

# Lighting Control Engine 3+



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The Lighting Control Engine 3+ (LCE3+) serves as a high-performance server for controlling large lighting projects, with pre-installed e:cue SYMPHOLIGHT and Lighting Application Suite (LAS). As a central control unit, this versatile light control server orchestrates all devices and lights within a project. The LCE3+ has integrated digital dry contacts, two single-pole relay outputs and support for a wide range of Ethernet-based protocols. Shows and light scenes can be controlled with the internal web server via mobile devices, web browsers or via cloud applications. A built-in status display on the front shows system and software messages. The LCE3+ is the ultimate server solution for any demanding lighting project.

## Highlights

- Software licenses for e:cue's SYMPHOLIGHT and Lighting Application Suite, pre-installed
- High quality industrial components for reliable uninterrupted and efficient 24/7 operation of SYMPHOLIGHT and LAS
- 2 x M.2 SSD disk drive in RAID 1 operation for increased system stability
- Integrated dry contact inputs (6x) and relay outputs (2x)
- LC display and cursor keys for status messages
- Easily mountable in 19 inch racks, space saving (3U)
- 5 years of support and warranty

## e:cue Interfaces

Lighting applications are heterogeneous by nature. e:cue interfaces serve to integrate many networks, protocols and third party products into e:cue solutions. They also aid in applying special control functions for fixtures, they integrate analog or mechanical signaling into the digital world and offer bridging functions. e:cue interfaces are the links to bring together the many techniques and technologies of lighting control.

## Delivery scope

## Identcode

- e:cue Lighting Control Engine 3+ including Microsoft® Windows 10™ IoT Enterprise and software licenses for e:cue's SYMPHOLIGHT and Lighting Application Suite
- Printed LCE3+ Information for Use (English / German), safety instructions
- Rack mounting rails, including screws
- 1 x mini DisplayPort to DVI, HDMI, VGA adapter
- 2 x IEC-C13 power cord (EU and UK versions)
- Dry contact plug
- 2 x relay interface plug

## Technical data

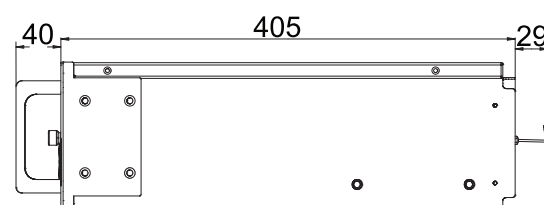
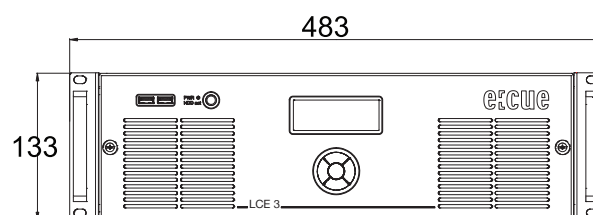
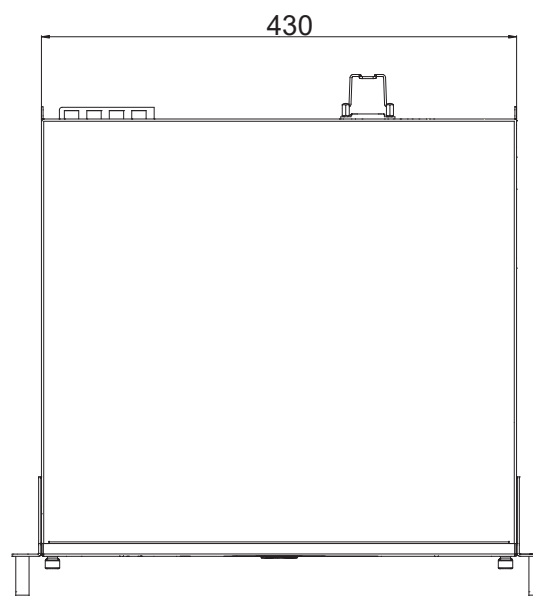
Dimensions (W x H x D)	483 x 133 x 405 mm/ 19.02 x 5.24 x 15.04 in (incl. mounting brackets)
Weight	12.3 kg / 27.12 lb (incl. mounting brackets)
Power supply input	100 ... 240 V AC, 50/60 Hz
Power consumption	110 W typically, efficiency up to 92.5%
Operating temperature	0 ... 40 °C / 32 ... 104 °F
Storage temperature	-10 ... 70 °C / 14 ... 158 °F
Operating / storage humidity	0 ... 80% RH, non-condensing
Protection class	IP20
Housing	Steel, front panel powder coated
Mounting	in 19-inch rack with rails
Certifications	CE, FCC, UKCA

## Interface specifications

USB	2 x USB 3.0 (front)
	4 x USB 3.2 Gen 1 (rear)
	2 x USB 2.0 (rear)
Digital dry contacts	6 x inputs, $V_{in} = 5 \dots 24 \text{ V DC}$
	1 kV galvanically isolated
	off: $V_{in} < 1 \text{ V DC}$ , on: $V_{in} > 4 \text{ V DC}$
	Input current $I_{in}$ (typical):
	$V_{in} = 5 \text{ V} / I_{in} = 0.8 \text{ mA}$
	$V_{in} = 12 \text{ V} / I_{in} = 2.3 \text{ mA}$
Relay outputs	$V_{in} = 24 \text{ V} / I_{in} = 4.8 \text{ mA}$
	12 V DC output, max. 70 mA, overload protected
	2 x SPDT
	Nominal voltage: 250 V AC
	Continuous current: 12 A (CE, CSA), 10 A (UL, provided plug's limitation)
	Inrush current: 50 A (max. 20 ms)
	Isolation between open contacts (1 kV)
User interfaces	LC Display, Keypad
Ethernet-Ports	1 x e:net 10/100/1000 Mbps, RJ45
Serial interfaces	2 x RS-232
Keyboard / mouse	2 x PS/2
Graphics	1 x HDMI
	2 x DisplayPort
	3 x mini DisplayPort
Audio	1 x microphone
	1 x audio/line output
	1 x audio/line input
Data storage	2 x M.2 SSD HDD (RAID 1 config)
Media drives	CD/DVD via USB port (not included)

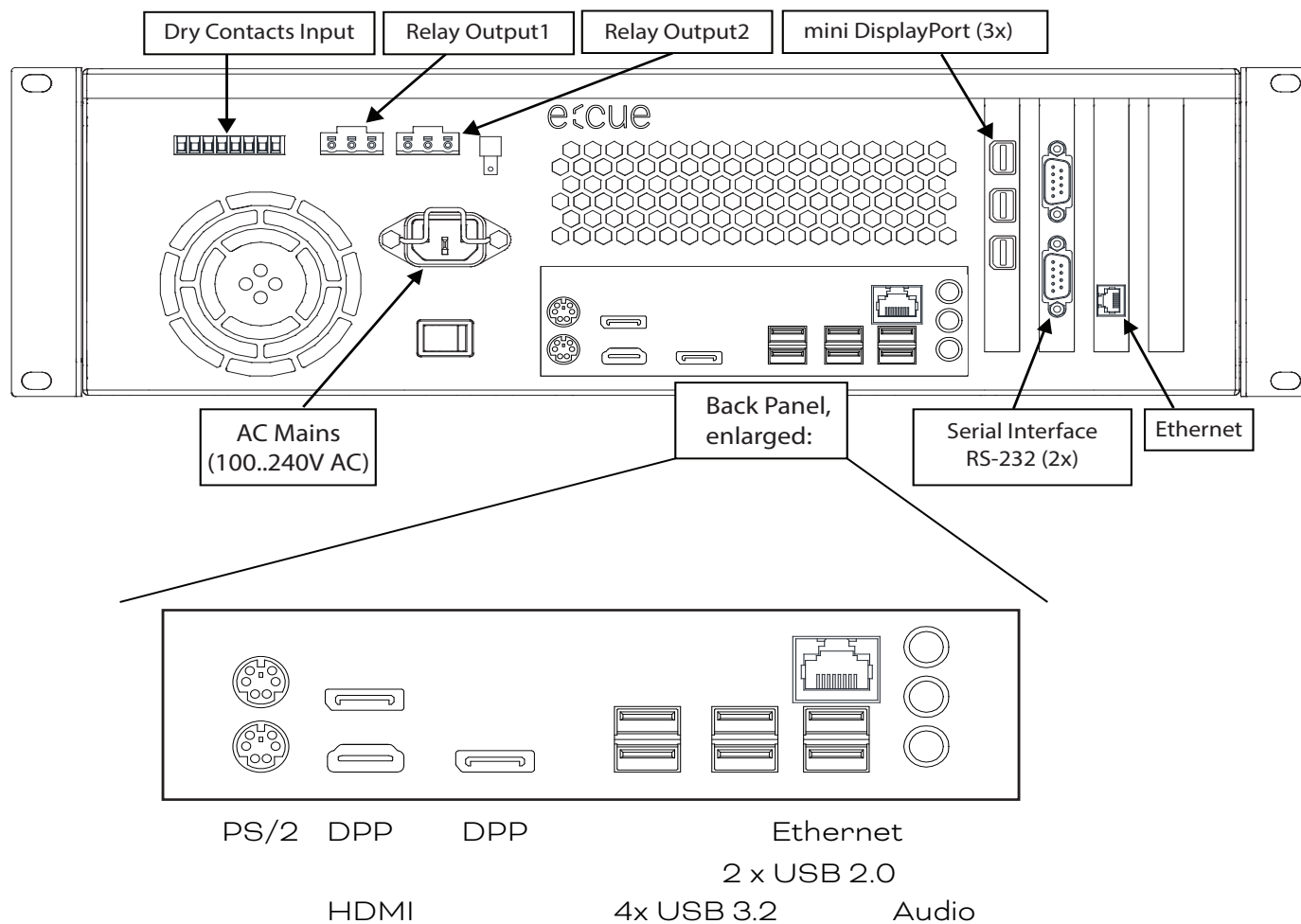
## Dimensions

All measures in mm



## Connectivity

Rear side



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