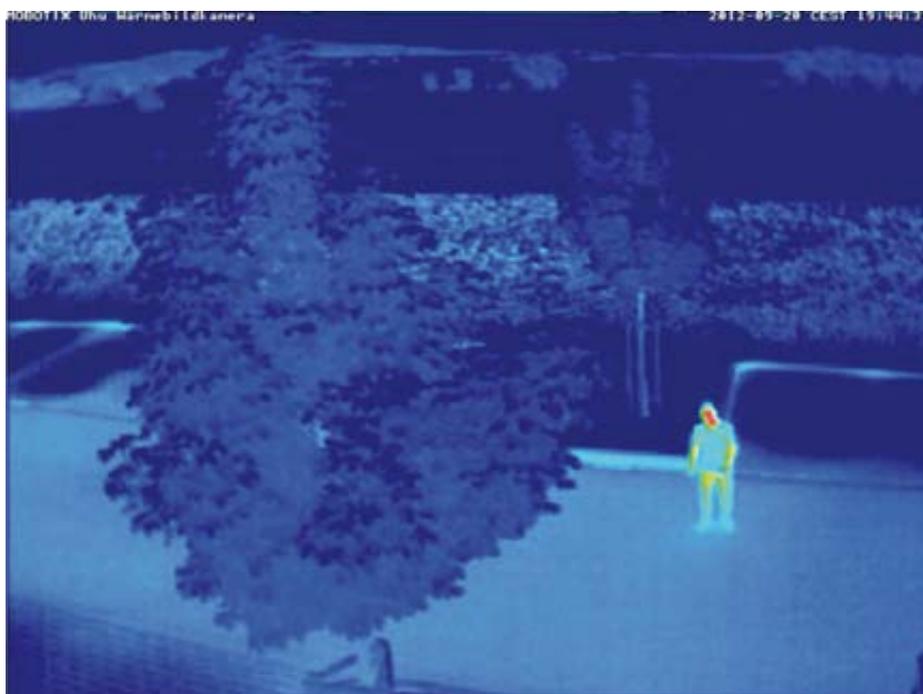


MOBOTIX Network Camera with Thermographic Image Module and Color/Black & White Sensor Module

Based on the proven design of the M15 system platform, this network camera provides an entirely new range of applications. Combined with the elaborate array of camera sensors (PIR sensor, microphone, etc.) and the analytic capabilities of the camera software (MxActivitySensor, video motion detection, event logic, etc.), it is now possible to detect, for example, moving persons even in total darkness.

The different display options of the thermographic image sensor (off-color/black & white) add to the existing possibilities for analyzing and using the generated images.

In addition, the modular design of the M15 platform provides even more flexibility: The left sensor module can be either a color or a black & white image module. If only the thermographic image is needed, the left sensor module can be plugged with the supplied dummy module.



Thermographic image in offset colors

HiRes Video Innovations

The German company MOBOTIX AG is known as the leading pioneer in network camera technology and its decentralized concept has made high-resolution video systems cost-efficient.

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Technical Specifications M15D-Thermal

Model Variants	MX-M15D-Thermal-L43/L65/L135
Lens options Thermal image sensor (right)	45°, 25°, 17° horizontal field of view
Lens options MX sensor module (left, optional)	180° to 13° horizontal field of view
Sensitivity Thermal image sensor (right)	NETD typ. 50mK, <79 mK, IR range 7.5 to 13.5 µm
Temp. measuring range Thermal image sensor (right)	-40 to +550°C/-40 to 1,022°F
Sensitivity MX sensor module (left)	Color sensor: 0.25 Lux at 1/60 s, 0.013 Lux at 1 s black & white sensor: 0.05 Lux at 1/60 s, 0.0025 Lux at 1 s, MxLEO – MOBOTIX Lowlight Exposure Optimization
Image sensor Thermal image sensor (right)	Uncooled micro bolometer, 336x252 pixels
Image sensor MX sensor module (left)	1/2.5" CMOS, 5 MP (2592x1944 pixels), progressive scan
Max. image size Thermal image sensor (right)	Can be scaled up to 2048x1536 (QXGA), automatically scaled to size of MX sensor module
Max. image size MX sensor module (left)	Color/Black & White 2048x1536 (QXGA)
Image formats Thermal image sensor (right) MX sensor module	2048x1536 (QXGA), 1920x1080 (Full HD), 1280x960 (MEGA), 1280x720 (HD), 1024x768, 800x600, 768x576 (DI-PAL), 704x576 (TV-PAL), 640x480, 384x288, 320x240, 160x120, custom formats
Max. frame rate Thermal image sensor (right)	9 fps*
Max. frame rate MxPEG (Live/recording with sound) MX sensor module (left)	VGA: 30 fps, MEGA: 30 fps, QXGA: 20 fps, Dual image: 9 fps
Image compression	MxPEG, M-JPEG, JPEG, H.264 (SIP video only)
Internal DVR	MicroSD slot including 4 GB, max. 64 GB
External video ring buffer	Up to 4 TB directly on NAS and PC/Server, no additional recording software required
Software (included)	MxEasy video management software, MxControlCenter control center software, MOBOTIX App for iOS devices version 5.0 and higher
Image Processing	Backlight compensation, automatic white balance, image distortion correction, panorama correction, video sensors (video motion detection/MxActivitySensor), optional off-color/black & white display of thermographic sensor
Virtual PTZ	Digital pan/tilt/zoom, continuous up to 8X
Alarm/events	Video Motion detection, MxActivitySensor, external signals, temperature sensor, PIR, microphone, shock detector, notification via e-mail, FTP, IP telephony (VoIP, SIP), visual/acoustic alarms, pre- and post-alarm images
Microphone and speaker	Microphone and speaker integrated

*When displaying dual images (thermo image sensor and MX sensor module), the frame rate is reduced to 9 fps

Technical Specifications M15D-Thermal

Audio features	Lip-synchronous audio, two-way communication, audio recording
Interfaces	Ethernet 10/100, MiniUSB, MxBus; inputs/outputs and RS232 via accessories
Video telephony	VoIP/SIP, two-way communication, remote controlling using key codes, event notification
Security	User/group management, HTTPS/SSL, IP address filter, IEEE 802.1x, intrusion detection, digital image signature
Certifications	EMV (EN 55022, CISPR 22, EN 55024, EN 61000-6-1/2, FCC Part15B, CFR 47, AS/NZS 3548)
Power supply	Year-round Power-over-Ethernet (IEEE 802.3af); PoE class 3 required
Power consumption without MX sensor module	Typ. < 5 W
Max. power consumption of attached MxBus modules	3 W MxBus and USB: 4 W
Operating conditions	IP66, -30 to +60°C/-22 to +140°F
Shock resistance	IK06 (IEC 62262/EN 50102)
Dimensions/weight M15D-Thermal without MX sensor module	W x H x D with wall mount: 158 x 244 x 239 mm; W x H x D with ceiling mount: 158 x 210 x 207 mm; Weight with wall mount: approx. 1,210 g Weight with ceiling mount: approx. 1,160 g
Weights MX sensor modules	L12: 85 g L25, L51: 111 g L38, L76, L160: 122 g
Standard Delivery	Housing (high-resistance composite, PBT), white, shock-resistant dome for L12 sensor module, coated glass pane for all other sensor modules, accessories for installation on wall and ceiling, Allen wrench, 50 cm patch cable, manual, software, 4 GB MicroSD card (built-in)



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M15D-Thermal Standard Delivery

Item	Count	Part Name
1.1	1	Camera housing with mainboard and wall mount (installed)
1.2	1	Front element with one thermographic image sensor, germanium disc and additional sensors (installed)
1.3	1	Transport plugs (installed)
1.4	1	Dummy module (must be installed when using only one sensor module)
1.5	4	Inner housing cover (installed)
1.6	4	Stainless steel Allen screw with flat head M4x8 for inner housing cover (installed)
1.7	2	Cable lock black with bayonet catch (Ethernet patch cable, USB, one mounted, one supplied)
1.8	2	Single wire plug, blue (MxBus, USB, mounted)
1.9	1	MicroSD card 4 GB (installed)
1.10	1	Ethernet patch cable, 50 cm/19.7 in with sealing (installed)
1.11	2	Sensor module cable 15 cm/6 in (installed in camera)
1.12	1	I/O cable with red clips to front element 15 cm/6 in (installed)
1.13	1	Hinged ferrite for Ethernet cable (installed)
1.14	1	Hinged ferrite for sensor module cable (installed)
1.15	2	Rubber plug for covering mounting screws, white
1.16	3	Stainless steel Allen screw M6x30 (installed)
1.17	3	Stainless steel washer Ø 6.4 mm (installed)
1.18	1	Stainless steel spring washer Ø 6.4 mm (wall/ceiling mount, installed)
1.19	1	Stainless steel lock nut M6 (wall/ceiling mount, installed)



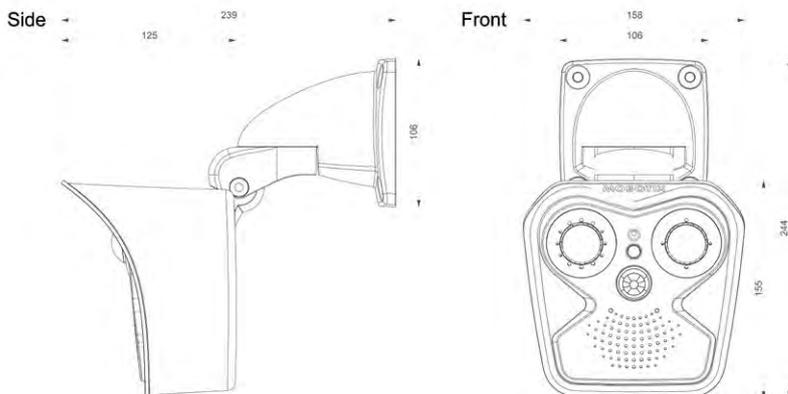
For accessories and additional information see the M15 documentation (www.mobotix.com > Support > Manuals).

Remarks

- Delivery time for single unit: None
Delivery time for projects: 8 to 12 weeks
- MTBF > 80,000 hours

Outlook

- Thermogr. sensor with VGA resolution, 30 fps
- Temperature measurement



All measurements in mm.

Attention – Special Export Laws Apply!

Cameras with thermal image sensors ("thermal cameras") are subject to the special export regulations of the U.S.A. and the ITAR (International Traffic in Arms Regulation):

- According to the currently applicable export regulations of the U.S.A. and the ITAR, cameras with thermal image sensors or parts thereof must not be exported to countries embargoed by the U.S.A. or the ITAR. At present, this applies to the following countries: Syria, Iran, Cuba, North Korea and Sudan. The same export ban applies to all persons and institutions listed in "The Denied Persons List" (see www.bis.doc.gov, "Policy Guidance > Lists of Parties of Concern").
- Under no circumstances can the camera itself or its thermal image sensors be used in the design, the development or in the production of nuclear, biological or chemical weapons or in the weapons themselves.

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