OCTO MK3 – Datasheet

eDMX to SPI Pixel Controller with Standalone Mode & Overdrive Feature

The ENTTEC OCTO MK3 is a high-performance, compact, and reliable pixel controller designed to convert up to 32 universes of Art-Net, sACN, Kinet, and ESP to SPI pixel data with port sync.

It features flexible pixel output configuration, supporting up to 8 universes per port, with 2 outputs when using Clock support and up to 4 outputs when repurposing Clock as additional data ports. The overdrive mode is automatically activated when outputting more than 6 universes per port, ensuring seamless performance under high data loads.

Engineered for maximum versatility, the OCTO MK3 supports over 20 industry-standard pixel protocols and enables custom protocol creation for specialised applications (refer to the Custom Protocol Creation Guide). With dual Ethernet ports, it facilitates network daisy-chaining, optimising data distribution without additional hardware.

With an inbuilt FX engine, the Standalone Mode allows users to create gradient effects with real-time previews directly through the web interface. The device can be configured to run standalone upon power-up, eliminating the need for a dedicated DMX source.

Features

- **Flexible pixel output configuration – Supports data and clock signals or can repurpose clock for additional data output.**
- **Supports up to 32 universes of Art-Net, sACN, Kinet and ESP 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.**
- **Port Sync ensures all ports stay synchronised, preventing inconsistencies and ensuring smooth operation.**
- **User-friendly web interface for intuitive device configuration and firmware updates.**
- **Inbuilt FX engine for standalone gradient effects without requiring an external DMX source.**

Note: OCTO does not provide power to lighting fixtures.

Specification

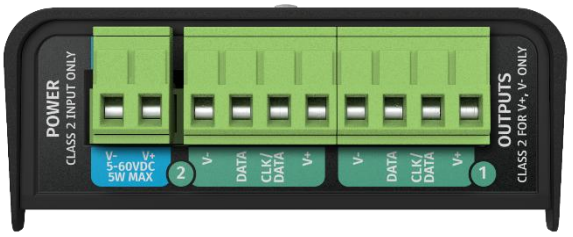
Connectors	2 x Network (RJ45)	
	2 x Data Output (Screw Terminal)	
	2 x Clock/Data Output (Screw Terminal)	
	1* Power Port (Screw Terminal)	
IP Rating	IP20	
Input Voltage	5-60V DC	
Max. Power Draw	5W	
Max. Heat Dissipation	4.5 W	
Max. Output Voltage	5V	
Max. Output Current	50mA	
eDMX Input Protocol	Art-Net	sACN
	ESP	KiNet
Network Speed	10/100Base-T	
Network Discovery	ENTTEC's EMU software	
Network Configuration	Static (Default 192.168.0.10) / DHCP	
Recommended Network Device Quantity Per Chain	Chains of up to 8 devices give optimum synchronisation between outputs.	
Data Output Type	SPI (NZR)	
Max. eDMX -> Pixel Conversion Per Device	32 Universes (16,384 channels)	
Max. Pixels Controllable Per Device	RGB	5,440 (1,360 per port)
	RGBW	4,096 (1,024 per port)
Max Frame Rate	100fps	
Firmware Updates	Web Interface	
LED Indicators	Forward-facing LED indicator	
	Network link/activity (integrated into RJ45 ports)	
Cooling Method	Convection	
Operating Temperature	0°C to 50°C /32°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	0.08kg / 0.18lbs	
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 MK3
- 2 x WAGO connectors
- 1 x Din mounting clip & screws

Phoenix Connector



Supported Pixel Protocols (Pre-listed):
APA-102, APA-104, GS8208B, SJ1221 (16bit), SK6805, SK6812, SK6813, SM16703, SM16704, SPXL-16bit, TLC5973 (16bit), TM1804, TM1812, TM1814, UCS1903*, UCS2903*, UCS2904*, UCS8903 (16bit)*, UCS8904 (16bit)*, UCS7604 (16bit), WS2811, WS2812, WS2812B, WS2813, WS2814, WS2815, WS2818*, 9PDOT (16bit)*

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 MK3 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.

Item	SKU
OCTO MK3	71522