



**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 8 Universes**

Each device drives up to 1,360 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)
Network Protocols	Art-Net (I, II, 3, 4, incl. ArtSync), Streaming ACN (sACN / ANSI E1.31)
Data Output	8x 512 channels SPI TTL (Maximum output per port: 680 RGB LEDs / 512 RGBW LEDs / 2048 1-channel LEDs)
Supported LEDs	APA101 / APA102 / APA104 / APA106 / GS8207 / GS8208 / GW6201 / GW6205 / LPD1882S / LPD6803 / LPD8806 / MBI6120 / MY9291 / P9883 / SJ1221 / SK6812 / SK6822 / SM16703 / SM16716 / TLS3001 / TLS3008 / TM1804 / TM1809 / TM1812 / TM1814 / TM1829 / UCS1903 / UCS2903 / UCS512B3 / UCS8904 / UCS9812S / WS2801 / WS2803 / WS2811 / WS2811S / WS2812 / WS2812B / WS2813 / WS2815 / WS2818 / 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 1024 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 x 70 mm x 46 mm (Length x Width x Height)
Weight	110 g   132 g incl. screw terminals and wall mounts
Temperature Range	-10 °C to 70 °C (Operating)   -20 °C to 85 °C (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

