Quick Installation

S74 Long Cable Extender

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Beyond**Human**Vision

MOBOTIX

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Before You Start

This section contains the following information:

Support

MOBOTIX Support

If you need technical support, please contact your MOBOTIX dealer. If your dealer cannot help you, he will contact the support channel to get an answer for you as quickly as possible.

If you have internet access, you can open the MOBOTIX help desk to find additional information and software updates.

Please visit **www.mobotix.com > Support > Help Desk**.

MOBOTIX eCampus

The MOBOTIX eCampus is a complete e-learning platform. It lets you decide when and where you want to view and process your training seminar content. Simply open the site in your browser and select the desired training seminar.

Please visit **www.mobotix.com/ecampus-mobotix**.

MOBOTIX Community

The MOBOTIX community is another valuable source of information. MOBOTIX staff and other users are sharing their information, and so can you.

Please visit **community.mobotix.com**.

Safety Notes

- This camera must be installed by qualified personnel and the installation should conform to all local codes.

- This product must not be used in locations exposed to the dangers of explosion.

- Do not use this product in a dusty environment.

- Protect this product from moisture or water entering the housing.

- Install this product as outlined in this document. A faulty installation can damage the product!

- Do not replace batteries of the camera. If a battery is replaced by an incorrect type, the battery can explode.

- This equipment is not suitable for use in locations where children are likely to be present.

- External power supplies must comply with the Limited Power Source (LPS) requirements and share the same power specifications with the camera.

- When using a Class I adapter, the power cord shall be connected to a socket-outlet with proper ground connection.

- To comply with the requirements of EN 50130-4 regarding the power supply of alarm systems for 24/7 operation, it is highly recommended to use an uninterruptible power supply (UPS) for backing up the power supply of this product.

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 AG products. Depending on national laws and the installation location of the cameras, 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.

Declaration of Conformity

The products of MOBOTIX AG are certified according to the applicable regulations of the EC and other countries. You can find the declarations of conformity for the products of MOBOTIX AG on www.mobotix.com under **Support > Download Center > Marketing & Documentation > Certificates & Declarations of Conformity**.

RoHS Declaration

The products of MOBOTIX AG are in full compliance with European Unions Restrictions of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS Directive 2011/65/EC) as far as they are subject to these regulations (for the RoHS Declaration of MOBOTIX, please see www.mobotix.com, **Support >**

Download Center > Marketing & Documentation > Brochures & Guides > Certificates).

Disposal

Electrical and electronic products contain many valuable materials. For this reason, we recommend 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 must not be disposed of in 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).

Disclaimer

MOBOTIX AG does not assume any responsibility for damages, which are the result of improper use or failure to comply to the manuals or the applicable rules and regulations. Our General Terms and Conditions apply. You can download the current version of the **General Terms and Conditions** from our website at [www.-mobotix.com](www.mobotix.com) by clicking on the corresponding link at the bottom of every page.

It is the User's responsibility to comply with all applicable local, state, national and foreign laws, rules, treaties and regulations in connection with the use of the Software and Product, including those related to data privacy, the Health Insurance Portability and Accountability Act of 1996 (HIPPA), international communications and the transmission of technical or personal data.

FCC Disclaimer

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
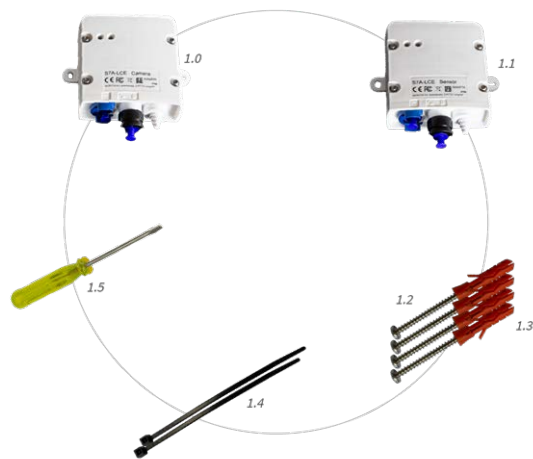
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Scope of Delivery

Fig. 1: Scope of delivery S74 Long Cable Extender

Scope of delivery S74 Long Cable Extender

Item	Count	Description
L 1.0	1	S7A-LCE Camera (Mx-A-S7A-CBL03)
L 1.1	1	S7A-LCE Sensor (Mx-A-S7A-CBL01-AN)
L 1.2	4	Spax Screws 4x40-A2

Scope of delivery S74 Long Cable Extender

Item	Count	Description
L 1.3	4	Washer DIN125-ø3,2-A2
L 1.4	2	Cable tie
L 1.5	4	Mini Screwdriver 2x30

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Technical Specifications

This section contains the following information:

Mx-F-S7A-LCE

Type	Mx-F-S7A-LCE	
Connectors (per LCE Box)	1 MOBOTIX 7 sensor module connector (USB-C)	
	1 Optical interface:	
	Cable quality	OM2 or better
	Fibre	50/125 µm
	Receptacle	LC - LC
	Transmission type	Simplex
	1 Electrical interface:	
	Power and electrical interface	6x2 for I2C (SCL, SDA), Reserved0, Reserved1, VCC, GND
	AWG	24-20
	Cable Diameter rigid	0,14-0,5 mm²
	Cable Diameter flexible	0,2-0,5 mm² (with ferrule)
Recommended cables	Optical Interface: LC-LC OM3 Electrical Interface: The wires must follow the specification as outlined above.	
Max Cable Length	30 m	
Connectable MOBOTIX Sensor Modules	4K, 4MP and Thermal Sensor Modules Multisense, IR-Light (no optical link necessary)	
Certificates	EN 50121-4, EN 55032, EN 55035, EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 62368-1, EN 63000, AS/NZS CISPR32, 47 CFR Part 15b	
IP protection class	No IP rating (indoor use only)	
IK protection class	No IK rating (indoor use only)	
Operating temperature range	0 to 40 °C/32 to 149 °F	

Type	Mx-F-S7A-LCE
Max. frame rate (fps)	Optical sensors only: 15 @ 4K WDR on 30 @ 4K WDR off
LEDs	2 Multicolor LEDs: power status (left), transmission status of optical link (right)

Dimensions

NOTE! Download the drilling template from the MOBOTIX website: **www.mobotix.com > Support > Download Center > Marketing & Documentation > Drilling Templates**.

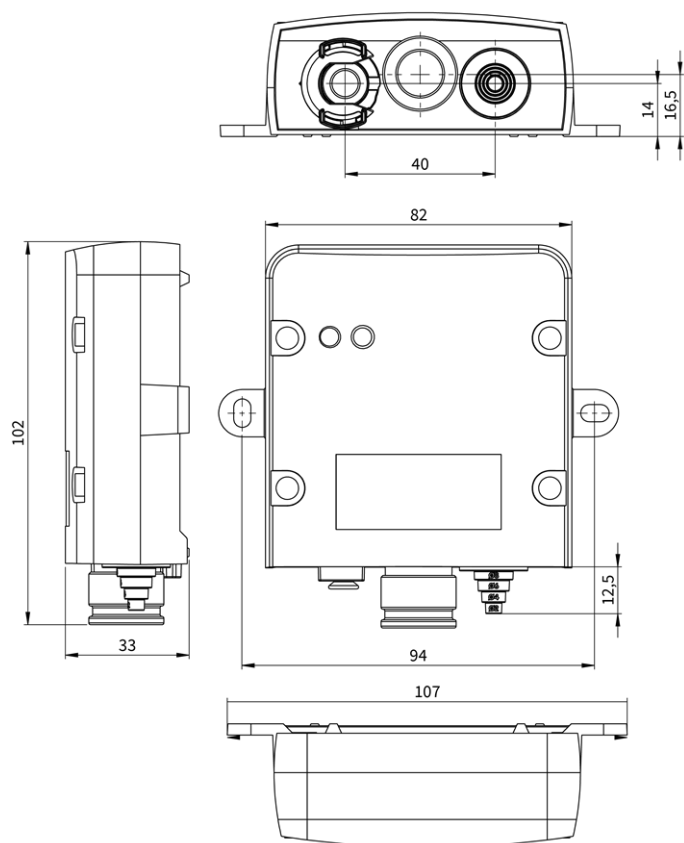**CAUTION!** Always print or copy the drilling template at 100% of the original size!

Fig. 2: MOBOTIX S74: All measurements in mm

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Mounting

This section contains the following information:

Before Mounting the S74 Long Cable Extender

Before mounting the S74 Long Cable Extender, the following questions should be answered:

- Where and how will the camera be mounted?

- Where and how will the sensor modules be mounted?

- How is the mounting surface level?

- Which other mounting options are available?

- Which accessories might be needed?

- How is the camera connected to the network and how is the power supplied?

- How are the connections furnished from the building?

- What cabling considerations are necessary?

If you have questions, please ask your MOBOTIX partner directly or contact the MOBOTIX support under **www.mobotix.com > Support > Help Desk**.

Protective Measures

> **WARNING!** When laying cables indoors and outdoors, the current regulations for cable laying, lightning and fire protection must always be observed.

MOBOTIX cameras and devices are protected against the effects of minor over voltages by a number of measures. However, these measures cannot prevent larger surge voltages from causing damage to the camera. When installing the cameras outdoors, special attention should therefore be paid to lightning protection and the associated dangers for the building and network infrastructure.

In general, you should only have MOBOTIX cameras and devices installed by certified specialist companies that are familiar with the installation and safe operation of network devices and the underlying regulations for lightning and fire protection as well as the current technology for preventing damage from surge voltages.

Notes on Cable Laying

- **Data cable:** Only double-shielded CAT5 cable or better (S/STP) may be used as data cable for the Ethernet interface.

- **Cable length:** The individual cable sections must not exceed the maximum permissible lengths in order to ensure perfect data transmission.

- **Avoidance of induction:** Data cables may only be laid parallel to power or high-voltage lines if the prescribed minimum distances are observed.

- Only original MOBOTIX cables should be used to connect the sensor modules, patch cables and USB cables in order to guarantee weather resistance according to IP66. The plugs supplied must be used if additional cables are required.

Fire Protection

When laying cables for the power supply, the relevant country-specific regulations (e.g. VDE in Germany) and the fire protection regulations valid at the installation site must be observed.

Lightning and Surge Protection

Measures should always be taken to protect this device from electrical surge damage.

Further information on how to avoid damage caused by lightning and over voltage is available from manufacturers of lightning and over voltage protection devices.

Connecting the LCE Boxes

WARNING! Make sure the power supply to the camera is disconnected before installing or replacing sensor modules.

WARNING! When installing the sensor modules, make sure that the sensor module cables are not damaged or bent sharply!

Connection Overview
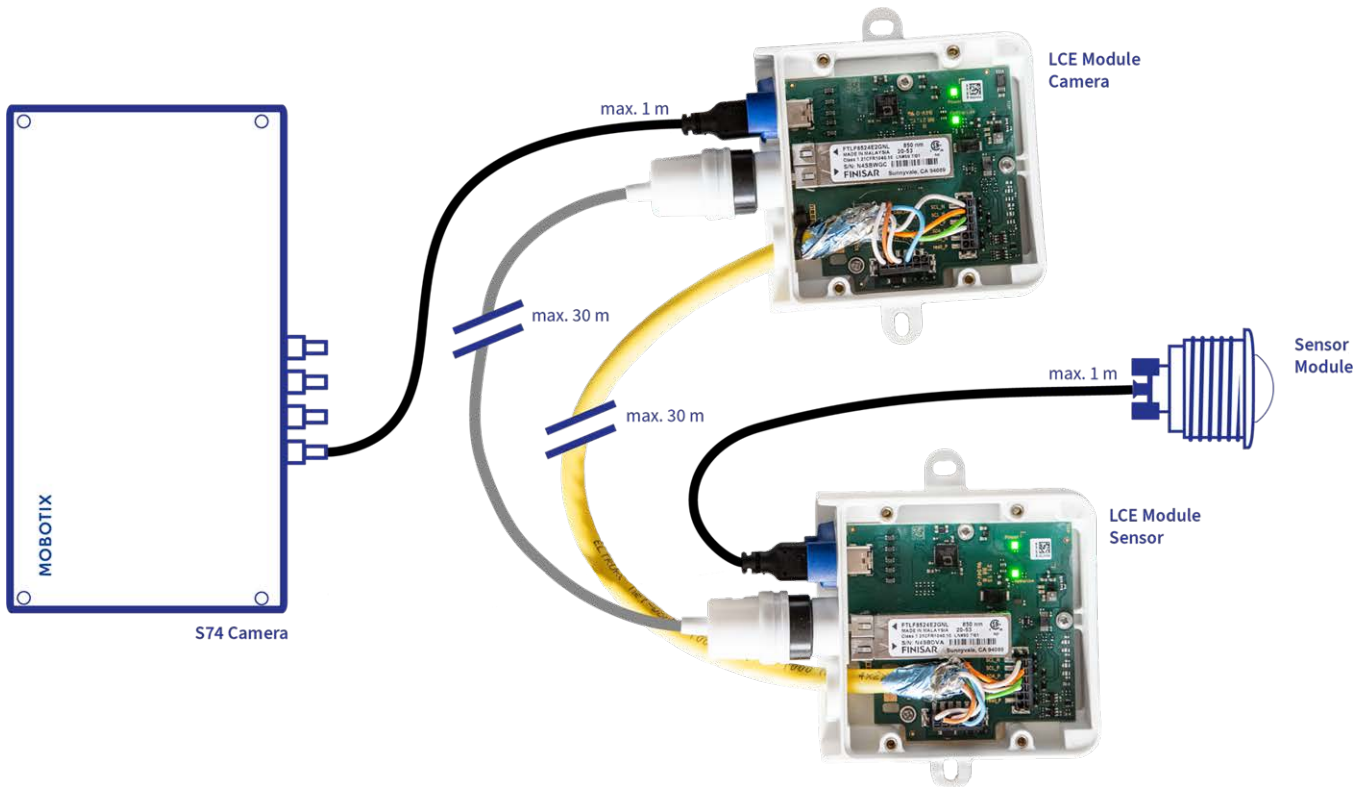
Preparing the Cable Connections

The following steps are required for both LCE boxes:

1. Remove the bayonet catch① from the sensor connection socket by rotating it counter-clockwise, then remove the blue rubber plug②.

2. Remove the black rubber plug③ from the SFP connection socket.

3. Cut off as many steps as necessary of the white rubber plug④ to properly fit to the used cable.

Connecting the Sensor Cables

NOTE! The maximum length of the sensor cables is 1 m.

NOTE! Make sure to connect the camera-side cable with the LCE Module "Camera" and the sensor-side cable with the LCE module "Sensor".
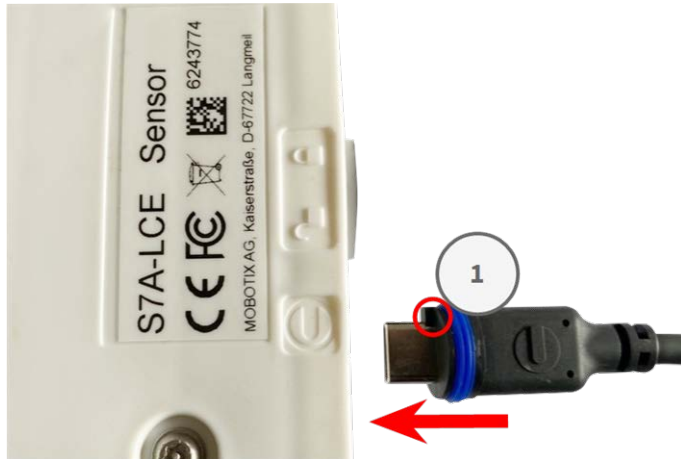
1. Plug the Mx-A-S7A-CBL-01 module cable into the module connector so that the small lug① plug fits into the module connector.

   NOTE! The lug of the plug must point to the inside① of the LCE box when plugged in. If the module cable is not plugged in correctly, the sensor or camera is not recognized by the S74 Long Cable Extender.

2. Attach the bayonet catch ② by rotating it clockwise.
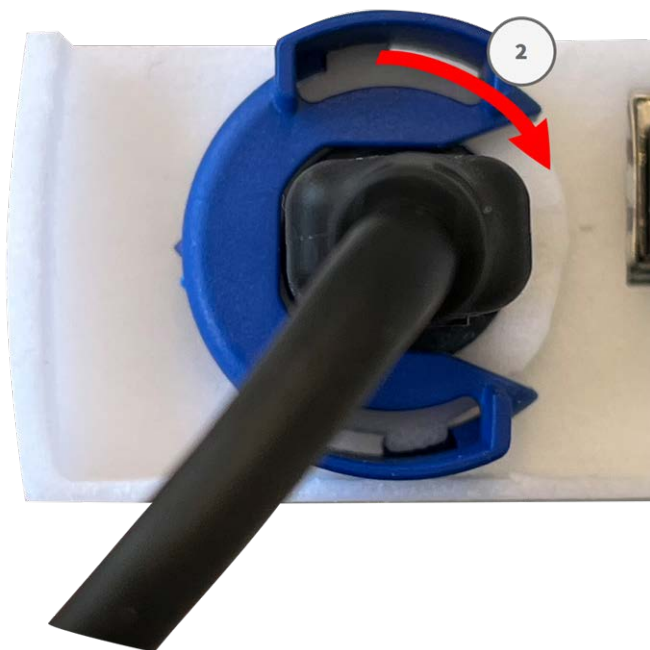
Connecting the Optical Fiber Cable

The optical fiber link transfers image and meta-data between the LCE Module "Camera" and the LCE Module "Sensor".

CAUTION! The length of the optical fiber cable may not exceed 30 m.

1. Remove the white rubber seal ① .

2. Loosen the black protective cap ② counterclockwise.

3. Feed the optical fiber cable through the protective cap and the rubber seal.

4. Push the SFP plug into the connector socket until your hear a "CLICK" sound.

5. Attach the black protective cap clockwise.

6. Attach the white rubber seal on the black protective cap and fasten the seal using the cable tie

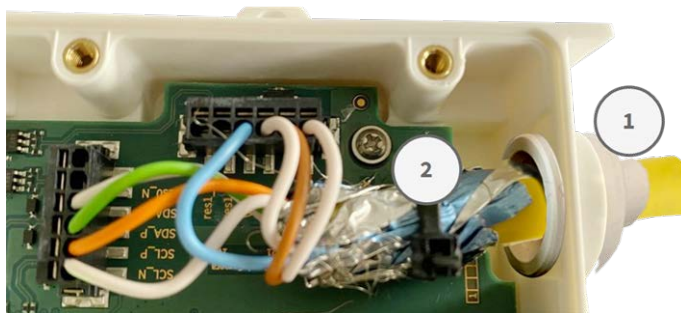7. Make sure to push the white rubber seal above the opening of the Long Cable Extender and fasten the seal using the cable tie .

Connecting the Electrical Link Cable

CAUTION! Make sure to connect the ends of the wires to the similar connectors on both Long Cable Extender boxes and ensure correct pairing (SCL_N /_P, SDA_N/_P...).

Cable & Connection Requirements

Depending on the sensor modules used, different cables are required for the power supply.

An eight-core cable is required for:

- 4k optical sensors
- 4Mp Optical sensors

A six-core cable is required for:

- thermal FLIR sensors

Wiring requirements

- Pair 1: SCL_N / SCL_P
- Pair 2: SDA_N / SDA_P
- Pair 3: VCC / VCC
- Pair 4: GND / GND
- Pair 5 (if needed): res0_N/res0_P
- Pair 6 (if needed): res1_N/res1_P

Installation Steps

1. Remove the covers of both Long Cable Extender boxes.

2. Cut off as many steps as necessary of the white rubber plug① to properly fit to the used cable.

3. Insert the network cable into the white rubber plug:

4. Remove the insulation from the network cable as shown below:
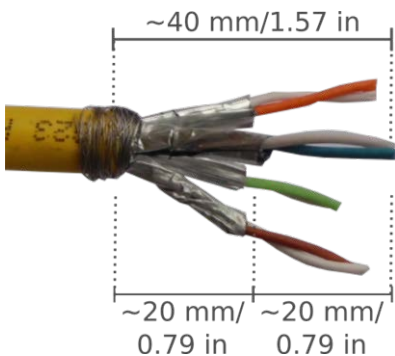
5. Apply the cable shield to the board by using the cable tie② .

6. Attach the covers of both Long Cable Extender boxes.

    NOTE! The tightening torque of the Long Cable Extender cover should not exceed 25Ncm.

Connecting Module Cables to the Camera

WARNING! Make sure the power supply to the camera is disconnected before installing or replacing sensor modules.

WARNING! When installing the sensor modules, make sure that the sensor module cables are not damaged or bent sharply!
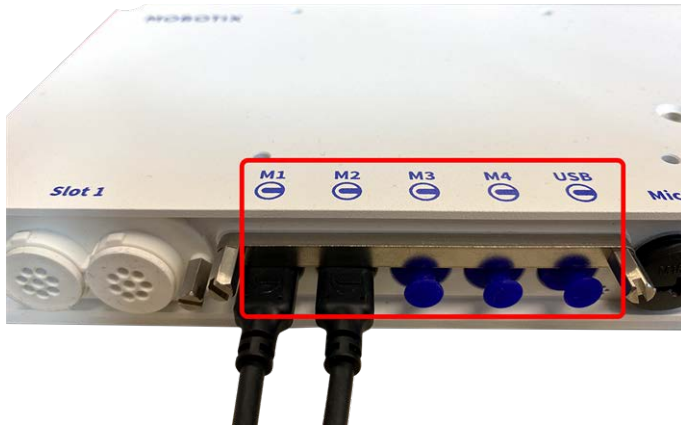
Fig. 3: 4 Module Connector Ports and 1 USB-C interface

Step by Step

1. Use a screwdriver to loosen both bolt screws① and then pull of the module latch.
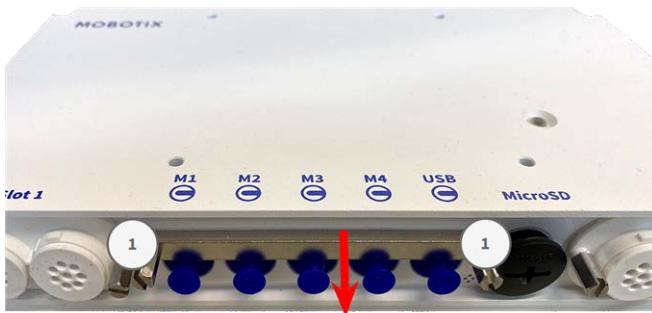
2. Remove the blue rubber plug① from the module connector.

3. Plug the module cable into the module connector ① so that the small lug ② plug fits into the module connector.
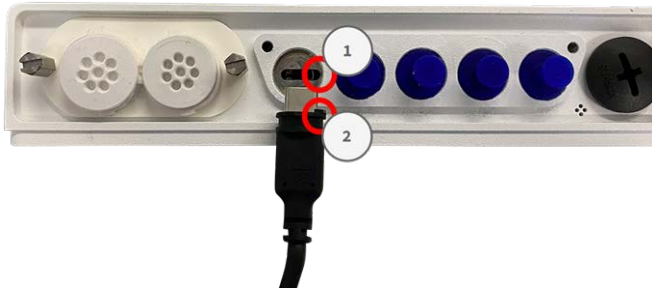
> **CAUTION!** If the module cable is not plugged in correctly, the sensor is not recognized by the camera.

4. Fasten the module latch by fastening the two bolt screws shown below.

5. Repeat steps 1 to 5 to connect additional modules.

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Operating the Camera

This section contains the following information:

Getting Started

You can use the MOBOTIX S74 with any current browser – or with MxManagementCenter.

You can download MxManagementCenter free-of-charge from **www.mobotix.com > Support > Download Center > Software Downloads**.

1. **Connect the camera to the network.** The network cable will also provide power to the camera.

   1. **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 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 Settings, p. 29:

      - **Network with dynamic IP addresses**

        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

        Using MxManagementCenter: With MxManagementCenter, you can show and integrate the camera without having to know its current IP address.

      - **Network with static 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 web browser: You may have to adjust the network settings of your computer.

      - **Automatically using MxManagementCenter:** The camera is displayed in MxManagementCenter although the IP address is not part of the local network, allowing you to reconfigure its settings.

   2. **Configure camera:** You can use the user interface of the camera in a browser or in MxManagementCenter.

Boot 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.

> **NOTE!** Pressing the key of the camera will let the camera announce the current IP address of the camera on the speaker (if a speaker is attached to the camera).

> **CAUTION!** When opening the camera, do not insert any objects into the housing. This could damage the camera!

Prepare the camera

1. Disconnect the camera's power supply.
2. Remove the black cover screw ① with a screwdriver.

Using the boot menu

After establishing the power supply the red LED on top of the camera body lights up 5 to 10 seconds and will stay on for 10 seconds.

1. Take a suitable tool for operating the boot menu (e.g. the tweezers M.3).
2. Reconnect the power supply of the camera.
3. Press the key by inserting the tool into the hole ② . The camera enters the boot menu, ready for selecting one of the boot options. The LED will flash once. The flash signal will be repeated every second.

> **NOTE!** The number of flashes corresponds to the current boot option.

4. **Switch the boot option:** Press the key (< 1 sec). After the last boot option, the camera returns to the first boot option (LED flashes once).

LED flashes	Boot Option	Meaning	Audio Confirmation*
1x	•/•	This option is not supported on this camera model.	•/•
2x	Factory Defaults	Starts the camera with factory defaults (factory default IP address, users and passwords will not be reset).	**Boing**
3x	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**
4x	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.

5. **Select a boot option:** Press the key longer (> 2 sec). The camera confirms the selection by flashing the LED rapidly for 3 seconds. After 20 sec, the camera will play a sound according to the table above.

> **NOTE!** If you do not select a boot option, the camera will resume its normal boot process after a certain time.

> **NOTE!**
>
> Starting the Camera With Factory Defaults or an Automatic IP Address (DHCP)
>
> The configurations loaded when using the boot options 2 and 3 will not be automatically saved to the camera's flash memory. Upon starting the camera the next time, the camera will use the last configuration it stored. You can store the configuration in the camera's flash memory using the **Admin Menu > Store** command.

> **CAUTION!**
>
> Note that you can restore specific parts of the camera configuration afterward 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 defaults.
>
> When starting the camera with DHCP support (option 2), make sure that the network has a properly functioning DHCP server. If this is not the case, the camera cannot obtain a valid IP address and will fall back to its last IP address.
>
> You should also make sure that the cameras always get the same IP addresses by mapping the MAC addresses of the cameras to the desired IP addresses.

Network Settings

Once the camera has been connected to the network, you need to set up the MOBOTIX 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 if it is already running on a 10.x.x.x network with a 255.0.0.0 network mask) you do not need to change the camera's network parameters. You can directly access the camera. If neither your network nor your computer use an IP address in the 10.x.x.x network (e.g. a 192.168.x.x or 172.x.x.x network), you should follow one of the following methods for changing the camera's network parameters:

- Manual setup
- Automatic setup using MxManagementCenter

NOTE! For the following examples, we will use a camera with the factory IP address 10.16.0.99. Replace this IP address with the IP address of your camera. You will find this address on a small sticker on the camera. Make sure that the IP addresses used in the following examples are not used by any other devices on your network.

Windows

1. Open the Windows **Control Panel > Network and Internet > Network and Sharing Center > Change Adapter Settings > Ethernet**.
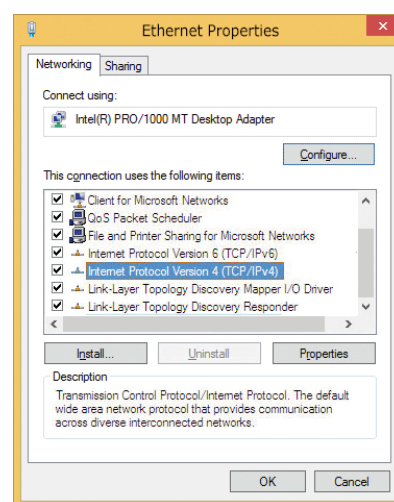
2. Right-click on the relevant network adapter and select **Properties**.

3. Open the properties of **Internet Protocol Version 4 (TCP/IPv4)**.
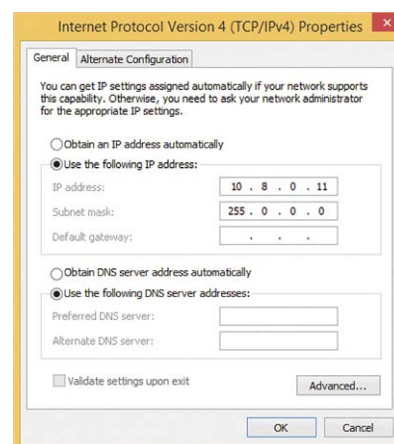
4. Activate **Use the following IP-address**. Enter an IP address in the 10.x.x.x range in this field (e.g. 10.16.0.11).

5. Click on **OK** to apply the settings.

Mac

1. Open **System Settings > Network**.

2. Click on **Ethernet** and in the **Configuration** field, select the *Manual* list entry and enter an IP address in the 10.x.x.x IP address range (e.g., `10.16.0.11`).
3. Click on **Apply** to apply the settings.

Linux / Unix

1. Open a terminal as `root` user.
2. Enter the following command: `ifconfig eth0:1 10.16.0.11`.
3. The computer now has the additional IP address `10.16.0.11`.

Network Settings on the Camera in the Webbrowser

1. Use a web browser to access the web interface of the MOBOTIX camera and enter the factory IP address (e.g. `10.16.0.99`).
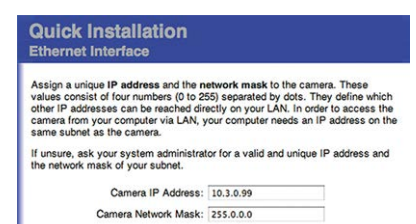
2. Click on the **Admin Menu** button in the user interface of the camera. The Quick Installation automatically starts after entering the access credentials of the admin user.

NOTE! Factory access credentials:
*User name:*admin
*Password:*meinsm

NOTE! You can also run the Quick Installation later on (**Admin Menu > Network Configuration > Quick Installation**; see Reference Manual).

3. **Enter the network parameters of the camera in the course of the quick installation.**

> **NOTE!** You can also change the network parameters later on by running **Admin Menu > Network Configuration > Quick Installation**.

4. Reboot the camera to apply the network settings.

# Network Settings on the Camera in MxMC

MxManagementCenter is a video management software for setting up and using the entire video surveillance system that provides a range of functions for different tasks and user groups. You can download the newest release of MxManagementCenter from the MOBOTIX website (www.mobotix.com > Support > Download Center > Software Downloads, MxManagementCenter section).

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 as a counter next to the **Add Devices** icon. This number is updated automatically if the number of MOBOTIX cameras on the network has changed (i.e., by connecting new/disconnecting existing cameras).

1. 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.
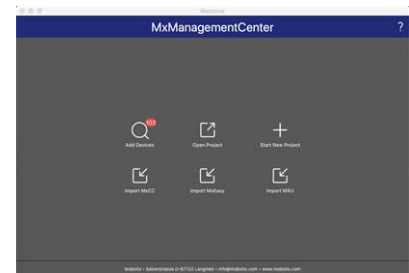
The application automatically monitors and displays the operating status of all cameras using corresponding icons.
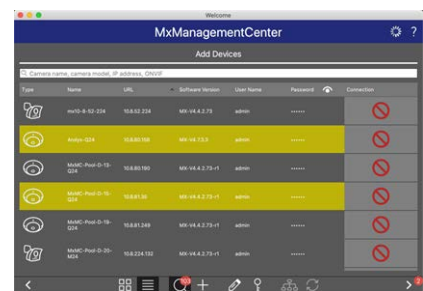
> **EXAMPLE:**
> - The camera is not in the same subnet as the computer.
> - The user name and password of the camera are not known.

NOTE! Using the Bonjour service (en.wikipedia.org/wiki/Bonjour_(software)), the application finds not only MOBOTIX cameras on the same subnet, but also in other subnets. Normally, you would not be able to establish any connection to cameras in a different network or subnet.

NOTE! 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.

2. Select the camera you want to set up and click on **Edit Network Settings** ⊕ at the bottom of the program window. The **Change Network Settings for Selected Devices** dialog opens.

3. Enter the IP address and the subnet mask of the selected camera.

Netzwerk für ausgewählte Geräte ändern ⊗
Automatische IP-Adresse
Erste IP-Adresse 10.23.236.50
Subnetzmaske   255.255.255.0
Anwenden

NOTE! The IP addresses of the other cameras are automatically incremented by 1.

4. Click on **Apply** to apply the settings.

NOTE! For more information on this feature, please read the MxManagementCenter online help or the Tutorial (see www.mobotix.com > Support > Download Center > Documentation > Brochures & Guides > Tutorials).

6

Camera Software in the Browser

When recording images or video sequences, you can choose to store either the visible image area of the live image or the full sensor image. This also allows examining the parts of an image or video that had not been visible in the real-time image section on display at the time of the recording.

Instead of using a web browser, you can also download the free MxManagementCenter from the MOBOTIX website (www.mobotix.com > Support), which allows displaying multiple cameras on one monitor, allows for comfortably searching and evaluating the alarm video clips with audio and provides alerting features. For mobile iOS and Android devices, the free-of-charge MOBOTIX MOBOTIX LIVE App is available.

This section contains the following information:

Access the camera's website in the browser

Once the power and network connection of the MOBOTIX have been established, you can open the interface of the camera software in a web browser.
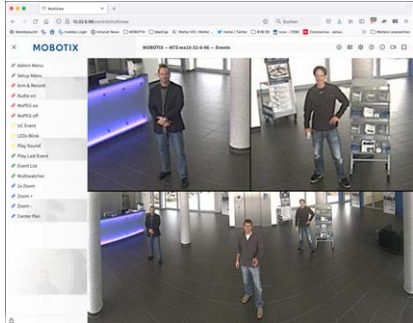

Fig. 4: The interface of the camera software

1. Enter the camera's IP address in the address field of a web browser.

NOTE! Make sure to copy the IP address camera from the back of the camera housing or from the sticker.

Basic Settings

Password for the Administration Menu: Accessing the administration area of the camera (Admin Menu button) in the browser is only possible after entering a user name and password.

- **Default user name:** admin
- **Default password:** meinsm

NOTE! You must change the password when logging in for the first time.

Make sure that you store information on user names and passwords in a secure place. If you loose the administrator password and cannot access the Administration menu, the password can only be reset at the factory. This service is subject to a service charge.

The Quick Installation wizard will appear automatically when accessing the Administration Menu for the first time. It provides an easy method to adjust the basic camera settings to the current application scenario. For security reasons, it is highly recommended to change the default administrator password after the camera has been configured properly.

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

Administering the camera: You can modify the camera configuration in the Administration Menu or the Setup Menu:

- **Admin Menu:** This menu contains the basic configuration dialogs of the camera (e.g. passwords, interfaces, software update).

- **Setup Menu:** This menu contains the dialogs for configuring the image, event and recording parameters. Some of these settings can be changed using the corresponding Quick Controls in the Live screen.

NOTE! For more information, consult the Reference Manual of the camera.

Camera Setup

1. In the Admin Menu go to **Hardware Configuration > Sensor Module Configuration** and set the Cable Length to "Long (>2 meters)".

2. Reboot the camera.

Multi Color LEDs Troubleshooting

On both boxes there are 2 multi color LEDs. The Power LED indicates the power status and the Link LED indicates the transmission status of the optical link:

- The Power LED① can be green or off depending on the power supply.

- The Link LED② can be green, red or off depending on the transmission signal.

This section contains the following information:

LCE Box Camera

Meaning of the LED signals on the LCE Box on camera side and troubleshooting.

Power LED	Link LED	Meaning	Trouble Shooting
Off		No power supplied to the LCE	Check connection of the USB-C-Cable between S74-Body and S7A-LCE-Camera.
Green		Power (5 V) supplied to the LCE from S74 Body	
	Off	No transmission signal could be detected	Check connection of the Optical Fibre on both boxes, it might be, that it is not plugged in correctly.
	Red	Optical Link is active, but transmitted data is corrupted	Check connection of Optical Fibre on both boxes, it might be, that it is not plugged in correctly. Check USB-C-Cable connection of Sensormodule to the Sensor-boxes. It might be, that wrong data comes already from the Sensor box.
	Green	Transmission Line and Data is correct transfered to the Camera module.	
Green	Green	No live image available	Check, wheather the USB-C cable is plugged in with the right orientation.

LCE Box Sensor

Meaning of the LED signals on the LCE Box on Sensor side and troubleshooting.

Power LED	Link LED	Meaning	Trouble Shooting
Off		No power supplied to the LCE	Check connection of the electrical link between the two LCE boxes. If the voltage drop is to high due to the used cable, the Sensor Box can be powered by a separate 5V / 1A DC Power supply.
Green		Power (5 V) supplied to the LCE from S74 Body or separated DC supply.	

Power LED	Link LED	Meaning	Trouble Shooting
	Off		Per design, the right Optical Link indication LED can never be Off. If the right LED is off, the LED might be broken.
	Red	No incoming data from Sensor-module, optical link not running.	Check the connection and orientation of the USB-C Cable from Sensormodule to LCE-Box. If LED remains Red, D-Phy might be broken.
	Green	Data from Sensormodule are correct, D-Phy is running and optical link (transmitter side) is active.	

Power LED	Link LED	Meaning	Trouble Shooting