Camera Manual
D26 Dome

Beyond**Human****Vision**

MOBOTIX

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SAFETY WARNINGS

Notes on Installing:

- This product must not be used in locations exposed to the dangers of explosion.
- Make sure that you install this product as outlined in *Chapter 2, «Installation»* of this manual. A faulty installation can damage the camera!
- When installing this product, make sure that you are only using genuine MOBOTIX parts and MOBOTIX connection cables.
- Only install this product on suitable, solid materials that provide for a sturdy installation of the fixing elements used.

Electrical installation: Electrical systems and equipment may only be installed, modified and maintained by a qualified electrician or under the direction and supervision of a qualified electrician in accordance with the applicable electrical guidelines. Make sure to properly set up all electrical connections.

Electrical surges: MOBOTIX cameras are protected against the effects of small electrical surges by numerous measures. These measures, however, cannot prevent the camera from being damaged when stronger electrical surges occur. Special care should be taken when installing the camera outside of buildings to ensure proper protection against **lightning**, since this also protects the building and the whole network infrastructure.

Max. power consumption of attached extension modules: The power consumption of all attached **MxBus modules** must **not exceed 2.5 W**. When attaching modules to the MxBus connector **and** the USB socket, the **power consumption of all attached modules must not exceed 3 W**, **if the camera is powered by PoE class 3**. If **PoE class 2** is used, **the camera cannot power any peripheral devices!**

Never touch the lenses: Due to the high performance of the D26, the area of the image sensors **can get quite hot**, especially when the ambient temperature is also high. This does not affect the proper functioning of the camera in any way. For this reason, the product must not be installed within the reach of persons without the dome.

Power off before opening the camera: Make sure the power supply to the camera is disconnected before opening the camera housing (e.g., when inserting or exchanging lenses, sensor modules and SD cards).

LEGAL NOTES

Legal aspects of video and sound recording

You must comply with all data protection regulations for video and sound monitoring when using MOBOTIX products. Depending on national laws and the installation location of the D26, the recording of video and sound data may be subject to special documentation or it may be prohibited. All users of MOBOTIX products are therefore required to familiarize themselves with all applicable regulations and to comply with these laws. MOBOTIX AG is not liable for any illegal use of its products.

NOTES ON SYSTEM SECURITY ("CYBER SECURITY")

To protect the camera against security risks in data technology, the following measures are recommended after the installation has been completed:

- **MxManagementCenter**:
  - Menu **View > Wizards & Tools > Secure System**:
    - **Change camera factory default password**: √
    - **Enable encrypted HTTPS**: √
    - **Disable public access**: √
  - **User Management** (for all users):
    - **Force Complex Password**: √
    - **Logout on Inactivity**: After 5 min
- **User interface of the camera in the browser**:
  - **Admin Menu > Network Setup > Web Server**:
    - **Enable MxWeb**: –
    - **Enable intrusion detection**: √
    - **Notification threshold**: 10
    - **Timeout**: 60 Minutes
    - **Block IP Address**: √

For more information on this topic, please read the *«Cyber Protection Guide»* on **www.mobotix.com** (under **Support > Download Center > Documentation > Brochures & Guides > Cyber Security**).

FOREWORD

Dear MOBOTIX customer,

Congratulations on your decision to purchase a professional and modern HiRes network camera "Made in Germany"! The D26 Dome is a complete decentralized system that has a high-performance processor, integrated software, an array of sensors and a digital SD card video recorder for long-term storage.

The numerous, easily interchangeable lens options of the D26 provide for solutions that can be tailored for many different application scenarios. This robust dome camera (IP66) can also be ordered with optional Vandalism, On-Wall and In-Ceiling sets.

The weatherproof MxBus and MiniUSB interfaces of the camera allow attaching MOBOTIX interface boxes and standard devices, such as 3G/UMTS modems, external storage devices, etc. The pre-installed MicroSD card flash storage is easily exchanged for larger storage requirements, providing for secure long-term storage.

The introduction of the newest image sensor technology with increased light sensitivity provides brilliant images with image sizes of up to 3072x2048 pixels, thus delivering color images of higher quality under lowlight conditions.

You can download the **MxManagementCenter** video management software for MOBOTIX cameras from the MOBOTIX website: **www.mobotix.com > Support > Download Center > Software Downloads**. The tutorial for the application is available from **Support > Download Center > Documentation > Brochures & Guides > Tutorials**.

For iPad, iPhone, and Android devices, MOBOTIX offers the **MOBOTIX MxBell**, a free-of-charge mobile solution that is easily found when searching for "MOBOTIX AG" in the App Store or on Google Play.

If you have any questions, our support and international sales staff are available at **intl-support@mobotix.com** from Monday to Friday, 8 am to 6 pm (German time).

We would like to thank you for your trust and wish you all the best with your new MOBOTIX camera D26 Dome!

Mx-D26A/B* with Outdoor-Wandhalter	Mx-D26A/B* with Aufputz-Set/ Aufputz-Set 10°	Mx-D26A/B* with Unterputzmontage-Set

Mx-D26A/B* with Vandalismus-Set

*Variant Mx-D26B supports MOBOTIX MxBus modules

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1   PRODUCT OVERVIEW

1.1   D26 – Lenses, Hardware, Image Formats

Lenses, Sensors	
B016* Hemispheric	–
B036* Super-Wide-Angle	•
B041* Super-Wide-Angle	•
B061* Wide-Angle	•
B079* Standard	•
B119* Tele	•
B237* Tele	•
B500* Tele	–
CSVario 4.5 to 10 mm*	–
Image sensor with individual exposure zones	Color/BW
Sensor sensitivity 6MP in lux at 1/60 s and 1 s	0.1 / 0.005 (Color) 0.02 / 0.001 (BW)
Hardware Features	
IP protection class	IP66
Temp. Internal DVR (MB)	64
Internal DVR (MicroSD, SDXC, pre-installed)	•
Microphone/speaker	–/– (via MX-EXTIO)
Passive infrared sensor (PIR)	– (via MxMultiSense MxBus module)
Integrated temperature sensor	•
Shock detector	•
Power consumption in Watts (typical)	< 4 W
Variable PoE class	2 – 3
Image Formats, Frame Rates and Image Storage	
Max. resolution (per sensor)	**6MP** (3072x2048)
Max. frame rate (MxPEG, max. resolution)	**6MP**: 8 fps
CIF images with 4 GB MicroSD DVR	250,000
VGA images with 4 GB MicroSD DVR	125,000
MEGA images with 4 GB MicroSD DVR	40,000
QXGA images with 4 GB MicroSD DVR	20,000

1.2   D26 – Software Features

General Features	
Digital zoom (continuous) with panning	•
Motion JPEG/MxPEG/H.264 codecs	•/•/•
Programmable exposure ones	•
Snapshot rec. (pre-/post-alarm images)	50
Terabyte ring buffer storage (internal/network)	•
Event/Continuous rec. with sound (0.2 to 30 fps)	•/• (via MX-EXTIO)
Time and event control	•
Weekly schedules/holidays	•
Web functionality (FTP, email)	•
Playback/Quad- und MultiView	•
Bidirectional sound in browser	•
Logo generator, animated	•
Flexible event logic	•
Master/Slave arming	•
Several scheduled privacy zones	•
Customized voice messages	•
VoIP telephony (audio/video, alert)	•
Remote alarm notification (network msg.)	•
Signal inputs/outputs, RS232	Via MX-Input-Box/MX-Output-Box oder MX-232-IO-Box
Programming interface/HTTP API	•
Security features (HTTPS/SSL, IP-based access control, IEEE 802.1X network authentication)	•
Video Analysis	
Video Motion detector	•
MxAnalytics	•
MxActivitySensor	•
Video Management Software	
MxManagementCenter	•
MOBOTIX MxBell	•

Free-of-charge download from **www.mobotix.com** or App Store/ Google Play

1.3 D26 – Technical Data

Model Versions	Mx-D26A/B* (all Day/Night image sensors) *Variant Mx-D26B supports MOBOTIX MxBus modules
Lens Options	MX-B036 to MX-B237 (20 to 135 mm in 35 mm format), 103° to 15° horizontal angle of view
Sensitivity	Color sensor (day): 0,1 lx @ 1/60s; 0,005 lx @ 1s BW sensor (night): 0,02 lx @ 1/60s; 0,001 lx @ 1s
Image Sensor	1/1,8" CMOS, 6MP (3072x2048), Progressive Scan
Max. Image Size	6MP (3072x2048)
Image Formats	Freely configurable format 4:3, 8:3, 16:9 or customized format (image cropping), e.g., 2592x1944 (5MP), 2048x1536 (QXGA), 1920x1080 (Full-HD), 1280x960 (MEGA)
Max. Frame Rate	MxPEG: 42@HD (1280x720), 34@Full-HD, 24@QXGA, 15@5MP, 12@6MP M-JPEG: 26@HD (1280x720), 13@Full-HD, 9@QXGA, 5@5MP, 4@6MP H.264: 25@Full-HD, 20@QXGA
Video Codec	MxPEG, M-JPEG, JPEG (max. output size 6MP) H.264 (max. output size QXGA, bandwidth limitation applicable)
ONVIF	ONVIF-S (camera software V5.2.x and higher)
DVR	• On internal MicroSD card (SDXC, SDHC pre-installed) • External on USB device • External on NAS • Full image recording regardless of live image zoom • MxFFS • Pre-alarm and post-alarm images • DVR monitoring with error notification
Software	Video management software MxManagementCenter
Image Processing	MxLEO, backlight compensation, automatic white balance, image distortion correction
PTZ	Digital pan/tilt/zoom; max. zoom 8x (continuous)
Alarm/Events	Temperature sensor, shock detector (with firmware version 5.0.1 and higher), other sensors/IO via MxMessageSystem, notification via e-mail, FTP, IP telephony (VoIP, SIP), visual/sound alarms, pre- and post-alarm images
Intelligent Video Analysis	MxActivitySensor, video motion analysis, MxAnalytics
Interfaces	Ethernet 100Base-T, MiniUSB, MxBus*; inputs/outputs and RS232 via accessories *Only variant Mx-D26B
Security	User/group management, HTTPS/SSL, IP address filter, IEEE 802.1x, intrusion detection, digital image signature, MxFFS
Certifications	EN55022:2010; EN55024:2010; EN50121-4:2006; EN61000-6-1:2007; EN 61000-6-2:2005; EN61000-6-3:2007+A1:2011; EN61000-6-4:2007+A1:2011; AS/ NZS CISPR22:2009+A1:2010; CFR47 FCC part15B
Power Supply	PoE (IEEE 802.3af)
Power Consumption	Typ. 4 W

Power Consumption of External Devices	At MxBus: max. 2.5 W, at USB: max. 2.5 W, total max. 3 W The power consumption of the camera will increase accordingly!
Protection Classes	IP66 IK10
Ambient Temperature	−30 to 50 °C/−22 to 122 °F
Dimensions/Weight	Diameter x Height: 160 x 86 mm; weight: approx. 350 g
Standard Delivery	Housing (high-resistance composite, PBT), white, shock-resistant dome (transparent), mounting supplies, wrenches, 50 cm patch cable, MicroSD card (installed)

1.4   Delivered Parts and Dimensions

1.4.1   The D26 Camera

Item	Quantity	Part Name
1.1	1	Camera housing
1.2	1	Lens (not with D26 Body)
1.3	1	Dome, transparent
1.4	1	MicroSD card (SDXC, SDHC pre-installed)
1.5	1	Ethernet cable CAT5 0,5 m/20" (pre-installed)
1.6	1	Hinged ferrite
1.7	1	Allen wrench 3 mm
1.8	1	Torx wrench TX20
1.9	1	Toothed wrench
1.10	1	Outer shell
1.11	1	Mounting ring
1.12	4	Stainless steel washers 5,3 mm dia.
1.13	4	Dowels 8 mm

1.14	4	Stainless steel Torx screws 4,5x60 mm
1.15	4	Stainless steel washers 4,3 mm dia.
1.16	4	Stainless steel Allen screws M4x16 mm
1.17	1	Single-wire plug, black (MxBus)
1.18	2	Single-wire connector
1.19	1	MxBus plug with two-wire connection line

Camera Housing and Connectors

The MOBOTIX D26 consists of the camera housing (mainboard, lens, dome), the outer shell and the mounting ring.

Outer shell

Dome

Lens

Key

LEDs

Slot for MicroSD card

USB

MxBus

Network connector

1.4.2 Dimensions

By rotating the camera module on both axes, you can aim the lens at the precise area you want to record.

Camera module can be freely rotated and tilted

85 mm/3.35 in

160 mm/6.30 in

Delivered Parts and Dimensions

Drilling Template Mounting Ring
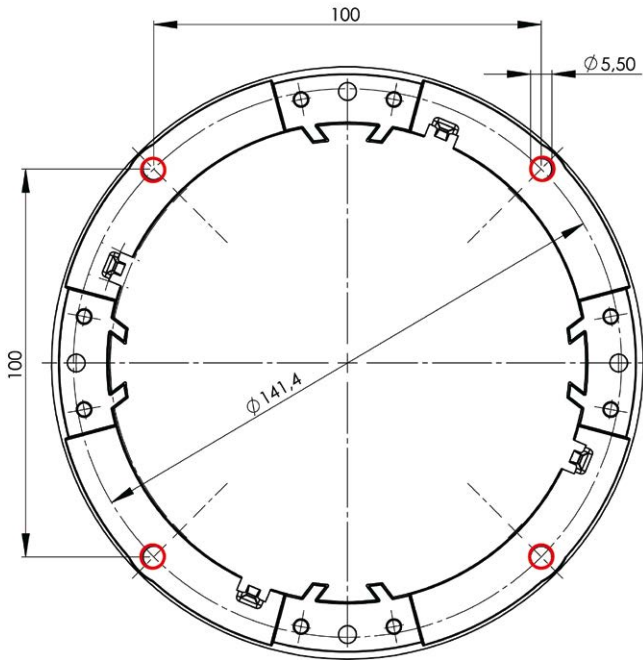
1.5   Available Accessories

1.5.1   On-Wall Set

Order no.: MX-OPT-AP

Consists of On-Wall Mount and mounting supplies. Conforms to U.S. installation standards. Reliably protects the cabling and allows additional modules to be integrated within the On-Wall Mount (patch/installation cable connector, IO extensions, WiFi, battery, ...).

1.5.2   10° On-Wall Set

Order no: MX-OPT-AP-10DEG

Consists of On-Wall Mount and mounting supplies for inclined installation (10°) of a camera. Conforms to U.S. installation standards. Reliably protects the cabling and allows additional modules to be integrated within the On-Wall Mount (patch/installation cable connector, IO extensions, WiFi, battery, ...).

1.5.3   Vandalism Set

Order no.: MX-D26-Vandal

Consists of a matt stainless steel ring, security screws and reinforced dome (3 mm polycarbonate). Ideally suited for surveillance in less friendly environments.

1.5.4   In-Ceiling Set

Order no.: MX-OPT-IC

For simple installation in false ceiling tiles. Suitable for discreet surveillance. Optionally available with a stainless steel ring.

Also suitable for mounting to drywall

1.5.5   Outdoor Wall Mount

Order no.: MX-OPT-WH

Consists of Outdoor Wall Mount and mounting supplies. Covers RJ45 flush-mounted sockets. Space for expansion modules (battery, UMTS, WiFi, etc.). Easily mounted to poles using Pole Mount. Weatherproof IP66.

1.5.6   Corner and Pole Mount

Order no.: MX-OPT-MH

Flange for Outdoor Wall Mount. Can be mounted to wall corners or poles. 3 mm stainless steel, white. Wall Mount may be ordered separately or as a set.

1.5.7   Tinted Dome

Order no.: MX-D26-OPT-DCS

Suitable for especially bright environments (e.g. under direct sunlight). A tinted dome reduces the glare from sunlight by 50% compared with the standard dome.

1.5.8 Stand/Wall Mount for Camera Tests

Order no.: MX-OPT-TW-Demo-1

The Stand/Wall Mount is a useful accessory for testing and for finding the optimum mounting position of the camera. The set also includes an Allen wrench as well as a Torx screw with dowel and the corresponding Torx wrench for installing as alternative wall mount for testing.

Using as a Stand (with/without tripod)

Using this stand, you can now place the camera upright on a flat surface or mount the whole assembly on a tripod (1/4" tripod thread at the bottom of the stand).

1.5.9 MiniUSB Cable to MiniUSB (Straight/Angled)

Order no.: MX-CBL-MU-EN-PG-STR-05/2/5 (straight/angled)

Only cables with **angled** plugs can be used for the D26

The MOBOTIX MX-232-IO-Box can be connected directly to the D26 with this cable, which is up to five meters long.

Available Accessories

1.5.10 MiniUSB Cable to MiniUSB (Angled/Angled)

Order no.: MX-CBL-MU-EN-PG-EN-PG-05/2/5
(straight/angled)

The MOBOTIX ExtIO can be connected directly to the D26 with this cable, which is up to five meters long.

Only cables with **angled** plugs can be used for the D26

1.5.11 MiniUSB Cable to USB-A Socket

Order no.: MX-CBL-MU-EN-PG-AB-05/2/5

USB-based storage media (for example, USB hard drives) can be connected directly to the D26 with this cable, which is up to five meters long.

1.5.12 Ethernet Patch Cable for Bayonet Catch

Order no.: MX-OPT-CBL-LAN-1/2/5/10

(length: 1 m/2 m/5 m/10 m)

The MOBOTIX-developed special cable can be installed in a waterproof manner and has an integrated sealing gasket. Every D26 ships with a 0.5-m-long cable as standard, which can be exchanged for a patch cable up to 10 m in length.

1.5.13 NPA-PoE-Set

Order no.: MX-NPA-PoE-EU and MX-NPA-PoE-INT (Version EU and Version INT)
Order no.: MX-CBL-NPA-BAT-2 (battery cable for mobile voltage sources)

This is a multifunctional PoE injector according to the IEEE 802.3af standard – with three connectors (for network, camera/PoE device, PC), universal power supply unit with interchangeable adapter plugs and crossover function. The NPA-PoE-Set connects and remotely supplies a D26 with power via an Ethernet cable up to 100 m in length. The blue adapter can also be connected to mobile voltage sources from 12 to 57 V DC by means of an additionally available battery cable. The "EU" version of the NPA-PoE-Set is supplied as standard with a European adapter, while the "INT" version includes four adapters (EU, USA, UK, AUS).

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1.5.14 MX-Overvoltage-Protection-Box

Order no.: MX-Overvoltage-Protection-Box-RJ45

Order no.: MX-Overvoltage-Protection-Box-LSA

Weatherproof network connector (protection class IP65, –30 to 60 °C/–22 to 140 °F) **with surge protection of up to 4 kV for MOBOTIX IP cameras**, ideal for replacing the MX-Patch-Box.

At the same time, the MX-Overvoltage-Protection-Box provides a weatherproof connection of a camera's patch cable to a network patch cable (**-RJ45** variant) or a network installation cable (**-LSA** variant).

1.5.15 MX-NPA-Box

Order no.: MX-OPT-NPA1-EXT

The MX-NPA-Box is a weatherproof PoE injector conforming to the IEEE 802.3af standard and is designed to connect external voltage sources (12 to 57 V DC) to a MOBOTIX camera.

The MX-NPA-Box is equipped with the Patch-Box's weatherproof and extremely compact exterior housing (protection class IP65, –30 to 60 °C/–22 to 140 °F), which means it can also be installed in the space of the Outdoor Wall Mount. Interfaces of the MX-NPA-Box: Camera via patch cable, Ethernet via LSA+ and external power supply via terminal connector (12 to 57 V DC possible).

1.5.16 MX-GPS-Box

Order no.: MX-OPT-GPS1-EXT

The MX-GPS-Box primarily serves as a high-precision time source for systems without an Internet connection. In addition, it can provide triggering based on GPS events (reaching or moving away from a specified position; exceeding or not reaching a specified speed). This interface box can be attached to all MOBOTIX cameras with an MxBus interface.

The MX-GPS-Box is equipped with the same compact housing as the other interface boxes (protection class IP65, –30 to 60 °C/–22 to 140 °F). This interface box should not be installed inside of other wall mounts, but on the exterior of the building with a large section of open

sky above it. This ensures the best possible reception from GPS satellites and thereby the highest possible accuracy of the received GPS data. The maximum length of the MxBus wiring (0.8 mm diameter wires) is 50 m/55 yd.

1.5.17 MX-232-IO-Box

Order no.: MX-OPT-RS1-EXT

This box provides the signal inputs and out-puts as well as the RS232 (serial) interface. It replaces the connections that were handled on the older camera models via a D-Sub 15-HD connector. The MX-232-IO-Box (protection class IP65, –30 to 60 °C/–22 to 140 °F) can be attached to all MOBOTIX cameras with an MxBus or USB interface. The maximum length of the MxBus wiring (0.8 mm diameter wires) is 50 m/55 yd. If the MiniUSB connector is used, the maximum cable length is 5 m/16 ft.

1.5.18 ExtIO Expansion Module

Order no.: MX-ExtIO

The device, which is suitable both for on-wall and in-wall installations, contains a powerful speaker, microphone, infrared motion sensor, ambient temperature sensor, two input and two output contacts and two illuminated keys. It is ideal for door communication, elevators, access control systems, etc. The ExtIO is suitable for use as direct connection to the S15 via a MiniUSB cable (max. 5 m), which can be ordered separately, or as a network connection via the PoE switch.

1.5.19 Mx2wire+ Media Converter

Order no.: MX-2wirePlus-Set-PW

The Mx2wire+ system allows an Ethernet network with PoE to be set up via two-wire cables, which saves users from having to lay several hundred meters of Ethernet cable. For example, an existing two-wire cable of an analog video camera can be reused to connect a high-resolution and modern IP network camera. Mx2wire+ is delivered in the standard wall outlet frame in different designs; however, it can also be used with the available on-wall socket that is included.

1.5.20 Other Accessories

Since the range of accessories for the MOBOTIX system keeps growing, you will find the list of applicable accessories in the **Camera Configurator** on the MOBOTIX website **www.mobotix.com**.

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The MOBOTIX YouTube Channel
www.youtube.com/user/MobotixAG

1.6 MOBOTIX Software

1.6.1 Integrated Camera Software (Firmware)

MOBOTIX cameras and connected MxBus modules operate with built-in firmware whose functions are accessed by the MOBOTIX **MxManagementCenter** remote stations and **MOBOTIX MxBell**.

The D26 models therefore also feature a variety of functions that are integrated in the firmware: from motion detection and long-term storage right through to alarm notification via video IP telephony. The virtual PTZ functions allow you to continuously zoom into or out of a MOBOTIX camera image using either the mouse wheel or a joystick.

When recording image or video sequences, you can choose to store either the section of the live image that is visible or the full sensor image (full image storage). This also allows you to examine parts of an image or video that had not been visible in the live image section on display at the time of the recording.

Unlike in the camera systems from other manufacturers, there is no need to buy and install additional software on your computer thanks to the MOBOTIX firmware that can be accessed directly in a web browser via the camera IP address. Instead of using a web browser, you can also download the free **MxManagementCenter** video management software from the MOBOTIX website (**www.mobotix.com > Support > Download Center > Software Downloads**) to quickly display multiple cameras on one monitor or on an entire video wall, switch alarms with sound or conveniently search for an event. The **MOBOTIX MxBell** for iOS and Android devices (iOS 11/Android 5.0 and higher) is also available free of charge from the **App Store/Google Play** for your mobile applications.

Download free of charge from **www.mobotix.com**

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Free updates!
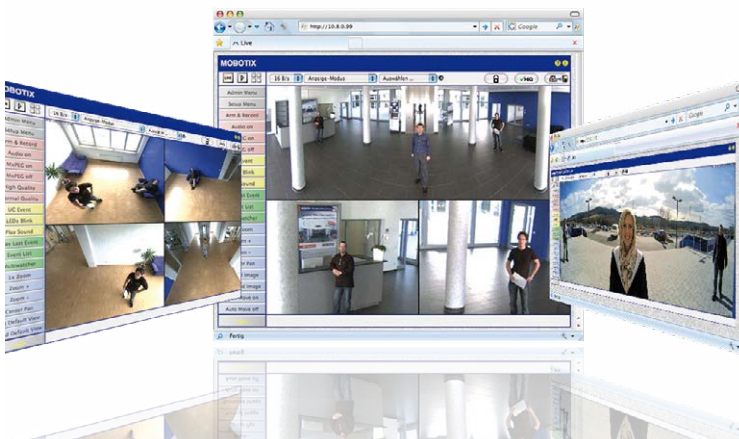
1.6.2 MxManagementCenter

MxManagementCenter (MxMC) is a completely new development that focuses on a unique and intuitive user experience. Single and double click, drag&drop, support of several screens and direct view of events and alarm messages are just some of the many advantages of the new software.

MxManagementCenter is perfectly designed in combination with MOBOTIX cameras representing the decentralized concept at its best. MxMC allows controlled recording access via the camera or later directly to the NAS.

A unique feature is the adaptive bandwidth management supporting quality search even over mobile networks with very limited bandwidth. MxMC is 100% free of charge, requiring no license or update costs and at the same time having no limits in terms of users, screens and cameras.

MxManagementCenter – simple operation of the most important camera functions:

- Integration of an unlimited number of cameras
- Camera groups with representation in Grid and Graphic views, Grid views with a focus window and many controls
- Optical and audible alarming of new events
- Instant Player that allows for quick viewing of the latest events during live video monitoring operation
- Easy use of multiple monitors by double-clicking on the live image, grid or event image
- Door station functions (intercom, open door, turn light on/off, etc.)
- Subsequent distortion correction of hemispheric camera images - in live images and in recordings

Download free of charge from **www.mobotix.com**

No license fees!
Free updates!

1.6.3 MOBOTIX MxBell

Never miss another visitor, thanks to push notifications! Use MOBOTIX MxBell on your smartphone or tablet to receive notifications from the doorbell of a MOBOTIX IP Video Door Station and live views from MOBOTIX cameras. This app helps you open the door and enables hands-free talking, automatic camera search, a live view, camera connection via SSL and display of the connection status.

Our new MOBOTIX MxBell is here!

The update scores with its new playback function, which makes it possible to search through the recorded events for the integrated Door Stations and cameras at a specific time point and play back the individual clips. In addition, the Grid view will simultaneously display up to four cameras, which in particular is a great advantage for small installations.

- Never miss another visitor, thanks to push notifications.
- Displays doorbell messages from MOBOTIX IP Video Door Stations.
- Live views from MOBOTIX IP cameras with gesture-controlled PTZ function.
- Open the door from anywhere, hands-free talking.
- Automatic camera search, live view and camera connection using SSL.
- Displays the connection status.
- Supports remote connections and mobile data.
- iOS 11/Android 5.0 and higher

Free download from **App Store/Google Play**

No license fees!
Free updates!

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2 INSTALLATION

Although the MOBOTIX D26 has been primarily designed for installation on walls and ceilings, it can also be mounted to a pole or the corner of a building, for example, using the appropriate MOBOTIX accessories.

2.1 Preparing the Installation

Before installing the MOBOTIX D26, the following questions should be answered:

1. **Where will the camera be mounted?**
   Mounting to a ceiling or wall, see *Section 2.1.1, «Ceiling and Wall Mounting»*

2. **Which other mounting options are available?**
   On-wall mounting, in-ceiling mounting, vandalism protection, wall mounting, pole mounting, see *Section 2.1.2, «Mounting Options»*

3. **How is the camera connected to the network and how is the power supplied?**
   MX-NPA-PoE or other PoE components (IEEE 802.3af), see *Section 2.1.3, «Network Connection and Power Supply, UPS»*

4. **How are the connections furnished from the building?**
   Sockets, see *Section 2.1.4, «Preparing the Camera Connections, MX-Overvoltage-Protection-Box»*

5. **What cabling considerations are necessary?**
   Wiring, see *Section 2.1.5, «Wiring, Fire Prevention, Lightning and Surge Protection»*

The following sections contain a brief answer to each of these questions, as well as references to the relevant sections in this manual. For more information on the MOBOTIX D26 and available accessories, please see **www.mobotix.com**.

2.1.1 Ceiling and Wall Mounting

Like all MOBOTIX cameras, the D26 is extremely flexible in terms of how and where it can be installed (see *Section 2.1.2, «Mounting Options»*). However, installations on a wall or ceiling are the most common mounting positions. In indoor spaces, the D26 is usually mounted from the ceiling. The Super Wide Angle lens (90°, B041) allows a room to be monitored almost entirely by a camera mounted in the corner. Using the PTZ software, you can easily zoom in on image details in either the live image or the recording.

Ceiling Installation with the In-Ceiling Set

Wall Installation Using the Outdoor Wall Mount

Outdoors, the D26 is usually mounted on a building wall. In principle, the camera can be installed without additional wall mounts, although the positional range of the lens may be limited as a result. **We therefore recommend using the practical Wall Mount from the range of available accessories** (see *Section 2.6, «Installing the Wall Mount»*). The cable exit of the D26 is located in the center of the housing's underside. For more detailed information on the installation process, see *Section 2.2, «Mounting the Camera Without Accessories»* and the following sections.

One Camera For 4 Gas Pumps - Long-Term Recording Without Peripheral Devices

A HiRes MOBOTIX Camera Can Replace Up To 6 Conventional Cameras

2.1.2 Mounting Options

On-Wall Installation (MX-OPT-AP)

The On-Wall Set can reliably protect external cables if the cables cannot be fed in the center below the camera housing. The On-Wall Mount also provides ample space for extra modules.

On-Wall Set (IP65, for outdoor applications)

On-Wall Installation with 10° Inclination (MX-OPT-AP-10DEG)

This On-Wall Set is identical to the regular On-Wall Set, except that the mounted camera is inclined by 10 degrees. The inclination makes it possible for the camera to deliver the best images even in demanding situations.

10° On-Wall Set (IP65, for outdoor applications)

In-Ceiling Installation (MX-OPT-IC)

The In-Ceiling Set allows the D26 camera to be installed in suspended ceilings, for example. This type of installation provides optimal protection for the camera and reduces the visible profile to a minimum since only the dome remains visible.

Discreet in-ceiling installation; decorative outer ring also available in stainless steel

Vandalism Set (MX-D26-Vandal)

The Vandalism Set provides added protection for D26 cameras. The set consists of a robust stainless steel cover and an impact-resistant polycarbonate dome. A camera equipped with the Vandalism Set is perfectly suited for applications in demanding environments (such as prisons, trouble areas, train stations, etc.).

Vandalism Set (IP65)

Wall Mount (MX-OPT-WH)

The Wall Mount is the ideal solution for mounting the D26 to walls for indoor and outdoor applications. The camera is completely dust-proof and resistant to water jets (IP65). The Wall Mount also covers RJ45 flush-mounted sockets and has ample space for additional modules.

Wall Mount made from sturdy PBT-30GF (IP65)

Corner and Pole Mount (MX-OPT-MH)

The MOBOTIX Corner and Pole Mount is the ideal choice when mounting the MOBOTIX D26 to a pole or building corner. This mount can only be used in conjunction with the Wall Mount. For poles with a diameter ranging from 60 to 180 mm.

Outdoor Corner and Pole Mount made from stainless steel (in conjunction with Wall Mount)

31

**Stand/Wall Mount for Camera Tests** (MX-OPT-TW-Demo-1)

The Stand/Wall Mount is a useful accessory for testing and for finding the optimum mounting position of the camera. The set also includes an Allen wrench as well as a Torx screw with dowel and the corresponding Torx wrench for installing as alternative wall mount for testing.

Using as a Stand (with/without tripod)

Using this stand, you can now place the camera upright on a flat surface or mount the whole assembly on a tripod (1/4" tripod thread at the bottom of the stand).

Converting to a wall mount (simulation of On-Wall set with 10 deg. tilt)

1. If required, release the two stainless steel Allen screws and remove the camera from the stand/wall mount.
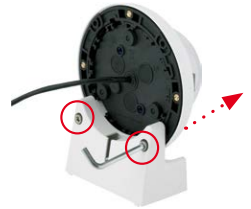
2. Place the camera with the two upper body screws exactly into the two receptacles of the Stand/Wall Mount.
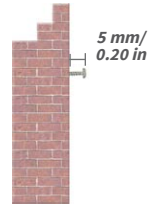
3. Mount the camera to the stand using the two stainless steel Allen screws.

4. Use the Torx screw to fasten the mount onto the wall. Make sure that the head of the screw is not tight against the wall, but that it still has 5 mm/0.2 in to go.

5 mm/
0.20 in

5. Slide the entire assembly from above over the Torx screw in the wall.

6. Properly tighten the Torx screw to secure the assembly in the desired position. There is a special hole in the Stand/Wall Mount to access the Torx screw.

Caution
The Stand/Wall Mount has been only designed used for testing purposes. Make sure that you replace this mount by a proper wall mount before bringing the system into service.

2.1.3 Network Connection and Power Supply, UPS

Power Over Ethernet (PoE Conforming to IEEE 802.3af)

All D26 models are supplied with power using the PoE standard. The Network Power Adapter (MX-NPA-PoE-Set) may be used for smaller installations. For larger installations, it is worth investing in a PoE capable supply device available on the market.

PoE adapter
MX-NPA-PoE

LAN or Power   *PC or Power*

When directly connecting to the computer, the PoE adapter replaces a cross-over cable

Camera
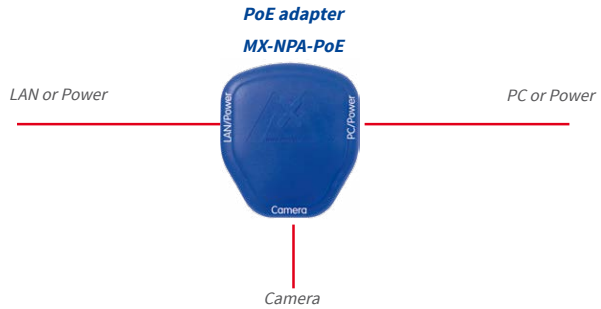
The **maximum length** of the network cable for power supply over an Ethernet cable is **100 m/110 yd**. The Mx2wire+ media converter set (available as an accessory) can be used to extend the range of an Ethernet connection up to 500 m in length (maximum transmission speed for a 500 m/546.81 yd cable: 45 Mbps and 12 W for the PoE device).

Note
The MOBOTIX D26 can be powered by switches or routers which support the PoE (Power-over-Ethernet) standard and conform to IEEE 802.3af.

Advantages of PoE power supply:
- Allows setting up centralized backup power supply via the network.
- Reduces energy consumption.
- No extra network connection for camera required.

Using Uninterruptible Power Supplies (UPS)

You should install an uninterruptible power supply (UPS) in order to maintain a continuous power supply even when utility power fails. These devices also provide full protection against electrical surges and voltage fluctuations, enhancing the reliability of the system as a whole.

When using a more powerful 19" rack-mounted UPS, you can also protect all other network components (for example, switches, routers, PoE switches, etc.).

Since MOBOTIX cameras do not require any heating, even during winter, the average power consumption of less than 5 watts is very low. This, in turn, means that you can centralize the UPS-protected power supply by injecting power into the Ethernet cables (max. 100 m). This kind of protected power supply can be used either with MOBOTIX PoE products (MX-NPA-PoE + Universal Power Supply) or with PoE-compliant switches according to IEEE 802.3af.

UPS units not only protect the camera against power failures, they also protect all other connected network devices against damage from voltage peaks and lows

PoE switch
PC/server
RAID
UPS

2.1.4 Preparing the Camera Connections, MX-Overvoltage-Protection-Box

Once the camera position, the position of the cable outlets and the method of power supply have been decided upon, the cabling can be installed. Before installing the MOBOTIX D26, you should make sure that the network connections have been properly tested so that the proper functioning of the camera is guaranteed.

If the camera is to be installed outdoors, you should also install the MOBOTIX **MX-Overvoltage-Protection-Box** (optional accessory). This interface box not only provides **overvoltage protection of up to 4 kV for MOBOTIX IP cameras**, it also provides simple and weatherproof connection of the cameras to a network patch cable (**-RJ45** variant) or a network installation cable (**-LSA** variant).

For additional information on the MX-Overvoltage-Protection-Box, open `www.mobotix.com` and see the **Online Catalog** under **Accessories > System Components > Interface Boxes**.

2.1.5   Wiring, Fire Prevention, Lightning and Surge Protection

When installing the wiring inside or outside of buildings, make sure you always adhere to the relevant regulations on wiring, fire prevention and protection against lightning.

MOBOTIX cameras are protected against the effects of small electrical surges by a range of measures. These measures, however, cannot prevent the camera from being damaged when stronger electrical surges occur. Particular care should be taken when installing the camera outside to ensure proper **protection against lightning**, as this also protects the building and the entire network infrastructure.

MOBOTIX recommends having MOBOTIX cameras installed only by certified specialists accustomed to installing network devices and having proper respect for the applicable regulations regarding lightning protection and fire prevention as well as the current technology for preventing damages from electrical surges.

Guidelines for Wiring

- **Data cable**: Make sure you only use double-shielded CAT5 or higher cable (**S/STP**) for Ethernet connections.
- **Outdoors**: Installing the camera outdoors requires special precautions and measures regarding the cables as well as lightning and surge protection (see below).
- **Wire lengths**: The cable segments must not exceed the maximum allowed cable lengths in order to ensure proper data transfer (see *Section 2.9, «Network and Power Connection»*).
- **Avoiding induction**: When running data cables parallel to existing regular power lines or high-voltage wires, make sure you observe the minimum distances to the power cables.

Fire Prevention

When installing the power lines to the camera, make sure you always adhere to the country-specific regulations (e.g. VDE in Germany, IEEE in the USA) in effect on wiring and fire prevention at the site of the installation.

Lightning and Surge Protection

In order to avoid damage to MOBOTIX cameras from overvoltages, you should always install the MX-Overvoltage-Protection-Box. This competitively priced and weatherproof network connector provides reliable protection against overvoltages of up to 4 kV; the box is easily installed in the Outdoor Wall Mount, for example (see *Section 1.5.14, «MX-Overvoltage-Protection-Box»*).

More information is available at an institution such as the International Electrotechnical Commission (IEC, `www.iec.ch`) or at a manufacturer of protection devices against lightning and electrical surges, such as Dehn (`www.dehn.de`).

2.2 Mounting the Camera Without Accessories

2.2.1 Mounting Instructions

As an allround camera, the D26 is primarily designed for installation on walls or ceilings. In general, direct installation of the camera without any accessories is always possible. However, to ensure a flush finish with the surface, you should first install a flush-mounted wall outlet (space for the connection cable).

If you choose to mount the camera directly to a wall without the MOBOTIX-recommended wall mount, you should position the camera in the center of the room to guarantee maximum coverage.

Required Tools

Please first check that all the components supplied with the camera are present in the original packaging. You will need these additional tools for installing:

- **Any additional materials for fastening the camera to a ceiling/wall, if necessary – 4 Torx screws incl. screw anchors and washers are included in the original packaging.**
- **Screwdriver**
- **Power drill** for screw anchor holes needed for ceiling/wall mounting
- MOBOTIX **drilling templates** (on **www.mobotix.com**)

- **Scissors** to cut out the template
- **Pen** to mark the drill holes
- Materials and any tools needed to connect the pre-installed MOBOTIX network cable in the camera with the on-site network cable.

Caution
For safety reasons, only use the pre-installed MOBOTIX network cable that was included in the delivery. Always ensure that the rubber plug of the network cable reliably protects the outer shell from moisture entering the camera. All openings of the camera housing need to be properly sealed. This is the only way to guarantee that the camera remains weatherproof.

Notes
Network Connection Without Pre-Installed Cable
The network cable is fed through the ceiling directly above the camera. Make sure the cable is completely sealed by the rubber gasket on the housing (do not bend the cable!) When preparing the installation, ensure that at least 15 cm of cable length (excluding the connector itself) remains inside the camera housing (similar to factory preinstallation). This will ensure that you can turn and tilt the lens mount freely later on.
Surface-Mounted Socket
If a surface-mounted socket is used, the camera must be mounted using the Outdoor Wall Mount. The camera cannot be mounted directly on top of protruding, surface-mounted sockets.

2.2.2 Procedure for Installing the D26 Without Accessories

1. Install and prepare **the network connection**

2. **Install the flush-mounted socket:** The pre-installed cable attached to the camera must be connected with the on-site network cable. For installation without accessories, a flush-mounted socket must be installed first to provide space for the connection. The cabling is now perfectly protected and cannot be seen or accessed from the outside. The camera cannot be mounted directly on top of protruding, surface-mounted sockets. Use the camera drilling template to mark the position of the flush-mounted socket for the desired camera position.

3. **Drill the holes:** Drill the holes for the supplied screw anchors (see drilling template).

4. **Connect the cable:** Connect the on-site network cable to the camera patch cable using a standard connector.

5. **Attach the camera:** Use the (included) screws to affix the mounting ring and the camera at the designated position.

6. The outer shell is required at a later stage in the installation and is attached only when the dome has been removed and placed back after a lens adjustment.

7. Proceed to *Section 3.3.1, «Aiming and Adjusting the Lens»*.

2.3   Mounting the Camera with the On-Wall Set

2.3.1   Mounting Instructions

On-Wall Sets available in 0° and 10° inclinations allow the D26 to be installed quickly and easily on the wall or ceiling of a room. When using the set outdoors (IP65), ensure that the screw holes on the rear of the camera housing are sealed with the included foam rubber washers. It is not possible to install the On-Wall Set directly above a surface- or flush-mounted socket.

The 10° On-Wall Set is the right choice if you want to mount the D26 on a wall with the lens pointing vertically downward (90° or more). If the 10° On-Wall Set is not used, then the angle of the lens may not exceed 80° for design-related reasons.

If the discreet appearance of the D26 is of particular importance, the In-Ceiling Set is ideal for mounting the camera on ceilings or drywalls.

The network connection and drill holes must be prepared correctly before installing the On-Wall Set (both indoors and outdoors):

- **Network connection**: You can use any one of the four openings in the On-Wall Set to guide the cabling into the camera. The network cable must be fed through the opening without a connector. An additional connector to connect to the camera cable is required.

- **Preparing the drill holes**: Use the drilling template for the D26 On-Wall Set to mark the exact position for drilling the anchor holes with regard to the camera position.

Caution
When using the On-Wall Set outdoors, ensure that the screw holes on the rear of the camera housing are sealed with the foam rubber washers included in delivery (IP65).

Drilling Template On-Wall Set
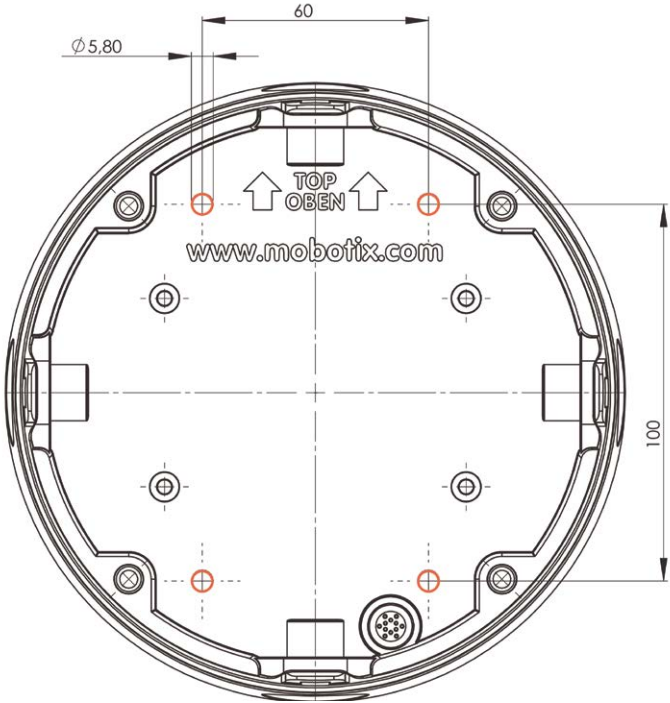
The drilling templates are available on **www.mobotix.com**

0°-Set: 160 mm/6.30 in

10°-Set: 166 mm/6.54 in

85 mm/3.35 in

74 mm/2.91 in

Mounting the Camera with the On-Wall Set

Notes
Use the drilling template available on **www.mobotix.com**, **Support > Download Center > Documentation > Drilling Templates** (valid for both 0° and 10° On-Wall Sets).
Make sure that the drilling template is not scaled or adjusted to the paper size when printing the PDF file (enlarged or reduced).
The maximum torque for all screws is 1 to 1.2 Nm.

Required Parts

Please first check that all components supplied with the On-Wall Set are present in the original packaging. The following additional items are required for installation:

- **Suitable materials for ceiling/wall installation: 4 screws incl. screw anchors and washers (e.g. from the original camera packaging)**
- **Screwdriver**
- **Power drill** for screw anchor holes needed for ceiling/wall mounting
- MOBOTIX **drilling templates** (on **www.mobotix.com**)
- **Scissors** to cut out the template
- **Pen** to mark the drill holes
- Materials and tools needed to connect the pre-installed MOBOTIX network cable in the camera with the on-site network cable

2.3.2 Procedure

1. **Attach washers**: Prior to installation, stick a black foam rubber washer around each of the four screw holes on the rear side of the on-wall housing (remove the adhesive foil and press into place, surface must be clean and free of grease). This prevents water from entering the housing.

2. **Prepare the cabling**: Insert the seal into the cable opening of the On-Wall Set such that the black rubber seal is on the outside. Fix it in place from the inside using a small hexagonal nut.

3. **Mount the On-Wall Set**: Mount the On-Wall Set (without the camera) at the intended position using the Torx screws (included with D26 camera, items 1.10 – 1.12).

4. **Cable feeding**: Attach the counter nut to the network cable, pass it through the seal from the outside and tighten the nut. The network cable is now screwed into the On-Wall Set, weatherproof. All unused openings must be sealed with the included sealant plugs. The cable passing into the housing must always be installed using the supplied three-part fittings.

5. **Remove the camera outer shell**: Remove all four Allen screws with the supplied Allen wrench and lift off the outer shell (not mounted upon delivery).

6. **Remove the mounting ring**: Separate the black mounting ring from the camera housing (lift the spring clip). This ring is not required when mounting the camera to the On-Wall Set.

7. **Connect the cable**: Connect the on-site network cable to the network cable passing through the On-Wall Set using a standard connector. Make sure to leave enough unused cable inside the housing. This will ensure that you can turn and tilt the lens mount freely later on. Excess cable can be easily stored within the On-Wall Mount.

8. **Attach the camera to the mount**: Press the D26 so that it is seated firmly within the On-Wall Mount. The tapered guides at the back of the D26 housing fit exactly into the openings of the On-Wall Mount. Attach the white outer shell with the supplied Allen screws (without rubber seal) once the lens has been adjusted.

9. Proceed to *Section 3.3.1, «Aiming and Adjusting the Lens»*.

2.4   Mounting the Camera with the In-Ceiling Set

The white decorative ring is also available in stainless steel

2.4.1   Mounting Instructions

The In-Ceiling Set offers the most stylish installation option for the D26. When properly installed, the only visible component is a particularly sleek and discreet dome camera, while most of the remaining components are concealed inside the ceiling. Only the compact dome and the thin decorative ring that conceals the screws can be seen.

For these reasons, the D26 installed with the In-Ceiling Set is the preferred option for most indoor spaces frequented by customers or the general public (e.g. hotels, restaurants, banks, retail stores, public buildings, etc.).

The common use of suspended ceilings in commercial and public buildings is an additional reason to place a preference on in-ceiling installation. The installation process is also simplified, as the network cable may be laid without difficulty and only a 15 cm diameter hole must be cut in the ceiling or ceiling component.

Before installing the MOBOTIX D26 on an indoor ceiling with the In-Ceiling Set, you must prepare the network connection and drill a hole for the camera:

- **Network connection**: The network cable is fed through the ceiling directly above the camera. When preparing the installation, make sure that about 15 cm of cable remains unused.

- **Cut a hole for installation**: The hole should have a **diameter of 150 mm** (see drilling template on **www.mobotix.com**, **Support > Download Center > Documentation > Drilling Templates**).

Drilling Template In-Ceiling Set

$\emptyset 150$

**Clamping range
6 to 22 mm/0.24
to 0.87 in**

65 mm/2.56 in

ø 180 mm/7.09 in
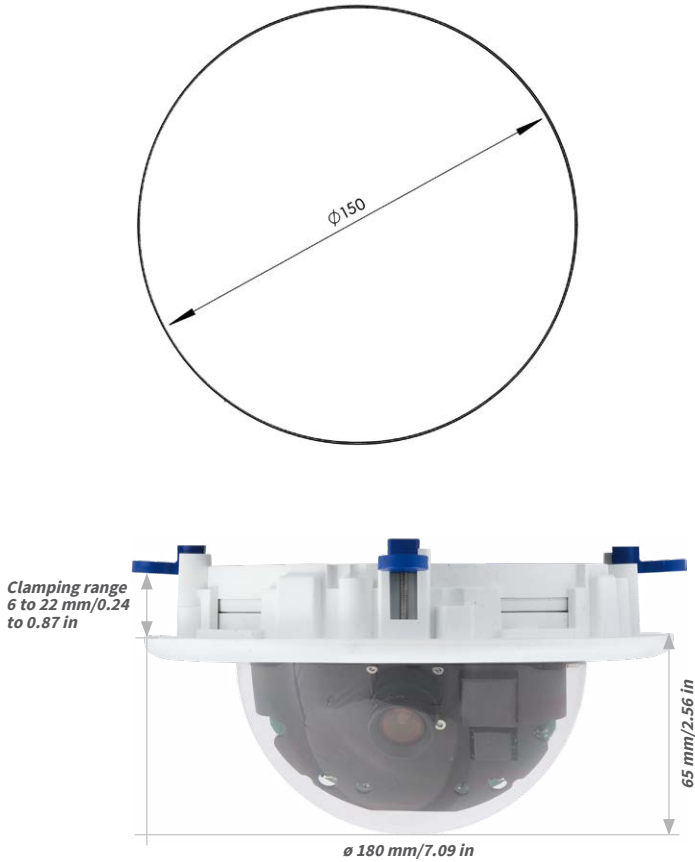
The In-Ceiling Set can be used in ceilings and walls that have a thickness of 6 to 22 mm/0.25 to 0.9 in

Notes
Use the drilling template available on **www.mobotix.com**, **Support > Download Center > Documentation > Drilling Templates**.
Make sure that the drilling template is not scaled or adjusted to the paper size when printing the PDF file (enlarged or reduced).

Required Parts

Please first check that all components supplied with the In-Ceiling Set are present in the original packaging. The following additional tools are required for installation:

- **Power drill with matching hole saw (150 mm diameter) or jigsaw**
- MOBOTIX **drilling templates** (on **www.mobotix.com**)
- **Scissors** to cut out the template
- **Pen** to mark the hole positions
- **Two blue In-Ceiling wrenches** from the In-Ceiling Set
- Materials and tools needed to connect the pre-installed MOBOTIX network cable in the camera with the on-site network cable

2.4.2 Procedure

1. **Prepare the network connection**: Run the network cable above the suspended ceiling and ensure that enough cable slack is available.

2. **Cut a hole for installation**: Cut a round hole for camera installation (e.g. with a 150 mm hole saw). Use the cutting template of the In-Ceiling Set.
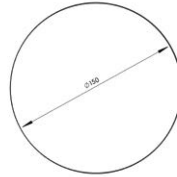
3. **Remove the camera outer shell**: Remove all four Allen screws using the supplied Allen wrench and lift off the outer shell (not mounted upon delivery).

4. **Remove the mounting ring**: Separate the mounting ring from the camera housing. This ring is not required to mount the camera in the In-Ceiling Set.

5. **Place the camera in the In-Ceiling Set**: The dovetail guides at the back of the camera housing fit exactly into the openings of the In-Ceiling mounting ring. To make the camera even more secure (e.g. for mobile use), push the four clamps (item 3.4) into the square notches above the dovetail guides until you hear them click into place.

6. **Connect the cable**: Connect the on-site network cable to the camera network cable using a standard connector.

7. **Insert the camera and the In-Ceiling Set into the hole**: Make sure that all winged cams are retracted before placing the In-Ceiling Set with the camera into the hole. Tightening the screws of the In-Ceiling Set extends the winged cams, thus firmly holding the set in place.

The blue winged cams (see left) automatically secure the In-Ceiling Set in the ceiling when tightening the screws

Installing the decorative ring:
turn clockwise

8. **Install the decorative ring**: Use the two wrenches from the In-Ceiling Set to place the ring on the set as shown in the figure and turn the ring clockwise until it stops.

Removing the decorative ring:
turn counter-clockwise – only relevant when completely removing the camera

The two wrenches from the **In-Ceiling Set** are also used for **dismounting**. Insert them as shown and turn the ring counter-clockwise. Loosen the screws of the In-Ceiling Set; this will automatically retract the winged cams. You can now remove the In-Ceiling Set, with the camera still attached, from the ceiling.

9. Proceed to *Section 3.3.1, «Aiming and Adjusting the Lens»*.

2.5   Installing the Vandalism Set

2.5.1   Mounting Instructions

The Vandalism Set provides additional security and protection for D26 cameras with little effort and at a low cost. It is ideally suited for use under particularly demanding conditions (such as prisons, trouble areas, train stations, etc.). The set consists of a robust stainless steel outer shell that is available in five different colors and a reinforced plastic dome.

To install the Vandalism Set, replace the standard plastic outer shell with the stainless steel outer shell of the Vandalism Set (including the safety screws and four mounted spacers). In addition, replace the original dome of the D26 with the reinforced dome of the Vandalism Set.

The Following Additional Tools Are Required for Installation:

- **Allen wrench** for removing the standard outer shell (included in the D26 packaging)
- **Screwdriver with bit receptacle** for the two-hole driver bit

2.5.2   Procedure

• **Remove the camera outer shell:** Remove all four Allen screws using the supplied Allen wrench and lift off the outer shell.

• **Remove the standard dome:** Unscrew the dome from the housing **(counter-clockwise)**. Package and store the standard dome for possible use at a later time.

• **Aim and adjust the lens:** When mounting the camera for the first time, please proceed to *Section 3.3.1, «Aiming and Adjusting the Lens».*

• **Mount the reinforced dome of** the Vandalism Set. Tighten it **in a clockwise direction** using a soft cotton cloth. If necessary, clean the dome with a cotton cloth before installing it.

Installing the Vandalism Set

- Insert the four spacers included in the **Vandalism Set**.
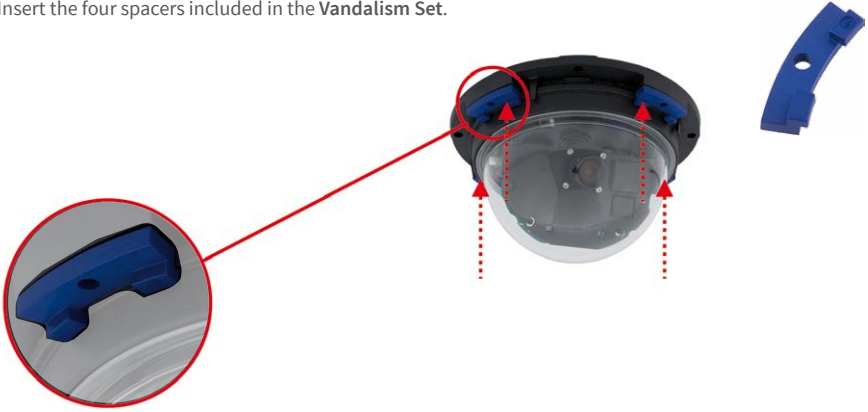
- Now attach the **stainless steel outer shell** of the Vandalism Set using the safety screws. Tighten the screws into place using the supplied two-hole driver bit.

2.6   Installing the Wall Mount

2.6.1   Mounting Instructions

The Wall Mount allows you to easily mount D26 cameras to walls or extensions, both indoors or outdoors. The camera remains IP65 weatherproof (dust-proof and resistant to water jets). The Wall Mount also covers RJ45 flush-mounted sockets and has ample space for additional modules (Mx2wire, WiFi, batteries, etc.).

Before mounting the MOBOTIX D26 with the Wall Mount, you must prepare the network connection and drill the holes for the fixtures:

Direct installation over surface- and flush-mounted sockets

- The **on-site network cabling** is passed through the opening in the back of the Wall Mount. The cable and the required (standard) connector for the camera cable (patch cable) are ideally protected by a robust wall sealing made from foam rubber. Nothing is visible or accessible from the outside. The Wall Mount may be mounted directly on top of surface- or flush-mounted sockets. Maximum width x height of the socket: 88 mm x 80 mm.

- Only use the **factory installed patch cable** of the D26 (50 cm cable length) or a MOBOTIX cable that is available as an accessory in various lengths.

- All openings of the camera housing need to be properly sealed. This is the only way to guarantee that the camera remains weatherproof.

- The supplied screw anchors should be used for the **drill holes** in the wall. Use the drilling template for the D26 Wall Mount to mark the exact position for the drill holes and the holes through which the cables will later be fed.
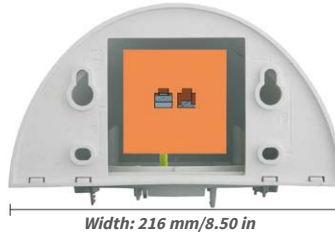
Installing the Wall Mount

Drilling Template Wall Mount
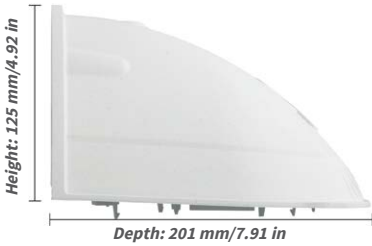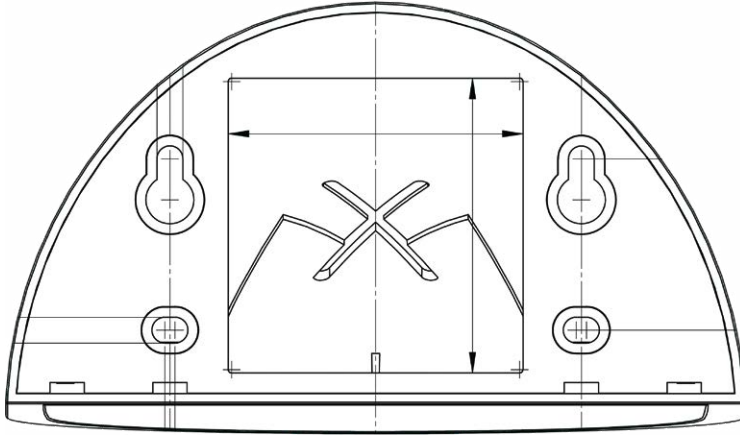
Height: 125 mm/4.92 in

Depth: 201 mm/7.91 in

Width: 216 mm/8.50 in

Direct installation over surface- and flush-mounted sockets

Notes
Use the drilling template available on **www.mobotix.com**, **Support > Download Center > Documentation > Drilling Templates**.
Make sure that the drilling template is not scaled or adjusted to the paper size when printing the PDF file (enlarged or reduced).

Required Parts

Please first check that all the components supplied with the Wall Mount Set are present in the original packaging. The following additional items are required for installation:

- **Power drill for screw anchor holes**
- **Screwdriver**
- MOBOTIX **drilling templates** (on `www.mobotix.com`)
- **Scissors** to cut out the template
- **Pen** to mark hole positions
- **Materials and tools** needed to connect the pre-installed MOBOTIX network cable in the camera with the on-site network cable.
- **Clean and soft cotton cloth**

2.6.2 Procedure

1. **Remove the camera mounting ring**: Separate the black mounting ring from the camera housing. This ring is not required when mounting the camera to the Wall Mount. If the D26 was not in its original packaging, then it may be necessary to remove the outer shell with the four Allen screws beforehand.

2. **Separate the bottom plate from the Wall Mount:** The bottom plate is used to hold the camera and is only attached and screwed into place during a later step.

3. **Pass the camera cable up through the bottom of the bottom plate:** Ensure the orientation is correct. The spring clips should be on the underside of the bottom plate.

4. **Snap the camera into place on the bottom plate:** Firmly push the camera into the Wall Mount. The plastic spring clips will snap into place when the trapezoidal elements on the rear of the camera housing exactly match up with the corresponding openings on the Wall Mount.

5. **Mount the Wall Mount (without camera):** Stick the black wall sealing to the back of the Wall Mount (remove the adhesive foil first, the surface must be clean and free of grease). Pass the network cable through the large square opening and into the Wall Mount. Use the included screws to install the Wall Mount (without the camera) at the intended position. Pass the network cable through the large square opening on back side of the Wall Mount.

6. **Connect the cable:** Prepare the on-site network cable for connection with the camera patch cable using a standard connector. Excess cable can be stored easily within the Wall Mount.

7. **Install the bottom plate with the camera in the Wall Mount:** Connect the camera patch cable to the network cable. Then mount the bottom plate with the camera in the slots from below and fix it in place on the Wall Mount using the 4 Allen screws (Allen wrench included).

8. Proceed to *Section 3.3.1, «Aiming and Adjusting the Lens»*.

2.7   Installing the Corner and Pole Mount

2.7.1   Mounting Instructions

The 3 mm thick stainless steel Corner and Pole Mount is extremely robust and rust-proof. It is used (exclusively) in conjunction with the Wall Mount in situations where you want to mount a D26 to a pole or wall corner. The Wall Mount required for complete installation must be ordered separately.

The mounting pole should have a diameter of between 60 and 180 mm. Attaching the camera to the corner of a wall not only makes sense from an aesthetic perspective, but also allows you to monitor an area that is not specifically covered by the camera without incurring major building modification costs. In such cases, only the lens of the camera has to be repositioned.

By design, the Corner and Pole Mount does not allow the use of a flush-mounted socket.

Required Parts

Please first check that all the components supplied with the Corner and Pole Mount Set are present in the original packaging.

The Following Additional Tools Are Required For Installation As A Pole Mount:

- **Screwdriver**
- Materials and tools needed to connect the pre-installed MOBOTIX network cable in the camera with the on-site network cable

Installing the Corner and Pole Mount

The Following Additional Tools Are Required For Installation Of The Corner Mount:

- **Power drill for screw anchor holes**
- **Screwdriver**
- **Scissors** to cut out the template
- **Pen** to mark hole positions
- Materials and tools needed to connect the pre-installed MOBOTIX network cable in the camera with the on-site network cable

2.7.2 Mounting to a Pole

Use the supplied stainless steel straps to affix the Corner and Pole Mount to a pole.

- Guide the supplied **stainless steel straps** through the openings in the Corner and Pole Mount as shown in the diagram. Make sure that you are using the slots of the mount that best fit for the thickness of the pole. The stainless steel straps allow attaching the mount to poles with diameters between 60 and 180 mm.

- Guide the on-site network cable from behind through one of the large round holes of the Corner and Pole Mount. In order to properly protect the cabling, it is best to pass the cabling from the inside of the pole through the Corner and Pole Mount directly into the camera (concealed cabling). **Note: The cable length from the pole should be at least 80 cm!**

- **Tighten the** stainless steel straps on the Pole Mount with a screwdriver. If necessary, the ends of the straps can be cut off.

2.7.3 Mounting to a Wall or Building Corner

Use the supplied screw anchors, screws and washers to affix the Corner and Pole Mount to a building corner.

- Mark the **four screw anchor holes** on the corner of the building, ensuring that the arrows on the mount point upwards. Drill the holes with a 10 mm wall drill.

- Pass the on-site network cable through one of the large round holes at the back of the Corner and Pole Mount, then through one of the 16 mm diameter holes on the front of the mount. In order to properly protect the cabling, you should let the cabling run from the inside of the building through the Corner and Pole Mount directly into the camera (concealed cabling). **Note: The cable length from the building corner should be at least 80 cm!**

- Place the included **wall anchors** in the drilled holes and screw the Corner and Pole Mount into place on the corner of the building using the Torx screws and washers. Use the drilling template to mark the exact positions for the drill holes.
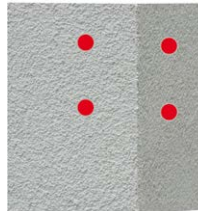
2.7.4 Mounting the Wall Mount to the Corner and Pole Mount

- **Feed the network cables through the appropriate hole at the back of the Outdoor Wall Mount. The wall sealing on the Wall Mount must be in place already.**

- Use the 6 x 20 mm Allen screws, Ø 6 mm washers and M6 nuts included with the Corner and Pole Mount and **attach the Wall Mount to the Corner and Pole Mount.**

- Continue with the remaining work steps as described in *Section 2.6, «Installing the Wall Mount»*!

2.8   Replacing the MicroSD Card

The camera must be taken down to remove, insert or replace a MicroSD card. To avoid data loss, be sure to deactivate MicroSD card recording in the camera software and reboot the MOBOTIX camera before removing the card.

Caution
A MicroSD card may only be removed from the camera after you have deactivated Recording to SD Card and rebooted the camera. Failing to do so may lead to loss of data! Make sure that the card is not write-protected!

2.8.1   Removing the MicroSD Card

- **Deactivate recording**: Recording to MicroSD card must be deactivated (**Admin Menu > Storage on External File Server / Flash Device**). If MicroSD card recording is still active, deactivate recording and reboot the camera. *Section 3.5, «MicroSD Card Recording»*, contains more information on this topic.

- **Remove the outer shell**: Remove all four Allen screws using the supplied Allen wrench. Take off the outer shell.

- **Remove the camera dome**. Take the delivered plastic foil or a cotton cloth and remove the dome by turning it in counter-clockwise direction.

- **Remove the MicroSD card**: Gently push the MicroSD card into the card slot of the camera. The card is released from the slot and can be removed from the camera.

Push-Push operation: Gently push MicroSD card once, then pull it out.

Click!

2.8.2 Inserting the MicroSD Card

Push-Push operation: Insert MicroSD card and push once.

1. **Insert the MicroSD card**: Push the MicroSD card into the card slot as shown, until an audible and perceptible click indicates it is in place.
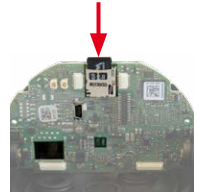
- **Remove the camera dome**. Take the delivered plastic foil or a cotton cloth, insert the dome into its seat and turn it in clockwise direction.

- **Attach the outer shell**: Place the outer shell onto the camera and tighten all four Allen screws using the supplied Allen wrench. Make sure that the rubber seal is seated properly.

- **Activate recording**: If you have inserted a MicroSD card that has already been MxFFS formatted, you can activate recording under **Admin Menu > Storage on External File Server / Flash Device**. Once the camera has been rebooted, it automatically activates recording.

- **If you are using a new MicroSD card**, it must first be formatted as described in *Section 3.5, «MicroSD Card Recording»*,.

2.9 Network and Power Connection

2.9.1 Notes on Cable Lengths and Power Supply

- Power is supplied to the camera via the camera Ethernet connection (patch or installation cable). We recommend using a MOBOTIX PoE adapter or another similar high-quality PoE product to loop-in the power supply:

  - **One camera:** with the PoE adapter (MX-NPA-PoE or MX-NPA-Box)

  - **Multiple cameras:** with PoE products conforming to IEEE 802.3af (PoE switch)

- The **maximum length** of the network cable for power supply over an Ethernet cable is **100 m**.

- Make sure that you only use switches or routers that support the **10/100 Mbps network interface** of the camera.

- We highly recommend using uninterruptible power supplies (UPS) to provide backup power.

- If you are using IEEE 802.3af or IEEE 802.3at (PoE+) Power-over-Ethernet network components to supply power to MOBOTIX cameras, make sure, if possible, that these components do not have a fan. Since the power consumption of MOBOTIX cameras is very low compared to other products, the reliability of the entire system is increased, thus extending the life of these components.

| Caution |
|---|
| **Max. power consumption of attached extension modules:** The power consumption of all attached *MxBus modules* must *not exceed 2.5 W*. When attaching modules to the MxBus connector *and* the USB socket, the *power consumption of all attached modules must not exceed 3 W*, *if the camera is powered by PoE class 3*. If *PoE class 2* is used, *the camera cannot power any peripheral devices!*

For information on changing the PoE class, see *Section 2.9.8, «Variable PoE»*. |

2.9.2 Network Cabling For D26 With Patch Cables

Using a patch cable and an MX-Overvoltage-Protection-Box or MX-NPA-Box offers the following advantages:

- Quick installation/deinstallation

- No shortening of cable even when installing/deinstalling several times

- Hose-proof/dust-proof connection in accordance with IP65

- Additional protection against overvoltages of up to 4 kV when using the MX-Overvoltage-Protection-Box.

Connecting the Patch Cable to an MX-Overvoltage-Protection-Box, an MX-NPA-Box or a Standard Network Outlet

To establish the network connection of the camera using an MX-Overvoltage-Protection-Box or an MX-NPA-Box, remove the blue bayonet catch and the blue sealing plug from the right-hand side of the box. Insert the MOBOTIX patch cable into the box and fasten the cable using the blue bayonet catch.
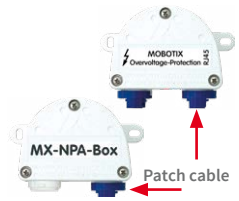
For additional, information on how to install an **MX-Overvoltage-Protection-Box** or an **MX-NPA-Box**, open **www.mobotix.com** and see the **Online Catalog** under **Accessories > System Components > Interface Boxes**.

When using a standard network outlet (only for indoor installations), insert the MOBOTIX patch cable of the D26 directly into the network outlet.

If additional cables are required inside the housing, they must be connected as described in *Section 2.8.6, «Connecting a USB Cable»* and *Section 2.8.7, «Connecting a Two-Wire MxBus Cable»*.

2.9.3 Power Supply Using a Switch

1. Connect the factory pre-installed cable of the camera to the **camera** connector of the PoE adapter.

IP addresses in the figure are shown only as an example

2. Connect the **LAN/Power** connector of the PoE adapter to the Ethernet connector of the switch/router or the Ethernet port.

3. Plug the RJ45 connector of the power supply unit into the **PC/Power** connector of the PoE adapter.

For the D26 you should use the blue MX-NPA-PoE-Set or the MX-NPA-Box – previous MOBOTIX network power accessories, such as the NPA-Set, Power-Box and Power-Rack (MX-NPA-Set, MX-NPR-4 and MX-NPR8/20) are not suitable for use with the D26

2.9.4   Power Supply When Connected Directly to a Computer

1. Connect the factory pre-installed cable of the camera to the **camera** connector of the PoE adapter.

2. Connect the **PC/Power** connector of the PoE adapter to the Ethernet port of the computer.

3. Plug the RJ45 connector of the power supply unit into the **LAN/Power** connector of the PoE adapter.

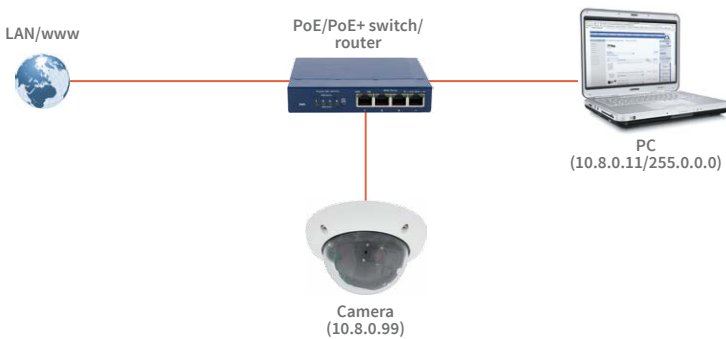*IP addresses in the figure are shown only as an example*
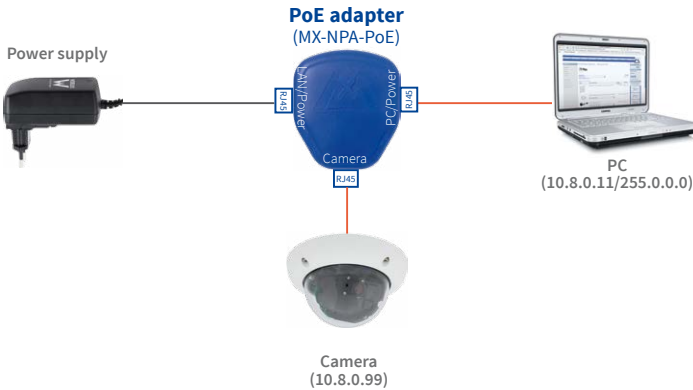
For the D26 you should use the blue MX-NPA-PoE-Set or the MX-NPA-Box – previous MOBOTIX network power accessories, such as the NPA-Set, Power-Box and Power-Rack (MX-NPA-Set, MX-NPR-4 and MX-NPR8/20) are not suitable for use with the D26!

2.9.5   Power Supply with Power-Over-Ethernet Products

Connect the factory pre-installed cable of the camera to a PoE port of the PoE switch/router. The switch/router must support the PoE standards IEEE 802.3af or IEEE 802.3at.

IP addresses in the figure are shown only as an example

2.9.6 Connecting a USB Cable

You should use a USB cable with an **angled** MiniUSB plug inside the housing of the D25

Using the USB connector (red arrow in figure), you can attach existing expansion modules, such as the MOBOTIX ExtIO (USB), the MX-232-IO-Box or external USB hard drives to the camera in a weatherproof and well-protected manner.
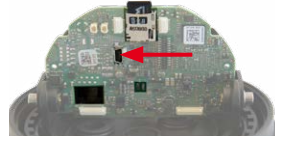
Procedure

- **Uninstall camera**: Remove the camera so you can access the connectors on the back.

- **Remove the outer shell**: Remove all four Allen screws using the supplied Allen wrench. Take off the outer shell.

- **Remove the camera dome**: Take the delivered plastic foil or a cotton cloth and remove the dome by turning it in counter-clockwise direction.

- **Tilt the main board**: If required, release the two stainless steel Allen screws and tilt the mainboard so you can access the USB connector.

- **Remove the sealing plug**: Push one of the three sealing plugs out of the housing by pushing it from the inside.

- **Guide USB cable through wire plug**: Gently push the angled connector of the MOBOTIX USB cable (see *Section 1.4, «Available Accessories»*) through the supplied black single-wire plug (item 1.16).

- **Insert cable plug with USB cable**: Push the wire plug with the cable from the rear into the housing (make sure that the plug is seated properly).

- **Connect USB cable**: Push the MOBOTIX cable with the angled MiniUSB plug into the USB connector (red arrow in figure).

- **Remove the camera dome**: Take the delivered plastic foil or a cotton cloth, insert the dome into its seat and turn it in clockwise direction.

- **Attach the outer shell**: Place the outer shell onto the camera and tighten all four Allen screws using the supplied Allen wrench. Make sure that the rubber seal is seated properly.

2.9.7 Connecting a Two-Wire MxBus Cable

You can use such a cable to connect additional MOBOTIX modules (e.g., the MX-GPS-Box or the MX-232-IO-Box) to the D25.

Note that you can attach one MxBus cable (with two wires) to the MxBus connector (red arrow in figure). Take care not to switch the polarity of the wires. It is recommended to use the same wire color for +/– for the entire MxBus system (e.g., red = +, blue = –).

In order to attach MxBus modules, you need to use the supplied MxBus connector with two-wire connection line and two single-wire connectors:

The length of the entire MxBus wiring must not exceed 50 m/55 yd!

Procedure

- **Uninstall camera**: Remove the camera so you can access the connectors on the back.

- **Remove the outer shell**: Remove all four Allen screws using the supplied Allen wrench. Take off the outer shell.

- **Remove the camera dome**. Take the delivered plastic foil or a cotton cloth and remove the dome by turning it in counter-clockwise direction.

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- **Remove the sealing plug**: Push one of the three sealing plugs out of the housing by pushing it from the inside.

- **Prepare MxBus cable**: Strip 5 mm (1/5 in) of insulation from the wire ends of the MxBus cable. Then push each wire into one of the holes in the single wire plug (this prevents humidity from entering the camera).
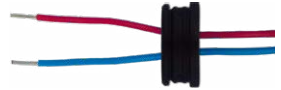
- **Insert single-wire plug with MxBus cable**: Push the single-wire plug with the MxBus wires from the rear into the housing (make sure that the plug is seated properly).

- **Insert MxBus connector**: Push the MxBus connector into the receptacle on the mainboard (red arrow in figure).

- **Connect MxBus cable**: Use one single-wire connector to join one wire color of the MxBus cable and repeat for the other color. Store the connectors within the camera housing so that they do not obstruct the main board when adjusting the camera image.

- **Remove the camera dome**: Take the delivered plastic foil or a cotton cloth, insert the dome into its seat and turn it in clockwise direction.

- **Attach the outer shell**: Place the outer shell onto the camera and tighten all four Allen screws using the supplied Allen wrench. Make sure that the rubber seal is seated properly.

2.9.8 Variable PoE

The power consumption of the camera depends on the functions in use as well as any peripheral devices connected (see table). PoE classes 1, 2 or 3 may be selected in the browser-based user interface in order to optimally adjust the camera to your system design (PoE switch in use, emergency power concept, etc.).

PoE Power Level Classes (IEEE 802.3af Standard)		
Class	**Max. power consumption**	**Camera operating mode and peripheral devices**
1	0.44 W–3.84 W	LowPower mode; no peripheral devices (available soon)
2	3.84 W–6.49 W	Normal mode; max. 1 W for MxBus peripheral devices
3	6.49 W–12.95 W	FullPower mode; max. 2.5 W for MxBus peripheral devices (for example, MX-GPS-Box and MX-232-IO-Box to MxBus), max. 4 W for peripheral devices to MxBus and USB interface

Caution
If the total power consumption of the camera and peripheral devices exceeds the power provided by the PoE switch for the specified class, the switch can disconnect the camera from the power supply. ***In this case, the camera will only be accessible again once the peripheral devices have been disconnected from the camera and the camera has been restarted.***

The default setting is usually fine, and nothing needs to be changed. However, the PoE power class must be changed in the browser if a higher or a lower power class is required for your application:

Variable PoE: Multiple cameras can be operated simultaneously from the same switch

1. Select **Admin Menu > Network Setup > Ethernet Interface** (for experts).

2. Click on **Change** under **Power Supply**.

3. A **Power Wizard** will appear to guide you through the PoE configuration steps.

4. Next, restart the camera: Disconnect the camera from the power supply. Then reconnect it, for example, by disconnecting and ten reconnecting the Ethernet cable at the PoE switch.
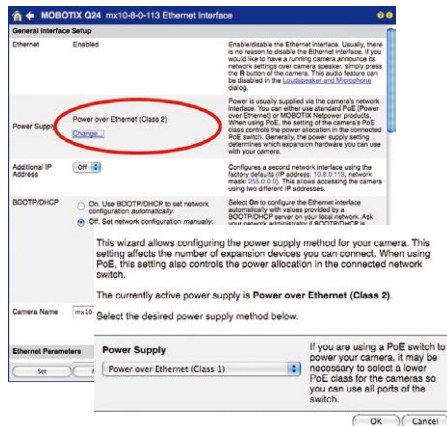
3   OPERATING THE CAMERA

3.1   Manual and Automatic Operation – Overview

Download the free-of-charge MxManagementCenter software at www.mobotix.com

MOBOTIX cameras do not require any extra software. Thus, you can set up and operate the MOBOTIX camera using a JavaScript-enabled browser on all common operating systems (such as Windows, Linux, Macintosh, etc.). As an alternative, you can also use the MOBOTIX application MxManagementCenter. Follow these steps to set up the camera:

1. **Connect the camera to the network.**

   Power is supplied directly via the Ethernet cable (see *Section 2.7, «Installing the Corner and Pole Mount»*)

2. **Establish a connection to the camera and adjust the network settings, if required.**

   By factory default, MOBOTIX cameras are booting as DHCP client with an additional fixed IP address in the 10.x.x.x range (e.g., 10.16.0.128). Local computer networks usually have IP addresses in the 172 or 192 ranges. Depending on whether a DHCP server is present on the local network (e.g., a DSL router) or if the network has been set up to use fixed IP addresses, there are several possibilities for establishing a connection to the camera and to change its network parameters:

   • **Network with DHCP server**

   – **Using a browser:**

   If you know the IP address that the DHCP server assigned to the camera, simply enter that address in the browser address bar to directly connect to the camera (see *Section 3.2.2, «First Images and the Most Important Settings in the Browser»*).

   – Using MxManagementCenter:

   With MxManagementCenter, you can show and integrate the camera without having to know its current IP address (see *Section 3.2.3, «First Images and Network Parameter Configuration in MxMC»*).

- **Network with fixed IP addresses**

In order to access the camera, it must have an IP address within the range of the local network. To set the camera's network parameters, you can use one of these methods:

– **Manually using a browser:**

First, you need to change the network parameters of your computer (see *Section 3.2.1, «Manually Setting Up the Network Parameters in a Browser»* and following …).

– **Integration into MxManagementCenter with automatic adjustment of the camera's IP address:**

The camera is displayed in MxManagementCenter despite the fact that the IP address is not part of the local network. The application allows reconfiguring the network parameters accordingly (see *Section 3.2.3, «First Images and Network Parameter Configuration in MxMC»*).

3. **Configure the camera.**

Using the web-based user interface or MxManagementCenter.

Camera software
in the browser

3.2   First Images and the Most Important Settings

Once the MOBOTIX camera has been connected to the network, you need to set up the camera's network interface accordingly. This step involves setting up and checking the network parameters of the camera. If your network has an active DHCP server or is already using an IP address in the `10.x.x.x` range with a `255.0.0.0` network mask, you do not need to change the camera's network parameters. You can access the camera directly (see *Section 3.2.2, «First Images and the Most Important Settings in the Browser»*). If your network or computer does not use an IP address in the 10.x.x.x range (for example, in the 192 or 172 ranges), you should follow one of the following methods for changing the camera's network parameters:

- **Manual Setup** (see *Section 3.2.1, «Manually Setting Up the Network Parameters in a Browser»*)

- **Automatic setup using MxManagementCenter** (see *Section 3.2.3, «First Images and Network Parameter Configuration in MxMC»*)

<table>
<tr><td>Note</td></tr>
<tr><td>We will use a camera with the factory address <code>10.8.0.99</code> in the following examples. Replace this IP address with the IP address of your camera. You will find the IP address of your camera on a small sticker on the camera. Make sure that the IP addresses used in the following examples are not already being used by other devices in the network.</td></tr>
</table>

Pressing the key (see *Section 1.4.1, «The D26 Camera»*) will prompt the camera to announce its current IP address on the camera speaker

3.2.1   Manually Setting Up the Network Parameters in a Browser

You need a computer that is using a `10.x.x.x` IP address in order to manually set up the network parameters of the MOBOTIX camera. The computer's network parameters usually have to be changed for this purpose.

1. Change the Network Parameters of Your Computer:

Windows (XP, Vista and 7):

1. Open **Start > Settings > Control Panel > Network Connections**. Clicking on **Properties** opens the dialog box shown.

2. Double-click on **Internet Protocol (TCP/IP)**. On the **General** tab, activate the *Use the following IP address* option. Enter an IP address in the 10.x.x.x range in this field (for example, `10.8.0.11`).

Entry in "Subnet mask" field: 255.0.0.0

3. Once all dialog boxes have been closed, the computer will have the IP address `10.8.0.11`.

Windows 8.1/10:

1. Open **Start > Settings > Control Panel > Network Connections**. Clicking on **Properties** opens the dialog box shown.

2. Double-click on **Internet Protocol (TCP/IP)**. On the **General** tab, activate the *Use the following IP address* option. Enter an IP address in the 10.x.x.x range in this field (for example, `10.8.0.11`).

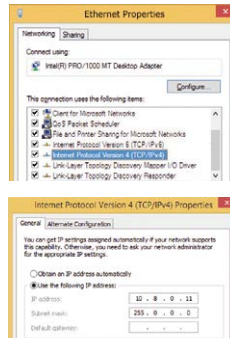3. Once all dialog boxes have been closed, the computer will have the IP address `10.8.0.11`.

Entry in "Subnet mask" field: 255.0.0.0

Linux/Unix:

1. Open a terminal as `root` user.

2. Enter the following command: `ifconfig eth0:1 10.8.0.11`

3. The computer is now also using the IP address `10.8.0.11`

Mac OS X:

1. Open **System Properties > Network.**

2. Select **Ethernet**. In the **Configuration** field, select **Manual** and enter a `10.x.x.x` IP address (for example, `10.8.0.11`).

3. Click on **Apply** on the bottom right-hand side of the dialog box to assign the computer the IP address `10.8.0.11`.

2. Set Up the Target Network Parameters of the MOBOTIX Camera:

1. Open a web browser on the computer and enter the default IP address of the MOBOTIX camera in the address bar of the browser (for example, `10.8.0.99`). Pressing Enter displays the user interface of the MOBOTIX camera (see also *Section 3.2.2, «First Images and the Most Important Settings in the Browser»*).

Default user data

User name: ***admin***
password: ***meinsm***

2. Click on the **Admin Menu** softbutton in the user interface of the MOBOTIX camera. The Quick Installation starts automatically once the admin user has logged on.

Note: The Quick Installation can also be executed at a later stage by opening **Admin Menu > Network Setup > Quick Installation**.

3. Enter the target network parameters of the camera on the appropriate page of the Quick Installation assistant.

Note: The network parameters can also be modified retrospectively via **Admin Menu > Network Configuration > Quick Installation.**
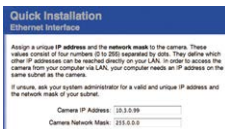
4. Once you have completed the Quick Installation and rebooted the camera, the new network parameters will be activated. The camera can now be connected to the target network and, if required, further configured.

3.2.2 First Images and the Most Important Settings in the Browser

Once the MOBOTIX camera has been connected to the power supply and to the network, you can access the user interface with the live camera image in the web browser. Internet Explorer, Firefox, Safari or any other graphical browser with activated JavaScript is suitable. It does not matter which operating system is used.

After entering the camera's IP address in the browser's address bar, you will see the live view of the MOBOTIX camera with its user interface controls, such as softbuttons, buttons for the different camera screens, pull-down menus (Quick Controls), icons for accessing the online help and the camera status, and status information elements.
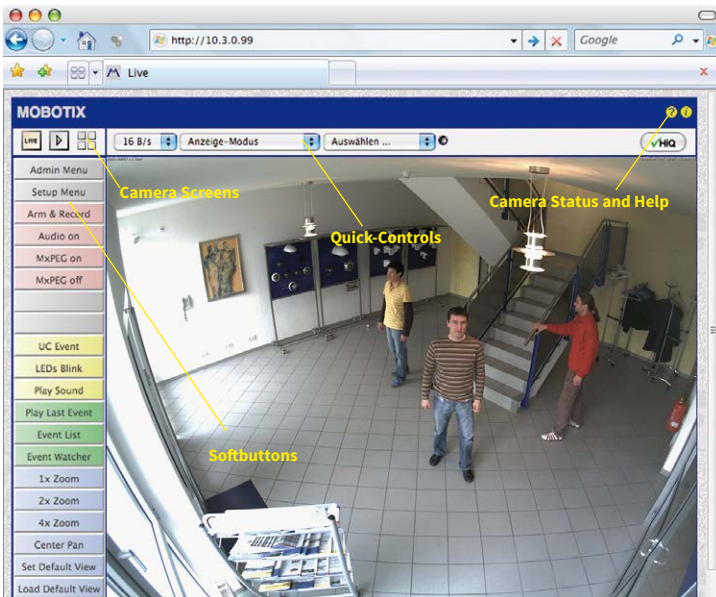
Note
Default access data for the administration menu • User name: ***admin*** • Password: ***meinsm*** (Note that you need to change the password upon your first login – camera release V5.1.x and higher.)

Camera Views: Live, Player, MultiView

Live view:
http://<camera IP>/
control/userimage.html

The MOBOTIX camera automatically displays the **live** screen when it starts up (factory default setting). You can set a different start page in **Admin Menu > Language and Start Page** (for example, the **Guest** screen) to allow a restricted access to the live image.
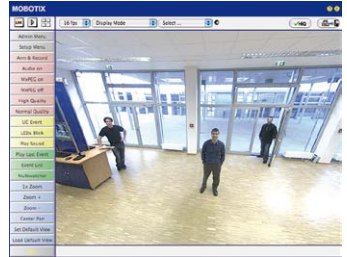
Player screen: http://<camera IP>/control/player

The other available standard screens include **Player** (playback of recorded images and video sequences) and the **MultiView** screen (displays several cameras with live or recorded images).

MultiView screen:
http://<camera IP>/
control/multiview

Guest screen: http://<-camera IP>/cgi-bin/guestimage.html

MultiView allows you to view several cameras via a "proxy" camera (especially useful if you want to access your cameras from outside of the network with reduced bandwidth).
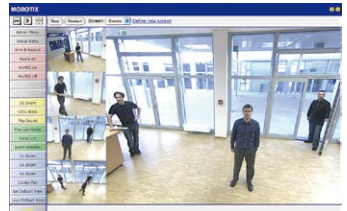
Note
For more information on camera screens, see the online help of the camera's user interface in the browser.

3.2.3 First Images and Network Parameter Configuration in MxMC

Installing and Starting MxManagementCenter

Download the current version of MxManagementCenter from the MOBOTIX website (**www.mobotix.com > Support > Download Center > Software Downloads** in the **MxManagementCenter** area). Double-click the shortcut for the program or the program file.

Finding Cameras

When starting MxManagementCenter for the first time, the configuration wizard opens and automatically starts searching for MOBOTIX cameras. The number of found cameras is shown next to the Add button. This number is updated automatically if the number of MOBOTIX cameras on the network has changed (i.e., by connecting new/disconnecting existing cameras)..
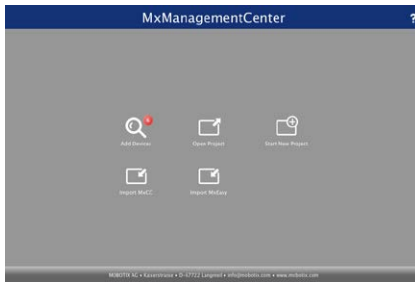
Download
MxManagementCenter
for free from
www.mobotix.com

Click on **Add Devices**. The cameras are displayed either in a list or as tiles. Use the **List** and **Tile** buttons to change the display mode.

MxManagementCenter automatically monitors and displays the operating status of all cameras. Cameras that are not on the same subnet as the computer are indicated by the Icon (Camera not in the same network as the computer). Likewise, the cameras that have an unknown password or for which no user name/password combination has been specified in MxManagementCenter will be displayed with the icon (Camera is password-protected).
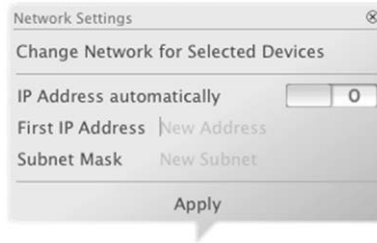
Reconfiguring Network Addresses of Cameras

Using Bonjour*, MxManagementCenter finds not only cameras on the same network as your computer, but also MOBOTIX cameras located in other subnets (status: 📷). In such a case, you would not be able to establish any connection to cameras in a different network or subnet.

This is the case, for example, if you are integrating cameras into a network without DHCP server (i.e., with fixed IP addresses) and the IP address range is different from the 10.x.x.x range supported by the cameras in addition to DHCP.

MxManagementCenter can automatically configure such a camera so that it is "integrated" into your existing network. To do so, you have to select the respective camera and then click on the 📷 button at the bottom of the program window.

The **Network Setting** dialogue opens.

Network Settings	⊗
Change Network for Selected Devices	
IP Address automatically	O
First IP Address New Address	
Subnet Mask New Subnet	
Apply	

If you have assigned a fixed IP address to your computer, you will certainly prefer to assign fixed IP addresses to the cameras. To do so, enter the IP address and the subnet mask. The IP address is incremented automatically for each selected camera.

When you click on **Apply**, the selected cameras are automatically reconfigured and they are located in the same subnet as the computer.

Adding Cameras

After a camera has been reconfigured, it has the status **Accessible** and can be integrated into MxManagementCenter.

Select the desired cameras (use **Cmd-click** to select several cameras). If the cameras are password-protected **1**, click on **Edit User and Password** **2** and enter the user name and password.
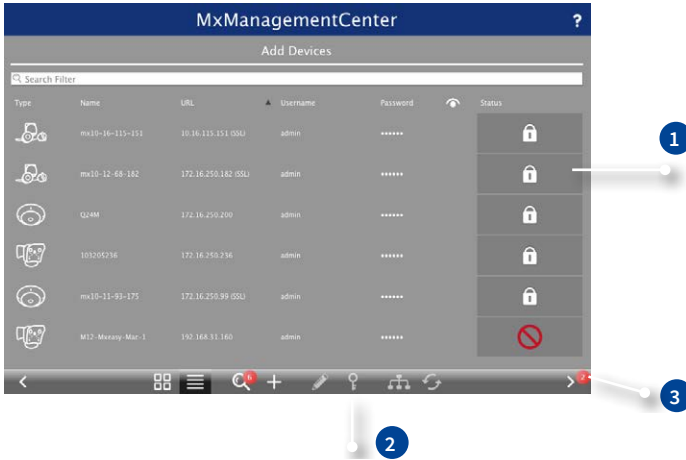
The number of selected cameras is shown on the **Next** button **3**. Move to the next page and click on **Finish**.

For more information, see the **MxManagementCenter Tutorial**, which can be downloaded as a PDF file from the MOBOTIX website: **www.mobotix.com > Support > Download Center > Documentation > Brochures & Guides > Tutorials**.

3.2.4 Start Options of the Camera

By default, the camera starts as DHCP client and automatically tries to get an IP address from a DHCP server. To start the camera in a mode different from the default mode, you can activate the boot menu of the camera.

Preparing the Camera

• Disconnect the camera's power supply.

• Reconnect the power supply of the camera.

Key

LED default settings:

1 Power (on),
 Error (flashing)
2 Recording (flashing)

Activating the Boot Menu

The red LED lights up red 5 to 10 seconds after establishing the power supply and will stay on for 10 seconds. Briefly press the key. The camera enters the boot menu, ready for selecting one of the start options.

The LED now flashes once and repeats the flashing signal after pausing for one second (the number of flashes indicates the current start option). To go to the next start option, briefly press the key again (< 1 sec). After the last start option, the camera returns to the first option (LED flashes once).

LED flashes	Start Option	Meaning	Audio Confirmation*
1 x	—	This option is not used on this camera model.	—
2 x	Factory Defaults	Starts the camera with factory defaults (factory default IP address, users and passwords will not be reset).	Boing
3 x	Automatic IP Address	Starts the camera as DHCP client and tries to obtain an IP address from a DHCP server. If a DHCP server cannot be found or no IP address can be obtained, the camera starts with its factory default address.	Boing Boing
4 x	Recovery System	Starts the camera with the recovery system, e.g., in order to recover from a failed update of the camera software.	Alarm Sound

*Only on cameras with audio option and installed speaker.

Selecting a Start option

Press the key longer (> 2 sec). The camera confirms the selection by flashing rapidly three times. You can now remove the paper clip. After 20 sec, the camera will confirm the selection by playing a sound according to the table above.

If nothing is selected, the camera will resume its normal boot process after a certain time.

Starting the Camera with Factory Default (Network) Settings

If you use the camera's **start option 2** to load the factory configuration, this configuration is not automatically saved in the camera's flash memory. When the camera is next rebooted without using **start option 2**, the last stored configuration will be used. To permanently store the new configuration in the camera's flash memory, open **Admin Menu > Store**. Note that you can restore specific parts of the camera configuration afterwards by using "Restore" to re-apply the settings still stored in the camera.

As opposed to resetting the camera using **Admin Menu > Reset configuration to factory defaults**, the **user information** will **not** be reset if the camera is booted using the factory settings.

Make sure you store the default network configuration to the permanent flash memory

Starting the Camera with an Automatic IP Address (DHCP)

Starting the camera using **start option 3** and an automatic IP address (DHCP) is only **temporary**. The network configuration of the camera can be permanently set to DHCP (factory setting) under **Admin Menu > Ethernet Interface**.

Make sure that the network has a functioning DHCP server when starting the camera with DHCP support. If this is not the case, the camera cannot obtain a valid IP address and will use its last IP address.

You should also make sure that the cameras always obtain the same IP addresses by permanently assigning the MAC addresses of the cameras to the desired IP addresses.

In case of an error, the camera uses its last IP address

Tip: Briefly pressing the **key of the camera** will announce the current IP address via the speaker (only on cameras with installed MX-EXTIO).

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3.3 Adjusting Lens Focus and Correcting Lens Distortion

3.3.1 Aiming and Adjusting the Lens

Make sure that you see the live image of the camera on the monitor of your computer or laptop. Now adjust the lens mount until you see the desired image area on your monitor:

- **Remove the camera dome.** Use the supplied plastic foil or a cotton cloth to remove the dome by turning it in a counter-clockwise direction. You may have to remove the outer shell first.

- **Loosen the toothed ring slightly** by turning it in a counter-clockwise direction using the supplied hook wrench. In addition, **loosen** the two **Allen screws** on both sides of the lens mount slightly by turning them in a counter-clockwise direction using the supplied Allen wrench.

- **Loosen the ring and screws** until you are still able to pan and rotate the internal part of the camera with the lens without much force but not so far that the lens is unable to move on its own.

- Now **aim the camera** by rotating and panning the lens mount (Note: the MicroSD card slot must point downward for the camera's live image to be displayed properly). Never use force when adjusting the direction of the camera, as this could damage the camera beyond repair.

- Once the camera has been aimed, **tighten the Allen screws** at both sides of the lens mount (in a clockwise direction) **and the toothed ring** (in a clockwise direction) with the supplied hook wrench. Do not use excessive force when doing so as this may damage the camera.

- **Adjustment: Adjust the image focus** by rotating the lens in its socket. Check the image on the computer monitor. To avoid damaging the lens mount, never turn the lens too far or with force.

Caution (only for 135 mm Telephoto lens)

Image Focus: Due to the lens effect of the dome, the focus of the 135 mm Telephoto lens shifts slightly once the dome has been mounted. Before mounting the dome, the Telephoto lens should be rotated by **90°-120° in a counter-clockwise direction** (against the direction in which the lens is screwed). Make sure that you check the focus of the live image with the dome installed and re-adjust the lens, if required.

- **Mount the dome.** Use the supplied foil or a lint-free cotton cloth to insert the dome into its seat and turn it in a clockwise direction. Once again, check the focus of the camera image on a computer monitor.

  If required, gently clean the front of the lens using a soft cotton cloth before installing the dome. Do not apply excessive pressure to the surface of the glass when cleaning the lens.

5. **Attach the rubber seal:** Place the rubber seal with the groove around the edge of the black mounting ring of the camera.

6. **Attach the outer shell:** Replace the outer shell and screw all four Allen screws tight using the supplied Allen wrench. Ensure that the rubber seal is properly positioned.

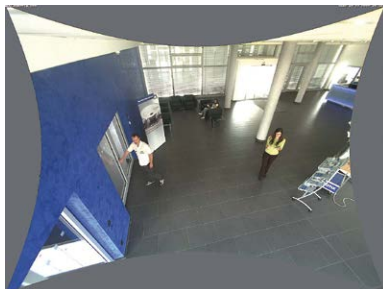### 3.3.2 Correcting Lens Distortion (B041 Only)

If you are using a D25 with the B041 90° wide-angle lens, the image, particularly the edges, may be slightly distorted due to the extreme angle of the lens.

You can suppress this effect using software (e.g. in the browser) so that a new and appropriately corrected image can be displayed live. A side effect of this correction, however, is that a cushion shape appears around the edges of the image.
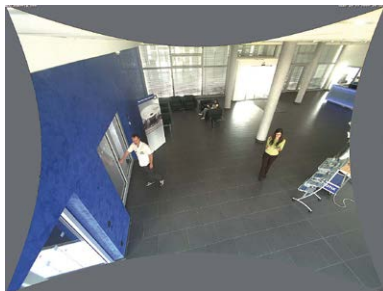
To hide this cushion effect, you simply have to zoom in on the image slightly. Although this reduces the size of the captured area, the image is almost distortion-free compared to the original.

Since activated lens distortion correction requires additional processing power, you should consider disabling it in situations where it is not really necessary. You will only notice a minimal distortion of the image, especially if you use the zoom. However, the maximum frames rate for high resolution may be reduced, which means you have to choose between maximum distortion correction or maximum frame rate.

Zoom without distortion correction

Corrected image (zoom)

We recommend activating lens distortion correction, especially for applications with a low frame rate and non-zoomed images (e.g. when using the D25 as a webcam). However, images can usually be corrected at a later point in time when searching recorded images. This saves on processing power during recording and increases the frame rate. The more you zoom in on the image, the less distorted the image should appear.

Activate/Deactivate Lens Distortion Correction in the Browser

To activate this option, first specify the lens you are using in the **Admin Menu > Camera Administration > Lens Configuration** dialog (this setting is saved until the camera is reset to its default configuration). Select the **B041 (4.0 mm)** option from the **Lens Type Selection** field and then click **Apply** followed by **Restart**.
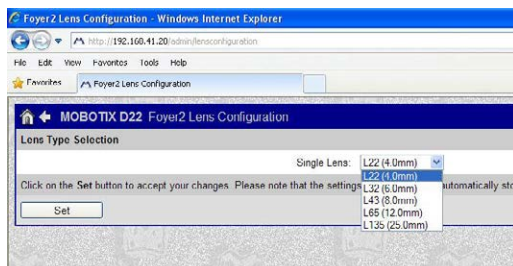
Now select the **Lens Distortion Correction** option in the **Display Mode** Quick Control panel. An automatically corrected (live) image is displayed that can be panned, tilted or zoomed. Switching to the **Full Image** option will deactivate the automatic distortion correction function.

3.4   Virtual PTZ and Full Image Recording

3.4.1   Preparing the Virtual PTZ Function

Greater ease of use through a joystick
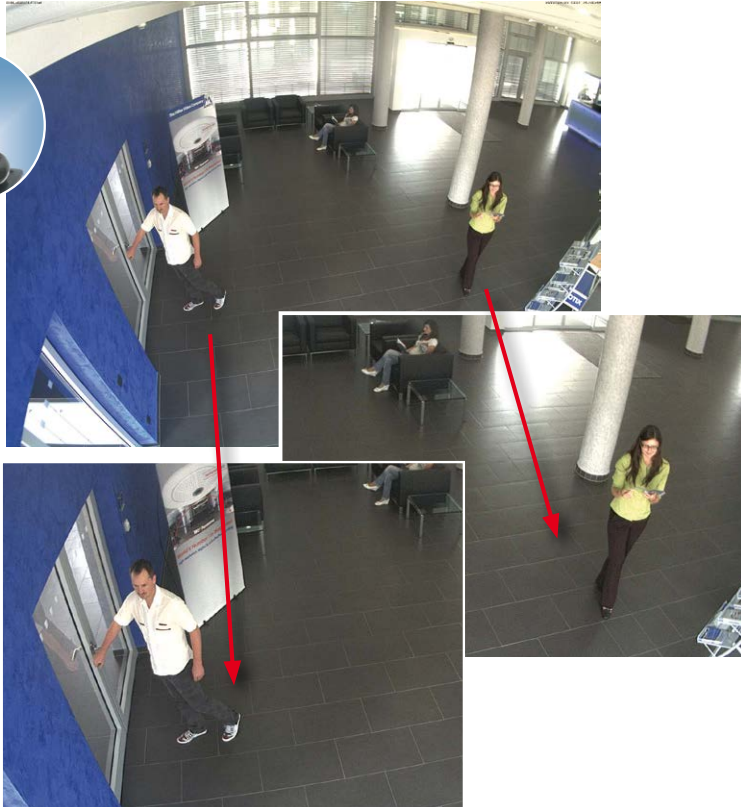
The virtual PTZ function allows you to use a mouse or joystick to continuously zoom in on images from the selected video source and "virtually" move the enlarged image section within the entire image sensor area.

Operation Using The Mouse And Scroll Wheel

The vPTZ function of the D26 can be controlled in the browser using the mouse. This position becomes the new image center by clicking on any position on the image displayed on the monitor. The image moves accordingly and the image distortion is automatically corrected. The **scroll wheel** can be used to control the zoom function. This functionality is disabled in the default settings of the camera and must therefore first be activated. To do this, go to **Setup Menu > vPTZ Settings**, disable **Lock Mouse Wheel Zoom**, click on **Set** and then on

Close to save your settings. You can now use the scroll wheel to zoom + (roll upwards) or zoom – (roll downwards).

Operation Using USB Joystick

A standard USB joystick can drastically improve vPTZ operation for the user – in the browser and in MxManagementCenter. Please first install the joystick on the PC according to the manufacturer's instructions.

In order to use a USB joystick in the browser, make sure that you have a PC with a Windows operating system and the latest version of Internet Explorer and that the **"ActiveX" mode in the camera software (browser) is activated:**

- Switch to **Browser** in the Quick Control.

- Under **Browser**, select the option **ActiveX** in the field to the right. The USB joystick can then be used until the browser is closed.

- To store the setting permanently, ActiveX must be activated in the **Admin Menu**. To do so, use **Language and Start Page** in the Admin Menu.

- Under the page options, select the **ActiveX** operating mode.

- Store the settings permanently in the camera by clicking on **Set** and **Close**.

- The joystick can now be used.
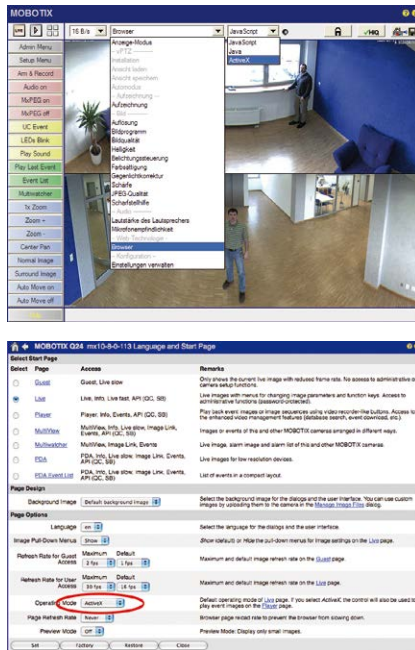
Notes
You will find more information and details on vPTZ in the camera's online help topic *«vPTZ Settings»*.

3.4.2 Full Image Recording

It is possible to record a **full image**, regardless of the live image stream that is being displayed. This ensures that the recording always contains the full image of the lens used, even though the operator may have used the vPTZ features to zoom into the image in order to examine a specific detail.

| Live image | Stored full image | Analysis in stored full image |
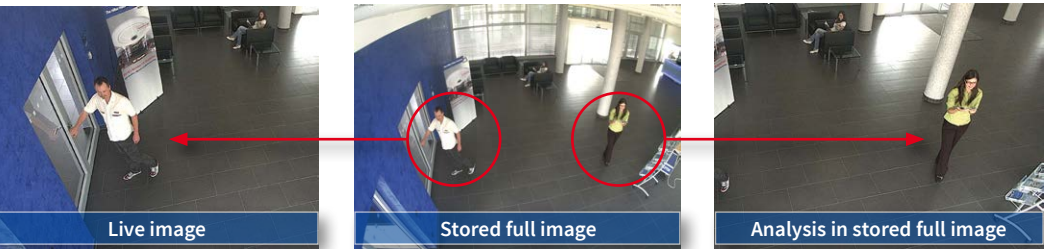
Stored full image: Original camera image without distortion or image correction

This means that you can use the vPTZ features in VGA resolution to pan, tilt and zoom in the live image while the camera is, for example, recording full images at 1 fps in MEGA or 6MP resolution.

In **MxManagementCenter**, the recorded full images may be prepared for the user with the vPTZ functions (for example, panning and zooming in on an image detail such as a doorway).

If **full image recording is not activated**, only the last displayed live image will be saved (save what is seen). The **main benefit** of live image storage is to ensure that the full power of the camera processor is used for live image correction and maximum frame rates. The **main advantage of full image recording** lies in the special functionality of the D14D, in that it can always ensure the availability of a maximum size (full) image for later searches, despite vPTZ actions carried out on the live image. The mechanical limitations of motor-driven PTZ cameras mean that they simply **cannot** provide this unique advantage to the user!

Notes

Post-event search in the full image: If you are using Full Image Recording on D14D cameras, you should use at least MEGA resolution when storing. This will facilitate later searches in **MxManagementCenter**. The advanced distortion correction features require this function to deliver satisfactory image quality.

Full image recording on: Due to the increased processing time, full image recording reduces the data rate of the live image stream, which may drop by around 10 to 30 percent. We therefore recommend reducing the frame rate for storage as much as possible to affect the live image stream as little as possible.

Full image recording off: The event that triggered a video motion (VideoMotion VM) window may not be in the recorded sequences while the window was not displayed at the time.

Activate/Deactivate Full Image Recording in the Browser

To configure this feature, open the **Setup Menu > Event Control > Recording** dialog box and activate or deactivate the **Full Image Recording** option.

3.5   MicroSD Card Recording

3.5.1   Introduction

Flash memory devices: more robust than hard drives

Flash-based storage devices (MicroSD cards, USB sticks and solid-state drives) do not contain any moving parts as compared to the commonly used hard drives. Flash-based storage devices are compact and highly resistant to moisture and vibrations. They feature low energy consumption and they do not lose any data in the event of a power failure, meaning that they are ideal for use with MOBOTIX cameras.

Number of Write/Delete Cycles Per Flash Storage Cell

The number of write/delete cycles of every storage cell of a flash device is limited. The controller of the flash device automatically detects individual flash cells that are no longer functioning. The contents of the faulty cell will then be rebuilt using a checksum and will be moved to a properly working spare cell. The faulty storage cell will be marked as "bad" and will no longer be used. No data is lost in this process.

In addition, MOBOTIX cameras constantly monitor activated flash storage devices. MOBOTIX has developed a technology to test the wear of the flash device by logging the number of write/delete cycles (patent pending). The flash memory wear is automatically displayed in the status bar in the live camera image but it can also be viewed at any time in the **Admin Menu > Camera Status** dialog box.

Conservative Memory Usage Thanks to MOBOTIX MxFFS File System

MxFFS formatting of the MicroSD card means that MOBOTIX camera software will use the flash device as evenly as possible, thus allowing for the maximum possible number of write/delete cycles. This also means that all storage cells of the flash device will be written and deleted with the same frequency, if possible. MOBOTIX technology increases the life of the flash device considerably and also improves the security and the reliability of the storage process.

Storage Requirements and Life Expectancy of MicroSD Cards

The life expectancy of a MicroSD card increases proportionally to the storage capacity, since the camera software will execute fewer write/delete cycles on each storage cell. The first deletion will begin once the SD card has been filled to capacity (first full cycle).

MicroSD Card Recording

32 GB MicroSD Card: Storage Requirements					
	6 fps CIF	6 fps VGA		1 fps MEGA	1 fps QXGA
	M-JPEG	M-JPEG	MxPEG	M-JPEG	M-JPEG
File size single image	15 kB	45 kB	–	120 kB	240 kB
Storage required per second	90 kB	270 kB	75 kB	120 kB	240 kB
Storage required per 24 hrs	7.8 GB	23.5 GB	6.5 GB	10.4 GB	20.8 GB
Time for one full cycle	4 days	1.3 days	4.8 days	3 days	1.5 days

4 GB MicroSD Card: Storage Requirements					
	6 fps CIF	6 fps VGA		1 fps MEGA	1 fps QXGA
	M-JPEG	M-JPEG	MxPEG	M-JPEG	M-JPEG
File size single image	15 kB	45 kB	–	120 kB	240 kB
Storage required per second	90 kB	270 kB	75 kB	120 kB	240 kB
Storage required per 24 hrs	7.8 GB	23.5 GB	6.5 GB	10.4 GB	20.8 GB
Time for one full cycle	12 hours	4 hours	14.4 hours	9.2 hours	4.4 hours

Caution

The MicroSD card's service life depends on production quality and frequency of use. Set the type of recording (event-controlled or continuous recording, frame rate, resolution) according to your specific requirements.

We recommend changing the pre-installed, high-quality MicroSD card once a year if you have it constantly set to continuous recording.

Monitoring The Cell Wear Of Flash Storage Devices (Patent Pending)

MOBOTIX uses its own technology for this purpose and has a pending patent. You can view the flash wear in the status bar of the live image or by opening **Admin Menu > Camera Status**. In addition, the camera can also send a warning message (for example, via e-mail) as soon as a critical error is detected when data is written to the SD card (**Admin Menu > Error Notification Function.**). The MicroSD card can then be replaced to ensure that any existing data is not lost.

| File Server / Flash Device	
Type	SD Flash Card
File System	MxFFS
Flash Wear	1%
Transfer Buffer Usage	0% (O: 0%, max: 0%)
Lost Event Images	0
Sequences	1 (1 files)
Newest Sequence	1970-01-01 01:00:00 #0
Oldest Sequence	1970-01-01 01:00:00 #0
Current Usage	4.0 MBytes (0.4%)
Max. Size	936 MBytes

3.5.2 Formatting the MicroSD Card

Before a MOBOTIX camera can store image and video sequences on a MicroSD card, the card needs to be formatted as MxFFS (MicroSD cards supplied by MOBOTIX are already MxFFS-formatted). The following steps are necessary to format a storage device (**Admin Menu > Storage on External File Server / Flash Device**):

1. Make sure that there is a MicroSD card in the card slot of the MOBOTIX camera.

2. Click **Format** in the **SD Memory Card** line.

3. Note down the characters shown in the **Encryption password** field or enter your own password. Next, click **OK**.
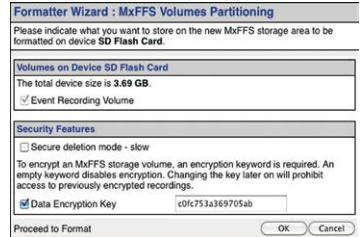
    Note: The **Secure deletion – Slow** option will ensure that any data on the MicroSD card is overwritten completely so that the data cannot be recovered in any way. However, keep in mind that this kind of safe formatting takes considerably more time.

4. In the next dialog box, enter the user name and the password of a user of the **admins** group and click **OK** to confirm.

    The MOBOTIX camera now starts formatting the card. It takes 5 to 12 minutes to format an 8 GB MicroSD card if the **Secure deletion – Slow** option is disabled. If **Secure deletion – Slow** is enabled, this may take anywhere between 3 and 14 hours.

Once the formatting has been completed, you can activate the MicroSD card for recording (see next section).

Caution
Make sure that you always wait until the formatting process has been completed before accessing the camera again. If the Secure deletion – Slow option is disabled, this usually takes just a few minutes. You can only access the MicroSD card once MxFFS formatting has been completed.
Formatting with the **Secure deletion – Slow** option enabled takes several hours. You can also use suitable applications on Windows, Linux/UNIX and Mac OS X systems to repartition and safely erase the MicroSD card.

3.5.3   Activating Recording

Follow these steps to activate the recording to a MicroSD card that has already been MxFFS-formatted (**Admin Menu > Storage on External File Server / Flash Device**):

1. Make sure that there is a MicroSD card in the card slot of the MOBOTIX camera.

2. Make sure that the MicroSD card is formatted in MxFFS format.

3. Activate the **SD Flash Card** option.

4. Click on **Set** and then **Close** to store the configuration.

5. Reboot the MOBOTIX camera (**Admin Menu > Reboot Camera**).

Once the camera has rebooted, make sure that the camera displays the **FR   REC** symbols in its live image. If this is the case, the camera uses the MicroSD card as recording target. If not, you must activate the recording (see below).

Activating the Recording

If the **FR   REC** symbols are not visible in the live image after rebooting, you need to activate the recording using one of the following methods in the web browser:

- Automatic activation by clicking on the **Arm & Record** softbutton. Confirm this in the Easy Dialog by clicking on the **Yes** button.

- Manual activation via the Quick Control **Recording** > **Recording on** or in **Setup Menu > Recording**.

Encryption and Authentication

All video data stored on the MicroSD card is encrypted to ensure security at all times. The password for this is defined during the card's formatting procedure and needs to be entered for authentication whenever the recordings are accessed (see next section).

Activate recording: **Admin Menu > Storage on External File Server / Flash Device**

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3.5.4 Accessing Data on the MicroSD Card

The following options facilitate access to the stored image and video sequences on a MicroSD card:

- **In the web browser:** Play back the recorded event images without audio directly from the MicroSD card using the Playback view of the camera software.
- **In MxManagementCenter:** Play back the recorded video sequences with audio by accessing the MicroSD card in the MOBOTIX camera via the camera or with a direct access to the MicroSD card via a card reader connected to the computer (coming soon).

Caution
When using the MicroSD card from one MOBOTIX camera in another MOBOTIX camera, you need to make sure that the time on the original camera is in sync with the new camera. We recommend using automatic time synchronization via a time server (**Admin Menu > Date and Time**).

3.5.5 Deactivating Card Recording

Follow these steps to deactivate the memory on a MicroSD card (**Admin Menu > Storage on External File Server / Flash Device**):

1. Activate the **None** option.

2. Click on the **Set** button at the bottom of the dialog box and then on **Close**.

3. Reboot the MOBOTIX camera (**Admin Menu > Reboot Camera**).

Once the camera has rebooted, make sure that the symbol **FR REC** is no longer visible in the bottom right-hand corner of the live image. You can now safely remove the MicroSD card from the camera (see *Section 2.8, «Replacing the MicroSD Card»*).

Caution
A **MicroSD card may only be removed from the camera after you have deactivated the recording** to MicroSD card and **rebooted the camera**. *Failing to do so may lead to data loss!*
Removing connected flash storage devices from the camera without properly deactivating them may lead to data loss and/or destroy certain areas of the storage device. This is limited to 4 MB of lost data per incident due to MxFFS formatting.

### 3.5.6 Using a MicroSD Card in a Different MOBOTIX Camera

A MicroSD card containing recorded video data from a MOBOTIX camera can be inserted into any MicroSD card-enabled MOBOTIX camera. Once a MicroSD card recording has been activated (requires a reboot), the "new" MOBOTIX camera automatically synchronizes with the card and resumes recording. No data is lost in this process. Make sure that you deactivate MicroSD card recording before removing the card and then reboot the MOBOTIX camera.

If the MicroSD card's contents are encrypted, you need to enter the same password in the "new" camera in the **Admin Menu > Storage on External File Server / Flash Device** dialog box. Otherwise, the camera cannot access the MicroSD card.

3.5.7 Limitations on Warranty When Using Flash Storage Media

MOBOTIX will not assume any responsibility for flash storage devices (for example, MicroSD cards or connected USB storage devices) delivered with or integrated into MOBOTIX cameras. The same applies to damage to flash storage devices or damage resulting from the use of devices that are not supplied by MOBOTIX.
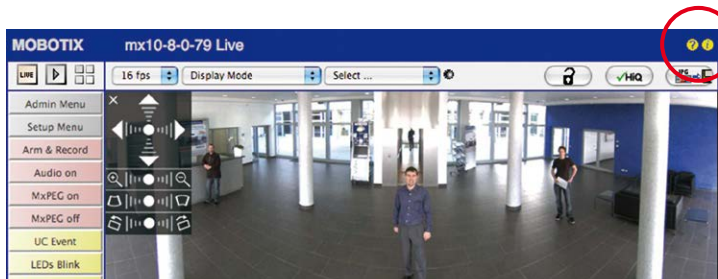
3.6 Configuration in the Browser
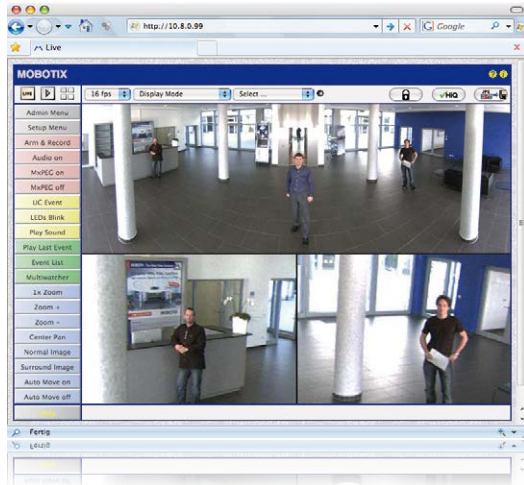
3.6.1 Overview

A MOBOTIX camera can be completely configured using a JavaScript-enabled browser on all common operating systems (such as Windows, Linux, Apple, etc.). The camera provides a HTML-based user interface for this purpose. The camera executes the changes you make to the camera configuration via HTTP commands using programs and scripts of the embedded software. The settings are stored in the camera's flash memory.
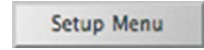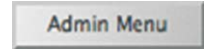
This section contains an overview of the basic browser settings of the MOBOTIX camera as well as further configuration options. Detailed information on the software functions is provided in the camera's online help.

Basic Settings

- **Administering the camera:** You can modify the camera configuration in the Admin Menu or the Setup Menu.

  – **Admin Menu:** This menu contains the basic configuration dialog boxes of the camera (for example, passwords, interfaces, software updates).

  – **Setup Menu:** This menu contains the dialog boxes for configuring the image, event and recording parameters. Some of these settings can be changed using the corresponding Quick Controls in the live view.

- **Resetting changes:** If you would like to reset some larger changes in one dialog box without resetting the complete configuration, you can use the **Default** button at the bottom of the dialog box to reset only this dialog box's settings to the factory defaults. If you would like to reset all image settings, you can do so using the **Manage Settings > Restore Image Settings** Quick Control in the live image of the camera.

- **Storing changes permanently:** Once you have finished configuring the camera, you should always store the settings in the camera's permanent memory. You can do so in each dialog box (clicking on the **Set** button at the bottom of each dialog box will temporarily implement the change; when you click **Close**, you will be asked to store the complete configuration in the camera's permanent memory) or in the Admin Menu (**Admin Menu > Store current configuration into flash memory**). The **Configuration** section of the Admin Menu provides more functions for storing, copying and managing camera settings. For more information on this topic, refer to the online help for the specific dialog boxes.

- **Time tasks and time synchronization:** Apart from a multitude of possibilities for controlling the camera using time (time tables, holiday and vacation, scheduled tasks, etc.), the camera can also synchronize its internal clock. This allows you to manually synchronize the camera with a computer or automatically using a time server or another MOBOTIX camera. The camera can use either NTP time servers or Time Protocol servers. For more information on this topic, refer to the online help for the specific dialog boxes.

- **The "More" and "Less" buttons:** When opening some of the camera dialog boxes, the camera only shows the most important parameters. These dialog boxes have a **More** button in the bottom right-hand corner. Click it to display additional options. If all options are displayed, click on the **Less** button to hide the additional options.

3.6.2   General Browser Settings

- **Run the Quick Installation:** After booting a new MOBOTIX camera, accessing the administration menu for the first time will automatically start the Quick Installation assistant (**Admin Menu** button). The Quick Installation assistant helps you in setting the most important parameters of the camera. For security reasons, you should set your own administrator password and disable public access to the camera.

- **Disable public access:** Guest users are only allowed to access the Guest screen of the camera without entering a password. If this is not required, you should deactivate public access (**Admin Menu > Quick Installation** or **Admin Menu > Users and Passwords**).

- **Add users and assign access rights:** Similar to a computer operating system, you can add users and user groups and assign the desired rights (**Admin Menu > Users and Passwords**, **Admin Menu > Group Access Control Lists (ACL)**). This approach allows individual access rights to be assigned or denied to camera-specific features based on the user groups.

- **Deactivate the automatic reboot:** In its factory state, every MOBOTIX camera will automatically reboot at 3:36 a.m. every day. All images in the camera's storage buffer will be deleted during this reboot. Images stored on external file servers, internal flash storage, or SD cards will NOT be affected by this reboot. Make sure that you deactivate the automatic reboot if this is not desired (**Admin Menu > Time Tasks**).

- **Optimize the image settings:** The factory image settings of MOBOTIX cameras deliver excellent images for most application scenarios and should therefore not be changed. If you do wish to make changes, your changes should be minor and gradual. You should, however, set an image program according to the application scenario of the camera. Image programs provide a quick and simple method for adjusting the camera to the application scenario as they perform several configuration steps at once (**Image Programs** Quick Control).

- **Set the resolution of the live image:** By default, all MOBOTIX cameras are factory-set to an image resolution of 640x480 pixels. You can select the desired resolution using the **Resolution** Quick Control.

- **Adjust the exposure:** The automatic exposure control of the MOBOTIX camera uses individually configurable exposure windows to determine the best image exposure. Open the **Exposure Control** Quick Control and select a predefined set of exposure windows. If required, you can also define custom exposure windows (**Setup Menu > Exposure Settings**).

- **Activate event control and recording:** By default, the MOBOTIX camera's event control is disabled. Click on the **Arm & Record** button to activate event control. This will activate motion detection and recording. Cameras with integrated flash memory (MOBOTIX R models and models with an SD card) will automatically use the flash memory to store image and video data (recording target). If desired, you can set additional events and adjust the settings of the recording and storage parameters (**Setup Menu > Event Settings**, **Setup Menu > Recording** and **Admin Menu > Recording to External File Server / Flash Device**).

- **Set up actions/messaging:** Upon detecting an event, the MOBOTIX camera can trigger alarms. These alarms can be adjusted to your needs and you can assign them to a specific event: playing back an alarm sound on the camera speaker, showing the visual alarm in the camera live image, sending an e-mail or network message with the alarm image, placing a phone call, uploading an alarm image to an FTP server, switching a signal output line of the camera (for example, for switching on the lights/opening a door).

  For the settings, see **Setup Menu > Action Group Overview**. The actions to be performed are defined and used in these action groups in the form of "action profiles." The different action profiles can also be defined in the following areas: Admin Menu in the Hardware Configuration (profiles for signal output), Transfer Profiles (FTP, e-mail, network messages) and Sound and VoIP Telephony (sound profiles, VoIP profiles). For more information, refer to the online help for the **Action Group Overview** dialog box.

- **Activate shock detector:** The D26 is also equipped with a shock detector as standard. If, for example, the camera's housing receives a blow, it automatically registers it and sends a notification via a network message or telephone call. A general advantage is that MOBOTIX cameras are extremely tough because of the absence of mechanical moving parts. This allows them to stay fully operational when they are subject to strong vibrations. Open the **Setup Menu > Event Control > Environment Events > Edit** dialog box if you would like to activate the shock detector (and any other sensors).

3.7   Additional Notes

3.7.1   Password for the Admin Menu

Accessing the Administration Menu of the camera (**Admin Menu** softbutton) is only possible after entering a user name and password.

- Factory default user name is ***admin***.
- Factory default password is ***meinsm***.

(Note that you need to change the password upon your first login – camera release V5.1.x and higher.)

The **Quick Installation** assistant automatically appears when the Administration Menu is accessed for the first time. It provides an easy method to adjust the basic camera settings to the current application scenario. For security reasons, we highly recommend changing the default administrator password after the camera has been properly configured.

Enter the user name and password exactly as shown above. Note that all entries are case-sensitive.

Caution
Make sure that you store information on **user names and passwords** in a secure place. If you lose the administrator password and cannot access the administration menu, the password can only be reset at the factory. This service is subject to a fee!

3.7.2   Permanently Deactivating the Microphone

The microphone can be irreversibly deactivated!

Deactivating a camera's microphone may be necessary in order to protect the privacy of persons at a workplace or for other reasons. You can permanently and irreversibly deactivate the microphone in the **Admin Menu > Loudspeaker and Microphone** dialog box.

Caution
This **deactivation occurs in the camera module itself and cannot be reversed**, even at the factory. Deactivating the microphone will also deactivate all functions that are making use of the microphone.

3.7.3   Using the Start Options of the Camera

- To **reset the camera to factory settings and to use the factory IP address**, please use **start option 2** as described in *Section 3.2.4, «Start Options of the Camera»*.
- To start the camera as a **DHCP client and to automatically obtain an IP address**, please use **start option 3** as described in *Section 3.2.4, «Start Options of the Camera»*.

Note
All defined users are deleted and the admin password is reset to the factory default when you reset the camera using **Admin Menu > Reset**. Use **start option 3** as described in *Section 3.2.4, «Start Options of the Camera»*.

3.7.4 Activating Event Control and Motion Detection

In its default configuration, the camera's event control and video motion detection features are not enabled. In order to activate event-controlled recording, open **Setup Menu > General Event Settings** and activate the Arming switch. Another method is to click on the **Arm & Record** softbutton in the browser's user interface. The camera displays the motion detection window in the live image (dotted frame in the center) and the camera automatically stores images as soon as the motion detection window detects movements.

If the dotted rectangle in the live image is visible, the camera is armed

Text and logos can be also deactivated or individually configured

3.7.5 Deactivating Text and Logo Options

As camera arming is deactivated in the camera's default configuration (see preceding section), the MOBOTIX camera only displays the text `WWW.MOBOTIX.COM`, the time stamp and the MOBOTIX logo at the top of the image. Once the camera arming has been activated, the text at the bottom of the live image (event, action, messaging and recording symbols) will also appear.

You can deactivate the status bar at the bottom of the live image and the text bar in the top left-hand corner by setting Text Display in the **Setup Menu > Text & Display Settings** dialog box to **Off**. Setting Text Display to **Date and Time** will only display the time stamp in the live image. To hide the logo in the live image, open **Admin Menu > Logo Profiles** and set **Logo Display** to **Deactivated**.

3.7.6 Deactivating the Camera Reboot

By factory default, the MOBOTIX camera automatically reboots once a week between 3 a.m. and 4 a.m. The reason for this is that in some rare cases, external influences (for example, radiation at high altitudes) can sometimes lead to camera malfunctions. The automatic reboot will refresh the camera's memory and will ensure proper operation without requiring any interaction on the part of the user. If desired, you can deactivate the automatic reboot of the camera in the **Admin Menu > Time Tasks** dialog box.

3.7.7 Browser

Current Internet browsers (Internet Explorer, Mozilla Firefox, Safari, Google Chrome, Opera, etc.) with enabled JavaScript can display the camera's live images with their standard settings.

3.7.8 Cleaning the Camera and Lens

If the lens becomes dirty during the installation process, clean the lens using a lint-free cotton cloth. Make sure that the lens is still in focus after cleaning and adjust its focus if required.

Cleaning the Lens Cover:

- Always mount and unmount the lens cover using a soft cotton cloth in order to protect it from being scratched and from getting dirty.

- You should clean the lens cover at regular intervals. Always use a soft, lint-free cotton cloth for this purpose.

- If the dirt is more persistent, add a mild alcohol-free detergent without abrasive particles.

- Make sure you instruct cleaning personnel on how to clean the camera.

3.7.9 Online Help in the Browser

For more information, see the News and Functional Overview pages in the online help of the camera's browser interface. Click on the ? icon to open the camera's online help. Furthermore, detailed information on the camera and its current configuration is displayed in the **Camera Status** dialog box. Click on the ℹ icon to open the relevant page.
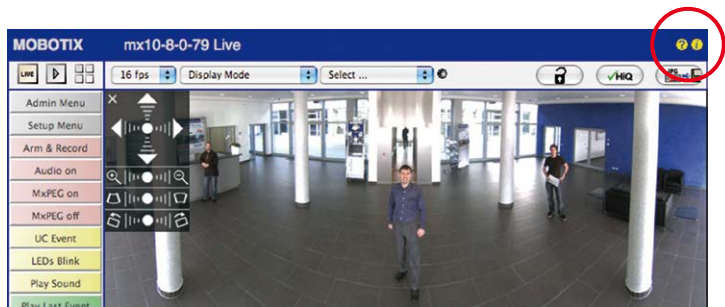
3.7.10 Declaration of Conformity

The products of MOBOTIX AG are certified according to the applicable directives of the E.U. and other countries. You can find the declarations of conformity of the products of MOBOTIX AG under `www.mobotix.com`, **Support > Download Center > Documentation > Certificates & Declarations of Conformity**.

3.7.11 RoHS Declaration

The products of MOBOTIX AG are in full compliance with Art. 5 of the German Electrical and Electronic Equipment Act and the E.U. Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) as far as they are subject to these regulations. (You can find the MOBOTIX RoHS Declaration under `www.mobotix.com`, **Support > Download Center > Documentation > Certificates & Declarations of Conformity**.)

3.7.12 Disposal

Electrical and electronic products contain many reusable materials. For this reason, we would ask that you dispose of MOBOTIX products at the end of their service life in accordance with all legal requirements and regulations (or deposit these products at a municipal collection center). MOBOTIX products may not be disposed of with household waste! If the product contains a battery, please dispose of the battery separately (the corresponding product manuals contain specific directions if the product contains a battery).

3.7.13 Disclaimer

Neither MOBOTIX AG nor any subsidiary of MOBOTIX AG will assume any responsibility for damage resulting from improper use of its products or failure to comply with the manuals and the applicable rules and regulations.

Our **General Terms and Conditions** apply. You can read the current version of the **General Terms and Conditions** on our website at **www.mobotix.com** by clicking on the `General Terms and Conditions` link at the bottom of every page.
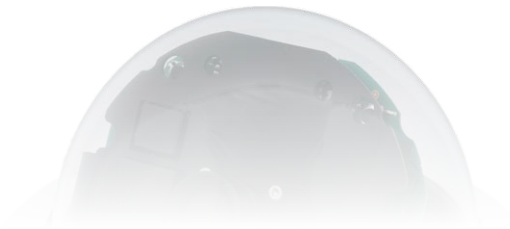
Notes

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You can find the latest version of this and other documents (e.g., declarations of conformity) at `www.mobotix.com` in the **Support > Download Center > Documentation > Manuals** section.

CE

Technical specifications subject to change without notice!

Camera Manual
D26 Dome

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