

ACobi-WSIN

AC Internal Itron CityEdge Mesh outdoor lighting controller

Product description

The obiWAN® ACobi-WSIN Internal Itron Mesh outdoor lighting controller works with the Itron CityEdge platform, managing over 90 million connected devices in more than 500 cities worldwide, and its provisioning tool, enabling an easy and fast deployment of individually managed light points on street lighting networks.

Main Features

- The obiWAN® ACobi-WSIN is an internal wireless module that discretely fits inside a luminaire or a lighting column
- Enables remote control and monitoring at every light point, for all lamp technologies
- It provides a robust and secure full, two-way wireless communication in the open IPv6 Itron RF mesh network, between all compatible Smart City Devices and the open CityEdge management platform
- Very low power consumption
- Dual-dimming node with 0-10V (analog) and DALI (digital) dimming auto-detect function
- Optional analog and digital inputs, with motion detection ready for Dynamic Lighting Scenario
- Asset management oriented, extended control and data exchange with DALI 2.0 LED Drivers, supporting ANSI C137.4
- Over-the-air firmware upgrades
- Automatic identification of all lamp failures reducing on-site activities
- It runs onboard astronomical clock and lighting schedules with dimming profiles
- Onboard real-time clock to prevent day burning
- ANSI C12.20 accurate energy and electrical parameters metering supporting utility billing
- ANSI C136.10 20kV/10kA extended surge protection and robust inrush protection
- Very high reliability, with 10 years warranty from factory

External Light Sensor

The obiWAN® ACobi-WSIN can be ordered with an optional external light sensor to support photocell operation.

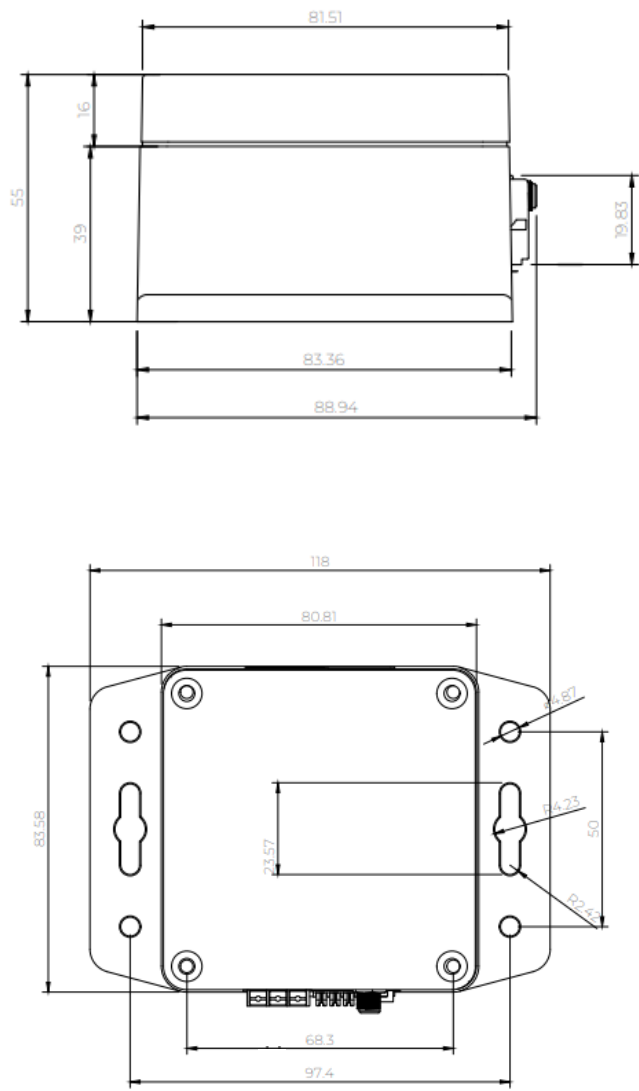
Typical applications

Outdoor installations: streets, roads and highways, decorative and heritage lighting, residential areas, road intersections, plazas, parks, outdoor industrial and logistics areas, parking lots, bridges, etc.



Mechanical Dimensions

L118mm (4.65") x W88.94mm (3.50") x H55mm (2.17")



Technical Data

Input

Supply voltage range:	100-277VAC, 50/60Hz (85-305VAC operational range)
Power consumption:	Average <1.5W
Surge protection:	ANSI C136.10 high peak surge current rating and high-energy absorption MOV

Output Control

Switched internal power relay with rated load current 10A @ 277VAC

Interfaces

Luminaire:	Dimming auto-detect 0-10VDC and DALI-2 according to IEC 62386 standard, up to 4 drivers
(Optional) Digital/Analog inputs:	Max. 24VDC, 20mA / 0-10VDC
(Optional) Light sensor:	0-64k Lux

Metering

0.5% accuracy as per ANSI C12.20
Metered parameters: Voltage, Current, Power, Frequency, Energy, Power Factor, Lamp Burning Hours, Device Up Time, Enclosure Temperature, Lamp Brightness Level, Device Boot Counter, Lamp On Cycles

Failures identification

Open Circuit, Relay Failure, Lamp Failure, Communication Failure, Cycling Lamp, High/Low Current, High/Low Voltage, High/Low Power, Low Power Factor, High Temperature, Mains Power Failure

Environmental

Operating temperature range:	-40 °C to +70 °C
Humidity:	95% RH, non-condensing
Storage temperature:	-40 °C to +85 °C
Salt mist test:	IEC 60068-2-11 (96 hours)

Mechanical

Dimensions:	L118mm (4.65") x W88.94mm (3.50") x H55mm (2.17"), including flanges and connectors
Weight:	230g
Degree of protection:	IP20

Housing

ABS, black
UL94 HB

Warranty⁽¹⁾

10 years

Reliability data

>1900 FIT (@25°C, FIDES 2009)

Itron CityEdge Network

Radio Frequency:	865-880 MHz – Europe, 902-928 MHz - North America, 902-907 MHz / 915-928 MHz – Brazil, 915-928 MHz – Australia, 921.5-928 MHz - New Zealand. Approvals: ETSI EN 300 220-1, FCC 15.247, Industry Canada RSS-210, ANATEL, AS 4268/ ACMA, NZS 4268/GURL
RF Communications:	Data Rate: up to 300kbps mesh networking, Automatic data routing with self-configuration, auto- healing & redundant uplinks, Spreading Technique: FHSS (Frequency Hopping), GFSK, Transmit Power: up to 1 W, Emission Designator: 250KF1D, Receiver Sensitivity: -98 dBm for 10% PER
Protocols/Security:	Addressing: IPv6, Protocol: IEEE 802.15.4g (WI-SUN Certified), Security: Secure Hash Algorithm 256-bit (SHA-256) and RAS-1024 or ECC-256, Encryption: Advanced, Encryption Standard (AES-128 or AES-256), Authentication: ECDSA & RSA Signatures, Key Storage: Secure NVRAM with tamper detection and key erasure

Certifications⁽²⁾

DALI-2, TALQ

Approval marks⁽²⁾



Installation

Can be installed inside a lighting fixture or column. It possesses an external antenna that has to be routed to the outside of the fixture or column

- (1) Warranty subject to obiWAN Terms & Conditions
(2) Approval pending