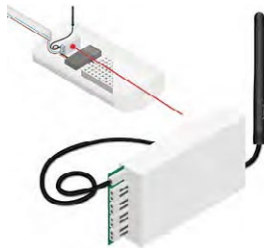# CITYOWL2

CITY MANAGEMENT SYSTEM

COMPONENTS

CityOwl 2 Controllers

Controllers are designed to be built into new luminaires

FEATURES:
• Autonomous operation based on predefined schedules and light level sensors.
• Individual remote management of street luminaires with electronic ballasts and light source power up to 400 W.
• On/off control for all types of street luminaire and dimming for LED luminaires.
• Bandwidth efficiency and minimal communication requirements.
• Dedicated secure memory for storage of encryption keys.
• Monitoring of a wide range of electrical parameters: Wh, VARh, V, W, A, VAR, PF, and frequency.
• Advanced data synchronisation and notification systems.
• Battery operated RTC protected against unforeseen grid faults.
• External infrared interface for security key transfer and local configuration.
• Over The Air (OTA) firmware update.

Lighting Panel Control & Monitoring Module

The Lighting Panel Control & Monitoring Module provides autonomous lighting panel operation and carries out measurements and analysis of various electrical parameters on the street lighting grid.retrospectively.

FEATURES:
• Autonomous operation based on pre-defined schedules.
• Monitoring of a wide range of electrical parameters on the street lighting grid: PF, V, current, frequency, active/reactive apparent power, and daily active reactive energy.
• Configuration options: current transformer ratio, voltage/power thresholds, and daytime/nighttime consumption thresholds.
• Reports errors and malfunctions to the Network Server in real-time: under/over power, under/over voltage, phase failure.
• 2 x digital inputs.
• 1 x dry contact relay output.

CityOwl 2 Gateway

Gateway is the cental communication device in a LoRa™ network, providing a radio link to any compatible Node within range. There are several manufacturers of LoRaWAN™ compatible base stations. Gateways are compatible with most solutions on the market.

FEATURES:
• Can connect up to 5000 Nodes.
• Operates over a 3–5 km range (dependent on urban density).
• Functions autonomously for up to 20 years with battery operated devices.
• Operates across a wide spectrum of radio frequencies to ensure global compatibility: 433 MHz, 868 MHz, 915 MHz, etc.
• High inteference immunity thanks to communication with multiple devices on different bands and channels and using various spread factors, all without interfering with each other.
• Highly secure certified Transport Layer Security (TLS) encryption

Network Server

The Network Server is the central, secure home of ANALYTICS SOFTWARE. The software/server integrates perfectly with Controllers and Lighting Panel Control & Monitoring Modules and is also compatible with other open-protocol LoRaWAN™ hardware solutions.

FEATURES:
• Manages and prioritises all network elements, radio communication, and information flow.
• Constantly monitors and evaluates signal-to-noise ratio (SNR) and selects the best Gateway to deliver the message to every Node.

• Each Controller and Lighting Panel Control & Monitoring Module must be registered with a local LoRaWAN™ network operator to be able to connect to ANALYTICS SOFTWARE. CityOwl 2 devices are already integrated with most public LoRaWAN™ operators.

SLe®
smart lighting engineering