

# OCTO MK2 – Datasheet

eDMX to SPI pixel controller with standalone mode and an added overdrive feature capable of transmitting up to 16 universes of SPI data in a compact 4-module DIN-rail form factor.



Take your projects to the next level with the ENTTEC OCTO MK2. This robust SPI LED controller efficiently converts up to 16 universes of DMX over Ethernet to pixel data (8U per output), with auto activation of Overdrive mode when configured to output more than 4U per port.

Make LED strip and pixel dot system deployment a breeze with the OCTO MK2. With network chaining and direct power from the LED pixel source, fast installation has never been easier.

The user-friendly OCTO MK2 comes equipped with convenient features such as an identity button for wiring checks and a wide input voltage range (4-60VDC) all packed into a slim 4 DIN form factor.

The OCTO MK2 supports over 20 pre-listed pixel output protocols and supports immediate custom pixel protocol creation (criteria apply, see user manual).

With the inbuilt Fx engine, the OCTO MK2 allows you to create and edit gradient effects with real-time preview effortlessly. The device's web interface offers a seamless editing experience and can be configured to run standalone upon power-up, eliminating the need for a DMX source.

## Features

- Supports up to 16 universes of Art-Net, sACN, ESP and KiNet with overdrive mode.
- Extensive protocol support, including both data and clock-based configurations.
- Custom pixel protocol creation for specialised applications.
- Daisy-chain networking for efficient data distribution.
- Supports DHCP and Static IP addressing.
- Grouping functionality reduces input channel count for streamlined configuration.
- Surface or TS35 DIN rail mounting options.
- Identify/Reset button for quick wiring verification without a network connection.
- Intuitive device configuration and updates through the built-in web interface.
- Inbuilt Fx engine allowing gradient effect in standalone operation without a DMX source.

**Note:** OCTO does not provide power to lighting fixtures.

## Specification

|                                               |                                                                        |                      |
|-----------------------------------------------|------------------------------------------------------------------------|----------------------|
| Connectors                                    | 2* Network (RJ45)                                                      |                      |
|                                               | 2* SPI Output (4-Pin Phoenix)                                          |                      |
|                                               | 1* Power (2-Pin Phoenix)                                               |                      |
| IP rating                                     | IP20                                                                   |                      |
| Input voltage                                 | 4-60V DC                                                               |                      |
| Max. power draw                               | 5W                                                                     |                      |
| Max. heat dissipation                         | 4.5 W                                                                  |                      |
| Max. output voltage                           | 5V                                                                     |                      |
| Max. output current                           | 50mA                                                                   |                      |
| Network speed                                 | 10/100Base-T                                                           |                      |
| Network discovery                             | ENTTEC’s EMU software                                                  |                      |
| Network configuration                         | Static (Default 192.168.0.10) / DHCP                                   |                      |
| IGMP Version                                  | IGMPv2                                                                 |                      |
| Recommended network device quantity per chain | Chains of up to 8 devices give optimum synchronisation between outputs |                      |
| eDMX input protocol                           | Art-Net                                                                | sACN                 |
|                                               | ESP                                                                    | KiNet                |
| Data output type                              | SPI (NZR)                                                              |                      |
| Overdrive Mode (Max 16U)                      | Auto activation <sup>1</sup>                                           |                      |
| Max. eDMX -> pixel conversion per device      | 16 Universes (8,192 channels)                                          |                      |
| Max. pixels controllable per device           | RGB                                                                    | 2720 (1360 per port) |
|                                               | RGBW                                                                   | 2048 (1024 per port) |
| Max Frame Rate                                | 100fps                                                                 |                      |
| Firmware updates                              | V4.0 onwards <sup>2</sup>                                              |                      |
| LED indicators                                | Forward-facing LED indicator                                           |                      |
|                                               | Network link/activity (integrated into RJ45 ports)                     |                      |
| Cooling method                                | Convection                                                             |                      |
| Operating temperature                         | -20°C to 50°C / -4°F to 122°F                                          |                      |
| Operating humidity                            | 5 to 95% (non-condensing)                                              |                      |
| Body material                                 | ABS plastic                                                            |                      |
| Mounting options                              | Surface & TS35 DIN Rail mount                                          |                      |
| Unit dimensions                               | 100.5*77.9*31 mm                                                       |                      |
| Unit weight                                   | 0.11kg / 0.24lbs                                                       |                      |
| Shipping Dimensions                           | 165*145*43 mm                                                          |                      |
| Shipping weight                               | 0.18kg / 0.39lbs                                                       |                      |
| Warranty                                      | 3-year return to the base manufacturer warranty                        |                      |

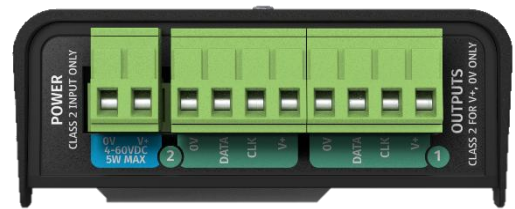
## Certification



## Box Content

- OCTO MK2
- 2 x WAGO connectors
- 1 x Din mounting clip & screws

## Phoenix Connector



### Supported Pixel Protocols (Pre-listed):

APA102, APA104, GS8208B, SJ1221 (16bit & 8bit), SPXL (16bit & 8bit), SK6812, TLC5973 (16bit & 8bit), TM1804, TM1812, TM1814, UCS1903\*, UCS2903\*, UCS2904\*, UCS8903\* (16bit & 8bit), UCS8904\* (16bit & 8bit), UCS7604 (16bit) WS2811, WS2812, WS2812B, WS2813, WS2815, WS2818\*, 9PDOT\* (16bit & 8bit).

\* IMPORTANT: If you wish to control a protocol marked with a \* and the option to do so is missing in the current firmware interface for your product, please select WS2811 or WS2812b instead for your LEDs to work properly.

## Safety

- Please refer to the OCTO MK2 User Guide for wiring diagrams & Installation guidance.
- Always refer to this product's safety notes before handling or specifying it on your project.

## Ordering information

For further support and to browse ENTTEC's range of products visit the [ENTTEC website](https://www.enttec.com).

| Item     | SKU   |
|----------|-------|
| OCTO MK2 | 71521 |

# enttec.com

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Due to constant innovation, information within this document is subject to change.

<sup>1</sup> In Overdrive mode, monitor the output FPS as the universe output increases, and verify the implementation to confirm it meets expectation.  
<sup>2</sup> This datasheet is for OCTO MK2 (SKU: 71521) units released after SN: 2374307 that only compatible with firmware V4.0 onwards.