

CoreSync

# PRODUCT AND SOLUTIONS GUIDE >

NORTH AMERICA



**molex**

For more than thirty years, Molex Connected Enterprise Solutions has designed and manufactured high-quality products that enable connected enterprises.



We apply the latest production techniques and invest in sophisticated manufacturing equipment to ensure consistent high-quality products and fast response to customer requirements.



Integrating field-proven cabling and wireless technologies, the Molex CoreSync platform enables smart buildings and smart campuses by feeding multisensory data to a central host, providing building analytics and orchestrating disparate building systems. Such as real time energy consumption, lighting, temperature, humidity and air quality, meeting room management and occupancy, security, audiovisual, powered shades and building.....

We have design and manufacturing facilities around the world, with an expert team of problem-solvers who work across borders to help bring your vision to life. We lead the industry in R&D investment, striving to develop and deliver innovative, high-quality, reliable solutions that can be customized to meet your needs.

**Together, we can turn your vision into reality.**

#### Why Choose Molex?

- Part of Molex, LLC with 40,000+ employees
- Certified to all the key international standards
- Trust, integrity & support
- Localized customer service

# CORESINC SOFTWARE PRODUCTS >

## Integration

Multiple ways to tightly integrate with other building management Systems.

## Building Analytics

Integration, User productivity, Analytics, Smart lighting.

## Productivity

Facilitate increase of user productivity through maximizing user scenarios.

## User Profiles

Rule-based management and directory services integration.

## Remote Management

Remotely configure and manage system through online portal.

## Predictive Maintenance

Data collected to gain insight on maintenance needs.

## CoreSync Manager

An IP-based smart building lighting controller designed to connect and control lighting luminaires, shades, and sensor devices.

- Fully featured Design Tool which is used for designing the lighting experience
- A real-time Facility Manager to provide a live report of all zones and devices in the system
- A commissioning and diagnostics tool used to discover and configure devices as perform firmware upgrades
- Flexible digital programming and individually addressable devices
- 250 lighting zones
- 100 shading zones
- 100 information zone
- Up to 2,500 individually addressable lighting fixtures and motorized shades
- Up to 12,500 individually addressable sensors
- DLC certified for Network Lighting Control

Order No.	Description
1809870001	CoreSync Manager Software (SC, DT, FM, MoDiag), Hardware + 50 licenses
1809870001	CoreSync Manager Software (SC, DT, FM, MoDiag), 50 licenses
1809871001	CoreSync Manger individual license

## CoreSync API

The API is used to enable integration with third party applications and Building Management Systems. Providing access to the following:

- Sensor Data including; Ambient light, Occupancy, Temperature, Humidity & Air Quality and Power
- Properties (zone) including; Brightness, Daylight harvesting, Sensor stats, Light stats, Biodynamics and Blinds
- Device status
- Data analytics such as energy consumption and occupancy percentages
- Sensor data available through pull and pub/sub
- Built-in MQTT broker

Order No.	Description
1809875000	CoreSync BACnet and CoreSync API bundle



API

## BACnet Gateway

This gateway is a lightweight, but fully featured that provides native support for integration with any BACnet compliant BMS system based on BACnet IP protocol 12 and above. The CoreSync gateway supports BACnet Advanced Application Controller profile and can be deployed in both hardware and virtual environments.

The gateway supports all functionalities of CoreSync lighting system including all lighting and sensor objects, ability to configure various types of devices, reading sensor data, modify zone settings and more.

Change of value events are delivered to BMS in real-time, so it can react immediately to environmental changes.

Order No.	Description
tba	CoreSync BACnet Gateway software only





## Mobile Application

The CoreSync Mobile Application is an Android-based local user interface that allows the control of lighting devices and shades in meeting rooms, breakout areas, and other multi-use spaces.

Currently offered on Molex-provided tablet devices:

- 5.7" single gang touchpad
- 10." Table-top or wall-mounted tablet
- Supports lighting spaces including user, general and beacon spaces
- Supports shading spaces
- Grouping
- Access control
- Kiosk mode
- OTA updates of application and device firmware
- Themes
- Pre-defined buttons
- User and admin modes

Order No.	Description
1809976100	CoreSync BACnet and CoreSync API bundle
1809975000	CoreSync POE Tablet VESA Pattern 75 x 75

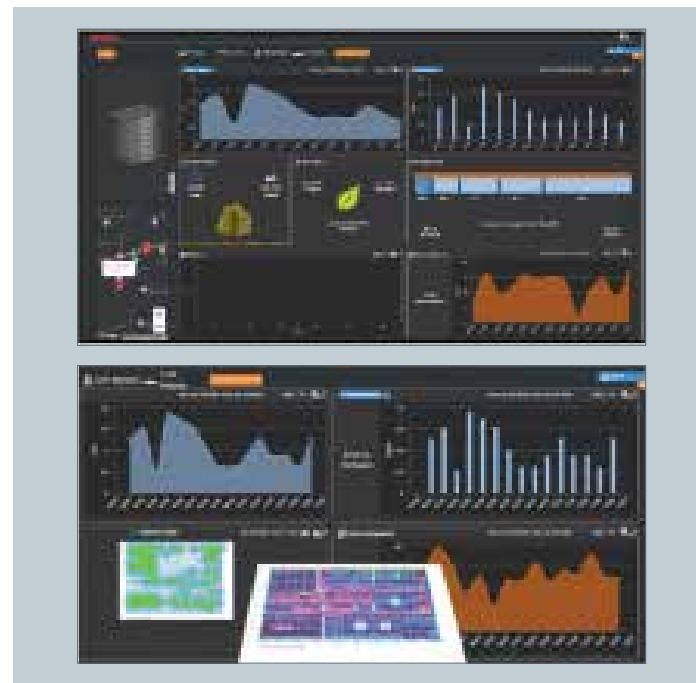


## CoreSync Dashboard

The Dashboard can be web based or installed directly to your hardware. It allows for an easy and intuitive visualization of the building, its floors or zones for lighting, sensors and other building data. It features energy monitoring, device status, other KPI monitoring, real time data visualization and interactive control.

- Building/Floor/Zone selection
- KPI information
- Operational information
- 2D floor map view
- Floor heatmap for all sensors
- Historical sensor data trends
- Multi-site display
- Live data streaming
- Lighting and shade control

Order No.	Description
tba	CoreSync Dashboard Software Only (requires customer-provided VM)



“We’re committed to establishing a smart, connected building that provides our employees with a comfortable and productive working environment while enabling more efficient and sustainable operations,” said Andrew Schindler, senior program director for Georgia-Pacific. “The innovation and smart building capabilities that Molex has demonstrated with Johnson Controls to transform our workplace will position Georgia-Pacific’s landmark headquarters as a truly connected environment today and well into the future.”



# NETWORK DEVICES

## Gateway/Drivers

### 1 PoE Gateway, Constant Voltage

The Molex Constant Voltage PoE Gateway is a low-voltage power distribution and network connected module that utilizes PoE (Power over Ethernet) technology.

- Cisco UPOE-compliant device
- CoAP Network Communication
- Dimmable to 1% - Provides flexibility in light output
- Distributes power and data
- UL1310 - Safe operation and standard compliance
- Ample power supports multiple devices
- Rugged and robust interfaces

Order No.	Description
180993-2012	POE Gateway Constant Voltage; Single Channel 24V
180993-2042	POE Gateway Constant Voltage; 4-Channel 24V

### 2 PoE Gateway – Unregulated

The CoreSync PoE Gateway is a low voltage power distribution and network connected module that utilizes PoE (Power Over Ethernet) technology.

- Cisco UPOE compliant device
- Input power up to 60W
- CoAP network communication
- UL 2108 compliant

Order No.	Description
180993-0001	Unregulated Gateway, Metal Enclosure
180001-0990	Unregulated Gateway, Plastic Enclosure, White
180990-0101	Unregulated Gateway, Plastic Enclosure, Black
180993-3001	Wireless Unregulated Gateway, UL North America
180993-3002	Wireless Unregulated Gateway, CE

### 3 PoE EnOcean Gateway

The Wireless PoE Gateway enables the integration of EnOcean based devices to be integrated for monitoring and control in the CoreSync system. The Gateway is powered and IP connected via CAT5e or CAT6 UTP cable to the Network Equipment and the CoreSync Manager.

- Gateway can connect and Control up to 20 devices.
- Individual Gateway effective range is 50' (15m), cover an area of 1000 sq feet
- CoAP based IP communication
- Compact size and mounting dimensions
- UL60950-1, CE, FCC

Order No.	Description
180993-3001	EnOcean Gateway, North American
180993-3002	EnOcean Gateway, European

### 4 PoE Gateway 2.0

The CoreSync PoE Gateway 2.0 is a low voltage power distribution and network connected module compliant with IEEE802.3bt standard that utilizes enhanced 90W-per-port PoE technology. Providing a usable 71 watts of power, control and secure 2-way communication with lights and other devices.

- Cisco UPOE and IEEE 802.3bt compliant device
- Input power up to 90W
- CoAP network communication
- UL 2108 compliant

Order No.	Description
180798-1000	CoreSync PoE Gateway 2.0 for 90W Input

### 5 LED Driver Series

The Molex CoreSync Smart LED Driver is a compact DC/DC LED driver family designed to drive LED engines for a large variety of lighting fixtures, powered and controlled by a Molex CoreSync PoE Gateway.

- Integrated Power Monitoring
- On-board thermistor
- Individually addressable
- Optimized for tunable white LED engines

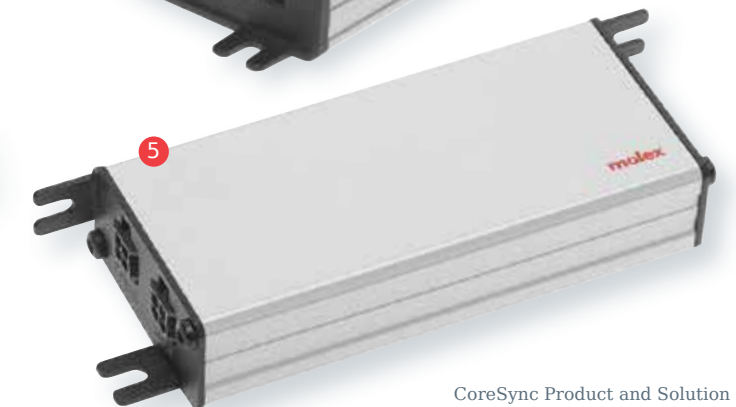
Order No.	Description
180996-1001 to 1007	Smart LED Driver Single Channel, offset mounting
180996-3101 to 3107	Smart LED Driver Single Channel, center mounting
180996-2001 to 2007	Smart LED Driver Dual Channel, offset mounting
180996-4101 to 4107	Smart LED Driver Dual Channel, center mounting
180996-5108	LED Smart Driver, Programmable, Single Channel (1060 - 1200mA)
180996-5109	LED Smart Driver, Programmable, Single Channel (1210 - 1400mA)
180996-6108	LED Smart Driver, Programmable, Dual Channel (1060 - 1200mA)
180996-6109	LED Smart Driver, Programmable, Dual Channel (1210 - 1400mA)

### 6 Programmable LED Driver

The PoE LED Driver is a constant current, dual channel driver, that can be programmed to have different output currents in the range from 200mA - 2500mA and up to 90W. Each channel can be programmed digitally to change the output current via analog dimming independent of each other.

- Programmable Output Current
- Programmable Dimming Curves
- Daisy-chaining to multiple devices in any order
- Dimming from 0.1% - 100%

Order No.	Description
182130-1001	Programmable Driver, Single channel, Low current
182130-1002	Programmable Driver, Single channel, Mid current
182130-1003	Programmable Driver, Single channel, High current
182130-2001	Programmable Driver, Dual channel, Low current
182130-2002	Programmable Driver, Dual channel, Mid current
182130-2003	Programmable Driver, Dual channel, Low current





## Sensors

### 1 PoE Fixture-Mounted Sensor R

This device enables lighting manufacturers to deliver PoE fixtures that incorporate fully network-connected sensing. Featuring digital PIR for accurate occupancy detection, plus ambient light, temperature and humidity sensing. The compact, PoE-powered Sensor also offers two-way communication, providing useful data for lighting automation and building management systems.

- PoE-network enabled
- Highly accurate occupancy sensing
- Ambient light sensing
- Temperature and humidity sensing
- Accurate local sensing and reporting
- Individualized sensing

Order No.	Description
182091-1000	PoE Fixture-Mounted Sensor R

### 2 PoE Multi-Mount Sensor C

The CoreSync PoE Multi-Mount Sensor C enables fully network-connected sensing in a powered PoE fixture or mounted in a ceiling aperture. The Sensor C also features two-way communication with control software, providing useful data for lighting automation and building management.

- PoE-network enabled
- Highly accurate occupancy sensing
- Ambient light sensing
- Temperature and humidity sensing
- Accurate local sensing and reporting
- Individualized sensing

Order No.	Description
182090-1000	PoE Multi-Mount Sensor C



### 3 Wireless Occupancy Sensor, Wall Mounted

The CoreSync Wall Mounted Occupancy Sensor harvests solar energy from indoor light and uses radio frequency technology to communicate wirelessly with other EnOcean-enabled devices, helping building automation systems to reset temperature, turn off lights and control other electrical loads upon detecting that a space has been unoccupied for a set period of time.

- Wireless, interoperable – Communicates with other CoreSync devices and Network Connected Lighting system
- Self-powered – Needs no wiring or battery support in a light-harvesting environment
- PIR motion sensor with 360° viewing angle

Order No.	Description
180997-0005	Occupancy Sensor Wall Mount, 902MHz (North America)
180997-0105	Occupancy Sensor Wall Mount, 868MHz (Europe)

### 4 Wireless Ambient Light Sensor, Wall Mounted

The CoreSync Ambient Light Sensor measures and reports the level of available natural light, enabling energy-saving daylight harvesting capabilities when used within the CoreSync Network Connected Lighting system.

- Interoperable – Fully compatible with other CoreSync and EnOcean enabled wireless devices
- Communicates wirelessly with other CoreSync devices and CoreSync Network Connected Lighting System
- Powered by solar energy – No wiring or battery scheme needed
- Mounts on any ceiling material – Easy, fast installation

Order No.	Description
180997-0006	Ambient Light Sensor, 902MHz (North America)
180997-0106	Ambient Light Sensor, 868MHz (Europe)



### 5 Wireless Occupancy Sensor, Ceiling Mounted

The CoreSync Ceiling Mounted Occupancy Sensor harvests solar energy from indoor light and uses radio frequency technology to communicate wirelessly with other CoreSync devices, helping building automation systems to reset temperature, turn off lights and control other electrical loads upon detecting that a space has been unoccupied for a set period of time.

- Wireless, interoperable – Communicates with other CoreSync devices and Network Connected Lighting system
- Self-powered – Needs no wiring or battery support in a light-harvesting environment
- PIR motion sensor with 360° viewing angle
- Internal tray – Provides power from supplemental coin battery

Order No.	Description
180997-0004	Occupancy Sensor Ceiling Mount, 902MHz (North America)
180997-0104	Occupancy Sensor Ceiling Mount, 868MHz (Europe)

### 6 Wireless Temperature/Humidity Sensor

The Sensor is powered by a solar cell and features on-board energy storage that allows operation for days even in total darkness, with socket for optional coin cell battery backup for use in lowest light environments. The slim housing can be easily mounted vertically on walls, using the enclosed 2-sided adhesive tape.

- Self-powered
- Provides frequent “signs of life” updates
- Individualized sensing
- Connects wirelessly with the CoreSync EnOcean GW

Order No.	Description
180997-0007	Wireless Temperature/Humidity Sensor



### 7 Advanced Lighting Sensor

Low voltage sensor platform leveraging network-connected infrastructure for digital building applications.

PIR and ambient light data can be granularly collected, utilized for advanced lighting control, transferred to BMS or other 3rd-party systems or cloud platform for augmented building control and automation as well as advanced reporting/analytics. The full RGBW ring indicator can support software-driven meaningful use cases such as presence-based occupancy status.

- PIR (passive infrared)
- Ambient light sensing
- RGBW ring beacon
- Daisy-chain capability
- Easy to install, power, connect
- Ceiling tile or surface bracket

Order No.	Description
182089-2000	Advanced Lighting Sensor (North America)



## 8 Advanced Environmental Sensor

Low voltage sensor platform leveraging network-connected Molex CoreSync infrastructure for digital building applications: VOC (volatile organic compounds) temperature, humidity, and pressure data granularly collected by Molex sensor array can be transferred to BMS and/or other 3rd-party systems or a cloud platform for augmented building control and automation as well as advanced reporting and analytics.

- Air quality/VOC
- Temperature
- Humidity
- Pressure
- Easy to install, power, connect
- Ceiling tile or surface bracket

Order No.	Description
182089-3000	Advanced Environmental Sensor

## 9 Advanced Beacon Indicator

This indicator is powered and connected by the CoreSync low-voltage POE network infrastructure and can be easily integrated with BMS and other 3rd-party systems for augmented building control and automation. The RGB LED supports software-driven use cases such as presence-based occupancy status and can be used to create pathways and event status notification to the end user.

- Powerful RGB indicator LED - Basic or color-mixing capable
- CoreSync low-voltage bus - Daisy-chain capability
- Easy to install, power, connect - Ceiling tile or surface bracket

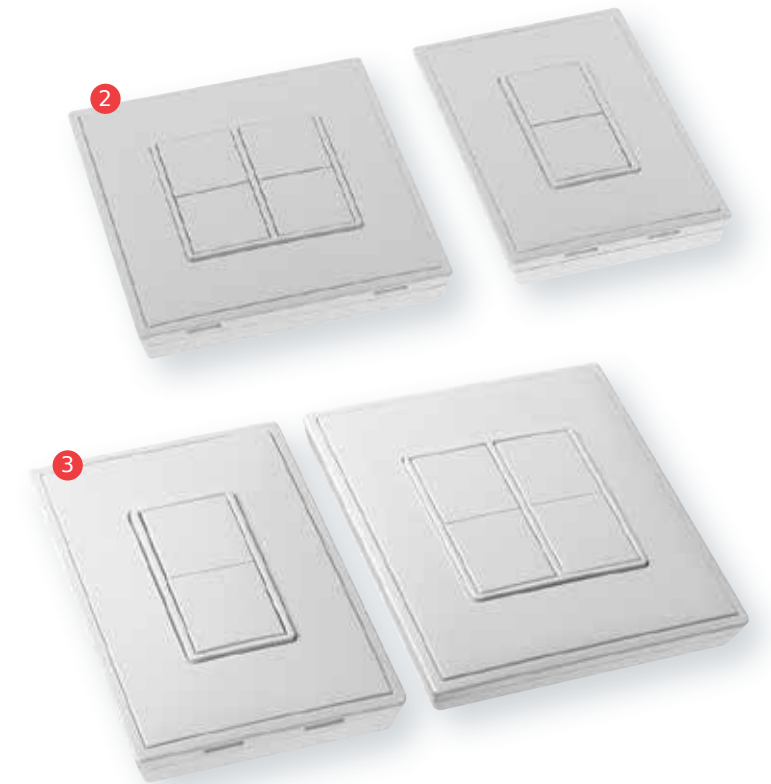
Order No.	Description
182089-1000	Advanced Beacon Indicator (North America)

## 10 Emergency Lighting Bypass

In the event of an emergency, such as power failure, PoE power source failure, disconnection of cabling, the Module will bypass normal PoE control and activate the emergency power source and onboard LED driver. The fixture will be powered to full brightness irrespective of previous state/control. Once the emergency condition is over, the lighting system will resume normal operation.

- CoreSync daisy-chain compatible
- Available in a range of power outputs
- Powered by building emergency source
- UL 924, CSA C22.2 No 141, FCC Class B
- NFPA (NEC, Life Safety Code) IBC

Order No.	Description
CORESM-00350	Emergency Lighting Bypass 350mA Single Channel
CORESM-00500	Emergency Lighting Bypass 500mA Single Channel
CORESM-00700	Emergency Lighting Bypass 700mA Single Channel
CORESM-01050	Emergency Lighting Bypass 1050mA Single Channel
CORESM-00880	Emergency Lighting Bypass 880mA Single Channel
COREDMD-00350	Emergency Lighting Bypass 350mA Dual Channel
COREDMD-00500	Emergency Lighting Bypass 500mA Dual Channel
COREDMD-00700	Emergency Lighting Bypass 700mA Dual Channel
COREDMD-01050	Emergency Lighting Bypass 1050mA Dual Channel
COREDMD-00880	Emergency Lighting Bypass 880mA Dual Channel



## Accessories

### 1 Digital Keypad

The CoreSync Digital Keypad is an intelligent control device that provides a hardwired, on-wall interface for controlling zones within the CoreSync building network system. The Keypad provides a familiar way to adjust the environment for personal comfort without affecting overall efficiency of the building.

- Configurable user interface
- Single- or multi-gang compatible
- RJ45 input connector
- Standard Decora size

Order No.	Description
180997-5106	6-Button CoreSync Digital Keypad (North America)
180997-5108	8-Button CoreSync Digital Keypad (North America)

### 2 Wall Mount Touchpad

The CoreSync Wall Mount Touchpad is a high-performance intelligent control device that provides a hardwired, on-wall interface for optimized control within the CoreSync building network system.

- Configurable CoreSync user interface
- HD, IPS 5.7" LCD with 1440 X 720 resolution and 16.8M colors
- RJ45 input connector

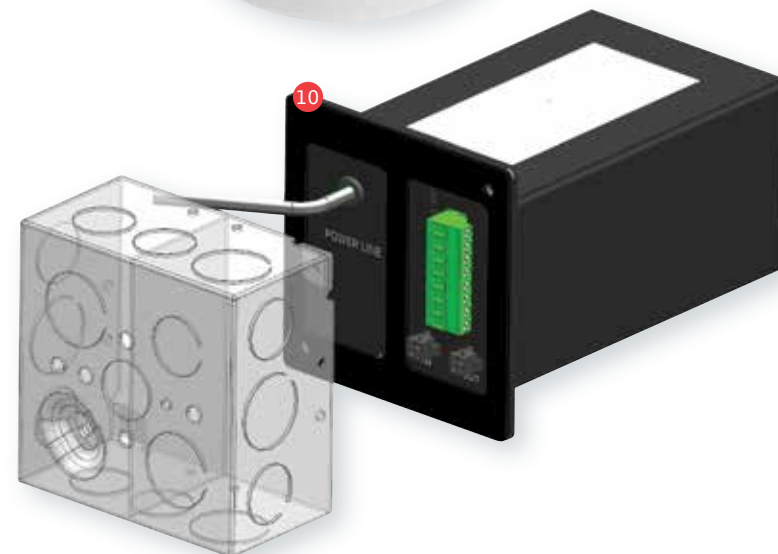
Order No.	Description
180997-6100	CoreSync Wall-Mount Touchpad

### 3 Wireless Switches and Dimmers

The single and double switch pads use energy harvesting technology to communicate with a wireless gateway and provide convenient local control of lighting, temperature and miscellaneous electric loads. These switch/dimmer pads are self-powered and never require batteries because the action of pressing the rocker generates sufficient energy to send a wireless signal to a given gateway device.

- Eliminates need for wire and conduit. Installation is fast, easy, non-intrusive
- No need for line voltage or batteries; self-powered.
- Switching and dimming capable
- Clean, contemporary design

Order No.	Description
180997-0001	Wireless Single Switch, 902MHz (North America)
180997-0002	Wireless Double Switch, 902MHz (North America)
180997-0101	Wireless Single Switch, 868MHz (Europe)
180997-0102	Wireless Double Switch, 868MHz (Europe)





#### 4 PoE Interface Module

The CoreSync PoE Interface Module allows a wide selection of non-CoreSync controllers to be part of the CoreSync ecosystem by enabling two-way communication with CoreSync control software. CoreSync daisy chaining technology is also included, allowing for more than one interface module to connect to the same CoreSync POE gateway.

- Up to four 0-10V inputs and four outputs
- Up to 3 individual RS485 channels
- 24V supply output

Order No.	Description
182135-1001	Interface Module, Universal

#### 5 LED Relay Zone Controller 0-10V

The compact size enables flexible installation inside of or next to electrical boxes and fixtures so the LED Relay Zone Controller can be easily wired out of sight using standard wiring practices. Simply link the module to a CoreSync motion sensor, light sensor, switch or rocker pad and experience levels of efficiency and convenience that can only be achieved through wireless controls.

- Supports California Title 24 daylight harvesting scenarios
- 120-277VAC voltage range
- Daisy chain capability
- Compact size
- Surge protection

Order No.	Description
180997-0003	LED Relay Zone Controller, 0-10V, 902MHz (North America)
180997-0103	LED Relay Zone Controller, 0-10V, 868MHz (Europe)



#### 6 2x2 LED Troffer Series

Designed to reduce installation costs, help achieve energy-saving objectives and provide a pleasant lighting experience for end users. Together with the latest LEDs, industry-standard network switches and CoreSync control software managing PoE Gateways, LED Smart Drivers and an array of sensor options, the CoreSync 2x2 LED Troffer Luminaire delivers an easy-to-apply lighting solution for new construction or retrofit applications.

- PoE-powered and controlled
- Removable Smart Lighting Element - Creates unique scenes and biorhythmic lighting sequences
- Integrated sensors: ambient light, occupancy, color temperature and power metering; optional air quality
- Indicator RGBW LEDs - for live alerts, indications, directions, occupancy status.
- Class 2 rated electronic device - Safe, easy access and long life

Order No.	Description
182056-1176	Smart Lighting Element
182056-0000	2x2 LED Troffer Fixture Base
180936-2000	Accessory - Protective cover for upward-facing LEDs
182057-0001	Accessory - General Clip to mount to grid
182058-0001	Accessory - 90° Seismic Clip to mount to grid
182059-0001	Accessory - Straight Seismic Clip to mount to grid

#### 7 LED Cable Harnesses

These connect a PoE Gateway to a Smart LED driver, providing low voltage power distribution and data communication necessary to control LED fixtures, sensors, and actuators. The harness system also helps minimize the number of PoE ports by "daisy chaining" from fixture to fixture. They are built around Molex's rugged Micro-Fit 3.0 connector system.

- Micro-Fit 3.0 Connector System - Proven reliability, durability, ease of use
- Available in overmold or shrink tube type - Efficiency and cost control
- Variety of lengths - Flexibility in design and layout

Order No.	Description
180777, 180778	CoreSync Daisy-Chain
180887, 180888	CoreSync Gateway to Driver
182105	CoreSync Gateway to Driver, reverse gender
182106	CoreSync Extender, 2-Gender
182110-400x	CoreSync Long-Run Cable
182110-5xxx	CoreSync Poke-In Extender
182110-6xxx	CoreSync Extender, 2-Gender
182110-7xxx	CoreSync Poke-In Extender



## CORESINC ECOSYSTEM ALLIANCE

The CoreSync EcoSystem Alliance includes companies working together to expand network connected services in commercial buildings and in everyday life. Alliance members are committed to elegant, high-quality design, bringing their expertise to create better-lit, contemporary spaces and digital experiences. Through combined expertise and innovation, the Alliance is developing friction-less integration that delivers improved efficiency, enhanced outcomes, real-time data and monitoring to commercial building owners, managers and tenants.

### Technology Alliance Associates

Molex has worked with a number of prestigious technology providers to create the CoreSync technology alliance. This alliance provides end users with the ability to specify a range of IoT end devices and BMS products in the knowledge that these technologies are fully compatible with the CoreSync PoE open system architecture. Through combined expertise and innovation, the alliance is developing friction-less integration that delivers improved efficiency, enhanced outcomes, real-time data and monitoring to commercial building owners, managers and tenants.

### Lighting Alliance Associates

The Lighting Alliance brings together a number of top lighting fixture manufacturers who have collaborated with Molex to configure and test their products to operate with the CoreSync PoE open system architecture. These companies are able to provide end users advice on lighting design based on experience in the field accumulated over a number of years and based on their in depth knowledge of the CoreSync system and have supply chains developed to ensure the timely delivery of CoreSync ready fixtures.

### Approved Integrator

CoreSync approved integrator's are a selection of independent companies with industry leading network professionals trained to support your needs for system design, installation, commissioning and user training. The Molex certification program through a tiered approach to training allows integrator's to become accredited in a specialized field. From design, integration or progress through the entire program to become a CoreSync master integrator. Approved integrator's receive regular product and training updates to ensure they are able to provide end-users with the advantages of the latest CoreSync technology developments.

### Distributors

Molex has agreements in place with number of leading IOT / Networking technology distributors who are able to provide local sales and distribution of Molex Coresync products.

For more information on our associates can be found at <https://www.molexc.com/about-us/ecosystem-alliance/>

### PoE Connected

#### Molex Connected Enterprise Solutions

Molex brings connectivity to the alliance, by running data and power over the same cable. Power over Ethernet (PoE) has eliminated the need for additional wiring installs, saving on costs and redundant cabling. [www.molexc.com/solutions-overview/poe/](http://www.molexc.com/solutions-overview/poe/)





CoreSync

Learn more  
about Molex

[molexces.com](http://molexces.com)

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Order No. US-MI

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