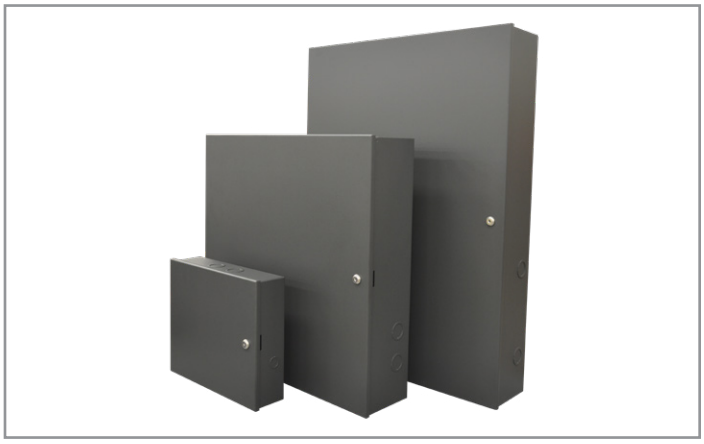
Project		**Catalog #**		**Type**	
Prepared by		**Notes**		**Date**	



WaveLinx Wired

IL Area Controllers

Modular design control panels with digital, 0-10V dimming, relay modules, bridge interface and ethernet gateway.

Typical Applications

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

Interactive Menu

Product Certification

CERTIFIED

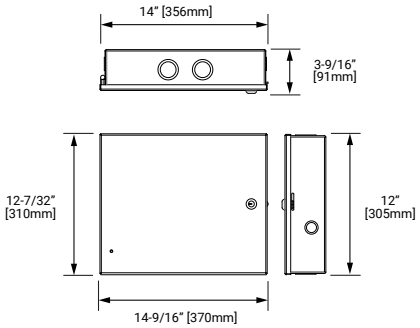
Product Features

WaveLinx Wired Local Bus · WaveLinx Wired 5-Wire Bus · Manual Dimmer · Manually Switched ON/OFF · Occupancy Sensor · Receptacle Control · Lumen Maintenance Control · Task Tuning · Scheduling · Demand Response · Daylighting Control · Outdoor Control

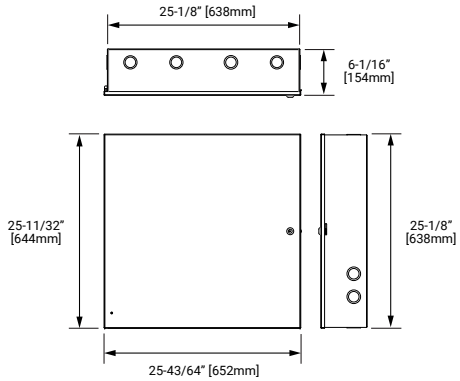
Top Product Features

- Modular design with digital, relay and dimming modules providing the flexibility and scalability needed to support all size and types of applications
- Factory assembled and pre-wired module ready to be installed by the electrical contractor with minimal wiring and eliminating non-value added on-site panel assembly and wire termination work
- LED diagnostics indicators and built-in override buttons to easily test, commission and troubleshoot the system
- Built-in interface modules for DMX, A/V and shades integration
- Mix and match digital control devices with digital, phase and 0-10V dimmable loads

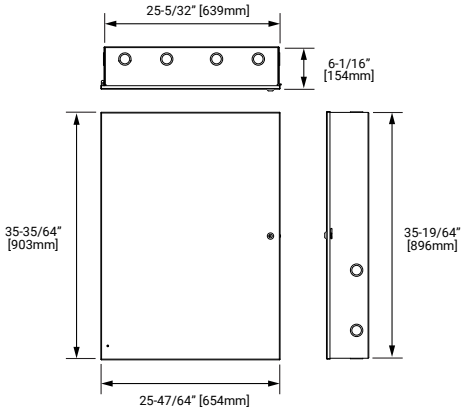
Dimensional Details



Small panel configuration



Medium panel configuration



Large panel configuration

Order Information

Catalog Number

Catalog Number [1]	Panel Size	SCMR1220-NA	SCMH1200-NA	SCMD4-NA	EG2-S-NA
ILS-0001	Small	0	0	0	1
ILS-0002		0	0	0	2
ILS-0010		0	0	1	0
ILS-0011		0	0	1	1
ILS-0020		0	0	2	0
ILS-0200		0	2	0	0
ILS-1000		1	0	0	0
ILS-1001		1	0	0	1
ILS-1010		1	0	1	0
ILS-1100		1	1	0	0
ILS-2000		2	0	0	0
ILM 1111	Medium	1	1	1	1
ILM-0010		0	0	1	0
ILM-0021		0	0	2	1
ILM-0031		0	0	3	1
ILM-0040		0	0	4	0
ILM-0041		0	0	4	1
ILM-1011		1	0	1	1
ILM-1031		1	0	3	1
ILM-1101		1	1	0	1
ILM-1110		1	1	1	0
ILM-1121		1	1	2	1
ILM-2001		2	0	0	1
ILM-2110		2	1	1	0
ILM-2111		2	1	1	1
ILM-2200		2	2	0	0
ILM-2201		2	2	0	1
ILM-2210		2	2	1	0
ILM-2211		2	2	1	1
ILM-3000		3	0	0	0
ILM-3001		3	0	0	1
ILM-3011		3	0	1	1
ILM-3100		3	1	0	0
ILM-4000		4	0	0	0
ILM-4001		4	0	0	1
ILL-0051	Large	0	0	5	1
ILL-0061		0	0	6	1
ILL-2131		2	1	3	1
ILL-2210		2	2	1	0
ILL-2211		2	2	1	1
ILL-2321		2	3	2	1
ILL-3200		3	2	0	0
ILL-3300		3	3	0	0
ILL-3301		3	3	0	1
ILL-3311		3	3	1	1
ILL-4400		4	4	0	0
ILL-4401		4	4	0	1
ILL-4410		4	4	1	0
ILL-4411		4	4	1	1

Notes

All medium and large size panels have Bridge Network (BN2) by default.

IL Area Controllers Product Specifications

Key Features

- **UL listed** - Ensures code compliance with the local electrical code
- **DALI 2 certified SCMD4 module** - Each SCMD4 module offers 4 wired local buses used to manage 64 digital devices
- Supports various ballast/driver types controllable by 0-10V
- Supports up to 48 switched outputs (based on selected configuration)
- Heavy duty 20A (@ 40C) relays used on all relay modules
- Capable of providing versatile solutions that include relays outputs, 0-10V outputs, DMX inputs and WaveLinx wired local bus connections for controls inputs and luminaire level local control
- Capable of mixed load voltages (120/277 VAC 50/60Hz) based on proper spacing and wire insulation.
- Panel systems solutions include both normal and emergency power sources based on proper spacing and wire insulation
- Ethernet connectivity available (based on selected catalog number)
- Capable of meeting all latest energy codes (IECC, Title 24, ASHRAE)

Mechanical

Enclosure: NEMA 1, Surface Mount, lockable, Size: See Dimensions

Enclosure Size:

- Small: 14.56" W X 12.22" H X 3.56" D (369.8mm x 310.4mm x 90.4mm)
- Medium: 25.67" W X 25.34" H X 6.06" D (652mm x 643.6mm x 153.9mm)
- Large: 25.73" W X 35.54" H X 6.07" D (653.5mm x 902.7mm x 154.2mm)

Weight:

- Small: 10lbs (4.5 kg)
- Medium: 33lbs (15 kg)
- Large: 59lbs (26.7 kg)

Environment:

- **Operating temperature:** 35°F to 122°F (+2° C to +50° C)
- **Max Storage temperature:** 140°F (+60° C)
- **Relative humidity operating:** +5 to 95% non-condensing
- For indoor use only

Electrical

Supply: 120-277VAC ± 10% 50/60Hz, 5A Max

Maximum Load:

- **Switching Load:** 20A max. per relay, 192A max. total (SCMR1220 Module)
- **0-10V Load:** 50mA per channel (SCMH1200 Module)
- **Local buses:** 250mA per loop/bus (SCMD4 Module)

Protection Internal: 5A Circuit Breaker for incoming power

WaveLinx Wired Network: Use Belden 1502 or 1502P, WaveLinx wired accessory LCCP or LCCNP or equal

Local Bus Wiring: 18-14AWG (depending on distance)

0-10V Wiring: 18-14AWG (depending on distance)

Standards/Ratings

- cULus Listed - Energy Management Equipment (UL916)
- Meets ASHRAE Standard 90.1 requirements
- Meets IECC 2015 requirements
- Meets CEC Title 24 requirements

Environmental Regulations:

- NEMA 1 Type 1

Warranty

Five year warranty standard

Overview

Cooper Lighting Solutions WaveLinx wired area controllers are one single lighting control solution for all traditional wired control application needs. Designed to be the most scalable, simple, modular and feature rich, these DIN Rail based lighting area controllers are capable of handling energy management, code compliance, architectural lighting and individual addressable lighting applications, all from a single system.

The Cooper Lighting Solutions WaveLinx wired IL area controllers are sold as a portfolio of feature rich lighting control panels that come in 20 different base configurations across three different enclosure sizes- small, medium and large. All configurations in medium and large size enclosures have the Ethernet Gateway (EG2-S-NA) available as an option. Each configuration and option combination has a unique catalog number (within the IL Series) for ease of ordering and identification.

Depending upon the size of the job and the limitations of the electrical closet and/or equipment room spaces, the area controllers can be mixed and matched and networked together. Each area controller configuration is fully networkable via Cooper Lighting Solutions WaveLinx wired network and commissioned via the Device Editor software package.

The WaveLinx wired area controller series solution comes compatible with a full complement of Cooper Lighting Solutions existing portfolio of sensors and accessories. These can be configured with any of the IL Series area controller configurations to create a powerful lighting control solution that can perform a variety of functions such as:

- Occupancy/Vacancy sensing
- Scheduling
- Daylight Harvesting
- Shade Control
- A/V Integration
- Standard/Custom partitioning
- DMX control
- BMS integration and more. Please refer to the design guide and product brochure for more details

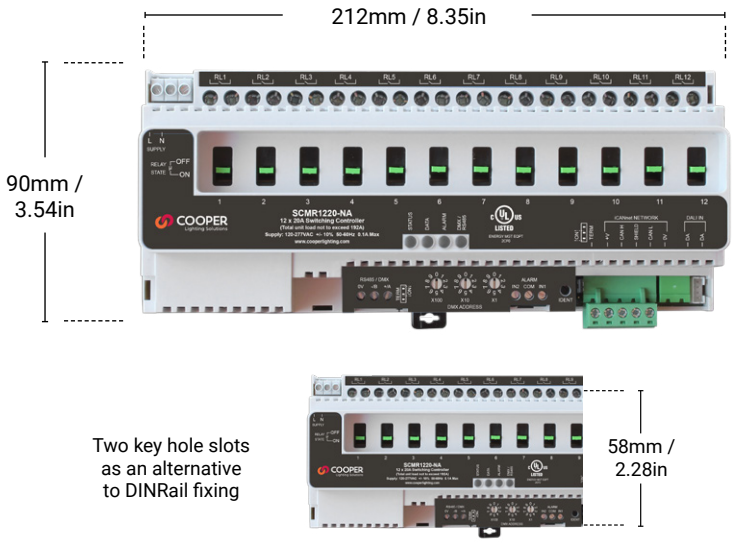
SCMR1220-NA

12 Channel 20 AMP Feed through Relay control module

Top Product Features

- 12 x 20A Mechanically held feed through relays
- Supports multiple phases
- Switches resistive, inductive and capacitive lighting loads
- Build in relay sequence delay to avoid large inrush
- Manual override per relay
- Alarm and Emergency input
- Mounts to standard Top Hat (TS35) DINRail
- Intelligent 'Built in' propagation delay for switching sequence 1-12
- RS485 / DMX512 input with DMX base address rotary switches
- 2 x Auxiliary Inputs

Dimensions



Overview

The SCMR1220-NA relay control module is a 12 channel 20A feed through relay unit that provides outstanding features and performance in a truly competitive and compact package. Each channel is rated for up to 20A and is designed to switch heavy loads of all types.

With a digital network, DMX and DALI connectivity, it has the capability of being linked with a virtually limitless number of other WaveLinx wired products to build up to any size of system. This product is designed for projects where high power switching is required including LED's, fluorescents as well as non-lighting loads of any voltage up to 277VAC.

SCMR1220-NA Product Specifications

Mechanical

Weight: 0.8kg, 1.7637lbs

Operating temperature: +2°C to +50°C

Note: All enclosures must be adequately ventilated

Max storage temperature: +60°C

Humidity: +5 to 95% non-condensing

Environmental protection: IP20

Electrical

Control: Via digital network connection, DMX or DALI

Supply: 120-277VAC -/+ 10% 50/60HZ, 0.1A MAX

Integral iCANnetTM Network Power Supply: 15V 500mA

Output channel current: Maximum 20A at 40°C

(Total unit load not to exceed 192A)

Note: Fully loaded channels should be spaced every other channel to prevent heat buildup

Relay outputs: Capable of switching capacitive inductive or resistive loads

Loads - maximum cable size: 12AWG per circuit

Protection: Provided by installer - use supply MCB, 6A or less

Standards/Ratings

- cULus Listed - Energy Management Equipment (UL916)
- Manufactured in an ISO 9001 certified factory
- Meets ASHRAE Standard 90.1 requirements
- Meets IECC 2015 requirements
- Meets CEC Title 24 requirements

Environmental Regulations:

- RoHS Directive 2011/65/EU

Warranty

Five year warranty standard

SCMH1200-NA

12 Channel 0-10V Dimming Control Module

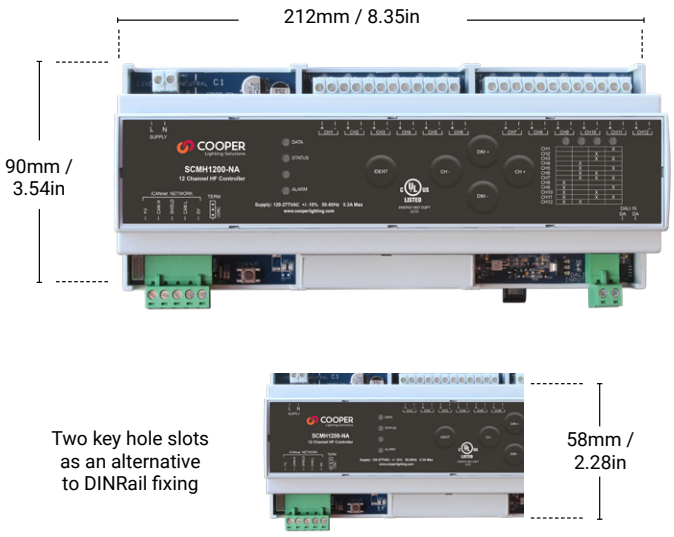
Top Product Features

- Twelve channel device
- 1-10V, 0-10V
- 128 scene memory
- Connects to WaveLinx digital network
- Fail to full bright safety feature

Overview

The SCMH1200-NA is a DINRail mount 12 channel 0-10V control module. Each channel may be configured to provide 1-10V or 0-10V control for analog devices. With WaveLinx wired network connectivity, it has the capability of being linked with a virtually limitless number of other WaveLinx wired products to build any size of system.

Dimensions



SCMH1200-NA Product Specifications

Mechanical

Weight: 0.35kg/0.77lbs

Operating temperature: +2°C to +50°C

Note: All enclosures must be adequately ventilated

Max storage temperature: +60°C

Humidity: +5 to 95% non-condensing

Environmental protection: IP20

Electrical

Control: Via digital network connection or DALI

Supply: 120-277VAC -/+ 10% 50/60 Hz, 0.3AMAX

Load Types:

- 80 per channel do not exceed 500 drivers or ballasts in total
- 0-10V control, 50mA source current
- 1-10V control, 50mA sink current

Terminal Sizes:

- Incoming supply, max cable size: 16 AWG
- 0-10V output, max cable size: 16 AWG per terminal
- Digital network cable type: Belden 1502 or equivalent

Standards/Ratings

- cULus Listed - Energy Management Equipment (UL916)
- Manufactured in an ISO 9001 certified factory
- Meets ASHRAE Standard 90.1 requirements
- Meets IECC 2015 requirements
- Meets CEC Title 24 requirements

Environmental Regulations:

- RoHS Directive 2011/65/EU

Warranty

Five year warranty standard

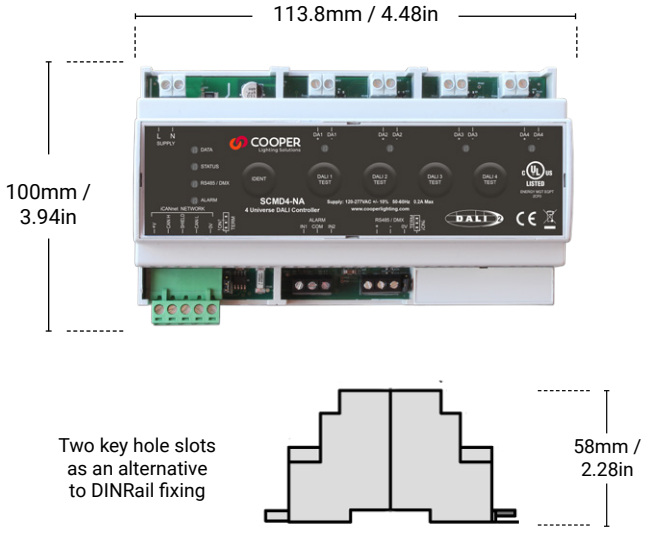
SCMD4-NA

Local Bus Control Module

Top Product Features

- Provides four WaveLinx wired local busses to address and control 256 devices (sensors, fixtures, relays, wallstations)
- Mounts to standard Top Hat (TS 35) DINrail
- 2 dry contact inputs
- DMX control
- RS485 control
- Connects to the WaveLinx wired digital network
- 4 internal dedicated WaveLinx wired local bus power supplies
- Each bus has a dedicated test/overide button allowing the installer to test or overide the instalation prior to commisioning

Dimensions



Overview

The SCMD4-NA provides four WaveLinx wired local busses enabling diming and switching of up to 256 individually addressable devices including luminaires and other WaveLinx wired devices. WaveLinx wired multi-sensors, wallstations and DAC's can be added to each bus creating a complete solution. Each bus supports up to 64 addresses.

The SCMD4-NA also features direct input capabilities from a DMX system or from the WaveLinx wired digital network.

The SCMD4-NA includes dry contact inputs that can be used for emergency override or fire alarm inputs.

SCMD4-NA Product Specifications

Mechanical

Weight: 0.35kg/0.77lbs

Operating temperature: +2°C to +50°C

Note: All enclosures must be adequately ventilated

Max storage temperature: +60°C

Humidity: +5 to 95% non-condensing

Environmental protection: IP20

Electrical

Supply: 120-277VAC -/+ 10% 50/60 Hz, 0.2AMAX

Switch inputs: 2, configurable as break or make, max wire size 12/14AWG

WaveLinx wired Network inputs/output: Screw terminals

WaveLinx wired Local Bus: Max wire size 16AWG

WaveLinx wired Local Bus Power: Nominal 16V, max current 250mA supplies to each bus

DMX signal: Addressable in software, DMX512

Maximum load: 0.2A @ 50°C

Terminals max wire size: 12/14AWG

Standards/Ratings

- cULus Listed - Energy Management Equipment (UL916)
- Manufactured in an ISO 9001 certified factory
- Meets ASHRAE Standard 90.1 requirements
- Meets IECC 2015 requirements
- Meets CEC Title 24 requirements

Environmental Regulations:

- RoHS Directive 2011/65/EU

Warranty

Five year warranty standard

EG2-S-NA

Ethernet Gateway

Top Product Features

- Connects WaveLinx Wired iCANnet™ network to 10/100 Mbps Ethernet LAN
- Configurable IP address
- Scheduled events with time clock supporting multiple time zones, regional daylight savings and NTP if required.
- iCAN network bridging over IP
- Supports iCANSoft suite of applications and WaveLinx CORE
- Power from PSU or iCANnet™ Network
- Status LEDs

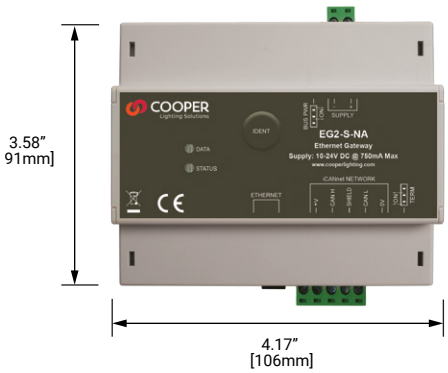
Overview

The EG2-S-NA provides Ethernet connectivity to the iCAN network for integration into our software services as well as providing API integration for third-party systems.

The EG2-S-NA incorporates an intelligent bridge function which allows multiple systems to be joined over a secure Ethernet network opening up the capabilities of the iCAN system to cover multi-campus installations across the globe giving building and business owners connectivity to there systems from anywhere in the world.

Dimensions

front



side

EG2-S-NA Product Specifications

Mechanical

Size: 4.17" x 3.58" x 2.44" (106mm x 91mm x 62mm)
Weight: 0.49 lbs (0.22 kg)
Environment:

- **Operating temperature:** 35°F to 122°F (+2°C to +50°C)
- **Max storage temperature:** 0°F to 0°F (+60°C)
- **Ambient temperature:** 0°F to 0°F (+2°C to +50°C)
- **Relative humidity:** 5% - 95% max, non-condensing

IP rating: IP20

Electrical

Control: Via iLight network connection
Supply: +10 - 24V DC @ 750 mA Max via external power supply or from iCANnet™
Terminal Size: iCANnet™ cable size: 5 x 1mm^2 Power cable size: 2 x 1mm^2
Protection: Fully transformer isolated ethernet

Software Specifications

Programming: For programming EG2-S, Device Editor software is required

Standards/Ratings

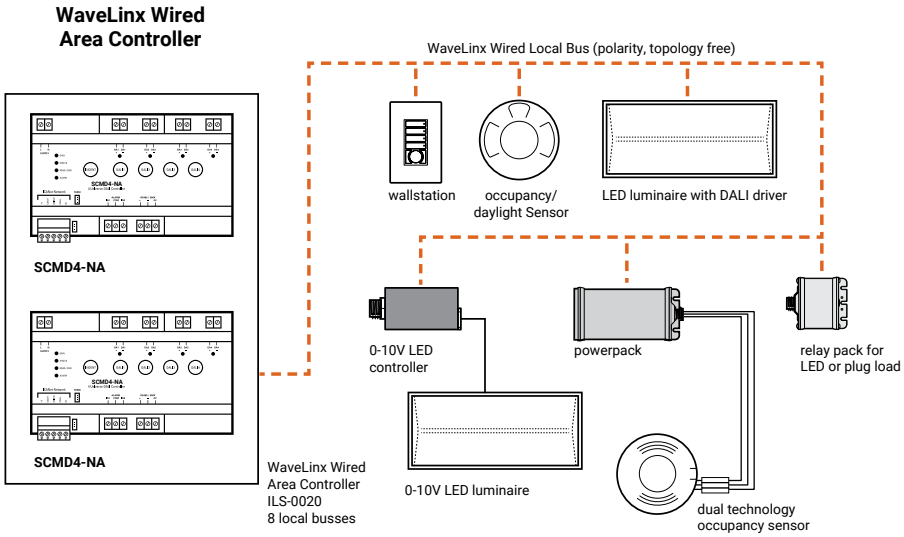
- cULus Listed - Energy Management Equipment (UL916)
- Manufactured in an ISO 9001 certified factory
- Meets ASHRAE Standard 90.1 requirements
- Meets IECC 2015 requirements
- Meets CEC Title 24 requirements
- Designed and manufactured to ISO9001 standards

Warranty

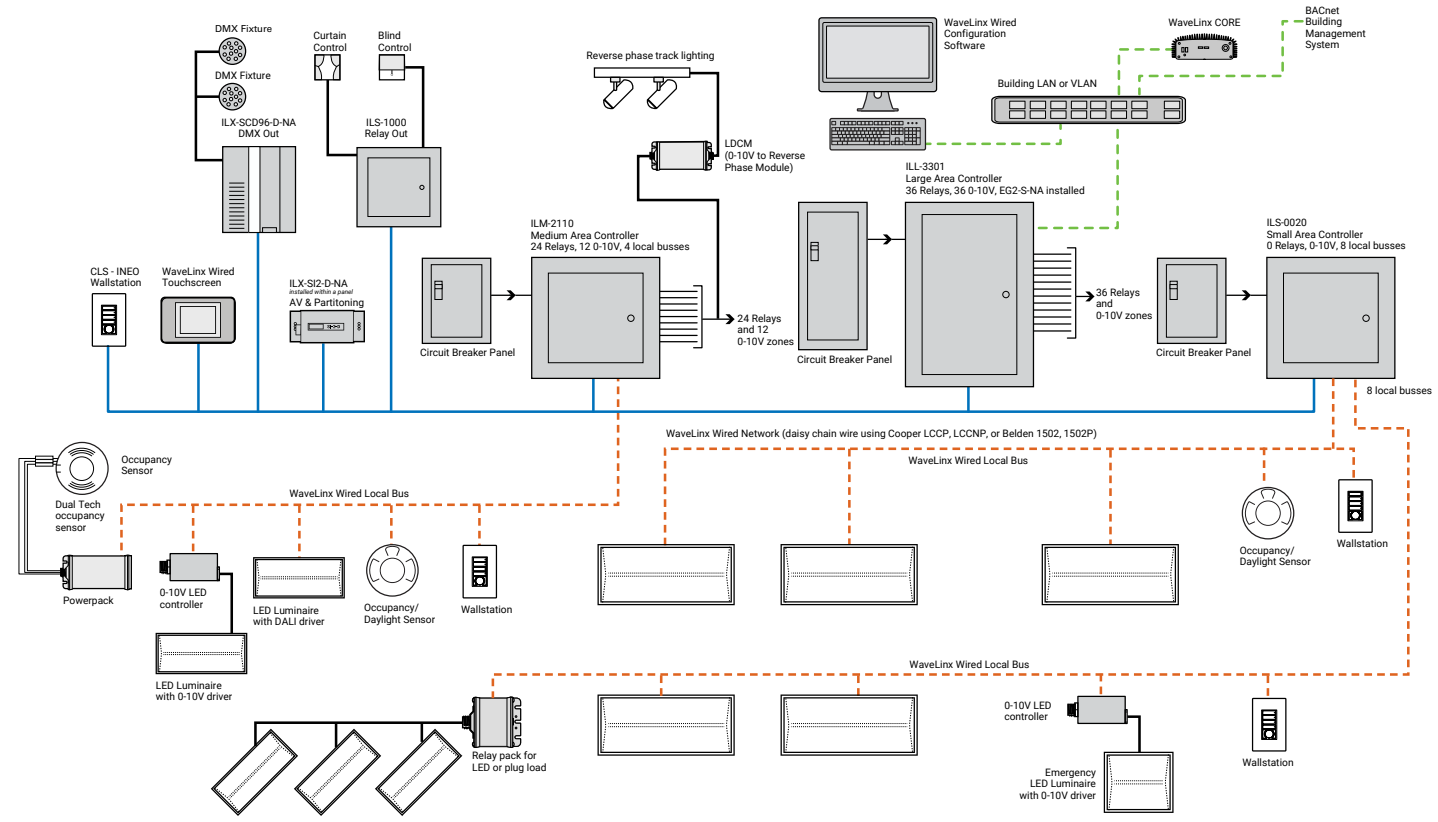
Five year warranty standard

System architecture

Simple WaveLinx wired system



Complete WaveLinx wired system



Sample System Topology:

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

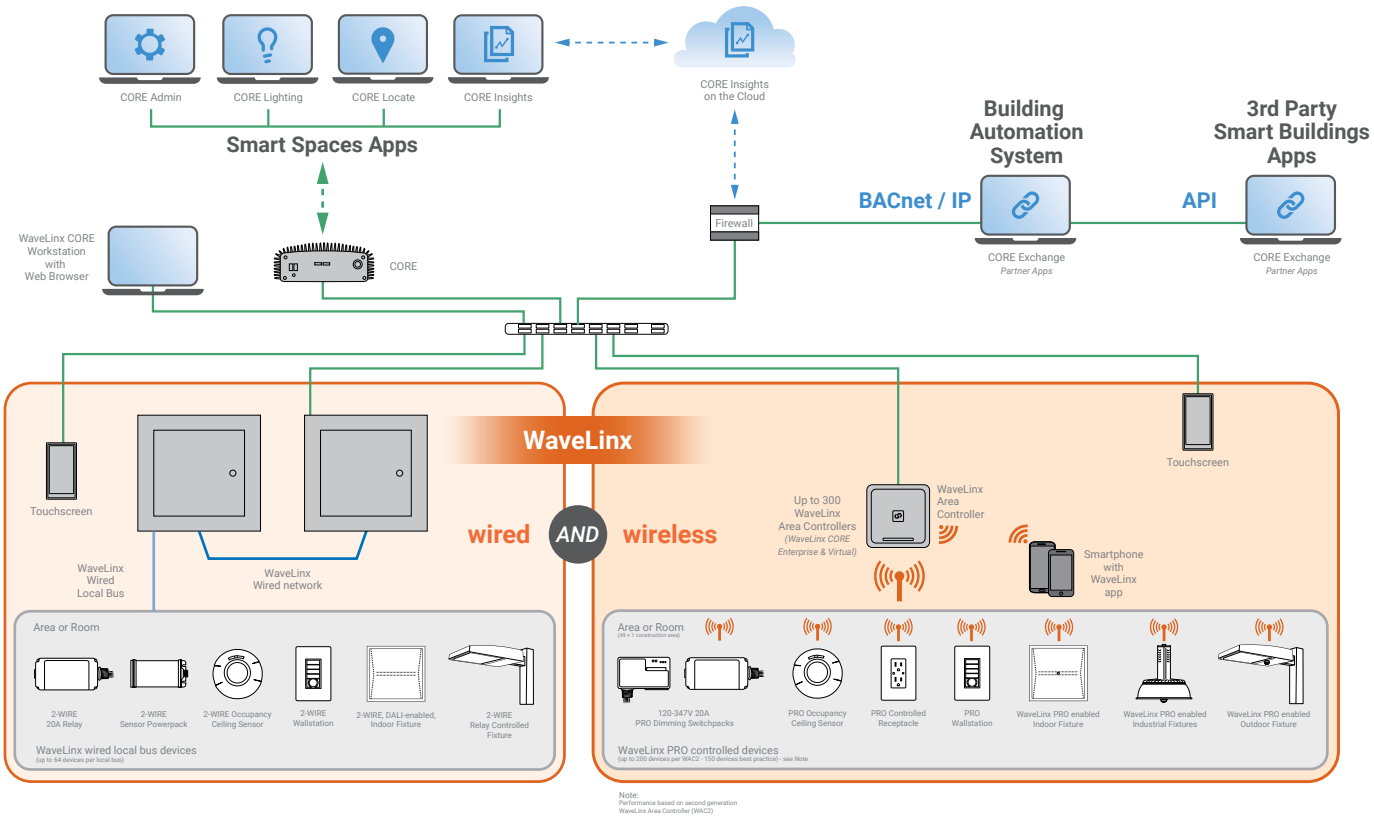
The **WaveLinx PRO wireless system** communicates using wireless mesh technology based on the IEEE 802.15.4 standard. A PoE LAN connection for each WaveLinx Area Controller (WAC) is required for power and data access to the building lighting network.

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