

16500, INC 2100 POWELL ST SUITE 800 EMERYVILLE, CA 94608-1826

Phone: 510-645-2524 Fax: 510-420-5719 Contact: Bowerman, Tara

# **DMX Controls**

21-12877-2 6/24/2021

Submission Type		
Prior Approval	Resubmittal for Approval	Approval
Corrections	✓ Your Use	Other



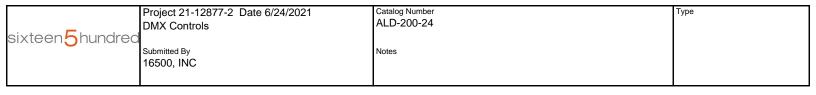
> Submitted By 16500, INC

Туре	Qty	Manufacturer/Brand	Catalog Number	Notes
	1	Acclaim Lighting	ALD-200-24	
	1	Acclaim Lighting	ALD-400-24	
	1	Acclaim Lighting	ALD-800-24	
	1	Acclaim Lighting	CAN100	
	1	Acclaim Lighting	ART500	
	1	Acclaim Lighting	ART4PU	
	1	Acclaim Lighting	PHAROS LPC4	
	1	Acclaim Lighting	PHAROS TPC	
	1	Acclaim Lighting	PHAROS EXT	
	1	Acclaim Lighting	PHAROS TPS	
	1	Acclaim Lighting	PHAROS LPC 10	
	1	Acclaim Lighting	PHARSO LPC 100	
	1	Acclaim Lighting	PHAROS VLC 50	
	1	Acclaim Lighting	PHAROS VLC 100	
	1	Acclaim Lighting	PHAROS BPS	
	1	Acclaim Lighting	ALF6PU	
	1	Acclaim Lighting	XMT-350	
	1	Acclaim Lighting	ARIA WIRELESS	
	1	Acclaim Lighting	ARIA RANGE EXTENDER	
	1	Acclaim Lighting	TC 1 PRO	
	1	Acclaim Lighting	DDC 1 AC	
	1	ABL-Acuity Brands Controls	DXT M02	
	1	ABL-Acuity Brands Controls	FCS 7TSN X DWH	
	1	ABL-Acuity Brands Controls	EZDIN 120/277	
	1	Targetti	SLESA U9	
	1	Targetti	SLESAU9	
	1	Targetti	SLESA-UE7	
	1	Targetti	SWITCH20	
	1	PureEdge Lighting	CDMX1 RGBW WH	
	1	KELVIX	DMXC 4C 3S IW W	
	1	KELVIX	RGBW QC 4C	
	1	KELVIX	DMXC 5C 1Z IW WH	
	1	KELVIX	RFC A RGBW 4Z HH BT B	
	1	KELVIX	CBU-ASR	
	1	KELVIX	TX-CMP-TCH	
	1	KELVIX	TX-CMP-BTN	
	1	KELVIX	CM-BTN-POE-IW-BB	
	1	KELVIX	CM-PTS-POE-IW-BB	
	1	KELVIX	DMXC-N1-6V-IW-B	



> Submitted By 16500, INC

Туре	Qty	Manufacturer/Brand	Catalog Number	Notes
	1	KELVIX	DMXC-TX-E1-24V-RM-B	
	1	KELVIX	TX-CMP-MINI-MDP-SA	
	1	KELVIX	TX-CMP-LW-GH-RM	
	1	KELVIX	DMXC-PTC-POE-IW-BB	
	1	KELVIX	DMXC-PL1-MV-DIN-S	
	1	KELVIX	CM-TX-DMX1-DIN-S	
	1	KELVIX	CM-DMXD-SPI-2202-I	
	1	KELVIX	TX-T8MK2-XMTR-ETH-B	
	1	KELVIX	TX-R2F-RCV-SPI-TB	
	1	KELVIX	CM-TX-DMX8-RM-B	
	1	KELVIX	CM-PXT-MV-DIN-S	
	1	KELVIX	CM-PDN-LV-RM-B	
	1	KELVIX	DMXC-BT-1C-4SZ-IW-B	
	1	KELVIX	DMXC-BT-2C-4SZ-IW-B	
	1	KELVIX	DMXC-BT-4C-4SZ-IW-B	
	1	KELVIX	DMXC-BT-5C-4SZ-IW-B	
	1	KELVIX	DMXD-5C-AMP-UNV	
	1	KELVIX	DMXD-16C-AMP-UNV	
	1	KELVIX	DMXD-32C-AMP-UNV	
	1	KELVIX	LCX-1041	
	1	KELVIX	LCX-4044	
	1	KELVIX	LCX-1300	
	1	KELVIX	LCX-4250	
	1	KELVIX	CM-010V-2CH-CT-5A-MV	
	1	LLI Architectural Lighting	LLI-C-CTRL-DMX-RGBW-TP	
	1	LLI Architectural Lighting	LLI-C-CTRL-DMX-STICK-CW4	
	1	LLI Architectural Lighting	LLI-C-CTRL-DMX-STICK-DE3	
	1	LLI Architectural Lighting	LLI-C-CTRL-DMX-STICK-GU2	
	1	LLI Architectural Lighting	LLI-C-DEC-DMX512-8A	
	1	LLI Architectural Lighting	LLI-C-DEC-DMX512-8A-RDM	



# AL DRIVER 200<sup>TM</sup>





The **AL Driver 200** is a multi-protocol, 200W driver for low voltage LED products. The input control protocols include DMX, RDM, 0-10V and DALI; and features 24V DC / PWM output. It offers maximum flexibility with your front end control preferences.

# **SPECIFICATIONS**

Input Voltage	100-277VAC, 50/60Hz
Output Voltage	24VDC
DC Output Wattage	200W
DC Output Current	4A maximum per channel
Control Input Protocols	DMX+RDM, 0-10V (sink and source), DALI
Control Output Protocols	Multi-channel PWM
Maximum Power Consumption	230W
Optional Operating Modes	Static color selection, internal preset color fade
Internal Sensors	Temperature & usage, data accessible via the on-board display
Finish	Black
IP Rating	IP22, Dry Location
Ambient Operating Temperature	14° F to 113° (-10° C to 45° C)
Connectors	6 pin terminals for PWM outputs, 3 pin terminals for DMX, 2 pin terminals for 0-10V & DALI
Warranty	5 Years Limited
Weight	TBD
Dimensions	TBD
Certifications	

# ORDER CODE

## **ALD224**

Catalog Number ALD-200-24

Notes

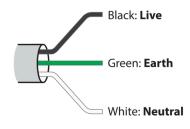
Туре

# AL DRIVER 200<sup>™</sup>

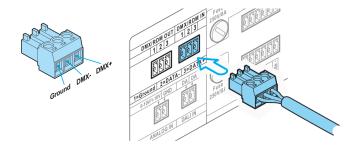


## WIRING

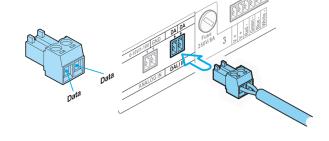
#### AC Power Input: 100-277VAC, 50/60Hz



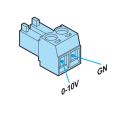
#### DMX In / Out

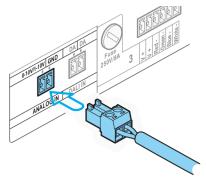


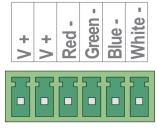
#### **DALI Input**







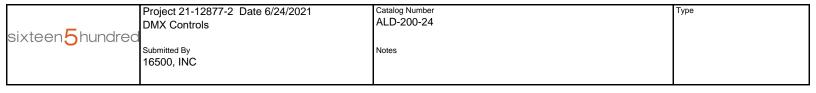




$LOAD = \mathbf{RGB}$	V+	۷+	Red	Green	Blue	
$LOAD = \mathbf{RGBW}$	٧+	٧+	Red	Green	Blue	White
LOAD = <b>Ai Dim</b>	V+	۷+	W1	W2	W3	W4
LOAD = DW	٧+	٧+	Warm	Cold	Warm	Cold
LOAD = <b>White</b>	V+	V+	White	White	White	White

#### Notes

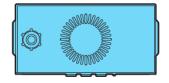
- Whichever LOAD-type is chosen, that setting will be applied globally to all ports. For example, it is not possible to choose Ai Dim operation for some ports and RGBW for others.
- The maximum 6.6A load limit for each port (and the maximum overall load for the whole device) must not be exceeded.
- In Ai Dim mode, the W1 to W4 connections align with the four marked wires of products such as Ai Flex.

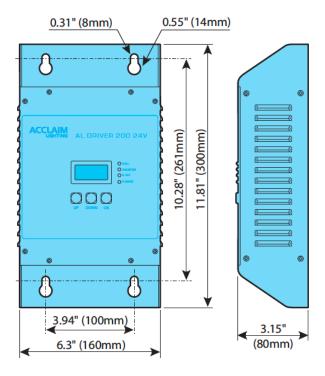


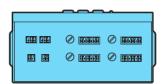
# AL DRIVER 200<sup>TM</sup>



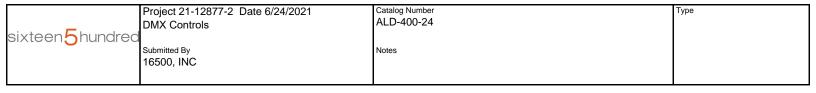
## **DIMENSIONS**





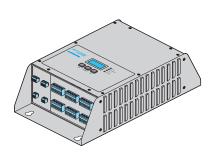


Weight: 5.29 lbs (2.4kg)



# AL DRIVER 400™





The AL Driver 400 is a multi-protocol, 400W driver for low voltage LED products. The input control protocols include DMX, RDM, 0-10V and DALI; and it features either a 12V or 24V DC output. It offers maximum flexibility with your front end control preferences.

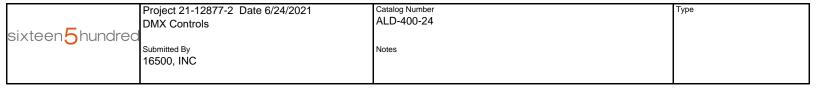
### **SPECIFICATIONS**

Input Voltage	100-277VAC, 50/60Hz
Output Voltage	12VDC or 24VDC
DC Output Wattage	400W
DC Output Current	6.6A Max per channel
Control Input Protocols	DMX, RDM, 0-10V (Source Only), DALI
Control Output Protocols	PWM
Max Power Consumption	4.167A, 500W @ 120VAC
Optional Operating Modes	Static color selection, Internal preset program
Internal Sensors	Temperature & usage, data accessible via on-board display
Finish	Black
Housing Material	Aluminum
IP Rating	IP22, Dry Location
Ambient Operating Temperature	14° F to 113° F (-10° C to 45° C)
Connectors	6 pin terminals for PWM outputs, 3 pin terminals for DMX, 2 pin terminals for 0-10V & DALI
Warranty	5 Years, Limited
Weight	8.4 lbs (3.8 kg)
Dimensions	<b>L</b> 13.38" x <b>W</b> 9" x <b>H</b> 3.14" (L 340 x W 230 x H 80mm)
Certifications	





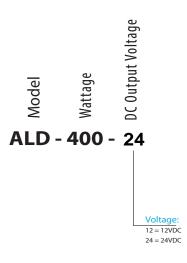




# AL DRIVER 400™



## ORDER CODE

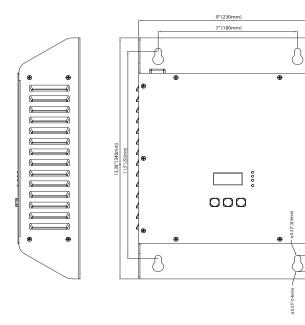


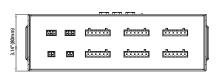
# 12V compatible with: Flex II

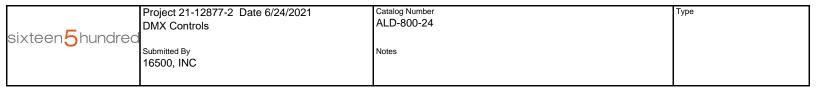
Flex III
Flex Pro
Flex Eco
Flex Spectrum
Flex Tube
Flex Tube SE
AL Graze DC CV
Rebel Drum Series CV

24V compatible with:

## **DIMENSIONS**







# AL DRIVER 800 TM





The **AL Driver 800** is a multi-protocol, 800W driver for low voltage LED products. The input control protocols include DMX, RDM, 0-10V and DALI; and features 24V DC / PWM output. It offers maximum flexibility with your front end control preferences.

# **SPECIFICATIONS**

Input Voltage	100-277VAC, 50/60Hz
Output Voltage	24VDC
DC Output Wattage	800W
DC Output Current	6.6A maximum per channel
Control Input Protocols	DMX+RDM, 0-10V (sink and source), DALI
Control Output Protocols	Multi-channel PWM
Maximum Power Consumption	960W
Optional Operating Modes	Static color selection, internal preset color fade
Internal Sensors	Temperature & usage, data accessible via the on-board display
Finish	Black
IP Rating	IP22, Dry Location
Ambient Operating Temperature	14° F to 113° (-10° C to 45° C)
Connectors	6 pin terminals for PWM outputs, 3 pin terminals for DMX, 2 pin terminals for 0-10V $\& \text{DALI}$
Warranty	5 Years Limited
Weight	14.4 lbs. (6.5 kg)
Dimensions	<b>L:</b> 15.8" <b>W:</b> 10.7" <b>H:</b> 4" (L: 400mm W: 270mm H: 100mm)
Certifications	· C €

# ORDER CODE

# **ALD824**

Catalog Number ALD-800-24

Notes

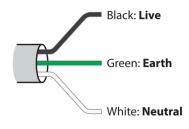
Туре

# AL DRIVER 800<sup>™</sup>

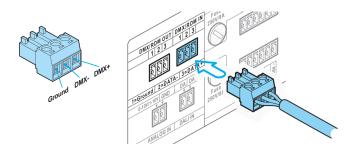


## WIRING

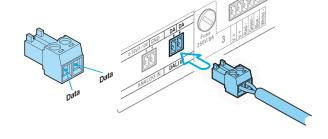
#### AC Power Input: 100-277VAC, 50/60Hz



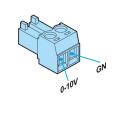
#### DMX In / Out

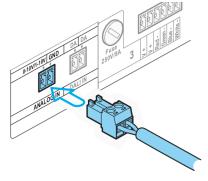


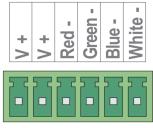
#### **DALI Input**







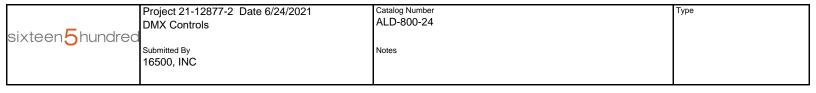




$LOAD = \mathbf{RGB}$	V+	۷+	Red	Green	Blue	
$LOAD = \mathbf{RGBW}$	٧+	٧+	Red	Green	Blue	White
LOAD = <b>Ai Dim</b>	٧+	۷+	W1	W2	W3	W4
LOAD = DW	٧+	٧+	Warm	Cold	Warm	Cold
LOAD = <b>White</b>	V+	V+	White	White	White	White

#### Notes

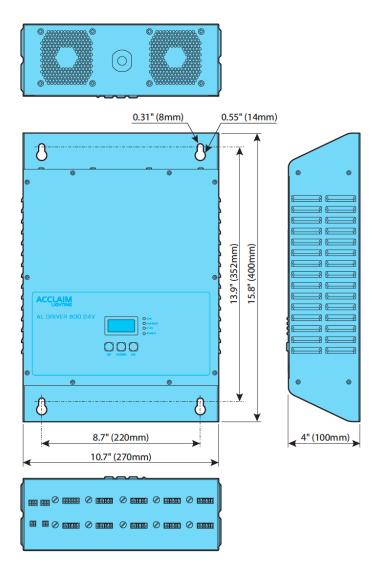
- Whichever LOAD-type is chosen, that setting will be applied globally to all ports. For example, it is not possible to choose Ai Dim operation for some ports and RGBW for others.
- The maximum 6.6A load limit for each port (and the maximum overall load for the whole device) must not be exceeded.
- In Ai Dim mode, the W1 to W4 connections align with the four marked wires of products such as Ai Flex.



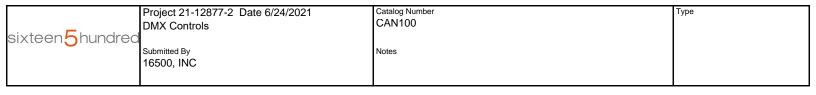
# AL DRIVER 800 TM



## **DIMENSIONS**



Weight: 14.4 lbs (6.5kg)











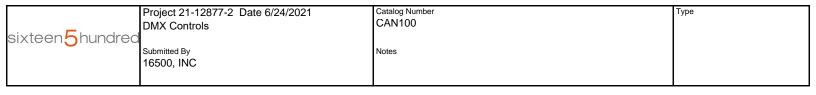




**Canvas** is a simple, yet powerful touch screen DMX controller designed for permanent installation. It's easy to navigate interface will walk you through the initial setup, give you up to 30 automatic presets, and then allows you to modify any aspect as needed from there. It features two DMX universes, two 0-10V lines, 8 dry contact triggers, and Aria wireless DMX built in.

# **SPECIFICATIONS**

DMX Output	1024 channels, 2 universes
0-10V Output	2 outputs, sink
Interface	3.5" TFT touch panel
Dry Contact Input Triggers	8
Internal Clock	Battery backed RTC, user adjusted
Operating Voltage	110-277VAC, 50/60 Hz
User Programmable Elements	80, static color or moving program up to 60 steps, 60 timer controlled events
Mobile Application	Canvas app available for iOS and Android for preset trigger and dimmer adjustment
Mounting	3 gang north american wall box
Wireless DMX	Aria transmitter built-in, transmits universe one (512 channels maximum)
Finish	White, almond, gray, and black face plates included
Material	Polycarbonate
Ambient Operating Temperature	14° F to 122° F (-10° C to 50° C)
IP Rating	IP20, dry location
Program and Firmware Storage	via Included micro SD card, 4 GB minimum
Fixture Connectors	Push lock terminal blocks for all inputs and outputs
Warranty	2 Years, limited
Weight	0.8 lbs. (0.36 kg)
Dimensions	<b>L:</b> 6.3" (includes faceplate) <b>W:</b> 4.7" <b>D:</b> 2.95" (160 x 119 x 75mm)
Certifications	© C € F© PRODUC





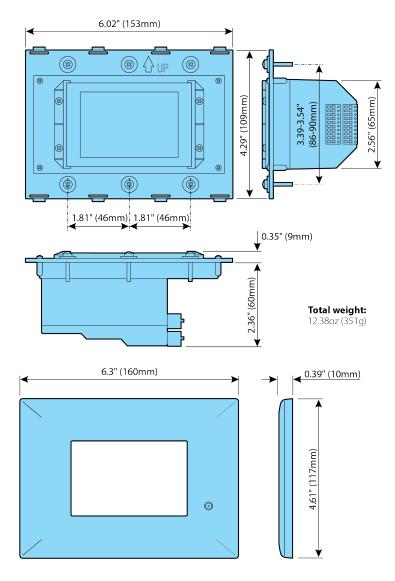


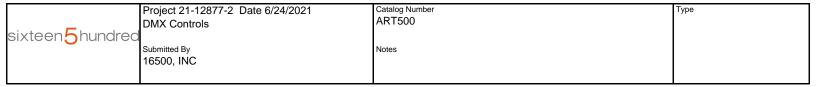
# ORDER CODES

# **CAN100:** Canvas Lighting Controller

White, almond, gray, and black face plates included

# DIMENSIONS







**ART 500** 





The Art 500 is a touch panel DMX Controller with 1,024 DMX channels and 500 preset scenes, designed to be the most effective control solution for architectural control. Included is the ART 500 software package, which offers an easy to navigate interface, combined with powerful control features.

### **ORDER CODE**

#### ART500

### **SPECIFICATIONS**

6V DC (Transformer Included) or POE
1024 DMX Channels, 2 Universes
Windows XP, Vista, 7 or 8 (ESA Pro), Mac OS X (ESA2)
8 x Dry Contact Trigger, Calendar Trigger, RS-232, IR
Single Gang Electrical Box (Not Included)
Glass Planel, Polycarbonate Body
14°F to 113°F (-10°C to 45°C)
Screw Terminal Blocks and RJ45, USB for PC / Mac Software
Micro SD Card
2 Years
8.71 oz. (247g), Dry Location
W 5.7" x H 4.17" x D 0.4" (146 mm x 106 mm x 11 mm)

#### Certifications



C ∈ RoHS

### **DIMENSIONS**



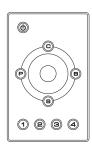




DMX Controls	Catalog Number ART4PU	Туре
Submitted By 16500, INC	Notes	

# ART 4 PRO

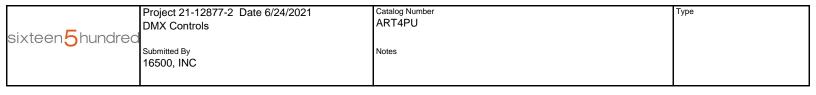




**ART 4 PRO** is simple, touch based wall-mount DMX controller, designed for RGB and RGBW lighting products. It features a PWM output which can directly drive 12-24VDC LED fixtures, four user programmable static color presets, and a manual speed and dimmer function.

# **SPECIFICATIONS**

DMX Output	4 channels
PWM Output	4 channels, 100W maximum pass through
Interface	Touch senstitve wall panel
Multiple Locations	Use the link out ports to connect up to 32 wall stations and sync preset controls
Audio Indicator	Tone can be toggled on /off by holding buttons 1-4 simultaneously
Operating Voltage	12-24VDC, 500mA (power adapter included - 6W, 12VDC,100-240VAC input)
Mounting	Single gang electrical box (not included)
Finish	White
Material	Aluminum housing, glass panel
Ambient Operating Temperature	32° F to 104° F (0° C to 40° C)
IP Rating	IP20, dry location
Fixture Connectors	Screw terminal block, direct hardwire
Warranty	2 Years, limited
Weight	0.3 lbs (140g)
Dimensions	<b>L:</b> 4.72" <b>W:</b> 2.99" <b>D:</b> 0.6" (120 x 76 x 15.3mm)
Certifications	C€



# ART 4 PRO



# ORDER CODES

**ART4PU:** Art 4 Pro (North American Version)

**ART4PE:** Art 4 Pro (European Version)

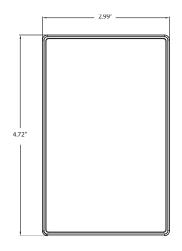
# INCLUDED COMPONENTS

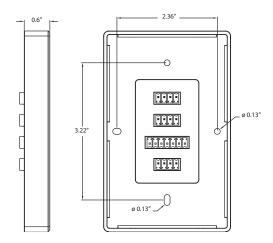
#### **Power Supplies**



APS-6-12 Power Supply for ART 4 Pro 100-240VAC, 500mA, 12VDC, 6W cULus component, CE approved

# **DIMENSIONS**







Submitted By 16500, INC Catalog Number PHAROS LPC4

Notes

LPC

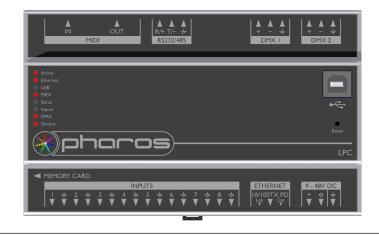
Туре





#### Overview

The Pharos LPC (Lighting Playback Controller) is an award-winning, all-in-one control solution for themed entertainment and LED lighting installations. It features individually controllable and independently running timelines and scenes, letting you build dynamic, precise, fully customisable pre-programmed lighting effects with the freedom of real-time manual overrides and the versatility of powerful show control and integration features.



#### **Features**



#### **Pharos Engine**

The intelligent Pharos Engine gives you complete control of your installation. Based on individually controllable and independently running timelines and scenes, it lets you build dynamic, precise, fully customisable pre-programmed lighting displays, all while giving you the freedom of real-time manual overrides, flexible multi-zone control, prioritisation and more.



#### **Pharos Mapping**

Design the big picture; control every pixel. Create a map of your fixtures within the Designer software, then use Pharos Mapping to create visually striking effects or play video across the entire array. Powerful controls allow you to build maps fast with pixel-precise adjustment. Multiple maps can be created to support different zones or for modelling different views of your installation.



#### **Pharos Trigger**

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos Trigger is a rules engine that uses conditional logic and a broad range of interfaces and protocols. Send and receive any command, to and from any system. Conditional logic is supported, along with a powerful built-in scripting language for unlimited flexibility.

#### Scalable

The right fit for every installation. Multiple Pharos Controllers can be seamlessly linked together to work as one via a standard Ethernet network giving impressive scalability. For additional integration options simply add Remote Devices to further extend the network. Whether one Controller or many, it's all easily programmed using our Designer software.

#### **Flexible**

Be limited by your design brief, not your control system. Our products support a vast range of different fixture types and can output multiple DMX-over-Ethernet (eDMX) lighting protocols at the same time. No other system gives you this level of flexibility and control over your project.

#### **Remote Management**

The control you need in your browser - from anywhere. Pharos Controllers can be connected to a network, making it possible for you to remotely manage your installation. The built-in web server lets you check the Controller's status, inputs and outputs, trigger timelines, view a full history log and much more.

#### **Custom Interfaces**

Create a custom web interface for your installation that gives your users the control they need and the look they expect. Our built-in web server supports an extensive JavaScript API and access control with multiple user levels.

#### Pharos Designer

Programmed and configured using the free Pharos Designer software - available for Windows or Mac OS X - with upload over Ethernet.

#### Reliable

Hardware and firmware are self-sufficient, so no PC needs to be left on site. Rugged, compact unit designed for 24/7 operation and reliability.

#### Installer Friendly

Made for permanent installation, with installer-friendly connectors and easy DIN rail mounting.

#### **5 Year Warranty**

Designed and manufactured in the UK, with quality and reliability our top priority.

#### Certifications

CE compliant, ETL/cETL listed, and California Title 20/24















Project 21-12877-2 Date 6/24/2021

**DMX Controls** 

Submitted By 16500, INC Catalog Number PHAROS LPC4

Notes



#### Supported Fixtures

LEDs in any colour configuration (RGB, RGBW, 8-bit, 16-bit, **LEDs** 

tuneable white)

**Automated** Moving heads, yokes or scanners

Generic Downlights, spotlights, uplights, etc. via controllable dimmers,

relays or ballasts

**Fountain Jets** Fountain jets for fountain animation or other animatronics **Fixture Library** 

Pharos offers a cloud library with over 13,000 fixture profiles, for easy download of your luminaires

#### Output

DMX512 2 ports (max 512 channels each) USITT E1.11-2008

Supports discovery and addressing via Designer software **RDM** 

sACN USITT E1.31 (with per fixture priority) standard Art-Net

ArtNet, ArtNet II and ArtNet III (configurable broadcast override) **KINET** KiNET V1 (DMX out) and V2 (Port out); PDS/Data Enabler

discovery

**Pathport** Pathway Connectivity protocol DALI Via RIO D (supplied separately)

Scalable Synchronises with up to 40 Pharos Controllers over network Simultaneous Multiple protocols can be in operation simultaneously. Limited by

patched channels, not universes used

#### Triggering & Integration

Commences programmed playback automatically on receiving Startup

**Contact Closures** Connect an external volt-free switch between input and ground

(internal 2.2k pull-up to 5V)

Digital In Connect an external voltage source between input and ground

(24V maximum; internal 2MOhm pull-down to 0V); software-

configurable low/high threshold

Analog In Connect an external voltage source between input and ground (24V maximum); software-configurable range

Clock Battery-backed real-time clock for calendar and time-based

Sunrise/Sunset/Twilight and Lunar phases Astronomical

**Ethernet** UDP, TCP, Multicast; send/receive any Ethernet message **Serial Data** RS232, RS485; configurable port; send/receive free syntax in

ASCII, HEX or decimal

MIDI MIDI Notes, SysEx or Timecode

Linear Timecode via RIO A (SMPTE, Film, EBU, NTSC) Timecode **Audio Level** Stereo 30-band spectrum analysis via RIO A DMX Trigger on changes within a range or entering a range eDMX sACN or Art-Net (option to pass-thru on local DMX output)

**DALI** Trigger on any message, via RIO D Web Interface Built-in or custom designed **Wall Stations** Integrate with BPS or TPC Conditions Full conditional logic support Lua scripting for total flexibility Scripting Scalable Supports Pharos Remote Devices

#### **Interfaces**

RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs; **Ethernet** 

Static IP or DHCP; Dual IP address for eDMX

DMX512 Two isolated DMX ports, RDM compatible \*

Serial RS232 / RS485 / DMX in 3

Inputs Eight inputs, individually selectable operating mode for contact

closure, digital or analogue input '

MIDI In & Out MIDI via 5-pin DIN 41524 socket **USB-B** socket USB 1.1 for connection to PC

## Specifications

CE compliant, ETL/cETL listed Certifications

Power 9V to 48V DC \* or PoE (IEEE802.3af,

Class 2) 4W typical

**Data Storage** Removable SD Card (supplied) **Temperature** 0°C to 50°C (32°F to 122°F) 10-50% relative, non-condensing Humidity

**IP40** 

**Physical** 8 unit wide DIN rail mounting enclosure

(DIN43880 / EN60715 (35/7.5 rail))

Туре

0.5 kg (1.1 lbs)

Shipping 20 x 15 x 12 cm (8" x 6" x 5")

0.8 kg (1.8 lbs)

Hardware watchdog and recessed reset Recovery

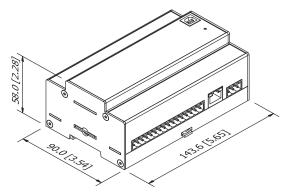
Warranty 5 years

Ingress

LPC 4

\* Install-friendly 0.200" (5.08mm) plug in rising

clamp connectors (included)



#### Order Code & Variants

LPC 1 Lighting Playback Controller 1 (512

channels DMX/eDMX)

LPC 2 Lighting Playback Controller 2 (1.024 channels DMX/eDMX)

Lighting Playback Controller 4 (2,048

channels eDMX incl 1,024 ch DMX)



Submitted By 16500, INC Catalog Number PHAROS TPC

Notes

Туре





**Touch Panel Controller** 

#### Overview

The Pharos TPC (Touch Panel Controller) is an elegant lighting controller with a customisable, 4.3" capacitive touch screen, 512 channels of eDMX output and vast interfacing potential, all over a single Power-over-Ethernet (PoE) network connection. TPCs are available in a range of different coloured bezels and overlays.



#### **Features**



#### **Touch Interface**

Touch screen user interface is fully customisable using the free Pharos Designer software. Create multiple pages of controls including buttons, sliders, keypads and colour pickers, and configure their appearance and visual feedback. Make it eye-catching by importing your own graphics or picking from one of our attractive themes.



#### **Pharos Engine**

The intelligent Pharos Engine gives you complete control of your installation. Based on individually controllable and independently running timelines and scenes, it lets you build dynamic, precise, fully customisable pre-programmed lighting displays, all while giving you the freedom of real-time manual overrides, flexible multi-zone control, prioritisation and more.



#### **Pharos Trigger**

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos Trigger is a rules engine that uses conditional logic and a broad range of interfaces and protocols. Send and receive any command, to and from any system. Conditional logic is supported, along with a powerful built-in scripting language for unlimited flexibility.

#### **Pharos Mapping**

Design the big picture; control every pixel. Create a 2D map of your fixtures within the Designer software, then use Pharos Mapping to create visually striking effects or play video across the entire array. Powerful controls allow you to build maps fast with pixel precise adjustment.

#### Scalable

The right fit for every installation. Multiple Pharos Controllers can be seamlessly linked together to work as one via a standard Ethernet network giving impressive scalability. For additional integration options simply add Remote Devices to further extend the network. Whether one Controller or many, it's all easily programmed using our Designer software.

#### **Remote Management**

The control you need in your browser - from anywhere. Pharos Controllers can be connected to Pharos Cloud, a secure remote management service from SixEye. This allows direct control of your Controllers from anywhere in the world, letting you check all of your Controllers' statuses, inputs and outputs, firing triggers, scheduling events, uploading new projects and much more. All Pharos controllers also have their own Web Interface that can be accessed on a local area network that provides real-time statuses, access to the full log and the ability to fire triggers on the controller.

#### **Flexible**

Be limited by your design brief, not your control system. Our products support a vast range of different fixture types and can output multiple DMX-over-Ethernet (eDMX) lighting protocols at the same time. No other system gives you this level of flexibility and control

#### **Pharos Designer**

Programmed and configured using the free Pharos Designer software - available for Windows or Mac OS X - with upload over Ethernet.

#### Reliable

Hardware and firmware are self-sufficient, so no PC needs to be left on site. Rugged, compact unit designed for 24/7 operation and reliability.

DIN rail mounting companion product provides PoE power, DMX and DALI outputs, RS232 serial and 8 digital/analog inputs for triggering and integration.

#### 5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

#### Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.















Project 21-12877-2 Date 6/24/2021

DMX Controls

Submitted By 16500, INC Catalog Number PHAROS TPC

Notes



#### Supported Fixtures

**LEDs** LEDs in any colour configuration (RGB, RGBW, 8-bit, 16-bit,

tuneable white)

Automated Moving heads, yokes or scanners Generic

Downlights, spotlights, uplights, etc. via controllable dimmers, relays or ballasts

Fountain jets for fountain animation or other animatronics Fountain Jets Pharos offers a cloud library with over 13,000 fixture profiles, for **Fixture Library** 

easy download of your luminaires

#### Output

sACN USITT E1.31 (with per fixture priority)

Art-Net ArtNet, ArtNet II and ArtNet III (configurable broadcast override) **KINET** 

KiNET V1 (DMX out) and V2 (Port out); PDS/Data Enabler

discovery

Pathport Pathway Connectivity protocol Via EXT or second port on LPC 1 DMX512

RDM Via EXT or EDN, supports discovery and addressing via Designer

DALI Via EXT or RIO D (supplied separately) Scalable

Synchronises with up to 40 Pharos Controllers over network Simultaneous Multiple protocols can be in operation simultaneously. Limited by

patched channels, not universes used

**EDN** Can natively integrate with and output DMX through the ports of

the EDN (Ethernet Data Node, supplied separately)

### Triggering & Integration

Startup Commences playback automatically on receiving power

Buttons, sliders, colour picker, etc Touchscreen

Clock Battery-backed real-time clock for calendar and time-based

triggers

Astronomical Sunrise/Sunset/Twilight and Lunar phases

Trigger on changes or entering a range Temperature

Ethernet UDP, TCP, Multicast; send/receive any Ethernet message

eDMX sACN or Art-Net

MIDI

Trigger on any message, via EXT or RIO D DALI

RS232 via EXT; RS232 or RS485 via RIO; send/receive free Serial Data

syntax in ASCII, HEX or decimal MIDI Notes, SysEx or Timecode

Timecode Linear Timecode via RIO A (SMPTE, Film, EBU, NTSC)

Stereo 30-band spectrum analysis via RIO A **Audio Level** 

Contact closure, active low, active high or 0-24V analog level via Inputs

**FXT or RIOs** 

Outputs Isolated relay outputs (48V 250mA) via RIOs Web Interface Built-in or custom designed

Wall Stations Integrate with BPS, TPS or TPC Conditions Full conditional logic support Scripting Lua scripting for total flexibility Scalable Supports Pharos Remote Devices

IO Modules Supports our extensive IO Module library for easy integration

#### Interfaces

RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs; Ethernet

Static IP or DHCP; Dual IP address for eDMX

Touchscreen 4.3" capacitive touch; 480×272 24bpp; 340 cd/m2; magnetic

Learning IR sensor for remote control IR Sensor Temperature Built-in ambient temperature sensor

### **Specifications**

Certifications CE compliant, ETL/cETL listed Power PoE (IEEE802.3af, Class 2) 4W typical Data Storage Removable SD Card (supplied) Temperature 0°C to 50°C (32°F to 122°F) Humidity 10-50% relative, non-condensing Ingress

Warranty

Wall mounted, partly recessed in UK 2-**Physical** gang 35mm or custom US 2.5" backbox

(supplied separately)

Туре

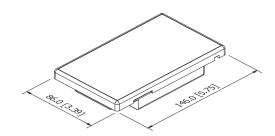
0.25 kg (0.55 lbs)

20 x 15 x 12 cm (8" x 6" x 5") Shipping

0.6 kg (1.3 lbs)

Recovery Hardware watchdog and recessed reset

5 years



#### Order Code & Variants

TPC BB Touch Panel Controller Black-on-Black

(512 channels eDMX)\*

TPC CC Touch Panel Controller Cream-on-Cream

(512 channels eDMX)

Touch Panel Controller White-on-White **TPC WW** 

(512 channels eDMX) **TPC FBB** Flush back box **TPC SBB** Surface back box

EXT Extension for TPC connectivity (DMX,

DALI, IO, serial, mains-powered)

\* TPC BB is default colour and shipped as

standard

Colour Information

Cream Bayblend T45 (UL94 HB) RAL 9001

Signal White Bayblend T45 (UL94 HB) RAL 9003 signal white

Jet Black Bayblend T45 (UL94 HB) RAL 9005

jet black



Submitted By 16500, INC Catalog Number PHAROS EXT

Notes

Туре

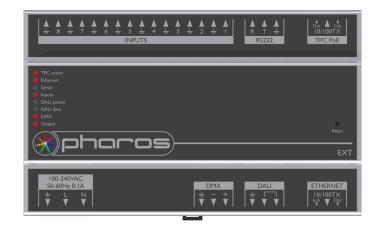




**TPC Extension** 

#### Overview

The Pharos EXT is an extension for the Pharos TPC and together they form a standalone, mainspowered lighting controller with versatile output and show control options. The TPC is a powerful lighting controller with Ethernet-based output and integration options. However, many DMX and DALI installations don't need the added complexity of network infrastructure. The EXT provides local DMX and DALI output for the TPC, as well as power and other hardware interfaces.



#### **Features**



The EXT is an optional extension for a single Pharos TPC. Together they can function as a standalone control system, or scale with other Pharos devices over a network. The EXT supplies power and data to the TPC via a single cable, and provides physical interfaces including both



#### **Pharos Trigger**

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos Trigger is a rules engine that uses conditional logic and a broad range of interfaces and protocols. Send and receive any command, to and from any system. Conditional logic is supported, along with a powerful built-in scripting language for unlimited flexibility.



#### **DALI Control**

Control up to 64 DALI devices from the EXT, with support for commissioning with DALI discovery and configuration commands. Pharos Designer includes a convenient drag-and-drop interface for DALI patching and timeline programming. DALI emergency ballasts are also supported with the ability to schedule automatic Function and Duration tests, automatic querying for battery level and lamp hours, and a full test result and error reporting web page.

#### Flexible Inputs

Each input is individually configurable in one of three modes. As a Contact Closure an external volt-free switch may be connected across the input. As a Digital Input an external voltage source (up to 24V) can be connected across the input and thresholds for 'high' and 'low' triggering can be set. As an Analog Input a variable external voltage can be measured within a configurable range.

#### Serial Data

The EXT has an RS232 serial port, whose data rate and format settings (baud, parity, stop bits, etc.) are configurable in software.

#### **Pharos Designer**

Programmed and configured using the free Pharos Designer software - available for Windows or Mac OS X - with upload over Ethernet or USB.

#### **Installer Friendly**

Made for permanent installation, with installer-friendly 0.200" (5.08mm) plug-in rising clamp terminals, a rugged, compact enclosure, and easy DIN rail mounting.

#### **Firmware**

Microprocessor-based system supports firmware updates via the network from Designer software or the web interface.

#### **5 Year Warranty**

Designed and manufactured in the UK, with quality and reliability our top priority.

#### Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.















Submitted By 16500, INC Catalog Number PHAROS EXT

Notes

Туре



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**Contact Closure** Connect an external volt-free switch between input and ground

(internal 2.2k pull-up to 5V)

Connect an external voltage source between input and ground Digital In (24V maximum; internal 2MOhm pull-down to 0V); software-

configurable low/high threshold

Analog In Connect an external voltage source between input and ground

(24V maximum); software-configurable range

**Serial Data** RS232; configurable port; send/receive free syntax in ASCII, HEX

or decimal

Control for up to 64 DALI devices; DALI discovery and **DALI Master** 

configuration commands

**DALI Slave** Use DALI messages from other systems or wall panels as triggers

**Emergency Lighting** 

Emergency Lighting Schedule automatic Function and Duration tests; automatic querying for battery level and lamp hours; test

result and error reporting web page

**Bus Power Detection** 

A separate DALI bus power supply is required - but the EXT can

detect and report bus power errors

#### Interfaces

TPC PoE RJ45 socket with Link/Data LEDs for direct connection to TPC only

(100m max distance)

RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs; Ethernet

Fixed IP or DHCP; Power-over-Ethernet (PoE)

DMX512 Isolated DMX port, RDM compatible \* Master (up to 64 devices) or Slave \* DALI

Serial RS232

Individually selectable operating mode for contact closure, digital Inputs

or analog input (24V maximum)

\* Install-friendly 0.200" (5.08mm) plug in rising clamp connectors (included)

#### **Specifications**

Certifications CE compliant, ETL/cETL listed

Power Mains-powered; 100-240VAC / 50-60Hz

/ 0.1A (10W typical) Required Pharos TPC

0°C to 50°C (32°F to 122°F) Temperature Humidity 10-50% relative, non-condensing

Ingress

Warranty

8 unit wide DIN rail mounting enclosure (DIN43880 / EN60715 (35/7.5 rail)) Physical

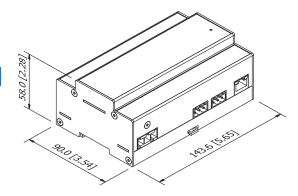
0.5 kg (1.1 lbs)

Shipping 20 x 15 x 12 cm (8" x 6" x 5")

0.7 kg (1.6 lbs)

Hardware watchdog and recessed reset Recovery

button 5 years



#### Order Code & Variants

EXT Extension for TPC connectivity (DMX, DALI, IO, serial, mains-powered)

Pharos TPC required





Submitted By 16500, INC Catalog Number PHAROS TPS

Notes

Туре





**Touch Panel Station** 

#### Overview

The Pharos TPS (Touch Panel Station) is an elegant interface with a customisable, 4.3" capacitive touch screen, that works with any Pharos Controller.



#### **Features**



#### **Touch Interface**

A 4.3" vivid colour capacitive touchscreen makes navigating your project's controls appealing and intuitive. It's quick and easy to activate presets, manual overrides, or even use a custom colour picker to personalise your lighting. The TPS puts control of your Pharos system at your fingertips.



#### Customisable

Create your fully customisable user interface using the free Pharos Designer software. Create multiple pages of controls including buttons, sliders, keypads and colour pickers, and configure their appearance and visual feedback. Make it eye-catching by importing your own graphics or picking from one of our attractive themes.



#### **Pharos Trigger**

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos Trigger is a rules engine that uses conditional logic and a broad range of interfaces and protocols. Send and receive any command, to and from any system. Conditional logic is supported, along with a powerful built-in scripting language for unlimited flexibility.

#### **Flexible**

Be limited by your design brief, not your interface. Whether you want to show a few simple buttons, or use custom branded graphics, the touch panel supports it all. It is also capable of supporting any font, including those with extended character sets; e.g. Chinese, Korean, Japanese.

#### Learning IR

The TPS may be taught to recognise up to 16 different IR codes from a standard infra-red remote control. When one of these keys on the remote control is pressed, the TPS will treat that as a press on its own screen.

#### Scalable

Multiple Touch Devices can be combined with one or more Pharos controllers on the same network to build the ideal system for your installation, with a maximum of 40 Controllers and Touch Devices in total. Each Touch Device is easily programmed using our Designer software.

#### Network

Works with any Pharos Controller, and links to it using standard protocols over an Ethernet

#### **Pharos Designer**

Programmed and configured using the free Pharos Designer software - available for Windows or Mac OS X - with upload over Ethernet.

#### PoE Powered

As a Power-over-Ethernet (PoE) device, the TPS can be placed at any remote location and only needs a single Cat5 cable that provides both power and data.

#### 5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

#### Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant



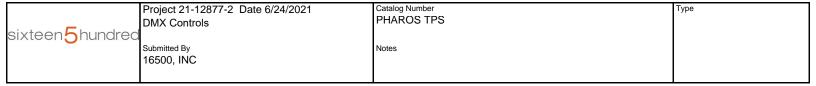














#### Capabilities

Portrait or landscape Orientation Layouts Free editable layouts Pages Any number of pages

Controls

Navigation Convenient and custom navigation via configurable navigation

**Fonts** Custom font support, including fonts with extended character sets

e.g. Chinese, Korean, Japanese

Themes Wide selection of themes available to download, or create your own with Designer's theme editor

A wide array of customisable buttons, sliders, colour pickers, labels, keypads and clocks

Flexible integration Fully integrated with Pharos Trigger, so button states, graphics,

and captions can change according to any number of preset

Learning IR allows any standard remote control to be used to Infra-red

activate button presses/state changes

Secure access Keypad for PIN-code entry; multiple user levels

Commissioning Commissioned with Pharos Designer

#### Interfaces

RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs; **Ethernet** 

Static IP or DHCP

Touchscreen 4.3" capacitive touch; 480×272 24bpp; 340 cd/m2; magnetic

IR Sensor Learning IR sensor for remote control Temperature Built-in ambient temperature sensor

#### **Specifications**

CE compliant, ETL/cETL listed Certifications PoE (IEEE802.3af, Class 2) 4W typical Power

Required Any Pharos Controller **Data Storage** Removable SD Card (supplied) 0°C to 50°C (32°F to 122°F) Temperature Humidity 10-50% relative, non-condensing

Ingress

Physical Wall mounted, partly recessed in UK 2-

gang 35mm or custom US 2.5" backbox

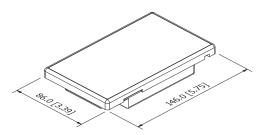
(supplied separately)

0.25 kg (0.55 lbs) 20 x 15 x 12 cm (8" x 6" x 5") Shipping

0.6 kg (1.3 lbs)

Recovery Hardware watchdog and recessed reset

Warranty 5 years



#### Order Code & Variants

TPS BB Touch Panel Station Black-on-Black

(Touch Device)\*

TPS CC Touch Panel Station Cream-on- Cream

(Touch Device)

TPS WW Touch Panel Station White-on-White

(Touch Device) **TPS FBB** Flush back box TPS SBB Surface back box

\* TPS BB is default colour and shipped as

standard

Colour Information

Cream Bayblend T45 (UL94 HB) RAL 9001

cream

Bayblend T45 (UL94 HB) RAL 9003 Signal White signal white

Jet Black Bayblend T45 (UL94 HB) RAL 9005

Pharos Controller required



Submitted By 16500, INC Catalog Number PHAROS LPC 10

Notes

Туре





Lighting Playback Controller X

#### Overview





The Pharos LPC X (Lighting Playback Controller X) offers an extreme level of power and integration, making it an ideal solution for landmark lighting installations with significant channel counts. It integrates with the full range of Pharos products and offers an optional real-time video input.

#### **Features**



#### **Pharos Engine**

The intelligent Pharos Engine gives you complete control of your installation. Based on individually controllable and independently running timelines and scenes, it lets you build dynamic, precise, fully customisable pre-programmed lighting displays, all while giving you the freedom of real-time manual overrides, flexible multi-zone control, prioritisation and more.



#### **Pharos Mapping**

Design the big picture; control every pixel. Create a map of your fixtures within the Designer software, then use Pharos Mapping to create visually striking effects or play video across the entire array. Powerful controls allow you to build maps fast with pixel-precise adjustment. Multiple maps can be created to support different zones or for modelling different views of your installation.



#### **Pharos Trigger**

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos Trigger is a rules engine that uses conditional logic and a broad range of interfaces and protocols. Send and receive any command, to and from any system. Conditional logic is supported, along with a powerful built-in scripting language for unlimited flexibility.

#### Scalable

The right fit for every installation. Multiple Pharos Controllers can be seamlessly linked together to work as one via a standard Ethernet network giving impressive scalability. For additional integration options simply add Remote Devices to further extend the network. Whether one Controller or many, it's all easily programmed using our Designer software.

#### **Flexible**

Be limited by your design brief, not your control system. Our products support a vast range of different fixture types and can output multiple DMX-over-Ethernet (eDMX) lighting protocols at the same time. No other system gives you this level of flexibility and control over your project.

#### **Remote Management**

The control you need in your browser - from anywhere. Pharos Controllers can be connected to a network, making it possible for you to remotely manage your installation. The built-in web server lets you check the Controller's status, inputs and outputs, trigger timelines, view a full history log and much more.

#### **Custom Interfaces**

Create a custom web interface for your installation that gives your users the control they need and the look they expect. Our built-in web server supports an extensive JavaScript API and access control with multiple user levels.

#### Pharos Designer

Programmed and configured using the free Pharos Designer software - available for Windows or Mac OS X - with upload over Ethernet.

#### Reliable

Hardware and firmware are self-sufficient, so no PC needs to be left on site. Rugged, compact unit designed for 24/7 operation and reliability.

#### Video Input

Optional DVI-D input for mapping live video, supporting up to 1080p60 with configurable scaling and X/Y pixel offset.

#### 5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

#### Certifications

CE compliant, ETL/cETL listed, and California Title 20/24













Project 21-12877-2 Date 6/24/2021

**DMX Controls** 

Submitted By 16500, INC Catalog Number PHAROS LPC 10

Notes



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**LEDs** LEDs in any colour configuration (RGB, RGBW, 8-bit, 16-bit,

tuneable white)

**Automated** Moving heads, yokes or scanners

Generic Downlights, spotlights, uplights, etc. via controllable dimmers,

relays or ballasts

**Fountain Jets** Fountain jets for fountain animation or other animatronics **Fixture Library** 

Pharos offers a cloud library with over 13,000 fixture profiles, for

easy download of your luminaires

#### Output

sACN USITT E1.31 (with per fixture priority)

ArtNet, ArtNet II and ArtNet III (configurable broadcast override) Art-Net

KiNET V1 (DMX out) and V2 (Port out); PDS/Data Enabler **KINET** 

**Pathport** Pathway Connectivity protocol DVI-I DVI-I output for video-mapped fixtures

DMX512 Via any eDMX node

DALI Via RIO D (supplied separately)

Scalable Synchronises with up to 40 Pharos Controllers over network Simultaneous Multiple protocols can be in operation simultaneously. Limited by

patched channels, not universes used

#### Triggering & Integration

Startup Commences programmed playback automatically on receiving

Clock Battery-backed real-time clock for calendar and time-based

triggers

Astronomical Sunrise/Sunset/Twilight and Lunar phases

**Ethernet** UDP, TCP, Multicast; send/receive any Ethernet message **RS232 Serial** Configurable port; send/receive free syntax in ASCII, HEX or

decimal

eDMX sACN or Art-Net

Inputs Contact closure, active low, active high or 0-24V analog level via

Isolated relay outputs (48V 250mA) via RIOs Outputs MIDI MIDI Notes, SysEx or Timecode via RIO A

Timecode Linear Timecode via RIO A (SMPTE, Film, EBU, NTSC)

Audio Level Stereo 30-band spectrum analysis via RIO A

**RS485 Serial** Via RIO; configurable port; send/receive free syntax in ASCII, HEX

or decimal

DALI Trigger on any message, via RIO D Web Interface Built-in or custom designed **Wall Stations** Integrate with BPS or TPC Conditions Full conditional logic support Scripting Lua scripting for total flexibility Scalable Supports Pharos Remote Devices

#### Interfaces

Neutrik etherCon (RJ45 compatible) for 10/100/1000Base-TX **Ethernet** 

Ethernet with Link/Data LEDs; Static IP or DHCP

eDMX Dedicated Ethernet port for eDMX; Neutrik etherCon (RJ45 compatible) for 10/100/1000Base-TX Ethernet with Link/Data

LEDs; Static IP or DHCP

**DVI-I Output** DVI-I output for monitoring or video mapped fixtures

RS232 via DB9 connector Serial USB Two USB 2.0 Type A ports

**Audio Outputs** Stereo analog & digital audio ports (for future development)

**DVI-D** Input Video input up to 1080p60 (with DVI-D IN option)

### **Specifications**

Туре

CE compliant, ETL/cETL listed Certifications Power 100-240VAC / 50-60HZ / 0.4-0.2A

40W typical (50W maximum) IEC connector with switch

UK, EU and US cable supplied Internal 16GB SSD (supplied) Pharos Designer 2.2 or later 0°C to 50°C (32°F to 122°F)

10-50% relative, non-condensing

Ingress

**Data Storage** 

Configuration

Temperature

Humidity

**LPC 60** 

19" rack unit, 1U, 13.5" deep **Physical** 

3.1 kg (6.8 lbs)

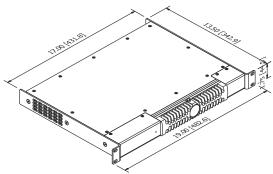
57 x 45 x 18 cm (22" x 18" x 7") Shipping

5.0 kg (11 lbs)

Recovery Hardware watchdog and recessed reset

button

5 years Warranty



#### Order Code & Variants

**LPC 10** Lighting Playback Controller 10 (5,120 channels eDMX/DVI)

**LPC 20** Lighting Playback Controller 20 (10,240 channels eDMX/DVI)

**LPC 30** Lighting Playback Controller 30 (15,360

channels eDMX/DVI)

Lighting Playback Controller 40 (20,480 **LPC 40** 

channels eDMX/DVI)

**LPC 50** Lighting Playback Controller 50 (25,600

channels eDMX/DVI) Lighting Playback Controller 60 (30,720

channels eDMX/DVI) **LPC 70** 

Lighting Playback Controller 70 (35,840 channels eDMX/DVI)

Lighting Playback Controller 80 (40,960 **LPC 80** 

channels eDMX/DVI)

**LPC 90** Lighting Playback Controller 90 (46,080

channels eDMX/DVI)

**LPC 100** Lighting Playback Controller 100

(51,200 channels eDMX/DVI)

DVI-D IN DVI-D Input upgrade (HD capture card)





Submitted By 16500, INC Catalog Number PHARSO LPC 100

Туре



LPC X

Lighting Playback Controller X

#### Overview





The Pharos LPC X (Lighting Playback Controller X) offers an extreme level of power and integration, making it an ideal solution for landmark lighting installations with significant channel counts. It integrates with the full range of Pharos products and offers an optional real-time video input.

#### **Features**



#### **Pharos Engine**

The intelligent Pharos Engine gives you complete control of your installation. Based on individually controllable and independently running timelines and scenes, it lets you build dynamic, precise, fully customisable pre-programmed lighting displays, all while giving you the freedom of real-time manual overrides, flexible multi-zone control, prioritisation and more.



#### **Pharos Mapping**

Design the big picture; control every pixel. Create a map of your fixtures within the Designer software, then use Pharos Mapping to create visually striking effects or play video across the entire array. Powerful controls allow you to build maps fast with pixel-precise adjustment. Multiple maps can be created to support different zones or for modelling different views of your installation.



#### **Pharos Trigger**

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos Trigger is a rules engine that uses conditional logic and a broad range of interfaces and protocols. Send and receive any command, to and from any system. Conditional logic is supported, along with a powerful built-in scripting language for unlimited flexibility.

#### Scalable

The right fit for every installation. Multiple Pharos Controllers can be seamlessly linked together to work as one via a standard Ethernet network giving impressive scalability. For additional integration options simply add Remote Devices to further extend the network. Whether one Controller or many, it's all easily programmed using our Designer software.

#### **Flexible**

Be limited by your design brief, not your control system. Our products support a vast range of different fixture types and can output multiple DMX-over-Ethernet (eDMX) lighting protocols at the same time. No other system gives you this level of flexibility and control over your project.

#### **Remote Management**

The control you need in your browser - from anywhere. Pharos Controllers can be connected to a network, making it possible for you to remotely manage your installation. The built-in web server lets you check the Controller's status, inputs and outputs, trigger timelines, view a full history log and much more.

#### **Custom Interfaces**

Create a custom web interface for your installation that gives your users the control they need and the look they expect. Our built-in web server supports an extensive JavaScript API and access control with multiple user levels.

#### Pharos Designer

Programmed and configured using the free Pharos Designer software - available for Windows or Mac OS X - with upload over Ethernet.

#### Reliable

Hardware and firmware are self-sufficient, so no PC needs to be left on site. Rugged, compact unit designed for 24/7 operation and reliability.

#### Video Input

Optional DVI-D input for mapping live video, supporting up to 1080p60 with configurable scaling and X/Y pixel offset.

#### 5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

#### Certifications

CE compliant, ETL/cETL listed, and California Title 20/24















Project 21-12877-2 Date 6/24/2021

**DMX Controls** 

Submitted By 16500, INC Catalog Number PHARSO LPC 100

Notes



# Supported Fixtures

LEDs in any colour configuration (RGB, RGBW, 8-bit, 16-bit, **LEDs** 

tuneable white)

**Automated** Moving heads, yokes or scanners

Generic Downlights, spotlights, uplights, etc. via controllable dimmers,

relays or ballasts

**Fountain Jets** Fountain jets for fountain animation or other animatronics **Fixture Library** Pharos offers a cloud library with over 13,000 fixture profiles, for

easy download of your luminaires

#### Output

sACN USITT E1.31 (with per fixture priority)

ArtNet, ArtNet II and ArtNet III (configurable broadcast override) Art-Net

KiNET V1 (DMX out) and V2 (Port out); PDS/Data Enabler **KINET** 

**Pathport** Pathway Connectivity protocol DVI-I

DVI-I output for video-mapped fixtures DMX512 Via any eDMX node

DALI

Via RIO D (supplied separately)

Scalable Synchronises with up to 40 Pharos Controllers over network Simultaneous Multiple protocols can be in operation simultaneously. Limited by

patched channels, not universes used

### Triggering & Integration

Startup Commences programmed playback automatically on receiving

Clock Battery-backed real-time clock for calendar and time-based

triggers

Astronomical Sunrise/Sunset/Twilight and Lunar phases

**Ethernet** UDP, TCP, Multicast; send/receive any Ethernet message RS232 Serial Configurable port; send/receive free syntax in ASCII, HEX or

decimal

eDMX sACN or Art-Net

Inputs Contact closure, active low, active high or 0-24V analog level via

Isolated relay outputs (48V 250mA) via RIOs Outputs MIDI MIDI Notes, SysEx or Timecode via RIO A

Timecode Linear Timecode via RIO A (SMPTE, Film, EBU, NTSC)

Audio Level Stereo 30-band spectrum analysis via RIO A

**RS485 Serial** Via RIO; configurable port; send/receive free syntax in ASCII, HEX

or decimal

DALI Trigger on any message, via RIO D Web Interface Built-in or custom designed **Wall Stations** Integrate with BPS or TPC Conditions Full conditional logic support Scripting Lua scripting for total flexibility Scalable Supports Pharos Remote Devices

Interfaces

Neutrik etherCon (RJ45 compatible) for 10/100/1000Base-TX **Ethernet** 

Ethernet with Link/Data LEDs; Static IP or DHCP

eDMX Dedicated Ethernet port for eDMX; Neutrik etherCon (RJ45 compatible) for 10/100/1000Base-TX Ethernet with Link/Data

LEDs; Static IP or DHCP

**DVI-I Output** DVI-I output for monitoring or video mapped fixtures

RS232 via DB9 connector Serial USB Two USB 2.0 Type A ports

**Audio Outputs** Stereo analog & digital audio ports (for future development)

**DVI-D** Input Video input up to 1080p60 (with DVI-D IN option)

### **Specifications**

Certifications CE compliant, ETL/cETL listed Power 100-240VAC / 50-60HZ / 0.4-0.2A

40W typical (50W maximum)

IEC connector with switch UK, EU and US cable supplied Internal 16GB SSD (supplied) Pharos Designer 2.2 or later 0°C to 50°C (32°F to 122°F)

Туре

Humidity 10-50% relative, non-condensing Ingress

**Data Storage** 

Configuration

Temperature

**LPC 60** 

19" rack unit, 1U, 13.5" deep **Physical** 

3.1 kg (6.8 lbs)

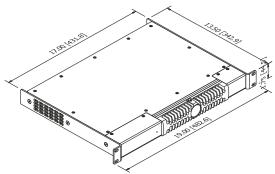
57 x 45 x 18 cm (22" x 18" x 7") Shipping

5.0 kg (11 lbs)

Recovery Hardware watchdog and recessed reset

button

5 years Warranty



#### Order Code & Variants

**LPC 10** Lighting Playback Controller 10 (5,120 channels eDMX/DVI)

**LPC 20** Lighting Playback Controller 20 (10,240

channels eDMX/DVI)

**LPC 30** Lighting Playback Controller 30 (15,360

channels eDMX/DVI)

Lighting Playback Controller 40 (20,480 **LPC 40** 

channels eDMX/DVI)

**LPC 50** Lighting Playback Controller 50 (25,600

channels eDMX/DVI) Lighting Playback Controller 60 (30,720

channels eDMX/DVI) **LPC 70** 

Lighting Playback Controller 70 (35,840 channels eDMX/DVI)

Lighting Playback Controller 80 (40,960 **LPC 80** 

channels eDMX/DVI)

**LPC 90** Lighting Playback Controller 90 (46,080

channels eDMX/DVI)

**LPC 100** Lighting Playback Controller 100

(51,200 channels eDMX/DVI)

DVI-D IN DVI-D Input upgrade (HD capture card)





Submitted By 16500, INC Catalog Number PHAROS VLC 50

Notes

Туре

VLC

Video Lighting Controller

#### Overview





The Pharos VLC (Video Lighting Controller) is an extremely capable but cost effective solution for large LED pixel arrays such as building façades, bridges, and presentation walls. It makes it simple to play video content across your array, either from locally stored HD media files or a DVI-D video input. It also offers a range of creative generative effects, the versatility of powerful show control, and integration features.

#### **Features**



#### Render Engine

Make your light fixtures a canvas onto which you can paint with creative effects or video playback. The powerful Designer 2 software allows you to build your fixture layout fast with pixel-precise adjustment. Then use individually controllable and independently running timelines to build dynamic, striking, pre-programmed lighting displays across your canvas.



#### **Pharos Trigger**

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos Trigger is a rules engine that uses conditional logic and a broad range of interfaces and protocols. Send and receive any command, to and from any system. Conditional logic is supported, along with a powerful built-in scripting language for unlimited flexibility.



#### **High Capacity**

Big just got a whole lot easier. The VLC can output all commonly used eDMX protocols (sACN, Art-Net, KiNET) over Gigabit Ethernet and there are no restrictions on using these protocols simultaneously. There are six VLC variants with pricing based on channel capacity, ranging from 25,600 channels up to a massive 768,000 channels.

#### Scalable

The right fit for every installation. Multiple Pharos Controllers can be seamlessly linked together to work as one via a standard Ethernet network giving impressive scalability. For additional integration options simply add Remote Devices to further extend the network. Whether one Controller or many, it's all easily programmed using our Designer software.

#### **High Definition**

Live video can be captured on the DVI-D input at resolutions up to 1080p60. Internal video playback at up to 1080p30 supports all major formats such as H.264/MPEG-4 AVC, MJPEG and QuickTime. The built-in 128GB SSD provides plenty of capacity for media storage.

#### **Remote Management**

The control you need in your browser - from anywhere. Pharos Controllers can be connected to a network, making it possible for you to remotely manage your installation. The built-in web server lets you check the Controller's status, inputs and outputs, trigger timelines, view a full history log and much more.

#### **Custom Interfaces**

Create a custom web interface for your installation that gives your users the control they need and the look they expect. Our built-in web server supports an extensive JavaScript API and access control with multiple user levels.

#### Pharos Designer

Programmed and configured using the free Pharos Designer software - available for Windows or Mac OS X - with upload over Ethernet.

#### Reliable

Hardware and firmware are self-sufficient, so no PC needs to be left on site. Rugged, compact unit designed for 24/7 operation and reliability.

#### 5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

#### Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.















Project 21-12877-2 Date 6/24/2021

**DMX Controls** 

16500, INC

Catalog Number PHAROS VLC 50

Notes

Туре



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LEDs in any colour configuration (RGB, RGBW, 8-bit, 16-bit, **LEDs** 

tuneable white)

**Fixture Library** Pharos offers a cloud library with over 13,000 fixture profiles, for

easy download of your luminaires

#### Output

sACN USITT E1.31 (with per fixture priority)

Art-Net ArtNet, ArtNet II and ArtNet III (configurable broadcast override)

**KINET** KiNET V1 (DMX out) and V2 (Port out); PDS/Data Enabler

discovery

**Pathport** Pathway Connectivity protocol

Via any eDMX node DMX512

Synchronises with up to 40 Pharos Controllers over network Scalable Simultaneous Multiple protocols can be in operation simultaneously. Limited by

patched channels, not universes used

### **Triggering & Integration**

Commences playback automatically on receiving power Startup

Clock Battery-backed real-time clock for calendar and time-based

triggers

Sunrise/Sunset/Twilight and Lunar phases Astronomical

UDP, TCP, Multicast; send/receive any Ethernet message Ethernet **Serial Data** 

RS232; configurable port; send/receive free syntax in ASCII, HEX

or decimal

eDMX Inputs Contact closure, active low, active high or 0-24V analog level via

Isolated relay outputs (48V 250mA) via RIOs Outputs

MIDI Notes, SysEx or Timecode via RIO A MIDI

Timecode Linear Timecode via RIO A (SMPTE, Film, EBU, NTSC)

Audio Level Stereo 30-band spectrum analysis via RIO A

**DMX / RS485** Via RIOs; trigger on changes within a range or entering a range

DALI Trigger on any message, via RIO D Built-in or custom designed Web Interface **Wall Stations** Integrate with BPS or TPC Full conditional logic support Conditions Scripting Lua scripting for total flexibility Scalable Supports Pharos Remote Devices

#### Interfaces

Neutrik etherCon (RJ45 compatible) for 10/100/1000Base-TX Ethernet

Ethernet with Link/Data LEDs; Static IP or DHCP

eDMX Dedicated Ethernet port for eDMX; Neutrik etherCon (RJ45 compatible) for 10/100/1000Base-TX Ethernet with Link/Data

LEDs; Static IP or DHCP

**DVI-D** Input Video input to capture resolutions up to 1080p60

**DVI-I Output** DVI-I output for monitoring RS232 via DB9 connector Serial USB Two USB 2.0 Type A ports

**Audio Outputs** Stereo analog & digital audio ports (for future development)

#### **Specifications**

Certifications CE compliant, ETL/cETL listed Power 100-240VAC / 50-60HZ / 0.4-0.2A

40W typical (50W maximum) IEC connector with switch UK, EU and US cable supplied Internal 128GB SSD (supplied)

**Data Storage** Configuration Pharos Designer 2.2 or later Temperature 0°C to 50°C (32°F to 122°F) Humidity 10-50% relative, non-condensing

Ingress

19" rack unit, 1U, 13.5" deep **Physical** 

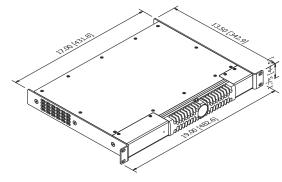
3.1 kg (6.8 lbs)

57 x 45 x 18 cm (22" x 18" x 7") Shipping

5.0 kg (11 lbs)

Recovery Hardware watchdog and recessed reset button

Warranty 5 years



#### Order Code & Variants

Video Lighting Controller 50 (25,600 channels eDMX) **VLC 50** 

**VLC 250** 

**VLC 100** Video Lighting Controller 100 (51,200 channels eDMX)

Video Lighting Controller 250 (128,000

channels eDMX) **VLC 500** Video Lighting Controller 500 (256,000

channels eDMX)

**VLC 1000** Video Lighting Controller 1000 (512,000

channels eDMX)

**VLC 1500** Video Lighting Controller 1500 (768,000

channels eDMX)





Submitted By 16500, INC Catalog Number PHAROS VLC 100

Туре

VLC



Video Lighting Controller



#### Overview





The Pharos VLC (Video Lighting Controller) is an extremely capable but cost effective solution for large LED pixel arrays such as building façades, bridges, and presentation walls. It makes it simple to play video content across your array, either from locally stored HD media files or a DVI-D video input. It also offers a range of creative generative effects, the versatility of powerful show control, and integration features.

#### **Features**



#### Render Engine

Make your light fixtures a canvas onto which you can paint with creative effects or video playback. The powerful Designer 2 software allows you to build your fixture layout fast with pixel-precise adjustment. Then use individually controllable and independently running timelines to build dynamic, striking, pre-programmed lighting displays across your canvas.



#### **Pharos Trigger**

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos Trigger is a rules engine that uses conditional logic and a broad range of interfaces and protocols. Send and receive any command, to and from any system. Conditional logic is supported, along with a powerful built-in scripting language for unlimited flexibility.



#### **High Capacity**

Big just got a whole lot easier. The VLC can output all commonly used eDMX protocols (sACN, Art-Net, KiNET) over Gigabit Ethernet and there are no restrictions on using these protocols simultaneously. There are six VLC variants with pricing based on channel capacity, ranging from 25,600 channels up to a massive 768,000 channels.

#### Scalable

The right fit for every installation. Multiple Pharos Controllers can be seamlessly linked together to work as one via a standard Ethernet network giving impressive scalability. For additional integration options simply add Remote Devices to further extend the network. Whether one Controller or many, it's all easily programmed using our Designer software.

#### **High Definition**

Live video can be captured on the DVI-D input at resolutions up to 1080p60. Internal video playback at up to 1080p30 supports all major formats such as H.264/MPEG-4 AVC, MJPEG and QuickTime. The built-in 128GB SSD provides plenty of capacity for media storage.

#### **Remote Management**

The control you need in your browser - from anywhere. Pharos Controllers can be connected to a network, making it possible for you to remotely manage your installation. The built-in web server lets you check the Controller's status, inputs and outputs, trigger timelines, view a full history log and much more.

#### **Custom Interfaces**

Create a custom web interface for your installation that gives your users the control they need and the look they expect. Our built-in web server supports an extensive JavaScript API and access control with multiple user levels.

#### Pharos Designer

Programmed and configured using the free Pharos Designer software - available for Windows or Mac OS X - with upload over Ethernet.

#### Reliable

Hardware and firmware are self-sufficient, so no PC needs to be left on site. Rugged, compact unit designed for 24/7 operation and reliability.

#### 5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

#### Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.















Project 21-12877-2 Date 6/24/2021

**DMX Controls** 

Submitted By 16500, INC Catalog Number PHAROS VLC 100

Notes

Supported Fixtures

LEDs in any colour configuration (RGB, RGBW, 8-bit, 16-bit, **LEDs** 

tuneable white)

**Fixture Library** Pharos offers a cloud library with over 13,000 fixture profiles, for

easy download of your luminaires

Output

sACN USITT E1.31 (with per fixture priority)

Art-Net ArtNet, ArtNet II and ArtNet III (configurable broadcast override)

**KINET** KiNET V1 (DMX out) and V2 (Port out); PDS/Data Enabler

discovery

**Pathport** Pathway Connectivity protocol

Via any eDMX node DMX512

Synchronises with up to 40 Pharos Controllers over network Scalable Simultaneous Multiple protocols can be in operation simultaneously. Limited by

patched channels, not universes used

**Triggering & Integration** 

Commences playback automatically on receiving power Startup

Clock Battery-backed real-time clock for calendar and time-based

triggers

Sunrise/Sunset/Twilight and Lunar phases Astronomical

UDP, TCP, Multicast; send/receive any Ethernet message Ethernet **Serial Data** RS232; configurable port; send/receive free syntax in ASCII, HEX

or decimal

eDMX Inputs Contact closure, active low, active high or 0-24V analog level via

Isolated relay outputs (48V 250mA) via RIOs Outputs MIDI Notes, SysEx or Timecode via RIO A MIDI

Timecode Linear Timecode via RIO A (SMPTE, Film, EBU, NTSC)

Audio Level Stereo 30-band spectrum analysis via RIO A

**DMX / RS485** Via RIOs; trigger on changes within a range or entering a range

DALI Trigger on any message, via RIO D Built-in or custom designed Web Interface **Wall Stations** Integrate with BPS or TPC Full conditional logic support Conditions Scripting Lua scripting for total flexibility

Scalable Supports Pharos Remote Devices

Interfaces

Neutrik etherCon (RJ45 compatible) for 10/100/1000Base-TX Ethernet

Ethernet with Link/Data LEDs; Static IP or DHCP

eDMX Dedicated Ethernet port for eDMX; Neutrik etherCon (RJ45 compatible) for 10/100/1000Base-TX Ethernet with Link/Data

LEDs; Static IP or DHCP

**DVI-D** Input Video input to capture resolutions up to 1080p60

**DVI-I Output** DVI-I output for monitoring Serial RS232 via DB9 connector USB Two USB 2.0 Type A ports

**Audio Outputs** Stereo analog & digital audio ports (for future development) **Specifications** 

Certifications CE compliant, ETL/cETL listed Power 100-240VAC / 50-60HZ / 0.4-0.2A

40W typical (50W maximum) IEC connector with switch UK, EU and US cable supplied Internal 128GB SSD (supplied) Pharos Designer 2.2 or later

Туре

Temperature 0°C to 50°C (32°F to 122°F) Humidity 10-50% relative, non-condensing

Ingress **Physical** 

**Data Storage** 

Configuration

19" rack unit, 1U, 13.5" deep 3.1 kg (6.8 lbs)

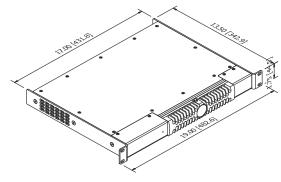
57 x 45 x 18 cm (22" x 18" x 7") Shipping

5.0 kg (11 lbs)

Recovery Hardware watchdog and recessed reset button

5 years

Warranty



#### Order Code & Variants

Video Lighting Controller 50 (25,600 channels eDMX) **VLC 50** 

**VLC 100** Video Lighting Controller 100 (51,200

channels eDMX)

**VLC 250** Video Lighting Controller 250 (128,000

channels eDMX)

**VLC 500** Video Lighting Controller 500 (256,000

channels eDMX)

**VLC 1000** Video Lighting Controller 1000 (512,000

channels eDMX)

**VLC 1500** Video Lighting Controller 1500 (768,000

channels eDMX)





Submitted By 16500, INC Catalog Number PHAROS BPS

Notes

Туре



BPS

**Button Panel Station** 

#### Overview

The Pharos BPS (Button Panel Station) is a versatile 8-button station with integrated button LEDs that works with any Pharos Controller. The stylish BPS is available in a range of finishes and there are two variants for compatibility with either US or UK back boxes. Install is easy and convenient as the BPS only requires a single Power-over-Ethernet (PoE) network connection.





#### **Features**



#### **Pharos Trigger**

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos Trigger is a rules engine that uses conditional logic and a broad range of interfaces and protocols. Send and receive any command, to and from any system. Conditional logic is supported, along with a powerful built-in scripting language for unlimited flexibility.



#### Sleek Design

An embossed magnetic overlay sits within a low-profile bezel that is only 5.5mm thick to give a sleek finish with no visible fixings. Both the bezel and the overlay are available in a variety of colours. There are two variants for compatibility with either US or UK back boxes.



#### Scalable

Up to 200 Remote Devices can be combined with one or more Pharos Controllers on the same network to build the ideal system for your installation. Each Remote Device is easily addressed using a convenient thumb wheel. Whether one Controller or many, it's all easily programmed

#### **Buttons**

The function of each of the 8 buttons is freely programmable and the system can detect press, hold, repeat and release events.

#### **LEDs**

Each button has a white LED indicator with fully user-controllable brightness and a choice of visual effects such as fades, fast or slow flashing or ramps.

#### PoF Powered

As a Power-over-Ethernet (PoE) device, the RIO can be placed at any remote location and only needs a single Cat5 cable that provides both power and data.

#### Learning IR

The BPS may be taught to recognise up to 8 different IR codes from a standard infra-red remote control. When one of these keys on the remote control is pressed the BPS will treat that as a press on its own button.

#### **Pharos Designer**

Programmed and configured using the free Pharos Designer software - available for Windows or Mac OS X - with upload over Ethernet.

#### Network

Works with any Pharos Controller and links to it using standard protocols over an Ethernet network.

#### 5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

#### Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.





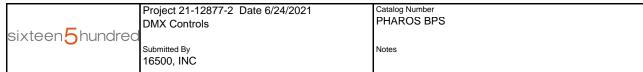














#### Capabilities

**Buttons** 8 high-reliability, tactile buttons with detection of press, held,

repeat and release

Security (PIN) and multi-key features supported

**LEDs** Each button has an individual white LED indicator with variable

brightness and flash effect options

Infra-red Learning IR allows any standard remote control to be used to

activate button presses

#### Interfaces

Ethernet RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs;

Static IP or DHCP; Power-over-Ethernet (PoE)

#### **Specifications**

Certifications CE compliant, ETL/cETL listed

Power PoE (IEEE802.3af, Class 1) 1.5W typical

 Required
 Any Pharos Controller

 Addressing
 By rotary selector switch

 Temperature
 0°C to 50°C (32°F to 122°F)

 Humidity
 10-50% relative, non-condensing

Ingress IP40

Physical Flush-mounting wall panel with variants suitable for

standard single-gang UK or US backboxes

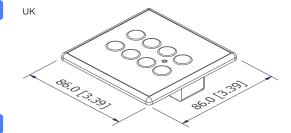
0.3 kg (0.7 lbs)

**Shipping** 20 x 15 x 12 cm (8" x 6" x 5")

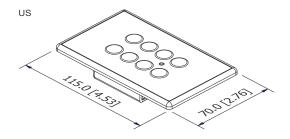
0.5 kg (1.1 lbs)

Recovery Hardware watchdog and recessed reset button

Warranty 5 years



Туре



#### Order Code & Variants

BPS UK BB Button Panel Station UK Black-on-Black

(Magnetic Overlay)

BPS UK CC Button Panel Station UK Cream-on-Cream (Magnetic Overlay)

BPS UK WW Button Panel Station UK White-on-White

(Magnetic Overlay)

BPS US BB Button Panel Station US Black-on-Black

(Magnetic Overlay)

BPS US CC Button Panel Station US Cream-on-

Cream (Magnetic Overlay)

BPS US WW Button Panel Station US White-on-White

(Magnetic Overlay)

Pharos Controller required

sixteen5hundred Submitted By 16500, INC	Project 21-12877-2 Date 6/24/2021 DMX Controls	Catalog Number ALF6PU	Туре
10300, INC		Notes	

# AL FADE 6 PRO

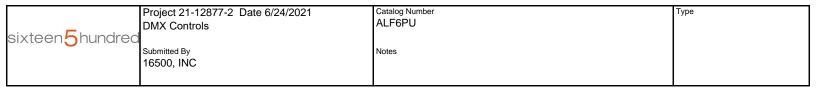




**AL Fade 6 Pro** is simple, fader based wall-mount DMX controller designed for single color or multi-color LED lighting products. It features a six channel DMX output, six user programmable presets (static color or moving sequence), and a master dimmer function. An IR remote control is included for wireless control up to 30'.

# **SPECIFICATIONS**

DMX Output	6 channels
DMX Input	6 channels, overrides dimmer levels for programming
Interface	Dimmable faders and preset buttons
Multiple Locations	Not available for AL Fade 6 Pro
Adjustable Start Address	Available via back panel dip switches
Operating Voltage	12-24VDC, 500mA (power adapter included - 6W, 12VDC,100-240VAC input)
Mounting	Single gang electrical box (not included)
Finish	White
Material	Aluminum housing, glass panel
Ambient Operating Temperature	32° F to 104° F (0° C to 40° C)
IP Rating	IP20, dry location
Fixture Connectors	Screw terminal block, direct hardwire
Warranty	2 Years, limited
Weight	0.3 lbs (140g)
Dimensions	<b>L:</b> 4.72" <b>W:</b> 2.99" <b>D:</b> 0.6" (120 x 76 x 15.3mm)
Certifications	C€



# AL FADE 6 PRO



## ORDER CODES

**ALF6PU:** AL Fade 6 Pro (North American Version)

**ALF6PE:** AL Fade 6 Pro (European Version)

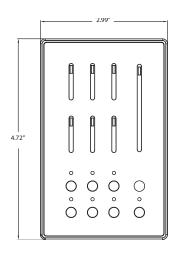
# INCLUDED COMPONENTS

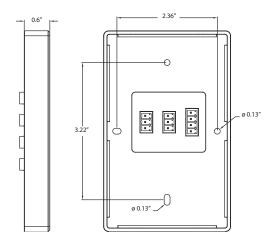
#### **Power Supplies**

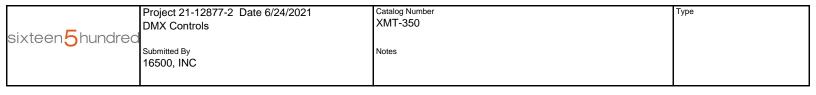


APS-6-12 Power Supply for AL Fade 6 Pro 100-240VAC, 500mA, 12VDC, 6W cULus component, CE approved

# **DIMENSIONS**

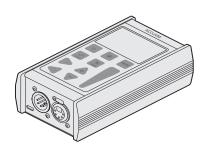








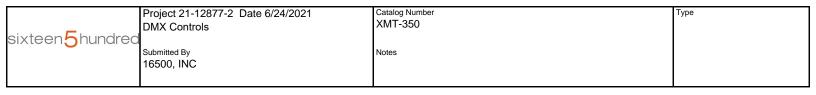




The **XMT-350** is a powerful DMX / RDM measurement and test tool. It allows for RDM addressing and monitoring of Acclaim Lighting (and 3rd party) products that have RDM capability, and can test all elements of the DMX data signal to ensure proper system operation. It includes a 9V battery for portable operation, micro-USB option, and hardwire cable adapter for non-XLR applications.

## **SPECIFICATIONS**

Received DMX Channels	512
Transmitted DMX Channels	512
Refresh Rates	5, 10, 15, 20, 25, 30, 35, 44 frames per second
Display	LCD, 128 x 64 pixels
DMX In Port	Neutrik 5-pin male connector
DMX Out Port	Neutrik 5-pin female connector
Included DMX Adapters	5 pin to 3 pin turnarounds, Hardwire adapter to 5 pin male
DMX Ports Electrical Standard	ANSI E1.11 / ANSI E1.20
USB Port	Micro USB, Type B, Used for direct power or firmware updated, cable not included
On-board SSD Memory	16MB
Included Battery	9V, Included in the box
Included Battery  Cable Tester	9V, Included in the box 5 pin, open circuit, wrong wiring
Cable Tester	5 pin, open circuit, wrong wiring
Cable Tester  Ambient Operating Temperature	5 pin, open circuit, wrong wiring 32° F to 113° F (0° C to 45° C)
Cable Tester  Ambient Operating Temperature  Re-charge Options	5 pin, open circuit, wrong wiring  32° F to 113° F (0° C to 45° C)  Rechargeable 9V batteries are allowed, but not provided or charged by the XMT-350
Cable Tester  Ambient Operating Temperature  Re-charge Options  Warranty	5 pin, open circuit, wrong wiring  32° F to 113° F (0° C to 45° C)  Rechargeable 9V batteries are allowed, but not provided or charged by the XMT-350  2 Years, Limited





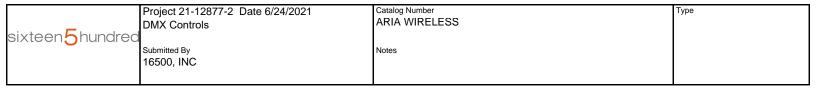


## ORDER CODE

₩ XMT350

## Addressing / RDM Compatible with:

AL Cove DMX
AL Driver 800
AL Driver 400
Pixel Graze
AL Graze DC DMX
AL Graze AC
Dyna Graze HO EXT DMX
Dyna Accent
Quad Eye
AL Dot









The **Aria Wireless DMX system** is a compact, local, outdoor rated wireless DMX system. The Aria transceiver can act as either the sending or receiving point, and you can select up to 15 channels on the 2.4 GHz band. The internal wireless radio features both automatic networking and signal routing optimization to ensure the best possible reception of DMX data. A 5dB, omni-directional antenna is included, which provides transmission up to 2600' line of sight and 300' between obstructions and walls.

## **SPECIFICATIONS**

Wireless Protocol	2.4 GHz, IEEE 802.15.4, 15 selectable channels
Estimated Transmission Distance	2600' (792m) line of sight, 300' (91m) between obstructions and walls
Data Encryption	AES 128-bit
DMX Universes	One per transceiver, maximum of 8 simultaneously
Max number of transceivers	Up to 250 (limited to ensure optimum data transmission)
Included Antenna	5dB, includes direct attachment adapter and 9' extension cable
Mounting	Wall mountable via screw holes on both the transceiver and antenna mount
Power Consumption	3W
Operating Voltage	100-240VAC, 277VAC - 50/60Hz
Display Features	Auto lockout and display blackout
Finish	Gray
Housing Material	Die cast aluminum
Ambient Operating Temperature	-40°F to 122°F (-40°C to 50°C)
IP Rating	IP66, Wet Location (does not include feed ends - install in an enclosure)
Wiring	3.28' (1m) Attached AC power feed cable and DMX in /out cable included
Warranty	5 Years Limited
Weight	3.96 lbs (1.8 kg)
Dimensions	W 9.1" x H 6.2" x L 2.2' (231.6 x 157.7 x 55mm)
Certifications	cette some constant of the co



Project 21-12877-2 Date 6/24/2021 DMX Controls Catalog Number ARIA WIRELESS

Notes

Туре





### ORDER CODES

\*Indicates Special Order

Model

## **ARIA WDS**

#### Direct connection with:

Dyna Drum HO
Dyna Drum SO
Dyna Drum EO
Dyna Accent
Dyna Accent Mini
UDM-W

## INCLUDED COMPONENTS

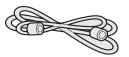


**5 dB antenna** Type N Female Connector



#### Type N Male to Male Adapter

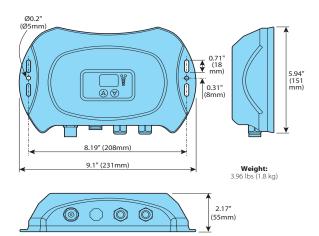
Connects antenna directly to Aria without using the extension cable

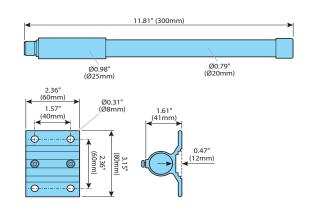


#### 9' (2.74m) Antenna Extension Cable & Bracket

To remotely mount the antenna

#### **DIMENSIONS**







Project 21-12877-2 Date 6/24/2021 DMX Controls Catalog Number ARIA WIRELESS

Notes

Type

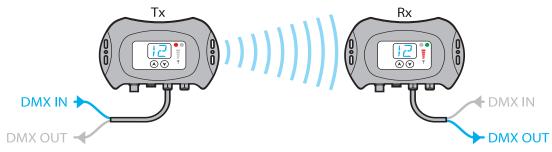




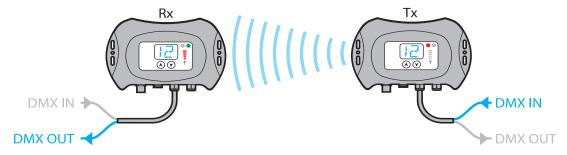
### SYSTEM LAYOUT

Consult user guide for additional details

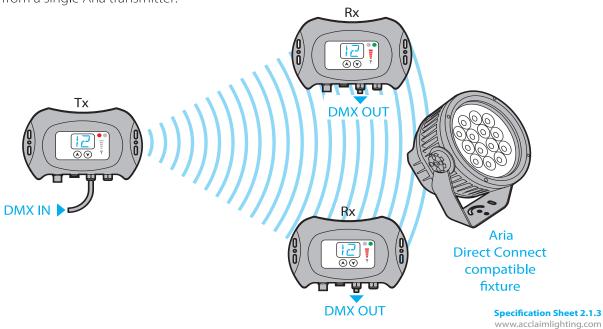
Aria units can operate either as a transmitter or as a receiver - although not at the same time:

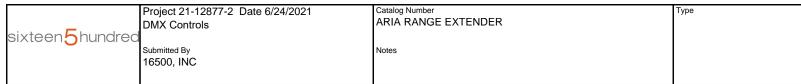


No configuration changes are required to change between operation as a transmitter or receiver; the detection of a valid DMX input will automatically prompt an Aria unit to become a transmitter.



Up to 250 Aria units (or Aria Direct Connect compatible lighting fixtures) can act as receivers from a single Aria transmitter:











The **Aria Range Extender** is a compact, local, outdoor rated expansion unit for the Aria wireless DMX system. The Aria Range Extender can receive signal from an Aria transceiver and rebroadcast it to expand your wireless range, matching your existing radio channel on the 2.4 GHz band. The internal wireless radio features both automatic networking and signal routing optimization to ensure the best possible reception of DMX data. A 5dB, omni-directional antenna is included, which provides transmission for an additional 2600'line of sight and 300' between obstructions and walls.

## **SPECIFICATIONS**

Wireless Protocol	2.4 GHz, IEEE 802.15.4, 15 selectable channels
Estimated Transmission Distance	2600' (792m) line of sight, 300' (91m) between obstructions and walls
Data Encryption	AES 128-bit
DMX Universes	One per range extender, maximum of 8 simultaneously
Max number of transceivers	Up to 5 per single transceiver (limited to ensure optimum data transmission)
Included Antenna	5dB, includes direct attachment adapter and 9' extension cable
Mounting	Wall mountable via screw holes on both the transceiver and antenna mount
Power Consumption	3W
Operating Voltage	100-240VAC, 277VAC - 50/60Hz
Display Features	Auto lockout and display blackout
Finish	Gray
Housing Material	Die cast aluminum
Ambient Operating Temperature	-40°F to 122°F (-40°C to 50°C)
IP Rating	IP66, Wet Location (does not include feed ends - install in an enclosure)
Wiring	3.28' (1m) Attached AC power feed cable
Warranty	5 Years Limited
Weight	3.96 lbs (1.8 kg)
Dimensions	W 9.1" x H 6.2" x L 2.2' (231.6 x 157.7 x 55mm)
Certifications	C E ROHS 2002195FEC



Project 21-12877-2 Date 6/24/2021 DMX Controls Catalog Number ARIA RANGE EXTENDER

Notes

Туре



# **ACCLAIM**LIGHTING

## **ORDER CODES**

\*Indicates Special Order

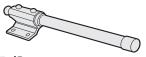
Model

**ARIA RE** 

#### Direct connection with:

Dyna Drum HO
Dyna Drum SO
Dyna Drum EO
Dyna Accent
Dyna Accent Mini
UDM-W

## INCLUDED COMPONENTS

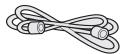


**5 dB antenna** Type N Female Connector



## Type N Male to Male Adapter

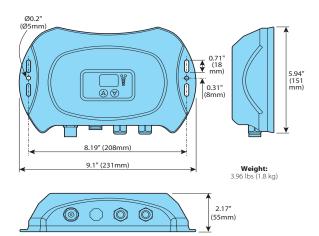
Connects antenna directly to Aria without using the extension cable

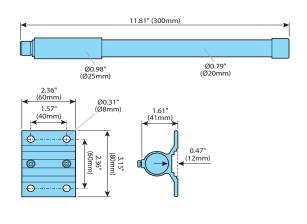


#### 9' (2.74m) Antenna Extension Cable & Bracket

To remotely mount the antenna

### **DIMENSIONS**





	Project 21-12877-2 Date 6/24/2021 DMX Controls	Catalog Number TC 1 PRO	Туре
1	Submitted By 16500, INC	Notes	

## TC 1 PRO<sup>™</sup>

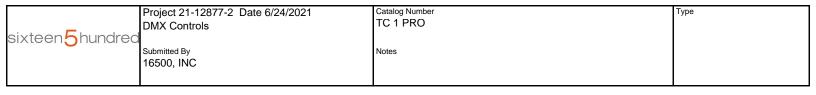




**TC 1 PRO** is simple, touch based wall-mount DMX controller, designed for single color lighting products. It features a DMX and 0-10V (source) outputs, four user programmable dimming level presets, and an adjustable fade function.

## **SPECIFICATIONS**

DMX Output	1 channel
0-10V (Source) Output	1 channel, signal generated by TC 1 Pro
Interface	Touch senstitve wall panel
Multiple Locations	Not available for TC 1 Pro
Audio Indicator	Tone can be toggled on /off by holding buttons 1-4 simultaneously
Operating Voltage	12-24VDC, 500mA (power adapter included - 6W, 12VDC,100-240VAC input)
Mounting	Single gang electrical box (not included)
Finish	White
Material	Aluminum housing, glass panel
Ambient Operating Temperature	32° F to 104° F (0° C to 40° C)
IP Rating	IP20, dry location
Fixture Connectors	Screw terminal block, direct hardwire
Warranty	2 Years, limited
Weight	0.3 lbs (140g)
Dimensions	<b>L:</b> 4.72" <b>W:</b> 2.99" <b>D:</b> 0.6" (120 x 76 x 15.3mm)
Certifications	C€



## TC 1 PRO<sup>™</sup>



## ORDER CODES

**TC1PU:** TC 1 Pro (North American Version)

**TC1PE:** TC 1 Pro (European Version)

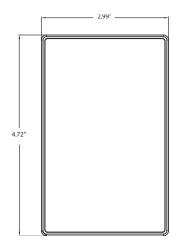
## INCLUDED COMPONENTS

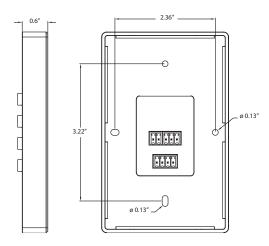
#### **Power Supplies**

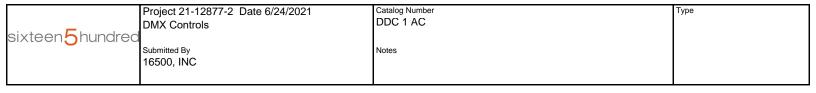


APS-6-12 Power Supply for TC 1 Pro 100-240VAC, 500mA, 12VDC, 6W cULus component, CE approved

## **DIMENSIONS**







## DDC 1 AC™

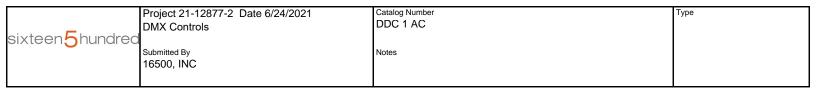




The **DDC 1 AC** is a two way DALI to DMX converter. It features one DALI input and one DMX output, allowing conversion of up to 64 channels of DALI into DMX-512 signal. Via an internal dip switch, you can reverse the path, making it DMX input to DALI output.

## **SPECIFICATIONS**

Operating Voltage	100-277VAC, 50/60Hz
DALI Input / Outputs	1
DMX Input / Outputs	1
Mode Adjustment	via internal dip switch, default is DALI -> DMX, optional mode is DMX -> DALI
Maximum Control Channels	64 DALI & 64 DMX
Protocols	DALI & DMX-512
Power Consumption	8.3 mA, 1W at 120VAC
Finish	Black
Housing Material	Extruded aluminum
IP Rating	IP20, Dry location
Operating Temperature	14°F to 122°F (-10°C to 50°C)
Fixture Connectors	Attached 14" (355 mm) leads for AC Input, terminal blocks for DMX and DALI
Warranty	3 Years
Weight	0.8 lbs (0.36 kg)
Dimensions	W 7.75" x H 2" x L 2.54" (197 x 51 x 64.6mm)
Certifications	. EDus C €



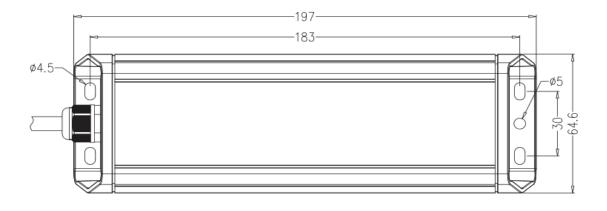
## DDC 1 AC TM

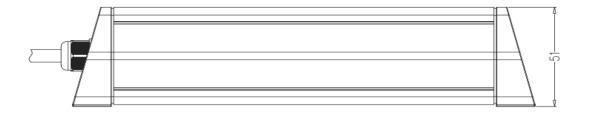


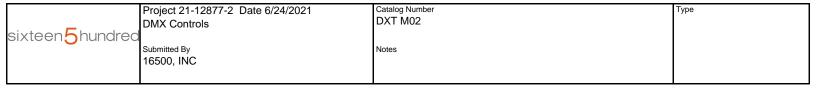
### ORDER CODE

**DDC 1 AC:** DALI to DMX Converter, 64 channels

## **DIMENSIONS**







#### **OVERVIEW**

Fresco DXT modules and assemblies are designed for reliable control of DMX/RDM luminaires. Factory prewired within a NEMA 1 enclosure, DXT assemblies are meant for permanent installation.

Featuring conduit knock outs, screw-down terminal strips and diagnostic LEDs, the DXT Modules are factory installed and wired for easy installation in commercial applications. Compatibility with luminaires and controllers is assured because DXT Modules are compliant to the latest revisions of the ANSI DMX/RDM standard as documented.

Select one, two or three DXT Modules for factory installation within an enclosure. Modules support data splitting, combining, isolating, 0-10V interfacing, etc. Mix and match modules as required for the project.

#### **FEATURES**

- · Factory installed DMX512 control and interface modules
- 1, 2 or 3 modules may be installed as specified
- Removable plug-on terminal strip connectors for all field wiring
- Direct pass-through connection for DMX/RDM
- Auto-terminating on the DMX/RDM outputs
- Black powder coated finish on the NEMA 1 enclosure
- Class 2 Power Supply 120/277V provided within each enclosure
- Ground lug provided with each enclosure
- Ethernet Switch with PoE
- Architectural controller for 485 version of Fresco Show NSB and Vignette

#### Warranty

Two-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/terms-and-conditions

**Note:** Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



Fresco.

## DXT Assemblies for Control Networks



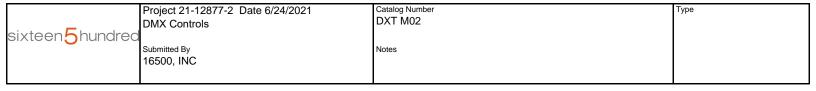
#### ORDERING INFORMATION

XT Example: DXT 1M04 2M09 3M09 NE					
	1## 2## 3##1				
Series	Module Type			Enclosure	
DXT DMX Networking	M02 DMX512 opto-splitter, 4 way M03 Contact closure output, 12 channel M04 0-10V dimmers, 16 channel M08 Constant voltage LED dimmer, 6 channel M09 DMX512/RDM opto-splitter, 4 way M11 1-port Ethernet DMX/RDM node M12 2-port Ethernet DMX/RDM node M14 4-port Ethernet DMX/RDM node M16 8-port DMX/RDM merger/hub	VIA5 <sup>2</sup> VIA5F <sup>2</sup> ARC <sup>3</sup> ARC8 <sup>3</sup> ARC16 <sup>3</sup> ARCVN <sup>3</sup> ARCVN2 <sup>3</sup> ARCVN2C68 <sup>3</sup> ARCVN2CC6 <sup>3</sup> ARCVN2C16 <sup>3</sup>	5-port Gigabit Ethernet Switch 5-port Gigabit Ethernet Switch w/Fiber Fresco Show NSB 485 Gateway, 1 Ethernet Fresco Show NSB 485 Gateway, 1 Ethernet, 8 Contact Closure Inputs Fresco Show NSB 485 Gateway, 1 Ethernet, 16 Contact Closure Inputs Vignette 485 Gateway, 1 Ethernet Vignette 485 Gateway, 1 Ethernet, 2 DMX Vignette 485 Gateway, 1 Ethernet, 2 DMX, 8 Contact Closure Inputs Vignette 485 Gateway, 1 Ethernet, 16 Contact Closure Inputs Vignette 485 Gateway, 2 Ethernet, 16 Contact Closure Inputs	NE1S NE1L	Small NEMA type 1 Large NEMA type 1

#### Note

- 1. ## Represents the module type desired in each module position in the assembly.
- 2. Any VIA5(F) modules must be earlier in the nomenclature than other modules.
- 3. Maximum of 64 Fresco Show NSB or Vignette Inserts per enclosure.

See Accessories next page.



DXT IDC CONN5	5-position IDC connector, bag of 4	DXT VIA5	5-port Gigabit Ethernet Switch
DXT 0M NE1S	Empty Small NEMA type 1 Enclosure	DXT VIA5F	5-port Gigabit Ethernet Switch w/Fiber
DXT 0M NE1L	Empty Large NEMA type 1 Enclosure	DXT ARC	Fresco Show NSB 485 Gateway, 1 Ethernet
DXT M02	DMX512 opto-splitter, 4 way module	DXT ARC8	Fresco Show NSB 485 Gateway, 1 Ethernet, 8 Contact Closure Inputs
DXT M03	Contact closure output, 12 channel module	DXT ARC16	Fresco Show NSB 485 Gateway, 1 Ethernet, 16 Contact Closure Inputs
DXT M04	0-10V dimmers, 16 channel module	DXT ARCVN	Vignette 485 Gateway, 1 Ethernet
DXT M08	Constant voltage LED dimmer, 6 channel module	DXT ARCVN2	Vignette 485 Gateway, 1 Ethernet, 2 DMX
DXT M09	DMX512/RDM opto-splitter, 4 way module	DXT ARCVN2CC8	Vignette 485 Gateway, 1 Ethernet, 2 DMX, 8 Contact Closure Inputs
DXT M11	1-port Ethernet DMX/RDM node module	DXT ARCVNCC16	Vignette 485 Gateway, 1 Ethernet, 16 Contact Closure Inputs
DXT M12	2-port Ethernet DMX/RDM node module	DXT ARCVN2E	Vignette 485 Gateway, 2 Ethernet
DXT M14	4-port Ethernet DMX/RDM node module	DXTREPL PS24V	Replacement 24V Power Supply
DXT M16	8 port DMX/RDM merger/hub module	DXTREPL PS48V	Replacement 48V Power Supply (for VIA5)
		DXTREPL DCDC	Replacement 48VDC to 24VDC converter

#### **SPECIFICATIONS**

#### Electrical

- Input: 120/277VAC
- 100W max @ 48VDC via internal Class 2 power supply if VIA5 is ordered
- 100W max @ 24VDC via internal Class 2 power supply if ARC\*\*/ARCVN\*\* is ordered
- 30W max @ 24VDC via internal Class 2 power supply otherwise

#### Installation

- Surface mount
- Conduit knockouts provided
- Powder coated steel enclosure with painted screws

#### Environment

- Ambient: 14 to 120°F (-10 to 50°C)
- Storage: 40 to 158°F (-40 to 70°C)
- Relative humidity: 90% non-condensing
- Designed for permanent interior installation

#### Performance

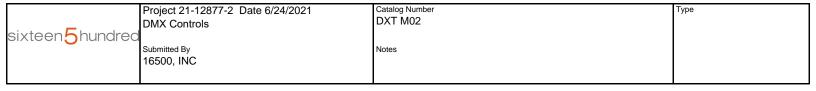
- Modules have a DMX/RDM in and through connections
- LED status indicators
- Note specific features are listed by module type

#### Standards

- ANSI E1.11 DMX512-A (2008)
- ANSI E1.20 RDM (2010)
- RoHS compliant
- UL Listed

#### Enclosure

- NEMA Type 1
- Weight (empty)
- NE1S (small): 7lbs (3.5kg)
- NE1L (large): 11.5lbs (5.25kg)



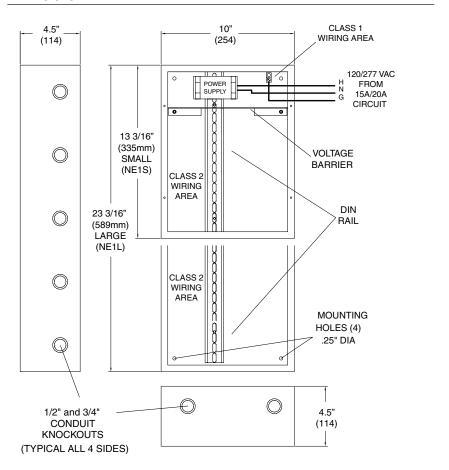


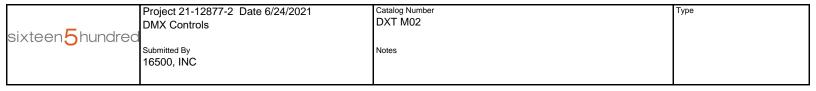


#### Note

- Pluggable Screw Terminal is included standard.
- 2. Pluggable IDC Connector is orderable in 4 packs as DXT IDC CONN5.

## **DIMENSIONS**





#### **AVAILABLE MODULES, TYPE CODES & SIZE**

Several modules are available for assembly in DXT enclosures. Module codes, module sizes and a description of the modules follows. Modules vary in size and are combined in standard enclosures, follow enclosure size guides to determine maximum number of modules allowed in small and/or large enclosures.

Туре	Size (module length)	Description	
M02	A (4.5 in, 115mm)	DMX512 opto-splitter, 4-way	
M03	C (8.0 in, 200mm)	Contact closure output, 12 channel	
M04	B (6.25 in, 160mm)	0-10V dimmers, 16 channel	
M08	C (8.0 in, 200mm)	Constant voltage LED dimmer, 6 channel	
M09	B (6.25 in, 160mm)	DMX512/RDM opto-splitter, 4-way (bi-directional)	
M11	A (4.5 in, 115mm)	1-port Ethernet DMX/RDM node	
M12	A (4.5 in, 115mm)	2-port Ethernet DMX/RDM node	
M14	C (8.0 in, 200mm)	4-port Ethernet DMX/RDM node	
M16	C (8.0 in, 200mm)	8-port DMX/RDM merger/hub	
VIA5	C (8.0 in, 200mm)	5-port Gigabit Ethernet Switch	
VIA5F	C (8.0 in, 200mm)	5-port Gigabit Ethernet Switch w/Fiber	
ARC	A (4.5 in, 115mm)	Fresco Show NSB 485 Gateway, 1 Ethernet	
ARC8	B (6.25 in, 160mm)	Fresco Show NSB 485 Gateway, 1 Ethernet, 8 Contact Closure Inputs	
ARC16	C (8.0 in, 200mm)	Fresco Show NSB 485 Gateway, 1 Ethernet, 16 Contact Closure Inputs	
ARCVN	A (4.5 in, 115mm)	Vignette 485 Gateway, 1 Ethernet	
ARCVN2	B (6.25 in, 160mm)	Vignette 485 Gateway, 1 Ethernet, 2 DMX	
ARCVN2CC8	C (8.0 in, 200mm)	Vignette 485 Gateway, 1 Ethernet, 2 DMX, 8 Contact Closure Inputs	
ARCVNCC16	C (8.0 in, 200mm)	Vignette 485 Gateway, 1 Ethernet, 16 Contact Closure Inputs	
ARCVN2E	B (6.25 in, 160mm)	Vignette 485 Gateway, 2 Ethernet	

### **ENCLOSURE SIZE SELECTION**

**Small Enclosures** 

NE1S enclosures (Small) have 9.5 in (240mm) of available module installation space. This supports:

2 x A size modules or 1 x B size modules or 1 x C size modules

Large Enclosures

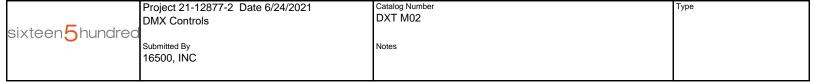
NE1L enclosures (Large) have 19.5 in (495mm) of available module installation space. This supports:

4 x A size modules or 3 x B size modules or 2 x C size modules

#### **COMMON ASSEMBLY CONFIGURATIONS**

Several assemblies are more common or have more applicability within commercial applications. Those assemblies follow.

Nomenclature	<b>Enclosure Size</b>	Description
DXT 1M09 NE1S	Small	4-way DMX/RDM opto-splitter
DXT 1M09 2M09 NE1L	Large	8-way DMX/RDM opto-splitter
DXT 1M09 2M12 NE1L	Large	4-way DMX/RDM opto-spliter with 2-port node
DXT 1M04 2M12 NE1L	Large	16 channel 0-10V dimming with 2-port node



#### M02 DMX512 OPTO-SPLITTER 4-WAY

MO2 is a 4-way DMX splitter that enables "star" type wiring patterns with DMX data lines. Each buffered output is isolated from the DMX input and protects all end devices from propagating electrical faults and ground loops.



M02 DMX512 Opto-Splitter 4-way, Size A

#### Warranty

Two-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/terms-and-conditions

**Note:** Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

#### **SPECIFICATIONS**

#### Electrical

- Power: 5W @ 24 VDCInput Voltage: 10 30 VDC
- Isolation: 1,500 V between inputs & outputs
- Protection: 250 V fault protection on inputs & outputs

#### Installation

- · Factory assembled
- DIN rail mounts

#### Environment

- Ambient: 14 to 122 °F (-10 to 50 C)
- Relative Humidity: 90% non-condensing
- Designed for permanent interior installation

#### Standards

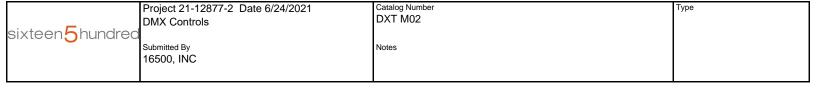
- ANSI E1.11 DMX512-A (2008)
- RoHS compliant
- FCC
- CE
- Class 2 low voltage

#### Performance

- One DMX512 input
- Four buffered DMX512 outputs
- One passive DMX512 thru connector
- Pluggable terminal blocks for all connectors
- Power and data easily daisy-chained between modules
- DMX IN indicator
- DC Power input indicator
- Termination switch
- Self-resetting port protection recovers from voltage faults

#### Mechanical (Size A)

- Width: 4.5 in (115 mm)
- Height: 3.6 in (91 mm)
- Depth: 1.5 in (38 mm)
- Weight: 0.5 lbs (0.32 kg)



#### MO3 DMX/RDM CONTACT CLOSURE OUTPUT, 12 CHANNEL

M03 provides DMX512/RDM control over twelve form-C relays for signal level switching. Each relay may be independently wired for normally-open (NO) or normally closed (NC) operation. Field configurable through the card front or via RDM. Nine operating modes are available for flexibility of use.



M03 DMX/RDM Contact Closure Output, 12 Channel, Size C

#### Warranty

Two-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/terms-and-conditions

**Note:** Actual performance may differ as a result of end-user environment and application.

Specifications subject to change without notice.

#### **SPECIFICATIONS**

#### Electrical

- Power: 6W @ 24 VDCInput Voltage: 10 30 VDC
- Isolation: 1,500 V between inputs & outputs
- Protection: 250V fault protection on inputs & outputs

#### Installation

- · Factory assembled
- · DIN rail mounts

#### Environment

- Ambient: 14 to 122 °F (-10 to 50 C)
- Relative Humidity: 90% non-condensing
- Designed for permanent interior installation

#### Standards

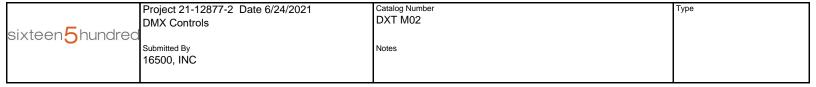
- ANSI E1.11 DMX512-A (2008)
- ANSI E1.20 RDM (2010)
- RoHS compliant
- FCC
- CE
- Class 2 low voltage

#### Performance

- Relays rated for 100,000 operations at 2A 30 VDC
- One DMX512 start address and operating mode may be set from the front panel interface or via RDM
- DMX512-present relay (normally open or normally closed)
- Indicator LEDs for power, processor, DMX input, and relay status
- Pluggable terminal block connectors accept solid or stranded wire between #26 to #16 AWG
- Normally open or normally closed wiring option for each relay
- One DMX512-A/RDM data input connection
- Suitable as pilot relay for high voltage contactors with adequate arc protection (by others)
- Data and power easily daisy-chained between modules
- Termination switch

#### Mechanical (Size C)

- Width: 8.0 in (200 mm)
- Height: 3.6 in (91 mm)
- Depth: 1.5 in (38 mm)
- Weight: 0.7 lbs (0.32 kg)



#### **M03 CONTACT CLOSURE OUTPUT, 12-CHANNEL**

#### **OPERATING MODES**

#### **Mode 1: 12 Channel Maintained Control**

Each relay is maintained "on" as long as the DMX value of its associated channel is above 50%

#### **Mode 2: 12 Channel Momentary Control**

When the DMX channel for a given relay passes through the 50% threshold, either increasing or decreasing the relay closes for 100 msec

#### Mode 3: 12 Channel Momentary "ON"

When the DMX channel for a given relay is increasing and passes through the 50% threshold, the relay will close for 100 msec

#### Mode 4: 6 Channel Momentary Split

Each adjacent pair of relays is associated with a single DMX channel. When the DMX level of the channel for a given relay pair passes through the 50% threshold, increasing, the lower number relay will close for 100 msec. When the DMX level for a given pair passes through the 50% threshold, decreasing, the higher number relay will close for 100 msec.

#### **Mode 5: 6 Channel Maintained Split**

Each adjacent pair of relays is associated with a single DMX channel. When the DMX level of the channel for a given relay pair passes through the 50% threshold, increasing, the lower number relay will close and maintain state while the higher number relay will open. When the DMX level for a given pair passes through the 50% threshold, decreasing, the lower number relay will open while the higher number relay will close and maintain state.

#### Mode 6: 12 Channel Momentary Split with Secondary Reset

2 sequential DMX channels are associated with each adjacent pair of relays. When the lower DMX channel increases through 50%, the lower-numbered relay will close for 100 msec. When the lower DMX channel decreases through 50%, the higher-numbered relay will close for 100 msec. To provide a secondary reset, when the higher DMX channel passes through 50%, increasing, the higher relay will close for 100 msec. If the higher DMX channel decreases through 50%, the relays remain unchanged.

#### Mode 7: Chase

Each relay will be triggered for 2 seconds. This mode is intended as a test feature, independent of the user-initiated TEST mode

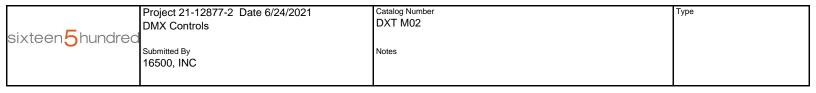
**Mode 8: Single Channel Select** Raising the DMX level of the start channel will maintain each relay in turn from none up to the twelfth. At a DMX percentage between 0-8%, no relays will be triggered. A DMX percentage between 9 and 16% will maintain relay 1 only, a DMX percentage between 17% and 24% will maintain relay 2 only, and so on. In this mode the contact closure output card has a DMX footprint of one channel.

#### Mode 9: Single Channel Build

Raising the DMX level of the start channel will trigger each relay additionally. At zero percent no relays are triggered white at full all twelve contact closures are triggered. At a DMX percentage between 0-8%, no relays will be triggered. A DMX percentage between 9 and 16% will maintain relay 1 only, a DMX percentage between 17% and 24% will maintain relay 1 and relay 2; and so on. In this mode the contact closure output card has a DMX footprint of one channel.

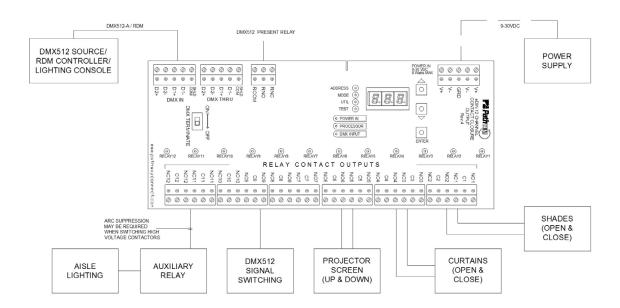
#### **Threshold Adjustment**

The relay trigger threshold may be globally adjusted (as an 8-bit value) using the UTIL mode. Valid range is between 2 and 253 (approximately 1% to 99%), with a default of 128 (50%)



#### **M03 CONTACT CLOSURE OUTPUT, 12-CHANNEL:**

#### **APPLICATION RISER DIAGRAM**



#### **DMX/RDM PIN OUT WITH XLR**

XLR Pin #	Purpose
1	Common
2	Data -
3	Data +
4	Data - (pair 2)
5	Data + (pair 2)

#### **DMX/RDM PIN OUT WITH CAT-5/6**

Pin#	Wire Color	Purpose
1	white/orange	Data +
2	orange	Data -
3	white/green	Data + (pair 2)
4	blue	Not assigned
5	white/blue	Not assigned
6	green	Data - (pair 2)
7	white/brown	Common
8	brown	Common (pair 2)



#### MO4 DMX/RDM 0-10 V DIMMERS, 16 CHANNEL

MO4 16 channel DMX /RDM to analog interface card converts 16 DMX channels to analog DC voltage. Diode shunts allow user-selection between current sourcing applications or current sinking control (typical for LED fixtures or 0-10V electronic fluorescent dimming ballasts). A non-dim mode supports solid-state relay control



MO4, DMX/RDM 0-10V Dimmers, 16 Channel, Size B

#### Warranty

Two-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/terms-and-conditions

**Note:** Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

#### **SPECIFICATIONS**

#### Electrical

- Power: 6W @ 24 VDC
- Input Voltage: 10 30 VDC
- Isolation: 1,500 V between inputs & outputs
- Protection: 250V fault protection on inputs & outputs

#### Installation

- Factory assembled
- DIN rail mounts

#### Environment

- Ambient: 14 to 122 °F (-10 to 50 C)
- Relative Humidity: 90% non-condensing
- Designed for permanent interior installation

#### Standards

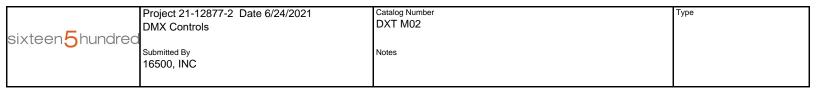
- ANSI E1.11 DMX512-A (2008)
- ANSI E1.20 RDM (2010)
- RoHS compliant
- FCC
- CE
- Class 2 low voltage

#### Performance

- DMX512 start address and operating mode may be set from front panel or using RDM
- Indicator LEDs for power, processor and DMX input status
- Standard DC output modes of 0-10 V, 0-15 V, 0-2.5 V or 0-5 V.
- Custom mode allows user-set minimum and maximum DC output up to 16 V
- Pluggable terminal block connectors accept solid or stranded wire between #26 to #16 AWG
- Power and data easily daisy-chained between modules
- EFBC/LED driver mode allows single DMX channel control of mains voltage (via solid state relay) and 0-10V dimming
- Maximum current rating per output of 10 mA (source) and 30 mA (sinking)
- CCL "Panic Input" drives all outputs to full
- One DMX512-A/RDM data input connection
- One passive DMX512-A data through connection
- Termination switch

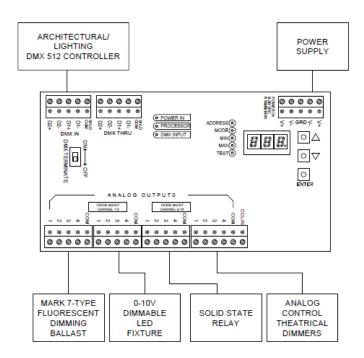
#### Mechanical (Size B)

- Width: 6.25 in (160 mm)
- Height: 3.6 in (91 mm)
- Depth: 1.5 in (38 mm)
- Weight: 0.7 lbs (0.32 kg)



#### MO4 DMX/RDM 0-10V DIMMERS 16 CHANNEL (CONTINUED)

#### **APPLICATION RISER DIAGRAM**

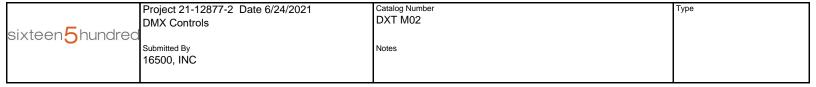


#### **DMX/RDM PIN OUT WITH XLR**

XLR Pin #	Purpose
1	Common
2	Data -
3	Data +
4	Data - (pair 2)
5	Data + (pair 2)

#### **DMX/RDM PIN OUT WITH CAT-5/6**

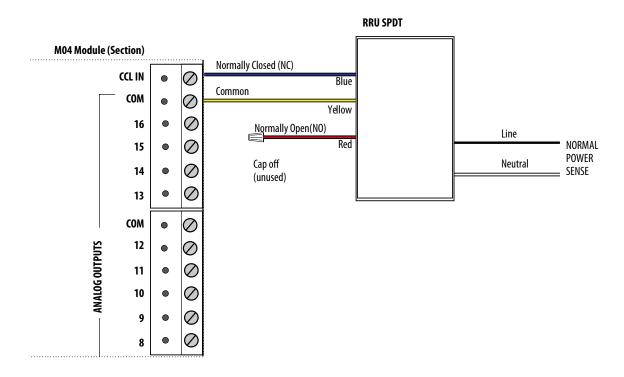
Pin#	Wire Color	Purpose
1	white/orange	Data +
2	orange	Data -
3	white/green	Data + (pair 2)
4	blue	Not assigned
5	white/blue	Not assigned
6	green	Data - (pair 2)
7	white/brown	Common
8	brown	Common (pair 2)



#### MO4 DMX/RDM 0-10V DIMMERS 16 CHANNEL (CONTINUED)

#### **CCL APPLICATION (PANIC LIGHTING TRIGGER)**

MO4 DMX/RDM 0-10 V dimmers may used with emergency/essential lighting. When paired with an RRU SPDT, a UL 924 listed transfer device, the M04 will ignore all DMX input commands and force all dimmed outputs to full when CCL IN is shorted to COM. Outputs 1 - 16 remain at full output while CCL IN is shorted to COM and resume tracking assigned DMX input channels when CCL IN is floating relative to COM. The MO4 device provides an internal pull up and biasing circuit so floating the input will have no impact during normal operation.



#### **NOTES**

- M04 and Emergency Lighting must be connected to emergency power
   M04 ignores all DMX input streams and drives all analog (0-10 V) outputs to full if the CCL intput terminal is shorted to COM.
- RRU must be fed with normal power to sense power failure or brown out (sense triggers at 90% of nominal voltage)
  M04 is Class 2 and RRU Normall Closed, Normally Open and Common connections (Bue, Red, Yellow) are isolated from line voltage
- RRU SPDT requires a grounded metal enclosure (not provided)
- RRU SPDT may be ordered from AcuityBrands controls



Catalog Number DXT M02

Notes

Туре

#### **DXT MODULE**

#### **M08 CONSTANT VOLTAGE LED DIMMER, 6 CHANNEL**

M08 provides direct pulse-width modulation (PWM) control of common anode constant voltage LED fixtures, typical of linear, string and tape luminaires. Multiple modes, including 16-bit ensure smooth dimming performance. The module also provides efficient switching control of DC devices such as solid state relays and solenoids.



#### Warrantv

Two-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/terms-and-conditions

**Note:** Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

## M08, Constant Voltage LED dimmer, 6 Channel, Size C

#### **SPECIFICATIONS**

#### Electrical

- Power: 5W @ 24 VDC
- 4 A at 24 VDC per output maximum (96W)
- Input Voltage: 10 30 VDC
- Isolation: 1,500 V between inputs & outputs
- Protection: 250V fault protection on inputs & outputs

#### Installation

- · Factory assembled
- DIN rail mounts

#### Environment

- Ambient: 14 to 122 °F (-10 to 50 C)
- Relative Humidity: 90% non-condensing
- Designed for permanent interior installation

#### Standards

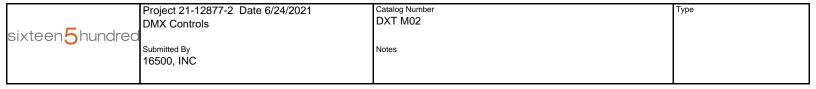
- ANSI E1.11 DMX512-A (2008)
- ANSI E1.20 RDM (2010)
- RoHS compliant
- FCC
- CE
- Class 2 low voltage

#### Performance

- DMX512 start address and operating mode may be set from front panel interface or remotely using E1.20 RDM
- Controls constant voltage LED fixtures rated between 5 to 30 VDC.
   External power supply required
- Six PWM outputs, individually fused at 4 A
- Asynchronous 300Hz pulse width modulation
- DMX512-present relay (normally open or normally closed)
- Contact closure 'panic' input drives all outputs to full
- Auxiliary 0-10V analog inputs HTP-merged with DMX input
- Indicator LEDs for power, processor, DMX input, active output
- 2000 step fade processor with user-adjustable smoothing algorithm and minimum and maximum output levels
- Multiple loss-of-signal options
- Pluggable terminal block connections accept solid or stranded wire between #26 and #16 AWG
- · Power and data easily daisy-chained between modules
- One DMX512-A/RDM data input connection
- One passive DMX512-A data through connection
- Termination switch
- User-initiated diagnostics and test modesMechanical (Size C)

#### Mechanical (Size C)

- Width: 8.0 in (200 mm)
- Height: 3.6 in (91 mm)
- Depth: 1.5 in (38 mm)
- Weight: 0.7 lbs (0.32 kg)



#### **M08 CONSTANT VOLTAGE LED DIMMER**

#### **OPERATING MODES**

#### Mode 1 Default LED Control (6 channels)

Incoming DMX value is interpolated to create a 16-bit value. A weighted fade curve is applied to the output to compensate for LED response, producing an apparently linear fade to the human eye.

#### Mode 2 : DMX Double Precision Mode with Curve (12 channels)

Two DMX control channels are used to produce a 16-bit value for each output. A weighted fade curve is applied to the output to produce an apparently linear fade to the humaneye.

#### Mode 3: DMX Double Precision Mode without Curve (12 channels) -

Two DMX control channels are used to produce a 16-bit value for each output. No compensating curve is applied. Output follows the DMX values linearly.

#### Mode 4: Non-Dim Mode

When the value of the corresponding DMX channel is below 50%, the associated output will be off. When the DMX channel is above 50%, the associated output will be on (full). A hysteresis zone of about 1% occurs at the 50% level, where the output's state is undetermined. Use this mode to drive non-dim loads such as solid state relays and solenoid coils.

#### Mode 5 : Single Channel Control (1 channel)

One DMX channel (the start address) controls all six outputs simultaneously. A weighted fade curve is applied to the output to produce an apparently linear fade to the human eye.

#### Mode 6: Three Channel Mirror with Curve (3 channels)

Outputs are paired (1 and 4, 2 and 5, 3 and 6). Paired outputs are driven by the same DMX control channel. The DMX value is interpolated to create a 16-bit value. A weighted fade curve is applied to the output to produce an apparently linear fade to the human eye.

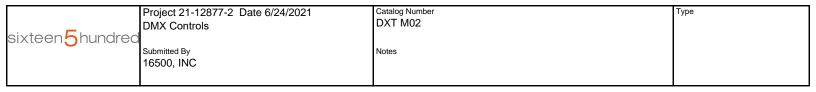
#### Mode 7: Three Channel Mirror without Curve (3 channels)

Outputs are paired (1 and 4, 2 and 5, 3 and 6). Paired outputs are driven by the same DMX control channel. The DMX value is interpolated to create a 16-bit value. No compensating curve is applied. Output follows the DMX value linearly.

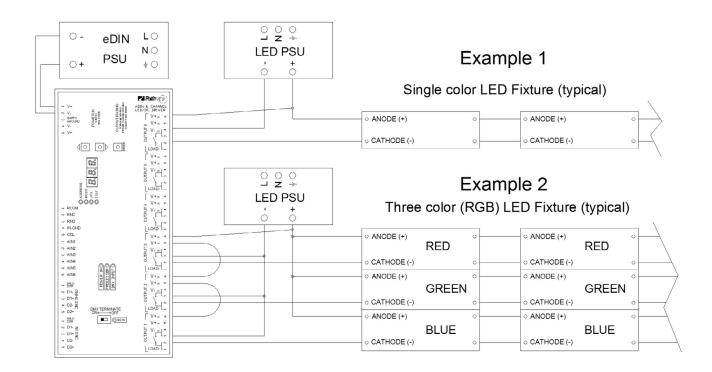
#### **Util Mode Options:**

A: Adjusts the smoothing algorithm between 1 (very smooth) and 100 (no smoothing). Default is 64.

- B: Adjusts a Grand Master maximum output level between 0 (off) and 256 (full-default).
- C: Sets a minimum output level between 0 (default) and 255, that the card will always maintain, even in the absence of DMX.
- D: Sets loss-of-DMX behavior. Options, as shown on the seven-segment screen, are "0" zero seconds; "0.5" thirty seconds; "1" one minute; and "--" forever (default).



#### **M08 CONSTANT VOLTAGE LED DIMMER APPLICATION RISER**

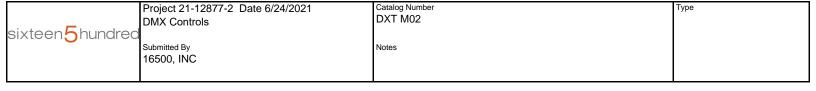


#### **DMX/RDM PIN OUT WITH XLR**

XLR Pin #	Purpose
1	Common
2	Data -
3	Data +
4	Data - (pair 2)
5	Data + (pair 2)

#### DMX/RDM PIN OUT WITH CAT-5/6

Г	Pin#	Wire Color	Purpose
Γ	1	white/orange	Data +
[	2	orange	Data -
Ţ	3	white/green	Data + (pair 2)
ľ	4	blue	Not assigned
	5	white/blue	Not assigned
Γ	6	green	Data - (pair 2)
Γ	7	white/brown	Common
[	8	brown	Common (pair 2)



#### M09 DMX/RDM OPTO-SPLITTER 4-WAY

M09 is a four-way opto-splitter that supports the bidirectional communication necessary for compliance with ANSI E1.20 Remote Device management ("RDM"). Ports 1 through 4 on M09 are fully opto-isolated and independently protected from fault voltages.



M09, DMX/RDM Opto-Splitter, 4-Way, Size B

#### Warranty

Two-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/terms-and-conditions

**Note:** Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

#### **SPECIFICATIONS**

#### Electrical

- Power: 6W @ 24 VDCInput Voltage: 10 30 VDC
- Isolation: 1,500 V between inputs & outputs
- Protection: 250V fault protection on inputs & outputs

#### Installation

- · Factory assembled
- DIN rail mounts

#### Environment

- Ambient: 14 to 122 °F (-10 to 50 C)
- Relative Humidity: 90% non-condensing
- Designed for permanent interior installation

#### Standards

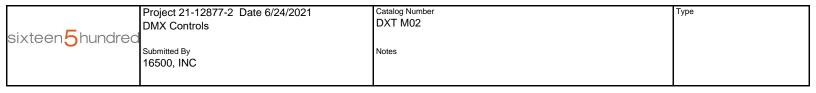
- ANSI E1.11 DMX512-A (2008)
- ANSI E1.20 RDM (2010)
- RoHS compliant
- FCC
- CE
- Class 2 low voltage

#### Mechanical (Size B)

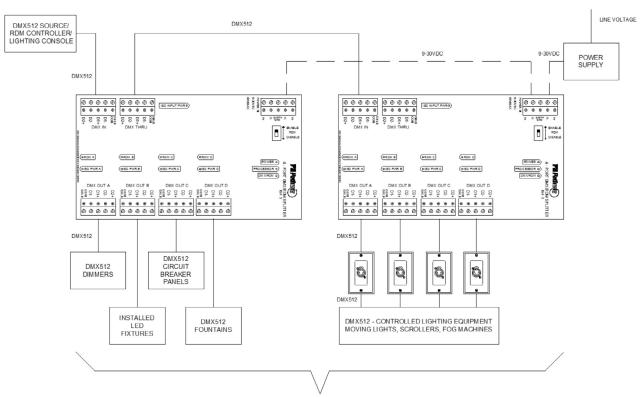
- Width: 6.25 in (160 mm)
- Height: 3.6 in (91 mm)
- Depth: 1.5 in (38 mm)
- Weight: 0.7 lbs (0.32 kg)

#### Performance

- One DMX512 /RDM input port
- One active DMX512/RDM bidirectional thru port
- Four fully isolated DMX512/RDM bidirectional output ports
- Pluggable terminal blocks for all connectors
- Power and data easily daisy-chained between modules
- DMX IN indicator
- DC Power input indicator
- ISO 5 V indicator
- Termination switch
- No fuses; self-resetting port protection recovers from voltage faults



#### M09 DMX/RDM OPTO-SPLITTER 4-WAY APPLICATION RISER



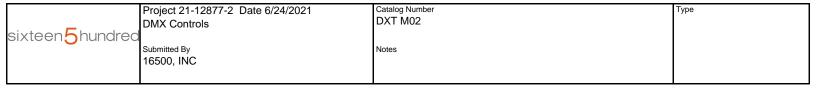
DMX512 RECEIVER & DMX512/RDM RESPONDER DEVICES

#### **DMX/RDM PIN OUT WITH XLR**

XLR Pin #	Purpose
1	Common
2	Data -
3	Data +
4	Data - (pair 2)
5	Data + (pair 2)

#### **DMX/RDM PIN OUT WITH CAT-5/6**

Pin#	Wire Color	Purpose
1	white/orange	Data +
2	orange	Data -
3	white/green	Data + (pair 2)
4	blue	Not assigned
5	white/blue	Not assigned
6	green	Data - (pair 2)
7	white/brown	Common
8	brown	Common (pair 2)



#### M11 1-PORT ETHERNET TO DMX/RDM NODE

M11 is a 1-Port node for encoding and routing DMX512 data over a standard Ethernet network. In addition to DMX, the M11 1-Port node supports RDM discovery and configuration data transport.



M11, One Port Node, Size A

#### Warranty

Two-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/terms-and-conditions

**Note:** Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

#### **SPECIFICATIONS**

#### Electrical

- Class 2 PoE powered devices
- Power: 6W @ 24 VDC
- Auxiliary Input Voltage: 10 30 VDC
- Protection: 60 V
- 10/100Mb TCP/IP connection

#### Installation

- Factory assembled
- DIN rail mounts

#### Environment

- Ambient: 14 to 122 °F (-10 to 50 C)
- Relative Humidity: 90% non-condensing
- Designed for permanent interior installation

#### Standards

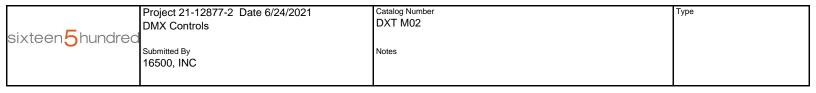
- ANSI E1.11 DMX512-A (2008)
- ANSI E1.20 RDM (2010)
- RoHS compliant
- FCC
- CE
- Class 2 low voltage

#### Performance

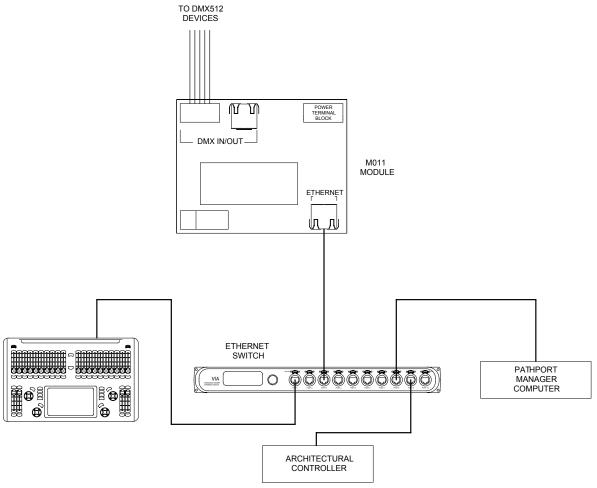
- DMX512 port configurable as input or output
- LED indicators for port direction, power, Ethernet link activity and identify
- Operates on 802.3af Power-over-Ethernet or on an 18-48V wide-range DC input
- Supports the following DMX/Ethernet protocols:
  - -- Art-Net
  - -- E1.31 streaming ACN (sACN)
  - -- Pathport Protocol
  - -- Strand Shownet
- Soft patch allows mix-and-match of different protocols
- Route DMX according to universe or channel-by-channel
- Multiple sources may be merged and/or prioritized
- Fully customizable DMX output universes
- · Pluggable terminal blocks for all connectors

#### Mechanical (Size A)

- Width: 3.6 in (91 mm)
- Height: 3.6 in (91 mm)
- Depth: 1.5 in (38 mm)
- Weight: 0.7 lbs (0.32 kg)



#### M11 1-PORT ETHERNET DMX/RDM NODE APPLICATION RISER



#### **DMX/RDM PIN OUT WITH XLR**

XLR Pin #	Purpose
1	Common
2	Data -
3	Data +
4	Data - (pair 2)
5	Data + (pair 2)

#### **DMX/RDM PIN OUT WITH CAT-5/6**

Pin#	Wire Color	Purpose
1	white/orange	Data +
2	orange	Data -
3	white/green	Data + (pair 2)
4	blue	Not assigned
5	white/blue	Not assigned
6	green	Data - (pair 2)
7	white/brown	Common
8	brown	Common (pair 2)



Catalog Number DXT M02

Notes

Туре

#### **DXT MODULE**

#### M12 2-PORT ETHERNET TO DMX/RDM NODE

M12 is a 2-Port node for encoding and routing DMX512 data over a standard Ethernet network. In addition to DMX, the M12 2-Port node supports RDM discovery and configuration data transport.



M12, 2-Port Node, Size A

Warranty

Two-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/terms-and-conditions

**Note:** Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

#### **SPECIFICATIONS**

#### Electrical

- Class 2 PoE powered devices
- Power: 6W @ 24 VDC
- Auxiliary Input Voltage: 10 30 VDC
- Protection: 60 V
- 10/100Mb TCP/IP connection

#### Installation

- Factory assembled
- DIN rail mounts

#### Environment

- Ambient: 14 to 122 °F (-10 to 50 C)
- Relative Humidity: 90% non-condensing
- Designed for permanent interior installation

#### Standards

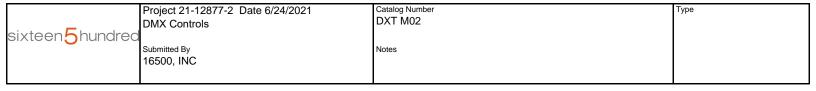
- ANSI E1.11 DMX512-A (2008)
- ANSI E1.20 RDM (2010)
- · RoHS compliant
- FCC
- CE
- Class 2 low voltage

#### Performance

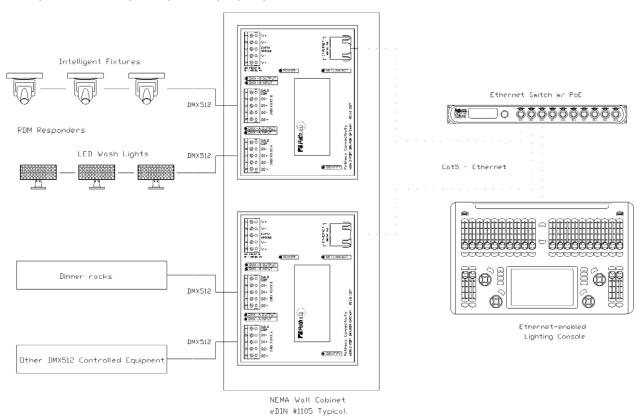
- Two DMX512 ports configurable as inputs or outputs
- LED indicators for port direction, power, Ethernet link activity and identify
- Operates on 802.3af Power-over-Ethernet or on an 18-48V wide-range DC input
- Supports the following DMX/Ethernet protocols:
  - -- Art-Net
  - -- E1.31 streaming ACN (sACN)
  - -- Pathport Protocol
  - -- Strand Shownet
- Soft patch allows mix-and-match of different protocols
- Route DMX according to universe or channel-by-channel
- Multiple sources may be merged and/or prioritized
- Fully customizable DMX output universes
- Pluggable terminal blocks for all connectors

#### Mechanical (Size A)

- Width: 3.6 in (91 mm)
- Height: 3.6 in (91 mm)
- Depth: 1.5 in (38 mm)
- Weight: 0.7 lbs (0.32 kg)



#### M12 2-PORT ETHERNET DMX/RDM NODE APPLICATION RISER

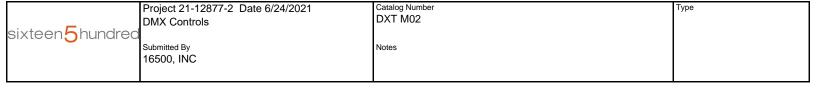


#### **DMX/RDM PIN OUT WITH XLR**

XLR Pin #	Purpose
1	Common
2	Data -
3	Data +
4	Data - (pair 2)
5	Data + (pair 2)

#### **DMX/RDM PIN OUT WITH CAT-5/6**

Pin #	Wire Color	Purpose
1	white/orange	Data +
2	orange	Data -
3	white/green	Data + (pair 2)
4	blue	Not assigned
5	white/blue	Not assigned
6	green	Data - (pair 2)
7	white/brown	Common
8	brown	Common (pair 2)



#### M14 4-PORT ETHERNET TO DMX/RDM NODE

M14 is a 4-Port node for encoding and routing DMX512 data over a standard Ethernet network. In addition to DMX, the M14 4-Port node supports RDM discovery and configuration data transport.



M14, 4-Port Node, Size C

#### Warranty

Two-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/terms-and-conditions

**Note:** Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

#### **SPECIFICATIONS**

#### Electrical

- Class 2 PoE powered devices
- Power: 6W @ 24 VDC
- Auxiliary Input Voltage: 10 30 VDC
- Protection: 60 V
- 10/100Mb TCP/IP connection

#### Installation

- Factory assembled
- DIN rail mounts

#### Environment

- Ambient: 14 to 122 °F (-10 to 50 C)
- Relative Humidity: 90% non-condensing
- Designed for permanent interior installation

#### Standards

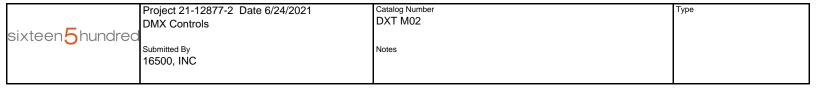
- ANSI E1.11 DMX512-A (2008)
- ANSI E1.20 RDM (2010)
- RoHS compliant
- FCC
- CE
- Class 2 low voltage

### Performance

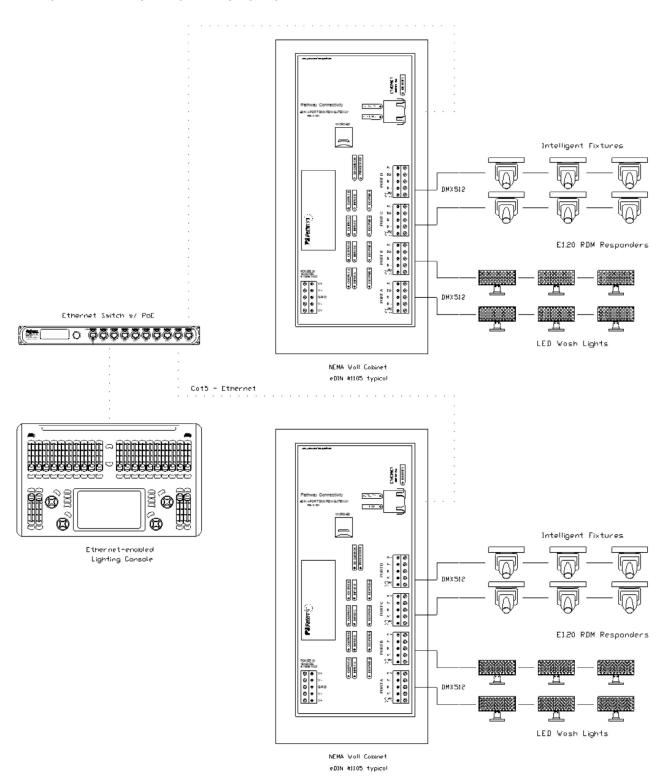
- Four DMX512 ports configurable as inputs or outputs
- LED indicators for port direction, power, Ethernet link activity and identify
- Operates on 802.3af Power-over-Ethernet or on an 18- 48V wide-range DC input
- Supports the following DMX/Ethernet protocols:
  - -- Art-Net
  - -- E1.31 streaming ACN (sACN)
  - -- Pathport Protocol
  - -- Strand Shownet
- Soft patch allows mix-and-match of different protocols
- Route DMX according to universe or channel-by-channel
- Multiple sources may be merged and/or prioritized
- Fully customizable DMX output universes
- · Pluggable terminal blocks for all connectors

#### Mechanical (Size C)

- Width: 8.0 in (200 mm)
- Height: 3.6 in (91 mm)
- Depth: 1.5 in (38 mm)
- Weight: 0.7 lbs (0.32 kg)



#### M14 4-PORT ETHERNET DMX/RDM NODE APPLICATION RISER





Catalog Number DXT M02

Notes

Type

#### **DXT MODULE**

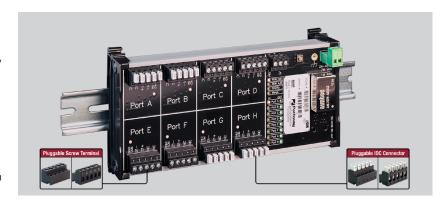
#### M16 8-PORT DMX/RDM MERGER/HUB NODE

#### **OVERVIEW**

The 8-port RDM Hub brings flexibility to single universe DMX512 distribution systems. Through the use of automatic DMX512 sensing, across four operating modes, any port may detect a roving DMX512 source and act as an input; or two inputs may be merged together; or the user may select between inputs; or a priority scheme may be invoked. The module is RDM discoverable and configurable, as well as daisy-chainable.

#### CONNECTIONS

The RDM Hub features terminal strips that can be removed from the card to facilitate easy wiring installation or replacement. Make the following connections, WITH THE POWER TURNED OFF.



#### **POWER**

The RDM Hub will operate on a range of voltages from

9-30 volts DC. Each module requires 250mA. Observe the correct polarity when connecting to V+ and V-. A second set of terminals are provided as a thru connection to other modules. The EARTH GND terminal must be connected to the enclosure's chassis or electrical ground terminal to ensure EMC compliance.

#### **DMX512**

DMX512 (DMX) connections consist of a shield and data pair. DMX usually comes from a lighting console, DXT DMX/Ether- net gateway, architectural controller or another M16

Connect DATA+ and DATA- to D1+ and D1-. Observe the same polarity convention throughout the system. Connect the cable shield or common wire to the SHLD COM terminal

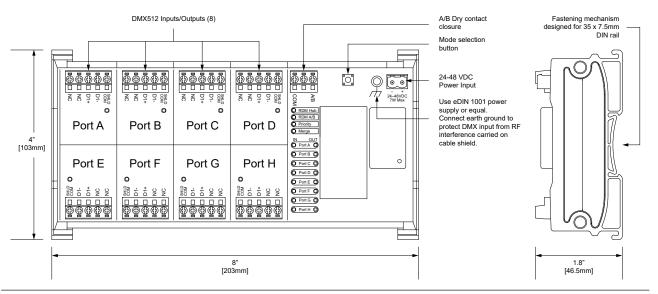
#### **DMX TERMINATE**

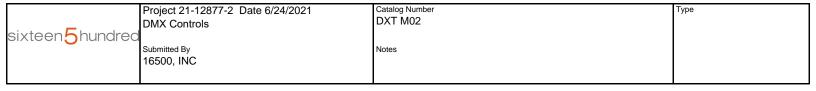
Each port on the RDM Hub is auto-terminated as required by its operation.

#### **STATUS INDICATORS**

#### **CONFIGURATION**

To configure, press and hold the function button until the current Function LED begins to flash. Momentarily release then press the button to cycle through the operating mode options. Once the desired mode is selected, release the but- ton. After three seconds, the LED will change to a steady glow and the new mode will take effect.





#### M16 8-PORT DMX/RDM MERGER/HUB NODE

#### **OPERATING MODE: RDM HUB**

Detect and latches to a DMX input applied to any port. Ideal when a single console or controller is moved between multiple locations in a venue.

All DMX lines are wired back to the RDM Hub card. When no DMX is present, the RDM Hub will scan all ports looking for an input signal. Once a DMX input is detected, that port becomes the input and all other ports become DMX outputs. If a second DMX source is applied to another port, that source will be ignored until the initial source is disconnected.

While in RDM Hub mode, the RDM Hub card acts as an RDM responder and proxy. Any connected downstream RDM devices may be discovered and configured using an RDM- enabled console or other RDM controller.

#### **OPERATING MODE: RDM A/B**

Allows the user to select input on Port B over Port A, using a maintained dry contact closure between COM (pin 3) and A/B (pin 1) of the three-position contact closure terminal block. Ideal for selecting a backup console over the primary console or source, on the fly.

Ports A and B are wired to DMX sources. All other ports are used as outputs. With no connection between COM and A/B, input signal on Port A will be routed to all output ports, and any input on Port B will be ignored. When a dry contact is closed and maintained between COM and A/B, input signal on Port B will be routed to all outputs, and any input on Port A will be ignored. The switch between sources is immediate. NOTE: If there is no DMX signal on the selected input port, no DMX will be output by the card.

While in RDM A/B mode, the RDM Hub acts as an RDM responder and proxy. Any connected downstream RDM devices may be discovered and configured using an RDM- enabled console or other RDM controller.

#### **OPERATING MODE: PRIORITY**

Provides predictable, signal priority arrangements of DMX sources. Ensures a primary console will take over completely from stage management panels, architectural controllers and other data sources.

Ports are wired to DMX sources as desired, with Port A having highest priority and Port H lowest. When signal ceases on Port A (or whichever port is currently the active input), after a one second delay, the card will latch to the next lower active source and distribute this source to all other ports.

Should signal return on Port A, or any other port higher than the current input, the card will immediately latch to that source and distribute its signal to all other ports.

**NOTE**: The DMX source must cease entirely for priority to take effect. Bringing all DMX levels to zero is not the same as the signal stopping or disconnecting.

NOTE: Do not install any DMX receiving devices between the DMX source and the RDM Hub card when in Priority mode. Intermediate devices will not function correctly 9 pt a different DMX source have priority.

While in Priority mode, the RDM Hub acts as an RDM responder. However, all proxy functions are disabled. Any connected downstream RDM devices will not be discovered and cannot be configured.

#### OPERATING MODE: MERGE

Allows slot-by-slot, HTP (highest-takes-precedence) merging of two DMX sources. For example, allows use of a remote focus unit while the main console is also active.

All DMX lines are wired back to the RDM Hub card. With one DMX input active, the RDM Hub will scan the remaining ports looking for an additional input signal. When found, the card will latch to the second signal and begin merging the two sources. When the secondary source ceases, merging will stop and the card will begin scanning once again.

9 pt: Should more than two DMX inputs be active, the sources actually merged will be determined using the Priority Mode order-of-precedence.

While in Merge mode, the RDM Hub acts as an RDM responder. However, all proxy functions are disabled. Any connected downstream RDM devices will not be discovered and cannot be configured.

#### **RDM PROPERTIES**

The RDM Hub is fully compliant with the E1.20 Remote Device Management standard. Operating modes may also be set remotely using an RMD-enabled console or other RDM controller.

The RDM Hub has two custom properties, which may only be set using an RDM-enabled console or other RDM controller.

**Hold Last Look**: On loss of all DMX inputs, output may be held for zero seconds, thirty seconds, 1 minute, 5 minutes or forever. Default is zero seconds.

**DMX512 Output Speed**: The DMX output frame rate may be set to: Slow, Medium or Fast. Default is Fast.

#### **SPECIFICATIONS**

Power Supply:	9-30 VDC, 12W
Input Signal:	ANSI E1.11 DMX512-A, ANSI E1.20 RDM
Outputs:	ANSI E1.11 DMX512-A, ANSI E1.20 RDM
Connections:	Two piece compression screw terminals, 16 - 24 AWG
Size:	3.5" x 6.25" x 1.25" (90mm x 160mm x 35mm)



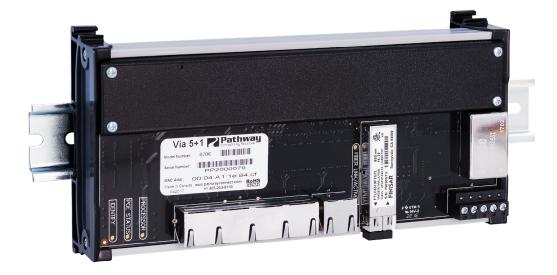
Project 21-12877-2 Date 6/24/2021 DMX Controls

Submitted By 16500, INC Catalog Number DXT M02

Notes

Type

## VIA5 GIGABIT ETHERNET SWITCH DXT VIA5/VIA5F



#### **PRODUCT OVERVIEW**

The VIA5 is a Gigabit Ethernet switch with five copper ports and a model option for a factory-installed duplex LC fiber connector.

Designed to mount on 35mm DIN rail, this compact switch is engineered specifically for lighting, sound and video signal routing in all entertainment production systems, including live shows. Management features, such as VLANs, DHCP and IGMP multicast filtering, are configured with Pathscape software, freely available for download.

#### **FEATURES**

- Trap Art-Net and convert it to sACN
- 35mm DIN-rail mountable
- Features include IGMP querier and snooping, DHCP per VLAN, Dante-compliant QoS option, Art-Net to sACN conversion
- Silent operation fanless, convection cooled design
- Acts as Power-over-Ethernet provider (PoE source) to connected devices, up to 15W per port
- Settable properties include Switch Name, Port Name, IP Address, Subnet Mask, Default Gateway, VLAN Configuration, Link Speed, PoE Allocation, DHCP Pool, IGMP Filtering
- Reported properties include PoE Usage, Serial Number, MAC Address, Firmware Version, Connected Devices (LLDP Compliant), Link Status, Bandwidth Usage
- Five RJ45 ports support 10/100/1000-BaseT speeds
- DXT VIA5F includes one fiber transceiver (1000Base-SX Gigabit Ethernet) with Duplex LC connector (850nm laser

#### **SPECIFICATIONS**

- 48VDC power input
- Operating Conditions: 14°F-118°F (-10°C to 48°C); 10humidity, non-condensing
- 75W max power consumption (at full PoE output)

#### 90% relative

#### STANDARDS COMPLIANCE

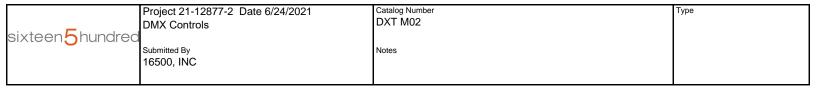
- IEEE 802.1AB Link Layer Discovery Protocol
- IEEE 802.3AF Power over Ethernet (with external supply)
- RoHS 2002/95/EC
- Class 2 Low Voltage

#### **WEIGHTS AND DIMENSIONS**

- 0.70 lbs (0.32 kg)
- 8.0"W x 4.0"H x 1.9"D (203mm x 104mm x 48mm)

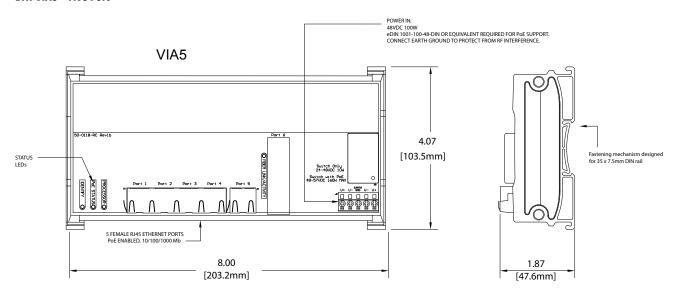
#### **INCLUDED FURNISHINGS**

- DIN tray (housing) with end caps
- 11" (280mm) piece of 35mm DIN rail
- Installation/Operations manual

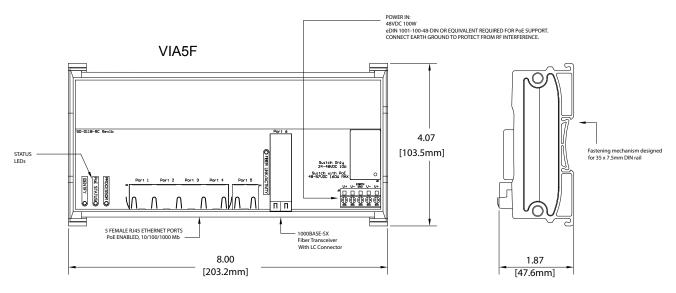


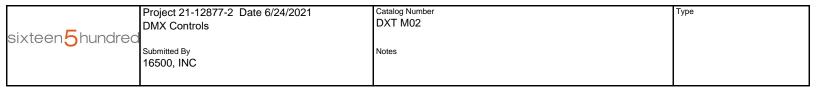
### **DIMENSIONS**

### DXT VIA5 - Five Port

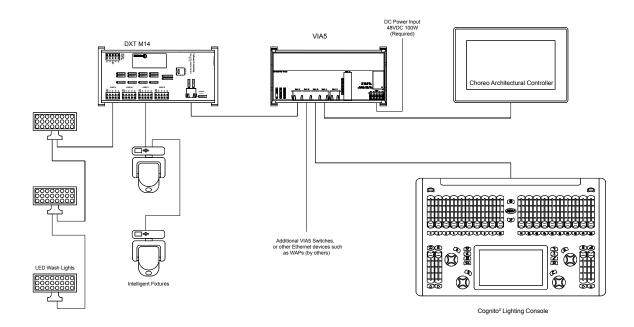


### DXT VIA5F - Five Port plus Duplex LC Fiber Port

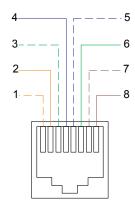




### **APPLICATION RISER**

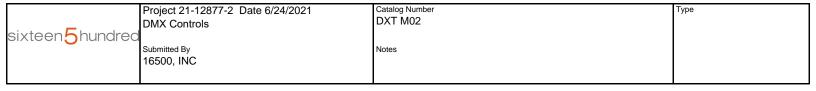


### CAT5/6 RJ45 PIN OUT

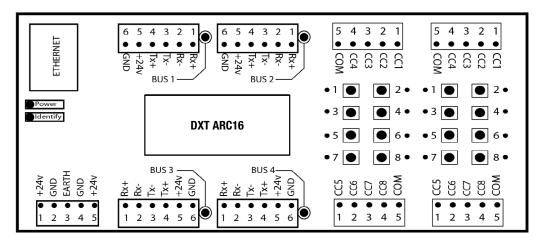


PIN#	COLOR
1	WHT/ORG
2	ORANGE
3	WHT/GRN
4	BLUE
5	WHT/BLU
6	GREEN
7	WHT/BRN
8	BROWN

COMPLIES WITH TIA-EIA 568B



### **DXT ARC - Fresco Show NSB 485 Gateway**



### PRODUCT OVERVIEW

The NSB485 Gateway provides a connection for your architectural lighting system to the NSB485 button and slider stations using a multi-drop serial data bus. Providing power on four separate buses, each can accommodating up to 16 devices (button or slider modules), this device comes in a variety of configurations with or without buttons and auxiliary contact closure inputs.

### **FEATURES**

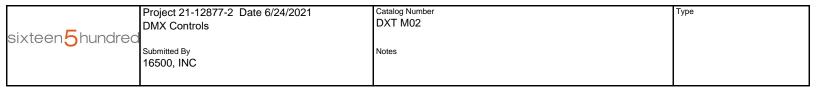
- Power and network connectivity for NSB485 slider and button modules, with optional Contact Closures
- Greatly extends the number of NSB stations connected to a Fresco Show WM or DTP using a single Ethernet connection
- Allows using legacy multi-drop wiring where PoE home-run is not feasible
- Use third-party buttons to trigger Fresco Show WM or DTP memories
- Increase the number of A/V contacts for your Fresco Show WM or DTP
- Attached devices can be discovered and configured on Fresco Show WM or DTP. Pathscape can discover and identify attached NSB stations.

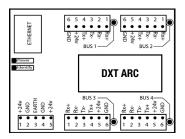
### **SPECIFICATIONS**

- Compatible with Fresco Show NSB series of button and slider inserts
- Class 2 (24v DC RS485 over Cat5 or six-wire cable)
- 3.6" wide and 4.5", 6.25" and 8" long depending on model
- Compression fit and IDC terminal connections for DMX512 connections and station buses
- Gateway requires 10W at 24VDC plus 1W per insert on the 4-port station bus network
- Operating Conditions: 32°F-105°F (0°C to 40°C); 10-90% relative humidity, non-condensing

### STANDARDS COMPLIANCE

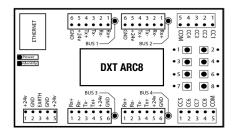
- IEEE 802. Ethernet
- RoHS 2002/95/EC





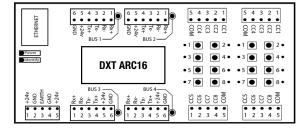
### **DXT ARC NSB485 Gateway**

- Four buses, each capable of powering 16 inserts (a 3-gang button station is 3 inserts)
- Attached stations discoverable and configurable on Fresco Show WM or DTP
- Ethernet configuration with Pathscape
- Mixes well with Fresco Show NSB PoE devices on network



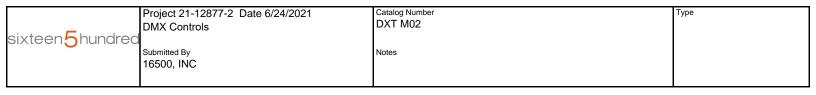
## DXT ARC8 NSB485 Gateway with 8 Contact Closures

- Four buses, each capable of powering 16 inserts (a 3-gang button station is 3 inserts)
- Local control of Fresco Show WM or DTP Memories for testing
- · Connections for eight momentary contacts
- Attached Fresco Show NSB stations discoverable on Pathscape

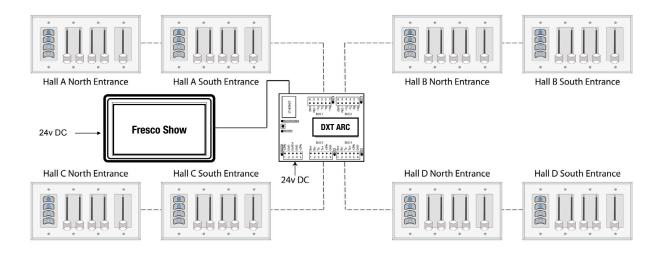


# DXT ARC16 NSB485 Gateway with 16 Contact Closures

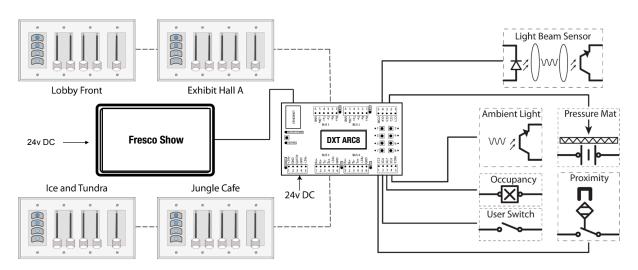
- · Capable of powering 64 Fresco Show NSB inserts
- Local buttons with LED indicators for control of Fresco Show WM or DTP Memories
- · Connections for sixteen momentary contacts
- Attached Fresco Show NSB stations discoverable on Pathscape

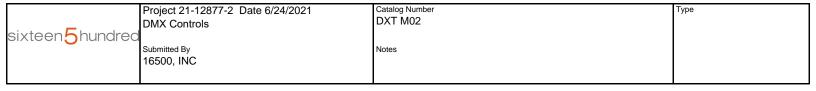


### **DXT ARC NSB485 Gateway in Divisible Ballroom**

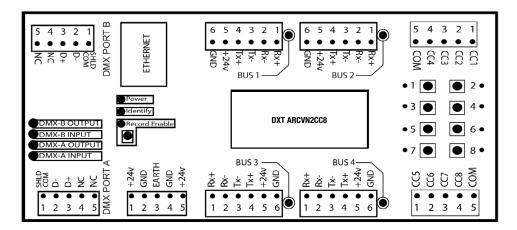


### **DXT ARC8 NSB485 Gateway for Remote Wallstations and Interactive Triggers**





### **DXT ARCVN - Vignette 485 Gateway**



### **PRODUCT OVERVIEW**

The Vignette Gateway provides connectivity for Vignette 485 button and slider stations using a multi-drop serial data bus for recording and recall of lighting snapshots. The Gateway has four separate buses, each accommodating up to 16 devices (button or slider modules). This device comes in a variety of configurations with or without buttons, auxiliary contact closures , DMX In and Thru/Out and Ethernet connectivity.

### **FEATURES**

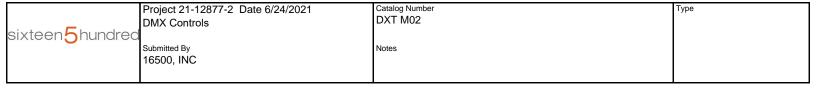
- Power and network connectivity for Vignette slider and button modules, with optional DMX512 ports and Contact Closures
- Configure up to four groupings of presets allows one Gateway to achieve asynchronous fades across four rooms
- Out of the box DMX512 Snapshot record and playback for multiple rooms
- Allows using legacy multi-drop wiring where PoE home-run is not feasible
- · Use third-party buttons to trigger snapshot replay
- Use Pathscape software to configure sACN output universes, sACN priorities, crossfades timing and the function of the two optional DMX512 ports.
- DMX512 outputs will crossfade between presets and incoming source when present. No sudden blackouts.

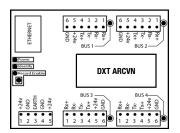
### **SPECIFICATIONS**

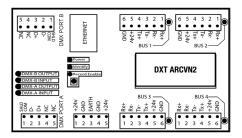
- Models DXT ARCVN and DXT ARCVN2 have integrated DMX512 In and Out/Thru ports that can crossfade on priority
- All models can use DXT Ethernet/DMX Gateways to record and playback up to four universes of DMX512
- Class 2 (24v DC RS485 over Cat5 or six-wire cable)
- Compression fit and IDC terminal connections for DMX512 connections and station buses
- 3.6" wide and 4.5", 6.25" and 8" long depending on model
- Gateway requires 10W at 24VDC plus 1W per insert on the 4-port station bus network
- Operating Conditions: 32°F-105°F (0°C to 40°C); 10-90% relative humidity, non-condensing

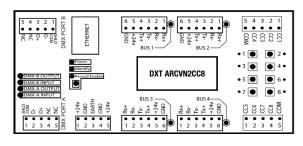
### **\$**ΤΑΝΔΑΡΔΣ ΧΟΜΠΛΙΑΝΧΕ

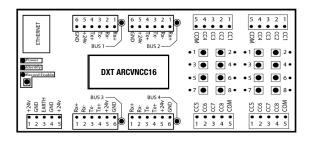
- ANSI E1.11 DMX512-A
- ANSI E1.31 streaming ACN
- IEEE 802. Ethernet
- RoHS 2002/95/EC

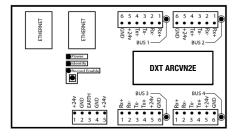












### **DXT ARCVN Vignette Gateway**

- Four buses, each capable of powering 16 inserts (a 3-gang button station is 3 inserts)
- Zero config out of the box operation
- Ethernet for configuration and sACN capture and playback
- Record Enable button for Press-and-Hold to record a snapshot on any button when used with Vignette

# DXT ARCVN2 Vignette Gateway with 2 DMX ports

- Four buses capable of powering 64 Vignette inserts
- Two DMX ports, can be configured as In for capture, Out for Playback of snapshots, or In and Out/Thru for priority or HTP of Vignette snapshots and theatrical control
- Ethernet configuration using Pathscape and for sACN capture and playback

## DXT ARCVN2CC8 Vignette Gateway with DMX and 8 buttons

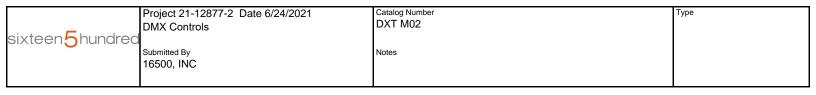
- Four buses capable of powering 64 Vignette inserts
- DMX and/or sACN capture and playback
- Stand-alone mode with 8 dedicated momentary buttons and LED indicators allows the DXT ARCVN2CC8 be used without Vignette stations on the bus
- Eight contact closure for A/V and third-party control

## DXT ARCVNCC16 Vignette Gateway with 16 Contact Closures

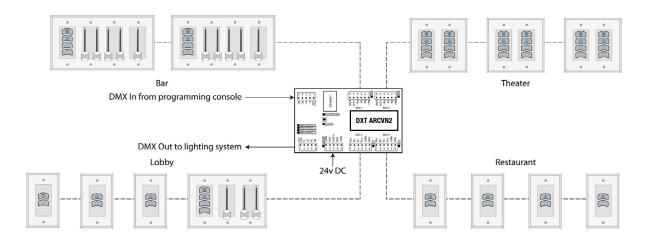
- Four buses capable of powering 64 Vignette inserts
- Local test buttons and LEDs
- Suitable Audio/Video integration or third party push buttons with or without Vignette stations
- DMX512 and Bus connectors come with Compresson fit connectors

### DXT ARCVN2E Vignette Gateway with 2 Ethernet

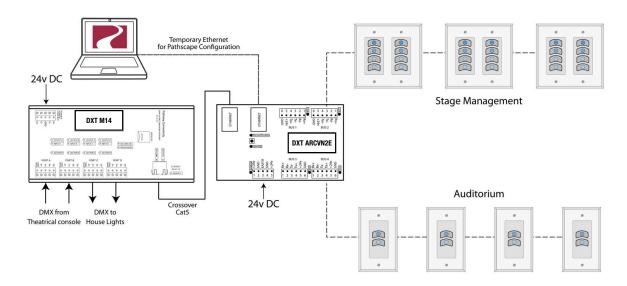
- Two Ethernets reduces port consumption on switches
- Works without a switch when paired with DXT M14 Ethernet/ DMX gateway for recording and playing back 2048 DMX slots
- DXT M14 can be configured to HTP two universes between theatrical console and Vignette snapshots or prioritize show



### **DXT ARCVN2 Vignette Snapshot across four rooms**



### **DXT ARCVN2E & DXT M14 for two universe Priority/Merge system**





Catalog Number FCS 7TSN X DWH

Notes

Туре

#### **OVERVIEW**

Fresco is an integrated touchscreen lighting control solution for dynamic spaces such as hotel ballrooms, conference rooms, museums, retail stores, houses of worship and restaurants. Fresco's thin profile and clean design enhances many commercial settings. Its glass-to-the-edge refinement and aluminum frame are a robust and modern improvement to architectural lighting control. Fresco delivers seamless control of traditional line-voltage dimming, switching, 0-10 V, DALI, nLight® and DMX for RGB and tunable white fixtures.

#### **FEATURES**

- On screen lighting design and setup, no computer required
- Lighting Control: forward and reverse phase dimming, 0-10 V, DMX (RGB/Tunable White), nLight® enabled luminaires (including nTune™), nLight power packs, and DALI
- 72 individual channels and 36 scenes to control lighting intensity, color and color temperature
- 65,000 zones per Fresco network
- Integral astronomic timeclock and on screen scheduling
- Direct DMX512 fixture control for single universe (optional)
- Automatic wake-up with proximity sensor
- Ethernet connection for remote configuration and control
- Integral Bluetooth® radio for wireless App control
- Partition status control for up to 24 rooms (Roomlink)
- Digital motion sensor, daylight harvesting, RS-232, contact closure and wallstation input from nLight devices
- Compatible with Fresco LMP dimming and switching cabinets (requires DMX option)
- Shade control integration capable (Lutron QS, Somfy, and MechoShade IQ)
- All device settings are stored on-board in non-volatile memory
- Integrates with Building Management Systems (BMS) through BACnet/IP

### Warranty

Two-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms\_and\_conditions.aspx

**Note:** Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



Fresco.

## FCS Architectural Lighting Control



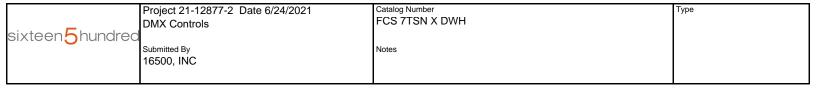
Fresco Greeting Screen (7" diagonal viewing area)



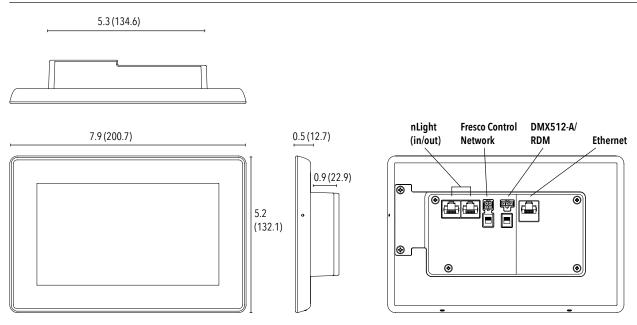
Fresco Homescreen

#### ORDERING INFORMATION

FCS			OKDEKING INFOR	IVIAITON			Example: FCS 7TSN X DBL
FCS		7TSN					
Series		Model		Options		Finish	
FCS	Fresco Control System	7TSN	7" touchscreen with nLight port	[blank] X	nLight only DMX/RDM control	DBL DWH DNA	Black White Natural Aluminum



### **DIMENSIONS**



Dimensions: in (mm)

### **SPECIFICATIONS**

### Electrical

Input Voltage: 18VDC-28VDC

Power: 6W max @ 24 VDC Class 2 Input

(Class 2 power supply provided with Fresco station)

#### Mechanical

- Width: 7.9 in (200 mm)
- Height: 5.3 in (135 mm)
- Depth: 0.5 in (13 mm)
- Viewable Area: 7.0 in (178 mm) diagonal
- Weight: 2.5 lbs (1.1 kg)

### Installation

- Enclosure: 3 gang back box
- Fresco steel mounting ring provided with all required hardware
- Remote power supply included

### Environment

Ambient: 15 to 105 °F (-10 to 40 C)
 Storage: -10 to 145 °F (-20 to 65 C)

- Relative Humidity: 90% non-condensing
- Designed for permanent interior installation

### Standards

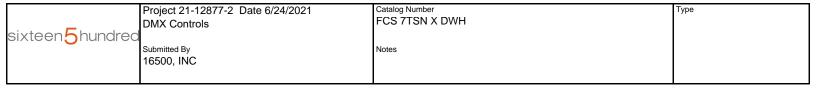
- FCC Part 15
- IEC61000-4-2, +/-16kV air discharge
- ANSI E1.11-2008 DMX, ANSI E1.20-2006 RDM
- IEEE 802.15 Bluetooth
- IEEE 802.3 Ethernet
- RoHS compliant
- ISO 16484-5 BACnet/IP

### Performance

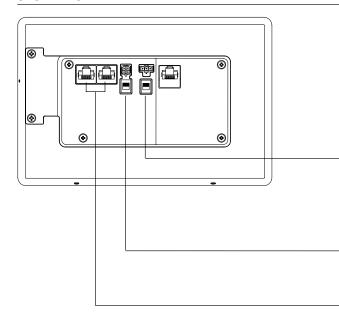
- Capacitive LCD backlit touchscreen
- Multi-touch control
- Proximity sensor wake-up
- 10 year battery backup for astronomic clock
- nLight link for 128 nLight devices
- One universe of DMX-512A/RDM (512 channels)
- Screen lockout pass code
- Adjustable backlight settings
- Full alpha-numeric scene and zone naming

### Legal

- US Patent Nos. D729,793, D729,797
- Canada CA 154120S



### SYSTEM CAPABILITY



### DMX512-A/RDM

Controls up to one universe of DMX512-A compatible devices, including those that support RDM configuration. Supported fixture types include RGB and dynamic white. A complete list of compatible luminaires is available from Acuity Controls inside sales and support teams. Also used to connect and control up to 32 Fresco Lighting Management Panels.

#### Fresco Control Network (FCN)

Extend the network by adding additional Fresco touchscreens and integration devices such as the Fresco AVI for AV and shade control.

### nLight®(in/out)

Connect up to 128 nLight devices including nLight-enabled luminaires, nPODMs, nPOD GFX, power packs, occupancy sensors, daylight sensors, nIO devices, and nLight ARP Panels. Two nLight ports each provide 40mA power and communication. Fresco directly configures and manages the nLight devices and does not support nECY/nGWY2 (Controller), nBRG (Bridge), or SensorView™ Software.

#### SYSTEM NOTES

- Fresco controls 1 universe of DMX/RDM devices
- Fresco controls 1 zone of nLight with 128 global channels of control
- Fresco touchscreens are connected via the Fresco Control Network
- Fresco Lighting Management Panels use the DMX network for communication

#### DMX512-A/RDM

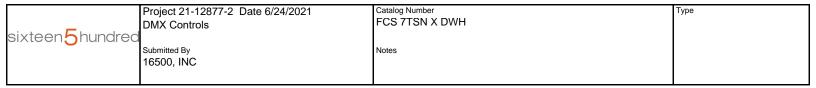
All DMX wiring must follow the DMX512-A/RDM standard (ANSI E1.1). It must be daisy chained and terminated per the standard.

#### nLight®

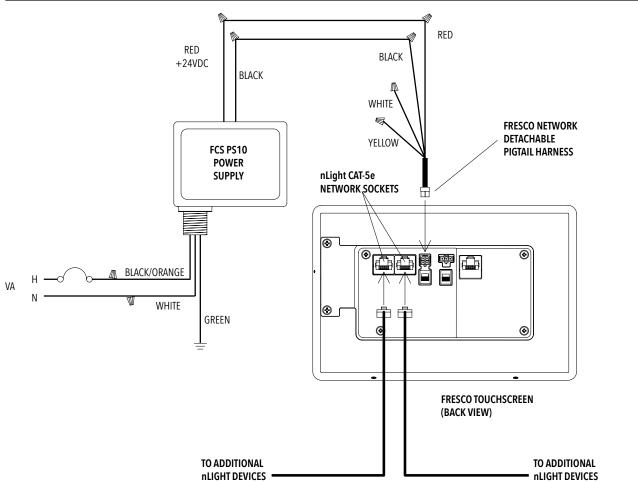
All nLight devices are connected via CAT-5e wiring and must be daisy chained following standard nLight installation methods.

### Fresco Control Network (FCN)

RS-485 network with 2 power and a twisted and shielded data pair. Connecting all Fresco touchscreens, dimming and switching cabinets and other network devices, FCN must be daisy chained and terminated

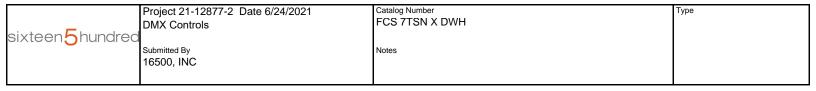


### WIRING DETAILS - 24VDC and nLight Network

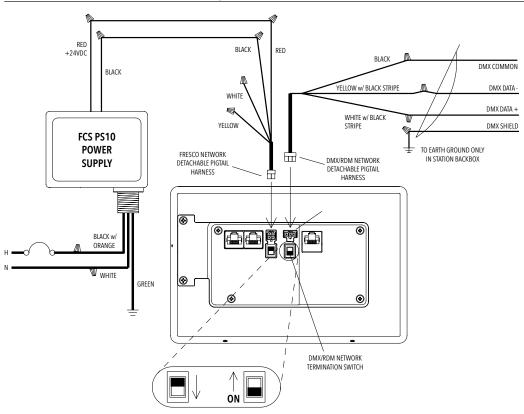


### **WIRING NOTES**

- Fresco Requires +24VDC, 6W max. Use accessory power supply provided with Fresco. Each Fresco touchscreen requires a dedicated power supply.
- 2 nLight ports support daisy chaining, Fresco may be located in any position on the nLight link for proper operation.
- When connecting additional Fresco network devices (touchscreens and Fresco AVI) only the White, Yellow, and Black wires for communication are used.



### WIRING DETAILS - 24VDC and nLight Network



#### WIRING NOTES

- Fresco Requires +24VDC, 6W max. Use accessory power supply provided with Fresco. Each Fresco touchscreen requires a dedicated power supply.
- 2 nLight ports support daisy chaining, Fresco may be located in any position on the nLight link for proper operation.
- When connecting additional Fresco network devices (touchscreens and Fresco AVI) only the White, Yellow, and Black wires for communication are used.

### DMX512-A/RDM WIRING

- Connects to the provided plug in 3-position harness.
- Color & signals:

Black: Common

Yellow with black stripe: DMX Data -

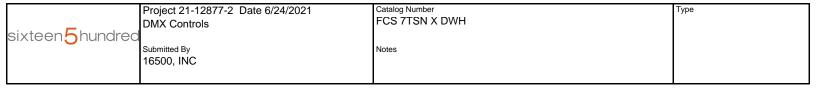
White with black stripe: DMX Data +

### DMX/RDM PIN OUT WITH CAT-5/6

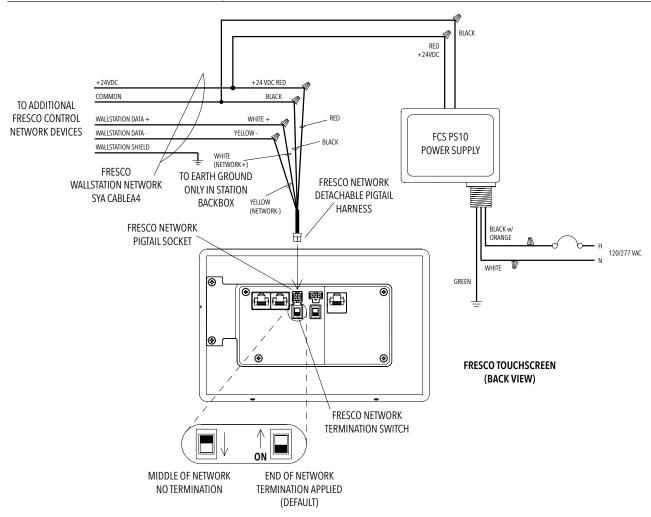
Pin#	Wire Color	Purpose
1	white/orange	Data +
2	orange	Data -
3	white/green	Data + (pair 2)
4	blue	Not assigned
5	white/blue	Not assigned
6	green	Data - (pair 2)
7	white/brown	Common
8	brown	Common (pair 2)

### **DMX/RDM PIN OUT WITH XLR**

XLR Pin#	Purpose
1	Common
2	Data -
3	Data +
4	Data - (pair 2)
5	Data + (pair 2)



### WIRING DETAILS - 24VDC and nLight Network



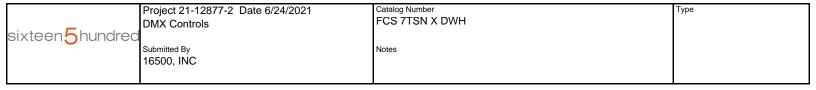
### WIRING NOTES

- Fresco Requires +24VDC, 6W max. Use accessory power supply provided with Fresco. Each Fresco touchscreen requires a dedicated power supply.
- 2 nLight ports support daisy chaining, Fresco may be located in any position on the nLight link for proper operation.
- When connecting additional Fresco network devices (touchscreens and Fresco AVI) only the White, Yellow, and Black wires for communication are used.

### Fresco Control Network (FCN) WIRING

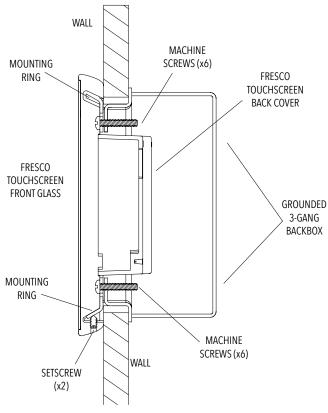
- Connects to the provided plug in 4-position harness.
- Color & signals:

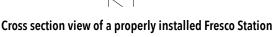
Red: +24 VDC Black: Common Yellow: Data -White: Data +

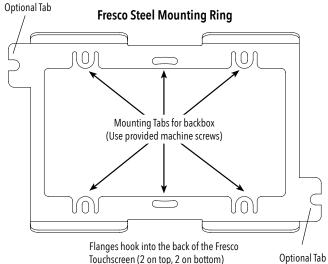


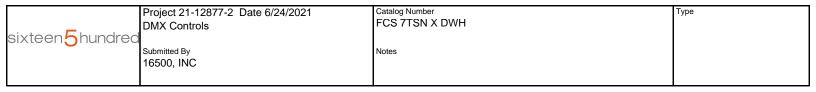
### **FRESCO INSTALLATION**

- 1. Complete all electrical installations and finish installing a 3-gang backbox
- 2. Install the Fresco galvanized steel mounting ring on the 3-gang backbox using hardware provided (6 machine screws). Mounting ring is provided with the Fresco Touchscreen
- Optional: if the box is not flush to the finished wall surface use two drywall screws (not provided) on tabs to pull backbox forward
- 4. Connect all wiring harness(es) and CAT-5e cables to the back of Fresco Touchscreen
- $5. \ \ Align \ and \ hang \ Fresco \ station \ on \ the \ top \ of \ the \ mounting \ ring$
- Slightly rotate the Fresco station upwards, then rotate the station towards the wall and into the backbox.
- 7. The Fresco station will be properly located when it is flush to the wall
- 8. Tighten the 2 threaded set screws on the bottom of the Fresco station using a 1/16" allen key (provided)



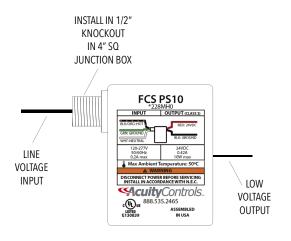


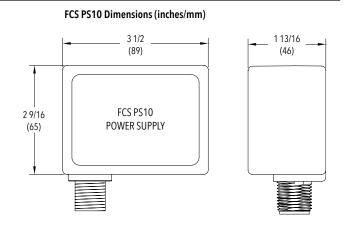


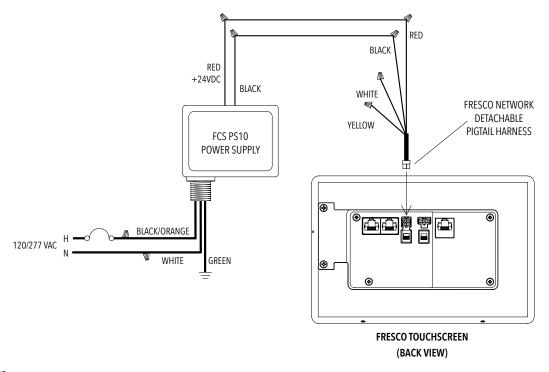


### FRESCO INSTALLATION

Fresco touchscreens are provided with a 24 VDC Class 2 power supply. The Fresco power supply (FCS PS10) is intended for use with 120-277V, 50/60Hz circuits and draws 40 W, max. The power supply requires installation with a listed electrical enclosure.







### WIRING NOTES

- 1. Mount through 1/2" KO in a 4" square junction box. Secure with lock nut.
- 2. Connect line voltage wires within junction box (120 or 277VAC only).
- 3. Connect the Class 2 low voltage 24VDC wires to the Fresco station's pigtail harness red and black wires.



Catalog Number EZDIN 120/277

Notes

Туре

**Acuity**Controls.

 $Fresco_{\cdot\cdot}$ 

 $EasyI^{\mathbb{T}}DIN$ 



#### **OVERVIEW**

Easyl<sup>TM</sup> DIN is a self-contained DMX show controller supporting 12 shows that can be triggered via touchscreen control, hard button digital stations, and/or a dry contact closure. The integral astronomic time clock supports normal and holiday schedules, and automatically adjusts for daylight savings time. Battery backup ensures at least 15 years of operation without loss of clock setting and show schedules despite power interruptions.

The Easyl™ DIN controller is provided in a painted steel enclosure with a pre-wired power supply and easly wired terminals for quick field installation. Status LEDs and manual trigger buttons on Easyl™ DIN simplify system validation.

Programmed via Easyl™ Studio software and downloaded via USB or swappable SD cards, it is easy to install, copy and edit shows on any Easyl™ DIN controller Easyl™ DIN Power Supply The Easyl™ DIN is provided in a painted steel enclosure and with a universal power supply installed. Input mains voltage may be from 120 to 277V, 50/60Hz.

#### Warranty

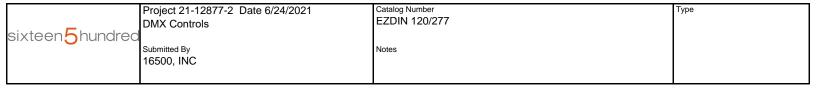
Two-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms\_and\_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application.

Specifications subject to change without notice.

ORDERING INFORMATION

EZDIN	Example: EZDIN 120/277
Series	Supply Voltage
EZDIN DMX show controller with both digital and contact closure inputs as show triggers	120/277 120 or 277 VAC



### **SPECIFICATIONS**

### **FUNCTIONAL**

- DMX Controller (full universe)
- Internally stores 12 shows
- Black painted steel enclosure

### **ELECTRICAL**

• Input Voltage: 120/277VAC, 50/60Hz

• Input Power: 1.0W nominal

• Current: 40mA max

### ENVIRONMENTAL

• Operating Temp: 14 to 105F (-10 to 40C)

• Storage Temp: -14 to 160F (-26 to 71C)

• Relative Humidity: 90% non-condensing

#### **DIMENSIONS**

- All dimensions are inches (millimeters)
- Size: 8.25" H X 12.75" W X 3.5" D (209.5 x 323.85 x 89 )
- Weight: 6 LB (2.72Kg)

#### OTHER

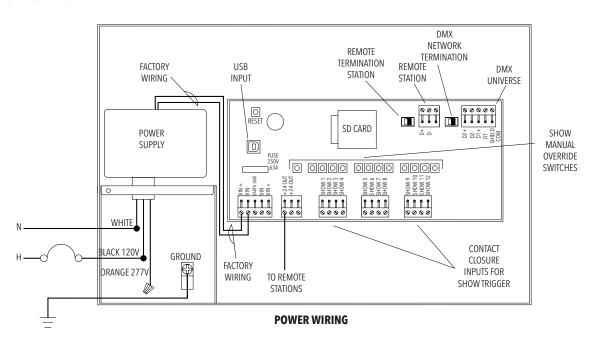
- Compatible with DMX512-A ANSI E1.11-2008
- Compatible with DMX512 RDM ANSI E1.20-2006
- DMX Channels: 512
- Standalone Memory: 20 hours of shows (Pro only)
- Show Capacity: 12
- Made in the USA
- 3 Year Limited Warranty

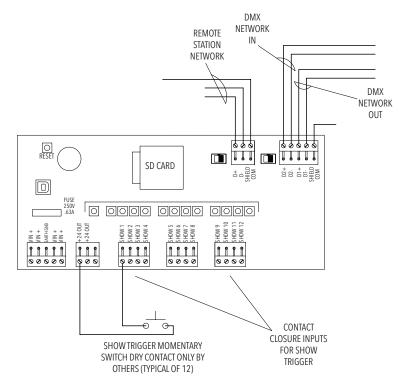
### STANDARDS

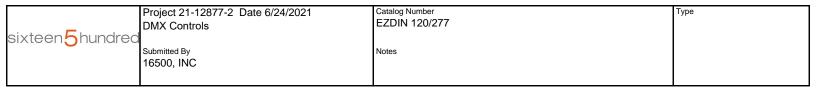
- UL/CUL
- Plenum Rated



### **WIRING DIAGRAMS**







Easyl™ DIN Features
Preprogrammed shows, rainbow feature, chase feature
Compatible with DMX512 and RDM fixtures
Operates with EZ RB 1-9 Button wallstations
Operates with EZ RTS remote touchscreens
Astronomic time clock with advanced control (play show, set color, remote touchscreen or wallstation disable)
Computer based software for multi area show creation
Dynamic white control
Allow temporary "override" and returns to previously playing show



16500, INC

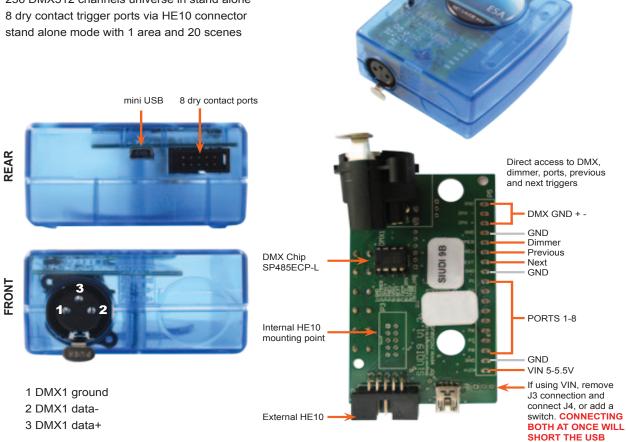
Catalog Number SLESA U9	Туре
Notes	



Sunlite Intelligent Usb Dmx Interface		Ref. SIUDI-9B	Page 1/2
Technical datasheet	Revision date 30 JULY 2013	www.nicolaudie.com	Version 1.0

### DMX Live control and Stand Alone controller

- **USB** connection
- 512 DMX512 channels universe in live mode (computer)
- 256 DMX512 channels universe in stand alone



	SPECIFICATIONS		
Package	Interface, cdrom, usb cable		
OS Requirement	Mac OSx 10.6/10.7/10.8 - Windows XP/VISTA/SEVEN/8 32/64 bits and USB 2.0		
Colors	Blue, Orange, Gray, Green, Marine, White, Red		
Connections	XLR3, mini USB, 1 HE10		
Power	Power From 5V to 5.5V DC (AC/DC adapter in option, ref: POWER1_EU)		
Certifications	EC, EMC, ROHS, ETL, UL (some are in progress)		
Interface	79x92x43 mm 90g		
Package	140x135x50 mm 290g		
Use	Environement IP20 Temperature 0°C to 50°C		
Buttons	2 buttons to change scene (previous/next) + 1 button to change dimmer		



2 DIMMER 3 DMX 1+ 7 UNUSED 8 DMX LED 4 PREVIOUS 5 DMX 1-CAUTION: DO NOT SHORT THE USB

### **External HE10**

P1 PORT 1 P6 PORT 6 P2 PORT 2 P3 PORT 3 P4 PORT 4 **P7** PORT 7 P8 PORT 8 **GND** Ground P5 PORT 5



Catalog Number Туре SLESA U9 Notes

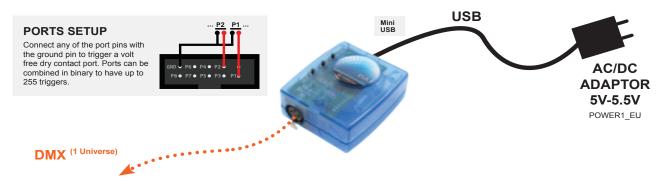


Sunlite Intelligent Usb Dmx Interface		Ref. SIUDI-9B	Page 2/2
Technical datasheet	Revision date 30 JULY 2013	www.nicolaudie.com	Version 1.0

### LIVE USE WITH COMPUTER



### STAND ALONE USE



### **SOFTWARE** TOOLS.EXE to set parameters



### **Nicolaudie software**

- Easy Stand Alone software (PC)
- ESA2 software (PC & Mac)

### **Firmware**

Write the latest firmware

#### Test

Test DMX outputs and ports

### **Parameters**

Adjust special parameters

**Dmx Timing** Adjust DMX output signal



Catalog Number SLESAU9

Notes

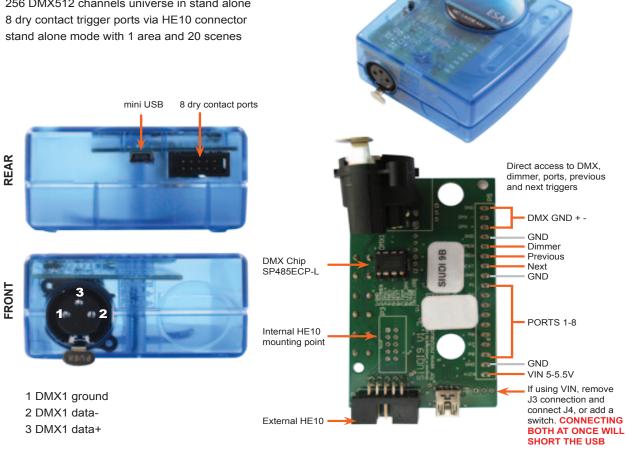
Туре



Sunlite Intelligent Usb Dmx Interface		Ref. SIUDI-9B	Page 1/2
Technical datasheet	Revision date 30 JULY 2013	www.nicolaudie.com	Version 1.0

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Use	Environement IP20 Temperature 0°C to 50°C		
Buttons	2 buttons to change scene (previous/next) + 1 button to change dimmer		







Submitted By

SLESAU9

Catalog Number

Notes

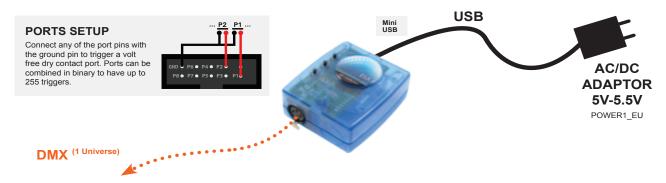
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SUNLITE INTELLIGENT USB DMX INTERFACE

Sunlite Intelligent Us	b Dmx Interface	Ref. SIUDI-9B	Page 2/2
Technical datasheet	Revision date 30 JULY 2013	www.nicolaudie.com	Version 1.0

## LIVE USE WITH COMPUTER



### STAND ALONE USE



### **SOFTWARE** TOOLS.EXE to set parameters



### **Nicolaudie software**

• Easy Stand Alone software (PC)

Туре

• ESA2 software (PC & Mac)

### **Firmware**

Write the latest firmware

### Test

Test DMX outputs and ports

### **Parameters**

Adjust special parameters

**Dmx Timing** Adjust DMX output signal



Submitted By 16500, INC Catalog Number SLESA-UE7

Notes

Type

NICOLAUDIE • • •

# SLESA-UE7

Sunlite Easy Stand Alone USB-DMX controller



### Overview

The Stand Alone DMX controller can be used to control a wide variety of different DMX systems- from RGB/RGBW to more advanced moving and color mixing luminaires, DMX audio players and fountains. The controller comes with a variety of features including 1024 DMX channels, clock/calendar, iPhone/iPad/ Android remote control, Ethernet facilities, dry contact port triggering and multi-zone SD card memory.

The lighting levels, colors and effects can be programmed from a PC, Mac, Android, iPad or iPhone using the included software.

http://www.nicolaudie.com/slesa-ue7.htm

### **Key Features**

- 3 DMX512 universes in live mode (computer)
- 2 DMX512 universes in stand alone
- Network synchronisation for hundreds of universes
- Multi-zone microSD memory
- 250 scenes across 5 areas
- USB & Ethernet connectivity for programming/control
- 8 dry contact trigger ports via HE10 connector
- Clock and calendar with Sunrise/Sunset triggering
- Network communication. Control lighting remotely
- OEM customization
- Windows/Mac software to set dynamic colors/effects
- iPhone/iPad/Android remote and programming apps

**Technical Data** 

Input Power 5-5.5V DC 0.6A

Output Protocol DMX512 (x2)

Programmability PC, Mac, Tablet, Smart-

phone

**Available Colors** Blue, Orange, Gray, Green,

Marine, White, Red

Connections Mini USB, XLR3, XLR5,

Ethernet, 2x HE10, battery

Memory microSD card

Environment IP20. 0°C - 50°C

**Buttons** 2 buttons to change scene

+ 1 button to change area

Complete Package

**Dimentions** 

79x92x43mm 120g 140x135x50mm 340g

**OS Requirements** Mac OS X 10.7-10.10.

Windows XP/VISTA/7/8

**Standards** EC, EMC, ROHS, ETL, UL

(some are in progress)

#### **Optional Accessories**

POWER1\_EU/UK/US 5V ACDC power supply with EU/UK/US plug



Project 21-1 DMX Contro Submitted By

Catalog Number SLESA-UE7	Туре
Notes	

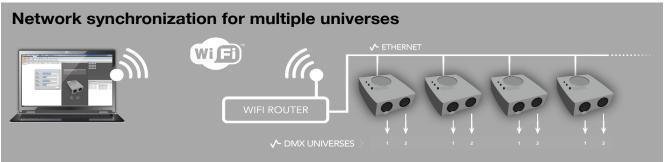


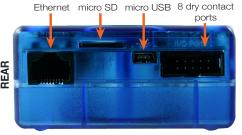
Sunlite Easy Stand Alone USB-DMX Interface		SLESA-UE7	Page 2
Technical datasheet	Revision date 26 May. 2015	www.nicolaudie.com	V 1.1

### **CONNECTIVITY**









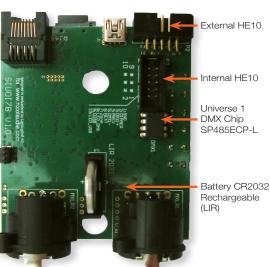


#### Universe #1 1 DMX1 ground 2 DMX1 data-3 DMX1 data+

Universe #2 #3

1 DMX2 ground 2 DMX2 data-

3 DMX2 data+ 4 DMX3 data-5 DMX3 data+



**External HE10** External HE10 Internal HE10 **P1** PORT 1 **P2** PORT 2 P3 PORT 3 **P4** PORT 4 SP485ECP-L P5 PORT 5

> **Internal HE10** 1 ● 3 ● 5 ● 7 ● 9 ●

ND ● P6 ● P4 ● P2 ● P8 ● P7 ● P5 ● P3 ● P1 ●

1 Ground 2 Dimmer 3 DMX1+ 4 PREVIOUS 5 DMX1-

**P6** PORT 6 **P7** PORT 7

P8 PORT 8

**GND** Ground

6 NEXT 7 Zone 8 LED DMX 9 VUSB 10 LED USB



Catalog Number

Туре SLESA-UE7 Notes

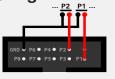


Sunlite Easy Stand Alone USB-DMX Interface		SLESA-UE7	Page 3
Technical datasheet	Revision date 26 May. 2015	www.nicolaudie.com	V 1.1

## **Setting up the Controller**

### **Dry Contact Port Triggering**

It is possible to start scenes using the input ports (contact closure). To activate a port, a brief contact of at least 1/25 second must be established between the ports (1...8) and the ground (GND). Note: the scene will not be switched off when the switch is released.



### iPhone/iPad/Android Control

The controller can be used with one of 2 different apps. Each available at Google Play and the App store.

#### **Easy Remote**

Create an entirely customized remote controller for your tablet or smartphone. Easy Remote is a powerful and intuitive app allowing you to easily add buttons, faders, color wheels and more. Connect to a WiFi network and the app will find all compatible devices.

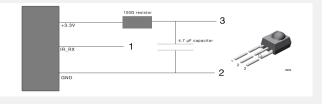
### **Arcolis**

The Arcolis application is a comprehensive tool allowing you to directly control and re-program the controller from your smartphone or tablet. This is a simple application which can be used by just about everyone in any situation. Mobile, easy to use and powerful, Arcolis is the ideal controller for dimming or switching traditional, LED and RGB color mixing DMX lighting fixtures. Program static and dynamic lighting scenes and effects.

http://www.nicolaudie.com/smartphone-tablet-apps.htm

#### Infra Red

The controller works with the official IR remote control. A 36khz infra red receiver can also be connected as an extension, such as the TSOP34836 by Vishay Semiconductors. Farnell ref: 4913127. It's a good idea to add a resistor and capacitor to surpress power supply



### **UDP Triggering**

The controller can be connected to an existing automation system over a network and triggered via UDP packet on port 2430. Refer to the remote protocol document for more information.

### **Network Control**

The controller can be connected to a local network, allowing it to be controlled from a smartphone or tablet over WiFi.

- Connect the controller to a router or switch with an RJ45 cable
- · The controller is set by default to get an IP address from the router via DHCP. If the network is not working with DHCP, a manual IP address and subnet mask can be set using the Hardware Manager
- · If the network has a filewall enabled, allow port 2430

### Programming the Controller

The controller can be programmed from a PC, Mac, Tablet or Smartphone using the software available on our website. Refer to the corresponding software manual for more information. The firmware can be updated using the Hardware Manager which is included with the programming software.

ESA Pro Software (Windows) - Timeline + Multi-Zone http://www.nicolaudie.com/en/esapro.htm ESA2 Software (Windows/Mac) - Single Zone http://www.nicolaudie.com/esa2.htm

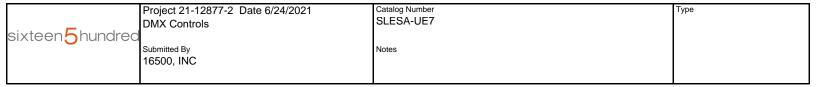
Hardware Manager (Windows/Mac) - Firmware, clock..

http://www.dmxsoft.com/global/ftp/hardwaremanager.zip http://www.dmxsoft.com/global/ftp/HardwareManager.dmg

### Service

Servicable parts include:

- Memory card used to store the scenes
- Battery used to store the clock/calendar
- DMX Chip for universe 1 used to drive the DMX (see p2.)
- \*To replace the Li-Ion rechargeable battery:
- 1. You need a rechargeable 3.6v LIR 2032 replacement battery
- 2. Remove the underside of the plastic casing with the 2 screws
- 3. Pull the battery out of its holder, being careful not to pull the holder itsself
- 4. Slide the replacement battery in from the top, making sure the positive side is as marked
- 5. Re-attach the casing



<b>S</b> SILICII	Sunlite Easy Stand	d Alone USB-DMX Interface	SLESA-UE7	Page 4
SUNLITE INTELLIGENT USB DMX INTERFACE	Technical datasheet	Revision date 26 May. 2015	www.nicolaudie.com	V 1.1

## **Troubleshooting**

### '888' is showing on the display

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 hardware manager
- -Try formatting or replacing the SD card

### 'OFF' is flashing on the display

There is no SD card detected.

- -Check the SD card is properly connected -Try formatting the SD card in the computer
- -Try re-writing the show file
- -Try replacing the SD memory card

### The controller is not detected by the computer

- -Be sure that the latest software version is installed
- -Connect by USB and open the Hardware Manager (found in the software directory). If it's detected here, try to update the firmware

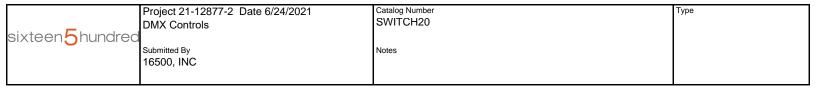
### 'OFF' is showing on the display

There is no showfile detected on the SD memory card.

- -Try formatting the SD card in the computer
- -Try re-writing the show file
- -Try replacing the SD memory card

### 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 flickering. There's one by each XLR
- -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





## **DURATAPE™ RGB IP20 INDOOR**

Power Supply (REQUIRED)	Туре	Wattage	Input/Output Voltage	Dimmable	IP Rating	Output	Dimensions
DEDDI1001244CDMX	ELECTRONIC ADDRESSABLE DMX DRIVER	100W	120-277V / 24V	DMX CONTROL 4 CHANNEL	NEMA1 ENCLOSURE	UL CLASS 2	12" × 12" × 4"1
DEDDI2002244CDMX	ELECTRONIC ADDRESSABLE DMX DRIVER	2X100W	120-277V / 24V	DMX CONTROL 4 CHANNEL	NEMA1 ENCLOSURE	UL CLASS 2	12" x 12" x 4" <sup>1</sup>
DEDDxxxDMX consult factory	ELECTRONIC ADDRESSABLE DMX DRIVER STANDALONE, UL LISTED ENCLOSURE PROVIDED BY OTHERS	consult factory	120-277V / 24V	DMX DIMMING	N/A	UR CLASS 2	consult factory

### MAXIMUM INTERCONNECTED TAPE LENGTH PER DRIVER

ure age		Driver Wattage							
€ #		40W	60W	96W	90W	2X90W	3X90W	100W	2X100
Fi.	3.5W/ft	9FT	13FT	21FT	20FT	(2) 20FT	(3) 20FT	22FT	(2) 22FT

Controller (Optional)	Туре	Application	Voltage	Listing	Dimensions	# Ouput Channels	Number of Zones	Number of Scenes
SWITCH20	RGBW Touch DMX512 Wall Control Panel with Sensitive Glass Touch Panel, White Finish	Indoor Only	12-24V DC	UL	4.73"H x 2.95"W x 1.15"D	12	3	1
TGDMXSLESAU9	Stand-alone DMX Programmable Controller with Easy to Use Software Interface	Indoor Only	5.5V DC	ETL, UL	5.3"W x 5.5"H x 1.9D	256	1	20





SWITCH20

TGDMXSLESAU9

Dimensions include enclosure with mounting bracket.
 Constant voltage drivers 50/60HZ, voltage regulated with short circuit protection. Operating temperature -40 C- 80° C
 Installation of power supply must be compliant to Class 2 installation standards. Refer to NEC and local building code requirements.

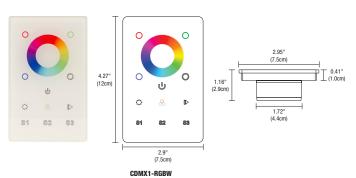
Catalog Number CDMX1 RGBW WH

Туре



TOUCH CONTROLLER

REV 07.22.20



#### Description:

Full touch controller offers fast and accurate color tone adjustment and independent brightness control. The 1 zone controller can adjust RGB and RGBW LEDs smoothly and accurately. Independent smooth dimming of each channel enables the controller to achieve millions of colors. For indoor applications only, and includes a Power Adapter to operate the controller.

Applications: Indoor

**Power Input:** 120-277VAC

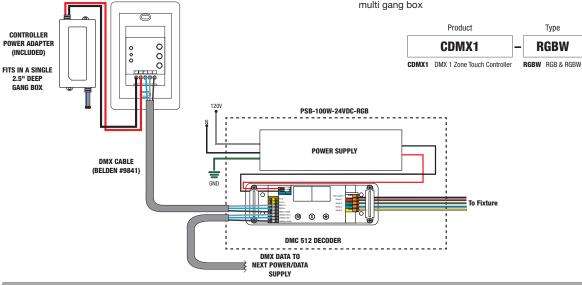
Installation:

**Output Signal:** USITT DMX 512 (1990)

Fits in a single gang 2.5 inch deep junction box, not to be used with a

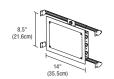
multi gang box

Product Туре Finish **RGBW** WH



	001111			
1	DYNAMIC COLOR CHANGING (DM	X) POWER SUPPLIES & RECOMM	ENDED CONTROLLERS	
ORDERING CODE	P\$B-100W-24VDC-RGB	PSB-2X100W-24VDC-RGB	PSB-3X100W-24VDC-RGB	PSB-4X100W-24VDC-RGB
	l.	SPECIFICATIONS		
MAXIMUM LOAD	100W	2X100W	3X100W	4X100W
INPUT VOLTAGE	120-277VAC	120-277VAC	120-277VAC	120-277VAC
OUTPUT VOLTAGE	24VDC	24VDC	24VDC	24VDC
DIMENSIONS	12.14" X 6.48" X 2.18"	14" X 10" X 3"	17" X 13" X 3"	17" X 13" X 3"
CLASSIFICATION	CLASS 2	CLASS 2	CLASS 2	CLASS 2
IN-WALL MOUNTING	PSB-100W-24VDC-RGB-IW	N/A	N/A	N/A
		DIMMING & CONTROLS		
TOUCH SCREEN CONTROLLER (CTP)	•	•	•	•
COLOR DIAL CONTROLLER (CDP)	•	•	•	•
DMX 1 ZONE RGBW TOUCH CONTROLLER (CDMX1-RGBW)	•	•	•	•

Classification: UL2108 - \* 24VDC over 100 Watts, wires must be in conduit from Remote Power Supply to J-box.

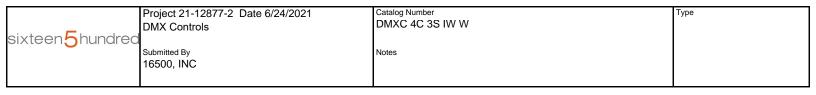


### 8.5" X 14" IN-WALL MOUNTING KIT

Includes Power Supply, Box Cover, and Stud Hangers for installing Junction Box in wall. Select "IW" in the options section of compatible Power Supply ordering codes if an In-Wall Mounting Kit is needed.

ORDERING CODES: PSB-100W-24VDC-RGB-IW

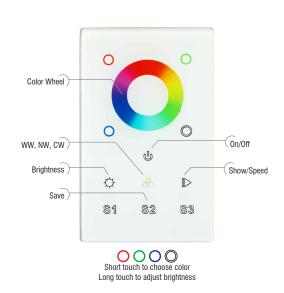
PROJECT	FIXTURE TYPE	DATE	





### DMXC-4C-3S-IW-W

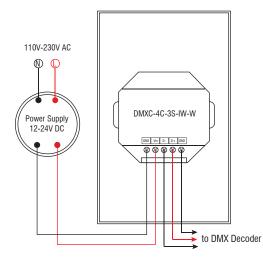
3-SCENE | RGBW | IN-WALL CONTROL STATION



### **PRODUCT FEATURES**

- Controls one zone and saves up to three scenes
- Compatible with standard 1-gang electrical box
- Compatible with DMXD-series decoders
- Individual control of R, G, B, & W channels
- Can control multiple DMX decoders
- · Sensitive glass touch panel
- Ten preset modes

### WIRING DIAGRAM



### **SPECIFICATIONS**

Model	DMXC-4C-3S-IW-W
Device Color	White
Voltage	12-24V DC
DMX Wired Control	Yes
DMX Channels	4
Dimensions L*W*D	4-3/4" x 2-15/16" x 1-1/8"
IP Rating	IP20
Temp Range	-4°F to 122°F
Color Touch Wheel	Yes
Dim Range	0.4% to 100%

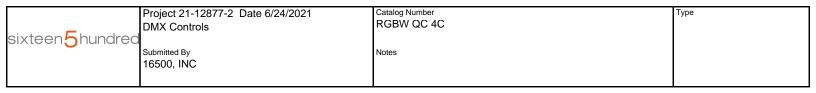














### RGBW-QC-4C

1-ZONE | RGBW

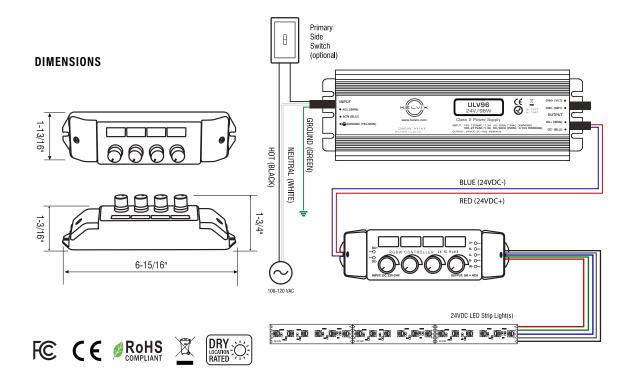


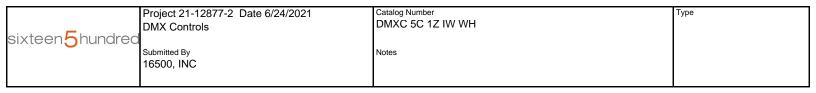
### **PRODUCT FEATURES**

- Simple and Quick 4-Channel RGBW Color Mixing
- Direct Dial 0-255 Intensity Values for Red, Green, Blue, and White
- Smooth 0–100% Intensity Adjustment with Digital Display

### **SPECIFICATIONS**

Remote Model	RGBW-QC-4C	
Receiver Input Voltage	12-24VDC	
Receiver Output	4 × 5A	
IP Rating	IP20	

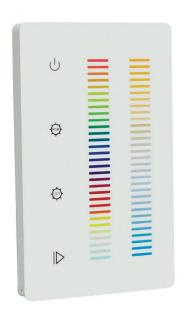






### DMXC-5C-1Z-IW-WH

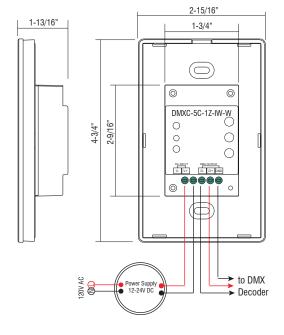
5-CHANNEL | RGB/CT DMX DECODER



### **PRODUCT FEATURES**

- Controls One Zone of RGB/CT
- Compatible with Standard 1-Gang Electrical Box
- . Compatible with DMXD-5C-8A-UNV and DMX-26506 Decoders
- Individual Control of R, G, B, and CT
- · Can Control Multiple DMX Decoders
- · Sensitive Glass Touch Panel
- Ten Preset Modes

### WIRING DIAGRAM



### **SPECIFICATIONS**

Model	DMXC-5C-1Z-IW-WH White		
Device Color			
Voltage	12-24V DC		
DMX Wired Control	Yes		
DMX Channels	5		
Dimensions L $\times$ W $\times$ D	2-15/16 × "4-3/4" × 1-3/16"		
IP Rating	IP20		
Temp Range	-4°F to 122°F		
Color Touch Slide	Yes		
Dim Range	0.4%-100%		



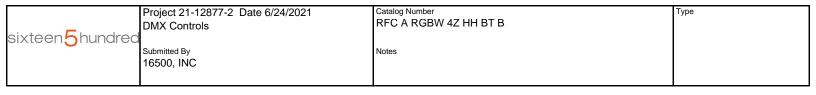








Questions/Support | 800-789-3810 | quotes@kelvix.com





### RFC-A-RGBW-4Z-HH-BT-B

4-ZONE | RGBW | HANDHELD REMOTE CONTROL



### **PRODUCT FEATURES**

- Controls up to four zones separately or synchronously
- Saves up to three scenes per zone
- · Compatible with RFR-A series receivers
- Can control multiple RF receivers
- · Remembers last setting
- Ten preset modes

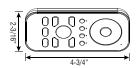
### **OPERATION**



### **SPECIFICATIONS**

Model	RFC-A-RGBW-4Z-HH-BT-B			
Device Color	Black			
Voltage	4.5V DC			
Battery Compartment	3 x 1.5V AAA batteries			
RF Wireless Control	Yes			
Operation Frequency	434MHz/868MHz			
RF Range	Up to 50ft			
Dimensions L*W*D	4-3/4" x 2-3/16" x 11/16"			
IP Rating	IP20			
Temp Range	-4°F to 122°F			
Color Touch Wheel	Yes			
Dim Range	1% to 100%			

### **DIMENSIONS**

















CBU-ASR

Notes

Catalog Number

Type

### CASAMBI

### **CBU-ASR**

Bluetooth controllable 2ch 0-10V controller



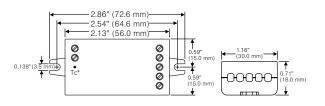




#### Warning!

Hazardous voltages. Risk of electric shock or fire. Only qualified professionals should make the connections. Disconnect the mains power supply and verify its absence prior to installation.

### **Dimensions**



\*Tc point is on bottom side

Dominant dimensions given in mm.

### **Description**

CBU-ASR is a Bluetooth controllable, Casambi enabled two channel 0-10V controller for dimmable LED loads and luminaires. It is powered by an external 12-24 VDC Class 2 power supply.

CBU-ASR can control two channels making it an ideal partner for tunable white (TW) applications. The two channels can be configured also to operate individually. The device also has a control port for an external relay and a sensor input.

CBU-ASR is an ideal partner for power packs with line voltage relays. It is protected against overvoltage, overcurrent and short circuit situations.

CBU-ASR together with other Casambi enabled products can be used from a simple one luminaire direct control to a complete and full featured light control system where up to 250 units form automatically an intelligent mesh network. Casambi supports nearly unlimited number of mesh networks in an installation site.

Casambi system can be controlled with Casambi app which can be downloaded free of charge from Apple App Store and Google Play Store. Other controlling methods are, for example, timers, Casambi enable sensors, such as PIR/occupancy and lux sensors, as well as Casambi Xpress and EnOcean switches.



Submitted By 16500, INC Catalog Number CBU-ASR

Notes

Type

CASAMBI

Project:			
Reference type:			
Item code:			
Date:			
Notes:			

#### **Technical data**

Input

Voltage range: 12-24 VDC, Class 2

No-load input current: 30 mA **0-10V output (both channels)** 

Output voltage: 0-10 VDC, adjustable

Max. output current

per channel: 5 mA, sinking and sourcing

Relay control output

Output voltage: 12-24 VDC, same as input

Max. output current: 100 mA

Sensor input

Input voltage: Max. 24 VDC Input resistance:  $>80 \text{ k}\Omega$ 

Radio transceiver

Operating frequencies: 2401-2483 MHz
Maximum output power: typ. +0 dBm, +/-3dBm

Operating conditions

Ambient temperature, ta: 13...+113°F (-25...+45°C)

Max. case temperature, tc: +167°F (+75°C)

Storage temperature: -13...+167°F (-25...+75°C)

Max. relative humidity: 0...80%, non-cond.

Connectors

Wire range, solid & stranded: 14 - 22 AWG

0.5 - 1.5 mm<sup>2</sup>

Wire strip length: .25" (6 - 7 mm)
Tightening force: 0.4 Nm / 2.6 Lb-in

Mechanical data

Dimensions: 2.2 x 1.2 x 0.7 inch

72.6 x 30.0 x 18.0 mm

 Weight:
 0.8 oz (23 g)

 FCC ID:
 2ALA3-CBUASR

 IC:
 22496-CBUASR

 UL:
 UL Listed

UL Plenum Rated (UL 2043)

### Range

The range between two CBU-ASR units or between a CBU-ASR and a smart phone can vary a lot depending on obstacles and surrounding material. In open-air the range between two CBU-ASRs is 200 ft, but surroundings may affect the range, so testing is highly recommended.

Casambi uses mesh network technology so each CBU-ASR acts also as a repeater. When testing the network, it is important to test that each unit can be controlled from any point of the network covered area.

Compatible devices: iPhone 4S or later iPad 3 or later iPod Touch 5th gen or later Android 4.4 or later devices produced after 2013 with full BT 4.0 support





Casambi uses mesh network technology so each CBU-ASR acts also as a repeater. Longer ranges can be achieved by using multiple Casambi units.

1) Range is highly dependant on the surrounding and obstacles, such as walls and building materials.



Project 21-12877-2 Date 6/24/2021 DMX Controls Catalog Number CBU-ASR

Notes

Туре

**CAS** MBI

Project:
Reference type:
Item code:
Date:
Notes:

#### Installation

CBU-ASR is a UL Listed Open-Type device which means that it will have to be used together with a Class 2 power supply with maximum output power of 100 VA. The product can be installed outside of a junction box. Make sure to comply with National Electric Code in installation and when selecting installation wires.

The products has one return line which is shared between the two 0-10V outputs, relay control output and sensor input.

The two 0-10V outputs can be configured for differet functions, such as 2 channel tunable white, or 1-2 jointly and individually dimmable channels. The standard configuration when delivered is 2 channel dimming, but the configuration can be changed by the end user from Casambi App.

Do not connect a typical PCB relay to the Relay output. The connected relay must have a flyback diode in place to protect the CBU-ASR against over-voltage spikes.

#### Wiring diagram

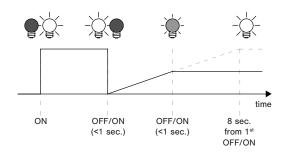


\* The relay must be protected against inductive over voltage spikes, i.e. it must have a flyback diode. Do not connect a typical PCB relay without the diode.

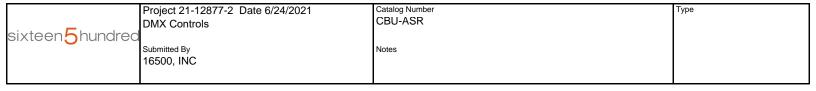
#### Warning

Changes or modifications not expressly approved by Casambi Technologies Oy could void the user's authority to operate the equipment.

#### **Dimming without app**



- 1. Turn lights on from a wall switch.
- Quickly flick the wall switch off (max. 1 sec.) and back on. The light level starts to increase gradually.
- Flick the switch again at desired dim level.
   The selected level is saved automatically.
- 4. If the second flick is not done within 8 sec. the light intensity reaches its maximum level.
- Flicking the switch can also be used to switch between predefined scenes.





Project:		
Reference type:		
Item code:		
Date:		
Notes:		
140100.		

#### **Compliance Statement**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

#### Radiation Exposure Statement for FCC

This device complies with FCC radiation exposure limits for an uncontrolled environment. This device shall be installed and operated with a minimum distance of 0.8" (2cm) between users or bystanders and the device.

#### **FCC Interference Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### **Radiation Exposure Statement for Canada**

This device complies with Industry Canada's licence-exempt RSSs.

Operation is subject to the following two conditions:

- (1) This device may not cause interference
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

This equipment is exempt from the routine RF exposure evaluation requirements of RSS-102. This equipment should be installed and operated with a minimum distance of 20 cm between the antenna and the user or bystanders.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage;
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement. Ce matériel n'est pas sujet à l'évaluation habituelle d'exposition RF selon RSS102. Ce matériel devrait être installé et exploité en gardant une distance minimale de 20 cm entre l'antenne et l'utilisateur ou les spectateurs.

#### **NOTES**



Catalog Number TX-CMP-TCH

Notes

Туре



# TX-CMP-TCH

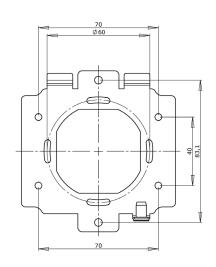
# FRONT END DASHBOARD | TOUCH WALL STATION

#### **PRODUCT FEATURES**

- 7" Capacitive Touch Screen
- Compatible with Color Changing and Pixel Systems
- 800 × 480 Resolution
- · OSC and UDP in and out
- · Power Over Ethernet (Class III)
- · Wall Mount

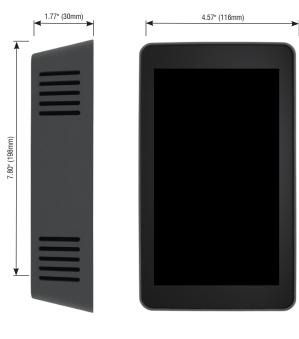


Model	TX-CMP-TCH
Input Voltage	48V PoE
Output Protocol	OSC, UDP
Programmability	PC, Mac
Connections	Ethernet (PoE)
Dimensions $L \times W \times H$	7.80" × 4.57" × 1.77"
Temp Range	-4°F (-20°C) to 122°F (50°C)

















021021KS



Catalog Number TX-CMP-BTN

Notes

Туре



# TX-CMP-BTN

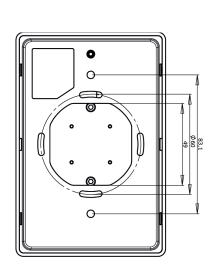
# 12 SCENE CONTROLLER | BUTTON WALL PANEL

#### **PRODUCT FEATURES**

- Six RGB Push-Buttons
- Compatible with Color Changing and Pixel Systems
- DMX-512 / RDM / ARTNET / sACN
- · OSC and UDP In and Out
- Power Over Ethernet (Class I)
- · Wall Mount

Model	TX-CMP-BTN
Input Voltage	48V PoE
Output Protocol	DMX, RDM, ARTNET, sACN
Programmability	PC, Mac
Connections	Ethernet (PoE)
Dimensions $L \times W \times H$	5.26" × 3.50" × 1.20"
Temp Range	-4°F (-20°C) to 122°F (50°C)



















Catalog Number
DMXC-N1-6V-IW-B

Notes

Type



# DMXC-N1-6V-IW-B

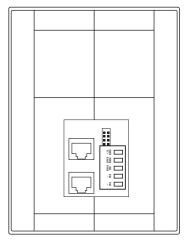
#### TOUCH INTELLIGENT KEYPAD | RGB/CT DMX DECODER

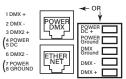


#### **PRODUCT FEATURES**

- Graphical Color Display to Show Selected Environment
- · Color Temperature Mixing
- Touch Sensitive Wheel for Accurate Color Selection
- Multi-Room Control with 90 Scenes, 10 Zones
- 1024 DMX Channels, Control 256 Unique RGBW Fixtures
- · Network Communication for Remote Lighting Control
- Windows/Mac Software to Set Dynamic Colors/Effects
- · Installed in a Single Gang Junction Box

#### WIRING DIAGRAM





Model	DMXC-N1-6V-IW-B
Input Power	6-7VDC 0.6A
Output Protocol	DMX512 (×2)
Programmability	PC, Mac
Available Colors	Black / White
Connections	USB, Ethernet, RS232, Clock, 8 dry contact ports
Memory	microSD (32Gb Max)
Temp Range	14°F (-10°C) to 113°F (45 °C)
Dimentions	5.75" (146mm) × 4.188" (106mm) × 0.438" (11mm)











Project 21-12877-2 Date 6/24/2021 **DMX Controls** 

Submitted By 16500, INC

Catalog Number TX-CMP-MINI-MDP-SA

Туре



# DRAFT COPY —

# TX-CMP-MINI-MDP-SA

PIXEL CONTROL COMPUTER LONG LIFE RYZEN QUAD-CORE

#### **PRODUCT FEATURES**

- Windows 10 IoT Enterprise
- AMD Ryzen V1807B
- AMD Radeon Vega 11 Graphics
- 4GB DDR Memory
- 128GB M.2 SATA SSD
- Intel Wireless-AC 8265 and Bluetooth v5
- Intel Gigabit LAN
- Power Supply Adapter With Detachable Power Cord Included
- Up to 7.1 Surround Audio via mDP
- · VESA/DIN Mount Kit Included



#### **DETAIL**





Model	TX-CMP-MINI-MDP-SA
Input Power	8-32VDC (AC Adapter Included)
Output Protocol	ARTNET
Available Colors	Black
Temp Range	32°F (0°C) to 140°F (60°C) Non-condensing Humidity
Dimensions	4.6" (116mm) x 4.7" (119mm) x 1.9" (47mm)













Catalog Number

TX-T8MK2-XMTR-ETH-B

Туре



# TX-T8MK2-XMTR-ETH-B

96 UNIVERSE | 8-PORT | ETHERNET-SPI TRANSMITTER



#### **PRODUCT FEATURES**

- Flexible System to Control LED Pixel Protocols
- · Two Operating Modes for Greater Adaptability
- 96 Universes of Multicast/Unicast or ART-NET Data Output
- · Output Protected form Electrostatic Discharge, Overvoltage, and Short Circuit
- Send Data up to 900FT When Combined with R2F/R4D **Pixel Control Receivers**

#### **SPECIFICATIONS**

Model	TX-T8MK2-XMTR-ETH-B
Input Power	110-240VAC
Input Connection	Ethernet (RJ45)
Input Protocol	E1.31 (sACN)/Art-Net
Output Connection	8 × RJ45
Output Protocol	8 × X-Data
Dimensions	9.625" × 1.563" × 6.25"
Operating Range	-40°F (-40°C) to 175°F (80°C)

# TX-R2F-RCV-SPI-B

#### **2 PORT PIXEL CONTROL RECEIVER**



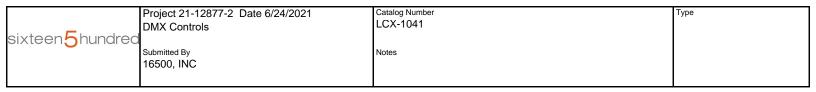
#### **PRODUCT FEATURES**

- Converts X-Data to Pixel Ready Data Stream (SPI)
- · Multiple Configurations
- Able to Run 6,144 (12 universes) Channels Split Over 2 Outputs

#### **SPECIFICATIONS**

Model	TX-R2F-RCV-SPI-B
Input Power	5–24VDC
Input Connection	Ethernet (RJ45)
Input Protocol	X-Data
Dimensions	3.063" × 3.813" × 1.5"
Operating Range	-40°F (-40°C) to 175°F (80°C)

Questions/Support | 800-789-3810 | quotes@kelvix.com





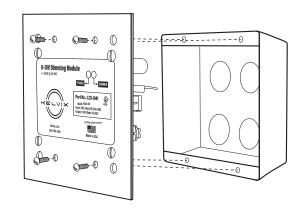
# LCX-1041

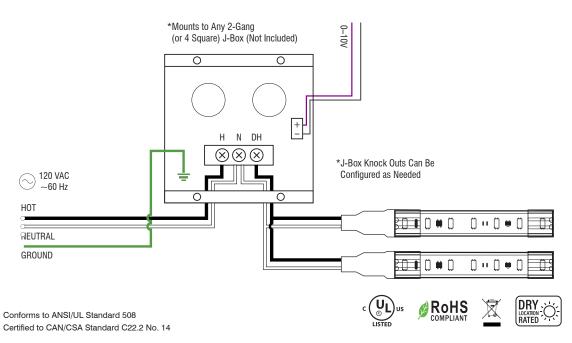
#### 0-10V DIMMING MODULE

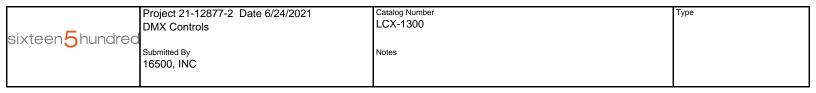
#### **PRODUCT FEATURES**

- For Use With OREX<sup>™</sup> and Forward Phase Dimmable Fixtures
- 1 Channel  $\times$  500W Dimmer @ 120 VAC
- Mounts to Any 2-Gang (or 4 Square) J-Box
- 0-10V Control Inputs

Model	LCX-1041
Input Voltage	120 VAC
Output Voltage	120 VAC
Output	500W Max
Front Panel Dimensions	4.8" × 4.8"
Depth	1.875"
Ambient Temperature	104°F Max









# LCX-1300

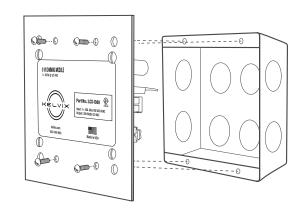
#### 0-10V DIMMING MODULE

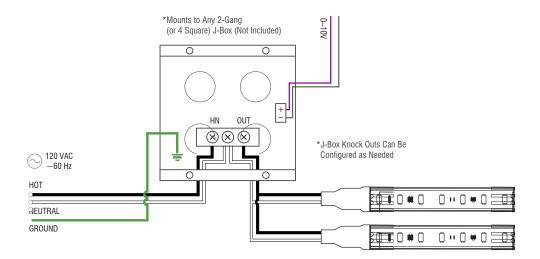
#### **PRODUCT FEATURES**

- For Reverse Phase, Trailing Edge, Elv Dimmable Loads
- + 1 Channel  $\times$  300w Dimmer @ 120 Vac
- Mounts on a 2" Deep Standard 2 Gang Electric Box
- 0-10v Control Inputs

#### **SPECIFICATIONS**

Model	LCX-1300
Input Voltage	120 VAC
Output Voltage	120 VAC
Output	300W Max
Front Panel Dimensions	4.80" × 4.80"
Depth	2.00"
Ambient Temperature	90°F Max at Full Load





Conforms to ANSI/UL Standard 508 Certified to CAN/CSA Standard C22.2 No. 14















# CM-010V-2CH-CT-5A-MV

UL LISTED | TUNABLE DIMMING MODULE



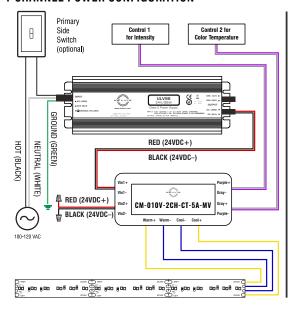
#### **PRODUCT FEATURES**

- UL Listed Dimming Module
- Wide Range DC Input (12-48VDC)
- 0-100% Dimming and Color Temperature Changing
- Up to 97% Efficiency
- 1kHz PWM Output Frequency
- EN55015 and FCC Part 15 Compliant

#### **SPECIFICATIONS**

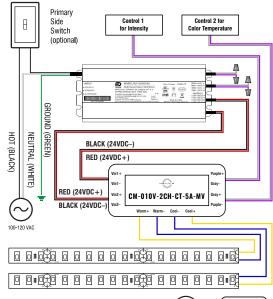
Input Voltage	12–48V
Input Control	2
Channel Output	2
IP Rating	IP65
Temp Range	-20°C to 60°C
Dimensions	3.86" × 1.73" × 0.57" (98mm × 44mm × 14.5mm)

#### 1-CHANNEL POWER CONFIGURATION



Conforms to ANSI/UL Standard 244A Certified to CAN/CSA Standard C22.2 No. 250.0

#### 2-CHANNEL POWER CONFIGURATION



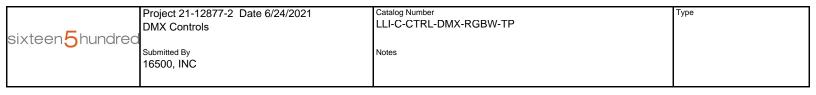














SPECIFIER	
PROJECT	
DATE	

# TOUCH PANEL WALL CONTROLLER





TUNABLE WHITE CONTROLLER

### **QUICK SPECIFICATIONS**

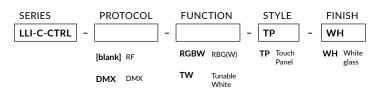
LED TAPELIGHT COMPATIBILITY	Compatible with 12-24V DC LED tapelights
PROTOCOL	RF wireless or DMX hardwire
ZONES	RGBW - 3 zones Tunable White - 4 zones, 2 scenes
INTERFACE	Glass touch control
WARRANTY	5 year limited

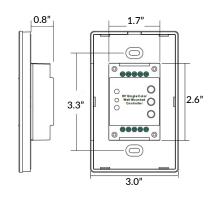
#### **POWER**

Power supply for controller not included. 12V DC power supply required.

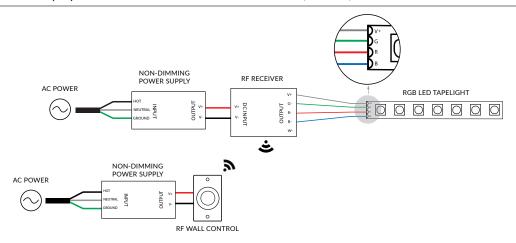


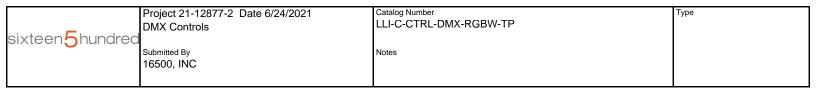






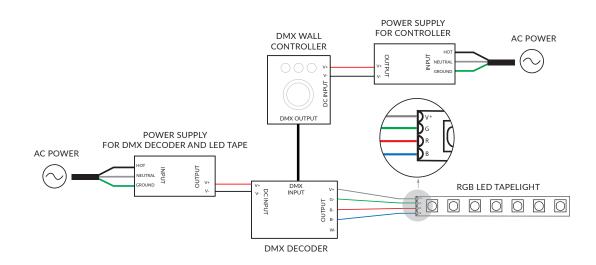
### EXAMPLE RGB(W) RF WIRING DIAGRAM POWER SUPPLY, RECEIVER, AND LED TAPELIGHT SOLD SEPARATELY



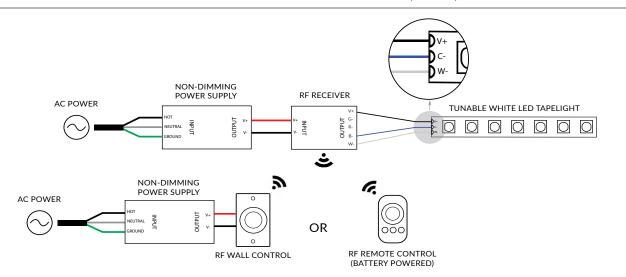


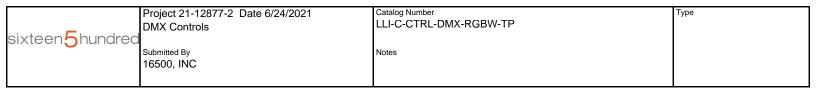
# TOUCH PANEL WALL CONTROLLER

EXAMPLE RGB(W) DMX WIRING DIAGRAM POWER SUPPLY, DECODER, AND LED TAPELIGHT SOLD SEPARATELY

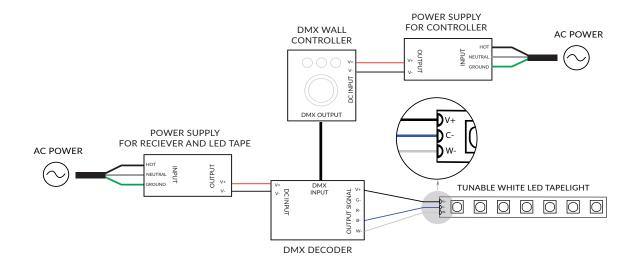


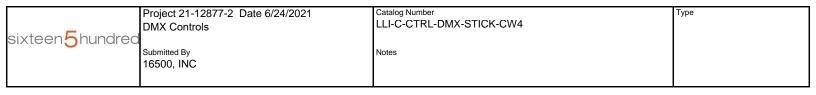
### EXAMPLE TUNABLE WHITE RF WIRING DIAGRAM POWER SUPPLY, DECODER, AND LED TAPELIGHT SOLD SEPARATELY





# EXAMPLE TUNABLE DMX WIRING DIAGRAM POWER SUPPLY, DECODER, AND LED TAPELIGHT SOLD SEPARATELY







# STAND ALONE DMX CONTROLLER, STICK-CW4



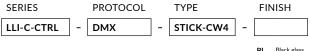


Black glass finish

White glass finish



#### PART NUMBER

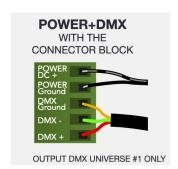


BL Black glass

WH White glass

#### **POWER OPTIONS**

Power and DMX cable connections are available on the screwterminal connector. Controller may be powered by Power + DMX RJ45 cable instead.





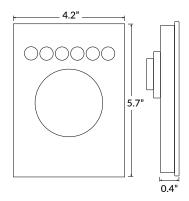
**NOTE:** Do not apply power to the DMX input. Doing so will damage the controller and void the warranty.

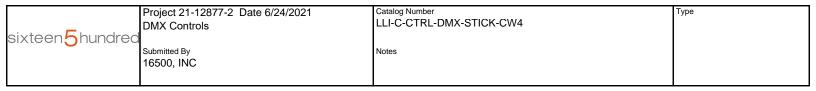
#### **QUICK SPECIFICATIONS**

	I .
INCLUDED IN PACKAGE	Controller, connector block, power supply, mini-USB cable, ESA2 software, ESA Pro2 Software
OS/COMPUTER REQUIREMENTS	Mac OSx 10.6 or higher / Windows XP or higher
PROGRAM SOFTWARE	Easy Stand Alone, ESA2 (Mac/Windows)
CONNECTIONS	Power/DMX - screw terminal and RJ45 Programming - miniUSB port
POWER SUPPLY	Requires 5-10VDC 0.6A power supply (included)
MEMORY	Integrated flash memory
WEIGHT	0.44 lb (200g)
MOUNTING	Single or double gang wall box
IP RATING	IP20 - dry locations only
WARRANTY	5 year limited

#### **FEATURES**

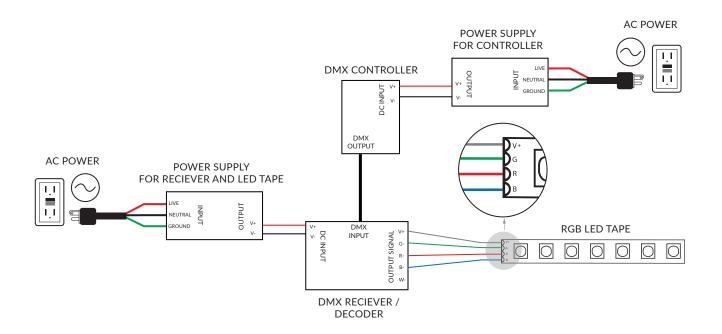
- Compatible with any DMX LED driver
- Can be controlled directly from a computer, smartphone, or tablet
- Touch-sensitive buttons, glass face
- Up to 36 dynamic or static scenes
- 8 port triggers
- 1024 DMX channels control up to 340 RGB fixtures
- Windows/Mac software for programming dynamic effects
- Internal clock and calendar with sunrise/sunset triggering





# STAND ALONE DMX CONTROLLER, STICK-CW4

EXAMPLE WIRING DIAGRAM LED POWER SUPPLY, DECODER, AND LED TAPE SOLD SEPARATELY





Project 21-12877-2 Date 6/24/2021 **DMX Controls** 

Catalog Number LLI-C-CTRL-DMX-STICK-DE3



# STAND ALONE DMX CONTROLLER, STICK-DE3







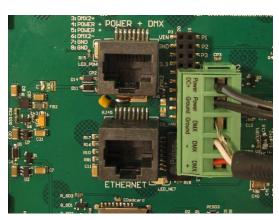


#### **PART NUMBER**

SERIES		PROTOCOL		TYPE
LLI-C-CTRL	-	DMX	-	STICK-DE3

#### **POWER OPTIONS**

Power and DMX cable connections shown on screw-terminal connector. Controller may be powered by Power + DMX RJ45 cable instead



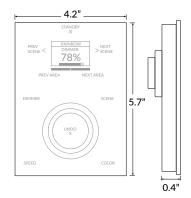
NOTE: Do not apply power to the DMX screwterminal input. Doing so will damage the controller and void the warranty.

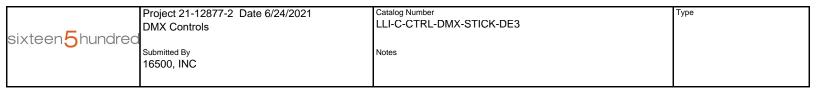
#### **QUICK SPECIFICATIONS**

INCLUDED IN PACKAGE	Controller, connector block, power supply
OS/COMPUTER REQUIREMENTS	Mac OSx 10.6 or higher / Windows XP or higher / iOS phone or tablet / Android phone or tablet
PROGRAM SOFTWARE	Easy Stand Alone, ESA2 (Mac/Windows) DMX Lightpad 3 App (iOS/Android) Easy Remote App (iOS/Android)
CONNECTIONS	Power/DMX - screw terminal and RJ45 compatible Memory - MicroSD slot Programming - MicroUSB port
POWER SUPPLY	6VDC power supply (included)
MEMORY	MicroSD card (not included)
MOUNTING	Single or double gang wall box
IP RATING	IP20 - dry locations only
WARRANTY	5 year limited

#### **FEATURES**

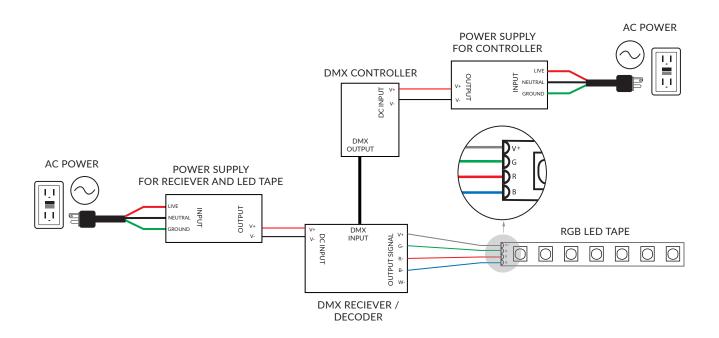
- Compatible with any DMX LED driver
- Multi-zone microSD memory
- Multi-room control with 500 scenes, 10 zones
- Integrated clock and calendar for scheduling events
- Touch-sensitive buttons
- USB and Ethernet connectivity for programming
- Windows/Mac software for programming dynamic effects
- iPhone/iPad/Android apps for remote control and program

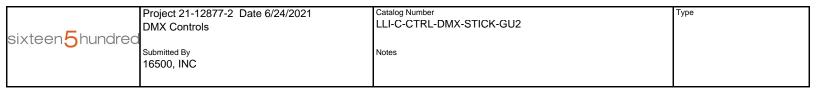




# STAND ALONE DMX CONTROLLER, STICK-DE3

EXAMPLE WIRING DIAGRAM LED POWER SUPPLY, DECODER, AND LED TAPE SOLD SEPARATELY







# STAND ALONE DMX CONTROLLER, STICK-GU2





#### **PART NUMBER**

SERIES		PROTOCOL		TYPE	
LLI-C-CTRL	-	DMX	-	STICK-GU2	

#### **AVAILABLE MEMORY**

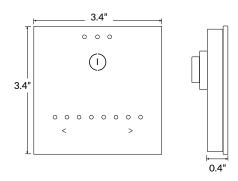
CHANNELS	STEPS
8	1691
16	1011
32	557
48	383
64	291
80	233
96	195
112	166
128	145

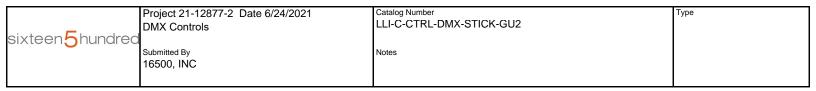
### QUICK SPECIFICATIONS

INCLUDED IN PACKAGE	Controller, CD-ROM, USB cable, connector block, power supply
OS/COMPUTER REQUIREMENTS	Mac OSx 10.6 or higher / Windows XP or higher, USB 2.0 port
PROGRAM SOFTWARE	Easy Stand Alone, ESA2 (included)
CONNECTIONS	Power (2 pins), DMX (3 pins), Port (2 pins), Micro-USB Port
POWER SUPPLY	6VDC power supply (included)
MOUNTING	Single or double gang wall box
IP RATING	IP20 - dry locations only
WARRANTY	5 year limited

#### **FEATURES**

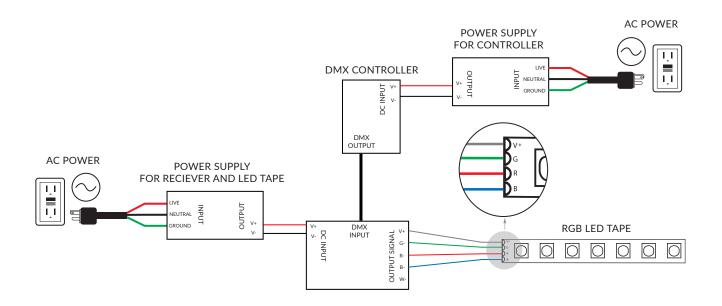
- Compatible with any DMX LED driver
- Up to 24 dynamic or static scenes
- Wall mounted control panel with glass face, touch-sensitive buttons
- Programmable with included USB cable and software no Ethernet or WiFi required

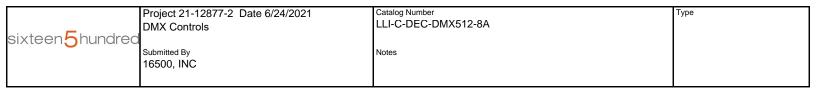




# STAND ALONE DMX CONTROLLER, STICK-GU2

EXAMPLE WIRING DIAGRAM LED POWER SUPPLY, DECODER, AND LED TAPE SOLD SEPARATELY







# DMX DECODER, 8A



#### **PART NUMBER**

SERIES		TYPE	CAPACITY		
LLI-C-DEC	-	DMX512	-	8A	

#### **QUICK SPECIFICATIONS**

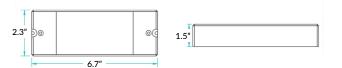
LOCATION RATING	Indoor only
FUNCTION	Static color, tunable white, RGB(W) LEDs
CHANNELS	4 Channels, 8 Amp
CARACITY	12V - 96W maximum
CAPACITY	24V - 192W maximum

#### **DMX ADDRESSABILITY**

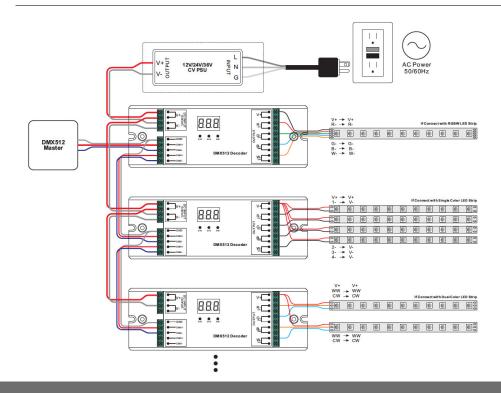
512 addressable DMX channels with digital display

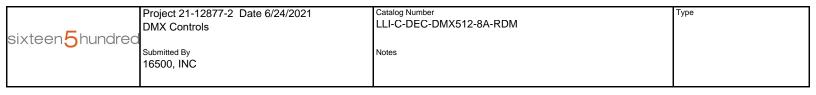
#### **POWER**

Power supply not included. 12V or 24V power supply required.



#### WIRING DIAGRAM







# RDM DMX DECODER



#### **PART NUMBER**

SERIES		PROTOCOL		CAPACITY		COMM.
LLI-C-DEC	-	DMX512	-	8A	-	RDM

#### **QUICK SPECIFICATIONS**

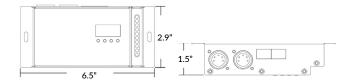
OUTPUT	8A maximum, 4 channels
IP RATING	IP20 - dry locations
FUNCTION	RDM communication and PWM dimming for static white, single color, tunable white, and RGB(W) LEDs
CAPACITY	12V - 96W maximum
CAPACITY	24V - 192W maximum
COMPATIBILITY	Compatible with LLI-C-CTRL-DMX controllers
WARRANTY	5 year limited

#### **FEATURES**

Can be controlled by up to eight (8) controllers. Can be synchronized with twenty (20) decoders.

#### **POWER**

Power supply not included. 12V/24V non-dimming power supply required.



#### WIRING DIAGRAM

