



#### New In This Issue:

- 5MP sensors for all cameras (day & night)
- AudioMount for S15M
- BellRFID bell button module
- MxLEO exposure optimization

## Complete HiRes Video Solutions

high-resolution, digital & cost-effective recording





Donbass Arena – UEFA EURO 2012 European Soccer Championship  
528 MOBOTIX HiRes IP cameras provide security

## Broader Views. Increased Security. Lower Costs.

HiRes IP Video Technology Changes The Game.



Fritz-Walter Stadium, Kaiserslautern, Germany  
77 MOBOTIX HiRes IP cameras



"Druzhba" ice hockey stadium in Donezk, Ukraine  
with over 600 MOBOTIX HiRes IP cameras



Olympic Games London 2012  
Rowing and canoe races, GB

# MOBOTIX

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## Now All MOBOTIX Camera Series Come With 5MP Sensors

Now also the Q25, M25, D25 and T25 offer the advantages of the latest MOBOTIX 5 Megapixel sensor technology: Up to four times higher light sensitivity, more details when zooming and smoother HiRes video streams up to 30 frames per second.

# M15D AllroundDual Camera



## Dual. Modular. Unique.

True to the original: The weatherproof, robust successor to our successful MOBOTIX dual camera features interchangeable sensor modules as well as the latest MOBOTIX system technology. The result is a product completely unrivaled in terms of performance, functionality and design.

- Weatherproof dual camera platform for two separately selectable 5MP sensor modules
- Image angle from telephoto lens to hemispheric (13° to 180°)
- Day and night sensor module can be used simultaneously in the camera
- Integrated DVR (up to 64 GB), weeks of recording without network load
- Robust, low-maintenance and weatherproof from -30 to +60 °C (-22 to +140 °F) (IP66)
- Digital, continuous zooming, panning, tilting
- Microphone, speaker and intelligent movement sensors (MxActivitySensor)

### M15D – HiRes Video Around The Clock

The M15D automatically selects the color sensor with daylight lens or the black/white image sensor with infrared lens – without high-maintenance mechanical switching. This provides for high-quality true-color images during the day and superb light sensitivity at night.



### Camera Housing



- AllroundDual Core-Sec equipped with individual sensor modules (L12, L25, L38, L51, L76, L160) for day and night operation
- Robust and low maintenance with no moving parts
- Suitable for wall or ceiling mounting

### Accessories



#### Pole mount

- 3 mm powder-coated stainless steel
- 2 stainless steel straps for pole diameters from 6 to 18 cm, incl. mounting parts



#### MX-Overvoltage-Protection-Box-LSA/-RJ45

- Weatherproof network connector
- Surge protection up to 4,000 V
- For connecting a network via patch cable or standard network cable



#### ExtIO function expansion

- Microphone/Speaker
- Infrared motion sensor, temperature sensor
- 2 signal inputs, 2 signal outputs, 2 illuminated keys



#### LPF sensor module

- LPF (long pass filter) special lens available for all night sensor modules, utilization in combination with IR illumination
- Basis for optimal license plate recognition



#### Polarization filter

- For all non-hemispheric sensor modules
- Reduces reflections on glass surfaces
- For instance for identifying the driver of a car/truck (behind the windshield)

### 5-Megapixel Sensor (5MP)



Even fast-moving objects such as this pigeon can be identified easily without any motion blur. When the light intensity fades, e.g., during dusk, the MOBOTIX Lowlight Exposure Optimization (MxLEO) shortens exposure times to deliver crisp images.

### Technical Data

<b>Model versions</b>	Sec (all combinations of 5MP day and night sensor modules possible, including LPF)
<b>Lens options</b>	12 to 160 mm format, horizontal angle 180° to 13°
<b>Sensitivity</b>	Color sensor: 0.25 lux at 1/60 s, 0.013 lux at 1 s B/W sensor: 0.05 lux at 1/60 s, 0.0025 lux at 1 s MxLEO – Lowlight Exposure Optimization
<b>Image sensors</b>	1/2.5" CMOS, 5 megapixels, progressive scan
<b>Max. image size (per sensor)</b>	Color: 2048 x 1536 (QXGA), B/W: 2048 x 1536 (QXGA)
<b>Image formats (per sensor)</b>	Freely selectable image format (160 x 120 up to 2048 x 1536); PTZ views: Surround (Quad), fisheye full image, normal, panorama, double panorama, panorama focus (3 views)
<b>Max. frame rate M-JPEG (live/recording)</b>	VGA: 30 fps, MEGA/HD: 10 fps, QXGA: 4 fps, 6MEGA: 2 fps
<b>Max. video rate MxPEG (live/recording/sound)</b>	VGA: 30 fps, MEGA/HD: 30 fps, QXGA: 20 fps, 6MEGA: 8 fps
<b>Image compression</b>	MxPEG, M-JPEG, JPEG, H.264 (SIP video only)
<b>Internal DVR</b>	MicroSD Slot (recording inside the camera, up to 64 GB; 4-GB card preinstalled)
<b>External storage</b>	Directly on NAS and computer/server without additional recording software
<b>Software (free of charge)</b>	MxEasy video management software, MxControlCenter control center software, MOBOTIX App for iOS devices iOS 5.0 and higher
<b>Image processing</b>	Backlight compensation, automatic white balance, image distortion correction (incl. panorama image correction), motion detection, MxActivitySensor
<b>Virtual PTZ (vPTZ)</b>	Digital pan/tilt/zoom, continuous 8x zoom, full image recording in the background
<b>Alarm/events</b>	Video motion sensor, MxActivitySensor, external signals, temperature sensor, PIR, microphone, shock detector, notification via e-mail, FTP, IP telephony (VoIP, SIP), visual/acoustic alarm, pre- and post-alarm images
<b>Audio</b>	Integrated microphone & speaker, lip-synchronous audio, intercom, sound recording
<b>Interfaces</b>	Ethernet 10/100, IPv4/IPv6, MiniUSB, MxBus; IO and RS232 via MX-232-IO-Box (accessory)
<b>Video telephony</b>	VoIP/SIP, intercom, remote controlling with key code, event notification
<b>Security</b>	User/group management, HTTPS/SSL, IP address filter, IEEE 802.1x, intrusion detection, digital image signature
<b>Certifications</b>	EMC (EN 55022, CISPR 22, EN 55024, EN 61000-6-1/2, FCC part 15B, CFR 47, AS/NZS 3548)
<b>Power supply</b>	Power over Ethernet (PoE) in accordance with IEEE802.3af1: PoE class variable (2/3) depending on operating mode; power consumption: typ. 4.5 or 5 watts (for 1 or 2 sensor modules)
<b>Operating conditions</b>	IP66, -30°C to +60°C (-22°F to +140°F)
<b>Dimensions</b>	W x H x D with wall mount: 15.8 x 24.4 x 23.9 cm W x H x D with ceiling mount: 15.8 x 21.0 x 20.7 cm
<b>Weight (without sensor modules)</b>	with wall mount: approx. 1,129 g with ceiling mount: about 1,078 g

### M15D – HiRes Video Even Under Extreme Conditions

The M15D camera is certified according to IP66 and has been successfully tested in a temperature range of -30°C to +60°C (-22°F to +140°F). In line with the proven MOBOTIX product strategy, the M15D model does not require additional cooling, heating or a special housing, meaning it needs only five watts of power to be fully operational.



*Two separate rooms*



*Around corners*



*Indoors and outdoors*

## Discreetly In The Background. Doubly Flexible.

With the S15D, up to two 5-megapixel sensor modules are each connected to a concealable camera housing via two-meter long cables. Thanks to its separation of camera housing and sensor modules, the S15D offers a broad range of installation and application scenarios.

- Weatherproof dual installation camera based on the optimized 5MP-MOBOTIX technology platform
- One or two separately connected, discreet miniature sensor modules
- Image sensor and microphone integrated directly into the sensor module
- Double Hemispheric equipment replaces up to eight cameras
- Integrated DVR functionality: Slot for MicroSD card (up to 64 GB)
- Functional expansion via MiniUSB and MxBus connector
- Intelligent movement sensors (MxActivitySensor)
- Can also be used as a Door Station camera or for mobile applications (EN 50155)

### S15D – Discreet Security

The MOBOTIX S15D FlexMount is a camera characterized above all by its miniature sensor modules and very broad range of application scenarios. S15 offers the advantage to mount two hemispheric 5MP sensor modules simultaneously.

### Camera Housing (Core)



- Suitable for wall or ceiling mounting
- Robust and maintenance-free with no moving parts
- All available MOBOTIX sensor modules can be connected (L12 to L160)
- Rear metal plate offers optimum heat dissipation

### Accessories



#### SlopeMount 15°

- For mounting at a 15° angle
- Recommended for wall installation with a focus on the center of the room



#### SurroundMount

- For long, narrow rooms (e.g., hallways, buses, trains)
- Integrates 2 sensor modules (L12, L25, L51)
- For ceiling mounting at a 25° angle



#### DualMount

- Captures an area with 2 sensor modules (especially day/night)
- Supports all available sensor modules
- For ceiling mounting at a 25° angle



#### HaloMount/SpeakerMount

- Mount for sensor modules or standard illuminants (HaloMount)
- Extra speaker (SpeakerMount)
- Built for discreet and simple wall or ceiling mounting, can be tilted by 20°
- Metal, powder-coated or galvanized



#### MX-Overvoltage-Protection-Box-LSA-RJ45

- Weatherproof network connector
- Surge protection up to 4,000 volts
- For connecting a network via patch cable or standard network cable

### Mobile application



A sensor module mounted to the roof of a car captures the optical condition of a gas pipeline in China as the car passes by.

### Technical Data

<b>Model versions</b>	Sec (all combinations of 5MP day and night sensor modules possible, including LPF)
<b>Lens options</b>	12 to 160 mm format, horizontal angle 180° to 13°
<b>Sensitivity</b>	Color sensor: 0.25 lux at 1/60 s, 0.013 lux at 1 s B/W sensor: 0.05 lux at 1/60 s, 0.0025 lux at 1 s MxLEO – Lowlight Exposure Optimization
<b>Image sensors</b>	1/2.5" CMOS, 5 megapixels, progressive scan
<b>Max. image size (per sensor)</b>	Color: 2048 x 1536 (QXGA), B/W: 2048 x 1536 (QXGA)
<b>Image formats (per sensor)</b>	Freely selectable image format (160 x 120 up to 2048 x 1536); PTZ views: Surround (Quad), fisheye full image, normal, panorama, double panorama, panorama focus (3 views)
<b>Max. frame rate, M-JPEG (live/recording)</b>	VGA: 30 fps, MEGA/HD: 10 fps, QXGA: 4 fps, 6MEGA: 2 fps
<b>Max. video rate MxPEG (live/recording/sound)</b>	VGA: 30 fps, MEGA/HD: 30 fps, QXGA: 20 fps, 6MEGA: 8 fps
<b>Image compression</b>	MxPEG, M-JPEG, JPEG, H.264 (SIP video only)
<b>Internal DVR</b>	MicroSD Slot (recording inside the camera, up to 64 GB; 4-GB card preinstalled)
<b>External storage</b>	Directly on NAS and computer/server without additional recording software
<b>Software (free of charge)</b>	MxEasy video management software, MxControlCenter control center software, MOBOTIX App for iOS devices iOS 5.0 and higher
<b>Image processing</b>	Backlight compensation, automatic white balance, image distortion correction (including panorama image correction), motion detection, MxActivitySensor
<b>Virtual PTZ (vPTZ)</b>	Digital pan/tilt/zoom, continuous 8x zoom, full image recording in the background
<b>Alarm/events</b>	Video motion sensor, MxActivitySensor, external signals, temperature sensor, microphone, shock detector, notification via e-mail, FTP, IP telephony (VoIP, SIP), visual/acoustic alarm, pre- and post-alarm images
<b>Audio (with AudioMount or SpeakerMount)</b>	Integrated microphone (per sensor module), lip-synchronous audio, intercom, sound recording
<b>Interfaces</b>	Ethernet 10/100, IPv4/IPv6, MiniUSB, MxBus; audio (IO); RS232 via MX-232-IO-Box (accessory)
<b>Video telephony</b>	VoIP/SIP, remote control via key code, event display, intercom function with accessory speaker (e.g., SpeakerMount)
<b>Security</b>	User/group management, HTTPS/SSL, IP address filter, IEEE 802.1x, intrusion detection, digital image signature
<b>Certifications</b>	EMC (EN 55022, CISPR 22, EN 55024, FCC Part15B, CFR 47, AS/NZS 3548), EN 50155, EN 61000-6-1/2
<b>Power supply</b>	Power over Ethernet (PoE in accordance with IEEE802.3af); PoE class variable (2/3) depending on operating mode; power consumption: typ. 4.5 or 5 watts (for 1 or 2 sensor modules)
<b>Operating conditions</b>	IP65 (DIN EN 60529), -30° to +60°C (-22° to +140°F)
<b>Dimensions</b>	Width x height x depth: 11.5 x 13 x 3.3 cm (camera housing/core), Ø x L: 4.3 x 6 cm (sensor module)
<b>Weight</b>	Camera Housing (core) approx. 444 g Sensor module approx. 91 g

### S15D – Flexible Installation In Indoor And Outdoor Applications

The flat, weatherproof housing can be installed, including flash memory and all external connectors (Ethernet, MiniUSB, MxBus), discreetly behind a wall or ceiling panel so that only the lens units in their ultra-compact protective housing (IP65) are visible in the room.



## Modular System For Maximum Flexibility.

The S15D and M15D IP video systems based on the modular MOBOTIX platform concept are equipped with a weatherproof camera core and separately available weatherproof sensor modules. This results in maximum flexibility for a wide range of applications as only a single camera platform is needed: video security applications in commercial, private and public sector environments, as surveillance or weather camera, webcam, indoors or outdoors, day or night.

The 5-megapixel sensor modules of the M15D and the S15D, equipped with microphone and LEDs, are identical and, if required, can be replaced using the special tools shipped with the system. The sensor modules are directly screwed into the camera housing (M15D) or are connected to the discreetly mounted camera housing using connection cables up to two meters in length (S15D). The camera software is preinstalled, so the cameras are ready for use without any additional configuration work required.

### Overview: sensor modules for M15D and S15D

The portfolio offers six different focal lengths (lens image angle 13° to 180°) for the M15D and S15D – each as a day or night version. All sensor modules can be freely combined, allowing users to build a camera system ideally suited to any task at hand. Since MOBOTIX cameras are backlight-proof, none of these lenses requires a mechanical auto iris, thus making the camera extremely robust and maintenance-free.

- L12 Hemispheric with 180° image angle (horizontal)
- L25 Super Wide-Angle with 82° image angle (horizontal)
- L38 Wide-Angle with 54° image angle (horizontal)
- L51 Wide-Angle with 39° image angle (horizontal)
- L76 Telephoto with 27° image angle (horizontal)
- L160 Telephoto with 13° image angle (horizontal)

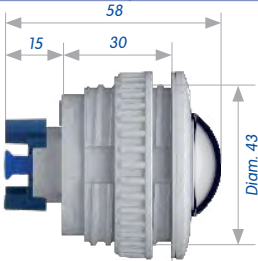
### Perfect images around the clock

A MOBOTIX dual camera equipped with a day and night sensor provides you with usable, detailed images in any weather, around the clock. This is made possible by various hard- and software-based aids that do not limit the available bandwidth as they are installed directly in the camera instead of running on a central server or PC as is the case with customary systems.

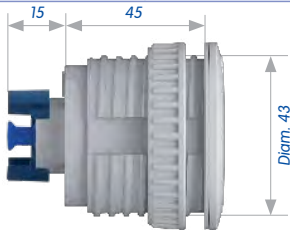


### Sensor Module Dimensions (mm)

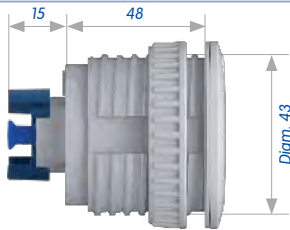
#### L12 (Hemispheric)



#### L25, L51



#### L38, L76, L160



### Accessories (for S15D)

#### Sensor cable

- Available lengths: 2 m, 1 m and 0.5 m

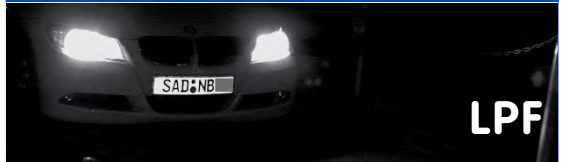


#### Extension 40 mm

- For larger mounting depths; the unit is directly plugged onto a sensor module or previously mounted extension



### Night sensor modules With Long-Pass Filter (LPF)


**LPF**

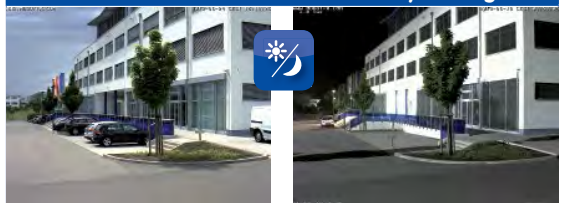

All night sensor modules (N12 to N160, black/white) can optionally be ordered with an LPF (Long-Pass Filter) special lens that features an infrared sensor for ideal license plate identification during any lighting condition. All LPF sensor modules (except for L12) can be equipped with an additional polarization filter.

### Polarization Filter



The non-hemispheric L25 to L160 sensor modules allow for replacing the screwed-in lens protection glass with a polarization filter (MOBOTIX accessories). Example: Identifying persons through the windshield of a car – the filter reduces reflections on the windshield's surface.

### Use Of A MOBOTIX Dual Camera At Day And Night



What sets a MOBOTIX day-and-night camera apart from other systems is primarily that the MOBOTIX camera continuously uses two sensor modules rather than relying on a mechanical filter switch. This delivers a significantly better image quality in low-light conditions as a true infrared black-and-white image sensor is used instead of the usual color sensor with electronic color fade-out.

Equipped with a color and black-and-white sensor module each, M15D and S15D are affordable and powerful single-camera solutions for application in areas where lighting conditions vary strongly. The M15D is built such that the sensor modules of the camera are aligned in parallel, meaning each sensor captures the identical image area. The convenient DualMount mounting bracket is available for the S15D (MOBOTIX accessories).

## SurroundMount



The SurroundMount is designed to monitor long, narrow spaces (corridor, bus, train, etc.) by elegantly and simply accommodating two sensor modules pointing in opposite directions. Thanks to a 25° lens swivel range, two hemispheric sensor modules can even cover the entire area directly below the SurroundMount.

Sensor module mount for 5MP sensor modules **L12, L25, L51**

## DualMount



The DualMount is also perfectly suited for aligning two sensor modules towards the same area when using the S15D as a highly discreet day and night camera. The lenses can be tilted downwards to avoid covering irrelevant areas such as ceilings or the sky. Outdoor ceiling mounting is possible beneath eaves, protruding construction elements, bridges or arches.

Sensor module mount for all 5MP sensor modules (**L12 to L160**)

## HaloMount



Design-oriented camera installation in or at suspended ceilings or walls: The stylish high-quality metal mounting bracket comes in five different versions (matt chrome, glossy chrome, brushed nickel, white or black), is easy to set up and supports single sensor modules or illuminants. Sensor modules placed into the HaloMount can be tilted up to 20°, allowing perfect capture of the desired area.

Sensor module mount for all 5MP sensor modules (**L12 to L160**)

### Designer-Friendly And Easy To Install

A MOBOTIX dual camera equipped with a day and night sensor provides you with usable, detailed images in any weather, around the clock. This is made possible by various hard- and software-based aids that do not limit the available bandwidth as they are installed directly in the camera instead of running on a central server or PC as is the case with customary systems.



The HiRes Video Company

**MOBOTIX**

## Mobile Solution



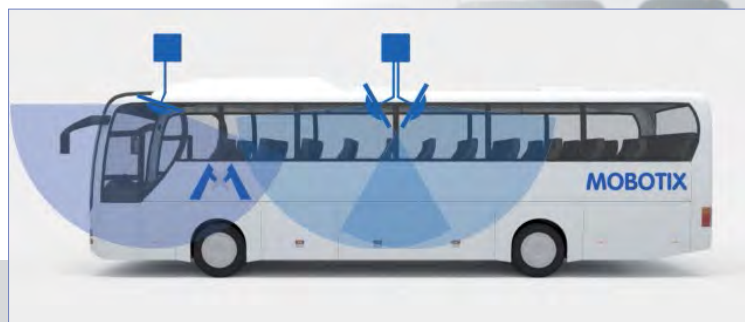
City bus of the TWK Kaiserslautern

### Stadtwerke Kaiserslautern (SWK) Public Utility Intelligent Technology Improves Public Transportation Security

The Stadtwerke Kaiserslautern (SWK) public utility company makes bus transportation more secure with mobile IP video systems from MOBOTIX. A FlexMount camera connected to a monitor shows the driver what is happening in the bus.



"Thanks to the mobile video system, we can keep an eye on what is going on in the bus, allowing us to ensure the safety of our passengers and employees," says Boris Flesch, Section Manager at SWK Verkehrs-AG.





## One Camera. Dual HiRes.

Two lenses, two HiRes image sensors with 5 megapixels each, up to 64 GB internal storage and a dual image of up to 6 megapixels make the D15D DualDome an efficient security solution: You can secure two different areas with just one camera, for example. All without vulnerable mechanical components!

- Individually configurable lens: Telephoto/wide-angle lens, day/night, panorama function
- Integrated DVR (up to 64 GB) stores up to 520,000 HiRes images (6-day capacity when recording 1 frame/sec.)
- Simple installation using a single network cable (data and power/PoE)
- Digital continuous pan, tilt and zoom function (virtual PTZ function)
- Premium sound and image quality thanks to echo cancellation and 5MP sensor technology
- Optimized interfaces: MxBus and MiniUSB (e.g., for UMTS and GPS)
- Sturdy, low-maintenance and weatherproof from -30 to +60 °C (-22 to +140 °F) (IP65 with wall-mount)
- Microphone, speaker and intelligent movement sensors (MxActivitySensor)

### D15D – Attractive Fixed Dome With Two Lenses

Two lenses, two HiRes image sensors, up to 64 GB internal storage and a dual image of a maximum of 6 megapixels make the D15D DualDome an efficient security solution: It is possible to secure two different areas using just one camera. All without vulnerable mechanical components.



## Camera Housing



### Standard housing

- DualDome with two image sensors that can be positioned independently of one another
- Capture large spaces and details at the same time

## Accessories



### Vandalism set

- Reinforced dome (3 mm polycarbonate)
- Stainless steel anti-vandalism ring (polished, matt or powder-coated in white, silver-gray or black)



### Wall mount

- Weather protection (IP65) for D15-DualDome
- Covers RJ45 in-wall sockets and functional boxes
- Space for expansion modules (Wi-Fi)



### Corner and pole mount

- 3 mm powder-coated stainless steel
- 2 stainless steel straps for pole diameters from 6 to 18 cm, incl. mounting parts



### PoE injector

- Power supply via power grid and battery (12 to 42 V)
- For direct PC connection without a switch thanks to integrated crossover function



### MX-232-IO-Box

- For connecting external sensors
- Switching external devices (e.g., gate, light, etc.)
- RS232 interface for the camera

## D15D In Use



Mounted to the corner of a building, this D15D captures two separate entry zones.

## Technical Data

<b>Model versions</b>	IT, IT-Night, Sec, Sec-Night, Sec-Pano, Sec-Night-Pano, Sec-DNight
<b>Lens options</b>	25 to 160 mm small image, horizontal viewing angle 82° to 13°, pano. version with 164°
<b>Sensitivity</b>	Color sensor: 0.25 lux at 1/60 s, 0.013 lux at 1 s B/W sensor: 0.05 lux at 1/60 s, 0.0025 lux at 1 s MxLEO – Lowlight Exposure Optimization
<b>Image sensors</b>	1/2.5" CMOS, 5 megapixels, progressive scan
<b>Max. image size (per sensor)</b>	Color: 2048 x 1536 (QXGA), B/W: 2048 x 1536 (QXGA)
<b>Image formats (per sensor)</b>	2048 x 1536, 1280 x 960, 1024 x 768, 800 x 600, 768 x 576 (D1), 704 x 576 (TV-PAL), 640 x 480, 384 x 288, 352 x 288, 320 x 240, 160 x 120; free image format selection (e.g. 1000 x 200 for skyline)
<b>Max. frame rate, M-JPEG (live/recording)</b>	VGA: 30 fps, MEGA/HD: 10 fps, QXGA: 4 fps, 6MEGA: 2 fps
<b>Max. video rate MxPEG (live/recording/sound)</b>	VGA: 30 fps, MEGA/HD: 30 fps, QXGA: 20 fps, 6MEGA: 8 fps
<b>Image compression</b>	MxPEG, M-JPEG, JPEG, H.264 (SIP video only)
<b>Internal DVR</b>	MicroSD Slot (recording inside the camera, up to 64 GB; 4-GB card preinstalled)
<b>External storage</b>	Directly on NAS and computer/server without additional recording software
<b>Software (free of charge)</b>	MxEasy video management software, MxControlCenter control center software, MOBOTIX App for iOS devices iOS 5.0 and higher
<b>Image processing</b>	Backlight compensation, automatic white balance, image distortion correction (including panorama image correction), motion detection, MxActivitySensor
<b>Virtual PTZ (vPTZ)</b>	Digital pan/tilt/zoom, continuous 8x zoom, full image recording in the background
<b>Alarm/events</b>	Triggering of events by integrated multiple-window motion detection, external signals, temperature sensor, PIR, notification via e-mail, FTP, IP telephony (VoIP, SIP), signal output, visual/acoustic alarms, pre- and post-alarm images
<b>Audio</b>	Integrated microphone and speaker, line-in/line-out, lip-synchronous audio, intercom, sound recording
<b>Interfaces</b>	Ethernet 10/100, IPv4/IPv6, MiniUSB, MxBus, IO and RS232 via MX-232-IO-Box (accessory)
<b>Video telephony</b>	VoIP/SIP, intercom, remote controlling with key code, event notification
<b>Security</b>	User/group management, HTTPS/SSL, IP address filter, IEEE 802.1x, intrusion detection, digital image signature
<b>Certifications</b>	EMC (EN55022, EN55024, EN61000-6-2, FCC part 15B, AS/NZS3548)
<b>Power supply</b>	Power over Ethernet (PoE in accordance with IEEE802.3af): PoE class variable (2/3) depending on operating mode; power consumption: typ. 5 watts
<b>Operating conditions</b>	IP65 (with wall mount) / IP54 (without wall mount), -30 to +60 °C/-22 to +140 °F
<b>Dimensions</b>	diam. x H: 20.1 x 11 cm
<b>Weight</b>	about 650 g

## D15D – Individual Lens Configuration

The standard models of the D15D stand out in particular as they allow the two image sensors and lenses to be combined as required. A lens can be delivered for every day or night sensor with a horizontal image angle of 13°, 27°, 39°, 54° or 82° as desired.





## Allround Easy. Allround Secure.

An elegant, ultra-compact and weatherproof IP dome camera. The Q25 opens up a whole new range of application scenarios thanks to the 360° allround view for recording an entire room, widescreen panoramic images and simultaneous quad display in all four cardinal directions.

- High-resolution widescreen panorama from wall to wall, ideal for access control
- Integrated DVR (up to 64 GB) for long-term recording without network load
- Digital continuous tilting, panning and zooming without mechanically moving the camera
- Robust and low maintenance with no moving parts
- Newest MOBOTIX 5MP sensor technology with up to 30 fps and improved zoom
- Microphone, speaker, MxBus and intelligent movement sensors (MxActivitySensor)
- Optimized image quality and reduced motion blur even in poor lighting conditions

### Q25M – The Perfect Overview

The Q25M provides a hemispherical 360° allround view with just one lens. Only one camera is needed to view all four corners of a room. The fish-eye effect, typical of this lens, can be digitally switched off already in the live images.

### Camera Housing



#### Standard housing

- Hemispheric allround view (360°)
- Suitable for wall or ceiling mounting
- White or black
- Robust and low maintenance with no moving parts

### Accessories



#### Vandalism Set

- Anti-vandalism stainless steel housing with lens protection
- Polished, matt



#### In-ceiling set

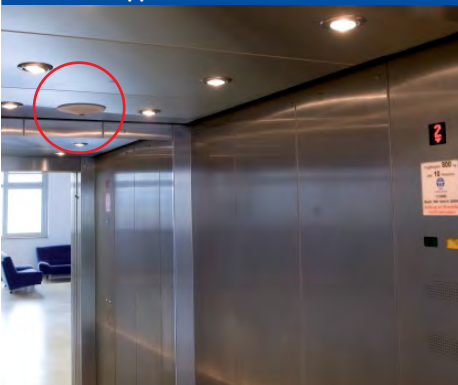
- Installation set with mounting accessories
- Simple installation from the front
- Ø 15 cm installation dimensions
- White or black
- Optionally available with stainless steel ring



#### ExtIO function expansion

- Microphone/Speaker
- Infrared motion sensor, temperature sensor
- 2 signal inputs, 2 signal outputs, 2 illuminated keys

### Application In An Elevator



The discreetly mountable Q25 provides a complete view and at the same time serves as a highly functional intercom system (microphone and speaker are integrated into the camera ex factory)

### Technical Data

<b>Model versions</b>	Basic, Sec, Sec-Night
<b>Lens options</b>	L12 (180° x 160°), L25 (82° x 61°)
<b>Sensitivity</b>	Color sensor: 0.25 lux (t=1/60 s), 0.013 lux (t=1/1 s) B/W sensor: 0.05 lux at 1/60 s, 0.0025 lux at 1/1 s MxLEO – Lowlight Exposure Optimization
<b>Image sensors</b>	1/2.5" CMOS, 5 megapixels, progressive scan
<b>Max. image size</b>	Color: 2048 x 1536 (QXGA), B/W: 2048 x 1536 (QXGA)
<b>Image formats</b>	Freely selectable image format (160 x 120 up to 2048 x 1536/color); PTZ views: Surround (Quad), fisheye full image, normal, panorama, double panorama, panorama focus (3 views)
<b>Max. frame rate, M-JPEG (live/recording)</b>	VGA: 30 fps, MEGA/HD: 10 fps, 3MEGA: 4 fps
<b>Max. video rate MxPEG (live/recording/sound)</b>	VGA: 30 fps, MEGA/HD: 30 fps, 3MEGA: 20 fps
<b>Image compression</b>	MxPEG, M-JPEG, JPEG, H.264 (SIP video only)
<b>Internal DVR</b>	MicroSD Slot (recording inside the camera, up to 64 GB; 4-GB card preinstalled)
<b>External storage</b>	Directly on NAS and computer/server without additional recording software
<b>Software (free of charge)</b>	MxEasy video management software, MxControlCenter control center software, MOBOTIX App for iOS devices iOS 5.0 and higher
<b>Image processing</b>	Backlight compensation, automatic white balance, image distortion correction (including panorama image correction), motion detection, MxActivitySensor
<b>Virtual PTZ (vPTZ)</b>	Digital pan/tilt/zoom, continuous 8x zoom, full image recording in the background
<b>Alarm/events</b>	Triggering of events by integrated multiple-window motion detection, temperature sensor, notification over email, FTP, IP telephony (VoIP, SIP), visual/acoustic alarm, pre- and post-alarm images
<b>Audio</b>	Integrated microphone and speaker, lip-synchronous audio, intercom, audio recording
<b>Interfaces</b>	Ethernet 10/100, IPv4/IPv6, MiniUSB, MxBus, IO and RS232 via MX-232-IO-Box (accessory)
<b>Video telephony</b>	VoIP/SIP, intercom, remote controlling with key code, event notification
<b>Security</b>	User/group management, HTTPS/SSL, IP address filter, IEEE 802.1x, intrusion detection, digital image signature
<b>Certifications</b>	EMC (EN50121-4, EN55022, EN55024, EN61000-6-2, FCC part15B, AS/NZS3548)
<b>Power supply</b>	Power over Ethernet (PoE in accordance with IEEE802.3af): PoE class variable (2/3) depending on operating mode; power consumption: typ. 4.5 watts;
<b>Operating conditions</b>	IP65 (DIN EN 60529), -30 to +50 °C/-22 to +122 °F
<b>Dimensions</b>	diam. x H: 16 x 5 cm
<b>Weight</b>	about 450 g

### Note: Q25M & MxAnalytics

The integrated MxAnalytics video analysis software is no longer available in firmware releases 4.1.9.29 and higher. We are currently evaluating how to provide the functionality of MxAnalytics for the Q25M-Sec. This decision will be taken at the end of 2013 at the latest.



## Fits In. Watches Out.

Elegance and discreetness based on cutting-edge technology: Up to 30 HiRes images per second and excellent image quality even under poor illumination. The MOBOTIX D25 is perfectly suited for any task. Exchangeable lenses and various mounting and configuration options, including Vandalism Set, support countless applications.

- Elegant dome camera with exchangeable lenses from telephoto to wide-angle lens
- Numerous installation options both outdoors or indoors
- 5MP sensor technology for detailed images and smooth video streams even in dark surroundings
- Integrated DVR (up to 64 GB) for long-term recording without network load
- Robust, low-maintenance and weatherproof device with no moving parts (IP65)
- Digital continuous pan, tilt and zoom function; improved zoom thanks to 5MP
- Intelligent movement sensors (MxActivitySensor)
- Can be expanded into an intercom using the MOBOTIX ExtIO module

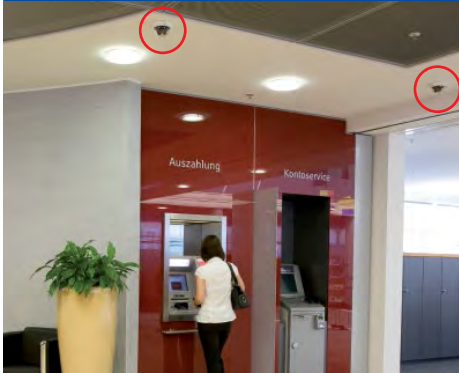
### D25M – Compact, Cost-Efficient And With High Resolution

The many, easy-to-replace lens options of the D25M provide a tailored solution for different types of applications. A robust dome camera (IP65) with optional vandal-proof, wall-mount and in-ceiling installation sets.

## Accessories

	<b>In-ceiling set</b> <ul style="list-style-type: none"> <li>• Installation set with mounting accessories</li> <li>• Simple installation from the front</li> <li>• 15 cm diameter</li> <li>• Optionally available with stainless steel ring</li> </ul>
	<b>On-wall set</b> <ul style="list-style-type: none"> <li>• Consists of on-wall set and mounting parts</li> <li>• Concealed cabling</li> <li>• 16.5 x 3.7 cm</li> </ul>
	<b>Vandalism set</b> <ul style="list-style-type: none"> <li>• Reinforced dome (3 mm polycarbonate)</li> <li>• Stainless steel anti-vandalism ring (polished, matt or powder-coated in white, silver-gray or black)</li> </ul>
	<b>Wall mount</b> <ul style="list-style-type: none"> <li>• Weatherproof (IP65)</li> <li>• Covers RJ45 in-wall sockets and PatchBox</li> <li>• Space for expansion modules (Wi-Fi)</li> </ul>
	<b>Pole mount</b> <ul style="list-style-type: none"> <li>• 3 mm powder-coated stainless steel</li> <li>• 2 stainless steel straps for pole diameters from 6 to 18 cm, incl. mounting parts</li> </ul>
	<b>ExtIO function expansion</b> <ul style="list-style-type: none"> <li>• Microphone/Speaker</li> <li>• Infrared motion sensor, temperature sensor</li> <li>• 2 signal inputs, 2 signal outputs, 2 illuminated keys</li> </ul>

## Discreet Ceiling Mounting



The compact dome camera delivers detailed images even from a great distance thanks to powerful 5MP technology – and thanks to the sensors' high light sensitivity, emergency lighting conditions are sufficient.

## Technical Data

<b>Model versions</b>	Basic, IT, IT-Night, Sec, Sec-Night
<b>Lens options</b>	25 to 160 mm format, horizontal angle 82° to 13°
<b>Sensitivity</b>	Color sensor: 0.25 lux at 1/60 s, 0.013 lux at 1 s B/W sensor: 0.05 lux at 1/60 s, 0.0025 lux at 1 s MxLEO – Lowlight Exposure Optimization
<b>Image sensors</b>	1/2.5" CMOS, 5 megapixels, progressive scan
<b>Max. image size</b>	Color: 2048 x 1536 (QXGA), B/W: 2048 x 1536 (QXGA)
<b>Image Formats</b>	2048 x 1536, 1280 x 960, 1024 x 768, 800 x 600, 768 x 576 (D1), 704 x 576 (TV-PAL), 640 x 480, 384 x 288, 352 x 288, 320 x 240, 160 x 120; free image format selection (e.g. 1000 x 200 for skyline)
<b>Max. frame rate, M-JPEG (live/recording)</b>	VGA: 30 fps, MEGA/HD: 10 fps, QXGA: 4 fps
<b>Max. video rate MxPEG (live/recording/sound)</b>	VGA: 30 fps, MEGA/HD: 30 fps, QXGA: 20 fps
<b>Image compression</b>	MxPEG, M-JPEG, JPEG, H.264 (SIP video only)
<b>Internal DVR</b>	MicroSD Slot (recording inside the camera, up to 64 GB; 4-GB card preinstalled)
<b>External storage</b>	Directly on NAS and computer/server without additional recording software
<b>Software (free of charge)</b>	MxEasy video management software, MxControlCenter control center software, MOBOTIX App for iOS devices iOS 5.0 and higher
<b>Image processing</b>	Backlight compensation, automatic white balance, image distortion correction, motion detection, MxActivitySensor
<b>Virtual PTZ (vPTZ)</b>	Digital pan/tilt/zoom, continuous 8x zoom, full image recording in the background
<b>Alarm/events</b>	Triggering of events by integrated multiple-window motion detection, external signals, temperature sensor, notification via e-mail, FTP, IP telephony (VoIP, SIP), visual/acoustic alarm, pre- and post-alarm images
<b>Audio (with ExtIO accessory)</b>	Intercom, lip-synchronous live sound, sound recording; video VoIP supported
<b>Interfaces</b>	Ethernet 10/100, IPv4/IPv6, MiniUSB, MxBus, IO and RS232 via MX-232-IO-Box (accessory)
<b>Video telephony</b>	VoIP/SIP, intercom, remote controlling with key code, event notification
<b>Security</b>	User/group management, HTTPS/SSL, IP address filter, IEEE 802.1x, intrusion detection, digital image signature
<b>Certifications</b>	EMC (EN 50121-4, EN 55022, EN 55024, EN 61000-6-2, FCC Part 15B, AS/NZS3548)
<b>Power supply</b>	Power over Ethernet (PoE) in accordance with IEEE802.3af1: PoE class variable (2/3) depending on operating mode; power consumption: typ. 4.5 watts
<b>Operating conditions</b>	IP65 (DIN EN 60529), -30 to +50 °C/-22 to +122 °F
<b>Dimensions</b>	diam. x H: 16 x 8.6 cm
<b>Weight</b>	about 350 g

## D25M – A Master Of Adaptility

All D25M models come with an easily interchangeable lenses and a robust 1.5 mm thick polycarbonate dome. An extensive range of accessories is also available for installing the camera in an application-optimized manner, for supplying power or expanding the functions of the camera.



## More Camera For Less. Guaranteed!

The M25M family comprises compact, cost-efficient and extremely powerful allround cameras featuring 5MP sensor technology and a vast choice of lenses including hemispheric models. Fully equipped with IP66-certified housing and long-term internal storage on a MicroSD card.

- Freely configurable lens: Telephoto/wide-angle lens, day/night, CSVario and hemispheric (180°)
- Latest MOBOTIX 5MP image sensor technology delivers excellent image quality
- Fast and simple installation on walls, poles or ceilings
- Integrated DVR (up to 64 GB) for HiRes video recording without affecting the network load
- Sturdy, low-maintenance and weatherproof from -30 to +50 °C (-22 to +122 °F) (IP 66)
- Digital, continuous panning, tilting, zooming
- Microphone, speaker and intelligent movement sensors (MxActivitySensor)

### M25M – The Robust Allrounder

The cost-effective and professional single lens camera solution with exchangeable lenses for indoor and outdoor use. The lenses can be freely selected: from Hemispheric through Super Wide Angle to Telephoto lens (New: L320) and CSVario.



### Camera Housing

#### Standard housing



- AllroundMono system with individual choice of lens
- Incl. FlexMount wall and ceiling mount
- Simple installation and concealed cabling

### Accessories

#### Pole mount



- 3 mm powder-coated stainless steel
- 2 stainless steel straps for pole diameters from 6 to 18 cm, incl. mounting parts

#### PoE injector



- Power supply via power grid and battery (12 to 42 V)
- For direct PC connection without a switch thanks to integrated crossover function

#### Mx2wire+ media converter



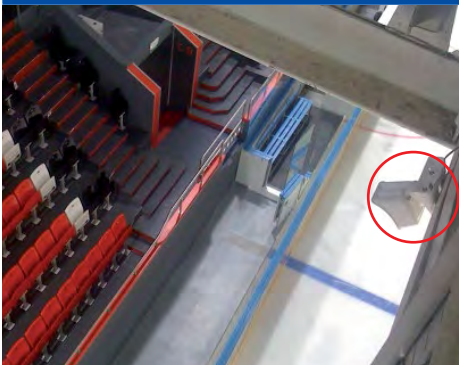
- Ethernet with PoE using two-wire cable
- Suitable for coaxial cables, bell wires, power cables and more

#### ExtIO function expansion



- Microphone/Speaker
- Infrared motion sensor, temperature sensor
- 2 signal inputs, 2 signal outputs, 2 illuminated keys

### Frost-Proof Without Extra Heater



In the ice stadium: The 5MP color sensor delivers useful images even when illumination is at a minimum after closing time, and the super-robust, weatherproof MOBOTIX camera (IP66) even withstands extreme temperature fluctuations.

### Technical Data

<b>Model versions</b>	IT, IT-Night, Sec, Sec-Night, Sec-D12, Sec-Night-N12, Sec-CSVario, Sec-Night-CSVario, Sec-D320, Sec-Night-N320, Sec-Night-N160-LPF
<b>Lens options</b>	12 to 320 mm format, horizontal angle 180° to 7°
<b>Sensitivity</b>	Color sensor: 0.25 lux at 1/60 s, 0.013 lux at 1 s B/W sensor: 0.05 lux at 1/60 s, 0.0025 lux at 1 s MxLEO – Lowlight Exposure Optimization
<b>Image sensors</b>	1/2.5" CMOS, 5 megapixels, progressive scan
<b>Max. image size</b>	Color: 2048 x 1536 (QXGA), B/W: 2048 x 1536 (QXGA)
<b>Image Formats</b>	2048 x 1536, 1280 x 960, 1024 x 768, 800 x 600, 768 x 576 (D1), 704 x 576 (TV-PAL), 640 x 480, 384 x 288, 352 x 288, 320 x 240, 160 x 120; free image format selection (e.g. 1000 x 200 for skyline)
<b>Max. frame rate, M-JPEG (live/recording)</b>	VGA: 30 fps, MEGA/HD: 10 fps, QXGA: 4 fps
<b>Max. video rate MxPEG (live/recording/sound)</b>	VGA: 30 fps, MEGA/HD: 30 fps, QXGA: 20 fps
<b>Image compression</b>	MxPEG, M-JPEG, JPEG, H.264 (SIP video only)
<b>Internal DVR</b>	MicroSD Slot (recording inside the camera, up to 64 GB; 4-GB card preinstalled)
<b>External storage</b>	Directly on NAS and computer/server without additional recording software
<b>Software (free of charge)</b>	MxEasy video management software, MxControlCenter control center software, MOBOTIX App for iOS devices iOS 5.0 and higher
<b>Image processing</b>	Backlight compensation, automatic white balance, image distortion correction (including panorama image correction), motion detection, MxActivitySensor
<b>Virtual PTZ (vPTZ)</b>	Digital pan/tilt/zoom, continuous 8x zoom, full image recording in the background
<b>Alarm/events</b>	Triggering of events by integrated multiple-window motion detection, external signals, temperature sensor, notification via e-mail, FTP, IP telephony (VoIP, SIP), visual/acoustic alarm, pre- and post-alarm images
<b>Audio</b>	Integrated microphone and speaker, lip-synchronous audio, intercom, audio recording
<b>Interfaces</b>	Ethernet 10/100, IPv4/IPv6, MiniUSB, MxBus; IO and RS232 via MX-232-IO-Box (accessory)
<b>Video telephony</b>	VoIP/SIP, intercom, remote controlling with key code, event notification
<b>Security</b>	User/group management, HTTPS/SSL, IP address filter, IEEE 802.1x, intrusion detection, digital image signature
<b>Certifications</b>	EMC (EN55022, EN55024, EN61000-6-2, FCC part 15B, AS/NZS3548)
<b>Power supply</b>	Power over Ethernet (PoE in accordance with IEEE802.3af): PoE class variable (2/3) depending on operating mode; power consumption: typ. 4.5 watts
<b>Operating conditions</b>	IP66 (DIN EN 60529), -30 to +50 °C/-22 to +122 °F
<b>Dimensions</b>	W x D x H: 14 x 23 x 19 cm
<b>Weight</b>	about 750 g

### M25M, D25M And Q25M With New Functions

The maximum image size for Q25M-Basic, D25M-Basic/IT and M25M-IT is now HD (1280 x 720) rather than VGA (640 x 480). For the IT and Secure models of these cameras the MxBus Interface is now also available to connect and supply MOBOTIX system accessories.



*The S15M, which can be mounted discreetly behind wall or ceiling panels, is based on the S15D dual camera (page 8) and thus also features weatherproof MxBus, MiniUSB and audio connectors to support various extensions.*

## Sees Everything. Is Hardly Seen.

The S15M is a high-resolution mono camera based on MOBOTIX 5MP platform technology. It can be mounted in a concealed manner behind a wall or ceiling panel, to a stainless steel plate etc. All that remains visible is the tiny exposure area of the hemispheric lens.

- Weatherproof mono camera system for flexible mounting solutions
- Integrated hemispheric design with day or night sensor
- MOBOTIX accessory AudioMount for fast and easy mounting
- Can be used as a Door Station camera (instead of the T25M-Sec camera module)
- Integrated DVR functionality: Slot for MicroSD card (up to 64 GB)
- Functional expansion via MiniUSB and MxBus connector
- Intelligent movement sensors (MxActivitySensor)

### S15M – Low Light, No Problem

The maximum resolution of the color and B/W sensors is 5 megapixels. Thanks to the new color sensors that feature higher light sensitivity, it is now often possible to use MOBOTIX color cameras around the clock, even under low light conditions.

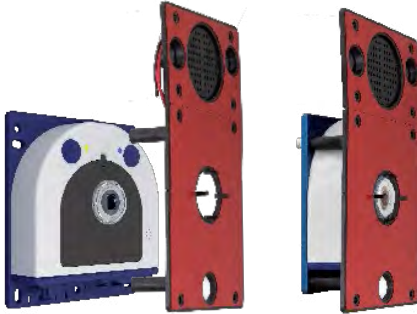
### Camera Housing



#### Standard housing

- Hemispheric allround view (360°)
- Suitable for wall or ceiling mounting
- White or black
- Robust and low maintenance with no moving parts

### AudioMount



A handy installation option for the S15M mono camera featuring a self-adhesive foil that can be attached to the back of thin and smooth surfaces (e.g., stainless steel plate, mailbox, etc.). The AudioMount has a pre-installed speaker and microphone, thus ensuring full intercom capabilities of the camera. S15M can also be utilized as a Door Station in combination with the AudioMount and other accessories (BellRFID bell buttons, MX-DoorMaster electronic door opener, MOBOTIX App).

### S15M In A Mailbox



The S15M elegantly integrated into the mailbox using AudioMount serves as a Door Station camera that can be extended by quickly and easily connecting additional modules (bell, door opener, etc.) via MxBus.

### Technical Data

<b>Model versions</b>	Sec, Sec-Night
<b>Lens options</b>	L12 (180° x 160°)
<b>Sensitivity</b>	Color sensor: 0.25 lux at 1/60 s, 0.013 lux at 1 s B/W sensor: 0.05 lux at 1/60 s, 0.0025 lux at 1 s MxLEO – Lowlight Exposure Optimization
<b>Image sensors</b>	1/2.5" CMOS, 5 megapixels, progressive scan
<b>Max. image size</b>	Color: 2048 x 1536 (QXGA), B/W: 2048 x 1536 (QXGA)
<b>Image formats</b>	Freely selectable image format (160 x 120 up to 2048 x 1536/color); PTZ views: Surround (Quad), fisheye full image, normal, panorama, double panorama, panorama focus (3 views)
<b>Max. frame rate, M-JPEG (live/recording)</b>	VGA: 30 fps, MEGA/HD: 10 fps, QXGA 4 fps
<b>Max. video rate MxPEG (live/recording/sound)</b>	VGA: 30 fps, MEGA/HD: 30 fps, QXGA: 20 fps
<b>Image compression</b>	MxPEG, M-JPEG, JPEG, H.264 (SIP video only)
<b>Internal DVR</b>	MicroSD Slot (recording inside the camera, up to 64 GB; 4-GB card preinstalled)
<b>External storage</b>	Directly on NAS and computer/server without additional recording software
<b>Software (free of charge)</b>	MxEasy video management software, MxControlCenter control center software, MOBOTIX App for iOS devices iOS 5.0 and higher
<b>Image processing</b>	Backlight compensation, automatic white balance, image distortion correction (including panorama image correction), motion detection, MxActivitySensor
<b>Virtual PTZ (vPTZ)</b>	Digital pan/tilt/zoom, continuous 8x zoom, full image recording in the background
<b>Alarm/events</b>	Triggering of events by integrated multiple-window motion detection, temperature sensor, notification over email, FTP, IP telephony (VoIP, SIP), visual/acoustic alarm, pre- and post-alarm images
<b>Audio (with accessories, e.g., AudioMount)</b>	Lip-synchronous audio, intercom, audio recording
<b>Interfaces</b>	Ethernet 10/100, IPv4/IPv6, MiniUSB, MxBus; audio (IO); RS232 via MX-232-IO-Box (accessory)
<b>Video telephony</b>	VoIP/SIP, intercom, remote controlling with key code, event notification
<b>Security</b>	User/group management, HTTPS/SSL, IP address filter, IEEE 802.1x, intrusion detection, digital image signature
<b>Certifications</b>	EMC (EN50121-4, EN55022, EN55024, EN61000-6-2, FCC part15B, AS/NZS3548)
<b>Power supply</b>	Power over Ethernet (PoE in accordance with IEEE802.3at): PoE class variable (2/3) depending on operating mode; power consumption: 4.5 watts
<b>Operating conditions</b>	IP65 (DIN EN 60529), -30° to +60°C (-22° to +140°F)
<b>Dimensions</b>	Width x height x depth: 11.5 x 13 x 3.3 cm (basic module)
<b>Weight</b>	about 500 g

### S15M – One Camera Instead Of Four

As Hemispheric MOBOTIX camera the S15M can – as well as the Q25M, for example – show images from four different angles on the monitor. Each of the four views has a virtual PTZ function and can be adjusted separately

# Hemispheric IP Video Door Station



*The Door Station modules can be combined with one another. This allows every customer to configure a tailor-made system: one to five bell buttons, connection via two-wire cable or network cable, in white, silver-metallic, dark gray, black or amber.*

## Better Overview. Increased Security. More Possibilities.

The IP Video Door Station from MOBOTIX is an innovative, modular system for door communication and access control. The system supports the VoIP/SIP video telephony standard and can be upgraded or modified at any time. The camera module featuring innovative MOBOTIX 5MP technology records all events taking place in front of the building or gate; when the bell is pushed, when motion is detected in the image area or upon triggering a contact. Fit for any weather, at dawn and dusk, as well as for backlight situations.

- Complete view from wall to wall and floor to ceiling thanks to hemispheric MOBOTIX technology
- Records the entire area in front of the door, including sound, automatically and around the clock
- Intercom with remote opening function, accessible globally, e.g., via PC or MOBOTIX App
- Integrated message function for leaving and listening to messages directly at the door
- Keyless access via PIN, transponder or MOBOTIX App
- Simple installation, optionally even without an IP cable via two existing bell wires
- Combination of MOBOTIX cameras and system accessories to a multifunctional comprehensive system

### Hemispheric IP Video Door Station – Complete Panorama View For Superior Overview

The high-resolution Hemispheric door camera with 5 megapixel image sensor and internal MicroSD storage allows monitoring of the entire entrance area. Complete Panorama view from wall to wall and floor to ceiling.

## Modules

**T25-CamCore**

- Allround view with no blind spots
- Speaker, microphone, bell and light button
- Integrated LED illumination

**KeypadRFID**

- Keyless entry via PIN or transponder
- Integrated message function

**Info module/Info2wire+**

- LED-backlit info module
- Info2wire+ product version for connecting the outdoor station via two-wire cable (data and power)

## BellRFID Bell Button Module



Each of the six bell button sets can be used without having to replace the BellRFID basic module. The bell button set can be exchanged at any time. Integrated RFID technology for keyless door opening via transponder. Blue function key for checking voice mailbox messages directly at the Door Station. The MOBOTIX website offers a free-of-charge printing service for BellRFID and the info module.

## Accessories

**Frame (without modules)**

- Available for on-wall or in-wall mounting
- Weatherproof (IP65)
- Versions for 1 to 4 modules
- Integrated module anti-theft protection

**MX-DoorMaster**

- Door opener and doorbell (volume and melody can be configured)
- Backup power supply with battery (up to 60 hours)
- 2 function buttons, 2 status LEDs

**MOBOTIX App**

- For iPhone/iPad/iPod touch iOS 5 or higher
- Connect to the door station from anywhere via Wi-Fi or UMTS

## Available colors

**Colors**

- Available in white, silver-metallic, dark gray, black, amber
- Modern, unobtrusive design

## Technical Data

<b>Model versions</b>	Sec, Sec-Night
<b>Lens options</b>	L12 (180° x 160°)
<b>Sensitivity</b>	Color sensor: 0.25 lux at 1/60 s, 0.013 lux at 1 s B/W sensor: 0.05 lux at 1/60 s, 0.0025 lux at 1 s MxLEO – Lowlight Exposure Optimization
<b>Image sensors</b>	1/2.5" CMOS, 5 megapixels, progressive scan
<b>Max. image size</b>	Color: 2048 x 1536 (QXGA), B/W: 2048 x 1536 (QXGA)
<b>Image Formats</b>	Freely selectable image format (160 x 120 up to 2048 x 1536/color); PTZ views: Surround (Quad), fisheye full image, normal, panorama, double panorama, panorama focus (3 views)
<b>Max. frame rate, M-JPEG (live/recording)</b>	VGA: 30 fps, MEGA/HD: 10 fps, QXGA: 4 fps
<b>Max. video rate MxPEG (live/recording/sound)</b>	VGA: 30 fps, MEGA/HD: 30 fps, QXGA 20 fps
<b>Image compression</b>	MxPEG, M-JPEG, JPEG, H.264 (SIP video only)
<b>Internal DVR</b>	MicroSD Slot (recording inside the camera, up to 64 GB; 4-GB card preinstalled)
<b>External storage</b>	Directly on NAS and computer/server without additional recording software
<b>Software (free of charge)</b>	MxEasy video management software, MxControlCenter control center software, MOBOTIX App for iOS devices iOS 5.0 and higher
<b>Image processing</b>	Backlight compensation, automatic white balance, image distortion correction (including panorama image correction), motion detection, MxActivitySensor
<b>Virtual PTZ (vPTZ)</b>	Digital pan/tilt/zoom, continuous 8x zoom, full image recording in the background
<b>Alarm/events</b>	Triggering of events by integrated multiple-window motion detection, temperature sensor, notification over email, FTP, IP telephony (VoIP, SIP), visual/acoustic alarm, pre- and post-alarm images
<b>Audio</b>	Integrated microphone and speaker, lip-synchronous audio, two-way speaker, audio recording
<b>Interfaces</b>	Ethernet 10/100, IPv4/IPv6, MiniUSB, MxBus
<b>Video telephony</b>	VoIP/SIP, intercom, remote controlling with key code, event notification
<b>Security</b>	User/group management, HTTPS/SSL, IP address filter, IEEE 802.1x, intrusion detection, digital image signature
<b>Certifications</b>	EMC (EN 50121-4, EN 55022, EN 55024, EN 61000-6-2, FCC Part 15B, AS/NZS3548)
<b>Power supply</b>	Power over Ethernet (PoE in accordance with IEEE802.3af): PoE class variable (2/3) depending on operating mode; power consumption: typ. 4.5 watts
<b>Operating conditions</b>	IP65 (DIN EN 60529), -30 to +50 °C (-22 to +122 °F)
<b>Dimensions</b>	Width x height x depth: 13.1 x 33.3 x 7.6 cm (Door Station in triple frame)
<b>Weight</b>	CamCore: about 450 g

## Hemispheric IP Video Door Station – Simple And Cost-Effective Installation

The MOBOTIX IP Video Door Station can be connected and supplied with power via a network cable or – thanks to the Mx2wire+ technology – via two bell wires.



# Very Simple Installation



## Quick And Cost-Effective Mounting

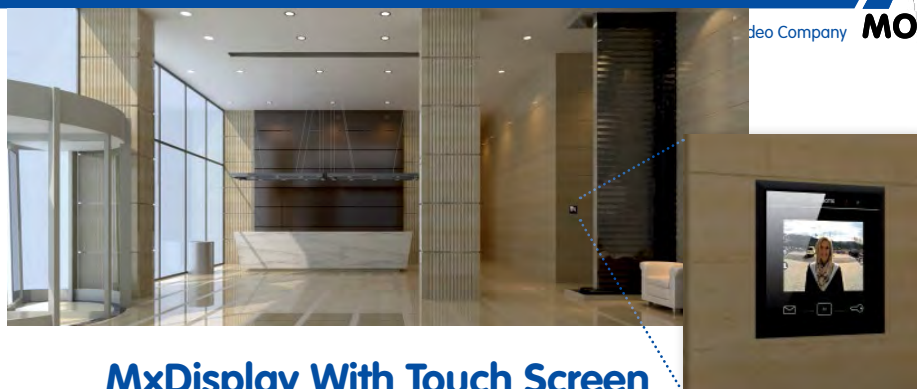
What does a typical system look like and what kind of cabling is needed? The system image shows the schematic structure of a hemispheric IP Video Door Station including the Security Door Opener from MOBOTIX for inside installation next to the door (MX-DoorMaster).

The outdoor station network connection and power supply are supplied via an Ethernet cable (PoE technology) or alternatively using the Info2wire+ expansion set via a two-wire bell cable. This way, the existing doorbell or **simple door intercom system can be replaced by a versatile access control system with a high-resolution MOBOTIX Door Station with little extra effort or cost.**

Thanks to standard network technology and intercompatibility of the MOBOTIX systems, Door Stations and any number of additional security cameras can be combined into a highly efficient end-to-end solution that can be controlled from a single remote station – **access control, video security and house automation** from a single source!

### Hemispheric IP Video Door Station – Simple Network Connection

The outdoor station requires just one cable for data and power to be connected to a PoE switch and thereby to any expandable Ethernet network.



## MxDisplay With Touch Screen

The MXDisplay is an upcoming versatile expansion module for the hemispheric IP Video Door Station that fits inside the system frames and housings of the Door Station. Equipped with a touch screen, the device serves as an indoor video remote station for MOBOTIX Door Stations and security cameras – including door opener and light switching function as well as playback of voice mailbox messages and recorded events. No extra power supply is required as power for the unit is supplied via the network cable according to the PoE standard.

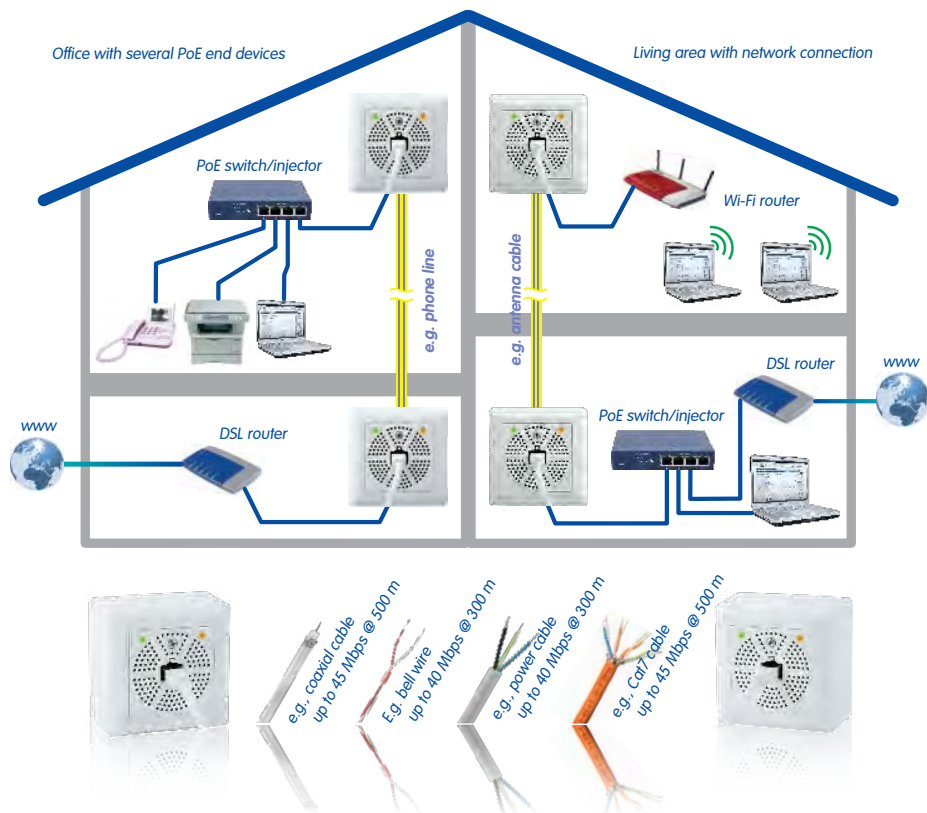


## MOBOTIX App

Door Station owners can use their iPhone or iPad as a remote station. The MOBOTIX App provides notifications when someone rings the doorbell, enables two-way communication with visitors and can remotely open the door. It is also possible to retrieve voice mailbox messages, live images and recordings from all integrated Door Stations and cameras. → Page 34/35

### Hemispheric IP Video Door Station – New Expansions To The Door Station

MOBOTIX now also offers a doorbell module T25-BellRFID with up to five bell buttons and integrated RFID technology. A special installation set to integrate single modules of the Door Station in stainless steel surfaces will be offered soon.



## Ethernet With PoE. Via Two-Wire Cable.

Mx2wire+ turns an existing two-wire cable into a modern multimedia cable – simply, quickly and cost-effectively. Ideally suited for integration into any MOBOTIX IP video system.

- Transfers data as well as power according to the PoE standard
- Transmission speed of up to 45 Mbps for a 500-m cable (Cat-7 cable used as two-wire cable)
- No separate power connection needed
- Uses existing telephone, power or antenna cables and therefore eliminates the enormous amount of time and effort normally required for cabling
- Compatible with all MOBOTIX camera and Door Station systems

## Mx2wire+ – Multiple Application Possibilities

Mx2wire+ can also connect a PC to the internet via an unused telephone line or an antenna cable. A set . The system was developed by MOBOTIX, manufactured in Germany and can also be used in the new IP door intercom systems.

## Mx2wire+

### Mx2wire+ Set

The Mx2wire+ Set includes all components required to set up an Ethernet connection via an existing two-wire cable (phone, coaxial, bell wire, Cat-7 cable).

The set includes a sender/receiver unit plus accessories for in- or on-wall mounting as well as a user manual.

## Components (contained in each Mx2wire+ Set)

### Boards

- 2x Mx2wire+ board and housing

### Frames

- 6x frames (2x concave, convex, plane each)

### Front panels

- 2x front panel

### On-wall sockets

- 2x on-wall socket

### Accessories

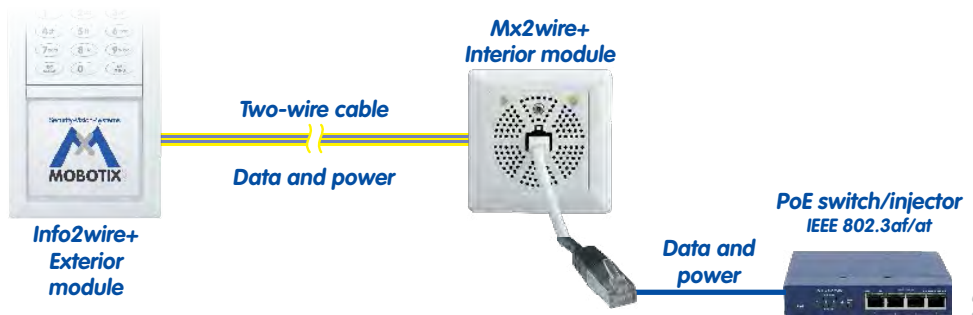
- 2x cavity socket
- Mounting materials

## Technical Data

<b>Model versions</b>	Mx2wire+ Set for cameras, MxInfo2wire+ for IP Video Door Station
<b>Transfer rate</b>	Up to 50 Mbps net (depends on distance)
<b>Maximum range</b>	500 meters (max. of 45 Mbps net)
<b>Interfaces</b>	<b>Front:</b> RJ45 (Fast Ethernet, PoE), DC socket <b>Rear:</b> Screw terminals for holding the two-wire cable and power supply connection
<b>Certifications</b>	EMC (EN55022, EN55024, EN61000-6-1, FCC part 15B, AS/NZS3548)
<b>Power supply (Mx2wire+ Set and end device)</b>	Power supply: PoE, PoE+ or 48-57 V DC Own consumption: 6 W, output: up to 13 W
<b>Status display</b>	<b>Status LED 1:</b> Network connection, power supply <b>Status LED 2:</b> Data transfer via active AB wire, device is connected at the other end
<b>Weight</b>	770 g (per packing unit, set)
<b>Operating temperature</b>	-30 to +50 °C (-22 to +122 °F)
<b>Measurements</b>	8 x 8 x 3.8 cm (in-wall version) 8 x 8 x 4.5 cm (on-wall version)
<b>Delivered parts</b>	Mx2wire+ Media Converter-Set, mounting parts, various frame versions, user manual

## Special Info2wire+ product version for MOBOTIX IP Video Door Station

When replacing a simple doorbell with a multifunctional IP Video Door Station, MOBOTIX offers a weatherproof backlit info module lit by economical, long-lasting LEDs that integrates a Mx2wire+ unit in an outdoor model and contains a second corresponding unit for installation in the home.



## Mx2wire+ – Power Supply On Customer Requirements

Mx2wire+ requires a voltage supply by a standard PoE switch (class 0 or class 4, IEEE 802.3af/at) for its own consumption as well as for supplying power to the connected PoE end device. This can either be the NPA-PoE-Set by MOBOTIX or a DC power supply unit (48-57 V, 600mA).

# Interface Boxes



*The interface boxes can be mounted safely out of reach in the VarioFlex wall mount of M15 and M25 or in the D15 and D25 wall mount (see fig. below).*

## Extended Camera Functionality. Suitable For Outdoors.

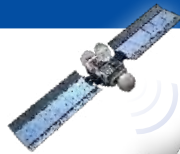
Everything from the same source for fast and cost-effective system configuration: The weatherproof MOBOTIX interface boxes (Protection Class IP65, -30 to +60 °C/-22 to +140 °F) extend the camera interfaces and increase the utility of an entire video system while offering the simplest installation. The compact, approx. 8-cm wide units fit perfectly behind the MOBOTIX camera wall mounts. Every box is delivered complete with detailed mounting parts and instructions.



### Interface Boxes – Simply Clever

To double the number of signal inputs and outputs, two MX-232-IO-Boxes can be connected to a single camera: one via USB, the other via MxBus.





### MX-GPS-Box

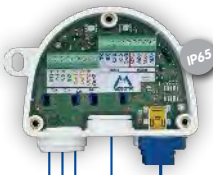
Precision GPS timer for MOBOTIX systems with exterior temperature and brightness sensor.



### M15 AllroundDual

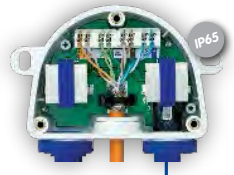
### MX-232-IO-Box

Easy-to-connect external sensors and control of peripheral devices via the camera



### MX-NPA-Box

IEEE 802.3af Network Power Adapter (NPA) for power supply by external power supply units and batteries from 12 to 57 V DC



### MX-Overvoltage-Protection-Box-RJ45 and MX-Overvoltage-Protection-Box-LSA

Network connector with integrated overvoltage protection (4 kV) for MOBOTIX cameras. Network connection via patch cable (RJ45 version) or installation cable (LSA version)





### MX-Overvoltage-Protection-Box

It is generally recommended to install an MX-Overvoltage-Protection-Box if MOBOTIX cameras are installed outside of buildings. These devices protect MOBOTIX cameras against short surges of up to 4 kV.



## ExtIO Opens New Horizons For Cameras.

The ExtIO can be connected to cameras directly via USB or via a network. It expands the functionality of the MOBOTIX cameras by a powerful audio unit with microphone and speaker, a passive infrared motion sensor, a temperature sensor and additional signal inputs/outputs. The two integrated keys on the unit are ideally suited to support door and gate communication solutions.

ExtIO	
	<b>ExtIO function expansion</b> <ul style="list-style-type: none"> <li>• Microphone/Speaker</li> <li>• Infrared motion sensor, temperature sensor</li> <li>• 2 signal inputs, 2 signal outputs, 2 illuminated keys</li> </ul>
Accessories	
	<b>On-wall set</b> <ul style="list-style-type: none"> <li>• Consists of on-wall set and mounting parts</li> <li>• Concealed cabling</li> <li>• 16.5 x 3.7 cm</li> </ul>
	<b>Wall mount</b> <ul style="list-style-type: none"> <li>• Weatherproof (IP65)</li> <li>• Covers RJ45 in-wall sockets and interface box</li> <li>• Space for expansion modules (Wi-Fi)</li> </ul>
	<b>Pole mount (for wall mounts)</b> <ul style="list-style-type: none"> <li>• 3 mm powder-coated stainless steel</li> <li>• 2 stainless steel straps for pole diameters from 6 to 18 cm, incl. mounting parts</li> </ul>

Technical Data	
<b>Interfaces</b>	USB, Ethernet 10/100 Mbps
<b>Audio/Intercom</b>	Microphone and powerful speaker, integrated amplifier and equalizer, line-in/line-out
<b>Input contacts</b>	2 galvanically isolated input contacts, safe extra-low voltage (AC/DC), switching voltage directly from the ExtIO or externally
<b>Output contacts</b>	2 potential-free output contacts, safe extra-low voltage (AC/DC, max load 100 mA)
<b>Sensors</b>	Passive IR motion sensor (PIR) Temperature sensor for ambient temperature Illumination sensor, 2 illuminated buttons
<b>Status display</b>	Two status LEDs
<b>Certifications</b>	EMC (EN55022, EN55024, EN61000-6-2, FCC part 15B, AS/NZS3548)
<b>Protection Class</b>	IP65 (DIN EN 60529)
<b>Operating temperature</b>	-30 to +60 °C (-22 to +122 °F) (DIN EN 50125)
<b>Power supply</b>	USB, Power over Ethernet (IEEE 802.3af; Class 2)
<b>Power consumption</b>	typ. 1 W
<b>Dimensions</b>	diam. x H: 16 x 4.5 cm, compatible with D25 accessories
<b>Weight</b>	about 430 g

### ExtIO – Intelligent Technology For Combined Systems

The practical and functional ExtIO module can be easily combined with all MOBOTIX cameras (except M1, M10, D10 and V10) and enables implementing door and gate intercom systems cost efficiently.



## Multifunctional. The Compact PoE Injector.

- Direct PC connection without a switch thanks to the crossover function
- For connecting to the mains power via power supply
- Suitable for use with power sources from 12 to 42 V
- For all PoE-supplied MOBOTIX products
- Suitable for all standard PoE devices conforming to IEEE 802.3af (e.g., VoIP phone, routers, etc.)
- Suitable for international use thanks to interchangeable adapter plugs
- Can be connected to the end device using an Ethernet cable up to 100 m in length

NPA-PoE Set	
	<b>Power supply and injector (blue)</b> <ul style="list-style-type: none"> <li>• Universal power supply with exchangeable plug</li> </ul>
	<b>EU plug</b> <ul style="list-style-type: none"> <li>• Adapter plug</li> </ul>
	<b>UK plug</b> <ul style="list-style-type: none"> <li>• Adapter plug</li> </ul>
	<b>US plug</b> <ul style="list-style-type: none"> <li>• Adapter plug</li> </ul>
	<b>AUS plug</b> <ul style="list-style-type: none"> <li>• Adapter plug</li> </ul>

Accessories	
	<b>Connection cable to the battery</b> <ul style="list-style-type: none"> <li>• Length 2 m</li> <li>• 1x RJ45 (injector) connector</li> <li>• 1x connector +/- (voltage source)</li> </ul>

Technical Data – Injector (Blue)	
<b>Connectors</b>	3x RJ45 (LAN/Power, PC/Power, camera)
<b>Nominal data input</b>	12 V to 42 V DC
<b>Nominal data output</b>	DC 48 V, PoE conforming to IEEE 802.3af: PoE classes, 1 to 3 (max. 12.95 W) 16 V input voltage or higher, PoE classes 1 and 2 (max. 6.49 W) at 12 V to 16 V input voltage
<b>Deactivating</b>	Less than 10 V input voltage
<b>Ambient temp.</b>	-30° to +60 °C (-22° to +140°F)
<b>Dimensions</b>	L x W x H: 6 x 5.5 x 2.7 cm
<b>Weight</b>	about 40 g
<b>Special features</b>	Integrated crossover function for direct connection to PC; connection to power supply or battery 12 V or higher; status LED with 4 states (green/orange/red/off)
<b>Certification</b>	EMC (EN55022, EN55024, EN61000-6-1, FCC part 15B, AS/NZS3548)

Technical Data – Power Supply Unit	
<b>Connectors</b>	1 x RJ45 (to adapter), 1 x network (up to 4 interchangeable adapter plugs)
<b>Nominal data input</b>	100 V to 240 V AC, 50 to 60 Hz/400 mA
<b>Nominal data output</b>	DC 24 V/750 mA
<b>Ambient temp.</b>	0 to +40 °C (32 to 104 °F)
<b>Dimensions</b>	LxWxH: 8.5 x 5.2 x 3.9 cm (without adapter plug)
<b>Weight</b>	approx. 165 g (incl. 1 adapter plug)
<b>Special features</b>	Suitable for international use thanks to broad input voltage range and interchangeable power supply adapter plugs (no tools required)
<b>Certification</b>	VDE 60950, AS/NZS60950, CSA60950, PSE-JQA 60950

### NPA-PoE-Set – A MOBOTIX Quality Product Made In Germany

The MOBOTIX Network Power Adapter Set (NPA-PoE set) is a high-quality, robust, ultra-compact and, above all, multifunctional PoE injector with three connectors (network, camera/PoE device, PC) and a universal power supply unit with interchangeable adapter plugs.

# Professional Video Management Solutions



## MxControlCenter™ – Professional Video Management

The MxControlCenter video management software can be used to combine any number of cameras at any locations into a well-structured and powerful video security system with centralized or local access-protected operation and analysis.

The state-of-the-art software, specifically tailored to support high-resolution MOBOTIX network cameras, provides a user-friendly interface and camera image display, convenient video search functions, effective alarm handling, automatic camera integration, video storage on file servers, as well as useful configuration and update wizards.

- Proven a thousand times worldwide in the most demanding video applications
- Unlimited number of users and cameras
- No license fees
- Individual user interface, adaptable to each individual user
- Simple installation and complete use on any standard PC
- Convenient layout editor for integrating building plans
- Integration of conventional network and analog cameras as well
- For Microsoft Windows

### MOBOTIX Software Free-Of-Charge

The entire camera setup and operating software is either integrated directly into the camera (web browser-controlled camera software) or can be downloaded from the MOBOTIX website free of charge ([www.mobotix.com](http://www.mobotix.com) > Support).



## MxEasy™ – Intuitive Application For Controlling Up To 16 MOBOTIX Cameras

MxEasy aims at easy operation of the most important camera functions through its intuitive user interface, thus creating a new user experience when viewing and controlling MOBOTIX cameras. The clear design allows up to 16 cameras to be managed, and the application can show up to four cameras at the same time.



All settings selected in MxEasy (e.g. virtual camera position, zoom, brightness, volume, microphone sensitivity, image storage and signal outputs) are usable immediately and are stored instantly in the configuration of the corresponding camera. The calendar functions integrated in the Alarm Planner provide an innovative tool for the scheduled settings of one or more cameras. This tool not only controls video and sound recording based on specified time and date information, but it also offers features like motion detection, image brightness and the microphone to be activated/deactivated based on a date and time schedule.

- Cameras can be installed without any knowledge of networks
- Supports up to 16 MOBOTIX cameras
- Time- or event-controlled recording
- Configurable motion detection, image brightness and microphone
- For Microsoft Windows and Mac OS X

### MxEasy – Ideal As An Entry-Level Video Technology System

The application finds all existing MOBOTIX cameras and automatically conducts the initial configuration of the devices. You do not need in-depth knowledge of network technology to connect and operate your MOBOTIX cameras.



# MOBOTIX App



## The Mobile Remote Station For Your MOBOTIX HiRes Video System

MOBOTIX offers high-resolution, network-based video security systems that meet the highest quality standards – with user-friendly hardware and software from a single source. The new, multi-functional App allows you to stay in contact with your MOBOTIX cameras from anywhere in the world. The App is available free of charge on the App Store for the iPad, iPhone and iPod touch.

- Mobile remote station for MOBOTIX cameras and Door Stations
- Bandwidth-optimized remote access
- Live images and recordings in the highest MOBOTIX HiRes quality
- Two-way communication intercom, door opening and video mailbox access
- Direct playback of camera recordings without buffering
- Doorbell and alarm notifications, "privacy" configuration mode
- Convenient search functions, viewer for external MxPEG videos
- Grouping of cameras and filtering of events

### Integrated Bandwidth Optimization Available With The App

Remote bandwidth optimization adjusts the image size and frame rate to the available bandwidth. This not only applies to the live camera feed but also to recordings and image sections.

### Comprehensive Premium Solution

The MOBOTIX App significantly differs from other video apps that are primarily used to view live images. There for you whenever and wherever you need it, the MOBOTIX App serves as the perfect remote mobile station that uses intelligent detailed solutions to increase security and convenience for users on a daily basis.

#### Main App Functions:

- Use via **WLAN (Wi-Fi)** and **worldwide** via the Internet
- **Automatically find** cameras in the local network
- Integrate cameras from outside the local network via **DynDNS**
- Video streaming can be optimized **to currently available bandwidth**
- **Two-way video communication** via camera's microphone and speaker
- **Notification when doorbell** rings and alerts for other events even if the mobile device is locked
- **Open door** and **switch on/off light**
- Digital camera pan, tilt and zoom (**virtual PTZ function**)
- **Do not disturb function**: Turn bell off completely
- Privacy **mode** used to temporarily switch off individual camera functions
- **Adjust image settings** (brightness, color, contrast)
- Customize an IP Video Door Station **voice mailbox** (doorbell profile, greeting, recording)
- **Event counter and preview images** (e.g., missed doorbell ring, messages, alarms)
- Quick **overview** of all cameras and recorded events
- **Group** cameras and recordings
- **Player** for playing back recorded messages and events
- Play videos forward and backward using the **shuttle wheel**
- **Export** snapshots to photo album
- **Backup and restore** App configurations
- **Integrated online help** for easier use



#### Hardware And Software Requirements For Using The App

- Apple iPad/iPad mini/iPhone/iPod touch running iOS 5.0 or later versions
- MOBOTIX IP Video Door Station and current IP camera models
- Camera firmware versions 4.1.4.70 and higher

# MxActivitySensor™



MxActivitySensor  
is available for all  
MOBOTIX video systems  
incl. Door Station

## Revolutionary, Camera-Internal Video Motion Analysis

The biggest issue of motion detection software on the market today is that they generate a vast number of false alarms. In answer to this problem, MOBOTIX developed MxActivitySensor, an extremely reliable analysis tool unique on the market. MxActivitySensor is a software-based analysis tool for detecting movement of people and objects in an image area (full image or custom-defined area). MxActivitySensor delivers reliable results even in applications where a lot of external interference is present, in contrast to the still available video motion that registers all image changes in defined video motion windows. For example, the camera distinguishes between movements of vehicles, people or objects that trigger an alarm and movements that are not relevant for alarms, such as changes in illumination, heavy rain or trees swaying in the wind.

## What Is Detected?

The sensor detects objects or people crossing the defined image area or continuously moving toward or away from the camera. MxActivitySensor works so reliably that it only detects people who enter or leave a room, while ignoring those who just stand up from sitting, turn around, etc.

MxActivitySensor also offers the option of setting specific directions of movement (up/down/left/right) as relevant events that trigger an alarm. This way, it is possible to capture movements going against the direction of traffic on a one way street, for example.

- Detect the movement of people and objects
- Filter according to directions of movement
- Fast, simple configuration
- Reliable even when interference (e.g., weather) is present
- Reduces the rate of false alarms by up to 90%, thus greatly freeing up system resources in terms of bandwidth and storage capacity
- Integrated into all MOBOTIX Secure cameras

*In this sequence, only the movements of the white vehicle were registered, while the trees swaying in the gale were ignored. This intelligent technology thus drastically reduces the number of false alarms.*

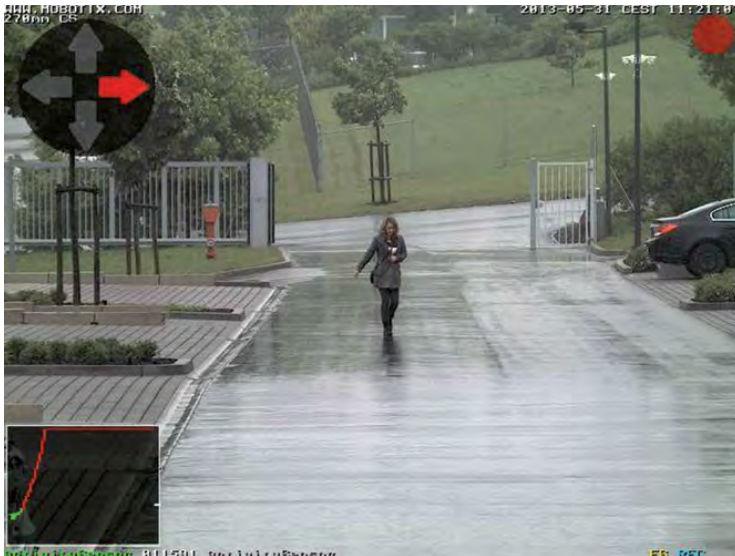


### What Happens When MxActivitySensor Is Triggered?

MxActivitySensor is a sensor built into the camera, just as the microphone or brightness sensor, and users can individually configure what actions take place when the sensor triggers. When MxActivitySensor detects motion, the range of possible actions the camera can take includes storing the evidence video, playing audio messages via a speaker, executing an alarm telephone call or delivering images via FTP or e-mail. In addition, the MOBOTIX App for mobile iOS devices can provide an acoustic or visual alarm, grant access to the live image of the camera and offer the option of two-way communication over the Internet from anywhere in the world.

### Configured In Just A Few Moments

The standard configuration of MxActivitySensor already provides better results in most situations than customary video motion detection applications. The software is so easy to use that even installation, maintenance and analysis can be performed by anybody. In principle, it is only necessary to define the desired image areas and the directions of movement that trigger an alarm.



*MxActivitySensor is triggered by significant movements of objects and persons and indicates the direction of motion (red arrow).*

*The diagram box at the bottom left shows the current motion activity and the configured trigger threshold (in this case: lower third). The higher the deflection level, the more activity.*

### Compact Guide: MxActivitySensor

You can find all relevant information on the options for configuring/controlling the MxActivitySensor on the MOBOTIX website ([www.mobotix.com](http://www.mobotix.com)) in the Support > Media Library > Compact Guides section.

# Decentralized Complete Systems

## Concept

Unlike conventional analog and digital video security systems, with the decentralized MOBOTIX concept a high-speed computer, and, if requested, a digital memory (MicroSD card) is built into every camera for long-term recording. The PC or video control center is required only to view and digitally control the cameras (vPTZ: virtual PTZ), not to evaluate and record video. This prevents customers from having to rely on expensive, overloaded video management software because most of the important functions that require a large amount of processing power, plus innovative video analysis tools, are integrated into the MOBOTIX cameras themselves.

## Complete Systems Rather Than Just Stand-Alone Cameras

Each MOBOTIX system can be flexibly expanded thanks to the decentralized system concept. This also means that no additional investments besides purchasing new cameras are required, such as recording devices or software licenses. In addition to offering high-resolution image sensors, most MOBOTIX cameras are also equipped with integrated environmental sensors (PIR, outdoor temperature, shock detector) as well as a speaker and microphone for video intercom functions based on the SIP standard. The weatherproof MxBus and MiniUSB interfaces allow for direct connection of MOBOTIX interface boxes and standard devices such as UMTS modules, additional memory, etc.

*MOBOTIX is a pioneer in decentralized systems: The processor, software, DVR and sensors are integrated into each camera.*





### Key Benefits

- Long-term recording takes place inside the camera (MicroSD card up to 64 GB) and therefore does not generate any network load
- Maximum failure safety as no central data storage is required
- Image streams are processed within the camera, further reducing bandwidth requirements
- No separate analysis software needed: Intelligent image processing directly inside the camera
- The data on each camera is accessed directly via the network
- Cameras autonomously detect motion in the image area and immediately send an alert via the network
- Simple, user-friendly connection to MOBOTIX cameras without a server (e.g., via MOBOTIX App)



Own processor



Internal software



DVR – Digital video recorder



Sensors integrated into the camera

### MOBOTIX Complete HiRes Video Solutions

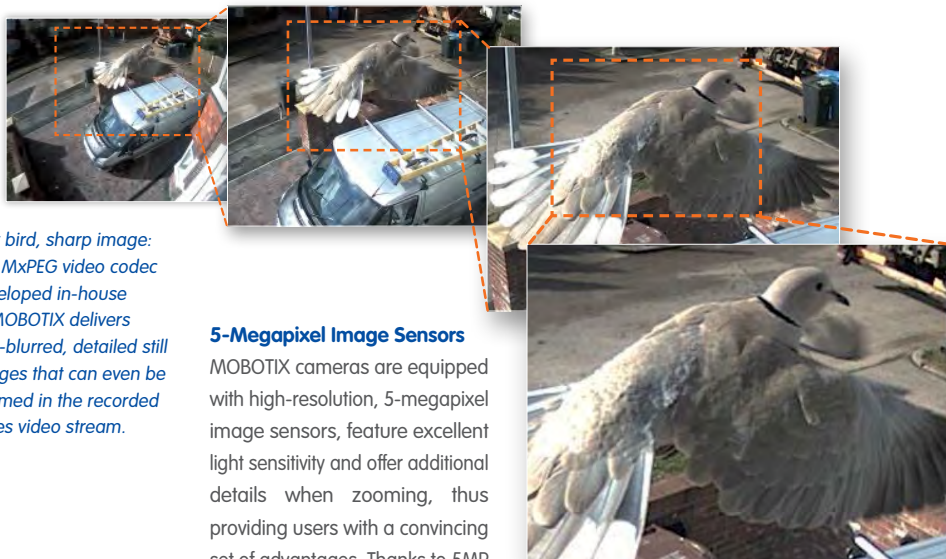
As decentralized complete video systems, MOBOTIX cameras have much more to offer than conventional solutions: modern, network-based video security technology that improves efficiency and daily usefulness.

# Superior Image Quality

**5MP  
Sensor**

## Concept

Image quality is the all-deciding factor for a security camera. As the decentralized MOBOTIX systems perform video analysis and data storage functions internally, they are not dependent on the available network bandwidth and possible bottlenecks; for this reason, maximum-resolution video streams from any number of cameras can be stored and managed efficiently and cost-effectively.



*Fast bird, sharp image:  
The MxPEG video codec  
developed in-house  
at MOBOTIX delivers  
non-blurred, detailed still  
images that can even be  
zoomed in the recorded  
HiRes video stream.*

## 5-Megapixel Image Sensors

MOBOTIX cameras are equipped with high-resolution, 5-megapixel image sensors, feature excellent light sensitivity and offer additional details when zooming, thus providing users with a convincing set of advantages. Thanks to 5MP technology in color and b/w sensors, MOBOTIX cameras convince even in bad weather or in low-light conditions by delivering highly detailed images of amazing quality. Another key advantage is that video stream frame rates of up to 30 frames per second are achieved because image data is preprocessed directly in the camera.

## QXGA Image Format 2.5 Times Larger Than Full HD

The day and night sensors feature a resolution of 5MP, which corresponds to 2592 x 1944 pixels. The image information is usable 100%, for example, when using the live zoom function. The maximum image size of a sensor is set to the more convenient QXGA format.

### MxLEO: Optimized Exposure And Reduced Image Noise

MxLEO raises digital image optimization to a whole new level: MOBOTIX Lowlight Exposure Optimization – an innovative technology integrated into all cameras from firmware version 4.1.9 onwards. The improved light sensitivity of the new MOBOTIX 5-megapixel sensors enables shorter exposure times. The MxLEO exposure and image optimization program developed specifically for this purpose delivers greatly improved images, in particular in poor light conditions below 25 lux. Such conditions are, for instance, present in parking lots illuminated by a simple outdoor light source (approx. 10 to 25 lux). Another example would be a building where the emergency light is the only source of illumination after hours (around 5 lux). The motion blurring that is usually caused by longer exposure times needed in the dark is significantly reduced, and image details such as faces and license plates are thus easier to identify.



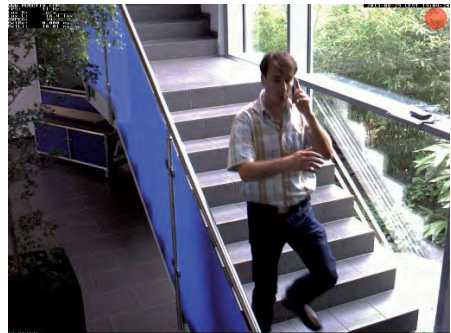
### MOBOTIX Image Quality – Key Benefits

- Higher quality and usability thanks to detailed high-resolution camera images
- Additional recording of lip-synchronous audio increases the chance of identification
- High resolution enables enlargement of details even in the recorded video stream
- Reduced motion blur, less image noise, lower storage and bandwidth requirements
- The MxPEG video codec that is only available with MOBOTIX systems is the only image codec specifically designed for security cameras

*The optimized MxLEO exposure program reliably prevents motion blur commonly present in images taken under low-light conditions.*



Stairway, light intensity: approx. 20 lux, 3MP sensor without MxLEO



Stairway, light intensity: approx. 20 lux, 5MP sensor with MxLEO

### MOBOTIX Saves Only What Is Necessary

Only relevant image detail (fading out sky, ceiling etc.); only relevant events (e.g. movement in the image); long-term recording only with temporarily increased frame rate during event, but no storage limitations in the MOBOTIX system thanks to modern NAS storage technology.

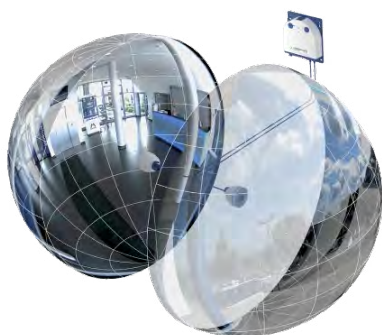
# Hemispheric Technology



## Concept

MOBOTIX is a pioneer in the field of hemispheric image technology. When several cameras are used to secure a single room, it is difficult to understand the room layout in its entirety. This makes it hard to comprehend the overall setting. An entire room can be effectively monitored with innovative MOBOTIX hemispheric technology. For example, a single, elegant and discreetly designed hemispheric camera such as the latest Q25 or S15 system replaces multiple standard cameras – at a fraction of the price and with much less installation effort. This means that the entire hemispheric area in front of each lens is captured, with no blind spots from wall to wall and floor to ceiling. Within fractions of a second, the microprocessor of the camera transforms the hemispheric image into an undistorted, wide-angle 180° panorama image.

*S15D double hemispheric camera: Two hemispheric sensor modules capture two different areas at the same time*



*The fisheye full images of both sensors can be displayed as a distortion-free, easy-to-view double panorama image.*

## Double Hemispheric Camera Captures Two Areas With No Blind Spots

The S15D even allows users to place two hemispheric sensor modules into a single camera. This way, two entirely separate rooms – next to or on top of each other, indoors or outdoors – can be monitored simultaneously. The sensor cables of up to two meters in length each present completely new installation and application options, both indoors and outside.



*Fr. l. to r.: Live image, stored full image, zooming into a section in the stored full image*



*The panorama image on the monitor shows a section of the hemispheric area monitored by the camera. Thanks to vPTZ, any section can be focused on – even in retrospect based on the recorded data.*

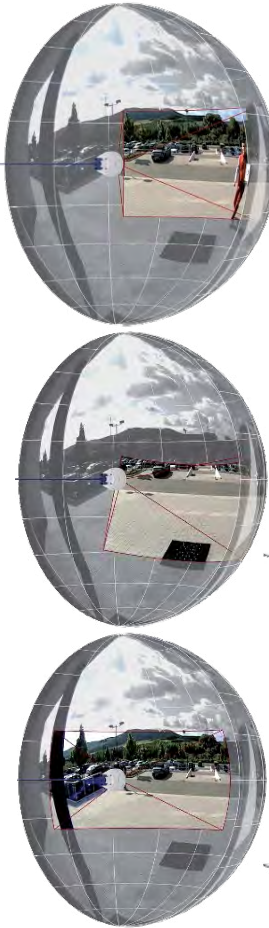
### Virtual PTZ – No Motor, No Wear-And-Tear

Moving the image section within the hemisphere creates the illusion of a mechanically pivoting camera: the virtual PTZ. The live image from the camera can be continuously enlarged, while allowing users to zoom in on any section of the image using the mouse or a joystick. This provides the features of a mechanical PTZ camera without the disadvantages of maintenance and wear.

Mechanical PTZ works by focusing on a section of the monitored space and recording this section only. When using the virtual MOBOTIX PTZ, however, users benefit from being able to pan to any section of the recording in retrospect (post PTZ) as the entire room is captured if full-image storage has been enabled.

### Key Benefits

- No blind spots from wall to wall and from floor to ceiling
- Ideal for securing an entire room with a single, discreet camera
- User-friendly, corrected panorama images deliver maximum transparency
- Hemispheric technology is also an integral part of the MOBOTIX IP Video Door Stations
- All objects are always in easy view – as opposed to systems using multiple individual cameras
- Digital live PTZ while also storing full-sized images without loss of information
- No mechanical moving parts – robust, maintenance-free, low wear and tear



### Very Simple Installation

Just install the camera on the ceiling, wall or pole, connect the network cable or wireless module, and you're done! Probably no other camera can be connected more quickly or easily than a MOBOTIX camera. And because fewer cameras are needed, the installation costs drop even further.



# Friendly To The Environment ...



## Concept

The success of MOBOTIX is based on a holistic corporate philosophy. Thinking and acting in a responsible manner starts right from the development phase of innovative software and hardware. The same principle is implemented when it comes to high-quality production in Germany that complies with the strict local environmental and occupational safety laws. Moreover, our competent support is free of charge and is offered to MOBOTIX customers throughout the entire service life of the products.

The modern, network-based video security technology offers numerous opportunities for improved energy efficiency. Consequently, MOBOTIX customers receive a complete solution that incorporates aspects of technology, environmental sustainability and cost-effectiveness, while addressing both the requirements of today and tomorrow. Featuring low power and resource requirements as well as a long service life, the network-based MOBOTIX video systems are as environmentally friendly as they are easy on your budget. Our products thus deservedly bear the "Green IP Video" seal of quality.

## Key Benefits For You

**Economical** MOBOTIX cameras are supplied power cost-effectively via PoE. Not only does this lower the energy costs, it also reduces the need for copper and other important raw materials because less cabling is required.

**Robust** MOBOTIX cameras are extremely resistant and operate in the temperature range from -30 to +60°C (-22 to +140°F) without the need for energy-consuming heating or an additional protective housing.

**Modern** High-power processors and flash storage integrated into the cameras make energy-consuming servers, storage units and other additional devices unnecessary, and their disposal.

**High resolution** A single hemispheric MOBOTIX camera with two image sensors replaces up to eight conventional cameras, including their energy and resource consumption.

**Sustainable** The lack of mechanical moving parts means that MOBOTIX cameras require practically no maintenance and are still completely operational after many years of use, making them more sustainable than other systems.

**Forward-looking** Even older camera models can be easily updated and then offer new functionalities. Remote updates via Internet and the fact that the cameras are maintenance-free reduce trips by car, and, thereby, the negative effect on the environment.

## MOBOTIX Systems Save Money ...

... because when all system costs are taken into account (purchase, installation, usage, maintenance and software), they are significantly less expensive than non-decentralized systems, starting with the very first camera.

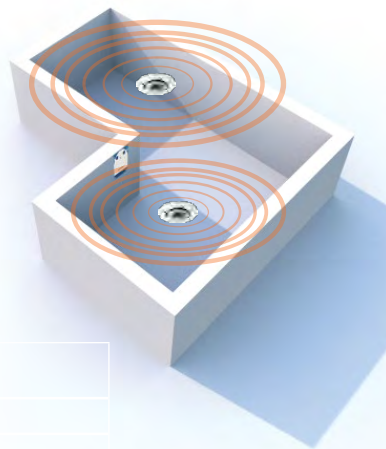
# ... And To The Budget

The HiRes Video Company



## **A Single MOBOTIX Camera Replaces Multiple Analog Cameras**

Even in rooms with complex floor plans, a single dual FlexMount camera can capture the entire space without any blind spots. Where conventional analog systems require up to eight cameras, the MOBOTIX S15D FlexMount camera (see image to the right) delivers amazingly detailed images – while featuring a highly discreet design.



## **MOBOTIX Systems Save Money ...**

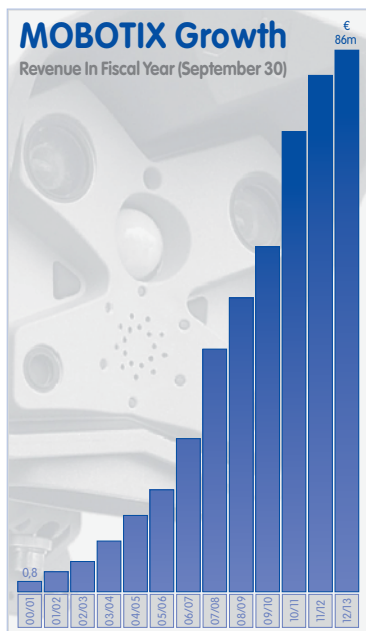
... because you can take advantage of the full function range of the video management software at no cost – no charge is incurred for licenses or updates. In addition, newly-developed functions are immediately available every time you update a MOBOTIX camera.

# MOBOTIX AG ... Made in Germany



*"At MOBOTIX, we are already thinking about tomorrow's challenges today. That is why we are not just focusing on technology, ease of use or customer benefit. We are combining all of these under one system approach of the highest possible quality. Consequently, our customers receive a complete solution that incorporates aspects of technology, future sustainability as well as environmental sustainability and cost-effectiveness, while addressing both the requirements of today and tomorrow."*

Dr. Magnus Ekerot  
CEO of MOBOTIX AG



## HiRes Video Innovations

The German company MOBOTIX AG has been known as a leading innovator and pioneer in network camera technology since their founding in 1999, and their proprietary decentralized concept has made high-resolution video systems cost efficient.

The **quality and high performance** of our products meets highest demands, as is demonstrated by our carefully designed production process. Each camera is assembled by a trained specialist and has to pass various tests before it may leave the MOBOTIX facilities – 100% ready for use.

## Free Consulting Service

Simply call us or send us an e-mail. We will get in touch with you promptly. Both our internal specialist consultants and our experienced partners make sure that your project is planned and installed optimally.



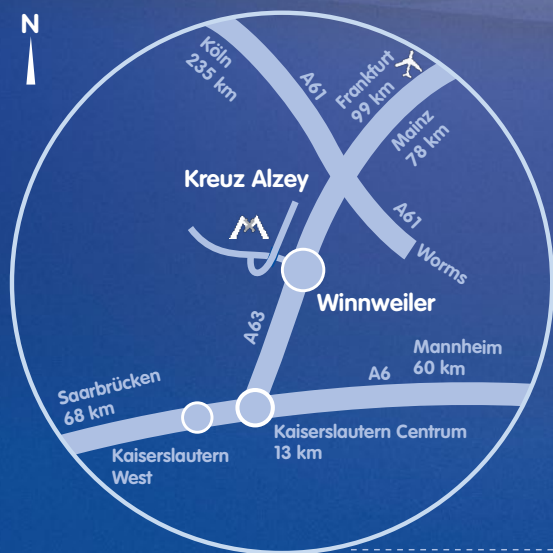
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General Notes: For a complete product overview, see the MOBOTIX website • Sold only to distributors or commercial clients • Prices excluding VAT/sales tax • Manufacturer's recommended retail price ex-factory Langmeil, Germany • Subject to change without notice • © MOBOTIX AG 2013



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#### New In This Issue:

- 5MP sensors for all cameras (day & night)
- AudioMount for S15M
- BellIRFID bell button module
- MxLEO exposure optimization

## Complete HiRes Video Solutions

high-resolution, digital & cost-effective recording

