MADRIX NEBULA

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

Made in Germany

Key Features

2nd Edition – 06/2017

The MADRIX NEBULA directly connects to your LED pixels.
This advanced SPI decoder receives control data over USB or Art-Net over Ethernet network and is built to provide excellent image quality.

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.

SPI Converter
Art-Net is directly converted to SPI without the need for an additional interface. Reliably distribute data from any compatible software or hardware controller. Use USB or Art-Net for all the great features of the MADRIX Software.

Supported LEDs

- APA101
- APA102
- APA104
- APA106
- GW6201
- LPD6803
- LPD8806
- MBI6120
- P9883
- SK6812
- SK6822
- SM16703
- SM16716
- TLS3001
- TLS3008
- TM1804
- TM1809
- TM1812
- TM1814
- TM1829
- UCS1903
- UCS512B3
- WS2801
- WS2803
- WS2811
- WS2811S
- WS2812
- WS2812B
- WS2813
- WS2818
- WS2822S
- WS2822S Addressing

As of May 2017. 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
Simply use several units at the same time for larger projects. MADRIX Software and hardware allow you to fully synchronize Art-Net data for all ports and across multiple devices to get an optimal image on the LEDs without visual interruptions.

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. 6 indicators quickly show the device status with the option to turn them off.

Invaluable Features
The device is ready within seconds after startup. Its firmware is upgradable for future features. HTP Merging is automatically available for two Art-Net sources. Use the built-in web tool for configuration.

Free software demo version, user manuals, and more information are available at **www.madrix.com**

Package Contents

- MADRIX NEBULA
- Set of screw terminals (2x 4-pin and 1x 2-pin)
- USB cable
- 2 Wall-mount brackets
- Quick start guide
- CD-ROM incl. MADRIX Software and USB drivers (license not included)

MADRIX LIGHTING CONTROL

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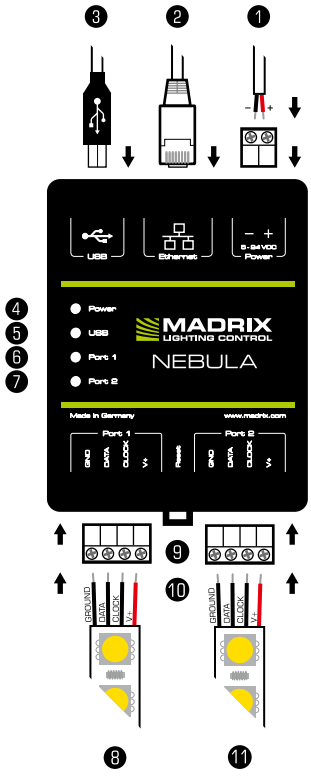
Technical Specifications

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 screw terminals)
Ethernet/Art-Net	RJ45, 10/100 MBit/s (compatible with 1 GBit/s)
Supported LEDs *As of May 2017.* *See www.madrix.com for the latest information.*	APA101, APA102, APA104, APA106, GW6201, LPD6803, LPD8806, MBI6120, P9883, SK6812, SK6822, SM16703, SM16716, TLS3001, TLS3008, TM1804, TM1809, TM1812, TM1814, TM1829, UCS1903, UCS512B3, WS2801, WS2803, WS2811, WS2811S, WS2812, WS2812B, WS2813, WS2818, WS2822S, WS2822S Addressing
Dimensions (L x W x H)	92 mm x 70 mm x 45 mm
Weight	111 g | 130 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

Connectivity



1) Power
2) RJ45 Ethernet port, incl. 2 status LEDs
3) USB port
4) Status LED for Power
5) Status LED for USB
6) Status LED for Port 1
7) Status LED for Port 2
8) Port 1
9) Reset button
10) DIN-rail unlocking clip
11) Port 2

CE FC RoHS compliant