

# SYMPL pixel Node



## e:cue SYMPL pixel Node

The SYMPL pixel Node is a LED pixel controller, converting e:net to control a wide range of supported serial addressable LED pixels like digital LED strips, dots and boards with multi controllable pixels. Control a wide range of supported asynchronous and synchronous like SPI LED pixels and configure content with e:cue's SYMPHOLIGHT. It comes with 2 x Pixel outputs over screw terminal plugs. Choose the output protocol separately for each of the two outputs. The SYMPL pixel Node makes it possible to run up to 2 x 2048 channels (=4096 in total, = 1364 RGB pixels). Connection to SYMPHOLIGHT runs via Ethernet interface with 100 Mbit/s. The Node is powered by an external power supply, Power-over-Ethernet, or via pass back power from the connected fixture. It is easily mounted on standard DIN rails, or with a key hole in the housing base on walls or on any stable vertical surface. Cover distances of up to 300 m\* between the Node and the fixture with the optional Pixel Range Extender.

## Highlights

- e:net to serial addressable LED pixel interface, with 2 x Pixel outputs
- Controls up to 2048 pixel channels per output (= 682 RGB pixels)
- Supports 512 DMX channels per output (= 170 RGB pixels)
- 3 ways of power supply: external, PoE, pass back power from the fixture
- Flexible mounting on 35 mm DIN rails
- Simple and easy integration in e:cue SYMPHOLIGHT
- Web interface for status and configuration

## e:cue Interfaces

Lighting applications are heterogenous 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

- e:cue SYMPL pixel Node
- Welcome note, safety instructions

## Identcode

AM390290035

## Optional accessories

- Power Supply 15W 24V DIN rail AM1884100HA
- 2 x Pixel Range Extender AM394020035
- SYMPL Switch AM313830035

## Product specifications

Dimensions (W x H x D)	53.5 x 90.5 x 62 mm (excl. fastening clip)
Weight	100 g
Power supply input	5 ... 24 V DC pass back power from Pixel Port 1 (e.g. from Pixel Strip) or 5 ... 24 V DC terminal plug cross cable section: 0.2 - 3.3 sqmm or PoE IEEE 802.3af on RJ45
Power consumption	2 W
Operating temperature	-20 ... 50 °C / -4 ... 122 °F
Storage temperature	-20 ... 70 °C / -4 ... 158 °F
Operating / storage humidity	0 ... 80% RH, non-condensing
Protection class	IP20
Installation	Indoor installation only, intra building connections only
Electrical safety class	SELV
Housing	Self extinguishing blend PC/ABS, UL E140692
Mounting	on 35 mm DIN rail (EN 60715), or with key hole on any stable vertical surface

Certificates CE, ETL, RoHS, FCC, UKCA

### Dimensions

All measures in mm

### Interface specifications

Output connectors	2 x serial addressable LED pixel output (4-pin terminal plug) cross cable section: 0.2 - 3.3 sqmm
Output channels	Up to 2048 pixel channels per output (= 682 RGB pixels) or up to 512 DMX channels per output (= 170 RGB pixels)
Output wiring	Cable length between controller and fixture up to 3 m (with Pixel Range Extender up to 300 m*)
Ethernet-Port	1 x ethernet 10/100 Mbit/s, RJ45 for e:net, PoE
User interfaces	LEDs for Ethernet activity, device status, output activity; Identify button; web interface

\*) depending on installation setup, cable quality, and  
fixture type.

### Supported protocols

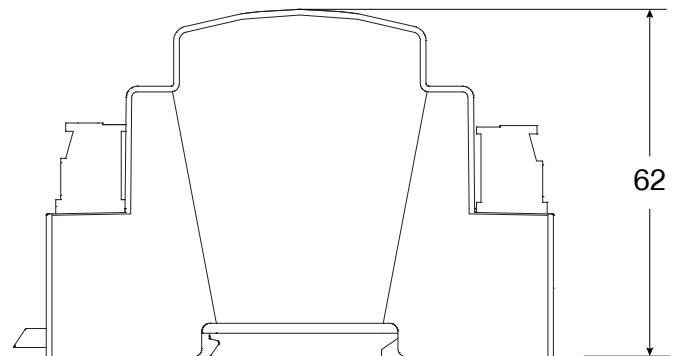
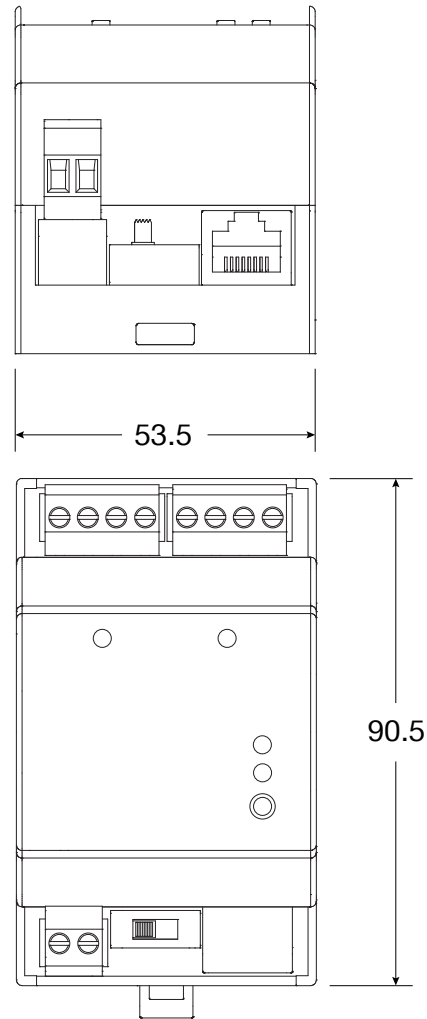
Communication protocols (input):

- e:net

LED pixel protocols (output):

- TM1804\_800
- TM1812
- APA104
- UCS2903
- UCS2904
- UCS8904A\_16 bit
- UCS8903
- WS2811\_800
- WS2812+b
- WS2813
- APA102+C
- WS2801
- DMX512

See [www.ecue.com](http://www.ecue.com) for all supplemented protocols.



Intertek  
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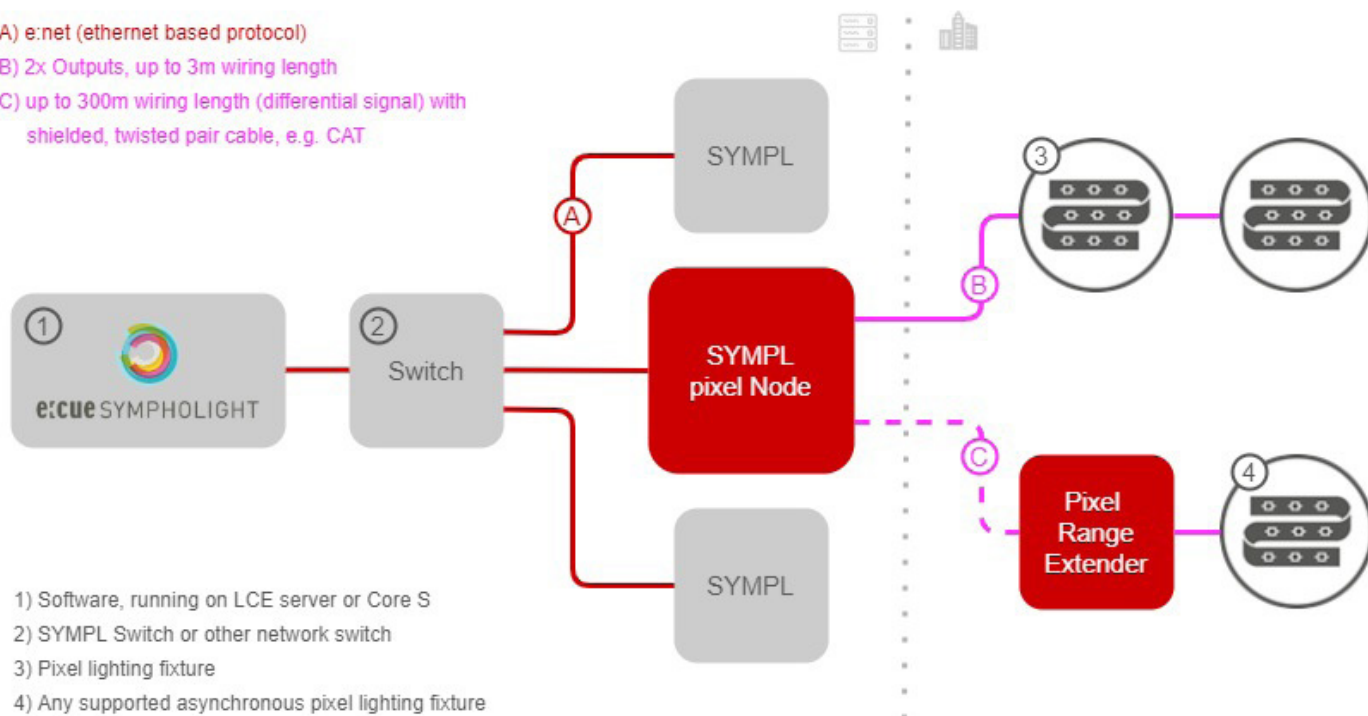
Conforms to ANSI/UL Std. 62368-1  
Certified to CSA Std. C22.2 NO. 62368-1

## System diagram

A) e:net (ethernet based protocol)

B) 2x Outputs, up to 3m wiring length

C) up to 300m wiring length (differential signal) with shielded, twisted pair cable, e.g. CAT



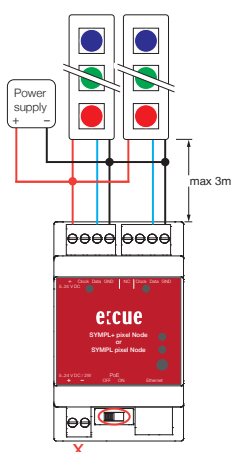
## Wiring diagrams

## Legende



## PSU between Node and fixture, parallel connection - recommended wiring

**left:** One PSU supplies both fixtures and the Node via port 1 with power (+ pin, 5 .. 24 V DC). Have PoE switched OFF.



**right:** Each fixture has a separate PSU. The PSU for the fixture on port 1 also supplies the Node with power (+ pin, 5 .. 24 V DC). Have PoE switched OFF.

