

Cisco Smart+Connected Cellular Core Node (External)



The Smart+Connected™ Cellular Core Node (EX-C) is an integral part of the Smart+Connected City Lighting solution—an open architecture-based light sensory network Internet of Things (IoT) platform that can be deployed along with LED luminaires.

The Cellular Core Node instantly converts any lighting manufacturer's LED fixture into a cellular-enabled sensory node in a light sensory network. This node provides both lighting control and cloud-based IoT services through a standard NEMA socket.

The Cellular Core Node uses a 3G cellular network for data transports that support a variety of application-specific sensors to deliver multiservice capabilities at each retrofitted and new LED luminaire.

The Core Node is offered in internal (embedded) and externally mounted Wi-Fi based versions, and in the cellular version described in this document. The Smart+Connected Cellular Core Node converts any third-party LED fixture with a NEMA socket to an advanced sensor node.

Features and Benefits

Main Features

- Multisensor wireless communication and control
- Directly mounts to the luminaire through existing NEMA photocontrol socket (in accordance with ANSI C136.41)
- Onboard GPS
- Controls power and light output of LED luminaire
- Measurement and reporting on electrical and sensor data
- Utility grade metering with 0.5% accuracy (in accordance with relevant sections of ANSI C12.20)
- Provides auxiliary power to additional devices (optional)
- Monitors status of LED luminaire and network
- Embedded antenna

Measurement and Control

The Cellular Core Node is connected to incoming AC mains and the LED driver. This direct connection provides on/off control and performance monitoring of the luminaire. Luminaire dimming control follows 0-10V DC dimming standard. Power monitoring and measurement is achieved by an onboard energy management IC. The onboard microcontroller manages data communication, sensor control, fault management, and status reporting.

Communication and Security

Communication to the device uses a standard 3G cellular network. It features highly secure, certification-based authentication for every device using TLS 128-bit encryption.

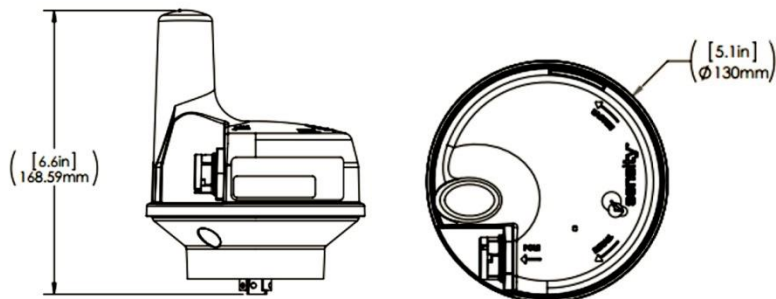
Sensors

Onboard sensors include power and accelerometer sensors. The sensor module includes ambient light, passive infrared (PIR) motion sensor, and temperature sensors (sold separately and only compatible with nodes with AUX options).

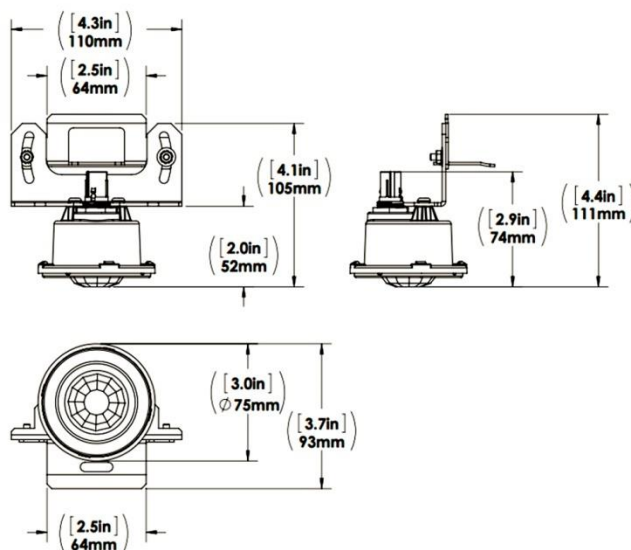
Dimensions

The following figures display the device dimensions (in millimeters).

Smart+Connected Cellular Core Node Dimensions



Sensor Pod Dimensions



Product Specifications

Table 1. Specifications

Product ID	SCS80-100-CN-EXCPA	SCS80-100-CN-EXCA	SCS80-101-CN-EXCPW	SCS80-101-CN-EXCW
Specifications	120-277V Configuration	120-277V Configuration	480V Configuration	480V Configuration
AC Input Voltage	120-277V	120-277V	480V	480V
Auxiliary Port	Yes	No	Yes	No
AC Output Voltage (Load and Aux)	120-277V	NA	480V	NA
Typical Power Consumption (no Aux. load)	2W	2W	2.2W	2.2W
Max AC Current (Total)	5A	3A	2A	1A
Max AC Current to LED Luminaire	3A	3A	1A	1A
Max AC Current to Aux. Output	2A	NA	2A	NA
AC Load Current Switching	Yes	Yes	Yes	Yes
AC Aux Current Switching	Yes	NA	Yes	NA
Dimming Control Output	0-10VDC	0-10DC	0-10VDC	0-10DC
Weight	0.9lb	0.8lb	1.2lb	1.1lb
Color (compliant to ANSI C136.41 specification)	Blue	Blue	Yellow	Blue
Operating Temperature	-30C to 55C	-30C to 55C	-30C to 55C	-30C to 55C
Water Ingress	IP65 when installed in vertical mounting position with NEMA twist lock			
GPS Accuracy	2.5m (clear open sky)			
Dimensions	6.1" height x 5.1" diameter			

Warranty Information

For information on Sensity product and services, including warranty information or returns, contact Sensity directly at:

Email: RMA@SENSITY.COM

Phone: (855) 500-SENS

Web: <http://www.sensity.com>

If a product must be returned for repair or replacement, you must obtain a Return Material Authorization (RMA) number from Sensity.

Note: Customer shall return the product at customer's expense within 30 days of receiving instructions for return. Failure to follow the return instructions shall void warranty. Customer will package equipment in a manner that is (i) in accordance with good commercial practice, (ii) acceptable to common carriers for shipment at the lowest rate for the particular equipment, and (iii) adequate to ensure safe arrival of the equipment at the named destination.

Ordering Information

The following table lists the currently available Smart+Connected Lighting Solution products.

Table 2. Ordering Information

Product Name	Part Number	Quantity in Bundle
Cellular Core Node External without AUX		
Core Node EX-C, NEMA, 3G, 120-277V	SCS80-100-CN-EXCA	1
Core Node EX-C, NEMA, 3G, 480V	SCS80-101-CN-EXCW	1
Cellular Core Node External with AUX		
Core Node EX-C, AUX Port, NEMA, 3G, 120-277V	SCS80-100-CN-EXCPA	1
Core Node EX-C, AUX Port, NEMA, 3G, 480V	SCS80-101-CN-EXCPW	1
Cellular Core Node External with Sensor Kit		
Core Node EX-C, AUX Port, NEMA, 3G, 120-277V with Sensor Pod and Sensor Mounting Bracket	SCS80-100-CN-EXCAK	1
Core Node EX-C, AUX Port, NEMA, 3G, 480V with Sensor Pod and Sensor Mounting Bracket	SCS80-101-CN-EXCWK	1
Core Node External Accessories		
Power Cable (North America), Core Node to External Sensor Pod, 4ft, 120-277V	SCS95-083-AC-ESPA=	1
Power Cable (North America), Core Node to External Sensor Pod, 4ft, 480V	SCS95-096-AC-ESPA=	1
Power Cable (ROW), Core Node to External Sensor Pod, 1.2m, 120-227V	SCS95-085-AC-ESPW=	1
Power Cable (North America), Core Node to External Sensor Pod, 2ft, 120-277V	SCS95-102-AC-ESPA=	1
Power Cable (North America), Core Node to External Sensor Pod, 2ft, 480V	SCS95-103-AC-ESPA=	1
Power Cable (ROW), Core Node to External Sensor Pod, 2ft, 120-227V	SCS95-104-AC-ESPW=	1
External Sensor Pod, Core Node EX-C, Cellular	SCS80-106-AC-ESPC=	1
Mounting bracket, External Sensor Pod	SCS95-082-AC-ESPM=	1

Cisco Capital

Financing to Help You Achieve Your Objectives

Cisco Capital can help you acquire the technology you need to achieve your objectives and stay competitive. We can help you reduce CapEx. Accelerate your growth. Optimize your investment dollars and ROI. Cisco Capital financing gives you flexibility in acquiring hardware, software, services, and complementary third-party equipment. And there's just one predictable payment. Cisco Capital is available in more than 100 countries. [Learn more.](#)

For More Information

For more information about the Cisco Smart+Connected City Lighting Solution, visit http://www.cisco.com/web/strategy/smart_connected_communities/city-lighting.html.




Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

 Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: www.cisco.com/go/trademarks. Third party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)