Highlights

Outdoor lighting spans across several applications such as street lighting, lighting for parks and recreation areas, sports fields, facades, landscape and more. Street lighting is a key contributor to energy consumption in cities where it can make up to 53% of a municipality's total electricity bill. A sustainable and ecologically approach to outdoor lighting is essential to minimize energy consumption and disruption to other biological systems.

Casambi offers the perfect solution to meet the diverse lighting control demands for outdoor lighting, while tapping into further energy savings with sensors and other solutions from the Casambi ecosystem. Casambi wireless lighting controls are based on BLE (Bluetooth Low Energy), which is the only low-power wireless technology found in all modern smartphones, tablets, and even smartwatches. The same technology is embedded into hundreds of luminaires and devices from all major lighting manufacturers, enabling you to enjoy the benefits of smart lighting without the need for special wiring, or complex hardware such as routers. The versatility of the Casambi system makes it possible to extend the lifetime of existing installations by adding the layer of smart controls in a seamless way.

Casambi's state-of-the-art technology is aligned with the trends and dynamics of the outdoor sector, bringing further benefits beyond illumination, such as providing data for smart city applications, or allowing remote access for easier operation and maintenance. This design guide outlines how the versatility of Casambi wireless lighting control system can serve the diverse needs of outdoor lighting installations.

Consultant & Lighting Designer

- Freedom in product choice & design flexibility
- Versatility and flexibility for all applications
- No complex wiring diagrams

Installer & Commissioner

- Tool-free installation of Zhaga/NEMA nodes
- No control cables needed
- Commission via the free app
- Ease of troubleshooting

Operator / Facilities Manager

- Reduced total cost of ownership
- Energy efficient & cost effective
- Simple reconfiguration without disruption
- Smart city applications
- Efficient operations through remote access and data services
- Future-proof and upgradable

Occupants / Community

- Minimized light pollution through smart dimming and tunable white
- Sustainable safety and security
- Enhanced right-time experience

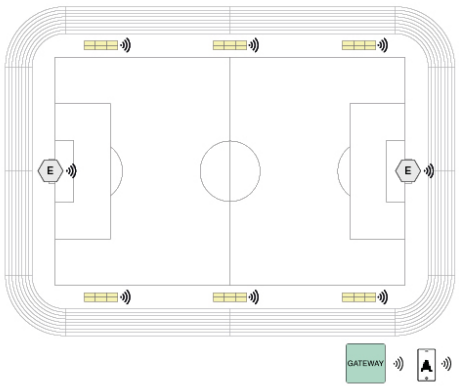
How to read this guide?

Room Type

Solution Type

3. Sports Field

Individual Control



Casambi Ready luminaire

Casambi Ready repeater

In case the distance between devices of a Casambi network is at the limit of the communication range, the range can be extended by using repeaters.
Such devices can be simply paired to the network and programmed to only receive and repeat Bluetooth signals. Casambi ecosystem also contains IP rated repeaters for use in the outdoor environment.

Casambi to Cloud Gateway

By using a gateway it is possible to access and control Casambi networks remotely. It can also be used for remote diagnostics and network monitoring.

Benefits

Staff can easily control lighting using the Casambi App from their smart devices. Multiple pre-programmed scenes for match, training or maintenance can be created and selected from a mobile device, or luminaires can be controlled individually by using a photo or layout of the sports field.

Devices

LUMINAIRE	Casambi Ready luminaire	6
OTHER	Casambi to Cloud Gateway	1
	Casambi Ready repeaters	2
APPLICATION	Casambi App on a smart mobile device **Not mandatory for daily use.*	

Functionality

Casambi App on a Smart Mobile Device

Calendar and Timer

Data and Remote Access

Scenes

5 Outdoor - V2.1 EN
For more information www.casambi.com/ecosystem

CASAMBI

Learn about the products used in the space

Understand how the products are laid out in the space

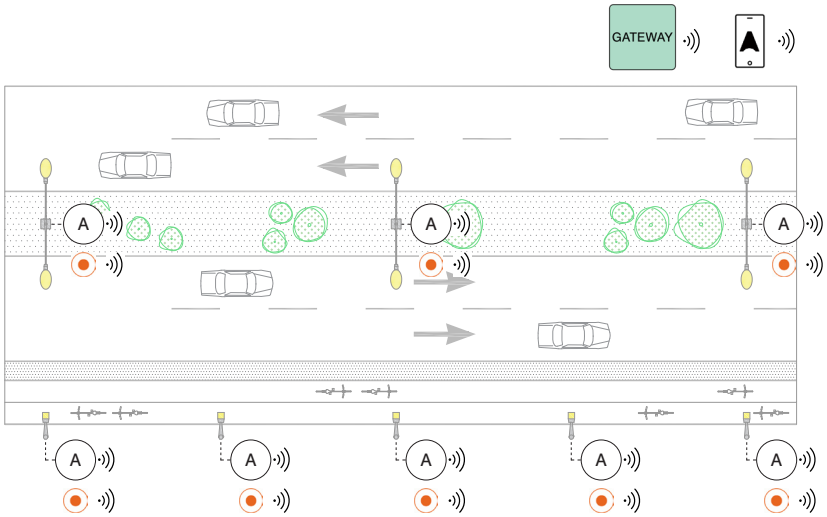
Understand the benefits

Understand what products would be needed to achieve the strategies

Learn what strategies can be implemented in the space

1. Street Lighting

Retrofit



Pole top Tunable White DALI luminaire with Zhaga/ NEMA socket

Pole top Tunable White DALI luminaire with Zhaga/ NEMA socket

Casambi Ready Zhaga/NEMA node

Casambi Ready occupancy and light sensor

Outdoor rated Casambi to Cloud Gateway

*By using a **gateway** it is possible to access and control Casambi networks remotely. It can also be used for remote diagnostics and network monitoring and Service & Maintenance.*

Casambi ecosystem contains wireless communication nodes that are compatible with Zhaga or NEMA sockets. With these nodes you can give Casambi wireless connectivity to existing street lights, without additional complex hardware integration. All electrical connection and mechanical fixing are done by twist and lock, without tools. The nodes come in an IP66, UV resistant, IK09 enclosure.

Benefits

To minimize the disruption caused by night-time lighting on biological systems, tunable white lighting that maintains the light temperature at very low levels (2200-3000K) can be used at late hours. Providing safety and security while keeping light levels to a minimum when not needed, according to usage, zone, time and traffic will also help reduce light pollution.

Devices

LUMINAIRE	Pole top Tunable White DALI luminaire with Zhaga/NEMA socket	+ A	3
	Pole top Tunable White DALI luminaire with Zhaga/NEMA socket	+ A	5
SENSOR	Casambi Ready occupancy and light sensor		8
OTHER	Outdoor rated Casambi to Cloud Gateway	GATEWAY	1
APPLICATION	Casambi App on a smart mobile device **Not mandatory for daily use.*		

Functionality

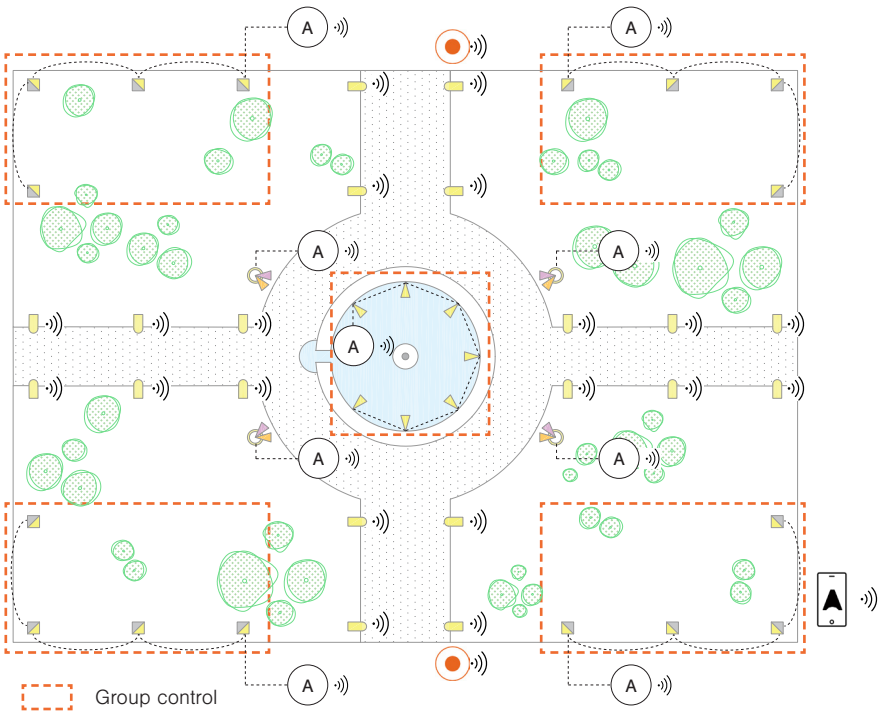
Casambi App on a Smart Mobile Device

Calendar and Timer

Occupancy Detection

Daylight Harvesting

Data and Remote Access



Standard bollard DALI

RGBW DALI floodlights

Standard luminaire IP68 DALI

Casambi Ready pole

Casambi Ready occupancy sensor

DALI bus

Casambi wireless DALI controller

As the DALI controller, Casambi Ecosystem contains IP rated devices that are suitable for outdoor use. Alternatively, standard IP20 Casambi Ready controllers can be placed inside IP rated plastic junction boxes.

Benefits

Calendar and timer functionality comes as built-in inside all Casambi devices. No extra devices are needed to activate or deactivate light scenes based on the time of day or specific dates. Such settings are handled during commissioning from the Casambi App.

Devices

LUMINAIRE	Standard luminaire DALI	+ A 4 →
	RGBW DALI floodlights	+ A 4 →
	Standard luminaire IP68 DALI	+ A 1 →
	Casambi Ready luminaire	20
SENSOR	Casambi Ready occupancy sensor	2
APPLICATION	Casambi App on a smart mobile device **Not mandatory for daily use.*	

Functionality

Casambi App on a Smart Mobile Device

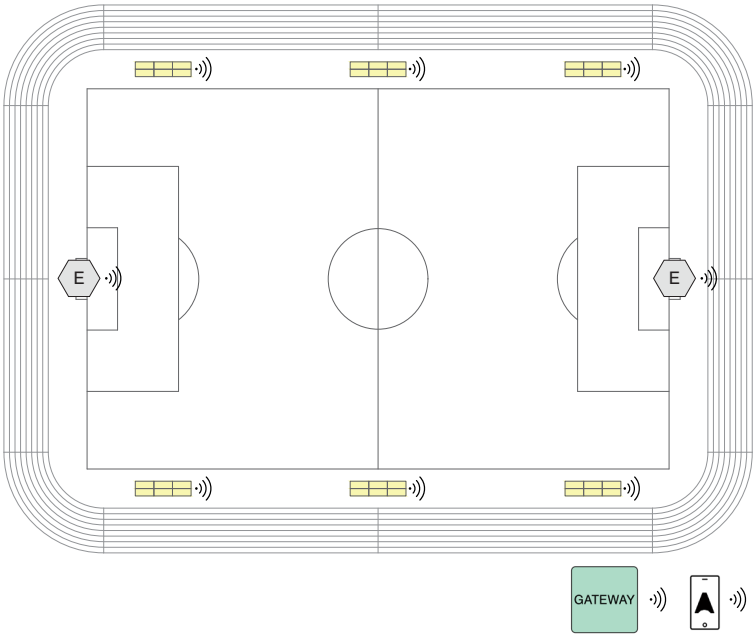
Calendar and Timer

Occupancy Detection

Scenes

3. Sports Field

Individual Control



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Devices

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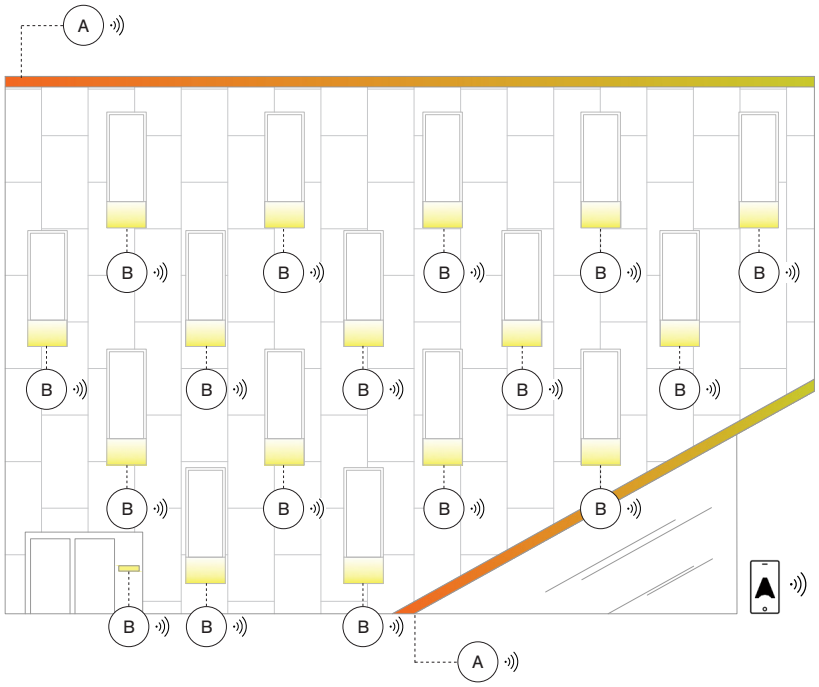
Functionality

Casambi App on a Smart Mobile Device

Calendar and Timer

Data and Remote Access

Scenes



Linear LED RGBW DMX

Tunable White luminaire DALI

Tunable White luminaire DALI

A Casambi DMX controller

B Casambi DALI controller

Benefits

with the Casambi App it's also possible to create animations. Animations consist of multiple existing basic scenes that are activated in a defined sequence. An animation can be set to fade off, stay on the last step or repeat after the last animation step.

Devices

LUMINAIRE	Linear LED RGBW DMX	+ A 2 →
	Tunable White luminaire DALI	+ B 16 →
	Tunable White luminaire DALI	+ B 1 →
APPLICATION	Casambi App on a smart mobile device **Not mandatory for daily use.*	

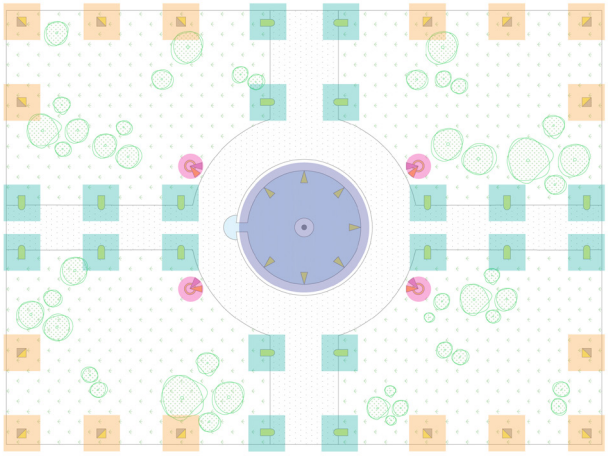
Functionality

Casambi App on a Smart Mobile Device

Calendar and Timer

Scenes

Example: Scenario



Light scenes during winter

Warm scene

- Poles (2700 K), Bollards (3000 K)
- Floodlight RGBW : Scenes are designed according to festive seasons. (Example: Christmas, New Year´s Eve, National Day etc.)
- Underwater fountain lights: (3000 K)

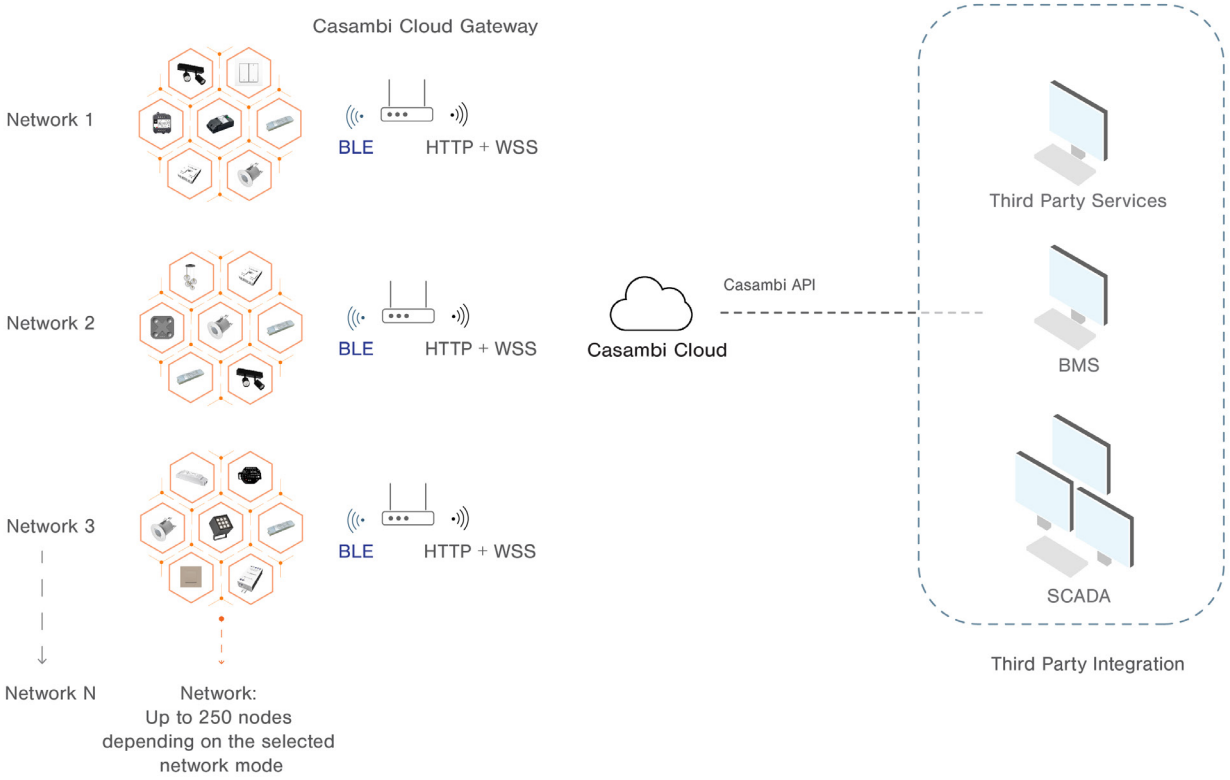
Light scenes during summer

Cool scene

- Poles (3500 K), Bollards (4000 K)
- Floodlight RGBW : Scenes are designed according to festive seasons. (Example: Festivals, Important Days etc.)
- Underwater fountain lights: (4000 K)

Control Type	Functionality
Daylight Control	Daylight sensors integrated into post top luminaires activate and turn off the lighting by measuring the amount of daylight available
Scheduling	Outputs of all poles are dimmed to 30% from midnight to sunrise Outputs of all bollards are dimmed to 50% from midnight to sunrise Underwater fountain lights and RGBW flood lights are turned on during evening times (17:00-23:00)
Motion detection (Presence)	Motion detected: Light output of poles are raised to 80% during late hours (00:00-05:00) No motion detected for 20 minutes: Back to the dimming level assigned in scheduling
Manual Control	Light scene settings can be instantly modified by authorized park staff via Casambi App.

Linking multiple networks with Casambi Cloud Gateway



Linking multiple networks locally