

ANALYTICS & REPORTING AS STANDARD

INTELLIGENT LIGHTING FOR PUBLIC SPACES

Currently, 30% of light output over Europe is lost to light pollution. This equates to €3.3 billion in wasted energy costs and 21 million tons of CO₂ per year. This would take 875 million trees per year to offset it.

In order to thrive, cities and towns need light at night - to increase human perception of safety, reduce social isolation and support the local nighttime economy. But humans also need darkness for health and wellbeing and to maintain our circadian rhythm. Similarly, nocturnal wildlife and the biodiversity which sustains us requires darkness to thrive as well.

This balance is always a tricky one to manage and it becomes increasingly challenging as the heart of towns and cities evolve over time. UrbaSens CIVIC CONNECT & CITY CONNECT enable enhanced engagement and flexibility of the lighting infrastructure across both towns and cities. Data and analytics are available for both the space and the light points individually and collectively, allowing you to see the energy savings as well as potential energy management improvements.

You can combine UrbaSens CIVIC CONNECT & CITY CONNECT systems to deliver improved visibility of the lighting networks across a city and its surrounding areas.



Urban Streets



Towns



Cities



Car Parks



Plaza & Promenade



Road & Street



Transportation & Logistics



SUSTAINABLE CONNECTIVITY

Lighting connectivity in outdoor environments does not have to be overly complex. Thanks to Zhaga connectivity, our solution enable a full range of lighting control options, meaning we don't simply have to turn the lights on when it's dark, and off when it's light.

Specifying a dark skies sensitive luminaire is only one part of the solution. UrbaSens CIVIC CONNECT and CITY CONNECT bring outdoor lighting control to the masses whilst prioritising a lower carbon future. As a result, balancing the needs of people, wildlife and the planet has never been easier.







SUSTAINABLE GEALS

UNITED NATIONS SUSTAINABLE DEVELOPMENT ALIGNMENT



PARTNERSHIPS FOR THE GOALS

So often, it's the right partnerships that most effectively advance targeted sustainability aspirations. Our collaboration with DarkSky (formerly known as the International Dark-Sky Association) has helped us innovate technologies such as NightTune. UrbaSens CIVIC CONNECT enhances this by enabling advanced controls for our NightTune technology resulting in increased energy savings whilst helping protect local biodiversity.



SUSTAINABLE CITIES & COMMUNITIES

The responsible application of light often directly affects the local community. This is why lighting optics are key and ensure that illumination stays exactly where it's needed. Additionally, when paired with **UrbaSens CIVIC CONNECT** and CITY CONNECT, you can further control light levels and get sustainable lighting-focused analytics in a way that balances our need for illumination, the environment's need for darkness and the planet's need for a lower carbon footprint.



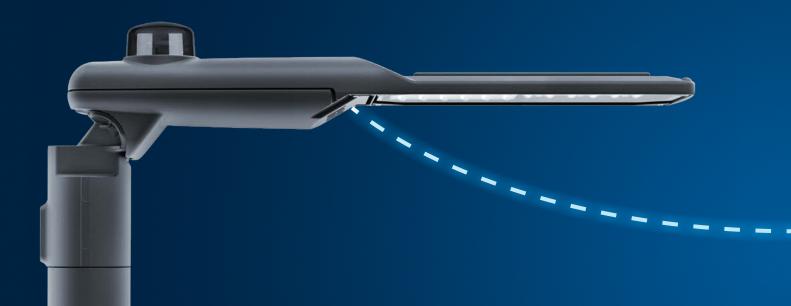
CLIMATE ACTION

There is more to managing energy consumption than switching lighting off. With UrbaSens CIVIC **CONNECT and CITY** CONNECT, balance is offered between the usage of the space and the lighting needs and up to 80% energy reduction.

With UrbaSens CIVIC **CONNECT and CITY** CONNECT, you can enable lighting analytics at scale whilst setting, controlling and enhancing lighting schedules across towns and cities.

URBASENS CIVIC CONNECT

LIGHTING CONTROL FOR TOWNS



FEATURES OF CIVIC CONNECT



NIGHTTUNE

Advanced technologies are now further optimised through DALI Addressing.



AUTOMATIC LOCALISATION

Integrated GPS for easier commissioning.



INTEGRATED CONNECTIVITY

10 years of network connectivity included with IoT network (NB-IOT, CAT-M1).



INTEGRATED SIM

Sim is preloaded in the node ready for commissioning.

SHARED FEATURES



WEEKLY CALENDAR

7 day week calendar to best reflect site specific behaviours.



OVER THE AIR UPDATE

The system can be updated wirelessly once installed.



REALTIME CONNECTIVITY

With UrbaSens CIVIC CONNECT and CITY CONNECT you can send commands and retrieve information almost instantly.

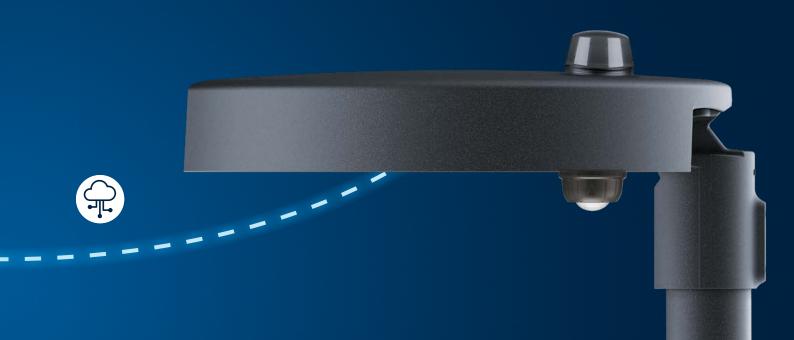


LIGHT SENSOR

Advanced lux level based switching.

URBASENS CITY CONNECT

LIGHTING CONTROL FOR CITIES





MOTION SENSING

Precision based presence detection via a D4i motion sensor.



ASTRO CLOCK

Switching via local sunset and sunrise.



ENERGY REPORTING

Get exact energy saving reports.



FAULT NOTIFICATION

Alerts are available on the platform and a daily notification email is possible.

FEATURES OF CITY CONNECT



MESH AND GROUPING

The system uses 2,4GHz mesh and manages the network itself.

<u>Up to 200 nodes per gateway.</u>



ADVANCED MOTION SCENARIOS

Acting as a group sensor, UrbaSens CITY CONNECT delivers a train of light, ensuring that neighbouring luminaires are gradually triggered to come on.

URBASENS CIVIC CONNECT

WHERE CAN IT BE USED?

Introducing UrbaSens CIVIC CONNECT, the cutting-edge outdoor lighting control system that utilises state-of-the-art M2M (machine-to-machine) network technology such as NB-IoT (narrowband internet of things) or Cat-M1 (low power wide area network). Specifically designed for towns, outskirt areas, car parks, and transportation hubs, our system seamlessly integrates with these networks to deliver unparalleled connectivity, allowing you to effortlessly manage and optimise your lighting infrastructure. Experience the power of easy deployment of UrbaSens CIVIC CONNECT and unlock a new era of smart and efficient outdoor lighting, powered by the latest M2M innovations.



LARGE TOWNS

UrbaSens CIVIC CONNECT enables you to best manage the energy consumption of your lighting network across large towns whilst linking its infrastructure to that of a nearby CITY CONNECT system. This enables a unified view of multiple lighting networks to easily review energy consumption, luminaire status and differing lighting schedules. This gives you the autonomy to manage your increasingly ambitious sustainability targets. UrbaSens CIVIC CONNECT allows you to embed, at scale, sustainable technologies such as NightTune to perfectly balance all needs; the community's need to feel safe, the need to protect the night sky, and nocturnal biodiversity's need for darker spaces.

CAR PARKS AND TRANSPORTATION

Car parks can often make up a significant part of a business's estate, for example, across a national or multinational retailer. This is where UrbaSens CIVIC CONNECT can support the management of these spaces. This connected system offers a standardised user interface, allowing an organisation to monitor multiple sites from a single platform. This is why UrbaSens CIVIC CONNECT is the ideal solution for transportation hubs like bus stations and bus depots.

URBASENS CITY CONNECT

WHERE CAN IT BE USED?

Introducing UrbaSens CITY CONNECT, the ultimate outdoor lighting control system tailored for city centers, large car parks, and expansive transportation hubs. With a single point of internet connection and its advanced 2.4GHz mesh technology, our system effortlessly connects up to 200 devices to a gateway, ensuring seamless control and unmatched efficiency. Experience the future of urban lighting with UrbaSens CITY CONNECT, where advanced motion sensor scenarios like the captivating 'Train of Light' add a touch of magic to your cityscape, creating an enchanting ambiance that captivates both residents and visitors alike.



CITIES

Across a city there are thousands of light points that give communities and visitors a feeling of enhanced safety and support a city's nighttime economy.

Managing this sort of lighting infrastructure is made much easier with UrbaSens CITY CONNECT. As more and more cities strive to achieve carbon neutrality, it has become increasingly important to measure our progress and advance our ambitions. This is why data analytics are built in as standard and enable you to adjust lighting schedules as well as monitor your improved energy savings targets over time.

TRANSPORTATION

With the ability to link up to 200 nodes per gateway and no limit to the quantities of gateways across a system, UrbaSens CITY CONNECT is the perfect solution for airports and other large transportation spaces like multiple train depots.

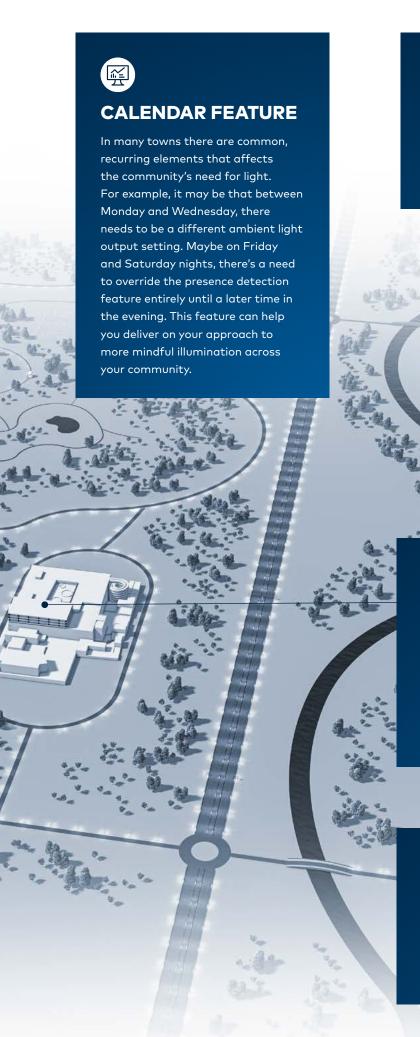
LARGE CAR PARKS

In areas like shopping malls where a car park may surround the entire mall, UrbaSens CITY CONNECT can link all of your light points together to give you the clearest possible view of the space and where your key areas are for energy efficiency optimisation.



URBASENS CIVIC CONNECT AND CITY CONNECT







OPTIMISED CONNECTIVITY

In inner-cities and dense areas, UrbaSens CITY CONNECT optimises connectivity with only one internet access point needed for 200 luminaires.



PRIVATE FACILITIES

Beyond towns and cities, UrbaSens CIVIC CONNECT and CITY CONNECT can link luminaires from multiple locations worldwide. For example, a global retailer or shopping mall chain can monitor energy savings and luminaire performance across all of their estate locations.



FAST DEPLOYMENT

With UrbaSens CIVIC CONNECT and its integrated GPS, installation has never been quicker.

DATA ANALYTICS



WEEKLY CALENDAR

Simply visualise how your schedule will be applied with our simulation tool - 'LightPlanner'.



LUMINAIRE STATUS

Through Zhaga-D4i luminaires, you can instantly access valuable network information such as luminaire status data, energy monitoring as well as fault reporting.

Available in near real-time and with a historic data log.



LOGS

Having autonomy over your lighting network means that you're able to tweak and optimise how your lighting network behaves. UrbaSens CIVIC CONNECT and CITY CONNECT allow you to track all activities in your system, from command log to change log.



SENSOR HEATMAP

The addition of sensors in the UrbaSens system goes beyond simple switching functionality. You're now able to analyse the usage of space via a heat-map which shows how often sensors are activated.





GROUP PERFORMANCE

An individual luminaire view is not always scalable, so UrbaSens CIVIC CONNECT and CITY CONNECT offer broader data to see how specific lighting groups across different areas of a town or city are performing. You get full access to display the data as you wish, from daily to yearly.



OPTIMISED SUSTAINABILITY

Across entire networks, UrbaSens CIVIC CONNECT and CITY CONNECT enable you to track your energy and cost savings over time. For example, if you make a slight amendment to a schedule, this is trackable, meaning you can see how a small change to the lighting infrastructure can turn into a major change in energy usage and cost over time.



FAULT NOTIFICATION

UrbaSens CIVIC CONNECT and CITY CONNECT empower users to better understand the lighting needs of a community. As part of this benefit, you can set up notification alerts on the platform. Both immediate notifications and daily update email options are available.



REALTIME CONNECTIVITY

With UrbaSens CIVIC CONNECT and CITY CONNECT you can send commands and retrieve information almost instantly. The intuitive dashboard enables realtime monitoring and immediate updates to how you want your infrastructure to behave.



NIGHTTUNE WITH CIVIC CONNECT

LET'S SET THE SCENE!

Put simply, NightTune is a system that automatically adjusts the level of light emitted by a light fitting, and its colour temperature, to suit the exact time of night, level of traffic and is commissioned to suit specific project and application needs.

Imagine a normal night. In the evening, when pedestrians are still using footpaths and walkways, as well as traffic on roads and streets. Here NightTune can provide a moderate colour temperature. Then, during the middle of the night when roads are quiet and there are fewer people using those same footpaths and walkways, the output of the neutral LEDs is reduced so that the light also becomes dimmer and warmer. As morning approaches and traffic returns to the streets, the output of the neutral LEDs increases once again, to provide brighter, cooler light that meets the higher safety demands.



NightTune works by dimming and mixing light from 2200K to a moderate 3000K via two independent groups of LED.



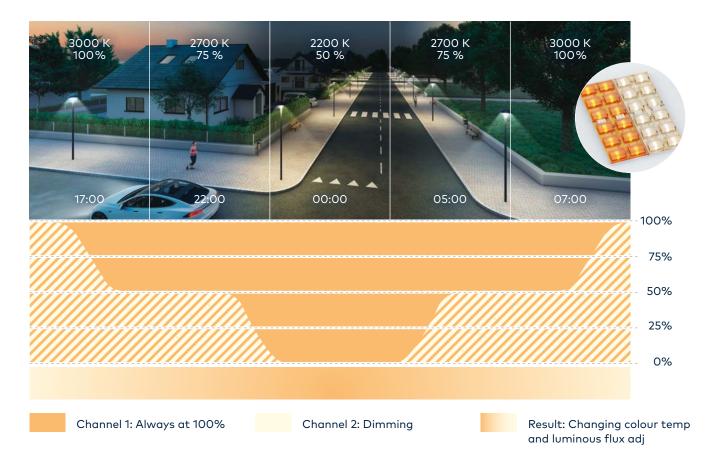
NightTune intelligently balances the nocturnal lighting needs for humans as well as local flora and fauna.



UrbaSens CIVIC CONNECT By combining advanced and NightTune combined means that you can apply a technology that's mindful of biodiversity alongside presence detection, scheduling and ambient lighting sensing.



technologies, you're able to balance the night time illumination needs of a community.



RESIDENTIAL ROADS

SAFETY AND COMFORT

Residential roads serve as the vital pathways that guide us home, and with strategically placed outdoor streetlights, they become safe and inviting havens, illuminating our way with warmth and security. By leveraging the power of both UrbaSens CITY CONNECT and UrbaSens CIVIC CONNECT, we can achieve these goals with precision, transforming residential areas and city centers into well-lit environments that prioritise safety, comfort, and a sense of belonging.



WEEKLY CALENDAR

Follow people's schedules whether a weekday morning or weekend evening ensuring them comfort and safety while making the right energy savings with both UrbaSens CITY CONNECT and UrbaSens CIVIC CONNECT.



NIGHTTUNE

Combine comfort and energy savings with NightTune and UrbaSens CIVIC CONNECT. Easily set the ambiance of the place and accompany people into the night with warmer colour and dimmed light.



TRAIN OF LIGHT

Together with motion sensor, UrbaSens CITY CONNECT can ensure that neighbouring luminaires are gradually triggered to come on. This means that a pedestrian's route is illuminated and the perception of safety is maintained without causing unnecessary light spill.



MAJOR ROADS

MONITOR AND PREVENT

In the bustling world of transportation, every moment counts. That's why ensuring reliability, minimising downtime, and closely monitoring streetlights are paramount for major roads. By harnessing our cutting-edge solutions, you can guarantee an uninterrupted flow, enhance safety, and deliver a seamless experience to commuters and travellers, all while preventing long maintenance or road blocking disruptions.



MONITORING

Via a D4i driver, get direct information from the luminaire itself. Monitor temperature, energy consumption, electrical grid under and over voltage. Within the platform, retrieve easily the different status of failure and operation on the map view or with a daily notification email.



DATA ANALYTICS

UrbaSens CIVIC CONNECT and CITY CONNECT offer the perfect lighting balance for communities, local biodiversity and our planet by offering you the ability to implement a lighting infrastructure that's powered by accurate, genuine and clear data analytics.



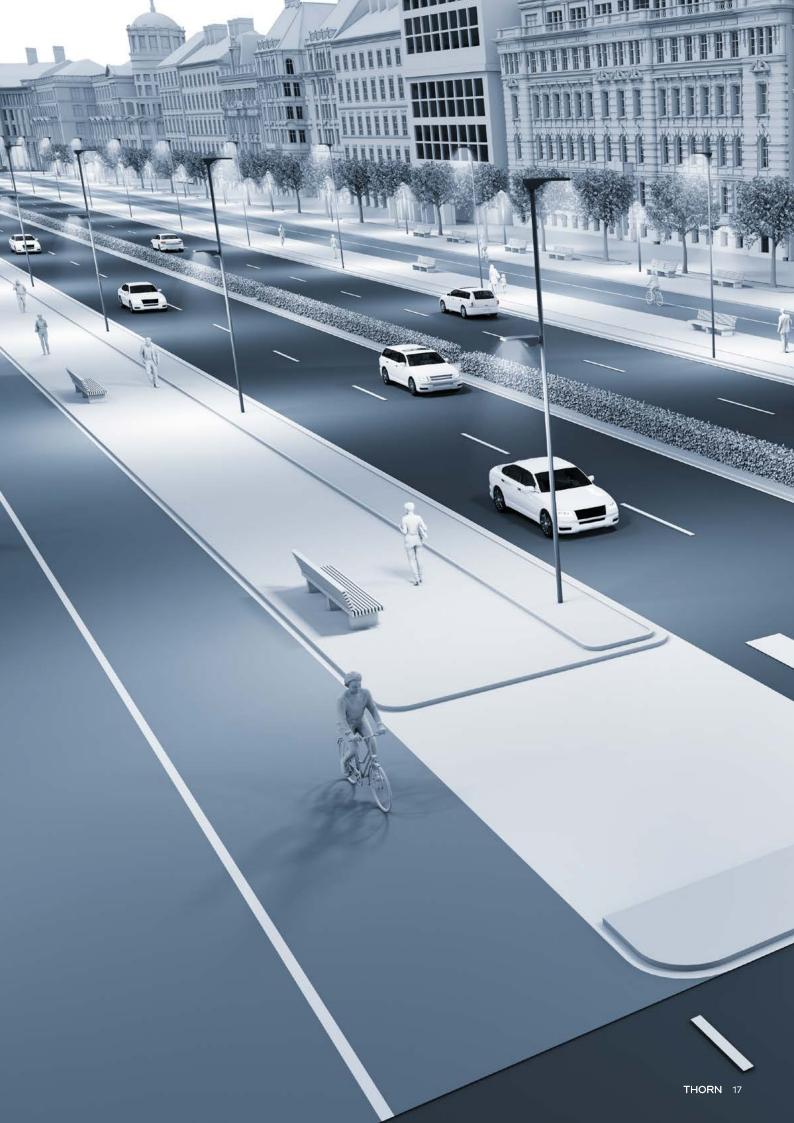
FAST DEPLOYMENT

UrbaSens CIVIC CONNECT incorporates a GPS which will automatically localize on the platform making deployment quick ensuring the smallest disruption on major roads. All you need to do is collect a serial number (available on the multiple QR code sticker) and can be done before deployment.



ABSOLUTE RELIABILITY

It's important that you're able to access the information that your connected lighting solution offers at any given point in the day. This is why UrbaSens CIVIC CONNECT is built on reliable GPS, cellular technology and UrbaSens CITY CONNECT utilises a connected mesh network via Gateways so that the information you need is only ever finger tips away in real-time



TOWN AND CITY CENTRES

SAFE AND EFFICIENT SPACES

In spaces where the micro-movements of vehicles and pedestrians happen in such close proximity, it's essential that people's safety is prioritised. However, that doesn't remove the need for being mindful of the lighting requirements of these spaces.



CAR PARKS

Activities within car parks vary greatly and are often a space of energy leak. Both UrbaSens CIVIC CONNECT and UrbaSens CITY CONNECT will help you achieve your energy savings target with each uniquely tailored for large and small car parks. Associated with motion sensors, these spaces will no longer be lit unnecessarily.



TRANSPORTATION

Connecting spaces such as train or bus stations require the correct lighting to safely accompany travellers and commuters. UrbaSens CIVIC CONNECT is the perfect tailored solution for small installation together with the weekly calendar to match people's routines.



PARKS AND PROMENADES

Improving comfort while considering energy savings and biodiversity is key for such spaces where people enjoy the outdoor environment. Whether by using NightTune with UrbaSens CIVIC CONNECT or train-of-light with UrbaSens CITY CONNECT, it's possible to be mindful of a park or promenade's surroundings and usage.



SIMPLE COMMISSIONING

When commissioning UrbaSens CIVIC CONNECT and CITY CONNECT, you can connect to the user interface and register a luminaire onto the system. This can be done either onsite or remotely. You can also programme groups or individual luminaires to ensure communities have the right light in the right place at the right time. Using GPS, the time code in each luminaire is also aligned perfectly, keeping time and ensuring the commissioned schedule remains accurate.



DISCOVER

URBASENS CIVICAND CITY CONNECT CITY CONNECT

AS TECHNOLOGY
INNOVATORS, THORN
LIGHTING HAS A VARIETY
OF APPLICATION SPECIFIC
CONNECTIVITY SOLUTIONS.

Uniform standards such as Zhaga enables interoperability and upgradability for light points over time. UrbaSens CIVIC CONNECT and CITY CONNECT have been designed to maximise the opportunity to responsibly and dynamically control the lit environment.

URBASENS NETWORK

URBASENS READY

URBASENS CITY CONNECT

URBASENS PLAY

(A)











		READY	DETECT	SENTINEL	CIVIC CONNECT	CITY CONNECT
SWITCHING	Day-Night cycle	•	•	•	•	•
SWITCHING	Ambient light	-	-	•	•	•
SCHEDULING	Real time			•		•
SCHEDOLING	Weekly calendar			•	•	•
MOTION	Standalone		•	•	•	•
MOTION	Group					
ADDRESSING	NightTune	•		•	•	
ADDRESSING	Variable Light Distribution					
ANALYTICS	Fault reporting	-	-	-	•	•
ANALYTICS	Energy monitoring					•
COMMISSIONING	On-site commissioning	-	-	•	•	•
	Remote commissioning					
	GPS					

URBASENS CIVIC AND CITY CONNECT



PRODUCT COMPATIBILITY

ROAD AND STREET LUMINAIRES			
Zhaga Up & Down	Zhaga Up		
Isaro Pro	Isaro		
R2L2			
Flow			
Carat			
Isaro			

URBAN LUMINAIRES				
	Zhaga Up & Down		Zhaga Up	
	Urba		Urba Deco	
	Aerie		Volupto	
1	Carat		Plurio	
			Avenue	

SPORTS AND AREA LUMINAIRES				
	Zhaga Up & Down	Zhaga Up		
Areaflood Pro				

THE URBASENS CIVIC AND CITY CONNECT SYSTEM

CIVIC CONNECT HARDWARE



ZHAGA DOWN MOTION SENSOR



RF-CONTROLLER ZG SIM

URBASENS PLATFORM



TALQ2 compliant



Central management system (CMS)



Additional CMS lighting systems from the Zumtobel Group

API (application programming interface)

API

Mobile Network



Cloud

CIVIC CONNECT

CITY CONNECT HARDWARE



RF GATEWAY



SCAN AND GO COMMISSIONING APP



RF CONTROLLER E (EXTERNAL)



CMS lighting systems

RF CONTROLLER PIR E (PRESENCE INFRARED **EXTERNAL**)



RF-CONTROLLER ZG M



CITY CONNECT

URBASENS PLATFORM

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. UrbaSens CMS is a cloud-hosted solution accessible via a web-based application. It is designed for laptop, PC and tablet operation. Each project is restricted to its owner entities and Thorn after sales service and strict user privileges allow secure operation. A user-friendly and intuitive interface makes operation simple with minimal training. It is divided into three major tools: 'Management' to install, set, change and monitor all parameters of all connected devices, 'Analytics' to review all historic project data, and 'Notifications'.





URBASENS COMMISSIONING APP

Simple and intuitive to use – that's the 'Scan & Go' UrbaSens commissioning app. It is used to register the devices to its assigned project and assign localisation – only needed with UrbaSens CITY CONNECT – with one single click via QR code scanning. Available on Android and iOS.



URBASENS LIGHTPLANNER

When you want to create, review and use the weekly calendar, LightPlanner will make life easier. Different profiles can be managed, along with the simulation tool that provides a direct visualisation of the status of the luminaires on a map.



TALQ V2 CERTIFICATION

UrbaSens CMS is TALQ v2 certified which will offer a greater level of compatibility between systems.



URBASENS RESTAPI

A RestAPI is available on specific request. All information and control over the lighting system is available which allows you to create a tailored application or integrate UrbaSens CITY CONNECT and CIVIC CONNECT into your lighting control system.

SERVICE SUPPORT

Together with our UrbaSens portfolio, via the Zumtobel Group we offer comprehensive service packages that allow us to tailor solutions to suit the needs of all customers.



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.

THE BENEFITS

OF WORKING WITH THORN

01

OVER 90 YEARS' EXPERIENCE

Yes, we really have passed the 90-year mark! Thorn has had nearly a century to develop its unique knowledge and expertise. And the best part is that we can build on this knowhow to make sure that we are always ahead of the game with the latest technology, the most reliable services and a price that works for everyone.



ELECTROMAGNETIC COMPATIBILITY (EMC) TESTING LABORATORY

02

CONSTANT RESEARCH AND INNOVATION

Thorn has been at the forefront of lighting technology for decades, and continues to push the boundaries. Our investment in R&D and innovation aims to bring customers the very best performance, thanks to the latest advanced engineering in light and electronics, with in-house development.

03

EXTENSIVE TESTING AND CERTIFICATION

Thorn's products undergo demanding tests for compliance, safety and performance. With Thorn, you can be sure that your lighting product does what it says it will do, meets all relevant standards and regulations, and comes with a guarantee of quality and safety.

04



ENVIRONMENTAL PRODUCT DECLARATION (EPD)

At Thorn we provide EPDs as a standard service. The EPD for each specific product details its impact on the environment throughout its lifecycle. The EPDs are based on ENISO 14025 and EN 15804. The information given by an EPD is relevant not only for environmental certifications such as LEED, BREEAM or ÖGNI. EPDs form the data basis for an environmental building assessment.

05

BEST-IN-CLASS OPTICS

Thorn's product range benefits from our class-leading optical systems. They offer several precision light distributions to fulfil various requirements, with excellent uniformity and glare control.



06

QUALITY FROM THORN'S SPENNYMOOR FACTORY

Thorn's products go through intensive quality manufacturing, assuring the best processes to develop better products all the way. In addition, we are one of the first companies in the UK to be certified to ISO 14001 – the standard for environmental management. In addition, we have successfully been recommended for certification to ISO 50001:2018 for energy management. Our factory at Spennymoor in the UK has achieved a reduction of approximately 25% in significant energy uses and 14% in electricity use compared to the previous year.

07

FIVE YEAR GUARANTEE

All Thorn products carry a five year guarantee.



GUARANTEE

08

ZUMTOBEL GROUP MEMBER

The Zumtobel Group is an international lighting group and a leading supplier of innovative lighting solutions, lighting components and associated services. With its core brands, Zumtobel, Thorn and Tridonic, the Group offers its customers around the world a comprehensive portfolio of products and services.

URBASENS CIVIC AND CITY CONNECT

HOW TO SPECIFY URBASENS SOFTWARE



UrbaSens Central Management System (CMS Lifetime usage per node)

Art No - 96636205

HOW TO SPECIFY URBASENS CITY CONNECT

8	UrbaSens CITY CONNECT RF-controller ZG M	Art No - 96632785 (single unit) Art No - 96632787 (12 units)
	UrbaSens CITY CONNECT RF-controller PIR E	Art No - 96628011 (1 unit)
	UrbaSens CITY CONNECT RF-controller E	Art No - 96628009 (1 unit)
	UrbaSens CITY CONNECT RF-gateway SIMC ETH E	Art No - 96628013 (1 unit)

HOW TO SPECIFY URBASENS CIVIC CONNECT



UrbaSens CIVIC CONNECT RF-Controller ZG SIM 10y

Art No - 96635511 (1 unit)

MOTION SENSOR OPTIONS FOR CIVIC CONNECT & CITY CONNECT



UrbaSens Motion Sensor Sensor ZG LG PIR

Art No - 96634039 (1 unit)



UrbaSens Motion Sensor Sensor ZG TR PIR

Art No - 22171802 (1 unit)



 $Thorn\ Lighting\ is\ constantly\ developing\ and\ improving\ its\ products.\ All\ descriptions,\ illustrations,\ drawings$ As a globally leading luminaire The right is reserved to change specifications without prior notification or public announcement. All goods supplied by the company are supplied subject to the company's General Conditions of Sale, a copy of which is available on request. All measurements are in millimetres and weights in kilograms unless otherwise stated. thornlighting.com/guarantee 02/2024 (INT)

