

Urbana RFTN Module



Born to be smart

Urbana RFTN Module is a Plug&Play control device for general lighting applications. The device incorporates the multifunctional control unit which is able to track power parameters and set operating values. This board is a plug-and-play solution for integrating any luminaire into Urbana IoT Platform.

Streetlights are no more simple lights, they are IoT end devices with some smartness inside.

The device deploys LoRa® radio technology for last mile communication. This innovative low-power and long-range technology is used by the local controller for communicating with Urbana Lamps. It operates under LoRaWAN® 1.0.2 standard with coverage radius up to 5 Km for indoor scenarios and up to 15 Km for outdoor. LoRa® technology provides the best performances for radio communication in terms of reliability, scalability and obstacles penetration with low power consumption. The maximum power consumption is 19 dBm with 153 dB of link budget and high sensitivity of -138 dBm.

Best in class for energy efficiency.

Adapt current flow according to physical parameters of the lamp.

Customize power and light level dynamically and in real-time to the preferred power level.

Real-time optimization through Urbana IoT Platform.

All lamps, thanks to Urbana RFTN Module, can be programmed and reprogrammed whenever needed with a personalized lighting plan so the lamp will shine according to the requirements.

TECHNICAL SPECIFICATIONS

Mechanical

Housing:	Solid case
Material:	Plastic
Dimensions (mm):	85 (D) x 95 (H)
Mounting:	Luminaire
Connectors:	NEMA C136.41

Electrical

Input Voltage:	85~265 VAC, 50/60 Hz
Input power (max):	5W
Load power (max):	350W
Load Inrush current (max):	100A

Environmental

Operating Temperature:	-40/+70 °C
Storage Temperature:	-50/+80 °C
Operating Relative Humidity (max):	100%
IP Rating:	IP65
Certification:	CE** , RoHS

Average lifetime

90.000 hr @ Ta=40°C
 45.000 hr @ Ta=50°C

Interfaces and Protocols

Control output interface:	1-10V, 0-10V
Navigation:	GPS/GLONASS
Radio Interface:	LoRa®
Protocol:	LoRaWAN®

* On request

** Under processing

Urbana products are continuously evolving. Urbana reserves the right to change technical and formal specifications without any public advice.

TECHNICAL SPECIFICATIONS

Functions and monitoring parameters

- Power consumption
- Active power
- Reactive power
- Driver status
- Dimming
- Geolocation (GPS version)
- Driver current
- On/Off

Configuration

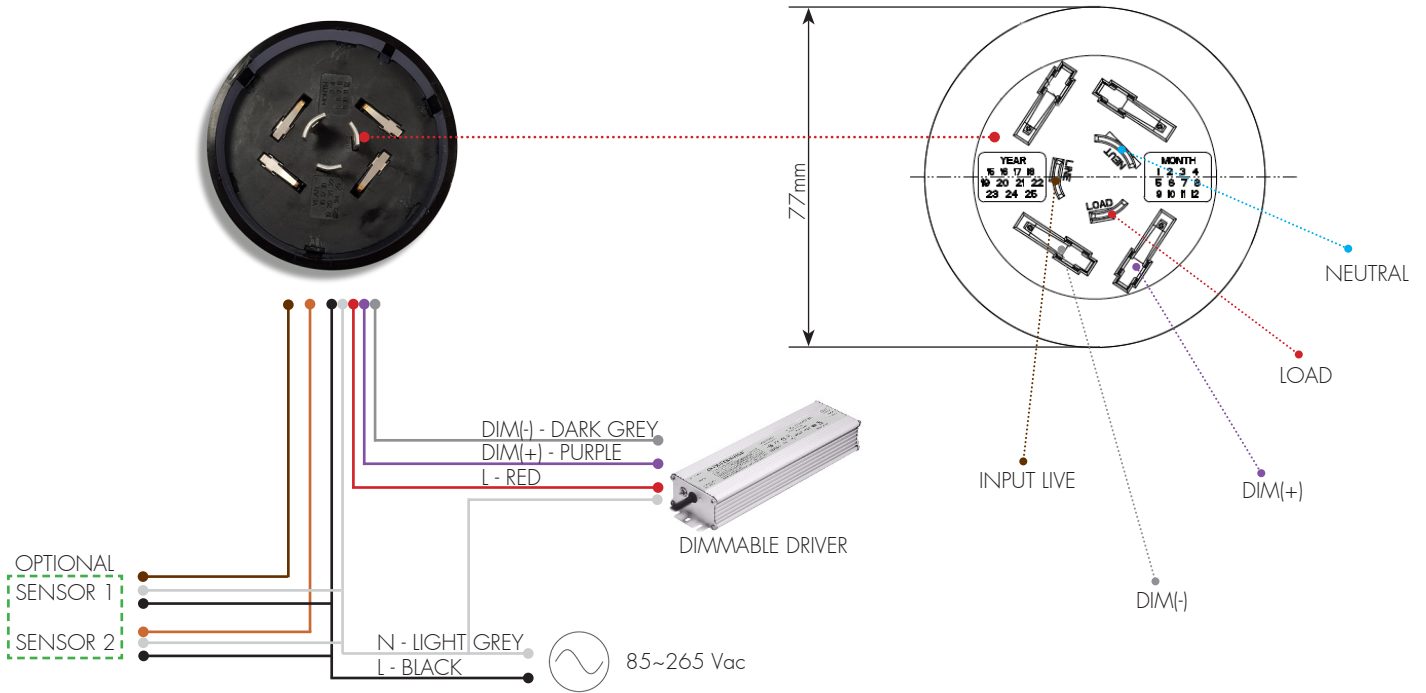
Plug&Play using Urbana IoT Platform

LoRa™ interface

Frequency	LoRaWAN® 1.0.2 Regional Parameters
Modulation	LoRa®
Stack	LoRaWAN® Certified 1.0.2
Sensitivity	-138 dBm (SF 12; SB 125 kHz, CR 4/6) -134 dBm (SF 12; SB 250 kHz, CR 4/6) -128 dBm (SF 12; SB 500 kHz, CR 4/6)
Output power	+19 dBm
RF Data rate	0.24 to 37.5 kbps
RF Range	up to 15000 m (line of sight)
Transmission current	118 mA (@3.0 V/+19 dBm)
Receive current	11 mA
Stand-by current	<1.8 uA

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CONNECTION SCHEME - NEMA C136.41



PRODUCT CODE

Products are identified by the following notation.

PRODUCT	FREQUENCY	FIRMWARE	GPS
RFTN	868: 863-870 MHz 915: 902-928 MHz	EU:EU868 US:US915 AU:AU915** AS:AS923 IN:IN868**	N: w/o GPS S: GPS

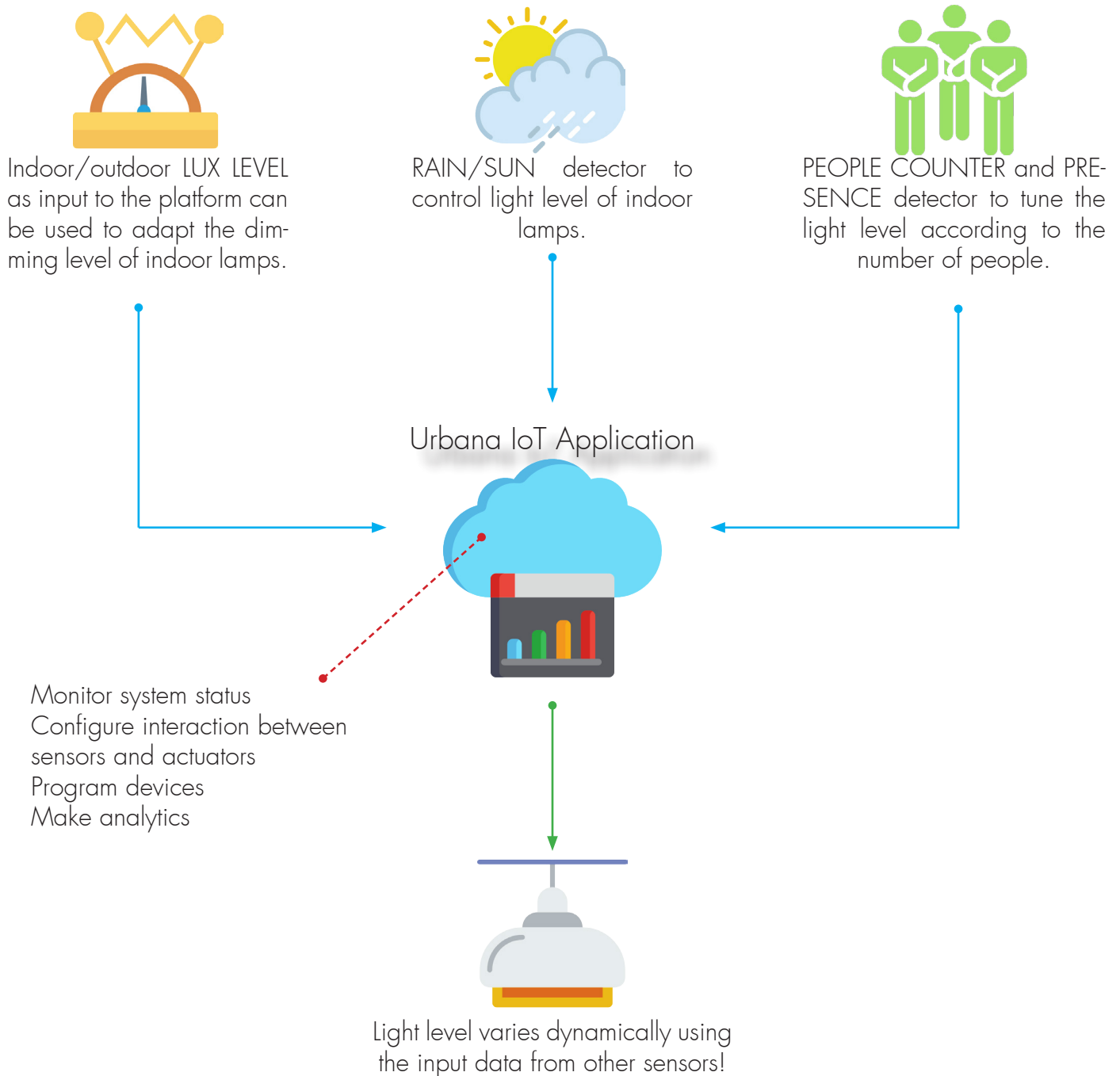
ex. **RFTN868EUS**

Urbana Smart Solutions Pte Ltd
140 Robinson Road, #08-02 Crown @ Robinson - 068907 Singapore
Tel. (+65) 62255055 Fax. (+65) 62255303

www.urbanasolutions.net

URBANA IoT PLATFORM

Urbana RFTN Module is compatible with Urbana IoT Platform, a platform that integrates lighting service with a lot of Smart services like video surveillance, environmental sensors. The application allow to quickly integrate input data from several sensor to be used to properly tune the lighting system. External sensor and device mounted sensor can be used to adaptively change the light level.



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