




**The versatile  
LED pixel-tape driver  
to directly control a wide  
range of digital LEDs.**

 Made in Germany  
**5** Years of Warranty

### **SPI Converter & Direct Connection**

Directly connect to a wide range of supported LEDs via two 4-pin screw terminals. A signal frequency of up to 24 MHz is available. Supply power over USB or 5 V to 24 V over a 2-pin screw terminal.

### **Art-Net / Streaming ACN / USB**

Network data is directly converted to SPI without the need for an additional interface. Reliably distribute data from any compatible software or hardware controller. In addition, simply connect to MADRIX® 5 over USB.

### **Designed For DIN Rails Or Walls**

Its non-conductive enclosure and standardized design for 35 mm top-hat rails make mounting quick, easy, and safe. 2 extra brackets are provided for optional wall mounting. 9 indicators quickly show the device status with the option to turn them off.

### **Quality Output Of 12 Universes**

Each device drives up to 2,048 RGB pixels while ensuring responsive delivery of high-quality signals to each individual LED. You can choose the output protocol separately for each of the two ports.

### **Sync Mode & Daisy-Chain Support**

MADRIX® 5 and MADRIX® hardware allow you to fully synchronize Art-Net data for all ports and across devices to get an optimal image on the LEDs without visual interruptions. 2 Ethernet ports allow linearly daisy-chaining several devices together.

### **Invaluable Features**

The device is ready within seconds after startup. HTP merging is automatically available for two Ethernet sources. Its firmware is upgradable. Access and change specific device settings using the built-in web configuration page.

## **Package Contents**

- 1x MADRIX® NEBULA
- 1x Set of pluggable screw terminals (2x 4-pin and 1x 2-pin)
- 1x USB 2.0 cable (certified)
- 2x Wall-mount brackets
- 1x Technical manual / quick start guide

## Technical Specifications

Supply Of Power	DC 5 V – 24 V; over <b>A)</b> 2-pin, pluggable screw terminal (12 A max.), <b>B)</b> 5 V USB, <b>C)</b> Port 1 or 2 sourced from LEDs; 6 A max. load per port when supplying through to LEDs
Power Consumption	< 1.5 W (300 mA) during normal operation (500 mA max. fused)
BTU/h	5.73 during normal operation
Network Protocols	Art-Net (I, II, 3, 4, incl. ArtSync), Streaming ACN (sACN / ANSI E1.31)
RDM Role	Acts on commands and replies to requests with its own status and sensor data via ArtRdm (RDM Responder)
Data Output	<b>Firmware ≤ 5.XX:</b> 8x 512 channels SPI TTL (Max. output per port: 680 RGB LEDs / 512 RGBW LEDs / 2,048 1-channel LEDs) <b>Firmware ≥ 6.00:</b> 12x 512 channels SPI TTL (Max. output per port: 1,024 RGB LEDs / 768 RGBW LEDs / 3,072 1-channel LEDs)
Supported LEDs	APA101, APA102, APA104, APA106, GS8206, GS8207, GS8208, GW6201, GW6205, LPD1882S, LPD6803, LPD8806, MBI6024, MBI6120, MY9291, P9883, SJ1221, SK6112, SK6805, SK6812, SK6813, SK6822, SK9816, SK9822, SK9826, SM16703, SM16704, SM16716, TLC5973, TLS3001, TLS3008, TM1803, TM1804, TM1809, TM1812, TM1814, TM1829, UCS512B3, UCS1903, UCS2603, UCS2903, UCS2904, UCS5603, UCS8903, UCS8904, UCS9812S, VS17822, WS2801, WS2803, WS2811, WS2811S, WS2812, WS2812B, WS2812C, WS2813, WS2814, WS2815, WS2818, WS2821, WS2822S, WS2822S Addressing
Ports	2x ports (Via 2x 4-pin, pluggable screw terminals)
Ethernet	2x RJ45, Auto MDI-X, daisy-chain support, 10/100 MBit/s (Compatible with 1 GBit/s)
Ethernet Switch	Lookup Table (ALU) for 1,024 unicast MAC addresses
USB	1x port, USB 2.0, type-B female socket
Handling	5 status LEDs (+ 4 network status LEDs)
Case	Non-conductive, V-0 flammability rating (UL94 test method), designed for 35 mm DIN-rails or wall mounting
Dimensions	90 mm × 70 mm × 46 mm (3.54" × 2.76" × 1.81") (Length × Width × Height)
Weight	110 g (0.24 lb)   132 g (0.29 lb) incl. screw terminals and wall mounts
Temperature Range	-10 °C to 70 °C (14 °F to 158 °F) (Operating)   -20 °C to 85 °C (-4 °F to 185 °F) (Storage)
Relative Humidity	5 % to 80 %, non-condensing (Operating / Storage)
IP Rating	IP20
Certificates	CE, EAC, FCC, RoHS
Warranty	5 years of limited manufacturer's warranty

