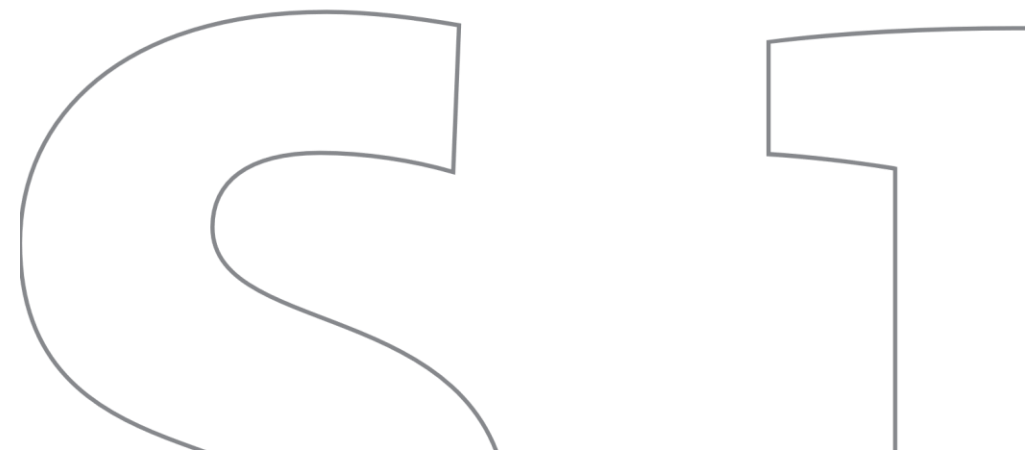


siteco

# SITECO Connect City

Use cases for Zhaga book 18 / D4i radio lighting control

Switch and dim.  
Integrate sensors.  
Monitor and optimize.



## Zhaga book 18 interfaces are conquering the entire Siteco outdoor luminaire portfolio

- Not every luminaire is equipped, but almost **all models** offer the choice to add one or two Zhaga book 18 interfaces.
- Siteco names the interface “**Smart Interface**”.



①  
**Streetlight SL 11**

**The undisputed top model in technical streetlighting.**  
Modern design with outstanding light for maximum visual comfort thanks to HD reflector technology. Convincingly efficient performance with reliable operation and intelligent control. The SL 11 leads the way.

②  
**Streetlight SL 21**

**The backbone of the smart city.**  
With its smart, future-proof product concept, this all-rounder serves all urban applications – from cycle paths to multi-lane traffic arteries.

Our **technical**  
outdoor luminaires –  
“Smart City Ready”.



③  
**Streetlight SL 31**

**Pragmatic, efficient, well thought out.**  
Spend less for better light: The SL 31 offers needs-based, long-lasting street lighting, ideal for the pragmatic renovation of old systems.

# Our decorative outdoor luminaires – “Smart City Ready”.



## DL\* 30

### Fresh urban aesthetics.

Decorative with optical guidance along the road. Convincing with precisely fitting light distributions. A pioneering luminaire with all control options.

## DL\* 50

### The urban all-rounder.

As a post or cable luminaire with a wide range of variants and modular design, it combines technical and decorative light – precise and glare-free.

## Bell

### Classic style with state-of-the-art LED technology.

Proven form meets innovative inner life including smart operating electronics. Available as complete luminaire in two sizes and LED module for refurbishment cases.

## Urban luminaires with Module 540

### Modular into the future of city lighting.

One module for many applications, efficient and elegant. The special optics with decorative light guidance ensure first-class visual comfort and create atmosphere.



## Most valued customer benefits

- A **standardized connection** ensures compatibility between the luminaire, lighting controller and sensor.
- The Zhaga/D4i connection enables a lighting control system or a sensor to be **retrofitted**.
- The time of the investment into luminaires, lighting control or sensors is **flexible**.
- As SITECO customer you may **now prepare for the future** and at a later time add a lighting control system of your choice.
- The lighting control system can be used for **many types of luminaires**.
- A later **system change is possible** at any time.







## The reasons for intelligent lighting control are increasing.

The central issues of our time - **energy efficiency, safety and sustainability** - are also changing the requirements for street and outdoor lighting.

It must work in an energy-saving manner and at the same time take into account the **increasing demands of the public** and the applicable **normative and safety-relevant aspects** for public facilities.

There is therefore **no alternative** to digitized LED outdoor lighting with intelligent lighting control.

# The reasons for intelligent lighting control are increasing.



## Lighting as required

Places with changing usage, e.g. Town hall or market squares can be **dimmed automatically**, depending on the time of day or the event.



## Increase security

Lighting adapted to events or rescue operations **increases visibility** and thus security.



## Reduce vandalism

Lighting increases when there is movement to **protect municipal and private facilities** such as sports facilities or schoolyards.



# The reasons for intelligent lighting control are increasing.



## Protect the climate

A conscious reduction of the lighting level in suitable places **reduces the CO<sub>2</sub> balance**, e.g. by dimming at times of low traffic in nature reserves, parks or industrial areas.



## Protect the flora and fauna

Targeted dimming in the deep night **reduces light pollution** and protects the flora and fauna, e.g. in parks and nature reserves.



## Public funding

Lighting control technologies enable the **implementation of environmental guidelines** and the application for public funding.



# Two exemplary end customer projects

## Maximum environmentally friendly solution: Ludwigsburg / Germany

- Romantic bridge with **foot and bike path across the Neckar** river.
- **Insect-friendly 2200 K lighting** using the Siteco SL11 street light with Zhaga book 18 **interfaces to top and bottom**.
- The Siteco Connect 21 control with Zhaga book 18 / D4i **PIR movement sensors** ensures a wide dimming in the night – as well as the required amount of safety in case of traffic.
- Mainly the **interface at the bottom** of the luminaires is used, because the movement sensors have got a radio integrated. It connects them in a mesh network via a local 2.4 GHz mesh network. This creates additional safety and comfort by illuminating luminaires laying ahead of the persons.
- The lighting may be switched according to **daylight brightness, day time (additional dimming after 11 pm) and movement**. One GPS controller on top of one luminaire feeds in the real-clock time into the system via the GPS signal.
- The customer preferred a **local radio network** without remote access by the internet and cloud in order to avoid ongoing cost (just one-time investment).

## The first thinking roundabout: Aschbach in Lower Austria

- "Do roundabouts in nature have to be brightly lit at night?"
- The solution enables nature conservation and safety, all combined.
- 10 street lights Siteco SL21 with Zhaga book 18 interfaces to top and bottom. They illuminate the out-of-town roundabout in the countryside from dusk for a good view.
- The Siteco Connect 21 control with motion detectors is dimming the light down to 15% in times without movement - with the **aim of nature conservation**.
- 7 Zhaga book 18 / D4i radar motion detectors that **detect arriving vehicles from a distance of 70-100 meters**. In this way, the light for the approaching vehicles is illuminated in advance.
- The individual movement detectors have got an integrated mesh radio device are **networked with one another** and the remaining 3 luminaires, so that the roundabout is illuminated as a whole when there is movement. It is a local mesh network control without follow-up costs.
- The lighting is switched according to surrounding **brightness, day time (further dimming after 1 am) and movement**.

# Lessons learned

- 2/3 of customers order lights with Zhaga book 18 **interfaces up and down** - to prepare for the future and to use motion detectors.
- The largest demand stems from the **public sector** (street and path lighting), not from companies.
- Most customers today are still in the **testing phase**.
- The biggest drivers are **nature conservation**, in particular
  - the reduction of the light pollution
  - protecting the flora and fauna like insects
  - while at the same time ensure a high amount of road safety.
- That is why **motion detectors** are currently of greatest interest. They allow dimming with simultaneous visibility in traffic.
- For a pure **monitoring of the luminaires**, for example the failure of electronic ballasts, the implementation costs of approx. 100 euros per light point are exceeding the customers spending-willingness (target: 10 % of the luminaire price).
- Customers express additional interest in using the Zhaga book 18 interface for **more Smart City applications** such as parking lot sensors, weather / air quality sensors and cameras.



Thank you a lot for your attention!

