mx-O-M7SB-336TS280
CIF Thermal Radiometry 45° x 35°	Mx-O-M7SB-336R100
CIF Thermal Radiometry 25° x 19°,	Mx-O-M7SB-336RS150
CIF Thermal Radiometry 17° x 13°	Mx-O-M7SB-336RS280
ECO CIF Thermal 105°x75°	MX-O-M7SA-320T040
ECO CIF Thermal 56°x42°	Mx-O-M7SA-320T080
VGA Thermal 90° x 69°	Mx-O-M7SB-640T050
VGA Thermal 69° x 56°	Mx-O-M7SB-640TS080
VGA Thermal 45° x 37°	Mx-O-M7SB-640TS100
VGA Thermal 30° x 26°	Mx-O-M7TB-640TS150
VGA Thermal Radiometry 90° x 69°	Mx-O-M7SB-640R050
VGA Thermal Radiometry 69° x 56°	Mx-O-M7TB-640RS080
VGA Thermal Radiometry 45° x 37°	Mx-O-M7SB-640RS100
VGA Thermal Radiometry 30° x 26°	Mx-O-M7SB-640RS150

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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 (missing or bad snippet).

The **Thermal** variants only measure in the center of the image (2x2 pixel spotmeter).

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# Functional Modules

## Supported Functional Modules

Functional Module	Order Code	Remark
Functional MultiSense module	Mx-F-MSA	with PIR sensor, temperature sensor, illumination sensor
Functional IR Light modules	Mx-F-IRA-W	for Super Wide-Angle Lens Sensor Modules 95°
	Mx-F-IRA-S	for Standard & Wide-Angle Lens Sensor Modules 45° and 60°
	Mx-F-IRA-T	for Tele Lens Sensor Modules 15° and 30°
		Power consumption IR Light Modules: 4,2 W at 100% brightness.

# Interface Slide in Boards

## S74 IO Slide in Board

Order Code	Mx-F-S7A-INT01
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
SPK	0,9W at any 8 Ohm speaker. MOBOTIX Audio module: 0,9W at 8 Ohm

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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 / OUT

INPUT

- Contact Closure (no galvanic isolation necessary) or up to 50V AC/DC
- max. length for cables: 50m

OUTPUT

- requires pull-up resistor and external power supply (10mA / max. 50V DC - no AC)
- max. length for cables: depends on loop impedance of the connected cable.

Specs for cables connected to the PCB terminals:

*Conductor cross section*

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>

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### S74 Network Slide in Board with RJ45 socket

Order Code	Mx-F-S7A-RJ45
Power Supply	PoE Plus (802.3at-2009)/Class 4
Network	RJ45 / Ethernet 1000Base-T

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### S74 Network Slide in Board with LSA terminal

Order Code	Mx-F-S7A-LSA
Power Supply	PoE Plus (802.3at-2009)/Class 4
Network	LSA / Ethernet 1000Base-T

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## S74 Network Slide in Board with RJ45 and VDC power supply

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

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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!

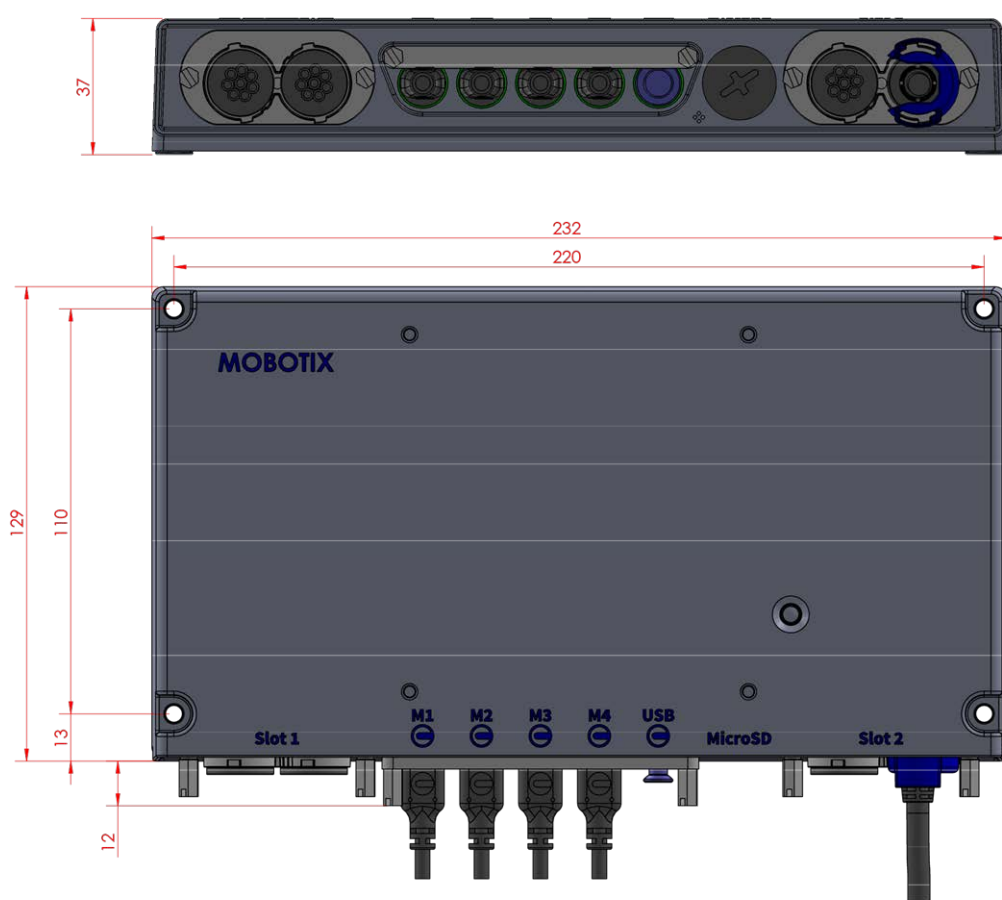


Fig. 1: S74: All measurements in mm

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MOBOTIX AG • Kaiserstrasse • D-67722 Langmeil • Tel.: +49 6302 9816-103 • [sales@mobotix.com](mailto:sales@mobotix.com) • [www.mobotix.com](http://www.mobotix.com)

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