

Project		Catalog #		Type	
Prepared by		Notes		Date	



WaveLinx

WaveLinx Outdoor Area Controller (WAC-MV-OD)

IP66 rated, outdoor lighting controller manages communication between WaveLinx PRO enabled luminaires

Typical Applications

Outdoor parking structures • Industrial • Manufacturing • Sports complex

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Complies with the following electromagnetic requirements:

- FCC part 15 sub part A
- EN/IEC 61000-4-2
- EN/IEC 61000-4-3
- EN/IEC 61000-4-4
- EN/IEC 61000-4-5
- IEC 62368-1 (Impulse test)
- UL/IEC 62368-1

Product Features



Compatibility



Overview

The WaveLinx Outdoor Area Controller (WAC-MV-OD) is the main component of the WaveLinx connected lighting system. WaveLinx eliminates the cost and complexity of typical wireless control system commissioning while providing a flexible and reconfigurable topology for on the fly space adjustments. The WaveLinx connected lighting system meets modern code and utility requirements, delivers energy and cost savings, while enabling buildings to become smart buildings.

The Outdoor Area Controller coordinates between the WaveLinx smart and connected Mobile App and various WaveLinx PRO devices to create communications and a building ecosystem that provides out-of-the-box functionality and leverages Cooper Lighting Solutions patent pending automatic code commissioning features. Using standard-based wireless mesh compliant topology the Outdoor Area Controller communicates to various WaveLinx PRO standard-based devices to provide area, lighting zone configuration, monitoring, and control.

The Outdoor Area Controller provides centralized coordination of multiple areas for partial ON/partial OFF scheduling, demand response (WaveLinx CORE application required), lighting, occupancy and daylight settings and scene control. A single Outdoor Area Controller can be connected to the building Local Area Network (LAN) to coordinate 49 user-defined and one construction area, or multiple WAC's can exist on a building LAN to scale the system to hundreds of areas all accessible for setup, configuration and control through the WaveLinx Mobile App.

Product Features & Benefits

- WaveLinx Outdoor Area Controller is suitable for parking garages and parking lot applications.
- The enclosure is IP66 rated. UV-resistant paint provides excellent weather resistance. It is made of die-cast aluminum for improved RF noise protection.
- The controller supports up to 200 devices (150 best practice) for up to 50 areas (49 user-defined + 1 construction area).
- Built-in Wi-Fi provides secure WPA2 connectivity with the WaveLinx Mobile Application (available for both iOS and Android operating systems)
- Independently IEC 62443-2 Cybersecurity certified and DLC QPL Listed

Order Information

All WaveLinx connected lighting system accessories require at least one indoor or outdoor WaveLinx Area Controller (WAC) for communications.

Catalog Number

Catalog Number	Description
WAC-MV-OD	WaveLinx Outdoor Area Controller
	Note For power and/or data connections, must use provided IP66-rated mating connectors for power and data (included). Outdoor rated cabling (provided by others.)

Optional Outdoor Accessories

Catalog Number

Catalog Number

Catalog Number	Description
ACC-P-CBL-POE-25	25ft (7.62m) - PoE cable assembly, for data/LAN network connectivity and/or PoE. Includes circular IP66-rated RJ45 connector to a standard RJ45
ACC-P-XANT-25	Remotely mounted antenna with 25ft (7.62m) extension cable (only for "Lighting 2.4GHz" antenna)

Product Specifications

Mechanical

Size: 17.60" x 8.56" x 5.83" (447mm x 217mm x 148mm)

Weight:

- **Device only:** 11.46 lbs. (5.2 kg.)
- **Device with antennas :** 11.9 lbs. (5.4 kg.)
- **Device with wall mount bracket:** 13.89 lbs. (6.3 kg.)
- **Device with pole mount bracket:** 14.22 lbs. (6.45 kg.)

Environment:

- **Operating temperature:** -4°F to 131°F (-20°C to 55°C)
- **Storage temperature:** -22° F to 185° F (-30°C to 85°C)
- **Relative humidity operating:** 5% to 95% RH (non-condensing)
- For outdoor use

Mounting: Suitable for exterior pole or wall mounted applications (hardware included)

Connections: IP66 rated connections for power and communications (mating connectors provided). M12 interface dust-capped, for future applications.

Color: Off-White

Electrical Connection

Input Connections:

- Circular RJ45 connector for Ethernet & PoE, 10/100/1000 BaseTx Cat. 5/6e
- Circular Liquid tight cord-grip for 10ft AC power cord with Watertite NEMA 5-15 plug
- Circular M12 connector for RS485 interface (not used)
- 2x Panel mount IP66 rated N-type connectors for Wi-Fi and IEEE 802.15.4 antennae

Input Power:

- AC: 120VAC, 30W (max)
- PoE: IEEE 802.3af/at, 30W (max), 100m (300ft) maximum cable length

Hardware Specifications

Status Indicators:

- RGB LED indication
 - LED1: Power indication - Green
 - LED2: Wi-Fi connectivity - Red
- Connected to CORE - Green
- IEEE 802.15.4 connectivity - Blue

Software Specifications

Programming:

- Settings and Configuration stored in non-volatile flash memory
- Up to 200 total WCL devices (for best performance, connect up to 150 devices)
- 49 user defined areas + 1 construction area
- Up to 16 scenes per area
- Up to 16 zones per area - up to 200 total zones per WAC2
- Up to 6 occupancy sets per area
- Individual luminaire daylight sets (when using integrated sensors)

Wireless Specifications

Radio: 2.4GHz

Standard: IEEE 802.15.4 (802.11 wifi used for mobile app connection)

Transmitter Power:

- IEEE 802.15.4:
 - a) Enclosure mount- Max: 15.15dBm
 - b) Remote mount- Max: 15.9dBm
- WiFi: Max: 13.84dBm

Range: 150ft (50m) LOS (best practice)

Note – consult outdoor sensor spec sheets for guidance when connecting to devices located outdoors

System Performance

Maximum number of Devices: 200 per Wireless Area Controller (best practice 150 devices)

Standards/Ratings*

- UL/IEC 62368-1 (IT equipment)
- IEC 62443-4-2 Cyber security Certification
- FCC Part 15/ICES-003
- UL Listed
- Complies with the following electromagnetic requirements:
 - FCC part 15 sub part A
 - EN/IEC 61000-4-2
 - EN/IEC 61000-4-3
 - EN/IEC 61000-4-4
 - EN/IEC 61000-4-5
 - IEC 62368-1 (Impulse test)
 - UL/IEC 62368-1
- IP66-Rated Outdoor Enclosure
- DLC listed

Warranty

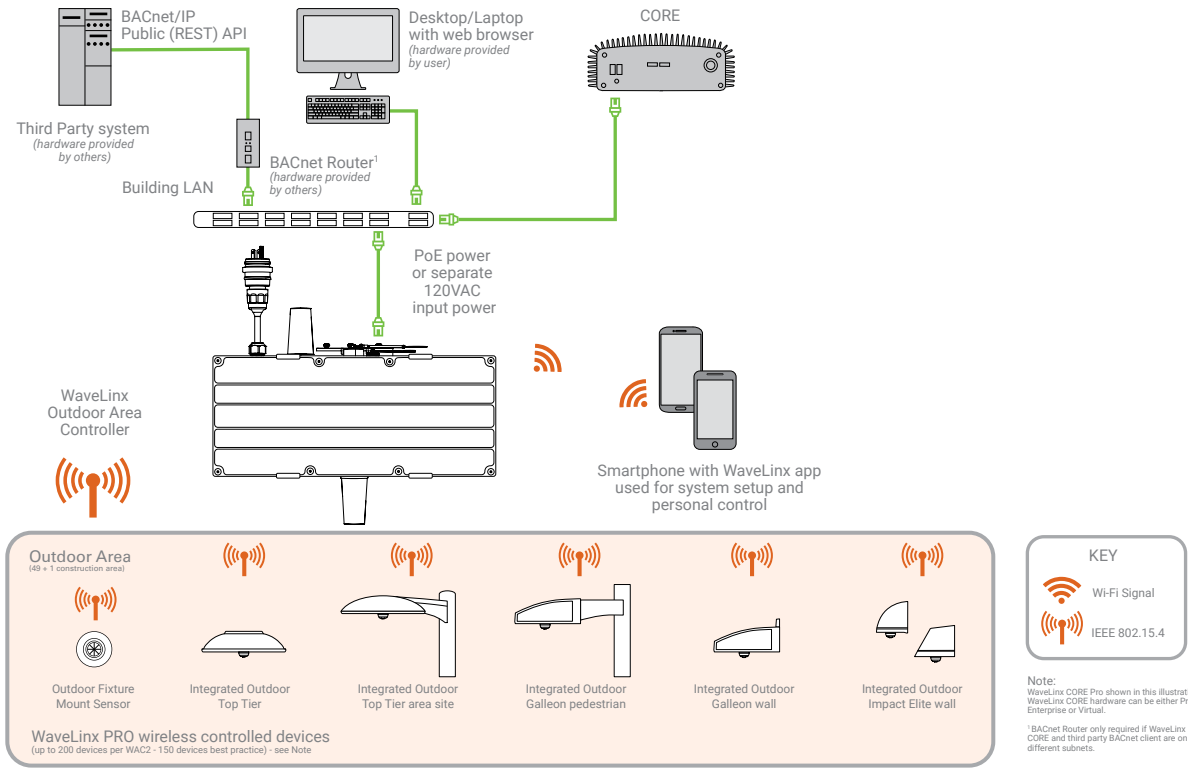
Five year limited warranty



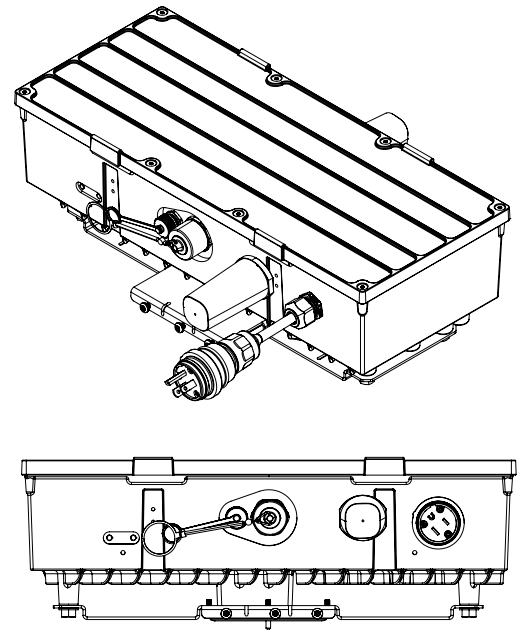
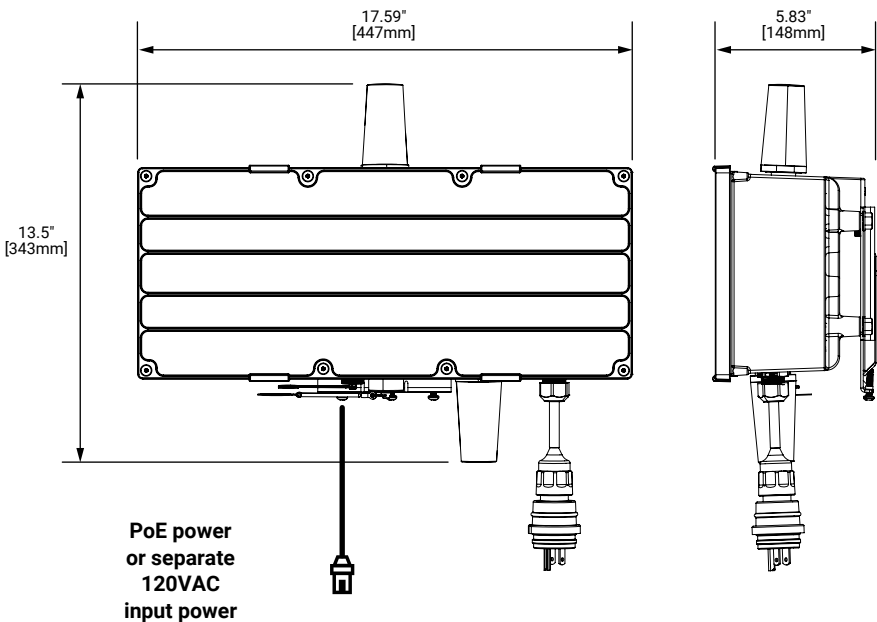
Download the WaveLinx Mobile App from either the Google Play or Apple Store®

System Architecture

This diagram shows the main components of the WaveLinx connected lighting system. The WCL system communicates using wireless mesh technology based on the 802.15.4 standard. 120VAC Line voltage power may be used for each WaveLinx Outdoor Area Controller, however, PoE may alternatively be used for power and data access to the building IT network. System setup is achieved through a simple mobile application via wireless communication to the system.



Dimensional Details

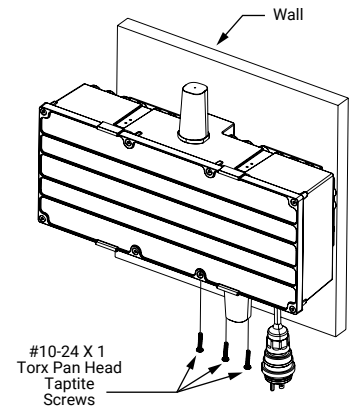
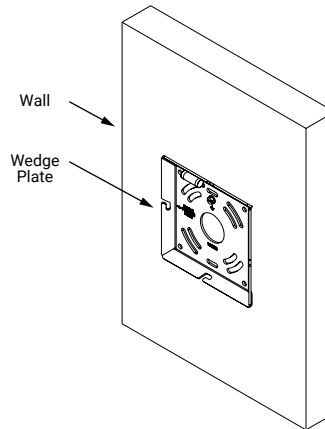
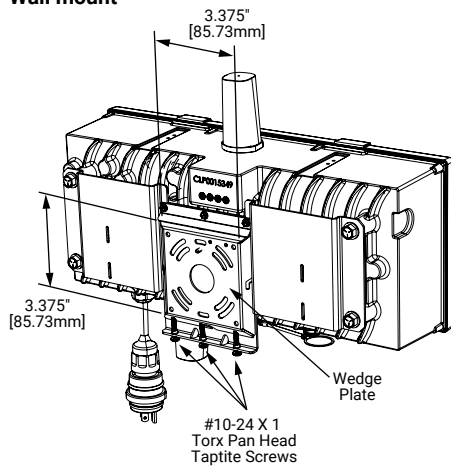


Product internals are inaccessible for maintenance. Warranty is void if the cover is removed.

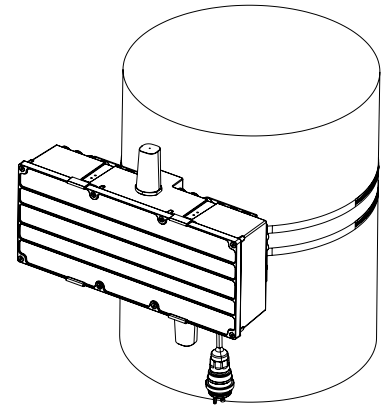
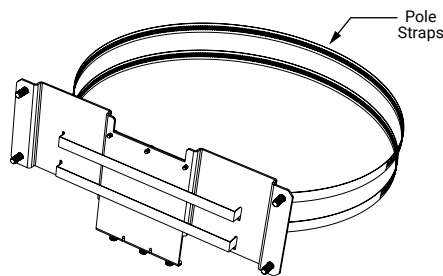
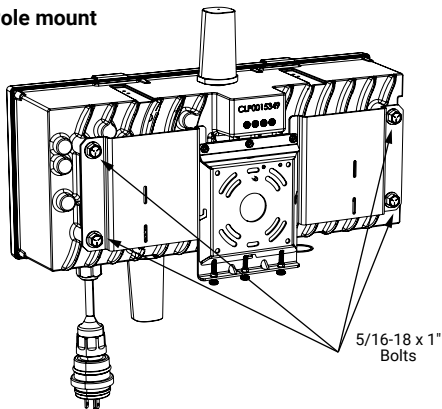
External images only.

Mounting Details

Wall mount

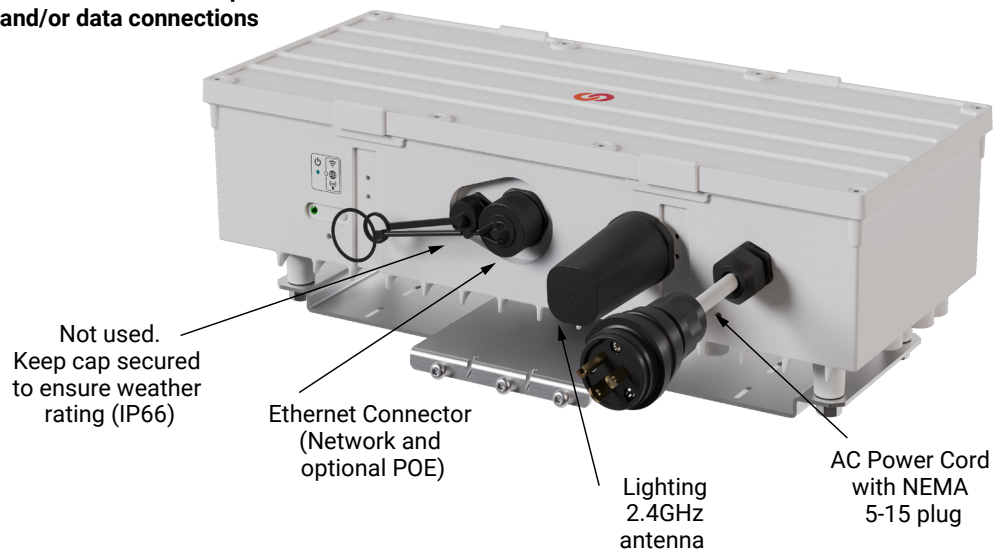


Pole mount



Installation

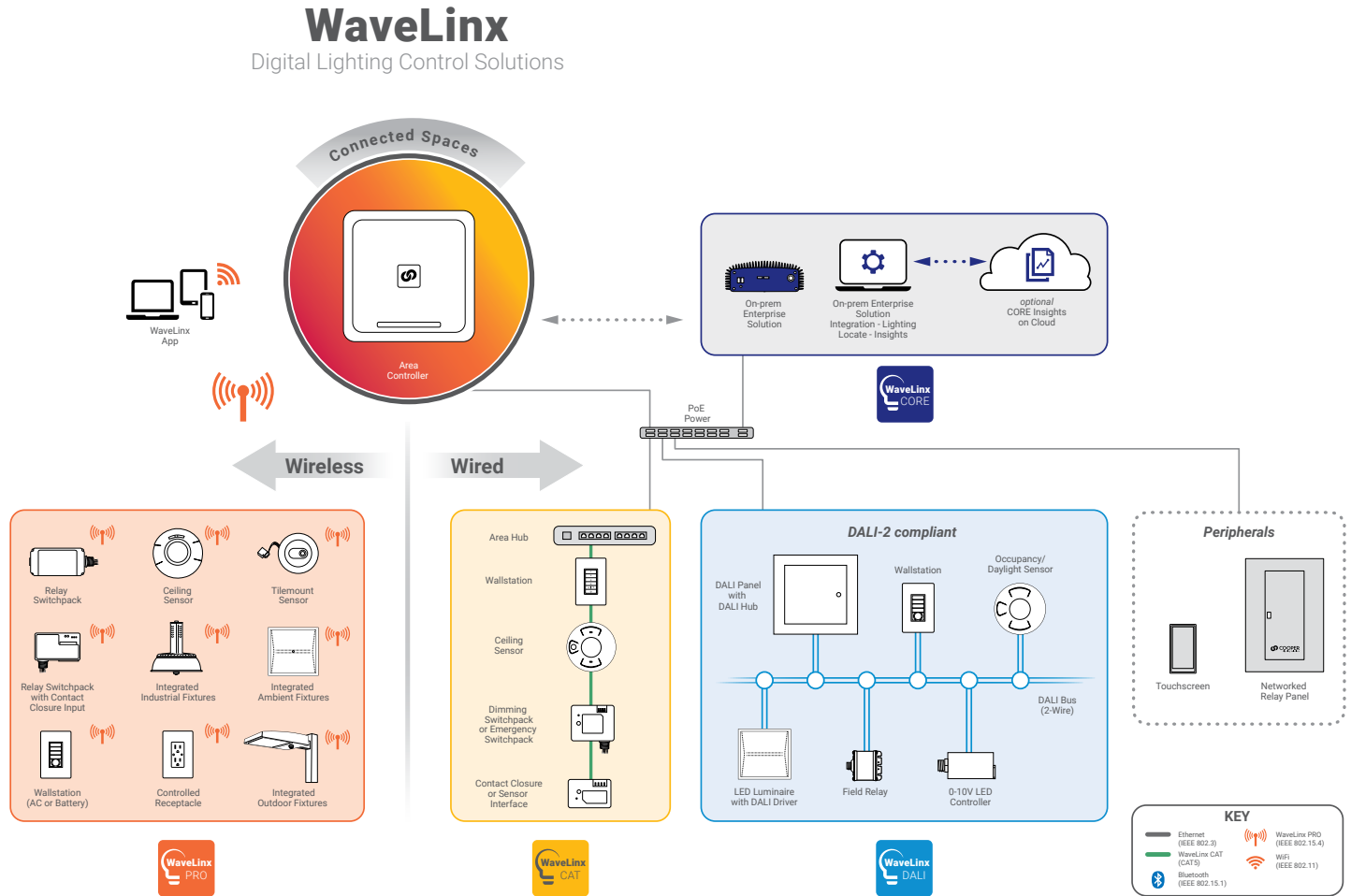
Cable assemblies for power and/or data connections



System Diagram:

This diagram shows the main components of the WaveLinx connected lighting system with WaveLinx DALI, CAT and PRO devices. The PRO devices communicate 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 CAT devices communicate over the category 5 based communication bus and control the light fixtures using a relay (on/off) and 0-10V output (dim/raise). WaveLinx DALI devices communicate via a DALI bus (2 wires), which connects various components including DALI fixtures, a DALI DAC (DALI to 0-10V converter), DALI field relays, DALI wallstations, and DALI occupancy sensors. WaveLinx Area Controllers (WAC) communicate with WaveLinx CORE Apps over the Ethernet network.

[View WaveLinx Network and IT Guidance Technical Guide](#)



Control Systems
• WaveLinx