



Smart city & smart lighting

Citylone, manufacturer and specialist of urban lighting management solutions, enlarges its management offer with a **radio range**.

Citylone allows **public lighting management** in DALI (wired, PLC, radio) and multi-protocoles (LonWorks, LoRaWAN, Wirepas, Bluetooth) to fit your needs.



Key strengths

- Opened protocols promoted by independent alliances made by different providers with equivalent solutions
- Large radio range adapted to all needs : new, renovation, detection, dynamic lighting...
- Easy deployment thanks to smartphone applications



CONNECTED SOLUTIONS RADIO



Citylone's radio solutions help you to



reduce energy consumption (dimming, extinction...) and **save money**



adapt lighting to city use (programmed schedules, detection at each pole...)



protect biodiversity thanks to lighting programming



detect failures and **follow consumptions**



connect the city and include the grid of public lighting network to create your own **smart city**



enhance city attractiveness thanks to the highlights of public lighting

CITYLONE VALUES

- **FRENCH DESIGN AND MANUFACTURING** : products designed and manufactured in France, from electronic card till end product
- **QUALITY** : products with only robust components, protective coating
- **OPENNESS** : products using standardized communication protocols to be able to communicate with products from other manufacturers
- **SUSTAINABILITY** : products that can be modified in FOTA (Firmware Over The Air) with a 5 years standard exchange manufacturer warranty
- **SIMPLICITY** : products that integrate autonomously in their ecosystem and interactives thanks to dedicated smartphone applications

LORAWAN PROTOCOL' SOLUTION RANGE

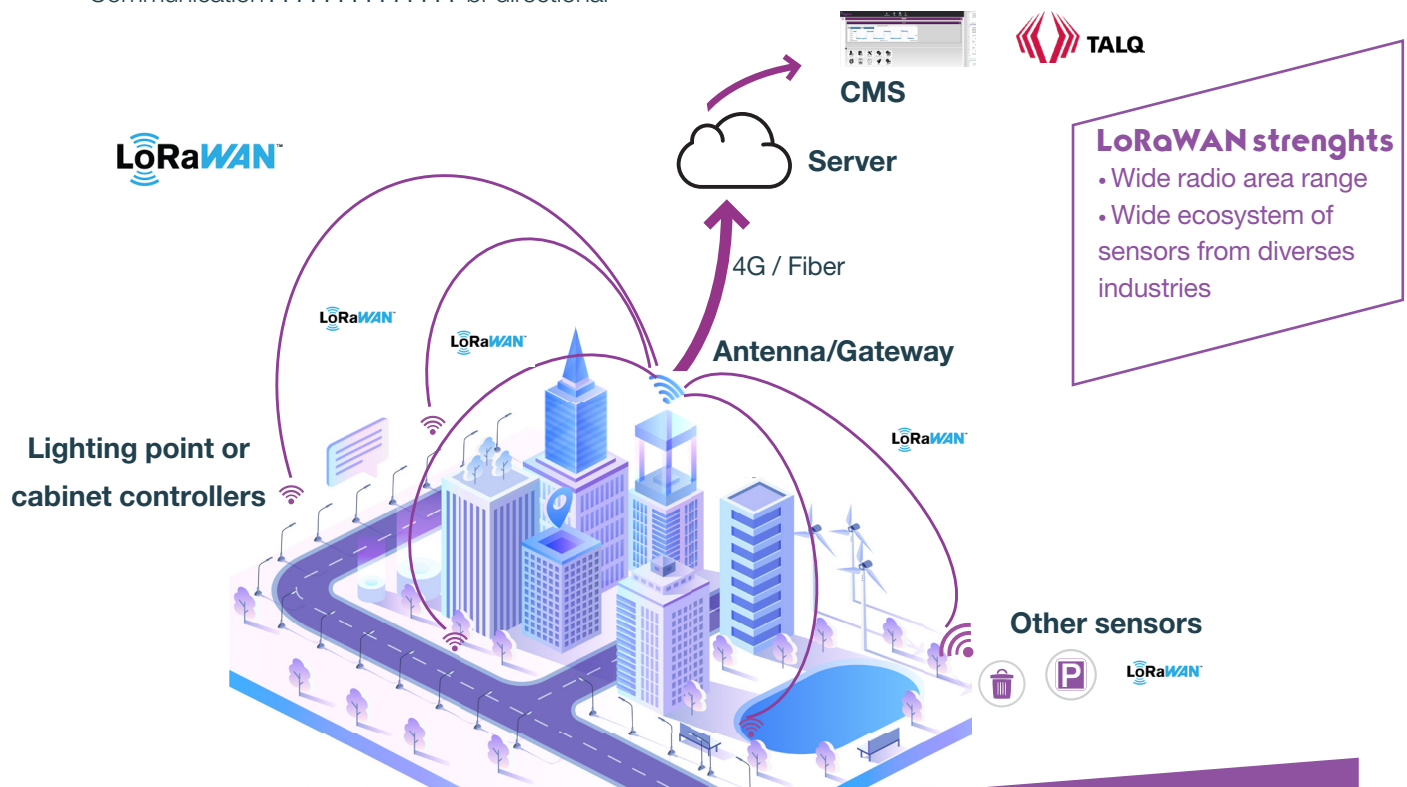
WHAT IS IT: LoRaWAN is a **Low Power, Wide Area** networking protocol designed to wirelessly connect operated things to a network. LoRaWAN is a **standardized protocol** in which the object are connected to the network through **gateways**.

TARGET: LoRaWAN range is aimed to collectivities who wish to implement a global supervision. Once the LoRaWAN network deployed, you can get sensors who collect information for each need : public lighting, car park, waste management...

HOW: The bi-directional communication is made **from one lighting point or a cabinet to the antenna/gateway (star topology)**. Antenna/gateway then sends information to cloud in 4G, fiber...

Data are transferred to be treated by server (core) that can also collect data from **other sensors** using the same protocol (waste, car park...)... **CMS** (Central Management System) allows to follow lighting park status and manage it remotely: programming, history, consumption management, maintenance optimization... All products can be **configured locally through Bluetooth** thanks to a free application under Android and iOs.

- Transmission range in free field 15km - in cities 2km
- Security AES128 double encryption
full message and useful data
- Network type private or operated
- Communication bi-directional



USE CASES

- **Radio network shared with other city applications:** lighting management can be shared with other applications (car parks, waste management, environment...) when a LoRaWAN radio network is deployed. One unique CMS system is installed to make a multidisciplinary management of the applications of the city.
- **Management of spares luminaries:** LoRaWAN radio allows remote management of lighting points spreaded on different cabinets with a minimum material investment.



WIREPAS PROTOCOL' SOLUTION RANGE

WHAT IS IT: Wirepas technology allows a **decentralized radio communication**: objects are **connected together** and relay information till an external communication gateway.

TARGET: This technology allows to get all the benefits of powerline technology connected solution on a radio technology. It also permits to work with medium voltage networks or to collect data coming from sensors powered by batteries.

HOW: Communication is made between the equipments (**mesh communication**) and then towards a Wirepas gateway; this gateway transfers information to cloud in 4G, fiber... Mesh communication allows **dynamic detections**, each lighting point sending information to its neighbours when a detection is noticed. Furthermore, if a point is defective, the network reorganizes itself automatically to find a new communication way.

Data are gathered to be treated by a **CMS**. It allows to follow carefully lighting park status and to manage it remotely: programming, history, consumption management, maintenance optimization... All products can be **configured locally through Bluetooth** thanks to a free application under Android and iOS.

- Transmission range free field 300 m
- Security AES128 encryption
- Type of network private
- Communication bidirectional



Wirepas strengths




- Mesh communication
- Interactions between nodes (eg: detection)

Lighting point controllers

USE CASES



- **Dynamic lighting management** : mesh communication allows detection information exchange between close lighting points to manage lighting according to the progress of pedestrian, cyclists...
- **Management of medium/high voltage** independently from electrical distributions
- **Gathering datas** from other sensors in the city, even from battery powered equipments

RADIO RANGE SOLUTIONS REFERENCES

CENTRALIZED MANAGEMENT	SLB-LR (in cabinet)	SLB-WP
		
Communication		
Failure detection Remote metering	✓	✓
Programmable integrated astronomical clock	✓	✓
Integrated gateway		✓

LIGHTING POINT MANAGEMENT	SL22 + SL-CONNECT Antenna	SL32 + SL-CONNECT Antenna	NEMA	ZHAGA
				
Radio 	SL22-LR	SL32-LR	SL-NEMA-LR	SL-ZHAGA-DP-LR
Radio 	SL22-WP	SL32-WP	SL-NEMA-WP	SL-ZHAGA-DP-WP
Installation	Pole	Pole	Lantern	Lantern
Connection	Wires + terminal blocks	Terminal blocks	Nema 7 pins	Zhaga book 18
Lighting point dimming	✓	✓	✓	✓
Failure detection	✓	✓	✓	✓
Festive lighting management		✓		
Detection management	✓ *	✓	✓	✓ (integrated sensor)

* Compatible only with presence sensors SL-DP001-EDA / SL-DP002-EDA

SENSORS	SL-DP001-EDA 	SL-DP002-EDA 	Sensor from the market
Type and powering	Fixed sensor Powered by controller	Adjustable sensor Powered by controller	with dry contact output Please consult us

For more information regarding controllers and sensors, please refer to specific documentation of each product.



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