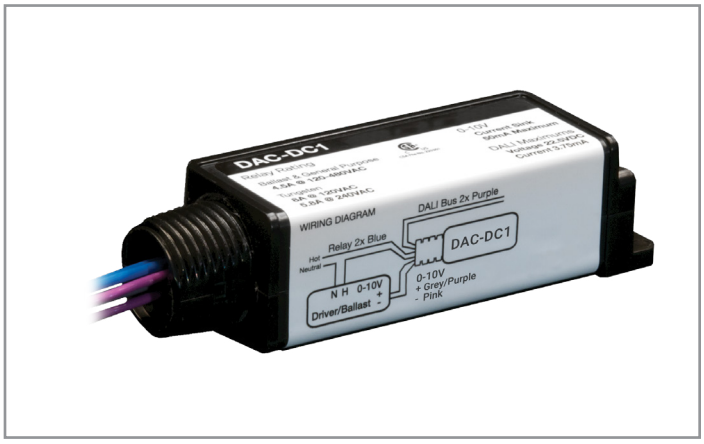
Project		Catalog #		Type	
Prepared by		Notes		Date	



WaveLinx Wired

DAC-DC1 / DAC-DC2

Digital to Analog Converter

Typical Applications

Office • Education • Healthcare • Hospitality • Retail • Industrial • Manufacturing

Interactive Menu

Product Certification

Product Features

WaveLinx Wired Local Bus

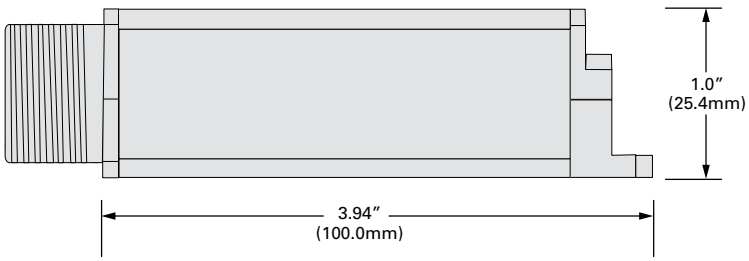
Task Tuning

Top Product Features

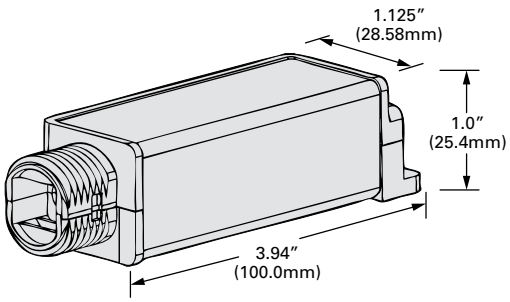
- Built-in latching relay and 0-10V current sinking interface
- All DAC's device settings configured through the software
- Automatic detection of WaveLinx Wired Local Bus loss of power for Emergency lighting control (UL924)
- Available for Class 1 or Class 2 wiring configurations
- Ultra-low profile form factor designed
- Options to meet Buy American Act requirements

Dimensional Details

Side View



Angled View



additional product diagrams

Order Information

Catalog Number

Domestic Preferences (1)	Catalog Number	Description
[Blank] =Standard **BAA** = Buy American Act	**DAC-DC1**	Digital to Analog Converter - wiring exits with line voltage wiring for Class 1 installations of the two wire communications bus.
[Blank] =Standard **BAA** = Buy American Act	**DAC-DC2**	Digital to Analog Converter - wiring exits with line voltage wiring for Class 2 installations of the two wire communications bus.

Notes

(1) Only product configurations with this designated prefix are built to be compliant with the Buy American Act of 1933 (BAA). Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.

Product Specifications

Key Features

- Built-in latching relay and 0-10V current sinking interface used to integrate individual or a group of dimmable 0-10V ballasts/drivers
- All DAC's device settings (fade, scenes and groups) configured through the software, eliminating the need for manual adjustments
- Automatic detection of the WaveLinx Wired Local Bus power loss with default to closed and full bright (100% lighting)
- Available for Class 1 or Class 2 wiring configurations
- Ultra low profile form factor designed to fit inside driver/ballast compartment of most standard luminaires
- Easily mountable to fixture housing through standard knockout using supplied 90° elbow and mounting clip
- Powered by the WaveLinx Wired Local Bus (via SCMD4). Line in and load out connection to driver/ballast, neutral & ground connection are not required.

Mechanical

Dimensions: 1"H x 3.94"W x 1.125"L (25.4mm x 100mm x 28.6mm)

Mounting:

- In fixture or junction box mounting only.
  Refer to Wiring Diagram section of spec sheet for proper wiring details.

Environment:

- **Temperature:** 32°F to 140°F (0°C to 60°C)
- **Relative Humidity:** 10% to 90% (non-condensing). For indoor use only.

Electrical

Relay Output:

- **Input Voltage:** 120-347VAC (+/- 10%) 50/60Hz (Single Phase)
- **Maximum Ballast/General Load for operating temperature lower than 104F:** 4.5A @ 120-347 VAC
- **Maximum Ballast/General Load for operating temperature higher than 104F:** 3A @ 120-347 VAC
- **Maximum Tungsten Load:** 8A @ 120 VAC, 5.8A @ 240 VAC
- **Input Frequency:** 50/60 Hz

Control Specification:

- **Communication Interface:** WaveLinx Wired Local Bus (topology, polarity free)
- **Current Draw:** 3.75mA
- **Analog Dimming Current Draw:** 0-10 VDC, 50mA max current sink only
  Note: Upon first power up allow 4-6 seconds before sending commands

Wiring:

- **Relay:** 18 AWG solid TFN non-polarized pair
- **0-10V Dimming:** 18 AWG solid TFN polarized pair
- **Communication:** 18 AWG stranded PTGE plenum rated non-polarized pair

Standards/Ratings

- UL 924, Emergency Lighting and Power Equipment
- UL 916, Energy Management Equipment
- CSA C22.2 No. 141-10, Emergency Lighting Equipment
- CSA C22.2 No.205, Signal Equipment
- Manufactured in an ISO 9001 certified factory
- Meets ASHRAE Standard 90.1 requirements
- Meets IECC 2015 requirements
- Meets CEC Title 24 requirements

Warranty

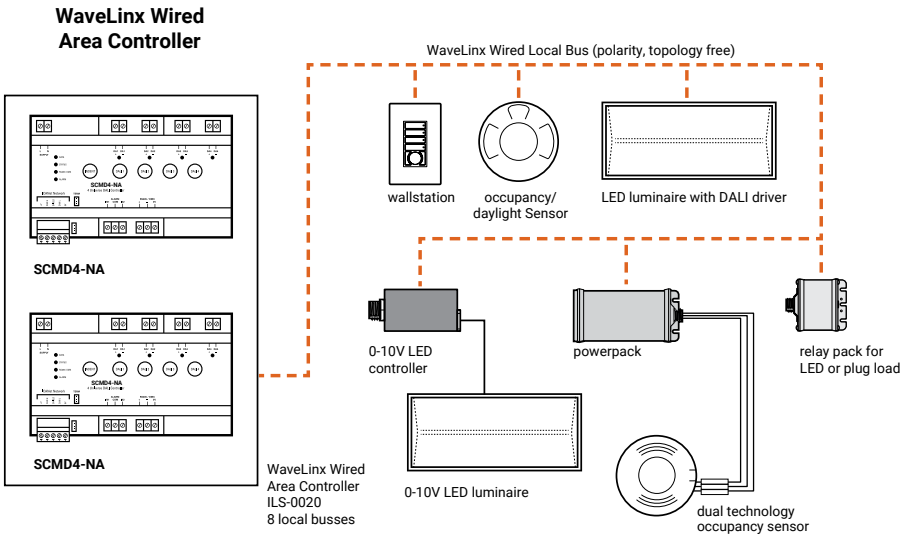
Five year warranty standard

Overview

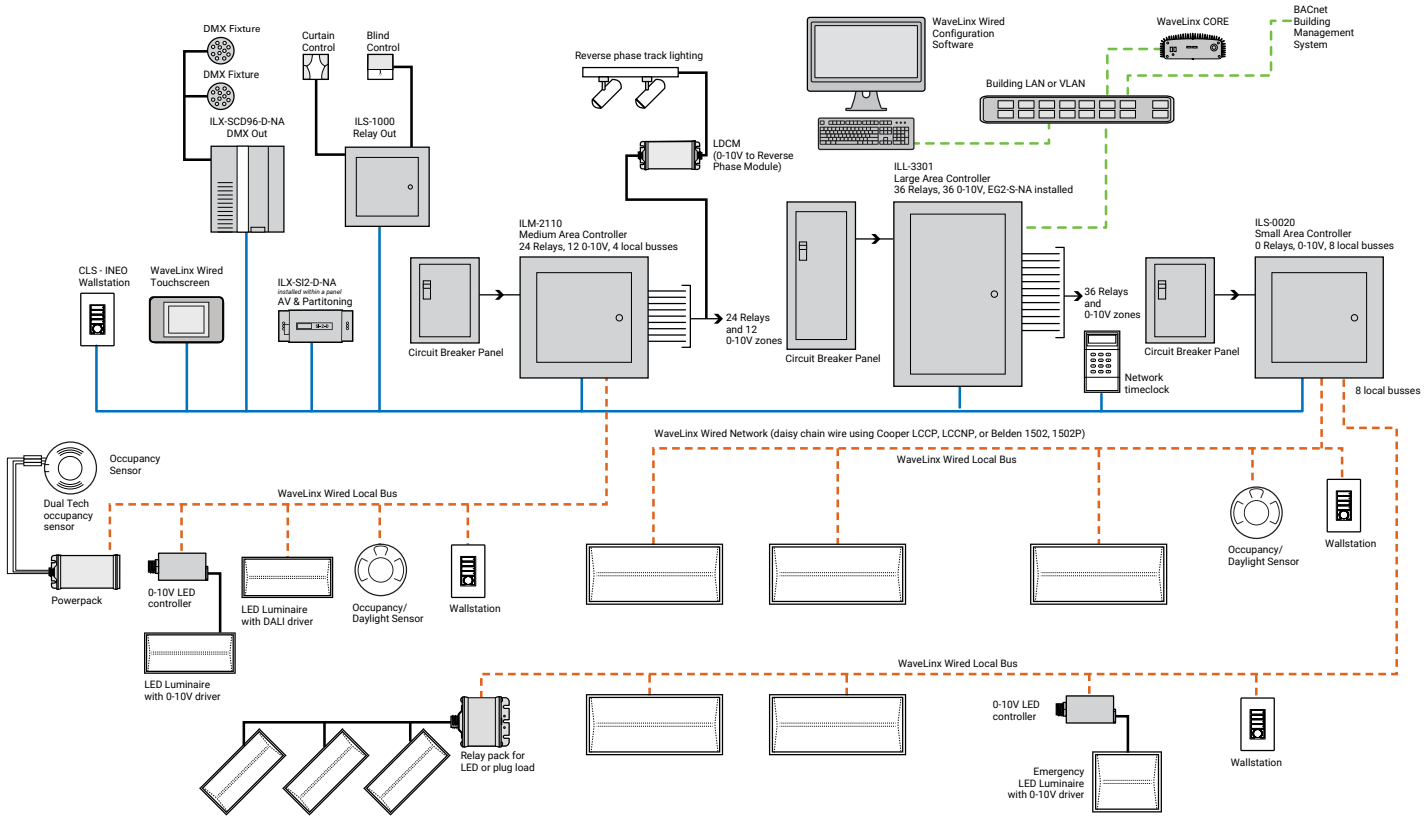
The Digital to Analog Converter (DAC) is a lighting control device used to control any standard 0-10V current sourcing dimmable ballast/driver. It allows dimming control by sending 0-10V dimming and on/off commands to the DAC via the WaveLinx Wired Local Bus.

System architecture

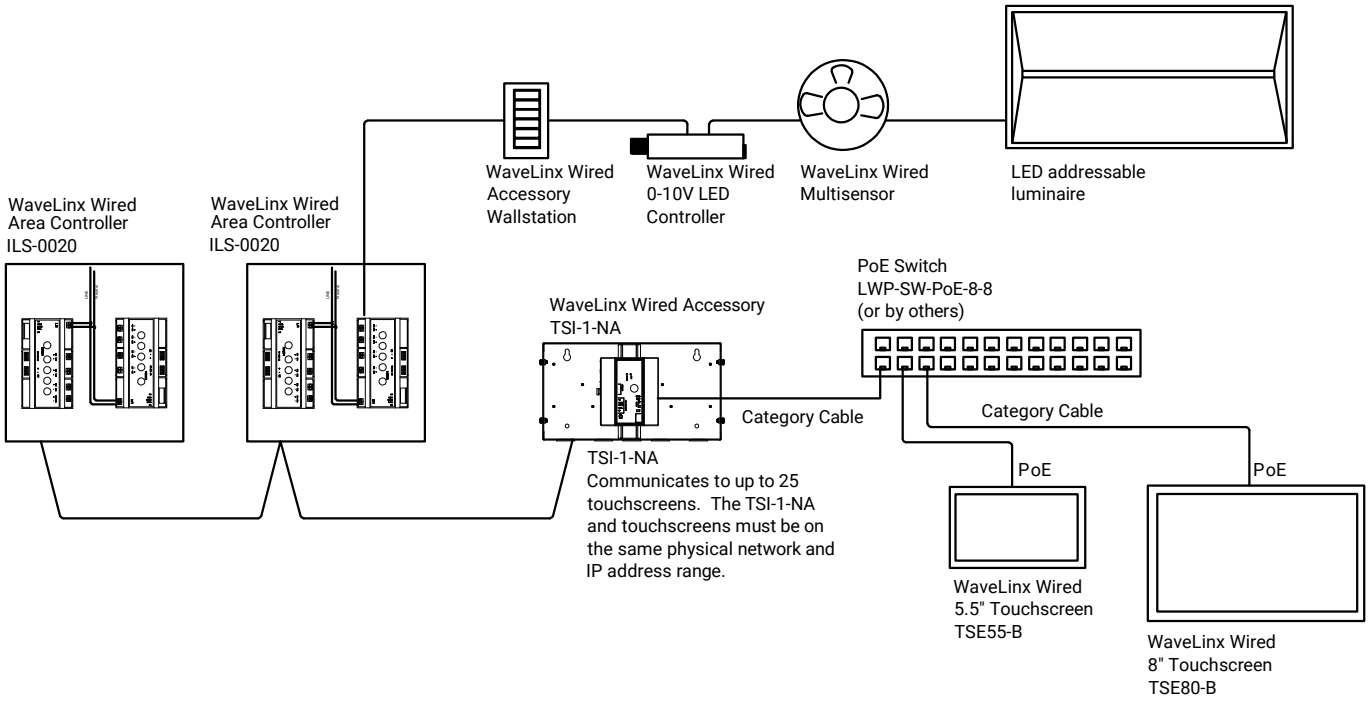
Simple WaveLinx Wired system



Complete WaveLinx Wired system

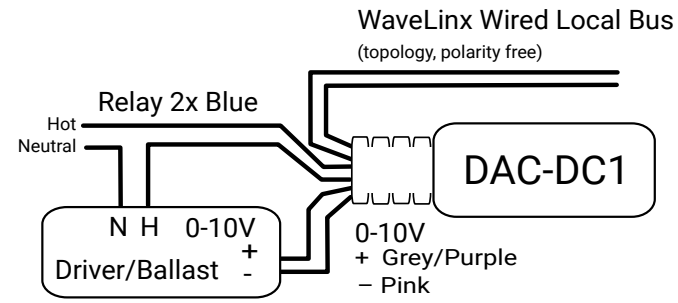


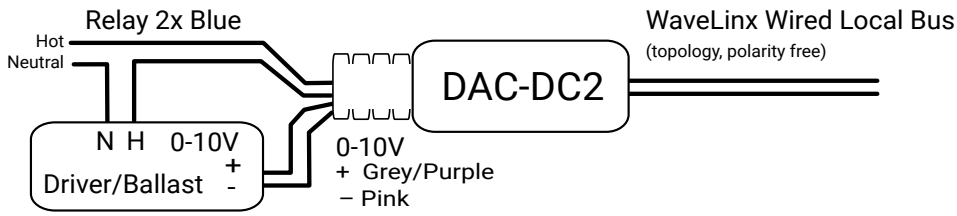
Typical schematic



Wiring Diagram

DAC-DC1 and DAC-DC2





Note: Install in accordance with all applicable National and local electrical and building codes.
Note: Specifications subject to change without notice.
Note: Older models DAC-DC1/DC2 have 0-10V wiring, +Grey/Purple and -Grey.

Sample System Topology:

This diagram shows the main components of the WaveLinx wired and PRO wireless connected lighting system.

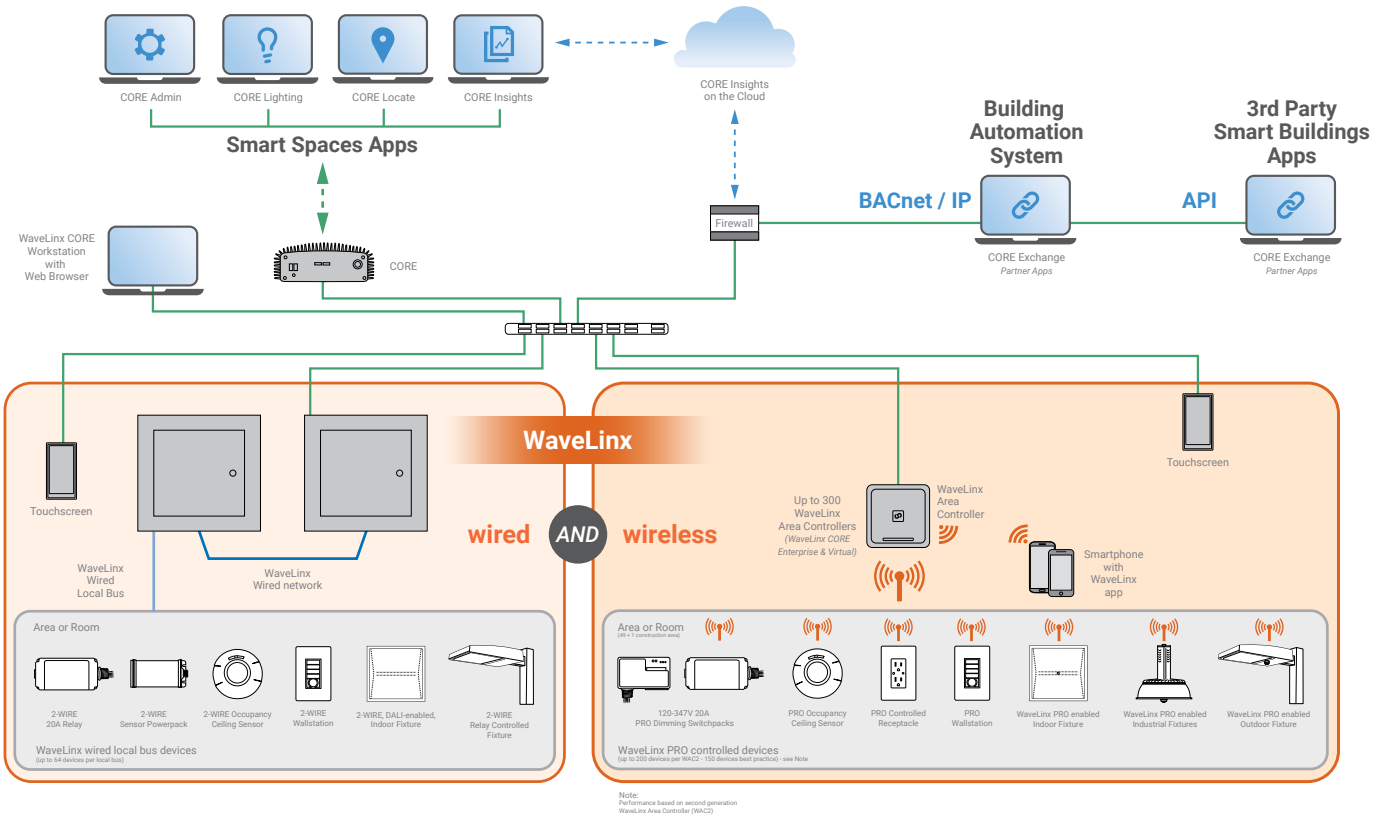
The **WaveLinx PRO wireless system** communicates using wireless mesh technology based on the IEEE 802.15.4 standard. A PoE LAN connection for each WaveLinx Area Controller (WAC) is required for power and data access to the building lighting network.

The **WaveLinx wired system** controls the devices using relay, 0-10V, DMX and the WaveLinx wired digital local bus. The WaveLinx wired system connects to the building LAN using the EG2 module. Each WaveLinx wired area controller communicates on the WaveLinx wired network.

WaveLinx Area Controllers (WAC) and WaveLinx Ethernet Gateways (EG2) communicate with WaveLinx CORE over the Ethernet network.

Please refer to the WaveLinx PRO Wireless Network and IT Guidance Technical Guide and WaveLinx Wired Network and IT Guidance Technical Guide for more information.

View WaveLinx Network and IT Guidance Technical Guide



Control Systems

- WaveLinx
- WaveLinx wired
- VividTune

Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com