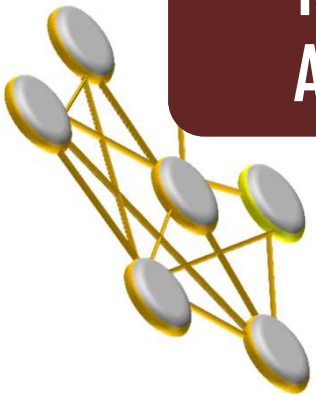
ROS
iluminación

intelligent

Smart Lighting for Smart Cities



REMOTE MANAGEMENT AND CONTROL SYSTEM

REMOTE MANAGEMENT AND CONTROL

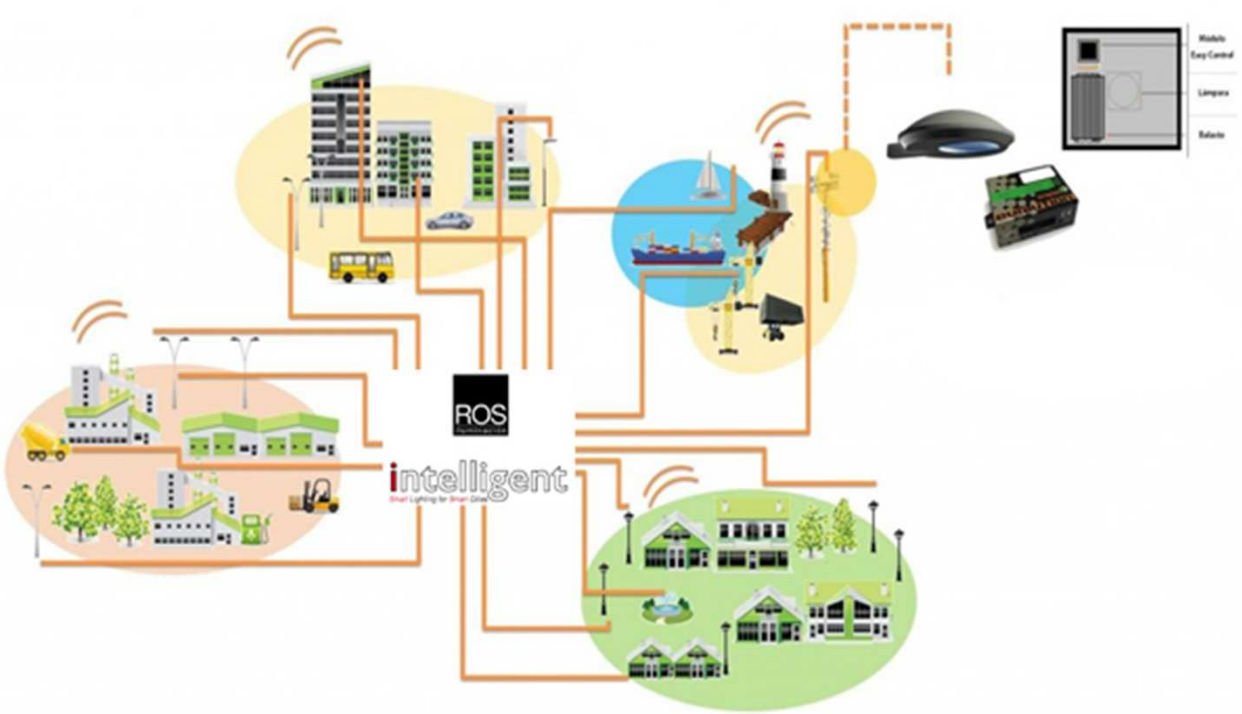
What we offer?

ROS Iluminación develops, designs, innovates and manufactures electronic equipment for managing electrical networks. We Integrate our **remote lighting management system point-to-point**, with a priority that is the **universality** of systems.

It relies on the use of new technologies, which enable total control of the point of light independently of the design of existing networks, creating innovative lighting logic, without requiring civil works and providing **intelligence to the network** by **integrating sensors .**

OTHER PRODUCTS AND SERVICIES

- Support and assistance
- Collaboration developing Smart Cities
- Singular projects and customized solutions



REMOTE MANAGEMENT AND CONTROL

Areas where we work

We work on all types of lighting: commercial, residential, stadiums, parks, historic areas, sports centers, gardens, cultural centers, playgrounds, boulevards, pedestrian streets, roundabouts, bike lanes, roads, highways, overpasses, tunnels, bridge, parking and others.

Additionally our system can also be used in indoor enclosures, factories, ports, etc.

All these sectors are easily to combine with remote management system with sensing of various kinds: detectors, air quality, light meters, etc..

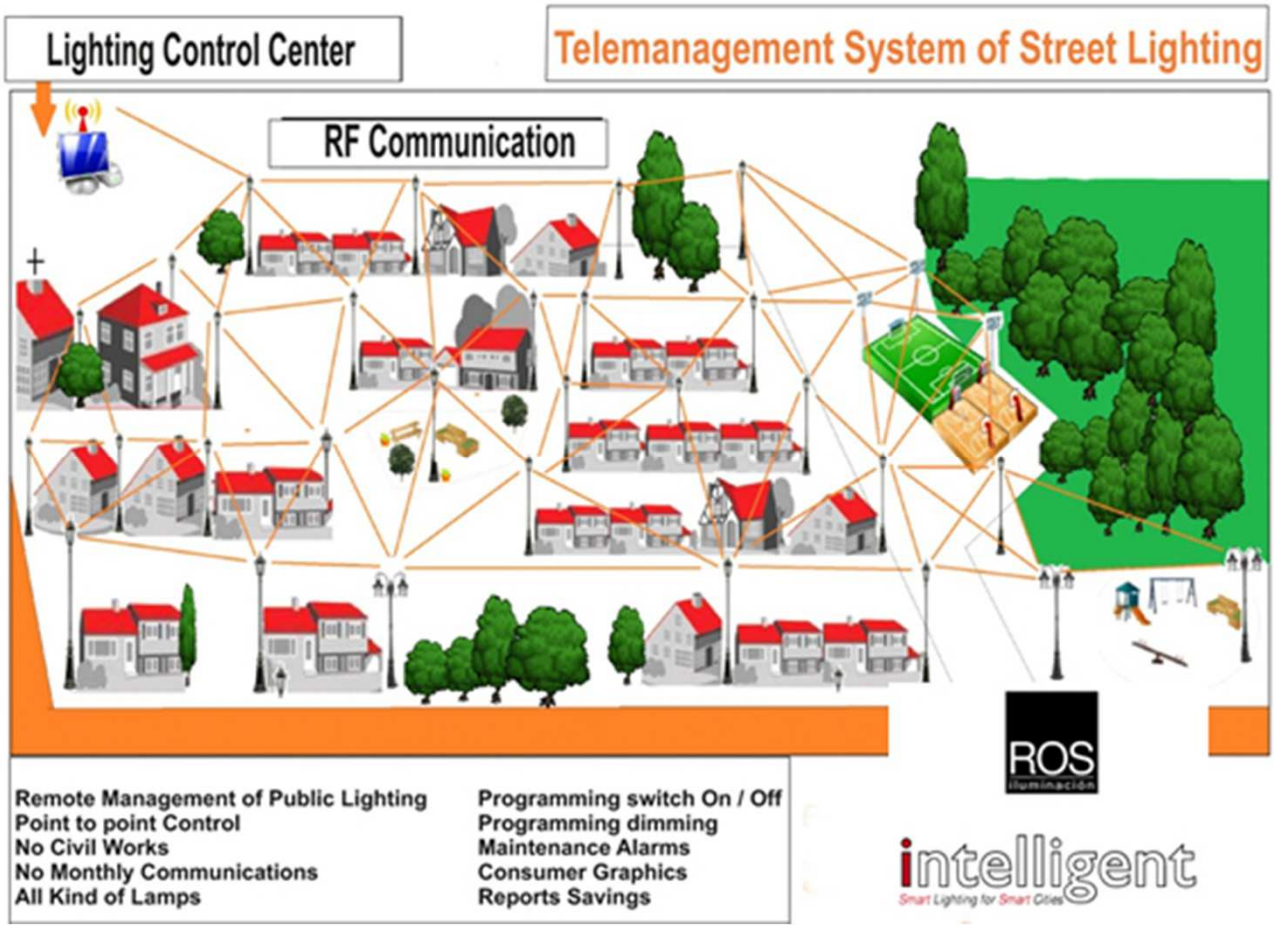
REMOTE MANAGEMENT AND CONTROL

Street Lighting Solution

ROS Intelligent is a management platform that allows electricity networks remotely manage any element associated with them. In the case of public lighting network allows us to manage lighting infrastructure of the city without relying on hierarchical fashion switchboards.

This allows us to design a system with a logical arrangement for the management of public lighting, based on the needs of the city without relying on classical configurations, we could say that this is the A la Carte Menu lighting.

It is a proposal for comprehensive and versatile for public lighting efficiency, is a product that is designed to meet the needs of energy savings that are currently suing and also offering the added value of complementary services for the installed network.



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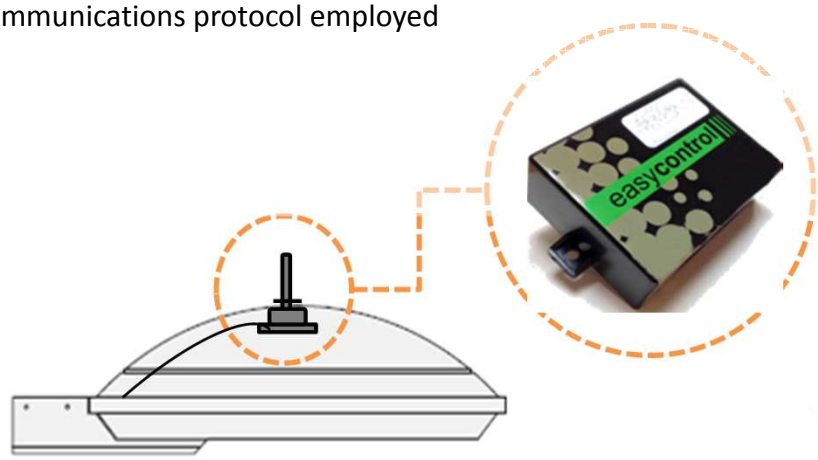
REMOTE MANAGEMENT AND CONTROL

Street Lighting Solution

- Easy Control Module Control
- Intelligent mesh
- Dimmable 1-10V or DALI
- Multiband Radio Frequency Communication
- Lighting Control Software
- Android Application Geoposition Auditor
- Integration of smart sensors
- Interoperable with other systems and independently of the network communications protocol employed



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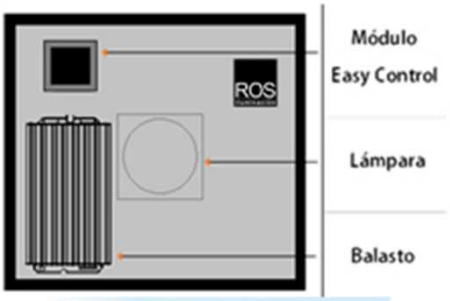
REMOTE MANAGEMENT AND CONTROL

Street Lighting Solution

The ROS Intelligent System is a *universal solution* that can be used with any technology, allowing technological change between them without changing the control module.

Universal System



REMOTE CONTROL

- Control Module

+

BALLAST

- Ferromagnetic
- Double level
- Electronic adjustable
- LED drivers
- Induction

+

LAMP

- Sodium vapor
- Metal halide
- LED
- Induction
- Fluorescent
- ...

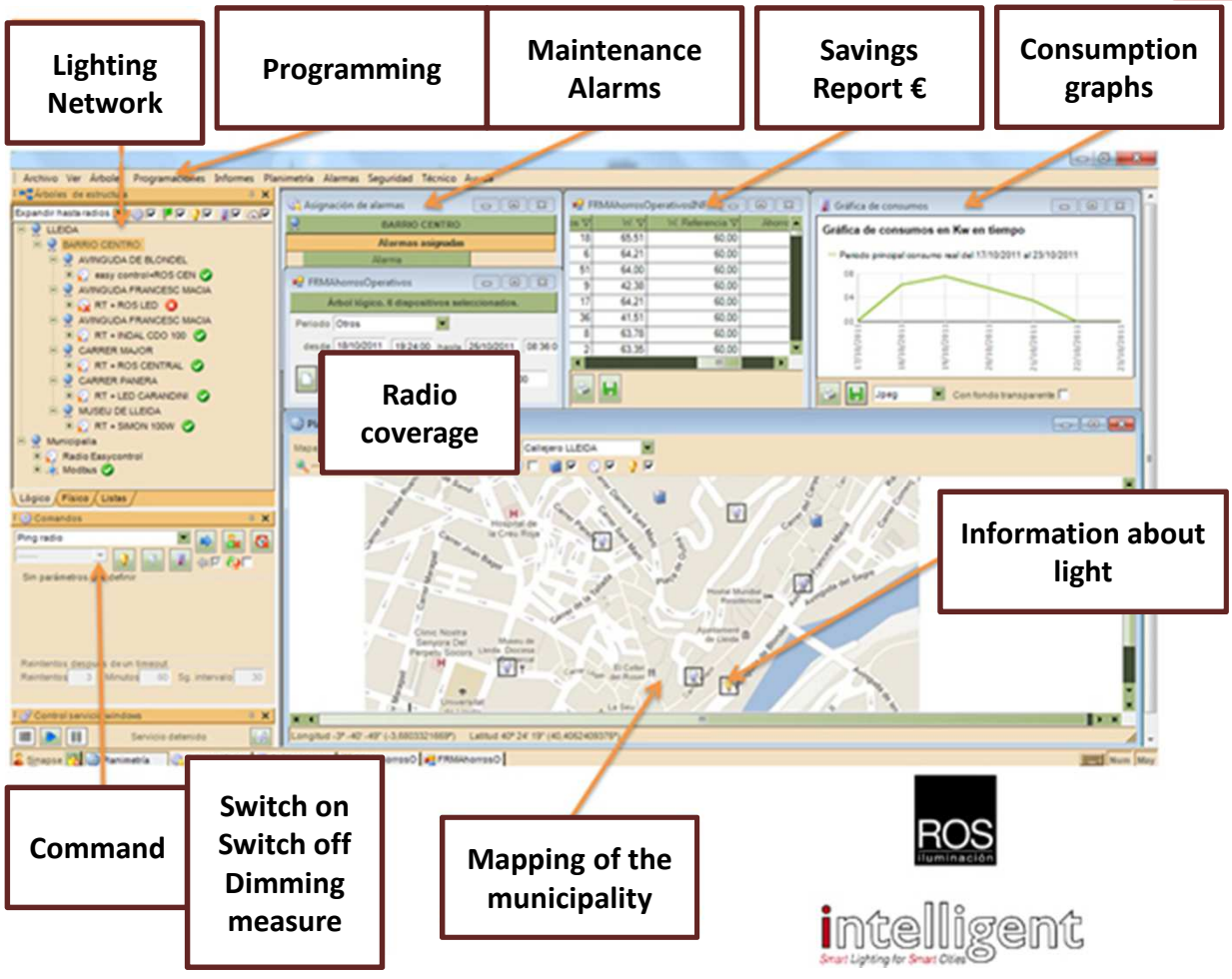
The structure of the system requires no accessory items headend, hubs and gateways. Furthermore, do not need other costs such as communications GSM/3G

REMOTE MANAGEMENT AND CONTROL

Street Lighting Solution

The **Control Software** allows control from the center to act on each point by regulations brightness, control, distance measurement parameters, instantly and unitarily on each point of all elements associated control equipment (lighting, elements as decorative Christmas wreaths, sources of irrigation, etc. ..) in real time monitoring each system element.

- Software developed under international standard
- Works with different computers without adapting
- Compatible with other communications bridges without walkways.



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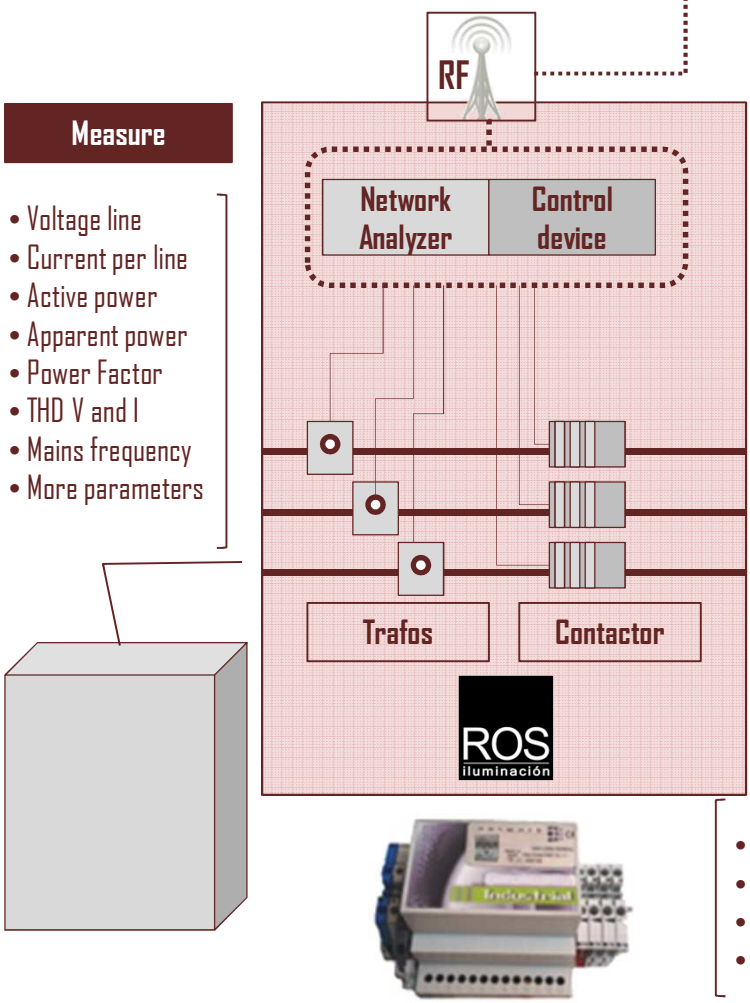
REMOTE MANAGEMENT AND CONTROL

Street Lighting Solution

The intelligent system in Lighting box offered by ROS Iluminación , optimizes the management of each installation, allowing us to act and monitor in real-time consumption and incidences of network efficiently:

- Remote Management lighting box
- Schedules on and off circuit
- Measures of consumption in real time
- Alarm and Fault Management
- Consumer reporting and maintenance



- Control Module
- Communications
- Din rail format
- Digital inputs and outputs

The conversion Control System in boxes intelligent lighting, is expandable to a point-to-point control using a simple integration of electronic ballasts, RF-controlled radiofrequency BPR.

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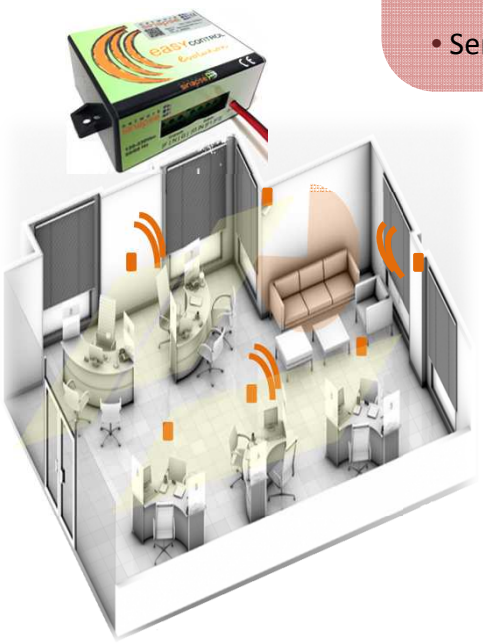
REMOTE MANAGEMENT AND CONTROL

Interior lighting Solution

The command center is the engine of the application, the software installed allows from a computer station manage the entire city.

- Pre-Installed software.
- It is customizable for each new installation based on customer needs.
- It has information and control over all points of the facility.
- It is accessible remotely if it is equipped with an Internet connection.

- Telemanagement lighting
- Turned on and off Settings
- Sectorisation offices
- Brightness Sensor regulating
- Sensors corridors presence



REMOTE MANAGEMENT AND CONTROL

Interior Lighting Solution

- **Sectorization lighting**

An RF remote management system allows point-to-point control interior lighting, increasing or decreasing lighting according to your demand.

- **Programming of lighting**

Using the Control Software, lit schedules and shutdowns are done to avoid unnecessary consumption after hours.

- **Presence sensors**

Installing occupancy sensors in corridors, toilets and walkways illuminate these areas only if the presence or movement of people

- **Sensors quality environment**

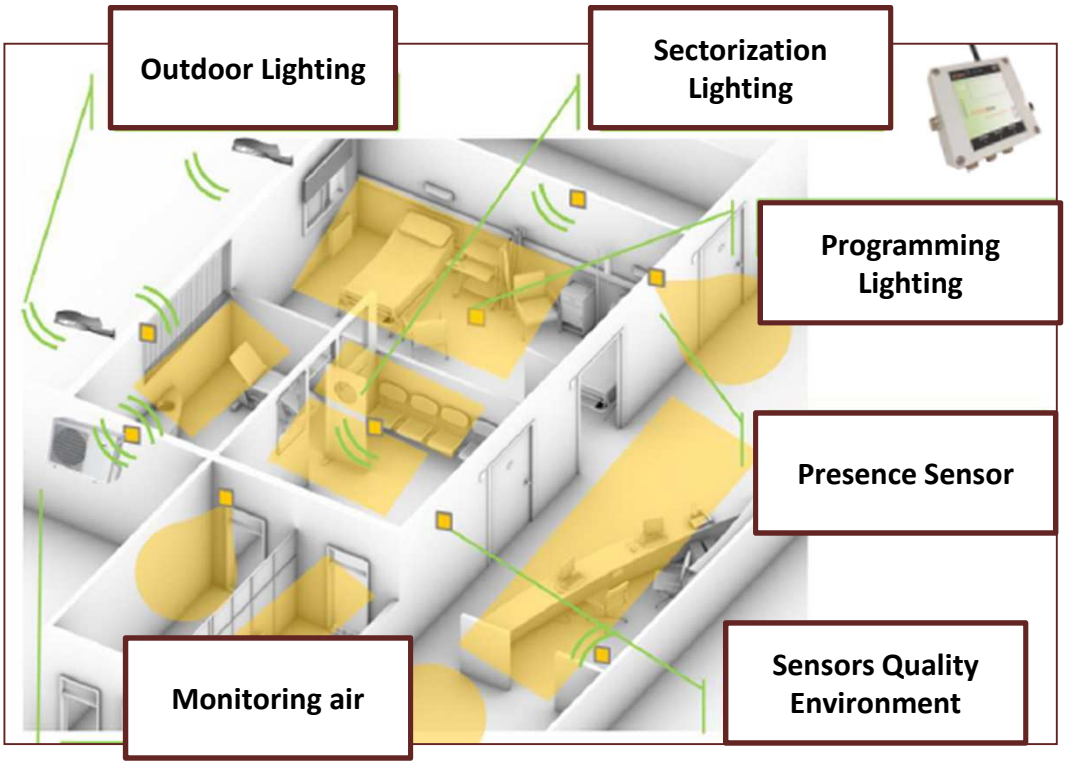
The control modules allow the integration of smart sensors such as humidity, temperature, gas ... to track and manage real-time environmental parameters in the center.

- **Outdoor Lighting**

The light management is global and can perform inside and outside of the center according to the schedule of the center.

- **Monitoring air**

Managing consumption of air conditioning with alarms according to the selected criteria.



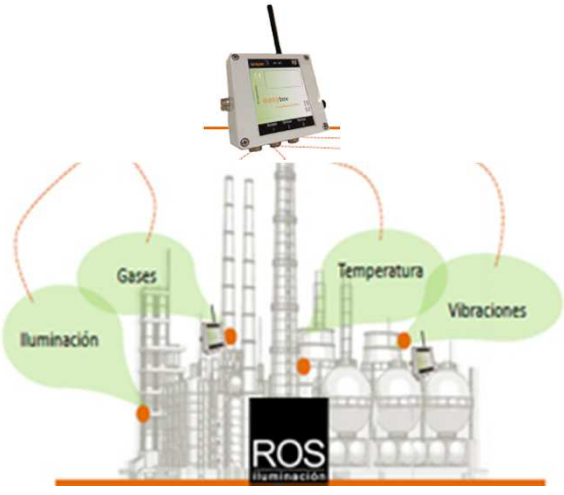
REMOTE MANAGEMENT AND CONTROL

Other aplications

ROS Remote Management System can be adapted to different applications, allowing control of sensors, contactors or other applications. Examples of these applications are:

PETROL STATION

HARBOUR



INDUSTRY

SPORT CENTRES

REMOTE MANAGEMENT AND CONTROL

Product Catalogue

EASY CONTROL is an intelligent control module. Integrated into a point of light, is able to control: on, off, adjust brightness, measure consumption, etc.

EASY CONTROL evolution

Point to point telemanagement System for efficient control exterior lighting.

Smart management
Point to Point
Monitoring
Regulations
Measures
Efficient lighting

Technical Specifications

- RF two-way communications in the bands 315, 433, 868, 915 MHz allowing frequency hopping between them.
- Independent relay outputs to manage autonomously switched off and the two loads up to 600VA and 1500VA power in his version.
- Measure current and voltage of the load connected to the computer.
- Calculating Apparent Power, Active, Reactive and Power Factor
- Control output 0-10V
- Control Output DALI
- Digital inputs for sensors
- Analog inputs for sensors
- Internal temperature sensor
- Dimensions 8,7 x9, 7x3, 2 cm
- Compliance Regulations in force:

ETSI EN 301 489-1 V1.8.1 (2008)
ETSI EN 301 489-3 V1.4.1 (2002)
ETSI EN 300 220-1 v 2.3.1 (2010-02)
ETSI EN 300 220-2 v 2.3.1 (2010-02)

REMOTE MANAGEMENT AND CONTROL

Product Catalogue

Electronic ballast with Universal dimming 1-10v

Dimmable power lamps
70w
100w
150w
250w
400w
600w
1000w

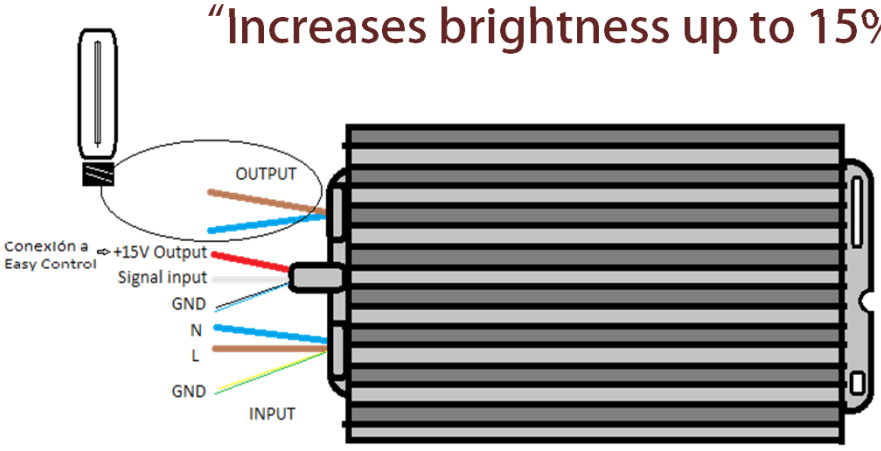
"Regulates up to 40% achieving a comfortable and steady lighting anywhere"

- Allows on / off or soft stepped from the control signal
- Improving the service life of the lamp

Power	Input Voltage(V)	Consumed power ballast+lamp(W)	Pulse Voltage(kV)	Power Factor
70w	120-265v	77	4.0	0.98
100w	120-265v	110	4.0	0.98
150w	120-265v	159	4.0	0.98
250w	120-265v	265	4.0	0.98
400w	120-265v	424	4.0	0.98
600w	120-265v	636	4.0	0.98
1000w	120-265v	1060	4.0	0.98

Valid and adaptable
120/265v
50/60Hz

"Increases brightness up to 15%"



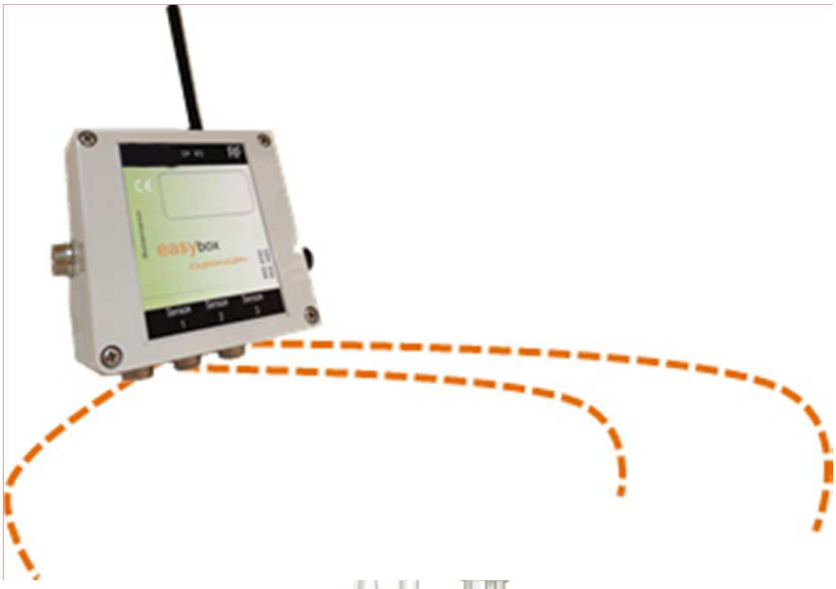
* Maximum distance from ballast to lamp 5 meters

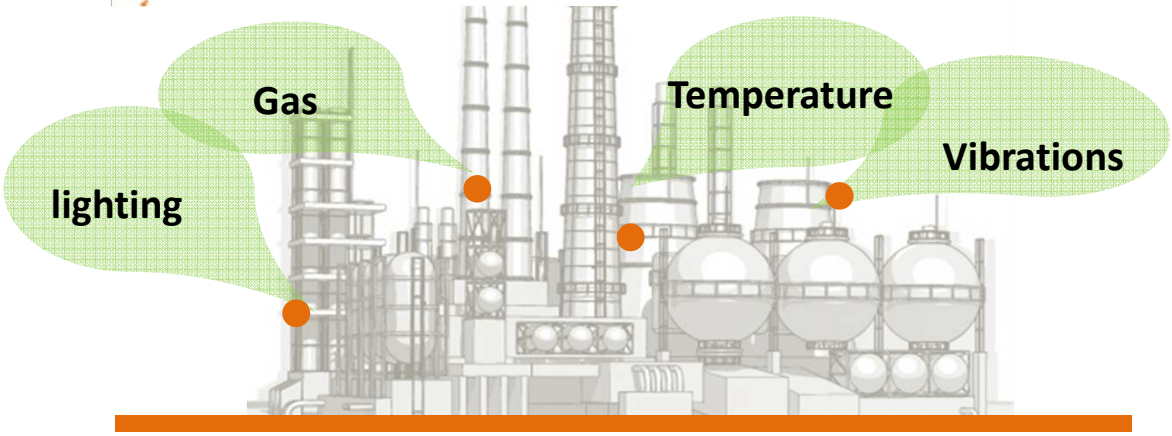
REMOTE MANAGEMENT AND CONTROL

Product Catalogue

EASY CONTROL BOX is an intelligent control module, able to remotely manage different parameters through a control center by radio.

A mesh network, supported by EC BOX, which can carry various sensors integrated with installation needs.





- Exterior lighting
- Environmental conditions
- Gases
- Vibrations
- Movement

REMOTE MANAGEMENT AND CONTROL

Product Catalogue

SMR (Remote Selector Modes) is a remote control system that allows the user management modes of the lighting system according to the requirements at all times by radio frequency communications.

Structure of the System

The system consists of:

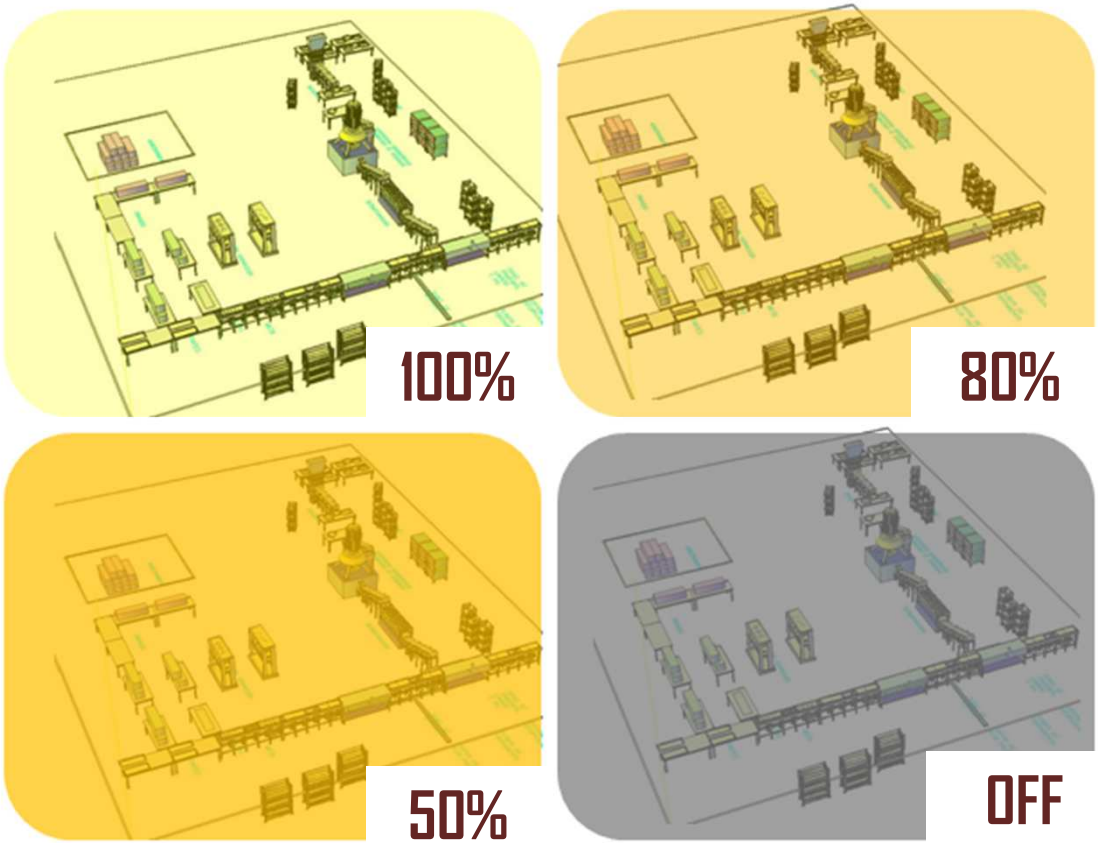
- **1-10v Easy Control** for brightness control groups of lights.
- **Remote Selector Mode** (depending on model): DIN rail or wall, with or without tou screen Scada.
- For modes of regulation it is necessary **driver or ballasts dimmables**
- Attaches **measuring elements, sensors ...**
- **Different models** according to potential and characteristics of the installation
- 433 Mhz RF Communication. sma Antenna
- Supply Voltage 85-245 Vac

MODELS	Modes	Areas	Options	
SMR Basic	2-4	1	On-Off-Regulation	
SMR Touch	2-4	1-30	On-Off-Regulation-Sectorization	2.8 Inch Touchscreen
SMR Scada Touch	2-4	1-100	On-Off-Regulation-Sectorization-Sensors-measuring elements-logics-application use custom	7 Inch Touchscreen

REMOTE MANAGEMENT AND CONTROL

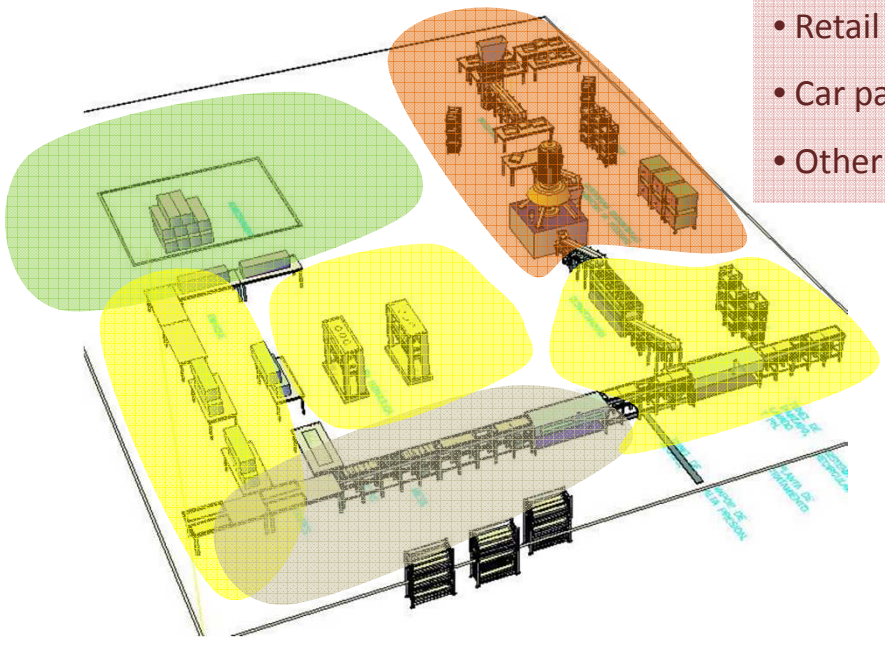
Product Catalogue

Lighting Regulation



Sectoring lighting

- Industrial plants
- Sport Centres
- Retail Parks
- Car park
- Other



REMOTE MANAGEMENT AND CONTROL

Product Catalogue

AUDITOR APP is a software, implementable on an Android device to perform the tasks of managing the installation of street lighting. Thus, the installer uses this tool to further control of the installed equipment and its location.

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The tool provides customized for each of the facilities, so it is not necessary to enter almost any data manually. The data required are preinstalled in the internal database of the application.

INVENTORIES MANAGEMENT TOOL FOR PUBLIC LIGHTING

AUDITING
LIGHTING
GEOPOSITION
INVENTORY

"Possibility of locate the point to be discharge directly into Google maps"

The application is designed to use the **GPS** antenna Android device, which will provide the **geographic coordinates** that uniquely identifies each of the elements of the installation, so you have accurate location of each device in the system information.

•Possibility of reading QR codes

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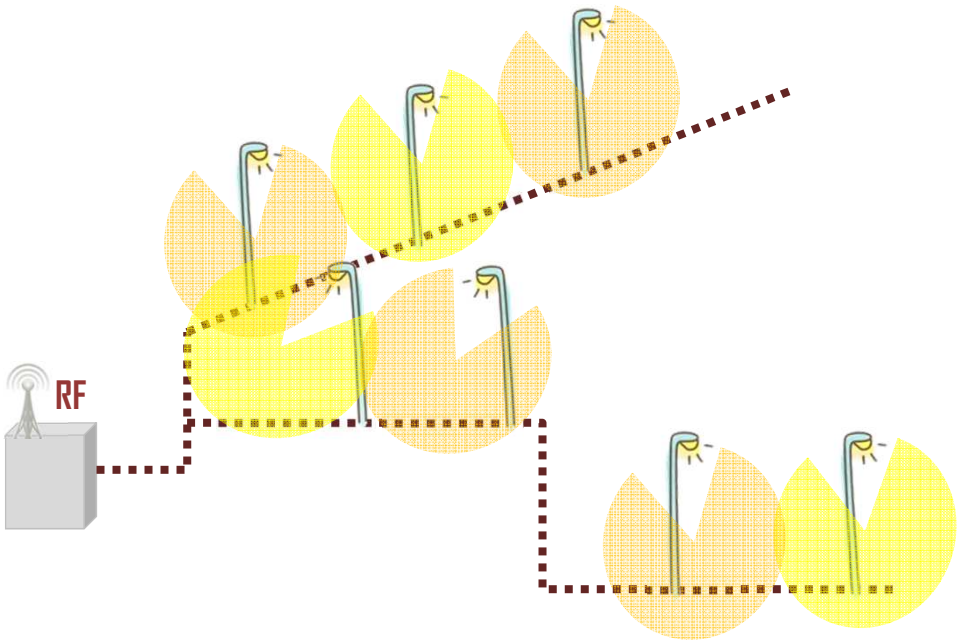
REMOTE MANAGEMENT AND CONTROL

Product Catalogue

Smart Public Lighting Panels, optimizes the management of each box installation, allowing action and monitor real-time consumption and incidences of network efficiently.

- **Telemanagement** lighting box
- Schedules **on and off circuit**
- **Measures of consumption** in real time
- **Alarm and Fault** Management
- **Consumer reporting** and **maintenance**

The conversion of this system is easily expandable to a point-to-point control using a simple integration of our electronic ballasts, RF-controlled radiofrequency BPR.



REMOTE MANAGEMENT AND CONTROL

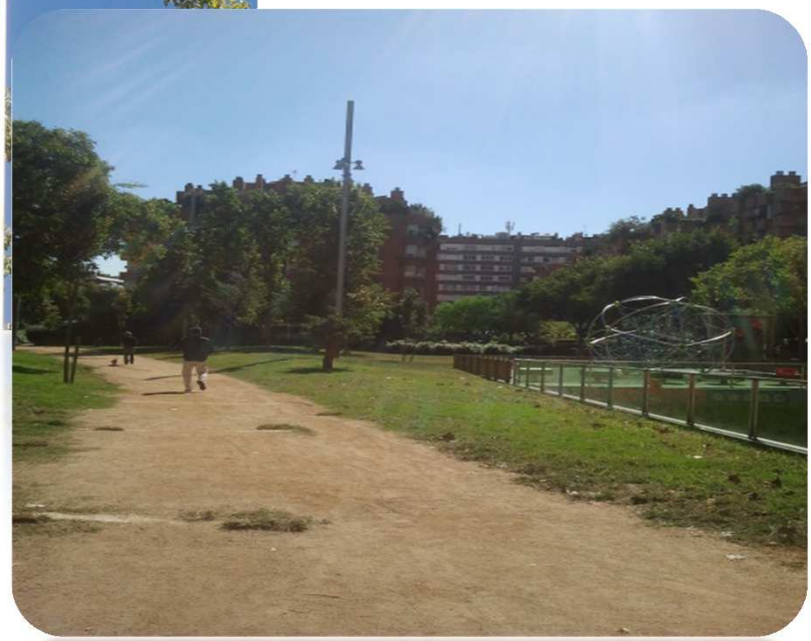
References

In Barcelona we are conducting several performances in different parts of the city. It is implementing the remote management system in the neighborhood of Sarria and Sant Gervasi.

They have reduced power of 150w and 100w HPS and LED technology is changing to dimmable 1-10v.

ESTIMATED SAVINGS : 50%

Barcelona



REMOTE MANAGEMENT AND CONTROL

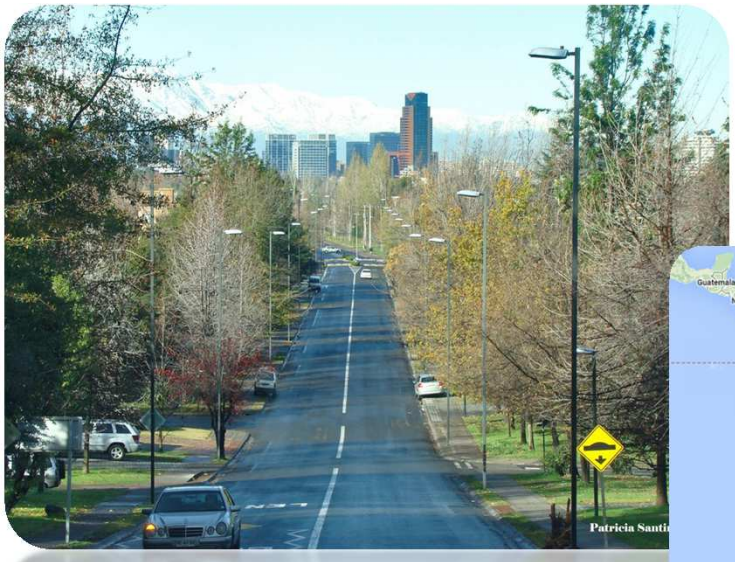
References

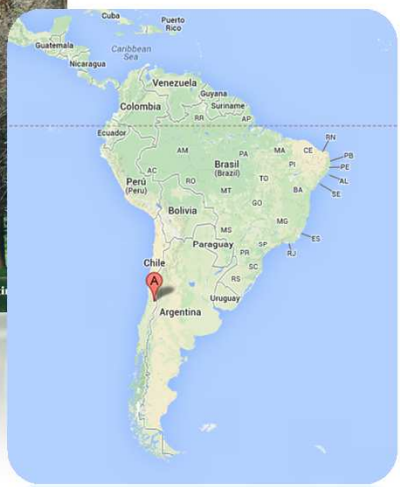
The first project focuses on Vitacura Chile, the city consists of 28.9 square kilometers, cut along the Mapocho River northeast of Santiago, is the municipality with the highest human development in Chile. This first project was the integration of a remote management system for point to point radio in LEDs.

The project is aimed at efficiency and energy savings through programming and adjustments of brightness of the lights of the municipality, by the necessary demand of each zone. Consumption reduction is achieved in the installation by efficient management of public lighting in the municipality.

ESTIMATED SAVINGS: 60%

Chile





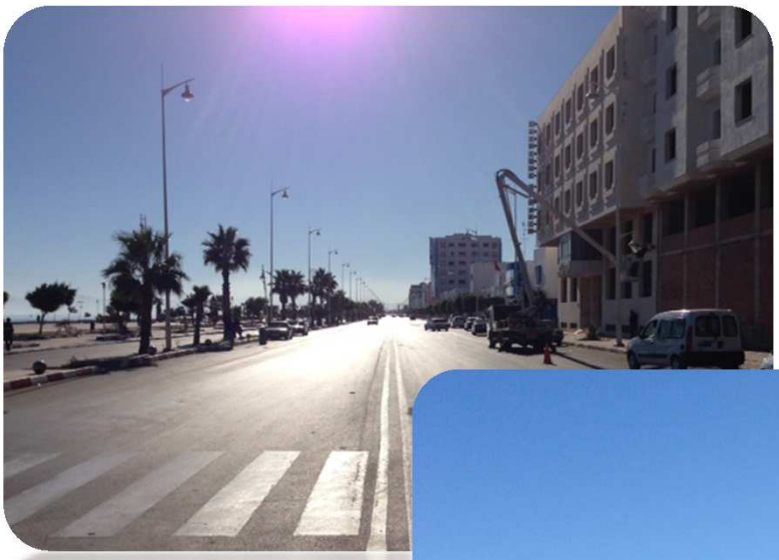
REMOTE MANAGEMENT AND CONTROL

References

In the first project in Morocco, the installation of the system was performed in some of the main streets of the municipality.

250w to 150w powers were reduced and switched to 150w to 70w. In addition, the ferromagnetic ballasts were replaced by electronic ballasts 1-10V

ESTIMATED SAVINGS: 70%



Nador

REMOTE MANAGEMENT AND CONTROL

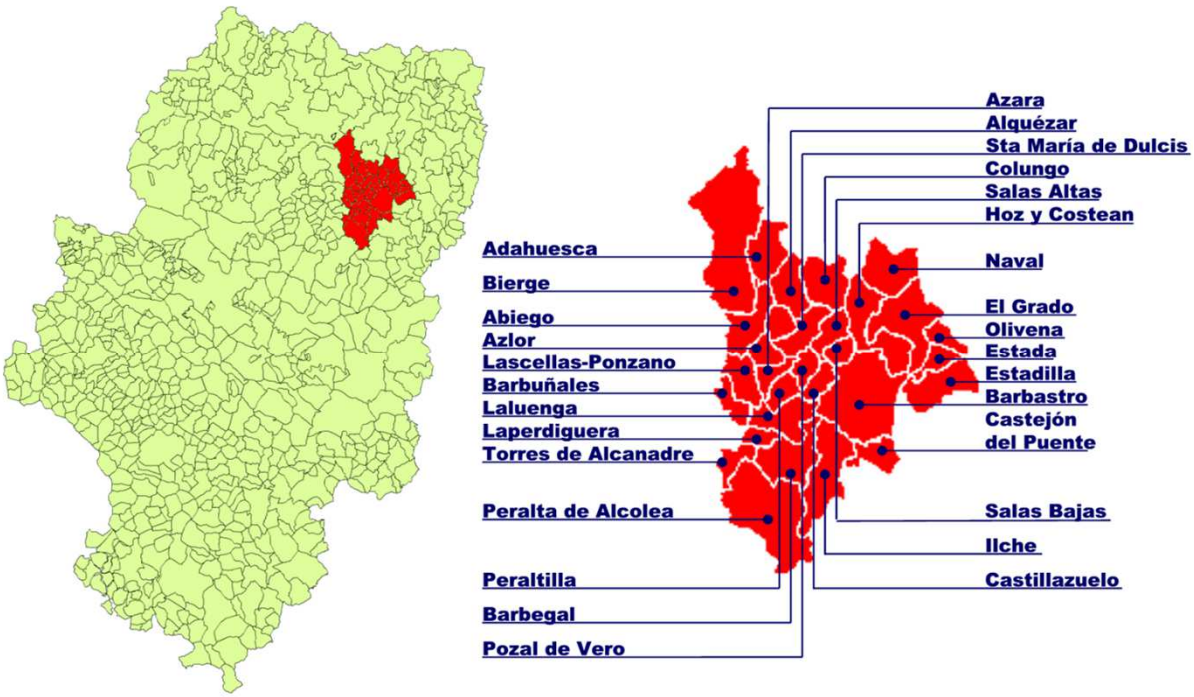
References

The scope of this project covers 29 municipalities in the Somontano region, consisting of the integration of a remote management system for point-to-point, managed from a central control center. The project is aimed at efficiency and energy savings through programming and adjustments of brightness luminaires in different municipalities, according to the unique needs of each population.

Reducing consumption according to schedules that implement generated an average savings of 66%.

ESTIMATED SAVINGS: 66%

Somontano



REMOTE MANAGEMENT AND CONTROL

References

Remote management system point to point for lighting control 29 municipalities in South of Spain, Cadiz.

This project covers 29 municipalities in Cádiz, cities with fewer than 20,000 citizen, consisting of renovation of lightings, the integration of a remote management system point-to-point. The project is aimed at efficiency and energy savings through programming and adjustments of brightness luminaires in different municipalities, according to the unique needs of each population.

Reducing consumption according to schedules that implement generated an average savings about 40%

Province of Cádiz
29 municipalities

REMOTE MANAGEMENT AND CONTROL

References

Renovation of the entire LED lighting with point to point control

The project consists of the technological renewal of the service, including the renewal of all parts of town with LED technology, renovation of 22 electrical panels and installation of the control point point. These actions will generate energy savings of 503,975 kWh / year (65 % of current consumption) that will cut emissions of 523 tCO2 / year.

ROS Iluminación wokrs with energy service company (ESCO) responsible for the project

Jimena de la frontera

REMOTE MANAGEMENT AND CONTROL

References

The new system installed in this town of about 40,000 inhabitants, can efficiently manage municipal public lighting providing an effective and individual control of each of the points of light, allowing for programming and adjustments of brightness of the lights, by the necessary demand each zone.

Thanks to this, the reduction of consumption in the facility, as well as efficient management of public lighting is achieved. Moreover, this system detects all points of melted or broken light, facilitating preventive maintenance to detect old lamps with low performance or low energy efficiency, allowing saving costs.

ESTIMATED SAVINGS: 62%

Puerto Real

- Center Township
- waterfront
- industrial areas
- vials
- districts

REMOTE MANAGEMENT AND CONTROL

References

The project carried out in 2007 in the second most populous city in Huesca and sixth in Aragon, was the implementation of the first system point-to-point by radio-frequency in Spain. The installation was successful and has been extended every year. Currently, this installation continues expanding with the savings generated by the system.

The project is aimed at efficiency and energy saving, as well as provide better comfort to citizens.

Reducing consumption is achieved in the installation by manage efficiently public lighting in the municipality.

ESTIMATED SAVINGS: 60%

Barbastro

REMOTE MANAGEMENT AND CONTROL

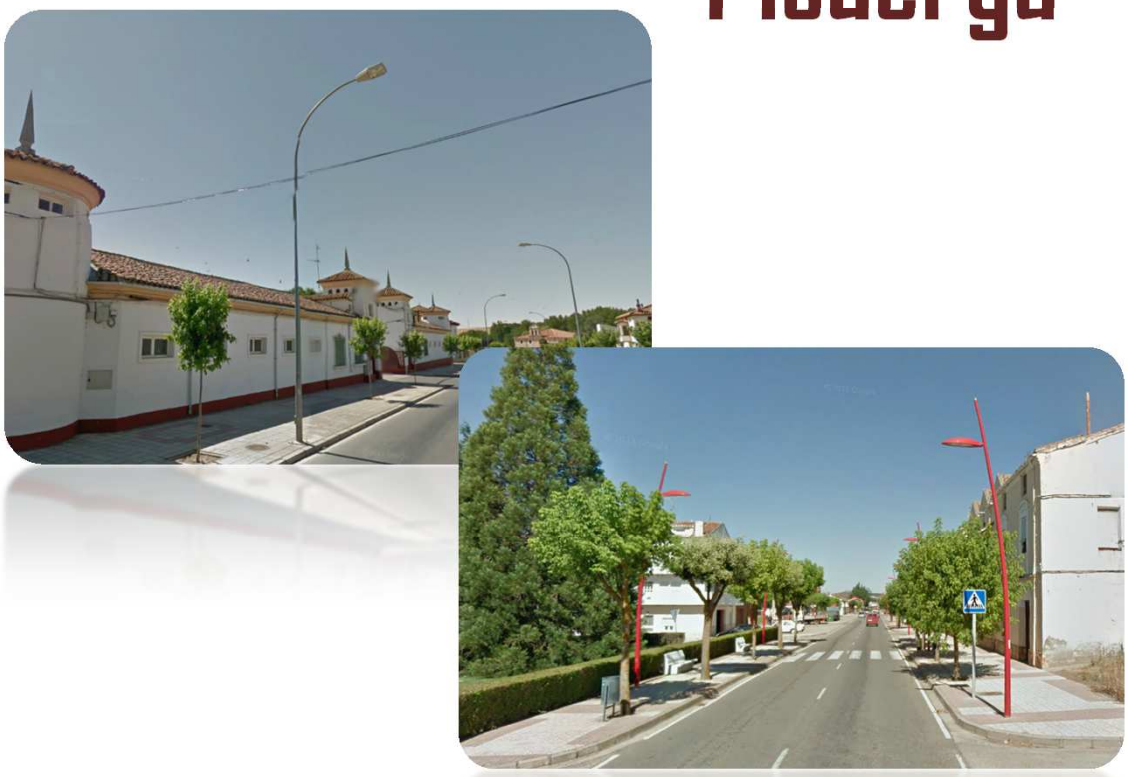
References

Herrera de Pisuerga is a town in the province of Palencia, Castile and León. This project consisted of the implementation of the remote management system point to point as well as the change of lighting Vapor High Pressure Sodium to luminaires Led.

Thanks to the combination of both technologies (remote management + luminaries Led), is generated big savings and better management in the control of public lighting.

ESTIMATED SAVINGS: 71%

Herrera de Pisuerga



REMOTE MANAGEMENT AND CONTROL

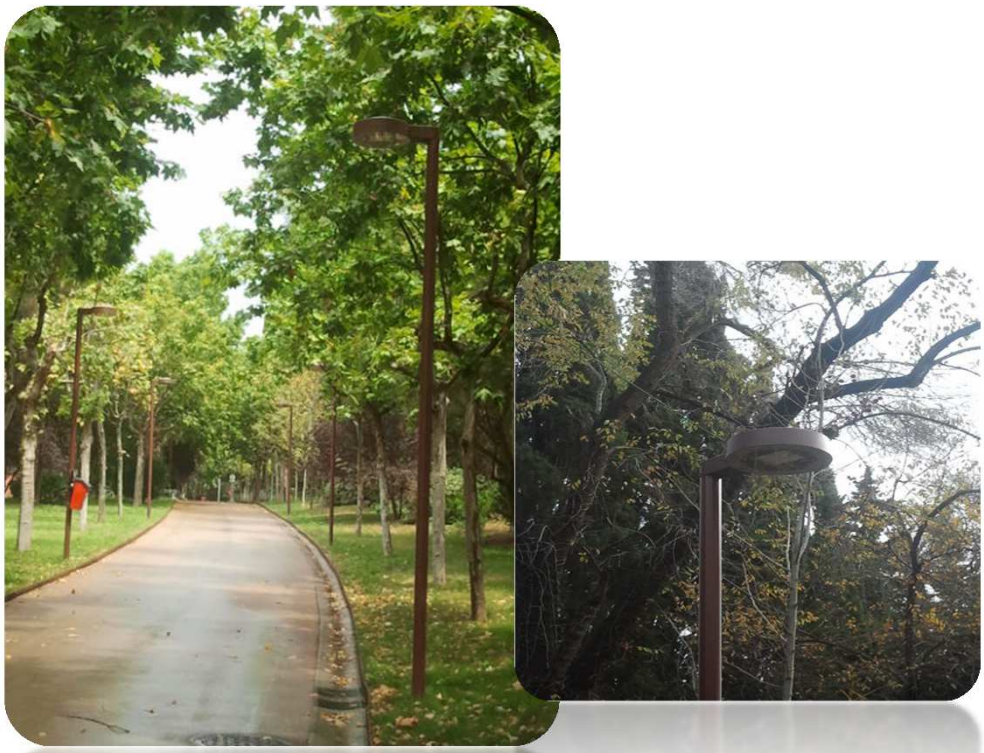
References

The municipality located in the province of Barcelona, has begun to implement the system in the new work being done in the town to incorporate remote management system in a gradual manner.

Reducing consumption in the town has been important with the introduction of LED technology and now wants to use this technology with remote management to adapt the lighting to the life of the town.

ESTIMATED SAVINGS: 58%

Sant Just



REMOTE MANAGEMENT AND CONTROL

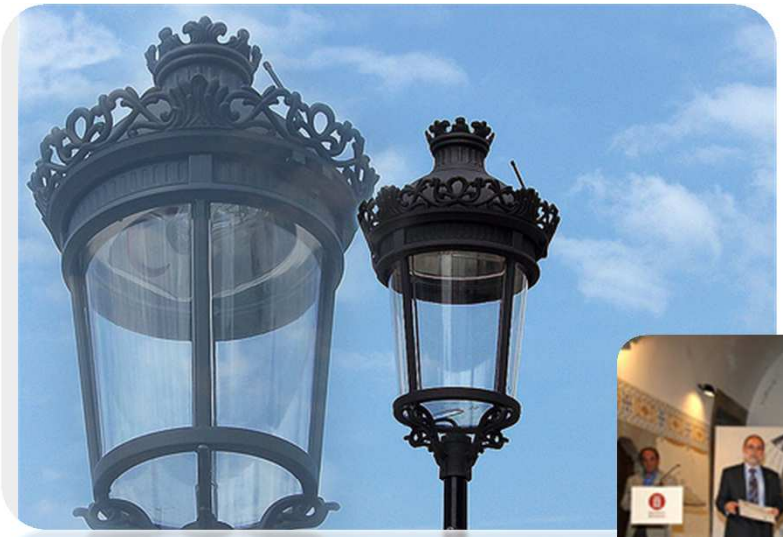
References

Caldes d'Estrac or Caldetes is a municipality located north of Barcelona, where he has made a clear commitment to new technologies. In 2009 the first remote management project began in the town and since then has expanded.

With the new system, the city has become one of the most efficient municipalities of Catalonia and has won awards such as the Barcelona Provincial Council Award for the fight against climate change by installing the remote lighting management system.

ESTIMATED SAVINGS: 64%

Caldes d'Estrac



REMOTE MANAGEMENT AND CONTROL

References

This project that was a reference in the area of La Rioja, involved the integration of the remote management system point-to-point. The main "goal" of the project was the efficiency and energy saving and also aims to provides the municipality a mesh which give added value to the luminaires, allowing to integrate sensors, security cameras, etc..

Currently, reducing consumption in the facility is achieving savings of 55%.

Huércanos

ESTIMATED SAVINGS: 55%

REMOTE MANAGEMENT AND CONTROL

References

Sabadell, fifth of Catalonia by importance and population, has 207,938 inhabitants.

In this latest project, the City of Sabadell installed in 2013 in Manresa Paseo, Plaza del Ángel and Palanca the street lighting remote management system characterized by individual control and flow control each fixture. This is added to the system that had been installed in 2008 in the neighborhood "The Planets", in Sabadell.

All this is part of the development of Sabadell Smart City, a project of the city government that seeks to exploit new technologies for create a more efficient and greener city.

ESTIMATED SAVINGS: 54%

Sabadell

REMOTE MANAGEMENT AND CONTROL

References

The project carried out was based on the implementation of the remote management system for point-to-point radio. The main objective of the project was the improvement of energy efficiency and savings, all without the need for civil work at the facility.

The system is integrated into bus lanes and tunnels in the exchanger, managing to control traffic lights and sensorizand other network elements.

ESTIMATED SAVINGS: 60%

Exchanger Plaza Castilla (Madrid)

REMOTE MANAGEMENT AND CONTROL

References

The project carried out in Cabezuela harbour, Port of Cadiz, was implemented in different lighting towers 30 m high.

Obsolete ferromagnetic ballasts were replaced with electronic ballasts, reducing power 1000w to 600w. Also was integrated the system point-to-point on each projector.

ESTIMATED SAVINGS: 68%

Puerto de Cádiz

REMOTE MANAGEMENT AND CONTROL

References

The project carried out at the Port of Castellon, is implemented in different lighting towers 30 meters high.

Obsolete first ferromagnetic ballasts were replaced with electronic ballasts, reducing power and integrating 600w 1000w to point control modules point in each projector.

With all that has been achieved very significant savings, has improved preventive maintenance and lighting has been adapted to work port avoiding light pollution in such a sensitive area.

ESTIMATED SAVINGS: 68%

Puerto de Castellón

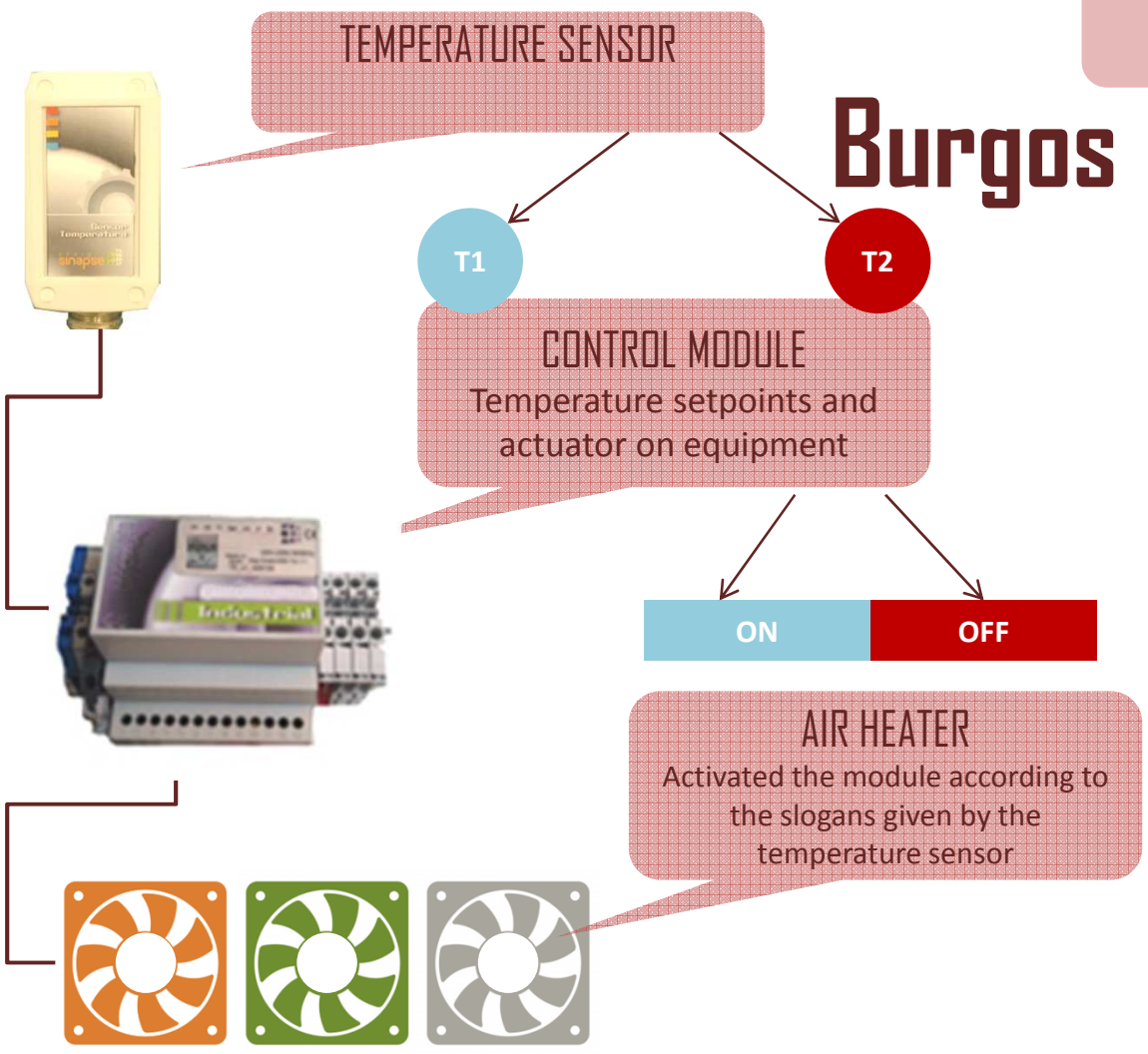
REMOTE MANAGEMENT AND CONTROL

References

Remote management system for point to point control unit heaters in industrial manufacturing plant in Spain

The system implemented in this industry include a control center for remote management and EC modules EVO with temperature sensor, depending on the temperature measured promptly activate the outputs of F1 or F2 module.

These outputs F1 and F2 acting on the coil of a contactor that enables or disables each heater (Industrial Fan, through which passes a fixed volume of water at a given temperature, and whose mission is to drive the hot air as a function of temperature water passing through it).



REMOTE MANAGEMENT AND CONTROL

References

Remote management system point to point for lighting control in one of the Petronor plants

The system implemented in this industry consists of a control center for remote and EC EVO sensor lighting modules. Depending on which measure regulating lux illumination to always have adequate lighting. The system combines with the RMS (Remote Mode Selector) system.

Also thanks to the management software can track the savings and improve preventive maintenance.

Petronor Bilbao

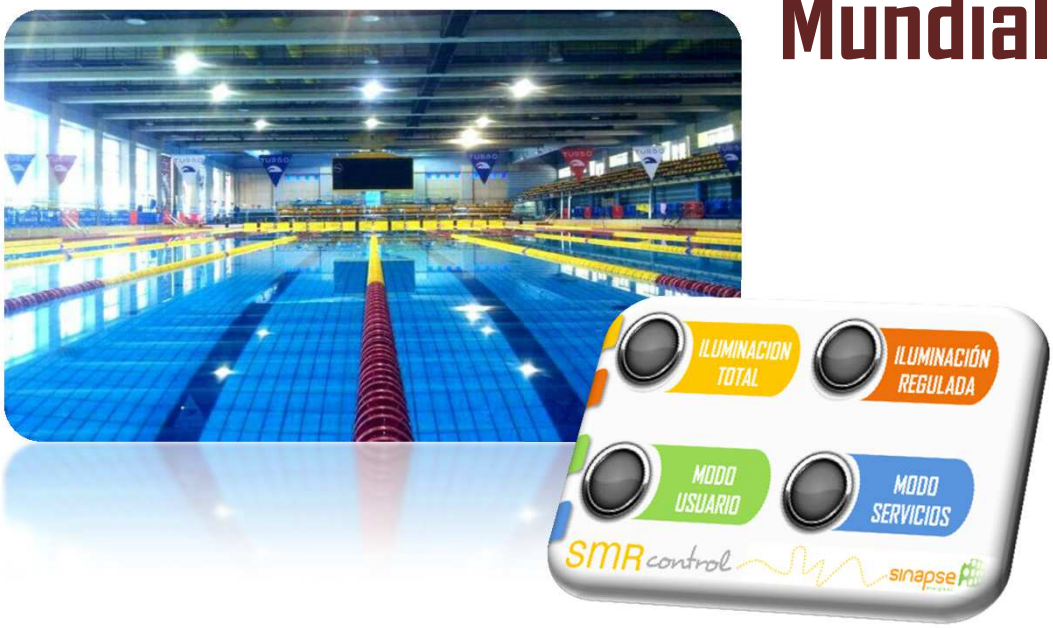
REMOTE MANAGEMENT AND CONTROL

References

Integrated Selector lighting modes for the olimpic swimming pool in Madrid

The World Swimming Centre Madrid 86, required a regulating control brightness in the Olympic pool, under the rules for the different competitions, so they formed a remote mode selector wall by regulating the control modules desired illumination

Centro Natación Mundial 86



REMOTE MANAGEMENT AND CONTROL

References

Parquesur is a shopping and entertainment center located in Leganés, about 7 kilometers from Madrid. It consists of a comercial center with a cybernetic fountain (unique in Europe), a park, along with 12 cinemas. It is considered the second largest shopping center in Spain and one of the largest in Europe.

The system acts on the mall roads and in parking areas. They make programming adjustments using the timetable of the Shopping Center.

ESTIMATED SAVINGS: 59%

Shopping Center Parquesur

REMOTE MANAGEMENT AND CONTROL

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