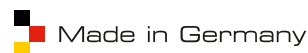




MADRIX NEBULA

The flexible pixel tape driver to directly control a wide range of digital LEDs.



Key Features

4th Edition – 05/2019

The MADRIX® NEBULA directly connects to your LED pixels.

This advanced SPI decoder receives control data over Ethernet network or USB and is built to provide excellent image quality.

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 the MADRIX® Software over USB.

Supported LEDs

- | | | | |
|------------|-----------|------------|------------|
| ▪ APA101 | ▪ P9883 | ▪ TM1814 | ▪ WS2812 |
| ▪ APA102 | ▪ SJ1221 | ▪ TM1829 | ▪ WS2812B |
| ▪ APA104 | ▪ SK6812 | ▪ UCS1903 | ▪ WS2813 |
| ▪ APA106 | ▪ SK6822 | ▪ UCS2903 | ▪ WS2815 |
| ▪ GS8207 | ▪ SM16703 | ▪ UCS512B3 | ▪ WS2818 |
| ▪ GW6201 | ▪ SM16716 | ▪ UCS8904 | ▪ WS2822S |
| ▪ GW6205 | ▪ TLS3001 | ▪ UCS9812S | ▪ WS2822S |
| ▪ LPD1882S | ▪ TLS3008 | ▪ WS2801 | Addressing |
| ▪ LPD6803 | ▪ TM1804 | ▪ WS2803 | |
| ▪ LPD8806 | ▪ TM1809 | ▪ WS2811 | |
| ▪ MBI6120 | ▪ TM1812 | ▪ WS2811S | |

Additional LED types will be supported with future firmware updates.

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® Software and 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.

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.

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

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

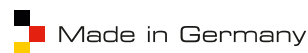
More Information

Find all the latest user manuals, drivers, firmware updates, and more at www.madrix.com



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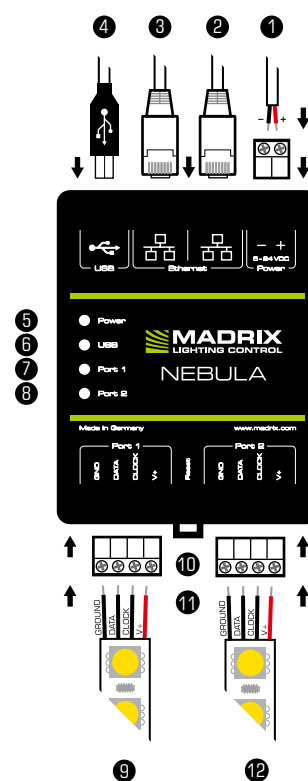


Technical Specifications

| | |
|------------------------|--|
| Power Supply | DC 5 V – 24 V, A) via 2-pin screw terminal (12 A max.), B) via 5 V USB, C) via Port 1 or 2 sourced from LEDs; 6 A max. load per port when supplying through to LEDs |
| Power Consumption | < 1.5 W during normal operation (300 mA max.) |
| USB | USB 2.0, type B port |
| Data Output | 8x 512 channels SPI TTL (Maximum output per port: 680 RGB LEDs / 512 RGBW LEDs / 2048 1-channel LEDs) |
| Ports | 2x ports (via 2x 4-pin, pluggable screw terminals) |
| Ethernet | 2x RJ45, Auto MDI-X, 10/100 MBit/s (compatible with 1 GBit/s) |
| Supported LEDs | APA101, APA102, APA104, APA106, GS8207, GW6201, GW6205, LPD1882S, LPD6803, LPD8806, MBI6120, 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 |
| Dimensions (L x W x H) | 92 mm x 70 mm x 45 mm |
| Weight | 110 g 132 g incl. screw terminals and wall mounts |
| Operating Temp. | -10 °C to 70 °C |
| Storage Temp. | -20 °C to 85 °C |
| Relative Humidity | 5 % to 80 %, non-condensing (Operating / Storage) |
| Case | Non-conductive, IP20, UL94 V-0 flammability rating, designed for 35 mm DIN-rails or wall mounting |
| IP Rating | IP20 |
| Certificates | CE, FCC, RoHS |

As of March 2019.
See www.madrix.com
for the latest information.

Connectivity



- 1) Power
- 2) Right Ethernet port, incl. 2 status LEDs
- 3) Left Ethernet port, incl. 2 status LEDs
- 4) USB port
- 5) Status LED for Power
- 6) Status LED for USB
- 7) Status LED for Port 1
- 8) Status LED for Port 2
- 9) Port 1
- 10) Reset button
- 11) DIN-rail unlocking clip
- 12) Port 2



RoHS compliant