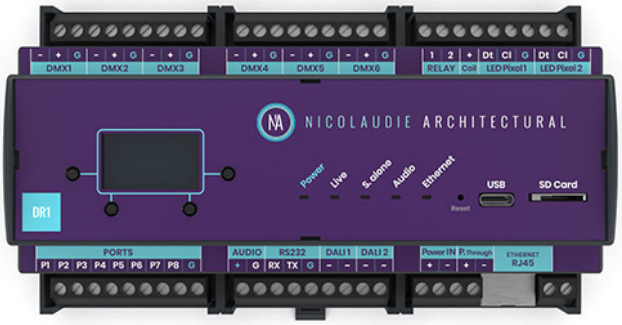
GEN LED acolyte®
Architectural Lighting Solutions

Date | Project

Notes

2 UNIVERSE DMX CONTROLLER



The 2 Universe DMX Controller is an incredibly durable solution for fixed lighting installations. Control up to two universes – as many as 1,024 channels -- over DMX, LED Pixel or DALI protocols. Link multiple controllers to synchronize more demanding, large-scale lighting projects, all with multi-zone show controls and advanced triggering capabilities. Program fades, bursts, scenes and sequences with a PC or Mac over USB/Ethernet or use an on-site programming app with your smartphone or tablet. Single unit allows for individual control over up to 341 RGB or 256 RGBW devices!

- 1,024 channels
- 20 zones
- 2,000 scenes
- 16 mb internal memory
- Micro SD card
- 8-15V DC power
- 8 ports
- Clock/calendar triggers
- Optional audio/DALI triggers
- Control with iOS/Android apps
- Program with PC/Mac or iOS/Android

Applications:

Commercial	Hospitality	Residential
Entertainment	Museums	Retail
Healthcare	Public Spaces	

ORDERING GUIDE

Category
DMXCTRLDR2U
DMXCTRLDR2U - 2 Universe DMX Controller

SPECIFICATIONS

Input Power	12V DC (8 - 15V range)
Output Protocol	DMX512 (x2)
Programmability	PC (Windows 7/8/10), Mac (Windows 7/8/10), Android, iOS
Connections	USB-C, Ethernet Screw terminals (for 2 DMX / RDM Universes, 2 DALI loops 2021, LED Pixel 2021, 8 Contact ports, Relay, 12V power-in & p.through, RS232 scene trigger (optional), Audio in <sound to light> (optional), Battery holder (CR2032), Micro SD slot
Memory	16MB flash, SD Card
IP Rating	IP20
Operating Temperature	32° - 122° F (0° - 50° C)
Standards	EC, EMC, ROHS
Dimensions (L x W x D)	6.3 x 3.58 x 2.44 in. (160 x 91 x 62 mm)
Weight	0.7 lb (317 g)

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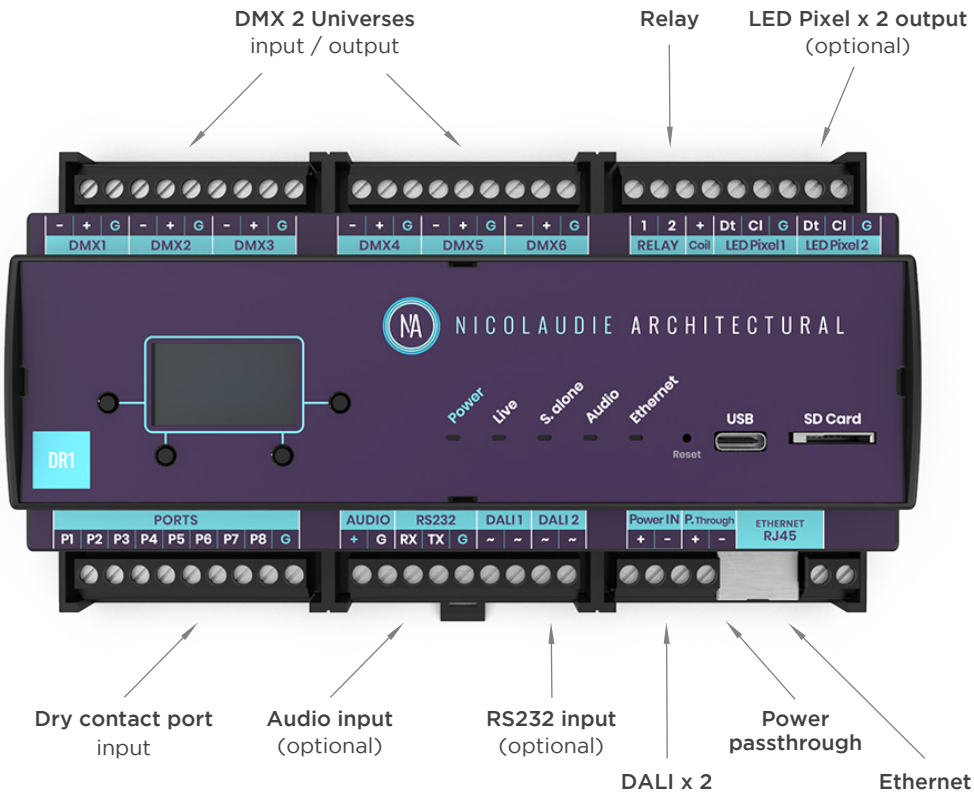
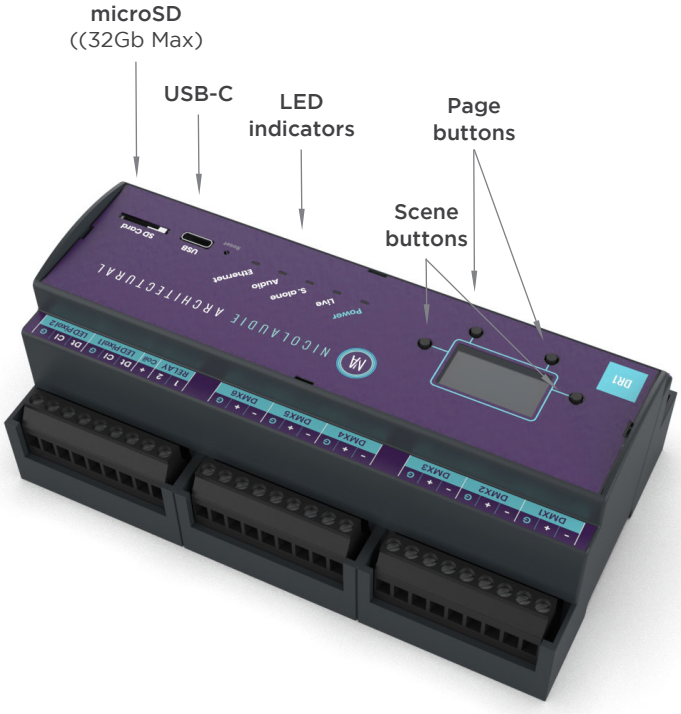
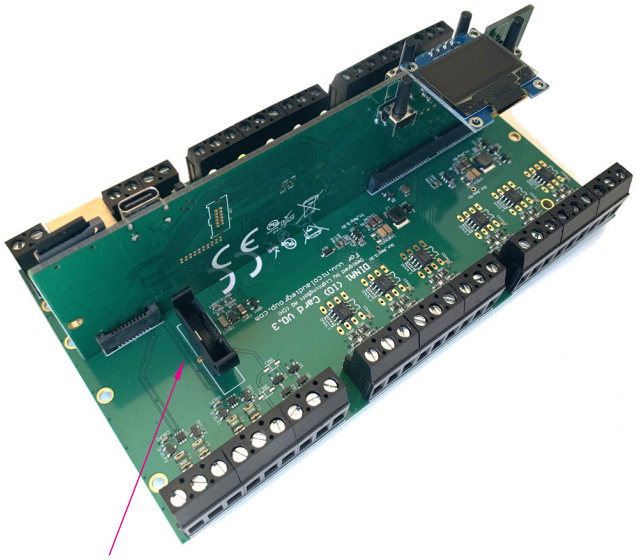
REV. 04APR2022

CONNECTIONS







INSTALLATION / SETTINGS

Easy Installation

1. Mount a DIN Rail or DIN Rail Encloser against a wall

2. Connect the wires

POWER: Connect 12V DC ACDC supply. The 2 Universe DMX Controller can accept 8v-15v.

Be sure to not invert the + and the ground.

DMX: Connect the DMX cables from one of the 6 universes to the lighting receivers.

3. Clip the 2 Universe DMX Controller onto the DIN RAIL

On the back of the interface housing is a channel designed to accept a DIN Rail with a black plastic clip which secures the interface.

To mount: Slide the mounting teeth behind the top of the rail and then rotate downwards to engage the clip.

To dismount: At the lower edge of the interface you will see a plastic clip. Pull this down to release interface from the rail.

Setting up the controller

The controller can be programmed from a PC, Mac, iOS (Apple) or Android device using the software listed below. Refer to the corresponding software manual for more information. Firmware and settings can be updated using Hardware Manager (installed with PC/Mac programming software) or with Hardware Tools.

Windows / Mac Programming Software

ESA Pro 2 - Multizone

www.nicolaudie.com/esapro2.htm

ESA2 - Single Zone

www.nicolaudie.com/esa2.htm

Hardware Manager - For Firmware, time/date

Find this under Tools @ nicolaudie.com/download.htm

Apple iOS and Android Apps

Arcolis - Search for 'Arcolis' on the Google Play Store and iOS App Store

Hardware Tools - Search for 'Hardware Tools' on the iOS App Store or on Google Play for Android devices.

Connections & Triggering

DMX512

Connect up to 2 DMX universes and 2,000 scenes for the 2 Universe DMX Controller. It is possible to buy extra DMX universes for the controller to reach the maximum number of channels.

LED Indicators

- POWER: Orange LED is ON when the interface is powered.
- LIVE: Green LED is ON when software or an app communicates with the controller.
- S. ALONE: Red LED is ON when the controller runs in Stand Alone mode.
- AUDIO: White LED is FLASHING when the controller receives an audio signal.
- ETHERNET: Blue LED is FLASHING when the controller is connected to a local network.

Audio (optional)

It is possible to directly connect an analog audio source to the 2 Universe DMX Controller in order to trigger your lighting scenes with the beat of the music. Simply connect a line level signal to the controller.

The programming/configuration must be done with ESA Pro 2 software like any other TCA trigger. You can decide to make a scene jump from step to step according to the beat.

When an audio signal is received by the controller, the AUDIO LED (white) will flash.

Ports

- Use up to 8 external trigger ports (dry contacts).
- Connect G and P1 to start Port #1.
- Connect G and P2 to start Port #2, and so on.
- Ports can be programmed in your show file (TCA).

RS232 (optional)

Make a cable using the 3 pins: RX, TX and G (GND).

Set the RS232 parameters to: 9600 bds 8 bits, no Parity, 2 Stop bits.

Messages should be hexadecimal (i.e., 1=01, 255=FF etc.).

- To play a scene, send 4 bytes: 1 x y 255
- To stop a scene, send 4 bytes: 2 x y 255
- To pause a scene, send 4 bytes: 3 x y 255
- To release a pause, send 4 bytes: 4 x y 255
- To reset a scene, send 4 bytes: 5 x y 255

When (y)=0, (x) can be set between 0 and 255.

- To stop scene 145, send the command: 2 145 0 255

When (y)=1, (x) can be set between 0 and 243 to trigger scenes 256-499.

- To play scene 300, send the command: 1 44 1 255

A page can contain 1 to 2,000 scenes as long as the total number on all pages does not exceed 2,000. The index of a scene can be found by looking in the file /show1/show_map.xml after writing a scene.

General examples:

0x01 0x02 0x00 0xFF to call scene 2.

0x01 0x05 0x00 0xFF to call scene 5.

0x01 0x10 0x05 0xFF to call scene 1296.

Hardware Settings Display

It is possible to display most of the controller settings from the device screen. Simply press and hold the 2 zone buttons for 2 seconds to display the settings. You can then navigate with the scene buttons. Repeat the operation to leave the display mode. The most important settings can be visualized from the device display: date/time, firmware version, serial number, network settings, etc. It is also possible to visualize the controller performances (CPU, memory, etc.).

Log Management

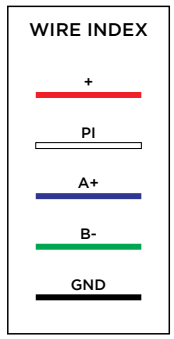
The 2 Universe DMX Controller offers the possibility to store activity logs on an SD Card or on a SysLog server. This option can be activated from the Hardware Manager program (Settings tab) and could be very helpful to service an installation. We recommend that you activate the SD Card option on demand only (debugging operation) to lower the SD Card access.

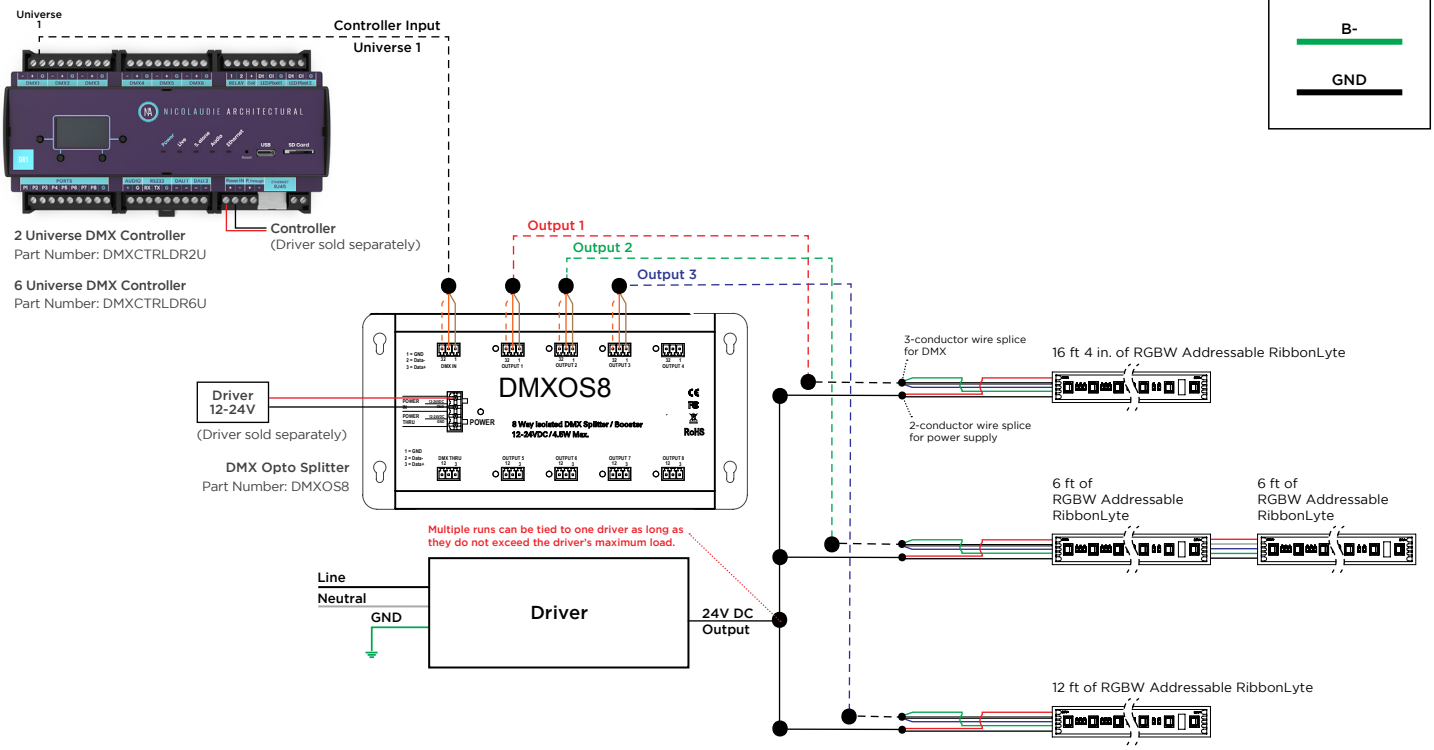
WIRING DIAGRAMS WITH RGBW ADDRESSABLE RIBBONLYTE

One DMX Universe consists of 128 addresses and 512 channels (42 ft, 8 in. of RibbonLyte).

Any single run of RibbonLyte that is less than 16 ft, 4 in. can be wired directly to the controller.

For additional runs, Opto Splitter must be used. Each individual run will need its own Opto Splitter output.



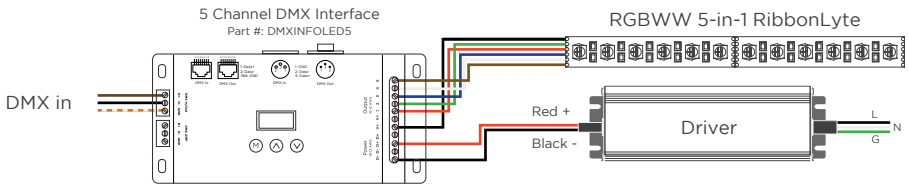


MAX LENGTH BETWEEN DRIVER & RIBBONLYTE AT FULL LOAD

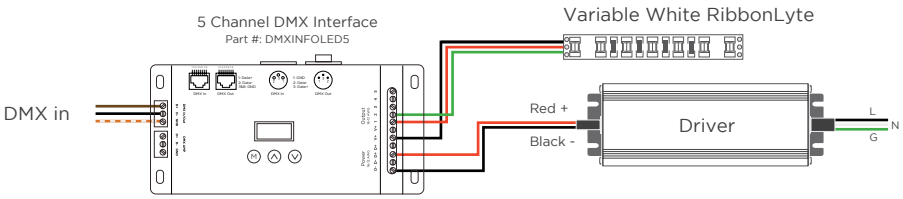
Wattages	40		60		96 + 100		150		200		240		300		320	
Wire Gauge	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
24 AWG	14	4.27	9	2.74	5.5	1.68	3.75	1.14	2.75	0.84	2.25	0.69	1.75	0.53	1.75	0.53
22 AWG	22	6.71	14	4.27	9	2.74	5.75	1.75	4.5	1.37	3.5	1.07	2.75	0.84	2.75	0.84
20 AWG	35	10.67	23	7.01	14	4.27	9	2.74	7	2.13	5.75	1.75	4.5	1.37	4.25	1.30
18 AWG	56	17.07	37	11.28	23	7.01	15	4.57	11	3.35	9	2.74	7.5	2.29	7	2.13
16 AWG	90	27.44	60	18.29	37	11.28	24	7.32	18	5.49	15	4.57	12	3.66	11	3.35
14 AWG	142	43.29	95	28.96	59	17.99	38	11.59	28	8.54	23	7.01	19	5.79	17	5.18
12 AWG	226	68.90	151	46.04	94	28.66	60	18.29	45	13.72	37	11.28	30	9.15	28	8.54
10 AWG	360	109.76	240	73.17	150	45.73	96	29.27	72	21.95	60	18.29	48	14.63	45	13.72
8 AWG	574	175.00	381	116.16	239	72.87	153	46.65	115	35.06	95	28.96	76	23.17	71	21.65

WIRING DIAGRAM WITH RGBW, RGBA & VARIABLE WHITE RIBBONLYTE

DMX



DMX WIRING DIAGRAM - COMPATIBLE WITH ALL MODELS OF VARIABLE WHITE RIBBONLYTE



WIRE COLORS PER RIBBONLYTE COLOR

RGBW & RGBA
Black Wire (+) Positive
Red Wire (-) goes to Red Channel
Green Wire (-) goes to Green Channel
Blue Wire (-) goes to Blue Channel
White Wire (-) goes to White Channel

RGBWW
Black (+) Positive
Green Wire (-) goes to Green Channel
Red Wire (-) goes to Red Channel
Blue Wire (-) goes to Blue Channel
White Wire (-) goes to White Channel 1
Brown Wire (-) goes to White Channel 2

VARIABLE WHITE
Black Wire (+) Positive
Red Wire (-) goes to Warm White Channel
Green Wire (-) goes to Cool White Channel