MADRIX NEBULA

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

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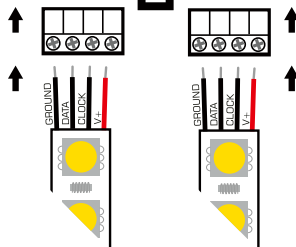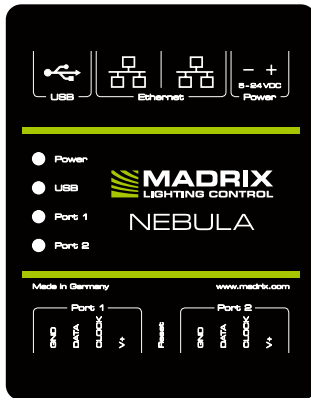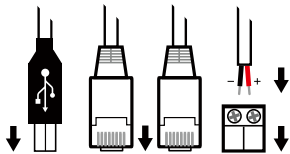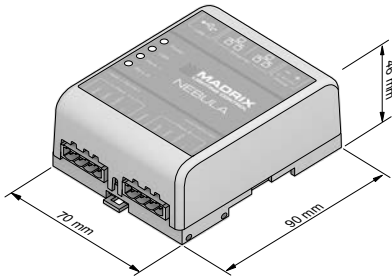
Sync Mode & Daisy-Chain Support
MADRIX® 5 and MADRIX® hardware allow you to fully synchronize Art-Net data for all ports and across devices to get an optimal image on the LEDs without visual interruptions. 2 Ethernet ports allow linearly daisy-chaining several devices together.

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.

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.

Specifications

Supply Of Power	DC 5 V – 24 V; over **A)** 2-pin, pluggable screw terminal (12 A max.), **B)** 5 V USB, **C)** 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)
USB Port	USB 2.0, type B plug
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 As of March 2019. See www.madrix.com for the latest information.	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)	90 mm x 70 mm x 46 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, V-0 flammability rating (UL94 test method), designed for 35 mm DIN-rails or wall mounting
IP Rating	IP20
Certificates	CE, FCC, RoHS