

DINA-DR1 / LITE

DIN rail mounted – Advanced lighting controller



Overview

The DINA-DR1 is a lighting controller for the most ambitious of projects, outputting 6 DMX512 universes (3072 channels) in 20 zones, eDMX and DALI simultaneously. Trigger lighting scenes using calendar triggers and conditional rules. Connect to the Nicolaudie Cloud for remote control and management.

Lighting levels, color and effects can be programmed from a PC or Mac. Remote control from iPhone/iPad, Android, Win & Mac.

www.nicolaudie.com/dina.htm

Key Features

- DMX512 / eDMX / LED Pixel Stand Alone controller
 - DR1 6x Universes (3072 channels)
 - DR1 LITE 2x Universes (1024 channels)
 - Output Universes via DMX512 (up to 6 universes) & Artnet/sACN (up to 12 universes with SUT universe upgrade)
 - 2x DALI buses (single-master) *
 - SUT Technology allows the device to be upgraded with more universes & used with other Nicolaudie Group software
 - USB & Ethernet connectivity
 - Stand Alone mode with 2000 scenes & 20 zones
 - 16MB flash memory & microSD slot
 - 8 dry contact trigger ports
 - RDM compatible
 - Windows/Mac software for programming
 - iPhone/iPad/Android/Mac & Windows apps for remote control
 - Compatible with NATouch-1 wall controller
 - Control 2 external relays
 - Nicolaudie Cloud * : Remote control and management via internet connection (subscription required)
 - Audio triggering / sound-to-light *
 - RS232 protocol scene control *
- Future features**
- Direct support for LED Pixel Tape *

* Optional features with DR1 LITE model

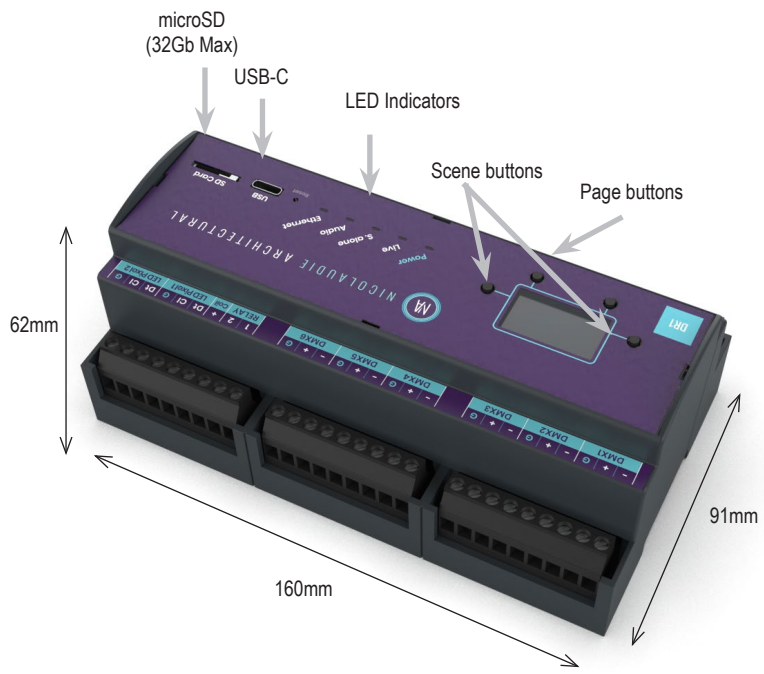
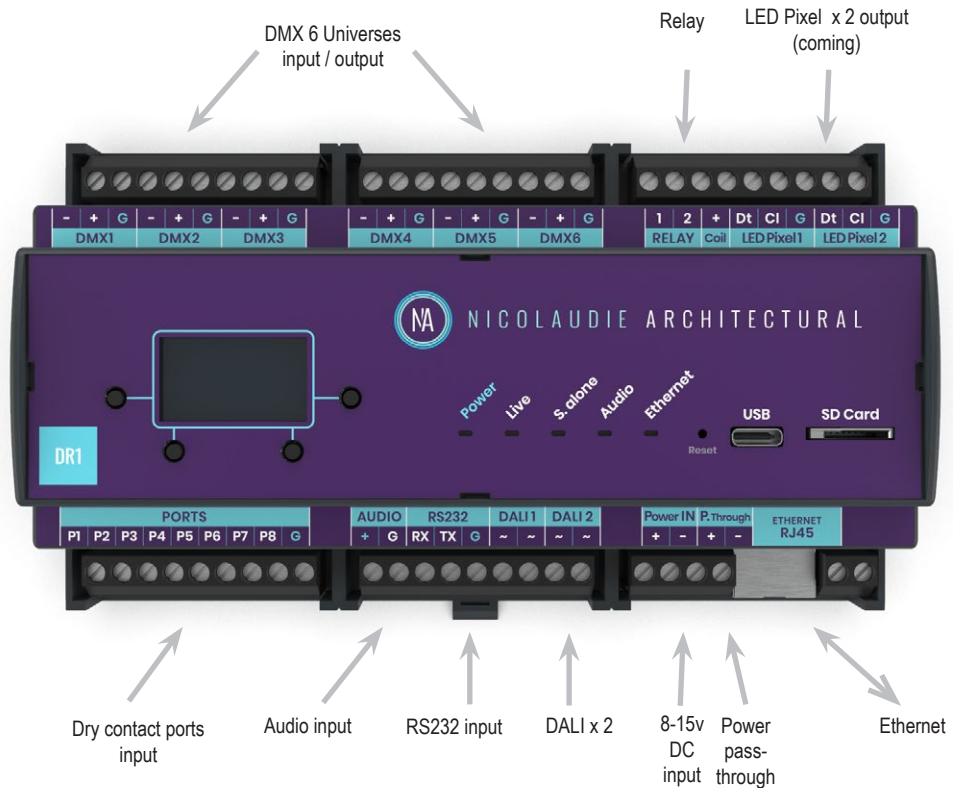
Technical Data

Input Power	12v DC (8-15V range)
Output Protocol	DMX512 (x6), DALI-2, eDMX, LED Pixel (SPIx2)
Programmability	PC, Mac, Android, iOS
Connections	USB-C Ethernet Screw terminals for – 6 DMX / RDM Universes – LED Pixel (coming) – 2 DALI loops – 8 Contact ports – Relay – 12v power-in & pass through – RS232 scene trigger – Audio in Battery holder (LIR2032 3.6v), microSD slot
TCP Connections	10 + 1 cloud
Memory	16MB flash, SD Card (max 32Gb, FAT32)
Environment	IP20
Buttons	2 scene, 2 page, 1 reset
Dim / Weight	160 x 91 x 62 mm 317g
OS Requirements	Mac OSX 10.13+, Win 10/11
Standards	ETL, Low voltage, EMC, and RoHS

Optional

12V AC/DC power supply

Connections



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EASY INSTALLATION

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

2. Connect the wires

POWER: Connect 12V DC ACDC supply. The DINA-DR1 can accept 8v-15v. Be sure to not invert the + and the ground.

DMX: Connect DMX cables from one of the 6 universes to the lighting receivers.
DALI: Connect DALI cables from DALI1 and DALI2 to your DALI devices.

3. Clip the DINA-DR1 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

Programming the Controller

The controller can be programmed from a PC or Mac. Refer to the corresponding software manual for more information.

Windows / Mac Programming Software



ESA Pro 2 Software (Windows/Mac) Designed for lighting professionals. Includes multi-zone programming, a time-line editor, automations, advanced triggers (TCA), DMX512, DALI, sound-to-light, relays and a standalone mode simulator.
nicolaudie.com/esapro2.htm



ESA2 Software (Windows/Mac) - Single zone, DMX512, step-based programming with time / port triggers. It only requires a few minutes to setup the software and gain full control of any kind of lighting.
nicolaudie.com/esa2.htm



Hardware Manager (Windows/Mac)
<https://eu-tools.n-g.co/Release/HardwareManager.dmg>
<https://eu-tools.n-g.co/Release/HardwareManager.exe>

Firmware and settings can be updated using Hardware Manager (installed with PC/Mac programming software). Use for DALI commissioning.

Remote Control



Arcolis Remote makes life easy allowing you to control your Nicolaudie interface over a local network from your iPhone/iPad, Android device, Windows or Mac. nicolaudie.com/arcolis-remote



Arcolis Remote Pro Create an entirely customized remote controller for your tablet or smartphone. Available for iPhone/iPad and Android devices. nicolaudie.com/arcolis-remote-pro

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CONNECTIONS AND TRIGGERING

DMX512

Connect up to 6 DMX universes to the controller using the DMX connections.

LITE models ship with licences for 2 universes (i.e. DMX1 and DMX2). The remaining DMX connections can be unlocked. See SUT Licence Upgrades on page 5.

LED INDICATORS

- POWER: orange LED is ON when the interface is powered on
- LIVE MODE: green LED flashes when software is connected
- STANDALONE MODE: red LED is ON when the controllers is running in standalone mode
- AUDIO: white LED flashes when the controller detects a beat or pulse from the microphone or Line In
- ETHERNET: blue LED flashes when the controller is connect to a local network

AUDIO / SOUND-TO-LIGHT

The controller has sound-to-light capability running in standalone mode.

Audio beats are detected using the Line In port. The signal should be line or headphone level. For microphone level, the signal will need a pre-amp.

The audio LED will flash white when a beat is detected.

Programming/configuration of sound-to-light must be made using ESA Pro 2. Refer to the ESA Pro 2 manual.

BATTERY

3.6v rechargeable LIR2032 battery provides power to store date and time and last played scene in case of a power cut.

Warning: Do not replace with a non-rechargeable CR2032 battery as these can leak and cause damage. Battery should not be relied upon for daily power outages due to life of ~500 cycles or rely on in temps below 0°C.

DALI

Connect up to 2 distinct DALI buses to the DALI1 and DALI2 connections. These support DALI-2 control-gears (e.g. DALI output drivers) in a single-master configuration with up to 64 addresses per bus. The DINA-DR1 acts as the master. Neither input devices nor other masters are currently supported.

Before programming you must commission your DALI devices connected to each bus. Open HardwareManager software and use the DALI screen. Then use ESA Pro 2.2+ for programming.

PORTS

Use up to 8 external trigger ports (dry contacts)

Connect G and P1 to trigger port #1 etc.

Use the ports to trigger actions in our software such as starting, stopping or pausing a scene.

RS232

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

Set the RS232 communication parameters to :
9600bds, 8 bits, no parity, 1 stop bit

Messages should be hexadecimal not decimal (ie. 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 0 - 255 to trigger scenes 0-255

When (y)=1, (x) can be set 0 -255 to trigger scenes 256-511

... and so on, up to (y)=7) and (x) =208 for scene 2000.

The index of a scene can be found in ESA Pro 2 on the Stand-alone screen, using the Scene List button or by looking in the file /show1/show_map.xml on the microSD after writing.

HARDWARE SETTINGS DISPLAY

Most controller settings can be displayed on the screen. e.g. date/time, firmware version, serial number, network settings, etc. Press and hold the 2 zone buttons (tick and cross) for 2 seconds to display the settings. Repeat to leave the display mode.

LOG MANAGEMENT

The controller offers the possibility to store activity logs on the SD CARD or on a syslog server. This option can be activated from Hardware Manager on the Settings tab. We recommend using the 'Store on SD Card' option for debugging only.

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SUT Licence Upgrades

Extra hardware features and software compatibility can be unlocked by purchasing upgrades or adding 30 day free software trials at https://store.nicolaudie.com/my_interfaces

1. Click + *Register a new Interface* and download the SUT driver software. Follow the on-screen prompts.

2. Once registered, select your interface on the left. You can buy new features and software compatibility, change the device name or transfer the device to a new owner.

Any licence changes will be *automatically* synchronised the next time you connect your interface to most Nicolaudie Group software while connected to the internet. Currently installed licences can be checked using HardwareManager on the SUT screen.

TROUBLESHOOTING

The controller is not detected by the computer

- Be sure that the latest software version is installed from our website
- Connect by USB and open the Hardware Manager (found in the software directory). If it is detected here, try to update the firmware. If it is not detected, try the method below.

• Bootloader Mode

Sometimes the firmware update may fail and the device may not be recognized by the computer. Starting the controller in 'Bootloader' mode forces to the controller to start at a lower level and in some cases allows the controller to be detected and the firmware to be written. To force a firmware update in Bootloader Mode :

1. Power off your interface
2. Start HardwareManager on your computer
3. Activate Bootloader by holding down buttons 2 & 3 (under the screen) while connecting power. Instead of connecting power you can also press the reset button. If successful, the green, red and white LED will flash and your interface will appear in HardwareManager with the suffix `_BL`.
4. Update your firmware

The lights are not responding

- Check the DMX +, - and GND are connected correctly
- Check that the driver or lighting fixture is in DMX mode
- Be sure that the DMX address has been set correctly
- Check there are no more than 32 devices in the chain
- Check that the red DMX LED is on or flickering.
- Connect with the computer and open Hardware Manager (found in the software directory). Open the DMX Input/Output tab and move the faders. If your fixtures respond here, it is possibly a problem with the show file

Green, red and white LED flashing

The controller is in bootloader mode. This is a special 'startup mode' which is run before the main firmware loads. Try re-writing the firmware with the latest HardwareManager available from the downloads section of our website.