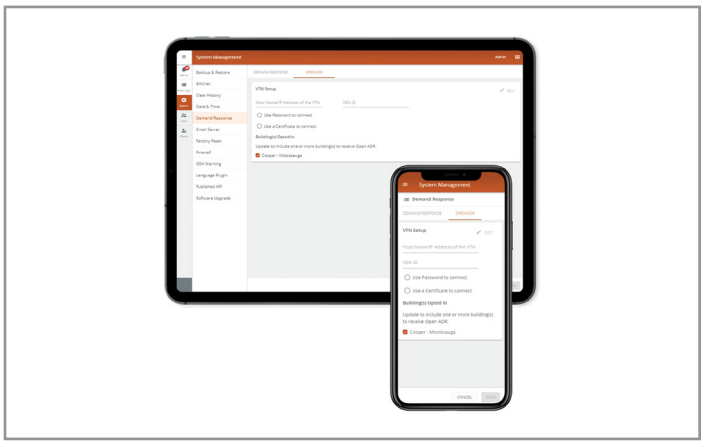
Project		Catalog #		Type	
Prepared by		Notes		Date	



WaveLinx

CORE - OpenADR

Allows WaveLinx users to selectively shed load in response to demand response programs

Typical Applications
Office • Education • Healthcare • Industrial

Interactive Menu

Product Features

Web Based
CORE Admin
CORE Lighting
CORE Exchange

Compatibility

WaveLinx CORE
WaveLinx PRO

Overview

The CORE OpenADR interface allows WaveLinx users to take advantage of the incentives offered by utility companies by participating to on-going Demand Response (DR) programs.

Open Automated Demand Response (OpenADR) is an open and interoperable information exchange model and emerging Smart Grid standard. OpenADR standardizes the message format used for Auto-DR so that dynamic price and reliability signals can be delivered in a uniform and interoperable fashion among utilities, ISOs, and energy management and control systems. For more information about OpenADR, please refer to https://www.openadr.org/.

Once registered and connected to a utility company's OpenADR Demand Response Automation Server (DRAS), the CORE OpenADR is able to automatically retrieve live power demand information from the utility company and automatically activate load shed profiles according to pre-configured user settings.

The CORE OpenADR ensures that WaveLinx PRO users in California are in compliance with Title 24 code which requires that lighting system to be capable of receiving and automatically responding to at least one standards-based messaging protocol such as OpenADR. Buildings larger than 10,000 square feet will have to automatically reduce their lighting power by at least 15 percent below the building's maximum lighting power.

Product Features & Benefits

- **No additional embedded device/hardware –** The CORE OpenADR interface is hosted on the WaveLinx CORE platform (Pro, Enterprise and Virtual) hence eliminating the need for installing any additional hardware to be code compliant.
- **OpenADR 2.0b Compliant –** Allows users to meet today's and future requirements. OpenADR 2.0b has been designed for high performing embedded devices such as the WaveLinx CORE platforms capable of supporting most Demand Response services and markets. The OpenADR 2.0b profile includes a flexible reporting (feedback) mechanism for past, current and future data reports.
- **Listed on the OpenADR certified product database –** The CORE OpenADR complies with the latest version of the OpenADR standard, i.e. 2.0b and is listed in the OpenADR Product Database (ref specifications).

Order Information

Catalog Number

Catalog Number	Description
TRX-OPNADR	CORE OpenADR license for WaveLinx CORE (Pro/Enterprise/Virtual) - unlimited nodes per site

Note
1. CORE OpenADR works with the WaveLinx PRO Wireless system only. Future releases of CORE OpenADR will include control over the WaveLinx Wired system.

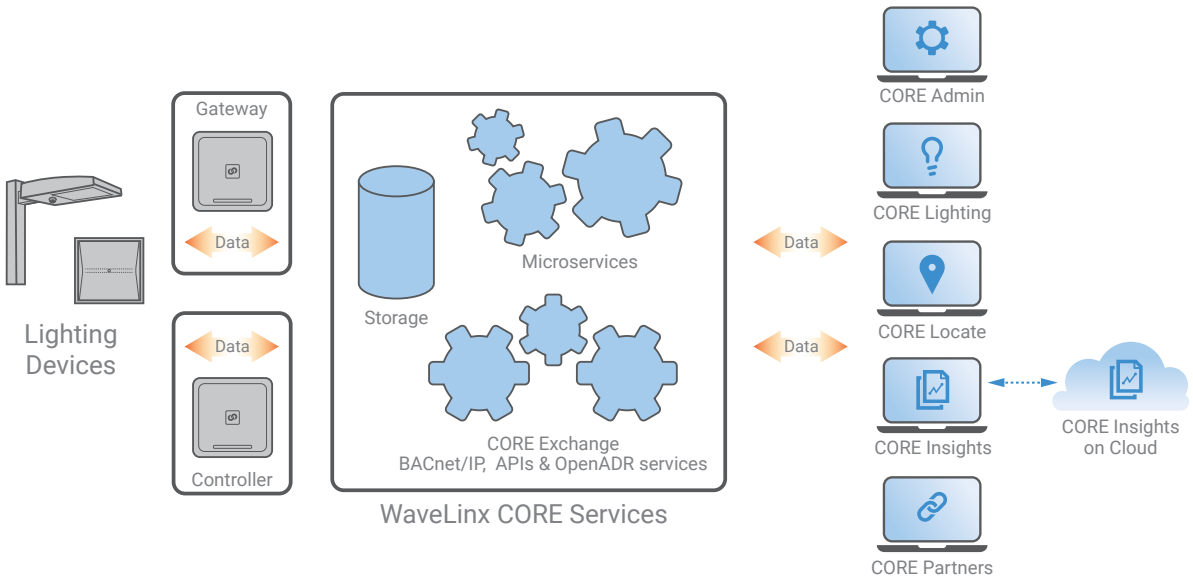
Product Specifications

Network Requirements

- The IP network shall allow HTTP data exchange between the WaveLinx CORE and the DRAS server. Please refer to the WaveLinx PRO Installation and Planning guide for more information with regards to the IT network requirements.

Certification

- For its OpenADR Interface, Cooper Lighting Solutions teamed up with IPKeys Technologies™, an expert in Smart Grid communications technology and provider of an OpenADR 2.0 compliant communication VEN client. As such the certification will be found in the OpenADR product database under IPKeys Technologies EISS 2.0.



Sample System Topology:

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

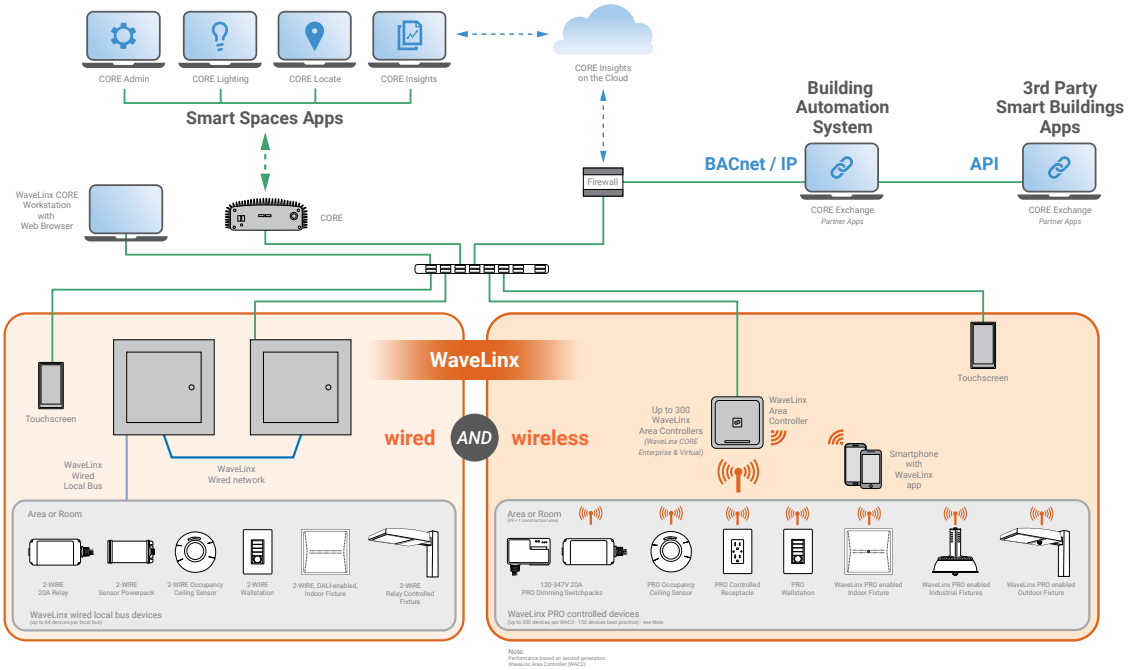
The **WaveLinx PRO wireless system** communicates using wireless mesh technology based on the IEEE 802.15.4 standard. A PoE LAN connection for each WaveLinx Area Controller (WAC) is required for power and data access to the building lighting network.

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 PRO Network and IT Guidance Technical Guide



		WaveLinx wired	WaveLinx PRO/CAT/Panel
WaveLinx CORE	Connects to WaveLinx CORE (Pro, Enterprise, Virtual)	●	●
	# of WAC or EG2-S-NA / # of devices per WaveLinx CORE Pro	2 / 3000	20 / 3000
	# of WAC or EG2-S-NA / # of devices per WaveLinx CORE Enterprise	10 / 32,500*	300 / 32,500*
	# of WAC or EG2-S-NA / # of devices per WaveLinx CORE Virtual Enterprise	10 / 32,500*	300 / 32,500*
	Connecting device	EG2-S-NA	WAC2-POE
CORE Lighting	Alarms	○	●
	Events	●	●
	Operate (floorplan control)	●	●
	Operate - area control	●	●
	Operate - zone control	●	●
	Operate - device control		●
	Scheduling	○	●
	Energy Dashboard		●
	Occupancy Dashboard		●
CORE Exchange	BACnet/IP	○	10,000 objects with WaveLinx CORE Pro up to 30,000 with Enterprise/Virtual
	Public (REST) API	○	●
	OpenADR		●
	Demand Response		●
CORE Admin	Manage Users	●	●
	Manage roles	●	●
	Manage clients	●	●
	Manage licenses	●	●
	System settings (backup/restore, network etc)	●	●
CORE Insights	Occupancy Trends and Comparison		●
	Average Occupancy		●
	Occupancy on Floor Plan		●
	Generate and Export Reports to pdf		●
	Hierarchical Navigation		●
	Quick Search		●
	Department Filter		●
	Historical View		●
	Popular Spaces		●

* For larger number of gateways and devices, please contact Cooper Lighting Solutions Sales representatives. Recommend designing the system at 70-80% of maximum capacity. Specifications based on WAC2-POE. The number of gateways and devices mentioned above are the total for a single system or the combination (Wired + Wireless) that can be used with a server.

● = All features ○ = Subset of features

Control Systems

- WaveLinx
- Greengate