

An aerial night view of a city, showing a grid of streets and illuminated buildings. The lights create a pattern of white and yellow against the dark background of the city.

Citintelly

LIGHT FOR THE SMART CITY

SMART LIGHTING SYSTEM

Citintelly offers complete solutions for smart cities making it simple to control and monitor all luminaires in one place on map.

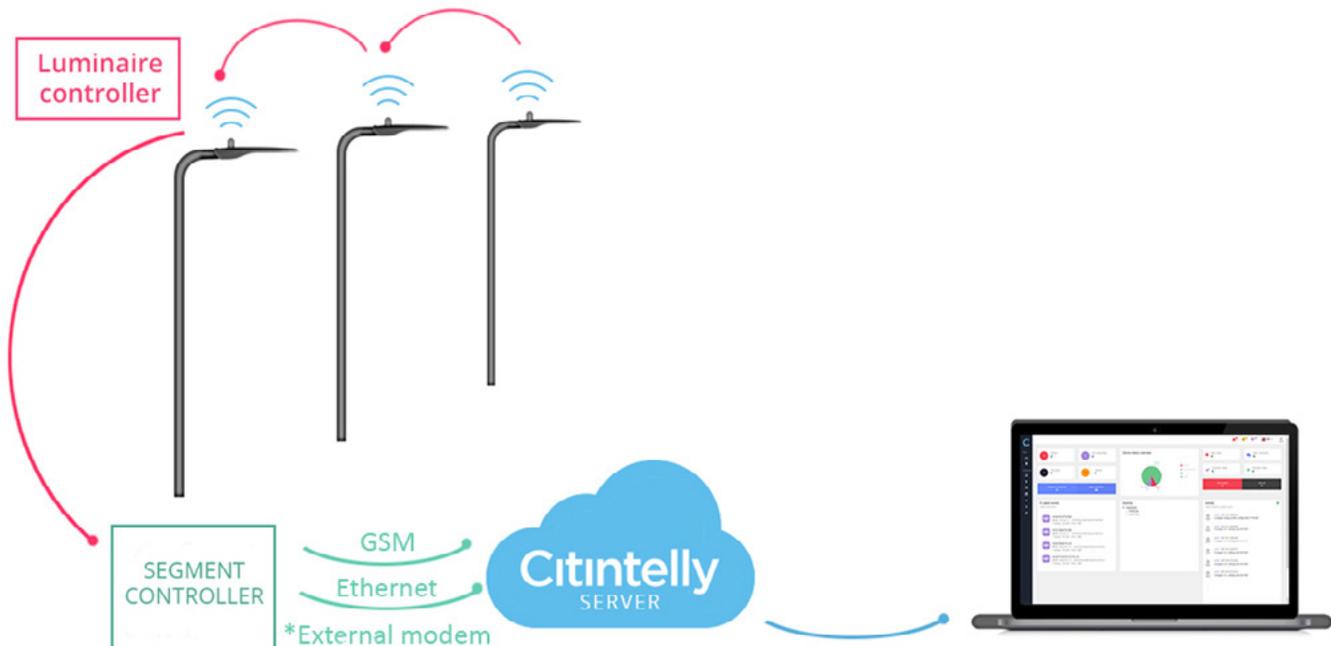


How does it works

Citintelly clients are using highly interactive and user- friendly interface via web – browser to monitor/control/analyze/configure outdoor lighting networks.

Segment controller (once it is configured) stores all required configuration about energy-profiles/scenes/groups/lamps and can operate without Central Management System (CMS).

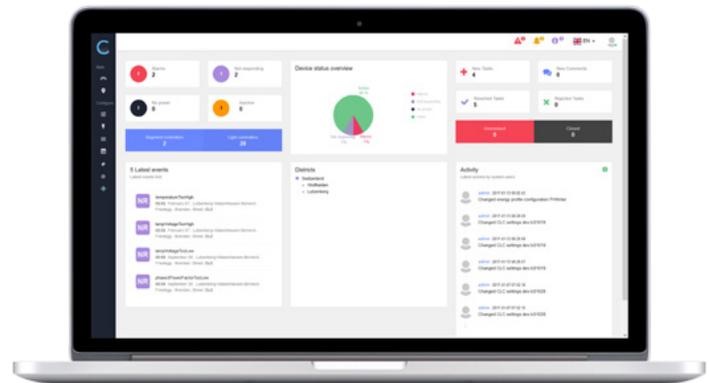
Luminaire controllers are configured to organize mesh-type network with self-healing features. Segment controller can reach farthest luminaire controller over big distance due to multi-hopping protocol.



Central Management System

CitIntelly has developed unique multi functional cloud base street lighting central management system (CMS). It is a perfect solution to manage large scale outdoor lighting networks in order to control and monitor street lighting infrastructure while saving energy and reducing maintenance costs. Lighting CMS is just the first step of more sophisticated Smart City platform development process. CitIntelly CMS is designed to support TALQ specification. The purpose of using TALQ specification is to ensure the ability to control different Outdoor Lighting Networks (OLN) from different vendors thus cities will be free to choose various TALQ compatible OLN automation suppliers while using Citintelly CMS.

- * Lighting system visualization in the city map
- * Lighting system regulation and selective dimming functionality
- * Luminaire grouping and configuration
- * Luminaire problem detection (possibility to go to the object with actual component for replacement)
- * Luminaire inventory management
- * Lighting system budget control
- * Stored and streaming data analysis module
- * Task management module allows chatting between users to solve problems



Segment controller

Citintelly Segment Controller receives commands from Citintelly CMS via GSM, Ethernet and transmits tasks to Luminaire controllers via radio frequency communication.

It sends commands to large number of Luminaires covering long distances.

- * Flexible control programs based on astronomical/Photocell/sensor data
- * Communication over 3G, ethernet (with CMS) and 868 MHz (with Luminaire Controllers)
- * External RS232/485 communication interfacing Electrical Meters or/and slave modules
- * Built-in astronomical calendar based on GPS coordinates
- * 4 relay outputs and 4 digital inputs
- * Firmware update over the air
- * -40° ... +75° operational temperature
- * DIN rail mounting case (90x82x22mm)



Luminaire controller

Citintelly Luminaire Controllers is wireless mesh-networking device that uses 868 MHz for communication with Segment Controller and other luminaire controllers. It is delivered in various configuration to meet the needs of your application.

Lighting fixtures are controlled over DALI or 1-10V interface. In case of DALI, detailed monitoring of LED drivers is also possible. Luminaire controller feeds data to Segment Controller about current status of LED lamp and execute commands to perform various energy profiles.

- * 868 MHz based communication featuring self-healing/multi-hopping mesh-type networking protocol with AES128 bit encryption
- * Combined DALI/1-10V control output
- * External sensor voltage supply 12/5 V and over DALI line
- * 2 relay outputs (NO/NC) and 2 digital inputs
- * Energy meter on AC side (I, U, P, Q, S, PF) and data from LED driver (LED current, voltage, power, temperature, minutes of operation)
- * Firmware update over the air via CMS application



Surge protector

- * Two port configuration: series or parallel connection
- * Luminaries insulation classification: Class I
- * Dynamic thermal disconnection
- * Failure indication

Installation

Designation according to EN 61643-11

Network configurations

Power system

Nominal voltage AC 50-60 Hz (L-N)

Load current AC 50-60 Hz

Maximum continuous operating voltage (L-N)

Maximum continuous operating voltage (L-GND)

Maximum discharge current (8/20)

Nominal discharge current (8/20)

Voltage protection level (L-N)

Voltage protection level (L-GND)

Maximum back-up fuse

Combined discharge voltage (1,2/50)

Short circuit withstand

Response time (L-N)

Response time (L-GND)

Residual current IGND

Flammability class

Temperature range

Relative humidity (Non-condensing)

L-N-GND

Type II, Type III

TT, TN, TNC, TNS, TNCS

AC 47.. 63 Hz

Unom = 230 V AC

IL = 10 A

Uc(L-N) = 320 V AC

Uc(L-GND) = 420 V AC

10 kA

5 kA

Up(L-N) = 1.5 kV

Up(L-GND) = 1.8 kV

25 A

Uoc = 10 kV

ISCCR = 1000A

25 ns

100 ns

<0.01 mA

V-0

-40 °C ... +80 °C

5 ... 95%



Benefits

- * Budget restriction feature that allows to monitor actual cost of electricity
- * Energy savings based on smoothed dimming curve
- * Automatic monthly report generation
- * In system alarm management task tool that allows to assign specific user to repair the problem and monitor activities

Certificates

- * ENEC safety and EMC conformity certificates confirms Citintelly luminaire controller high quality
- * RoHS restricts the use of six hazardous materials found in electrical and electronic products



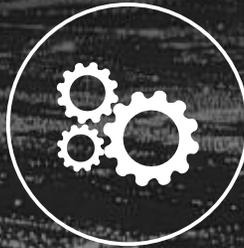
RoHS



DEKRA



Launching
Citintelly System



Configurating
Regimes



Doing
Trainnings



Problem
Solving



Everyday
Support

Citintelly

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