Lighting Control Engine 4 mx

Information for Use

Read the Information for Use and the Safety Instructions carefully. Subject to modification without prior notice.
Typographical and other errors do not justify any claim for damages. Modification of the product is prohibited.
This document is designed for electricians and system administrators of the product.
All product names and trademarks mentioned in this manual are trademarks of their respective owners.
Except for internal use, relinquishment of the instructions to a third party, duplication in any type or form - also extracts - as well as exploitation and / or communication of the contents is not permitted.

Downloads and more information at:
www.ecue.com

IC: CL26100016155

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Table of Contents

1 Safety instructions

Please read the safety instructions, provided in a separate manual, carefully. Make sure that the environmental, mounting, and installation prerequisites are met. This manual should be kept at a safe place and in reach of the device.

1.1 Symbols

The exclamation mark warns about possible damage of the device itself, to connected devices, and to the user.

The information symbol gives general hints and informs about handling and procedures for use of the device.

1.2 General safety instructions

- To prevent electric shock hazard or damage to the equipment, disconnect the power cord to remove power from the server. Portions of the power supply and some internal circuit remain active until power is removed.
- Device components inside the system can reach high temperatures. Do not open the system while in operation. Repairs may only be carried out by authorized, specially trained personnel. When in doubt, contact Traxon e:cue service.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets, and circuitry.
- Avoid dust and humidity. Do not place the device in any area where it may become wet.

- Installation and maintenance of this product must be performed by qualified individuals who are knowledgeable about the procedures, precautions, and hazards associated with the product.
- To prevent the device from overheating, only operate it in well-ventilated environment. Cooling fins may not be obstructed. Do not install next to heat emitting sources or in a place subject to direct sunlight.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- If safety instructions are missing, please contact Traxon e:cue to receive a new copy.

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2 General device description

The e:cue Lighting Control Engine 4 mx (LCE4MX) is a high-performance lighting control server designed for medium-sized and complex projects. Equipped with two preinstalled e:cue software applications, it serves as a powerful and versatile central control unit for sophisticated lighting installations.

As the core of a lighting system, the LCE4MX controls and manages all connected devices and fixtures within a project. It supports e:net, Art-Net, sACN, and DALI-2, ensuring seamless integration into any lighting network. In addition, it enables the integration of external engines, triggers, third-party devices, and multimedia content.

This flexibility makes it an ideal solution for demanding applications — from automation systems and DALI-2 projects to medium-scale architectural illumination.

The LCE4MX can be mounted on DIN rails using the included DIN rail mounting kit or installed directly on walls.

Highlights of the LCE4MX

- Pre-installed with e:cue SYMPHOLIGHT and the e:cue Lighting Application Suite (LAS)
- Industrial-grade components for reliable, uninterrupted operation
- Fanless design with SSD storage — no moving or rotating parts
- Support for multiple lighting control protocols
- Flexible installation: suitable for DIN rail mounting or wall mounting
- Supports headless operation (no keyboard or monitor required)
- Designed, tested, and optimized for maximum system reliability
- Power supply unit included
- Windows 11 LTSC, 10 years security updates
- 5 years warranty

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2.1 Delivery content

Delivery content of the e:cue Lighting Control Engine 4 mx:

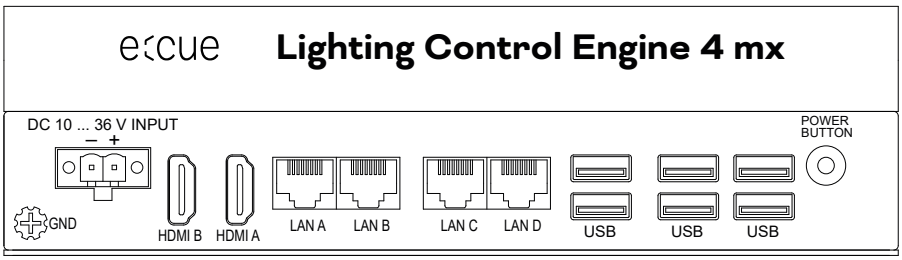
1. e:cue Lighting Control Engine 4 mx CL26100016155
2. Microsoft® Windows 11™
3. e:cue SYMPHOLIGHT & License dongle
4. e:cue Lighting Application Suite License dongle
5. Power supply unit
6. Power cords with Schuko and UK plugs
7. DIN rail mounting kit
8. Welcome card, Safety instructions

2.2 Optional accessories

- Ethernet Data Cable (RJ45) AA556130055
- SYMPL Switch AM313830035

2.3 Connectors and Interfaces

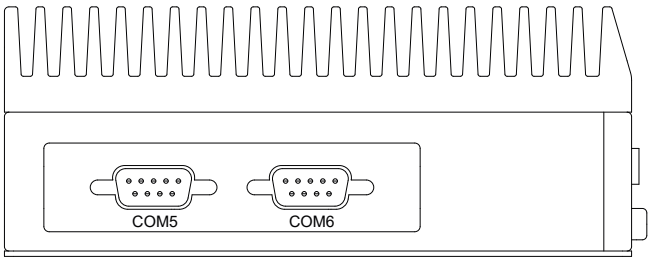
Front



LAN A: 1 GBit

LAN B ... D: 2.5 GBit

Left



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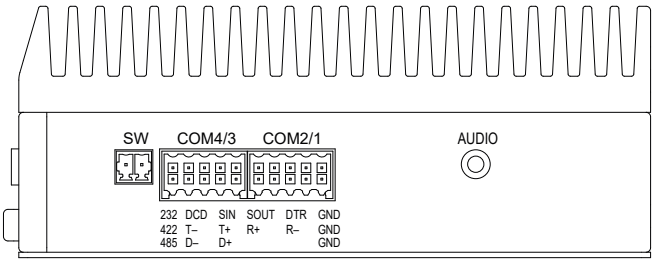

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2.4 Product specifications

Technical Data

Dimensions (W x H x D)	200 x 140 x 55.7 mm/ 7.87 x 5.51 x 2.19 in
Weight	1.8 kg / 3.97 lb
Power supply input	External 10 ... 36 V DC, 2.5 ... 9 A
Power consumption	90 W
Operating temperature	-20 ... 60 °C / -4 ... 140 °F
Storage temperature	-40 ... 85 °C / -40 ... 185 °F
Operating / storage humidity	10 ... 95% @ 40 °C, non-condensing
Housing	Metal
Mounting	DIN rail and wall mounting
Battery	Yes (1)
Certifications	CE, FCC

Engine

Operating system	Microsoft® Windows 11™
LAN chipset	1 x Gigabit Ethernet 3 x 2.5 Gigabit Ethernet
System connection ports	4 x e:net (RJ45 Ethernet for GbE) 4 x RS-232/422/485 2 x RS-232 3 x USB 3.2 and 3 x USB 2.0 2 x HDMI (max resolution: 4096 x 2304 @ 60 Hz) 1 x audio (Line-out & Mic-in)
Data storage	256 GByte SSD
User interfaces	Power button & LED Remote On/Off switch

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3 General remarks

3.1 Transport

Only transport the device in its original packaging. This protects the device from damage.

3.2 Unpacking

Only unpack the e:cue LCE4MX at its installation location. To protect the device against condensation water, unpack it and wait until all moisture remaining in the device has evaporated. Condensation can occur when the device is moved from a cold to a warm location. Keep the packaging for use in case of further transport. Inspect all parts for completeness regarding chapter „2.1 Delivery content“ on page 04. If there is apparent damage to the device or parts are missing from the delivery scope, please

contact the Traxon e:cue Support service.

3.3 Warranty regulations

Depending on the product, warranty regulations are of different duration. The warranty time is usually noted in the quote and in the order confirmation. See www.traxon-ecue.com/terms-and-conditions for details. Legal warranty regulations apply in any case.

3.4 Maintenance and Repair

Only external cleaning might be necessary. This cleaning may only be carried out by skilled personnel. To clean the device, disconnect it from the line power supply. Disconnect all devices connected to the server. Do not use any cleaning agents containing solvents (e.g. acetone, alcohol, or thinner) or abrasives. The housing surface can be cleaned with a moist, lint-free cloth. Ensure that no water penetrates into the housing. Otherwise, this could damage the electronics.

- Before dismounting, appropriate measures must be taken to protect the respective components against damage caused by electrostatic discharge (ESD protection).
- Do not try to repair the device. Return it to your Traxon e:cue distributor for replacement or repair.

In case of returning the LCE4MX

When returning the LCE4MX for any reason, e.g. for exchange, be sure to watch the following note:

Always care for proper backup of all user data like shows, images and media files. Data backup is responsibility of the user, Traxon e:cue cannot guarantee that user data are kept.

3.5 Disposal

Batteries and technical appliances must not be disposed of with domestic waste, but should be handed in at the appropriate collection and disposal points.

The proper disposal of packing materials and of the device is the responsibility of the respective user and for his account; in all other matters, the retrieval obligation for packing materials and the device is subject to the statutory regulations.

3.6 Support

In case of technical problems or questions regarding installation and repair please contact:

Traxon Technologies Europe GmbH
Customer Service
Im Dörener Feld 8
33100 Paderborn, Germany
+49 (5251) 54648-0
support@ecue.com

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3.7 Cybersecurity

Cybersecurity disclaimer

In order to protect building automation systems, plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art security concept. Traxon's product portfolio including this product you are about to install only forms one element of such a concept. Keep into account that Traxon's products including the product you are about to install contain the ability of third parties to connect to the device via USB, wired and wireless network interfaces.

You are responsible for preventing unauthorized access to your building automation system, plants, systems, machines and networks which should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. Additionally, Traxon's guidance on appropriate security measures should be taken into account.

Traxon's portfolio undergoes continuous development to make it more secure. Traxon strongly recommends that updates are applied as soon as they are available and that the latest versions are used. Use of versions that are no longer supported, and failure to apply the latest updates may increase your exposure to cyber threats. Traxon strongly recommends to comply with security advisories on the latest security threats, patches and other related measures.

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4 Installation

The installation of the LCE4MX consists of mounting the device, system ports connections and to power supply. The sequence of cabling is not defined.

Do not distribute the Nodes of a single project across multiple network ports. Each port has its own network controller, and these controllers are not synchronized — nodes served from different ports can drift out of sync. Keep all SYMPL dmx Nodes belonging to one project on a single port. You may, however, dedicate each port to a separate function: e.g. one port for DMX, one for DALI, and one for the general/management network.

4.1 Mounting

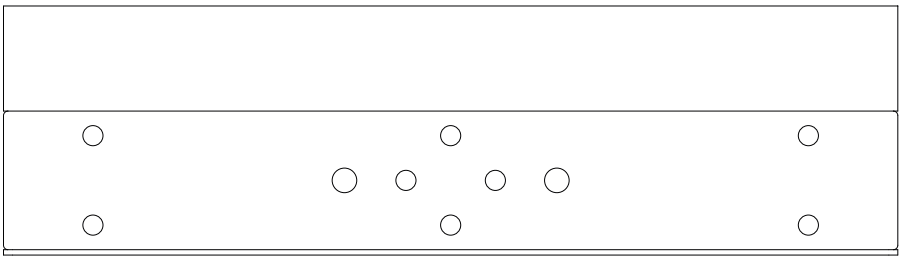
Place the device on a stable surface.

You can mount the LCE4MX in racks as well as on walls or on DIN rails using the included DIN rail mounting kit. Use the mounting holes to fasten the LCE4MX at a secure and well ventilated place. Place the cooling fins in a vertical orientation. Ensure proper strain relief for the connected cables.

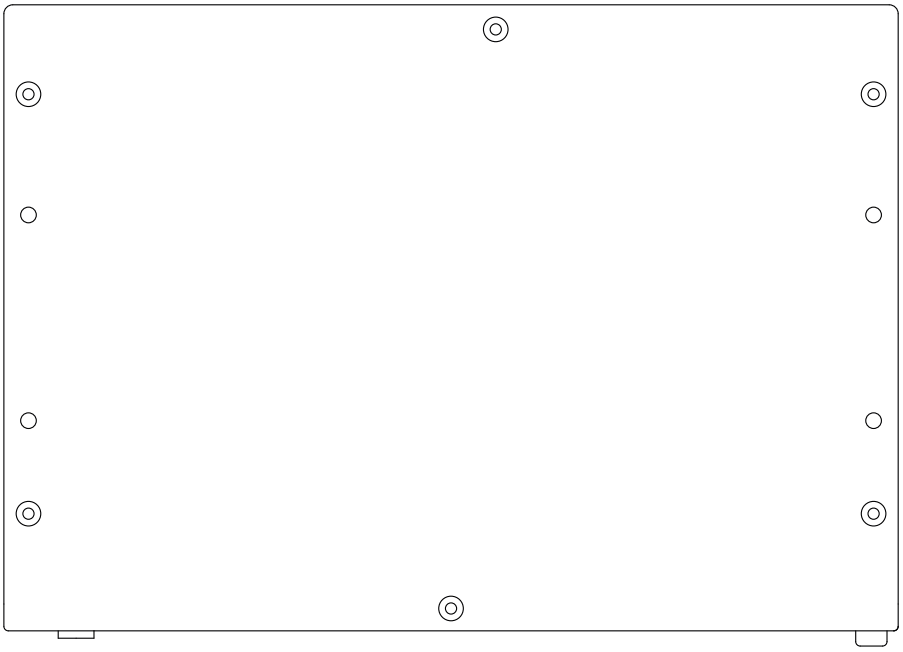
When mounting the LCE4MX in a rack, ensure that the server rack is sufficiently ventilated.

Mounting holes

rear side:



bottom:



4.2 Power supply

Connect the LCE4MX with the provided power cord to mains.

5 Configuration

The LCE4MX runs on Microsoft® Windows 11™ as operating system. It enables you to run lighting control applications as e:cue's SYMPHOLIGHT and e:cue's Lighting Application Suite (LAS) on the LCE4MX. When first powering the LCE4MX, a setup of the server is required. Set the network properties for the LCE4MX and the lighting control applications afterwards.

5.1 LCE4MX initiation

Connect a display and input devices (keyboard, mouse) to the LCE4MX. Display and input devices are always necessary when accessing any application or settings on the LCE4MX. Connect with the power supply and switch on the LCE4MX with the power button.

You can hot plug all other peripherals to the LCE4MX.

Do not switch off the server with the main switch or by removing the power supply, but use the Windows shutdown function to prevent loss of data.

5.2 Setup

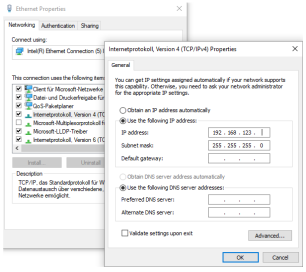
Boot the LCE4MX by pressing the On/ Off button. Windows starts its usual setup. Follow the instructions. You can change the keyboard layout to your needs and also set your time zone which matters for the lighting show execution.
Windows is set to automatic login. For other cases, these are the login credentials:
The default user name is: **ecue**
The default password is: **ecue!**
The LCE4MX has a second, backup user account prepared for safety or support reasons. Keep the account and do not change its settings: ecueBackup (user name), ecuebackup! (password). Especially in case of a forgotten password for the first account, accessing the user configurations through the backup account resolves the issue.

- Provide an Internet connection for the LCE4MX at least once during installation. If necessary, use a running DHCP server to assign an IP address. Update Windows, SYMPHOLIGHT and the LAS. Enable and execute updates whenever available. If you have a constant internet connection, ensure that everything is protected.

- Recommendation: Use the default power plan “ecue”. Do not use a power manager modus which includes “sleep“ since the LAS does not prevent a system shutdown. As per default, the high performance power management plan does not allow sleep modus.

5.3 Network Settings LCE4MX

Additionally to the network connection to the Internet, the LCE4MX is equipped with another three network adapters. This enables the integration of the LCE4MX into the network of the lighting installation. Configure the network properties for the LCE4MX as in every Windows OS, according to your network requirements:



Use the preferred dedicated local network range 192.168.123.xxx with one system-internal network adapter.

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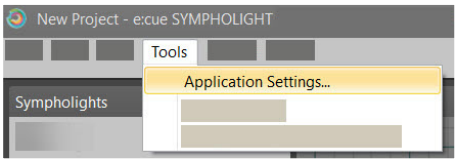
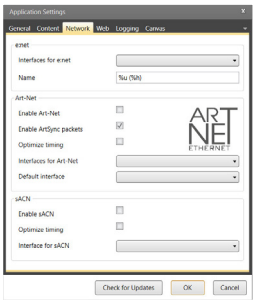
5.4 Network Settings SYMPHOLIGHT

The e:cue SYMPHOLIGHT application is pre-installed on the LCE4MX. For SYMPHOLIGHT to communicate with the network devices in the installation, SYMPHOLIGHT has to be adjusted to the same network as all the other network components. The next steps describe how to set the network address in SYMPHOLIGHT. For further information about SYMPHOLIGHT, please refer to the SYMPHOLIGHT User Manual.

1. Start the SYMPHOLIGHT application.
2. Click on ***Tools*** in the top left menu and select ***Application Settings***:



3. In the pop up window ***Application Settings*** click on ***Network***:



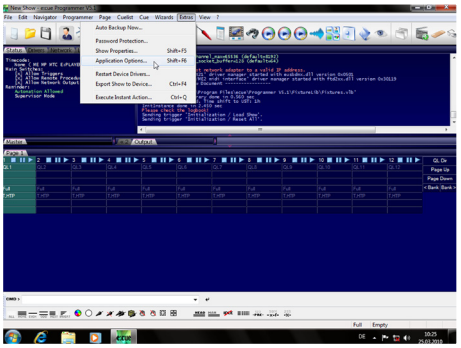
4. Enter or select the IP address(es) of your network at ***Interfaces for e:net***.
5. Click ***OK*** to apply the changes. The pop up window closes and the network settings for SYMPHOLIGHT are now configured.

Notice that only the network settings for the SYMPHOLIGHT application have been set now. If you have further network devices installed, each of these devices have to be configured separately. See the SYMPHOLIGHT Setup Manual for details.

5.5 Network Settings LAS

The e:cue LAS is pre-installed on the LCE4MX. For the LAS to communicate with the network devices in the installation, the LAS has to be adjusted to the same network as all the other components. The next steps describe how to set the network address in the LAS. For further details on the LAS, see the System Manual e:cue LAS.

1. Start the Programmer Enterprise.
2. Click on ***Extras*** and select ***Application Options***:



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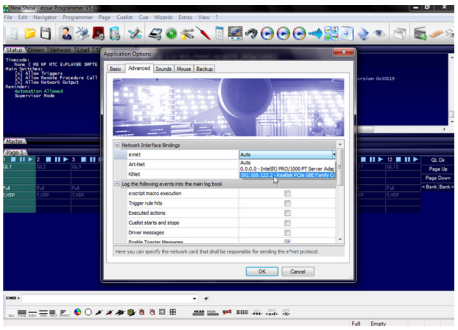
3. Under the ***Advanced*** tab, you can specify which network card the programmer software e:net outputs to. You can specify this setting for the Art-Net and KiNet protocols. e:cue recommends only outputting one protocol per network:



4. Click ***OK*** to apply the changes. The network settings for the LAS are now configured.

Notice that only the network settings for the SYMPHOLIGHT application have been set now. If you have further network devices installed, each of these devices have to be configured separately. For further details on the LAS, see the System Manual e:cue LAS.

6 Dismounting

⚠ Before dismounting, appropriate measures must be taken to protect the respective components against damage caused by electrostatic discharge (ESD protection).

Disconnect all attached cables. Dismount the e:cue LCE4MX by unfastening the device. The dismounting is completed.

7 Certifications

CE

FC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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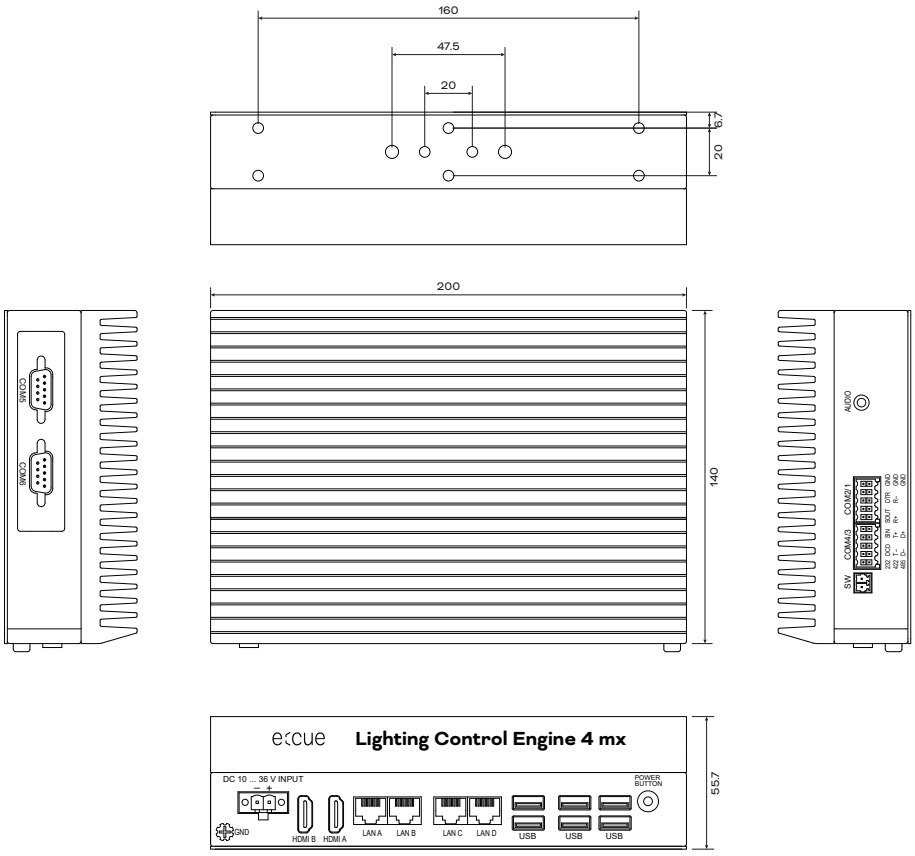
8 Dimensions

All dimensions in mm



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