
THORN
LIGHTING
URBASENS
INTELLIGENT LIGHTING CONTROL FOR
THE CITIES OF THE FUTURE

BETTER SYSTEMS BETTER LIGHT

WE MAKE LIGHT WORK

SHAPING CITIES WITH BRILLIANCE

Imagine controlling the lighting of an entire city from a simple dashboard – without having to leave your office. That's the power of UrbaSens, our intelligent, state-of-the-art outdoor lighting control system. Combined with our luminaires, services and expert support team, UrbaSens enables you to revolutionise your urban lighting infrastructure.

URBASENS

INTELLIGENT CITY LIGHTING

The UrbaSens lighting management system is specifically designed to meet the daily challenges of public outdoor lighting in cities. Incorporating a variety of intelligent functions, it combines advanced safety and comfort features with significant energy and maintenance cost savings. Simply stated, it provides genuine added value through modern data management and an open system architecture.

01

A COMPLETE SOLUTION

With its clear dashboard interface, UrbaSens lighting management enables the complete operation, monitoring and maintenance of outdoor lighting systems. User interfaces allow easy lighting control of an unlimited number of luminaires, both individual switching and dimming and entire group manipulation. The system quickly processes even complex information such as graphical data from charts and heatmaps.

02

CLOUD PLATFORM

Remote access to the complete city lighting system from any point is provided by a cloud connected server platform. System, luminaire, driver and UrbaSens controller data are collected, stored and analysed there. Data exchange via the open RESTful API interface enables connection to the "Smart City" and asset management systems, also to cloud connected systems.

03
COST SAVINGS

The benefits of a dimmable and intelligently controlled lighting system are probably most clearly visible in the significant reductions in energy and maintenance costs it offers – with potential savings of up to 80 percent. Remote access and transparency features of UrbaSens allow maintenance project planning to be conducted much more efficiently.

04
ENVIRONMENTAL PROTECTION

Lighting management from Thorn contributes to urban environmental protection in various ways. Programming lighting intensity to suit user and the city needs, appropriate dimming and reduced light spill through improved lighting control helps to considerably minimise CO_2 emissions. This results in more sustainable cities with more eco-friendly environments.

05
FLEXIBLE SOLUTION

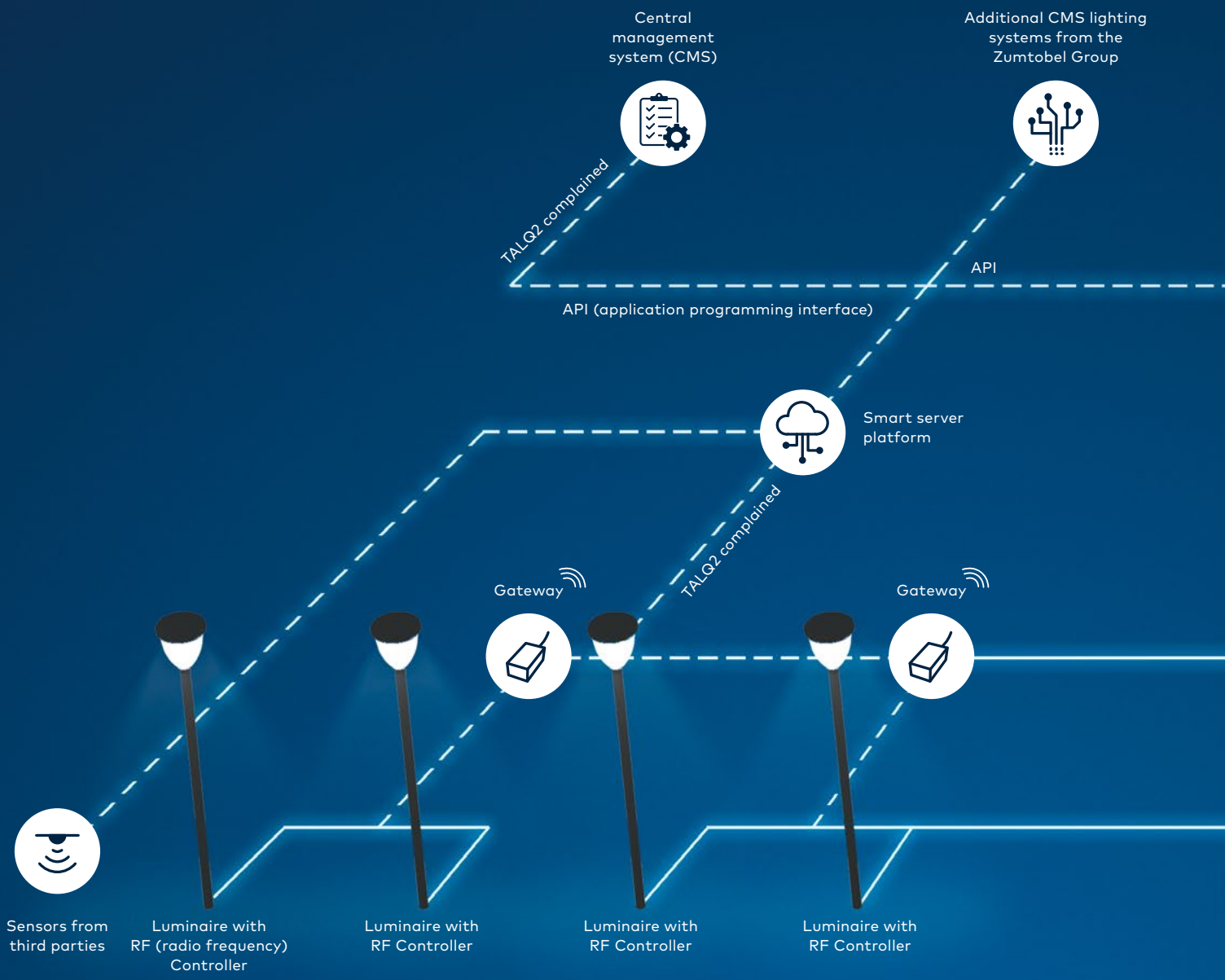
Easy to integrate with other systems, UrbaSens is ideally suited for retrofit solutions or for centrally managing different areas. For instance, if the flow of traffic in a particular area of the city needs to be altered because of street work, special events or an emergency, you can simply reprogram your lighting without having to visit the site.

06
IMPROVED SAFETY

Good illumination provides a feeling of safety and makes a location more attractive for local residents and visitors. UrbaSens automatically switches lights on when they are needed, for example, when someone goes jogging in a dimly lit area at night. It increases light levels at the right times, such as during rush hour, thereby helping to reduce light pollution.

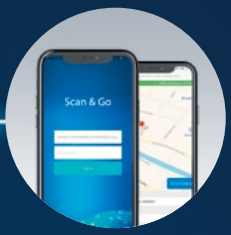
THE URBASENS SYSTEM

FLEXIBLE IN ALL DIRECTIONS



URBASENS SOFTWARE

CENTRAL MANAGEMENT SYSTEM (CMS)



SCAN & GO COMMISSIONING APP

CMS lighting systems from third parties

API

URBASENS HARDWARE

RF GATEWAY

RF CONTROLLER E (EXTERNAL)

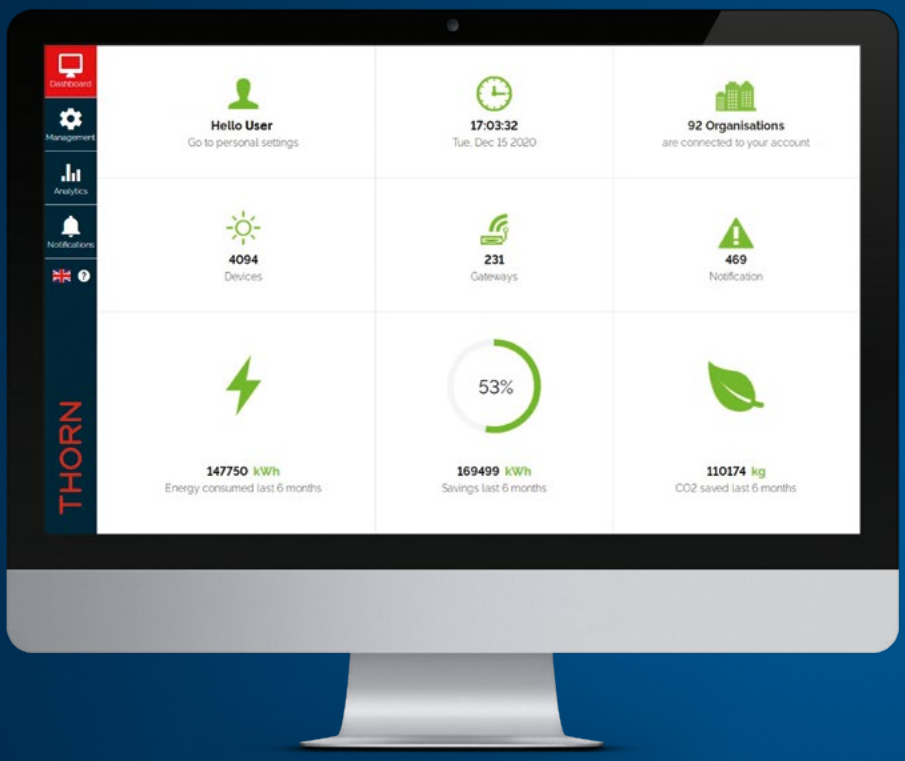
RF CONTROLLER PIR E (PRESENCE INFRARED EXTERNAL)

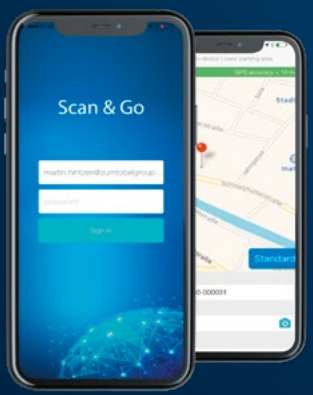
RF CONTROLLER ZG M (ZHAGA MESH)

URBASENS SOFTWARE

URBASENS CMS

The central management system (CMS) of UrbaSens enables remote configuration, management, monitoring and reporting on all lighting fixtures throughout a city's infrastructure. A web-based control application with map-based visualisations and an open RESTful API interface, it can be operated on laptops, PCs and tablets.





URBASENS COMMISSIONING APP

Simple and intuitive to use – that's the "Scan & Go" UrbaSens commissioning app. Working with the app – for functions like on-site acquisition of device locations or UrbaSens map integration – is fast and requires very little training.

URBASENS HARDWARE

RF GATEWAY

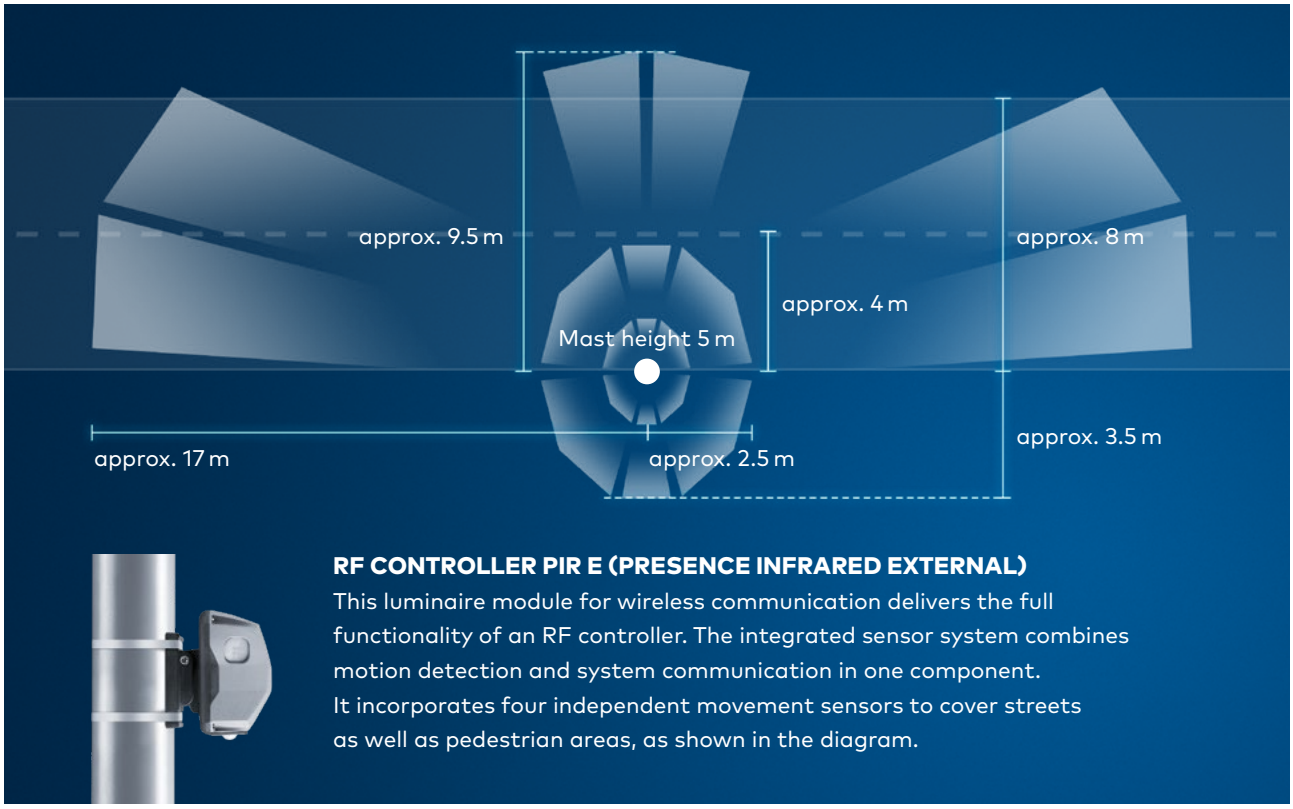
This network module communicates with up to 200 UrbaSens RF controllers. It records system and sensor data, also status data from RF controllers, forwarding them to the UrbaSens lighting management system. Server communication occurs via WiFi, LAN or SIM card, controller communication via 2.4 GHz radio frequency according to IEEE 802.15.4

RF CONTROLLER E (EXTERNAL)

Featuring a DALI interface, integrated astronomical clock and class II protection with pre-set lighting profiles and sensor information, this luminaire control module for wireless communication supports a maximum unobstructed distance between devices of up to 150 m. It forwards failure and status reports to the CMS.

RF CONTROLLER ZG M (ZHAGA MESH)

Designed for the new standardized ZHAGA socket, this controller has an integrated antenna with 24V DC power supply and provides power metering information for connected luminaire drivers. It is compatible with all UrbaSens components equipped with an integrated ambient light sensor and sensor interface (LSI / DALI).



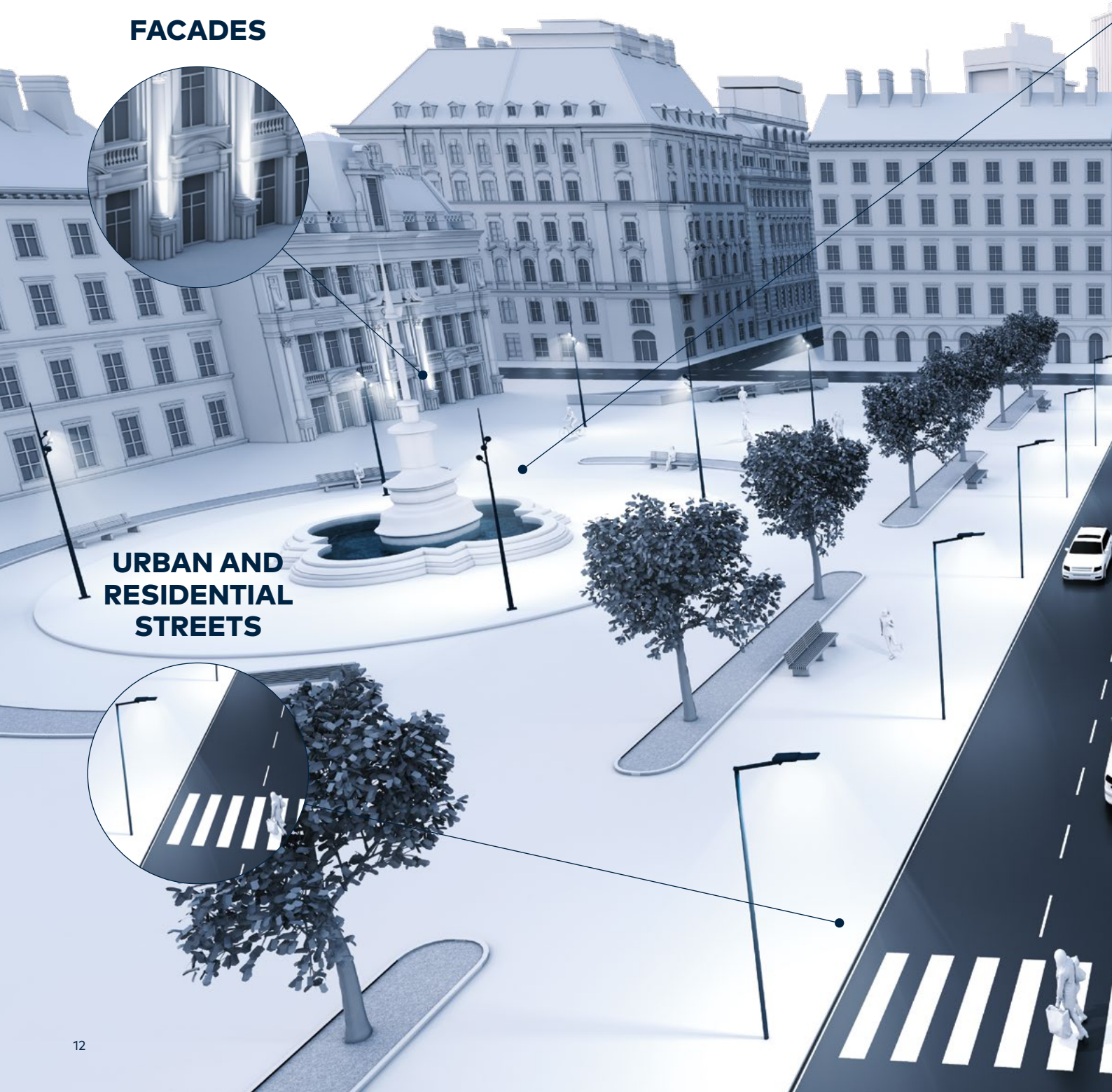
RF CONTROLLER PIR E (PRESENCE INFRARED EXTERNAL)

This luminaire module for wireless communication delivers the full functionality of an RF controller. The integrated sensor system combines motion detection and system communication in one component. It incorporates four independent movement sensors to cover streets as well as pedestrian areas, as shown in the diagram.

TYPICAL APPLICATIONS

A SYSTEM FOR THE MOST DIVERSE REQUIREMENTS

UrbaSens covers wide-ranging control applications throughout the entire city – from historical areas with facade lighting to streets, pathways, pedestrian crossings and much more. It not only benefits peoples' lives, but also helps to optimise usage of urban space, also in terms of environmental protection and sustainability.



HISTORICAL AREAS

PARKS, PLAZAS AND PROMENADES

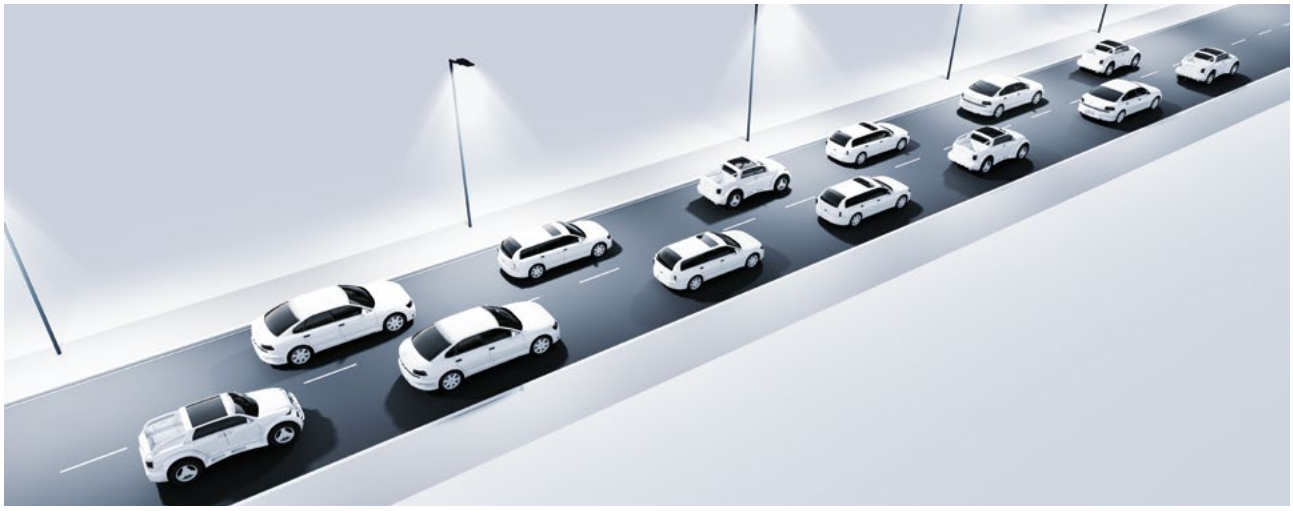
ROADS

A WEALTH OF POSSIBILITIES

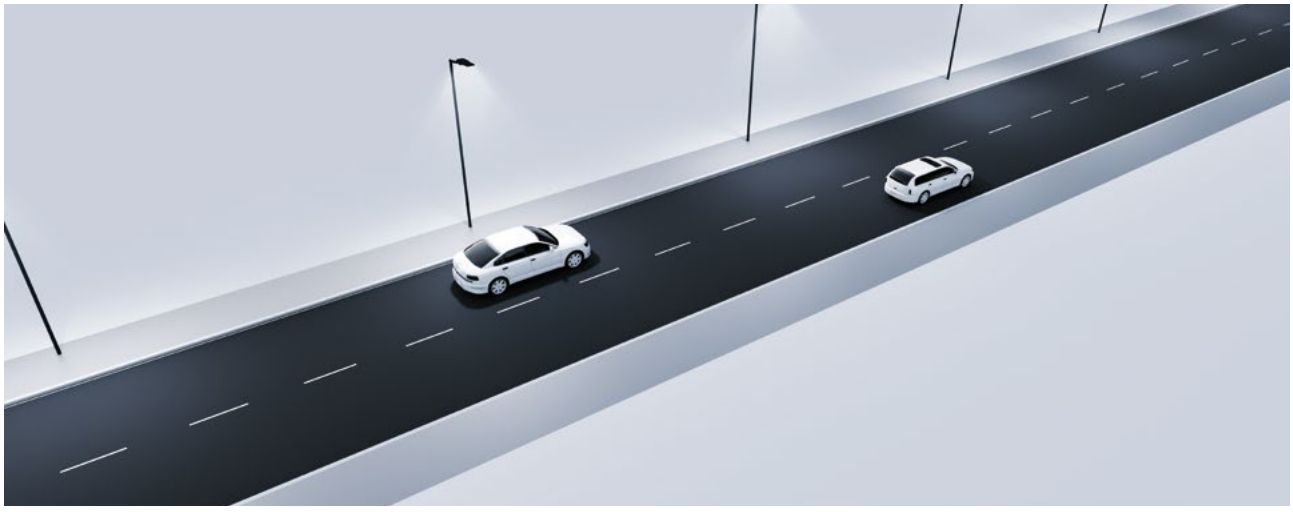
Whether for safety, traffic management or aesthetic purposes, cities have a variety of different lighting requirements. Often, spaces are illuminated more than is actually needed. Given the wealth of lighting and control options to choose from, the following points provide an overview of factors to have in mind during the planning.

ROADS

- For improved safety, lighting systems for roads should be configured to provide higher light levels during rush hour.
- The lights are dimmed when traffic begins to wane.



Lights operate at full power during the rush hour



When there is less traffic, the lights are automatically dimmed

URBAN & RESIDENTIAL STREETS

- Reducing street illumination at night in residential areas helps to save energy.
- Dimming limits light intensity and reduces light pollution entering homes, thus enabling better sleep.

7:00 pm

When people come home, the lights are switched on

12:00 pm

Dimming street lighting at night improves sleep

HISTORICAL AREAS

- Controlled lighting of facades and surrounds in historical areas creates a pleasant atmosphere.
- It can be adapted for time, events, weather, seasons and people's needs using dimming and different lighting scenarios.

Light levels are adapted according to space usage

More light is provided during events

PARKS, PLAZAS AND PROMENADES

- Light sensors are an excellent choice for open spaces in which people interact such as parks, plazas and promenades.
- Sensors can be flexibly used for sound, presence and daylight detection.

Presence detection – lights switch on when there is movement

Noise detection – lights are activated by sound sensors

Daylight detection – lights are turned on/off by sensors detecting the sunrise or sunset

CASE STUDY

CITY OF NENZING, AUSTRIA

The town of Nenzing in Vorarlberg has taken a big step towards the future with renewed street lighting from Thorn and the intelligent UrbaSens lighting management system. This saves the community energy and at the same time increases the well-being and safety of residents and visitors.
UrbaSens enables Nenzing to precisely adapt the lighting levels of the 550 R2L2 street lights according to the actual lighting needs. What that means in reality: In areas where only limited lighting is needed at night, for example in quiet residential areas, the lighting control system can dim the street lights down to 20%. This allows the residents a restful sleep. When the traffic is heavy, for example during rush hour, time controls raise the lighting level, providing greater safety.

"We're proud that our town is taking on such a pioneering role as a Smart City. UrbaSens offers us the right amount of light at the right time and in the right place. This saves us up to 80% energy and increases our residents' sense of wellbeing. In addition the modern Thorn R2L2 LED street lights fit perfectly into our urban landscape."

Florian Kasseroler, Mayor of the market town of Nenzing


STOP

SMART CITY

FLEXIBLE IN ALL DIRECTIONS

UrbaSens is a lighting journey that culminates in an interactive and fully networked city. Every installation brings us closer to the realisation of our vision of a world of Smart (and efficient) Cities.


DATA EXCHANGE
ENVIRONMENTAL PROTECTION
COST SAVINGS
INCREASED SAFETY
DATA ANALYTICS
LIGHT MANAGEMENT

OUTDOOR LUMINAIRES

The following selection provides an overview of some of our outdoor lighting products that are integrated with lighting management functionalities for enhanced lighting effects.

ROAD


Isaro Pro


Isaro


R2L2


Flow


Thor


Carat


Urba

URBAN – POST TOP


Alumet


EP 145


EP 445


FleXity


Flow


Legend


Avenue


Plurio


Urba Deco


Volupto


Aerie

ARCHITECTURAL


Contrast


Raze

For more information and support, please visit our website:
www.thornlighting.com

SERVICE SUPPORT

Together with our UrbaSens portfolio, via Zumtobel we offer comprehensive service packages that allow us to tailor solutions to suit every customer's needs.

FINANCING SERVICES

Thorn offers various financing services to help you with the acquisition of your new lighting installation. At the same time, you benefit from the optimised energy savings and minimized operating costs of our lighting solutions.

TECHNICAL AND MAINTENANCE SUPPORT

Our service team offers fast, efficient and reliable technical and maintenance support, either on site or via remote analysis – for repair work, scheduled maintenance, system testing, optimisation and much more.

DIGITAL SERVICES

Modern lighting is intelligent and connected, thanks to digitisation and the Internet of Things (IoT). Our digital services experts can bring new perspectives to your lighting project, identify ways to improve efficiency and provide ideas for achieving desired effects.

TURNKEY SERVICES

From the specifications to the project management and installation, including maintenance on request, we can handle everything to provide you with a first-class lighting solution – all from a single source.

TRAINING

Solutions available today offer the potential to use light in new ways and to benefit from intelligent lighting networks. Getting the most out of a smart lighting management system requires an in-depth understanding of how it works. Our training opportunities will help you get started.

GET IN TOUCH

www.thornlighting.com/contacts

WE MAKE LIGHT WORK

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