MOBOTIX c25
MX-c25

MX-Bus-IO-Module
for MxBus modules and signal inputs/outputs (accessory)

Compact Hemispheric Camera for Ceilings

- Includes MxAnalytics video analysis tools out-of-the-box
- Recording on internal MicroSD card (SDXC)
- Signal inputs/outputs and MxBus via optional MX-Bus-IO-Module
- Audio package variant (with microphone and speaker) available
- Sensors for temperature, illumination, shock detection integrated
- Installation is as simple as installing a ceiling spotlight

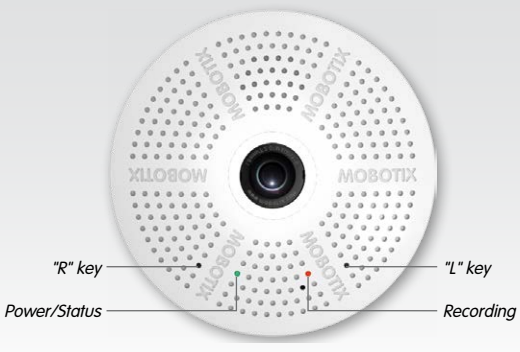
MOBOTIX 6MP camera for unobtrusive indoor applications, available as Day or Night version with MX-B016 (Hemispheric) or MX-B036 (103°) lens
More information available under `www.mobotix.com` **> Products > Hemispheric c25**

32.396-001_EN_07/2015

c25 Standard Delivery

Item	Count	Part Name
1.1	1	Housing (installed)
1.2	1	Back plate with spring clips (installed)
1.3	1	Main board with lens MX-B016 or MX-B036 (installed)
1.4	2	Bayonet catch, blue (installed)
1.5	1	USB plug, blue (installed)
1.6	1	Ethernet plug, blue (installed)
1.7	1	Ethernet patch cable, 50 cm/19.7 in, black
1.8	1	MicroSD card pre-installed (SDHC installed, SDXC supported)
1.9	1	Disassembly tool

Connection and Initial Operation of the c25



For information on **connecting** the c25, please see the *Q25 Camera Manual, Section 2.9, «Network and Power Connection, Additional Cables»*.

Regarding the **initial operation** of the c25, please see the *Q25 Camera Manual, Chapter 3, «Initial Operation»* and follow the instructions for wall mounting.

Use a suitable device for operating the camera keys (e.g., an opened paper clip).

Inserting/Exchanging the SD Card

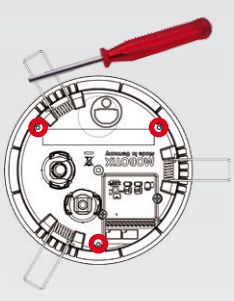
All camera models can use the integrated MicroSD card (SDXC) to record video data. In order to exchange the MicroSD card, please proceed as outlined in the following instruction. For information on reliable SD cards, please see the MOBOTIX website `www.mobotix.com` **> Support > MX Media Library > Planning** in the document *MicroSD Card Whitelist for MOBOTIX Cameras*. If the camera has not yet been installed, skip step 1.

Caution: In order to avoid damage from electrostatic discharge, you should touch a grounded device before opening the housing of the camera (e.g., the blank metal at the back of a computer). This will remove any static electricity that may have built up.

1. Remove camera, remove cables

Pull the camera from its position by gently pulling the camera downward on one side, then the other side. ***Take care to NOT let the spring clips snap forward (this may hurt you!).*** Remove all cables that are attached to the connectors on the back side.

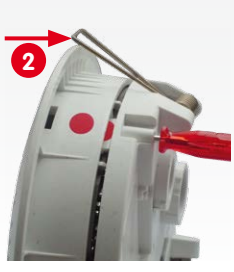
2. Locate the locks



In order to remove the back plate, you will need to push the delivered disassembly tool (item 1.9) into the three holes on the back one after the other to release the locks (see red circles in figure).

3. Remove back plate

Insert the disassembly tool into a lock and press firmly until you feel a perceptible resistance 1.



Gently push against the nearest spring clip to push the lock out of its seat and to lift the back plate from the housing 2.

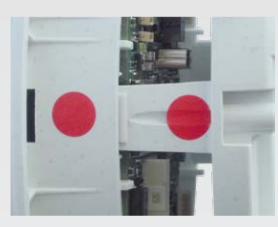
Repeat the process for the two other locks and cautiously lift the back plate from the housing.

4. Remove/insert SD card

If a MicroSD card has been installed, gently press with your finger as indicated by the arrow until you hear a ***click***. Then release the SD card. The card is protruding slightly and can be easily removed.

Insert the new MicroSD card and gently press with your finger as indicated by the arrow until you hear the ***click***.

5. Attach back plate



Make sure that the SD card is properly locked in place, since the card can be damaged otherwise. Begin by inserting the wide lock (next to the SD card) into the camera housing as shown. From the factory, the lock and the corresponding slot are highlighted by ***color mark***.

Make sure that the two other locks are also properly positioned, then press the back plate into its seat until you hear all three locks click into place.

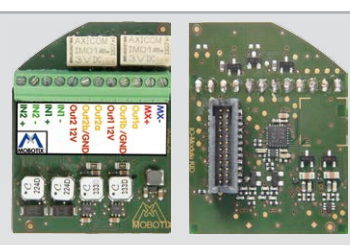
6. Re-connect the cables

Insert the Ethernet cable and – if installed – the USB cable into the corresponding sockets and secure the connectors using the blue bayonet catches.

Press the spring clips back and insert the camera into its original mounting position (see *«Installing the c25»*).

To finish, make sure that the camera image is properly aligned: If required, cautiously turn the camera to adjust image alignment.

Installing the MX-Bus-IO-Module



For the c25, you can use the optionally available MX-Bus-IO-Module to attach MxBus devices (e.g., an MX-GPS-Box), to attach external sensors using the signal inputs and to switch other devices via the signal outputs.

1. Insert the MX-Bus-IO-Module

On the back of the camera, remove the sticker that protects the receptacle and the camera's interior from collecting dirt (see red arrow in figure to the right).

Carefully push the module board onto the receptacle. Secure the module board using the two supplied Phillips screws (red arrows in figure).

When attaching the connection wires to the MX-Bus-IO-Module, make sure the wires are guided to the module without tension (you could apply a cable tie and tie the wires to the network cable, for example).

2. Attach the connection cables

Attach the connection wires as shown in the terminal connector overview.

Terminal Connectors

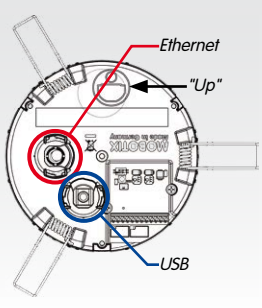
MX- MX+	MxBus connections	MxBus	
Out1 A	Output 1 A	Relay pot.-free	–
Out1 B /GND	Output 1 B/GND		Output 1 12 V self-powered
Out1 12V	Output 1 12 V	–	
Out2 A	Output 2 A	Relay pot.-free	–
Out2 B/GND	Output 2 B/GND		Output 2 12 V self-powered
Out2 12V	Output 2 12 V	–	
IN1 - IN1 + IN2 - IN2 +	Input 1 – Input 1 + Input 2 – Input 2 +	Inputs	

Outputs

Installing the c25

Use the drilling template on the back for this purpose (red circle) or draw a circle with 105 mm/4.13 in diameter for the cut-out. Cut out the hole for the camera, then guide the Ethernet cable and any other cables you want to attach to the camera through the hole.

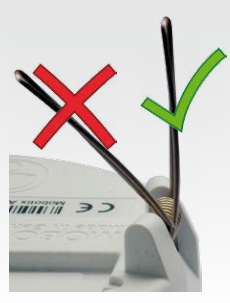
1. Connect the cables



Insert the cables into the appropriate connectors and fasten them using the blue bayonet catches.

Make sure that the camera points into the desired direction: The icon on the back (black arrow) shows the "up" direction of the image.

2. Install the c25



Press the spring clips back and insert the c25 into the hole for the camera. The spring clips will snap outwards, thus firmly holding the camera in place.

Make sure that you only press back the spring clips as shown in the image. Do not press them back any further as the springs may snap out of their fixtures otherwise.

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Removing the c25

1. Pull out the camera

Pull the camera from its position by gently pulling the camera downward on one side, then the other side. ***Take care to NOT let the spring clips snap forward (risk of injury!).***

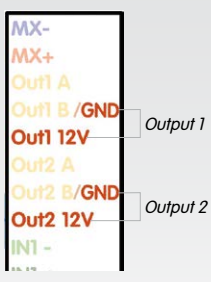
2. Remove the cables

Remove the cables coming from the building (network cable, USB cable, MxBus and signal input/output wires). Pull out the camera.

Initial Operation of the c25

The initial operation starts with connecting the power supply (see section *«Network and Power Connection, Additional Cables»* in the *Q25 Camera Manual*). The first access follows the procedure described in the same manual in the section «Initial Operation of the Camera». All other tasks require access to the camera's user interface in the browser. Enter the camera's IP address into the address bar of the browser.

1. Configuring and Using the MX-Bus-IO-Module



The camera will automatically detect an installed MX-Bus-IO-Module (see **Camera Status**, **System** section in browser).

The signal inputs can be used right away in the ***signal input profiles*** in the **Setup Menu > Event Overview**. Likewise, the signal outputs can be used in the ***signal output profiles*** in **Admin Menu > Hardware Configuration > Signal Out Profiles**.

In addition, the signal inputs/outputs have been entered automatically in the **Admin Menu > Assign Wires** dialog and can be used to control doors and lights.

To use one or both signal outputs not as potential-free outputs (for relays), but as ***self-powered 12 V outputs***, open the **Admin Menu > Hardware Configuration > Manage Hardware Expansions** dialog. In the **MxBus/IO Board** section, click on **Connect** for each output you want to use as self-powered output.

2. Save the configuration

In the live image of the browser, select the **Manage Settings** quick control and set **Store Entire Configuration** as value. The camera stores the configuration in the permanent camera memory so that the settings will be applied at the next camera reboot.

Important Notes

Safety Warnings

- This product must not be used in locations exposed to the dangers of explosion.
- Make sure that you install this product as outlined in the installation instructions above.
- When installing this product, make sure that you are only using genuine MOBOTIX parts and MOBOTIX connection cables.
- Only install this product in suitable, solid materials that provide for a sturdy installation of the fixing elements used.
- 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.
- When removing the camera from the ceiling, make sure that the spring clips do not snap back (***risk of injury!***).
- When attaching modules to the USB connector, the ***power consumption of all attached modules must not exceed 1 W***.
- Due to the high performance of the c25, the area of the image sensor **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. This camera must not be installed within the reach of persons.
- Make sure the power supply to the camera is disconnected before opening the camera housing (e.g., when exchanging the SD card).
- MOBOTIX products include all of the necessary configuration options for operation in Ethernet networks in compliance with data protection laws. The operator is responsible for the data protection concept across the entire system. The basic settings required to prevent misuse can be configured in the software and are password-protected. This prevents unauthorized parties from accessing these settings.
- Make sure that the operating temperature of 0 to +40 °C is not exceeded.

Legal Notes

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 c25, 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 valid regulations and comply with these laws. MOBOTIX AG is not liable for any illegal use of its products.

Technical Specifications

Since the c25 is identical to the Q25 for the most part, the technical data listed in the *Q25 Camera Manual* in Section *«Technical Data»* also applies to this product. You can find the *Q25 Camera Manual* as a PDF file on **`www.mobotix.com`** > **Support** > **Manuals**.

c25 (Differences Compared to Q25)	
Lens Options	B016 (180° horizontal field of view) B036 (103° horizontal field of view)
Audio features	Audio package variant (with microphone and speaker) available
Interfaces	Ethernet 10/100, IPv4/IPv6, MiniUSB; MxBus and inputs/outputs using optional accessory
Power Consumption	Typ. 4 W
Operating Conditions	IP20 (DIN EN 60529) 0 to +40 °C (DIN EN 50155)
Max. thickness for installation	Spring clips properly clamp down on materials from 1 to 26 mm/0.04 to 1.02 in
Dimensions	Outside diameter 120 mm/4.72 in, total height 51 mm/2.01 in with B016, 56 mm/2.21 in with B036, height installed 15 mm/0.59 in with B016, 20 mm/0.79 in with B036, rec. min. installation depth 55 mm/2.17 in
Materials	Housing: PBT GF30
Weight	approx. 212 g

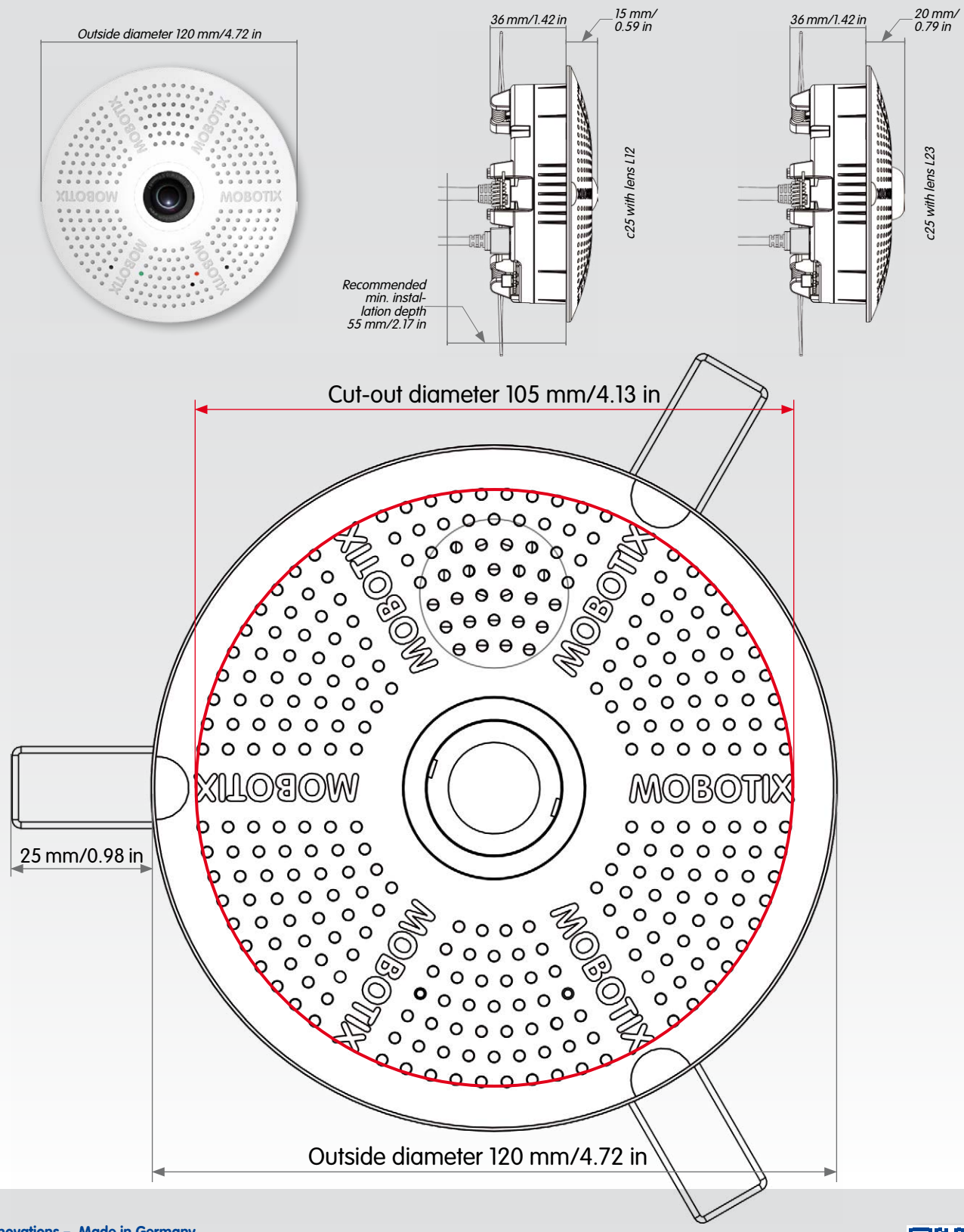
MX-Bus-IO-Module	
Inputs	2 galvanically separated inputs (AC/DC, 0 to 48 V)
Outputs	**Variant 1 (default):** 2 potential-free outputs (max. load per pin: max. 30 W or max. 1 A or max. 48 V AC/DC) **Variant 2 (set in browser):** 2 powered outputs 12 V DC; max. 50 mA per output
Add. Interfaces	MxBus connections for MOBOTIX peripheral devices
Operating Conditions	Same as camera
Cross-sectional area of wires at the terminals	0.14 mm² – 0.5 mm² (AWG 21 – 26)
Power Consumption	Typ. 0.5 W, max. 1.5 W

Forms of the c25

MX-c25 with lens B016

MX-c25 with lens B036

Dimensions/Drilling Template



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