Wireless Connected Lighting System
Indoor | Outdoor

WaveLinx

eaton.com/waveLinx
**WaveLinx Wireless Connected Lighting System**

- **EATON POWER**
  - Unparalleled knowledge of electrical power management

- **LIGHTING**
  - Advanced LED fixtures

- **CONNECTIVITY**
  - Communications & sensing technology
  - Physical devices & controllers

- **APPS / SOFTWARE**
  - Data accumulation & analysis
  - Software applications

**Take compliance, network security and energy savings into your own hands**

Automatic code compliance. 7-Tier network security features. Integrated wireless sensors to collect and transmit key building data. And, the ability to control your system from a mobile app and the ability to exchange data with third party applications.

*It’s simple: WaveLinx just works.*

**Connected Lighting simplified by Eaton**
Say goodbye to the high costs and complexity of typical addressable control systems

WaveLinx is designed for plug-and-play connectivity for either standalone or networked applications.

**Stand-Alone Installation:**
For smaller office spaces within a larger building.
- IT setup not required
- Set up and manage the system via mobile app
- Scalable to join larger network

**Network Installation:**
For entire building connectivity.
- Smart building ready
- Simple configuration
- Security features for peace of mind
- BACnet/IP and Public API (REST) integration
- Real-time alarms with smart tips

Flexible, turnkey installation

www.eaton.com/WaveLinx
For many WaveLinx applications, installation is so simple, it’s not even necessary to involve IT.
Technology
Industry-leading technology, in a simple package

WaveLinx out-of-the-box functionality provides the fastest control confirmation on the market. It’s also one of the easiest lighting systems to install and manage. WaveLinx is the designer and contractor choice for offices, medical buildings, educational facilities, and more.

Save on installation time and cost
WaveLinx is designed to get you up and running faster. In some cases, it’s not even necessary to involve IT.

Get off the job faster
The commissioning process doesn’t need to cause headaches or hang-ups. The WaveLinx built-in features reduce commissioning time by 40% or more.

Be smart building ready
Integrated sensors on the light fixtures gather real-time building data, so you can make more informed decisions and save energy. Data can be easily shared with your building enterprise platform via BACnet and Public API (REST).

Control it all, from your mobile device
View building stats and program multiple zone settings conveniently, with an easy-to-use mobile app.

Wireless, code-compliant, and cost-effective for today

= up to 70% ENERGY SAVINGS
ASHRAE 90.1 2016 - 70%
IECC 2015 - 55%
T24 2016 - 70%

Lighting fixture with integrated sensor
Highly efficient LED fixtures

Wireless Area Controller
Provides centralized coordination of multiple area control options

Wireless Wall Station/Receptacle
Provides wireless control of multiple and local areas

Mobile Applications
Provides personalized, local control from a tablet or smartphone

Stay secure with unparalleled 7-tier network security features
WaveLinx reduces project commissioning time by **40% or more**

Automatic code compliance?

Yes, it’s true

No more waiting weeks for commissioning teams, code compliance hang-ups or missed opportunity costs. With WaveLinx, you can finish the job more quickly, and move on to the next.

- Automatic code commissioning meets or exceeds code requirements
- Wireless integrated sensors ensure maximum efficiency
- A simple mobile app allows building managers to easily adjust settings, even after the project has finished, with no need to go back into the wall
- Connected fixtures provide a platform for future scalability

The sensor is factory wired and ready to meet code out-of-the-box.
LEDs on double-duty

With IoT technology, your lights are more than lights – they’re a gold mine for building information. Make better decisions with real-time, actionable data.

View key building information and optimize your zone settings, all from the mobile app:

- Occupancy/vacancy control lets you fine tune occupied light level and partial ON/OFF requirements
- Daylighting helps you harness your space’s natural light, and meet code requirements
- Multicolor LED status lights allow for easy system troubleshooting and diagnostics

Imagine if your lighting system helped you get off the job faster with controls and lighting that just work
Stay secure with ultimate peace of mind

With information security threats and fears on the rise, WaveLinx is designed to keep your data on lockdown with seven tiers of security.

**Physical barriers to entry**
The WaveLinx server sits in the ceiling, and hidden from view.

**Network segmentation**
Isolated targets mean reduced for large scale breaches.

**Customer security**
NIST Cybersecurity Framework and industry best practices.

**Over-the-air updates**
Wireless technology allows your system to securely stay up-to-date.

**Device security**
Features 128-bit encryption device-to-device communication.

**Eaton COE assurance**
Continuous monitoring and reporting of internet threats and vulnerabilities.

**Network security**
Secure HTTPS protocols and WPA2 technology.

WaveLinx is UL2900-1 listed to the Standard for Software Cybersecurity for Network-Connectable Products

Eaton has the first lab approved to participate in UL’s Data Acceptance Program for Cybersecurity
Control and efficiency, at your fingertips

Next-level convenience and control: configure zones, customize settings, and save energy from one secure mobile app.

- Easy, automatic code commissioning provides a sequence of operations that meets the strictest codes
- Adjust automatic settings, with the ability to configure each setting yourself
- View occupancy/daylight data from sensors, and implement demand response to save money

WaveLinx mobile app settings
- Manual Dimmer
- Occupancy Sensor
- Lumen Maintenance Control
- Daylighting Control
- Receptacle Control
- Tuning Control
- Scheduling
- Manually Switched ON/OFF
- Demand Response
WaveLinx can offer significant benefits

- Save time reacting to your system with WaveLinx Insight Manager and our system smart tips
- Achieve more with the wireless system that has the broadest offering of indoor and outdoor controls and fixtures
- Stay secure with unparalleled 7-tier network security features

In a typical 10,000 square foot school area, the WaveLinx system offers significant benefits:

- **30% Maintenance Savings**
  - Easily reconfigure the classroom without rewiring from a simple mobile app
  - Wireless controls install faster for less downtime during school retrofit or construction

- **40% Faster Install & Set-up**
  - Achieve faster certificate of occupancy by reducing installation time of the lighting and control system by 40%
  - Easily program the luminaires to work the way the school wants rather than hardwired zones
  - Reduce unnecessary accessories with luminaires with integrated fixtures providing daylight and occupancy detection

- **15% Lower Installed Cost**
  - Reduce total installed cost with fewer components and less hard piped conduit
  - Eliminate up to 60% of wire runs and 45 minutes per control zone

- **25-70% Energy Savings**
  - Save 47% more energy on average by utilizing Networked Lighting Controls (NLCs)
  - 25-70% energy savings are possible with integrated luminaire lighting controls
  - Simplify energy code compliance (CA T24, ASHRAE, IECC)

**Education**

Complete projects and open schools faster while reducing cost with the WaveLinx system, for LED lighting and control projects.

WaveLinx mobile app used for system setup and personal control

www.eaton.com/WaveLinx
Offices

Reduce labor, cost and installation time with WaveLinx to get low cost compliance for both retrofits and new installation.

Wireless, code-compliant and cost-effective

**Lighting**
- Multiple zones
- Out of the box 75% high end trim

**Occupancy**
- Automatic on to 50%
- Automatic plug load control
- Vacancy option

**Daylighting**
- Continuous dimming to off
- Open or closed loop daylighting

**Manual Controls**
- Fully programmable scene or zone buttons
- Intuitive controls

**Scheduling**
- UL924
- Power Measurement
- DLC NLC V2 qualified

In a typical 10,000 square foot commercial office area, the WaveLinx system offers significant benefits:

**IMPROVE**
Productivity & Maintenance
Wireless controls install faster for shorter down time
Easily reconfigure the space without rewiring from a simple mobile app
Accommodate all users with configurable occupant lighting settings

**40% Faster Installation**
Achieve faster certificate of occupancy by reducing installation time of the lighting and control system by 40%
Easily program the system using the WaveLinx mobile application

**15% Lower Installed Cost**
Reduce total installed cost with fewer components and less required conduit
Eliminate up to 60% of wire runs and 45 minutes per control zone with wireless lighting controls

**up to 70% Energy Savings**
Save 47% more energy on average by utilizing Networked Lighting Controls (NLCs)
25-70% energy savings are possible with integrated luminaire lighting controls
Simplify energy code compliance (CA T24, ASHRAE, IECC)

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**40% Faster Installation**
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Trellix
Smart spaces IoT platform

Trellix is an on-premise smart spaces IoT platform that moves real-time monitoring and processing to the edge which allows you gain faster insights of buildings operations, drive efficiencies and make effective decisions.

Trellix
Enterprise | IoT | BACnet | API Integration

The Trellix lighting management software application helps real-estate professions take full advantage of IoT by connecting WaveLinx with other building systems using BACnet and Public API (REST). Trellix also includes alarms with smart tips, system events, demand response, platform flexibility and future proofing.

catalog number:
ELS-OPR**K - Trellix Software license for interfaces (included in ELS-IMPRO1, ELS-IMENT1, ELS-VRT1) Includes: 1000 nodes (BACnet, API, AV)
ELS-BAC**K - BACnet License adder
**defines number of additional nodes
See product spec sheets for ordering information
ELS-API**K - API License adder
**defines number of additional nodes
See product spec sheets for ordering information

For more information, see: TrellixConnect.com
Alarms & Events

Real-time notifications of system faults – Allows the facility manager to pro-actively address issues before they are reported by tenants.

Smart tips for each alarms – Empowers facility managers by allowing them to investigate and resolve the issues.

Email Notifications – Allows the facility managers to get notification on their mobile devices when away from their desk.

Enterprise Scheduling

Allows facility managers to make changes to schedules from a central location. This feature is ideal for medium and large facilities with more than three WACs.

Floor Plan

Allows facility managers to create a floor plan so that they can have a visual representation of their lighting system. The floor plan is used to locate devices, view their status, area send manual commands to a single device, zone(s) and (a).

Systems

The OpenADR is an open and standardized way for electricity providers to communicate demand response signals with their customers using a common language over any existing IP-based communications network, such as the Internet.

Demand Response – Take advantage of the incentives offered by utility companies by participating to on-going Demand Response (DR) programs.

OpenADR, BACnet/IP or Public API – Use any of these three protocols to broadcast a demand response signal to all connected wireless area controllers.

No additional embedded device/hardware – The OpenADR interface is hosted on the Insight Manager platforms (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 Insight Manager capable of supporting most DR services and markets.
Control devices
Precise control. Wireless communication.

Wireless Area Controller

The Wireless Area Controller (WAC-POE) is the main component of the WaveLinx Wireless Connected Lighting System. The WAC coordinates between the WaveLinx Mobile App and various WaveLinx devices to create a smart building ecosystem that provides out of the box functionality and leverages our patent pending automatic code commissioning features.

catalog number:
WAC-120 - Wireless Area Controller with PoE injector
WAC-POE - Wireless Area Controller without PoE injector
WPOE-120 - PoE injector accessory

Trellix Core Pro
Enterprise | BACnet | API Integration

The Trellix Core Pro is an on-premise hardware platform hosting Trellix enterprise lighting management software application. It networks up to twenty (20) Wireless Area Controllers collecting data that can be shared with third party system via BACnet and Public API (REST).

catalog number:
ELS-TCPR01 - Trellix Core Pro (supports 20 WACs)
Includes: 1000 nodes (BACnet, API, AV)

Trellix Core Enterprise
Virtual Trellix Core Enterprise

Enterprise | BACnet | API Integration

The Trellix Core Enterprise is an on-premise hardware platform hosting Trellix enterprise lighting management software application. They network up to five-hundred (500) Wireless Area Controllers collecting data that can be shared with third party system via BACnet and Public API (REST).

catalog number:
ELS-TCENT1 - Trellix Core Enterprise (supports 500 WACs)
Includes: 1000 nodes (BACnet, API, AV)

ELS-TCVRT1 - Trellix Core Virtual Enterprise (supports 500 WACs)
Includes: 1000 nodes (BACnet, API, AV)
Wireless Ceiling Sensor
Sensing | Daylight | Wireless | Battery
The room based wireless sensor offers PIR occupancy and daylight sensing of up to 1500 square feet. The room based sensor is battery powered and is one of the smallest ceiling mounted room based wireless occupancy and daylight sensors on the market. The sensor in combination with the WaveLinx mobile application allows you to gain considerable energy savings from occupancy sensing-based control of lighting and plug loads.
catalog number:
CWPD-1500 - Ceiling sensor

Wireless Dimming Switchpack
Plug Load | 0-10V | Wireless
The wireless dimming switchpack with 0-10V (WSP-MV-010) offers 120-277VAC 20amp zero crossing relay control and continuous 0-10V dimming control of LED and non LED loads. The wireless relay switchpack with 0-10V control also supports 20amp plug load control.
catalog number:
WSP-MV-010 - Relay dimming switchpack

Wireless 347V Dimming Switchpack
0-10V | 120-347VAC | Wireless
The 347V dimming switchpack (WSP-CA-010) offers 120-347VAC 20amp relay control and continuous 1-10V dimming control of LED and non LED loads.
catalog number:
WSP-CA-010 - 347V Relay dimming switchpack

Wireless Tilemount Daylight Sensor
Daylight | Dimming | Downlights | Wireless
The Tilemount daylight sensor provides daylight dimming and control for connected downlight luminaires or other luminaires that do not support the WaveLinx Integrated Sensor. The Tilemount daylight sensor provides 0-10V dimming control of LED and non LED loads for 120-277V 3amps luminaires.
catalog number:
TMSVPD1 - Tilemount daylight sensor

Wireless Ceiling Sensor
Sensing | Daylight | Wireless | Battery
The room based wireless sensor offers PIR occupancy and daylight sensing of up to 1500 square feet. The room based sensor is battery powered and is one of the smallest ceiling mounted room based wireless occupancy and daylight sensors on the market. The sensor in combination with the WaveLinx mobile application allows you to gain considerable energy savings from occupancy sensing-based control of lighting and plug loads.
catalog number:
CWPD-1500 - Ceiling sensor
Wireless Wallstation

Manual | Scenes | Zones | Wireless

The wireless wallstation is available in several small and large button configurations as well as various colors. These wallstations are mains powered and provide wireless control of the lighting in each area. The wireless wallstation mounts in a standard wallbox and includes a decorator style color matching wallplate. Each wallstation is fully configurable to provide local and multi-level control in each area.

catalog number:
- W1L -* - 1 Large button
- W1L-RL -* - 1 Large button with raise/lower
- W2L -* - 2 Large button
- W2L-RL -* - 2 Large button with raise/lower
- W2S -* - 2 Small button
- W2S-RL -* - 2 Small button with raise/lower

Battery Wallstation

Battery | Manual | Scenes | Zones | Wireless

The wireless wallstation is available in several small and large button configurations. These battery powered wallstations are for new or retrofit installations and provide wireless control of the lighting in each area. The wallstation surface mounts to a wall and includes a decorator style color matching wallplate. Each wallstation is fully configurable to provide local and multi-level control in each area. Battery life expectancy up to ten years.

catalog number:
- WB2L-S1 -* - 2 Large button, S1
- WB2L-S2 -* - 2 Large button, S2
- WB2L -* - 2 Large button
- WB3L-S2 -* - 3 Large button, S2
- WB3L-D -* - 3 Large button, D
- WB3L -* - 3 Large button
- WB5-S3 -* - 5 Button, S3
- WB6S-S3 -* - 6 Small button, S3
- WB6S-S3D -* - 6 Small button, S3D
- WB6S-S5 -* - 6 Small button, S5

Wireless Receptacle

Plug Load | Wireless

The wireless receptacle provides simplified wireless plug load control. Plug load control is required now in many building codes as part of an energy saving control strategy. The wireless receptacle is automatically paired with all WaveLinx occupancy sensors in a space when it is assigned to an area using the WaveLinx Mobile Application.

catalog number:
- WR-15 - 15A wireless receptacle
- WR-20 - 20A wireless receptacle
Lighting products

WaveLinx wireless technology offers an intelligent, simple, easily control of various luminaires to meet application requirements:

- Supports integrated or tile mount connected sensors for occupancy and daylighting
- Designed and tested by Eaton to provide guaranteed compatibility
- Eliminate the worry of controls and luminaire integration

Integrated Sensor
Sensing | Daylight | Wireless

The integrated sensor combines control within the light fixtures to reduce installation and design time while meeting energy codes. With the integrated sensor the lighting design is the control design.

catalog number: SWPD1 - Integrated sensor
See luminaire spec sheets for ordering information

Architectural lighting

Integrated sensors
Sensing | Daylighting | Individual | Grouping

Corelites

- **Iridium**
  Linear suspended WaveStream LED

- **Divide**
  Suspended WaveStream LED

- **Jaylum**
  Suspended LED

- **Bridge**
  Architectural recessed WaveStream LED

Corelites

- **RSA**
  Architectural recessed integral LED

www.eaton.com/WaveLinx
**Ambient lighting**
Integrated sensors
Sensing | Daylighting | Individual | Grouping

Metalux
**WSL**
Linear surface / suspended series
WaveStream LED

Metalux
**SkyRidge**
Recessed ambient
WaveStream LED

For a complete list of compatible products, see:
www.eaton.com/WaveLinx

**Recessed lighting**
Tile Mount Sensing | Direct Driver Control

Halo
**PD6**
LED recessed downlight
(wireless control)

Halo
**RL56**
LED recessed downlight
(direct wireless)

Portfolio
**LDSQA4A**
LED square adjustable accent/slope
(wireless control)

Portfolio
**LD4A and LDSQ4A**
Round and square recessed downlight
(wireless control)
Industrial lighting

Integrated sensors
Sensing  |  Daylighting  |  Individual  |  Grouping  |  Motion

Industrial high bay and low bay sensors
The WaveLinx industrial high bay and low bay sensors offer passive infrared (PIR) occupancy with a photocell for closed loop daylight sensing. The sensors are IP66 rated for warehouse, manufacturing and industrial spaces with installation heights up to 40 feet and coverage up to 2500 square feet. Easy tool-less fixture connection (Zhaga Book 18 socket) with out of the box controls functionality.

catalog number:
ZW-SWPD2 - Fixture Mount Low Bay Sensor, 7 - 15ft (2.1 - 4.5m)
ZW-SWPD3 - Fixture Mount High Bay Sensor, 15 - 40ft (4.5 - 12.2m)

Industrial fixture options are available in WaveLinx ready or integrated options

www.eaton.com/WaveLinx
Outdoor lighting

Sensing | Daylighting | Individual
Grouping | Motion | Astronomic

Outdoor fixture mount sensors
The WaveLinx outdoor sensors (high and low mounted) offers passive infrared (PIR) occupancy with a photocell for closed loop daylight sensing. The sensors are IP66 rated for outdoor site and indoor environments with installation heights up to 40 feet and coverage up to 5000 square feet. Easy tool-less fixture connection (Zhaga Book 18 socket) with out of the box controls functionality. Available color options: white, black and bronze.

catalog number:
ZW-SWPD4 - Outdoor Fixture Mount
Low Bay Sensor,
7 - 15ft (2.1 - 4.5m)
ZW-SWPD5 - Outdoor Fixture Mount
High Bay Sensor,
15 - 40ft (4.5 - 12.2m)

For a complete list of compatible products, see:
www.eaton.com/WaveLinx

Wireless Outdoor Lighting Control Module
The WaveLinx 7-pin outdoor lighting control module enables schedules to provide ON, OFF and dimming controls based on astronomical or time schedules based on a 7 day week. Allows to create multiple control zones.
catalog number:
WOLC-7P-10A - Outdoor lighting control module

For a complete list of compatible products, see:
www.eaton.com/WaveLinx

Outdoor fixture options are available in WaveLinx ready or integrated options
What is Connected Lighting?

* Eaton’s portfolio of connected lighting solutions leverages the real-estate of the physical light fixture to increase building, business and community operating efficiency through controls and data. With connected lighting solutions, we go beyond controlling light to solve higher complexity problems enabled by sensing and communication capabilities within the light fixture itself.

With innovation you can rely on, and connections you can build on; that’s how Eaton makes connections work.
Lighting Product Lines
Ametrix
AtLite
Corelite
Ephesus
Fail-Safe
Halo
Halo Commercial
Invue
Io
Iris
Lumark
Lumière
McGraw-Edison
Metalux
MWS
Neo-Ray
Portfolio
RSA
Shaper
Streetworks
Sure-Lites

Controls Product Lines
Fifth Light Technology
Greengate
iLight (International Only)
iLumin
Zero 88

Connected Lighting Systems
Distributed Low-Voltage Power
HALO Home
iLumin Plus
LumaWatt Pro
WaveLinx