

Highlights



Light is an essential element in modern retail design. Good retail lighting can really highlight displayed products, add a sense of direction to space, enhance the retail experience, and even reflect a brand's visual identity. However, retail spaces have the highest lighting energy consumption (51kWh/sqm per year) among all building types. This is primarily due to the intensity of lighting required for displaying the products.

Casambi offers the perfect solution to meet the lighting control demands of today's retail space. Casambi provides lighting designers and manufacturers with the ability to wirelessly link devices together enabling the creation of highly customizable lighting networks that are easily configured and controlled using the Casambi App. It's based on BLE (Bluetooth Low Energy), 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 in your facility without the need for special wiring or any long list of hardware required. Casambi's open smart lighting ecosystem of 100% interoperable lighting products consists of luminaires, drivers, sensors, switches, dimmers, and other control gear from all the major manufacturers - all utilizing the simplicity of safe and reliable wireless communication. Casambi is easy and fast to specify, install, commission, and use, thanks to its simplified system architecture and user interfaces.

The free Casambi App works as the user interface, commissioning tool, and remote gateway, so no additional devices or software is required to operate a standard Casambi mesh network. Wireless and self-powered switches from the Casambi Ecosystem can be used as handheld devices or easily attached to any surface. They work both as an on/off switch and a dimming controller.

Facility Management Advantages

- Energy efficiency and sustainability
- Data and connectivity, occupancy control
- No internet connection required for daily operation
- Reduced operational costs
- Wireless emergency lighting with automated testing & reporting
- Non-disruptive installation, easy commissioning

Occupant Advantages

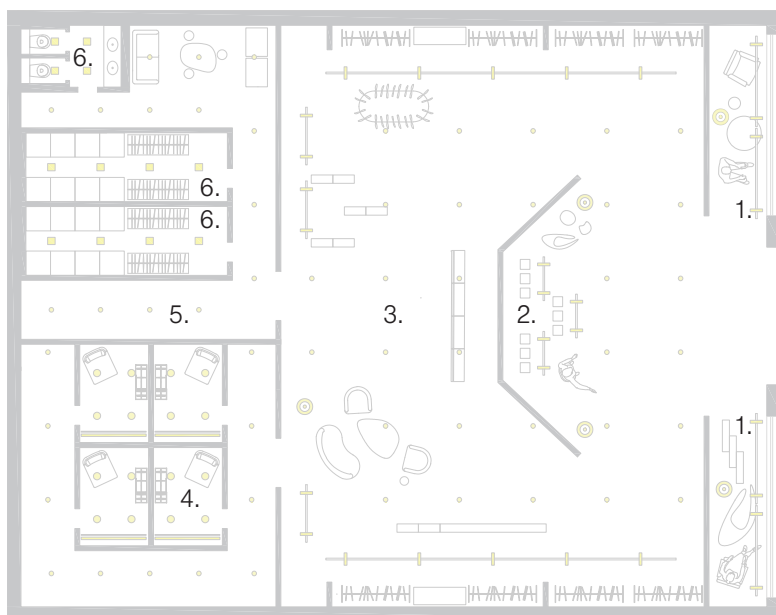
- Flexibility
- Scalability
- Human-centric lighting
- Productivity
- Individually and easily controllable lighting over a workstation
- Task-related predefined lighting scenes
- Intuitive UI

Specifier Advantages

- The range and robustness of the mesh
- Advantages for future-proofing the installation
- Task-related predefined lighting scenes
- Flexibility
- Scalability
- Intuitive UI

Installer / Contractor Advantages

- Non-disruptive installation, easy commissioning
- Scalability
- Future-proof the installation
- Free software updates over the air



Possible Functionalities

1. Shop Window



2. Focal Point



3. Main Display Area



4. Changing Rooms



5. Circulation Areas



6. Storage and Restrooms



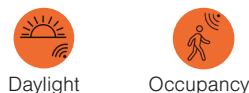
- **Switch:** ON/OFF switch or dimming controller.
- **Xpress:** Casambi wall-mounted switch to control up to 4 scenes, dimming and color temperature.
- **Casambi App:** Full functionality for commissioning and end- user control.
- **Daylight:** Level of artificial lighting is adjusted in response to available daylight.
- **Occupancy detection:** Lights are activated or dimmed based on presence.

Controllers

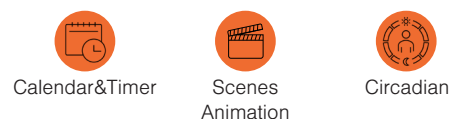
Manual Control



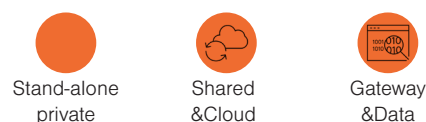
Sensors



Calendar & Timer



Network



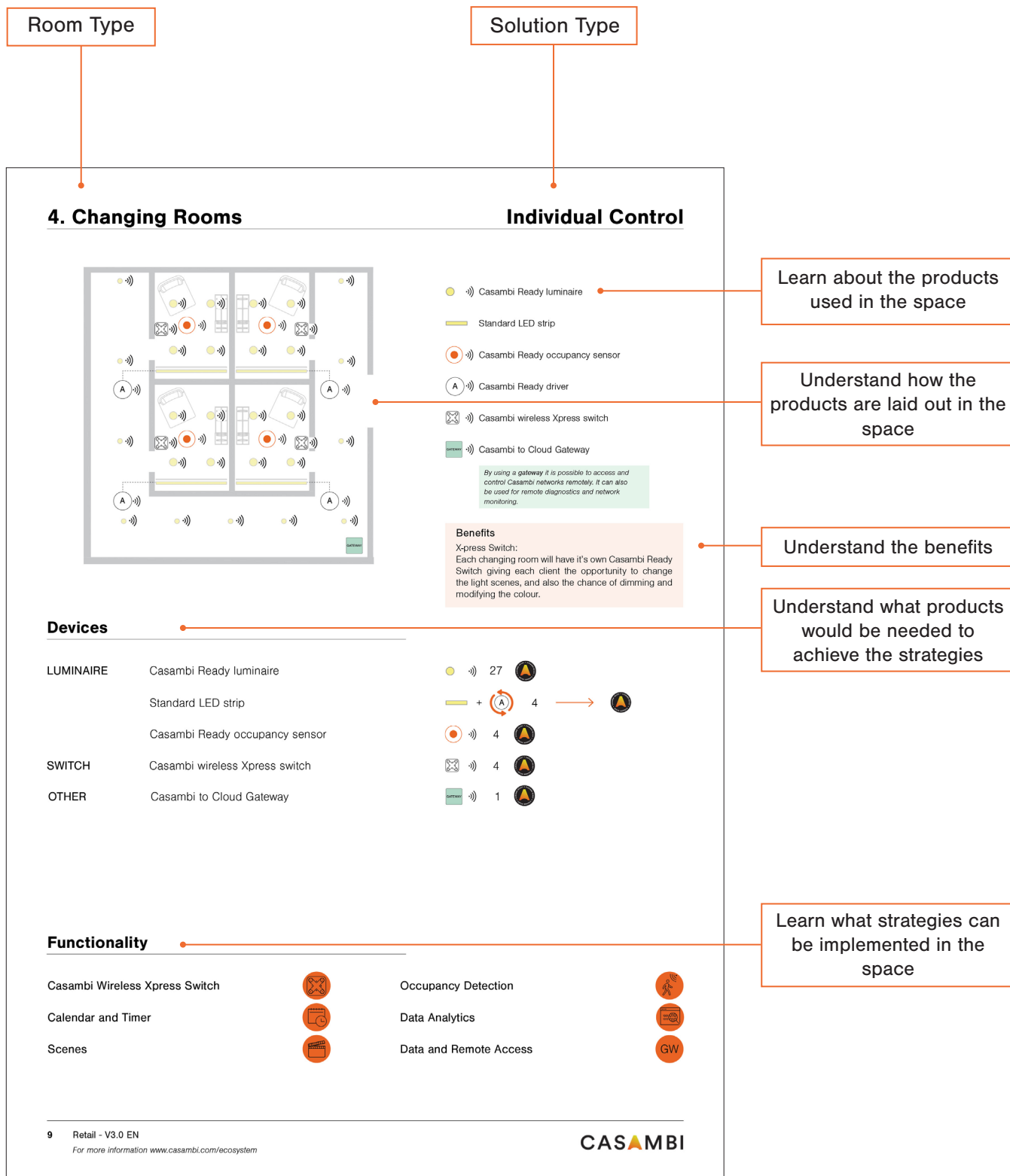
iBeacon profiles are embedded into each Casambi device, helping retailers track the in-store experience of visitors and extract knowledge from the use of physical space. With the Casambi Extension Interface, any sensor information can be collected and processed to create heatmaps or other analytics that you can use to increase the efficiency of your stores.

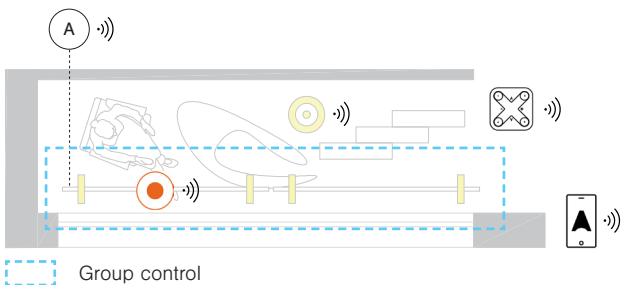
Through its modern API, Casambi networks can be integrated into IoT tools that enable network monitoring and the usage of collected data from the network.

Casambi API consists of Rest API & Websocket services, and all received data is in human-readable JSON format.

- **Calendar & Timer:** Activate or deactivate light scenes based on the time of day or specific dates.
- **Scenes:** Programmed scenes or animations adjusting the light level, color or color temperature.
- **Circadian Lighting:** Personalized circadian profiles to adjust the color temperature (K) of luminaires based on the time of day.

How to read this guide?





- Standard track luminaire with DALI driver
- Casambi Ready luminaire
- Casambi Ready occupancy and light sensor
- Casambi wireless controller DALI
- Casambi wireless Xpress switch

Responsive Shop Window

- Every day - Except Sundays: (09:00-20:00)
Daylight sensing - lights are switched on when measured daylight level falls below preset threshold value
- Store closed: (20:00-00:00) Lights on
- Late hours: (00:00-09:00) Occupancy detection - lights are switched on when presence is detected in front of the window. No occupancy for 10 mins, lights switched off

Devices

LUMINAIRE	Standard track luminaire with DALI driver
	Casambi Ready luminaire
SENSOR	Casambi Ready occupancy and light sensor
SWITCH	Casambi wireless Xpress switch
APPLICATION	Casambi App on a smart mobile device
	<i>*Not mandatory for daily use.</i>



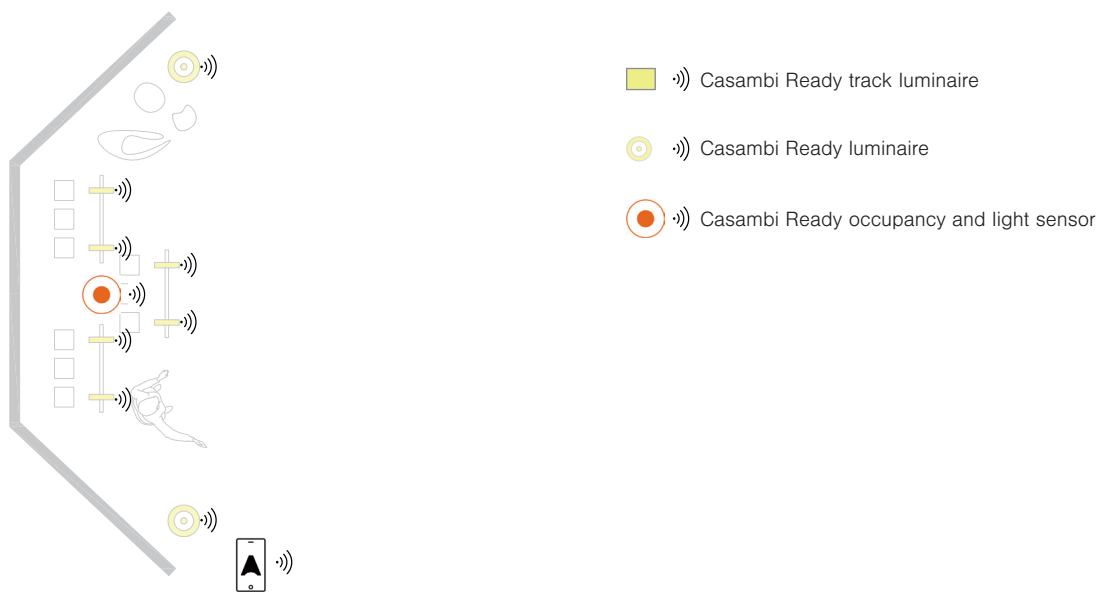
Functionality

- Casambi App on a Smart Mobile Device
- Calendar and Timer
- Scenes
- Daylight Harvesting



- Casambi Wireless Xpress Switch
- Occupancy Detection
- Data Analytics



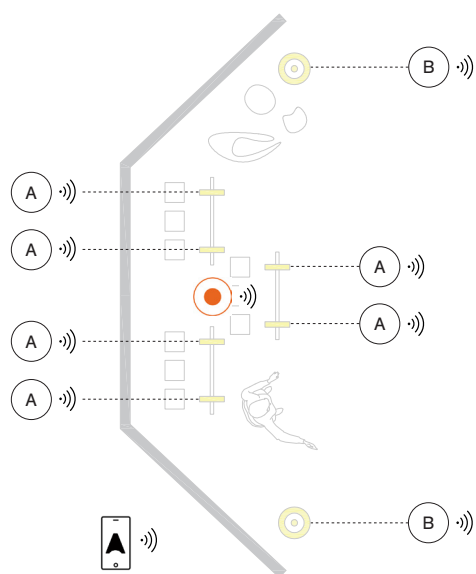


Devices

LUMINAIRE	Casambi Ready track luminaire	6	
	Casambi Ready luminaire	2	
SENSOR	Casambi Ready occupancy and light sensor	1	
APPLICATION	Casambi App on a smart mobile device		
		*Not mandatory for daily use.	

Functionality

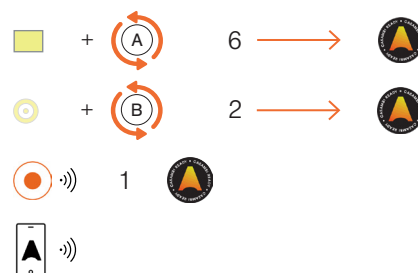
Casambi App on a Smart Mobile Device		Occupancy Detection	
Calendar and Timer		Daylight Harvesting	
Scenes		Data Analytics	



- Standard track luminaire
- Decorative luminaire with dimmable LED lamp
- Casambi Ready occupancy and light sensor
- Casambi Ready In-track driver
- Casambi wireless phasecut dimmer

Devices

LUMINAIRE	Standard track luminaire
	Decorative luminaire with dimmable LED lamp
SENSOR	Casambi Ready occupancy and light sensor
APPLICATION	Casambi App on a smart mobile device <i>*Not mandatory for daily use.</i>



Functionality

Casambi App on a Smart Mobile Device



Calendar and Timer



Scenes



Occupancy Detection



Daylight Harvesting

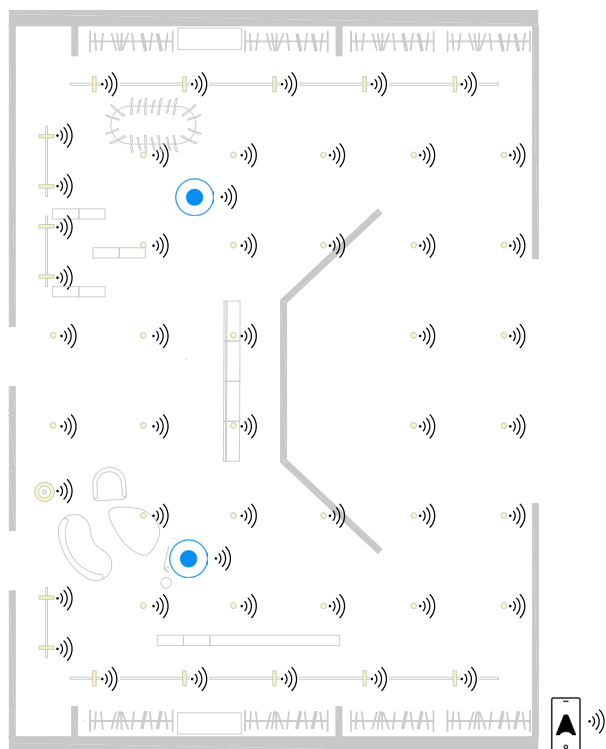


Data Analytics



3. Main Display Area

Individual Control



-  Casambi Ready luminaire
-  Casambi Ready luminaire
-  Casambi Ready luminaire
-  Casambi Ready air quality sensor











Benefits

You can create separate control groups or create new control groups anytime via the Casambi App. Using Casambi Ready products would be the easiest and most economic option.

iBeacon profiles are embedded into each Casambi device, helping retailers track the in-store experience of visitors and extract knowledge from the use of physical space.

Devices

LUMINAIRE	Casambi Ready luminaire
	Casambi Ready luminaire
	Casambi Ready luminaire
SENSOR	Casambi Ready air quality sensor
APPLICATION	Casambi App on a smart mobile device <i>*Not mandatory for daily use.</i>

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-  30 
-  1 
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Functionality

Casambi App on a Smart Mobile Device

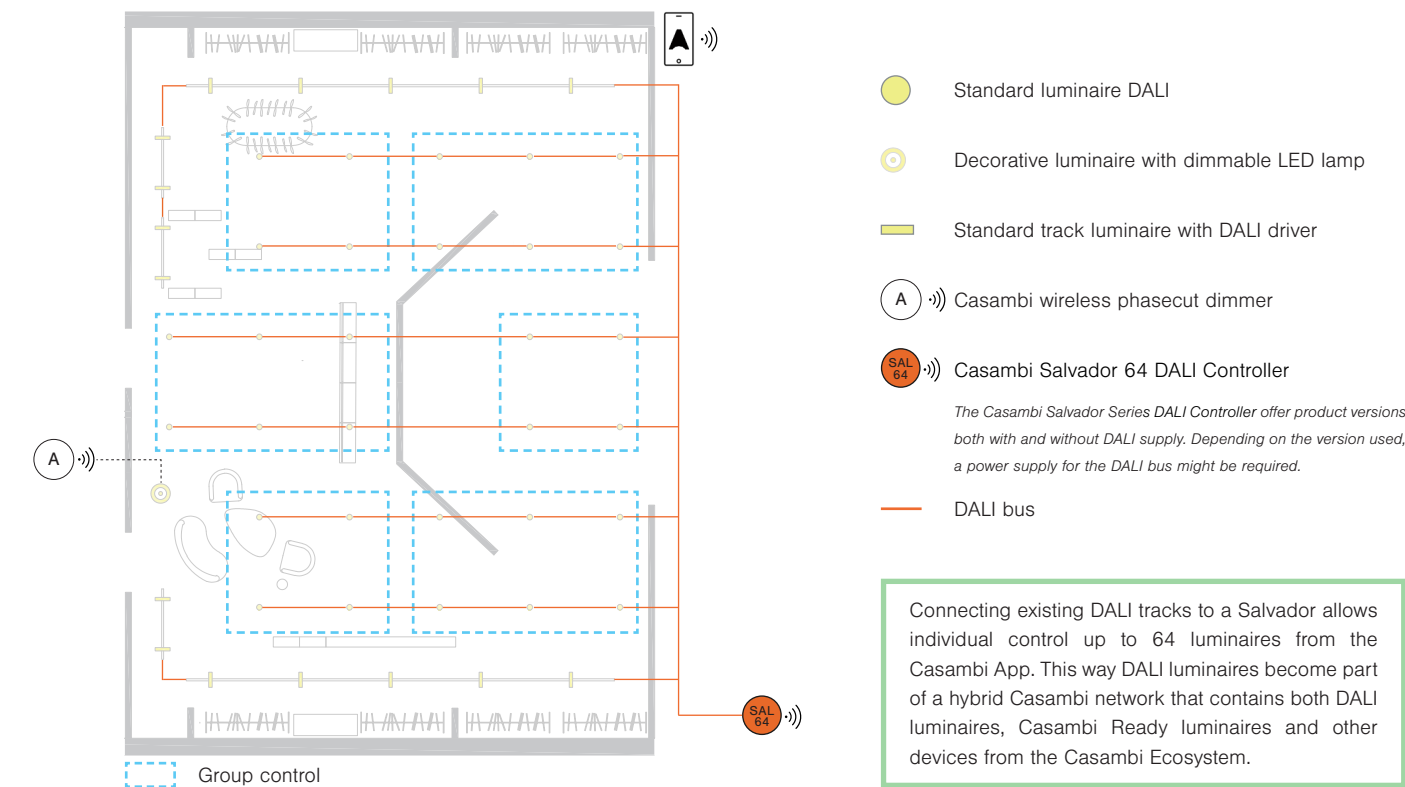
Calendar and Timer

Scenes



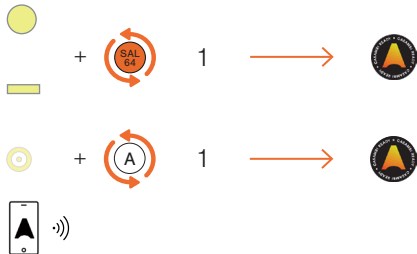
Data Analytics





Devices

LUMINAIRE	Standard luminaire DALI
	Standard track luminaire with DALI driver
	Decorative luminaire with dimmable LED lamp
APPLICATION	Casambi App on a smart mobile device <i>*Not mandatory for daily use.</i>



Functionality

Casambi App on a Smart Mobile Device

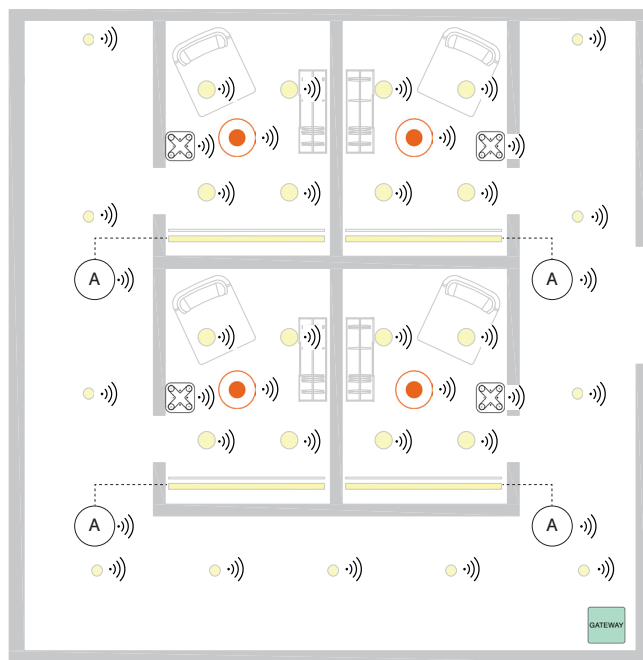
Calendar and Timer







Scenes



Data Analytics





-  Casambi Ready luminaire
-  Standard LED strip
-  Casambi Ready occupancy sensor
-  Casambi Ready driver
-  Casambi wireless Xpress switch
-  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

X-press Switch:

Each changing room will have it's own Casambi Ready Switch giving each client the opportunity to change the light scenes, and also the chance of dimming and modifying the colour.

Devices

LUMINAIRE	Casambi Ready luminaire
	Standard LED strip
	Casambi Ready occupancy sensor
SWITCH	Casambi wireless Xpress switch
OTHER	Casambi to Cloud Gateway



Functionality

Casambi Wireless Xpress Switch



Calendar and Timer



Scenes



Occupancy Detection

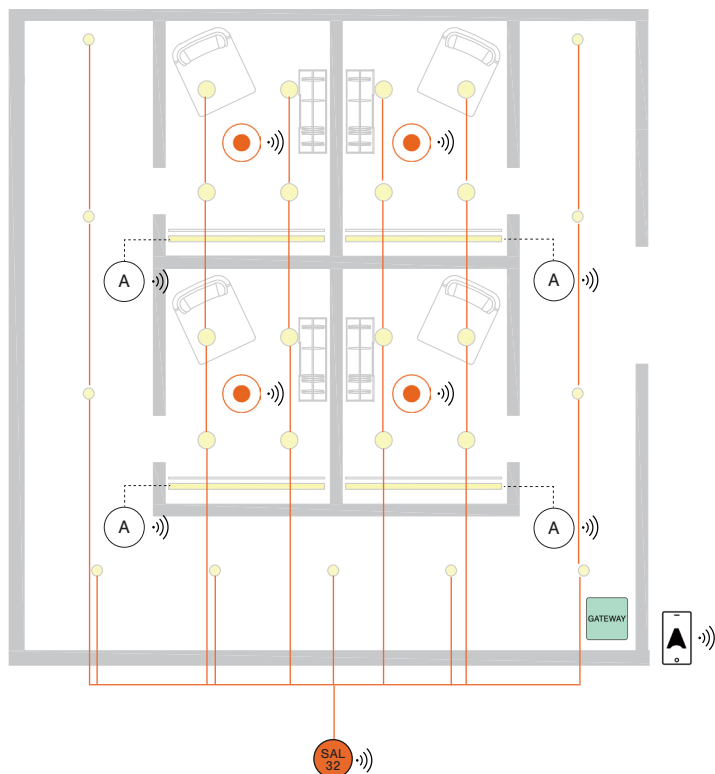







Data Analytics





Data and Remote Access





-  Standard luminaire DALI
-  Standard LED strip
-  Casambi Ready occupancy sensor
-  Casambi wireless 4-channel PWM dimmer
-  Casambi Salvador 32 DALI Controller

The Casambi Salvador Series DALI Controller offer product versions both with and without DALI supply. Depending on the version used, a power supply for the DALI bus might be required.
-  DALI bus
-  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. Some gateways from the Casambi ecosystem allow the use of a QR code for personalized light settings in changing rooms or offices.

Benefits

Casambi Application: You can create separate control groups or create new control groups anytime via the Casambi App. With the Casambi Cloud Gateway you can also do it remotely.

Devices

LUMINAIRE	Standard luminaire DALI
	Standard LED strip
SENSOR	Casambi Ready occupancy sensor
OTHER	Casambi to Cloud Gateway
APPLICATION	Casambi App on a smart mobile device <i>*Not mandatory for daily use.</i>



Functionality

Casambi App on a Smart mobile device



Calendar and Timer



Scenes



Occupancy Detection

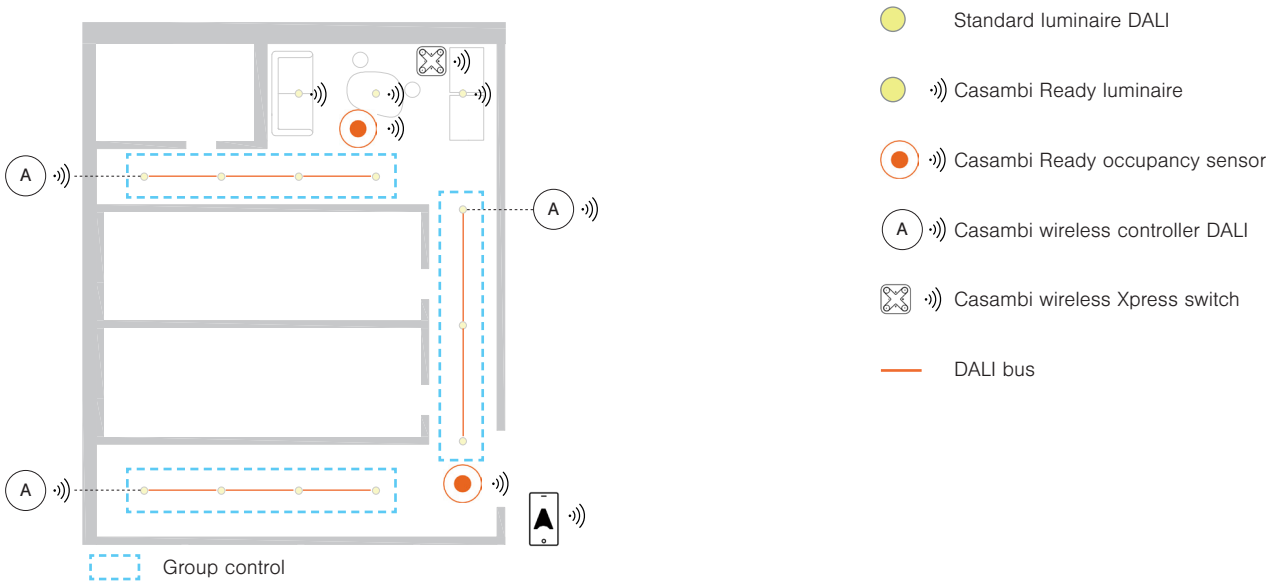


Data Analytics



Data and Remote Access





Devices

LUMINAIRE	Standard luminaire DALI
	Casambi Ready luminaire
SENSOR	Casambi Ready occupancy sensor
SWITCH	Casambi wireless Xpress switch
APPLICATION	Casambi App on a smart mobile device
	<i>*Not mandatory for daily use.</i>



Functionality

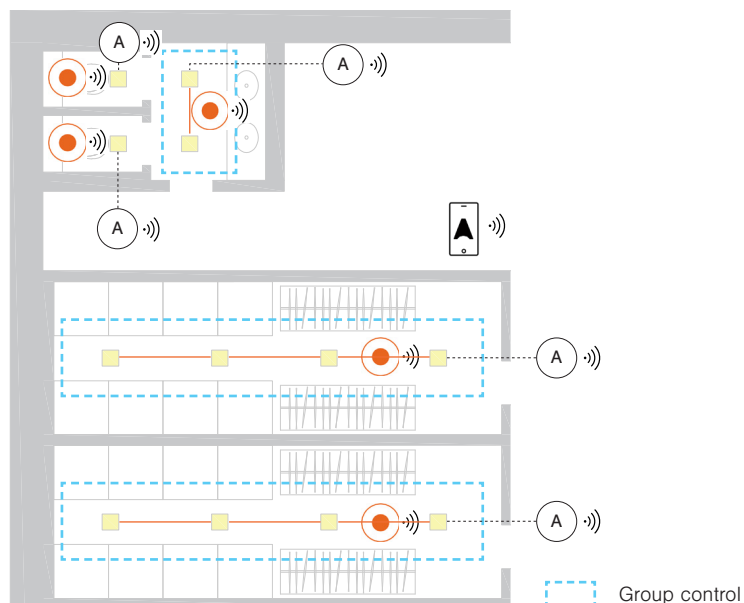
Casambi App on a Smart mobile device

Calendar and Timer

Casambi Wireless Xpress Switch

Occupancy Detection

Group Control with DALI Dimming

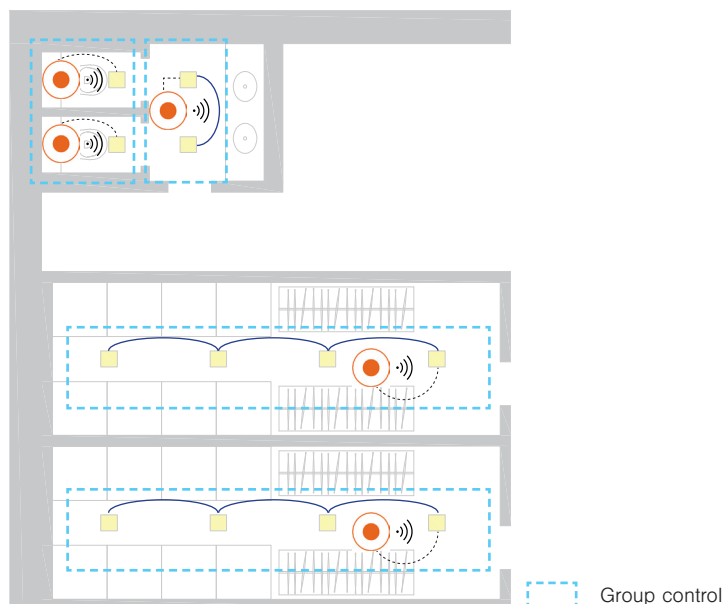


Devices

LUMINAIRE	Standard luminaire DALI
SENSOR	Casambi Ready occupancy sensor

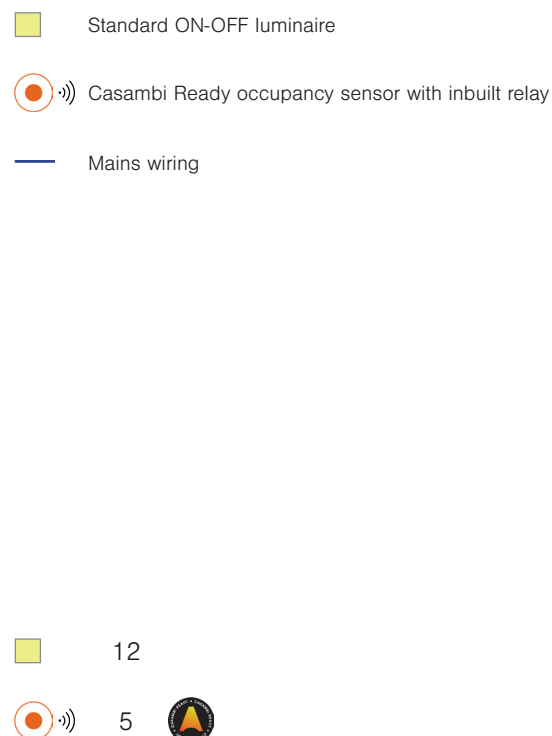


Group Control with Relay Switching



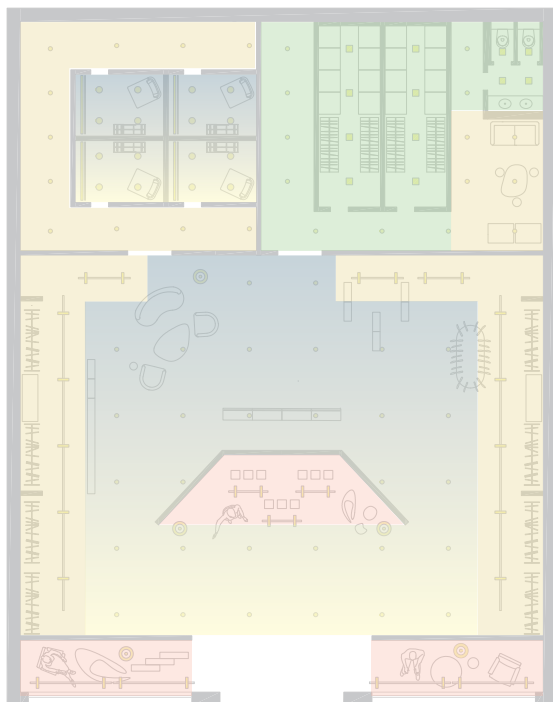
Devices

LUMINAIRE	Standard ON-OFF luminaire
SENSOR	Casambi Ready occupancy sensor with inbuilt relay







Seasonal Scenes - Four Seasons

Winter



Light Scenes

-  Warm scene - Shop window and focal point
-  Neutral scene - Display area
-  Circadian scene - Store general areas
-  Static colour temperature - Back of house areas

Lighting Functionality

Shop window and focal point:

- **Every day** - Except Sundays: (09:00-20:00) Daylight sensing - lights are switched on when measured daylight level falls below preset threshold value.
- **Store closed:** (20:00-00:00) Occupancy, Lights 100% on
- **Late hours:** (00:00-09:00) Occupancy detection - lights are switched on when presence is detected in front of the window. No occupancy for 10 mins, lights switched off.

Main display area:

- **Every day** - Except Sundays: (09:00-20:00) All lights on - Focal Point: Warm Scene (2700K), General Areas: Circadian Scene (2700-4000K), Display Areas: Neutral Scene (3000K)
- **Store Closed:** (20:00-00:00) Cleaning scene with presence detection. If no presence detected for 30 minutes all lights are switched off.
- **Late hours:** (00:00-09:00) All lights are switched off.

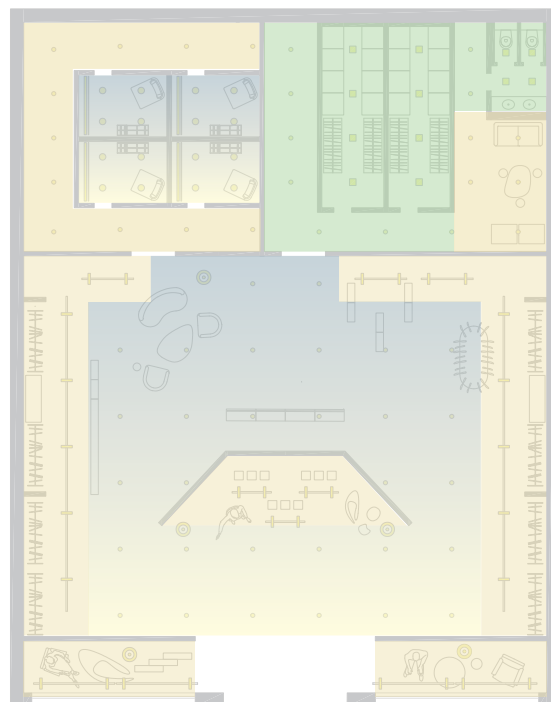
Changing rooms, circulation areas, storage and restrooms:

- **Working hours:** (9am-8pm) Occupancy, Lights 100% ON
No occupancy for 20mins, Lights dimmed to 10%
- **After work hours:** (8pm-9am) Lights OFF




Festive season:

- **Shop Windows and Focal Point:** RGBW lights, green, red and white

Spring



Light Scenes

-  Neutral scene - Display area
-  Circadian scene - Store general areas
-  Static colour temperature - Back of house areas

Lighting Functionality

Shop window and focal point:

- **Every day** - Except Sundays: (09:00-20:00) Daylight sensing - lights are switched on when measured daylight level falls below preset threshold value.
- **Store closed:** (20:00-00:00) Occupancy, Lights 100% on
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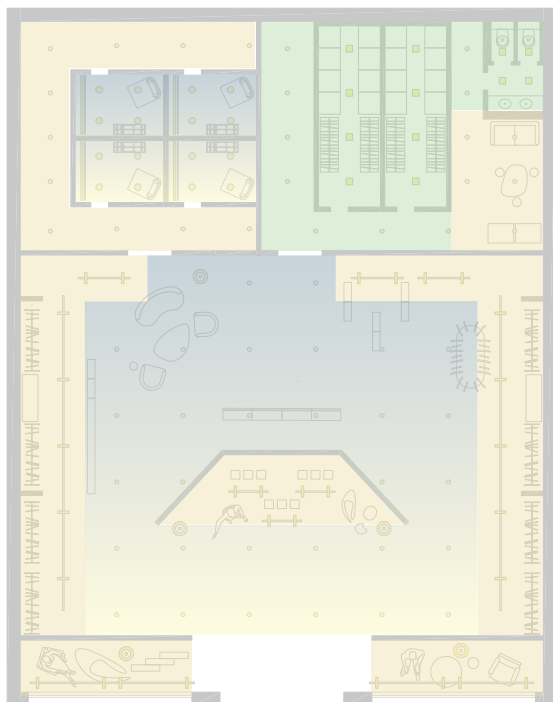
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- **Store Closed:** (20:00-00:00) Cleaning scene with presence detection. If no presence detected for 30 minutes all lights are switched off.
- **Late hours:** (00:00-09:00) All lights are switched off.

Changing rooms, circulation areas, storage and restrooms:

- **Working hours:** (9am-8pm) Occupancy, Lights 100% ON
No occupancy for 20mins, Lights dimmed to 10%
- **After work hours:** (8pm-9am) Lights OFF

Seasonal Scenes - Four Seasons

Summer



Light Scenes

- Neutral scene - Display area
- Circadian scene - Store general areas
- Static colour temperature - Back of house areas

Lighting Functionality

Shop window and focal point:

- Every day** - Except Sundays: (09:00-20:00) Daylight sensing - lights are switched on when measured daylight level falls below preset threshold value.
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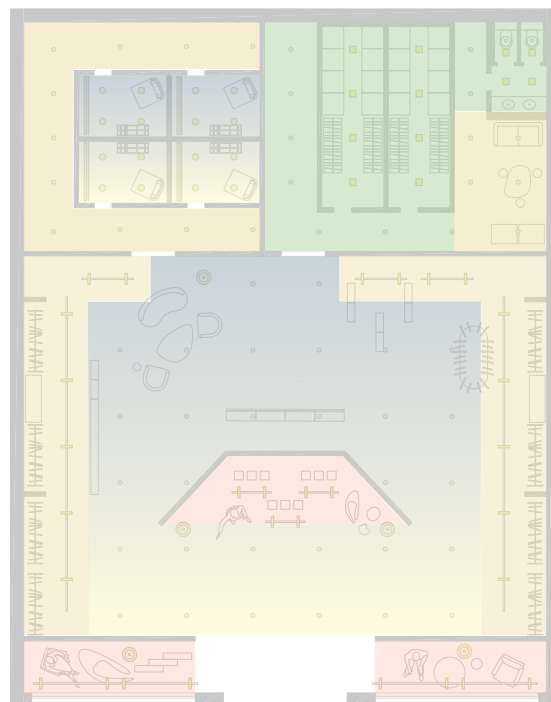
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- Working hours:** (9am-8pm) Occupancy, Lights 100% ON
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- After work hours:** (8pm-9am) Lights OFF

Festive season:

- Shop Windows and Focal Point:** RGBW lights, green, red and white

Autumn



Light Scenes

- Warm scene - Shop window and focal point
- Neutral scene - Display area
- Circadian scene - Store general areas
- Static colour temperature - Back of house areas

Lighting Functionality

Shop window and focal point:

- Every day** - Except Sundays: (09:00-20:00) Daylight sensing - lights are switched on when measured daylight level falls below preset threshold value.
- Store closed:** (20:00-00:00) Occupancy, Lights 100% on
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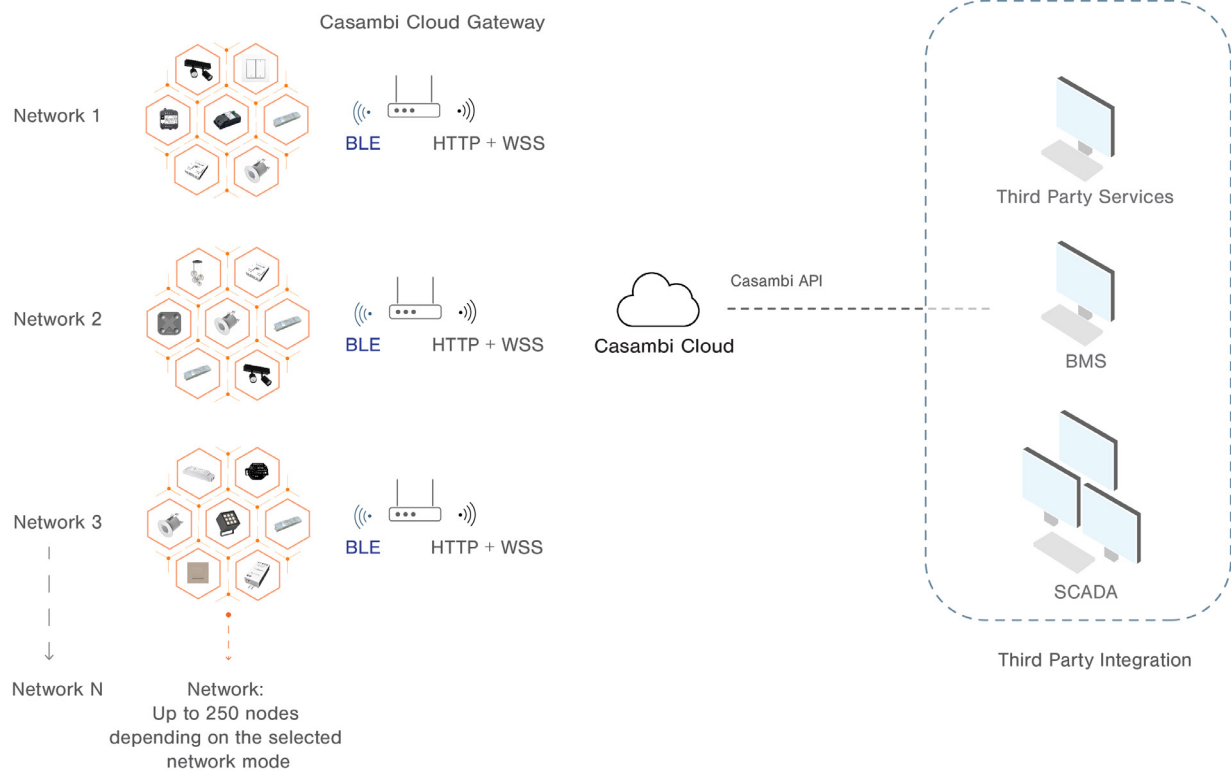
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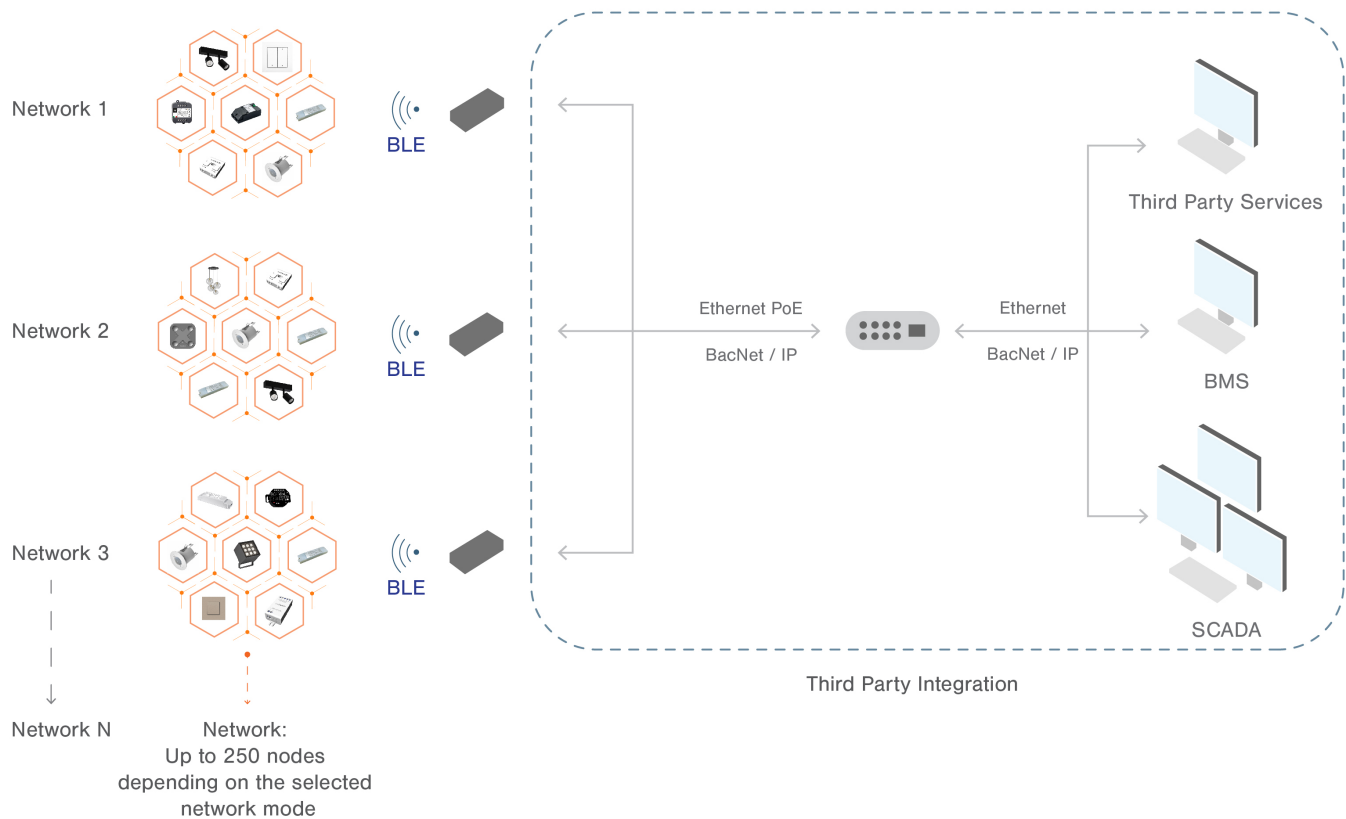
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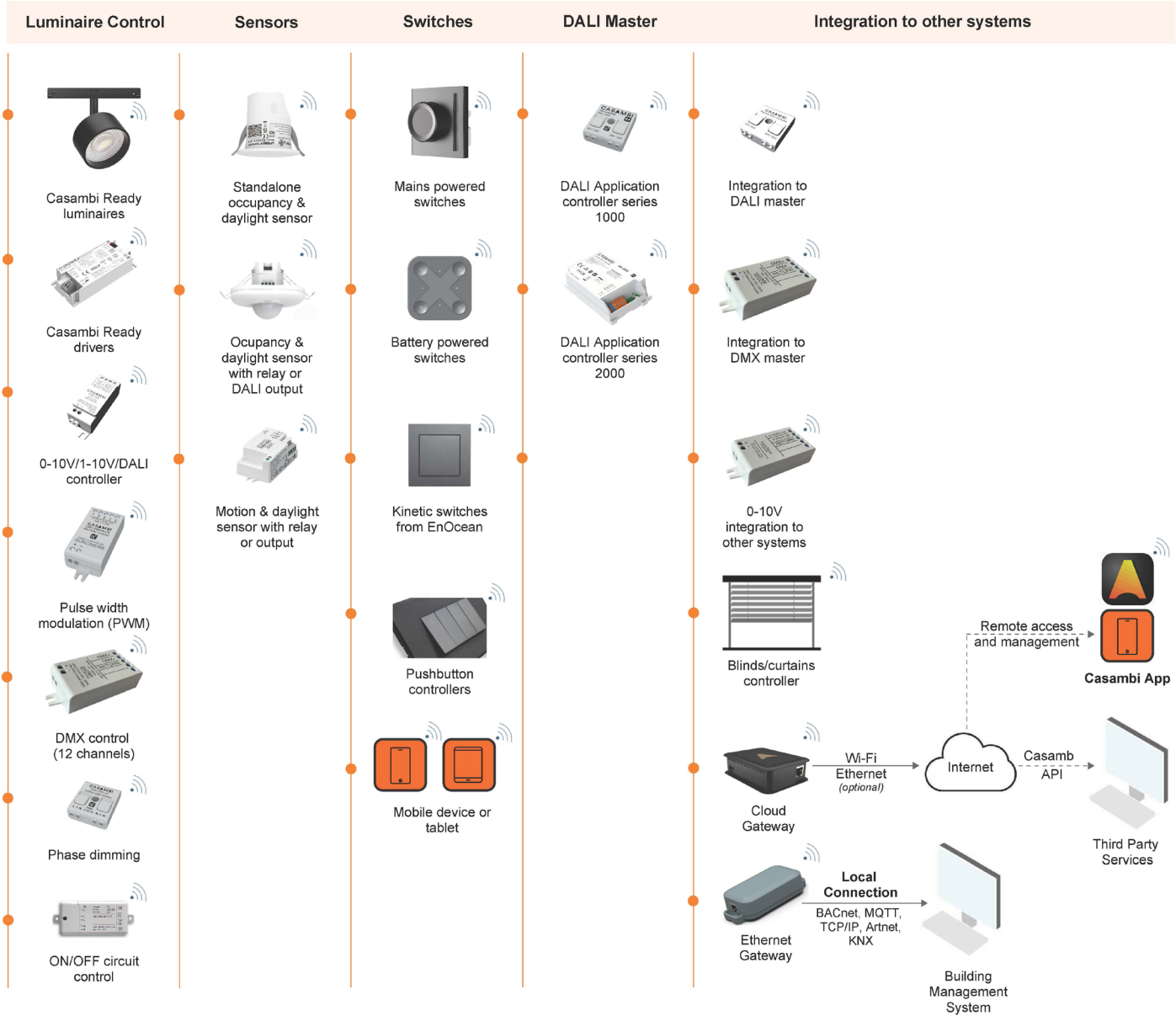
Linking multiple networks with Casambi Cloud Gateway



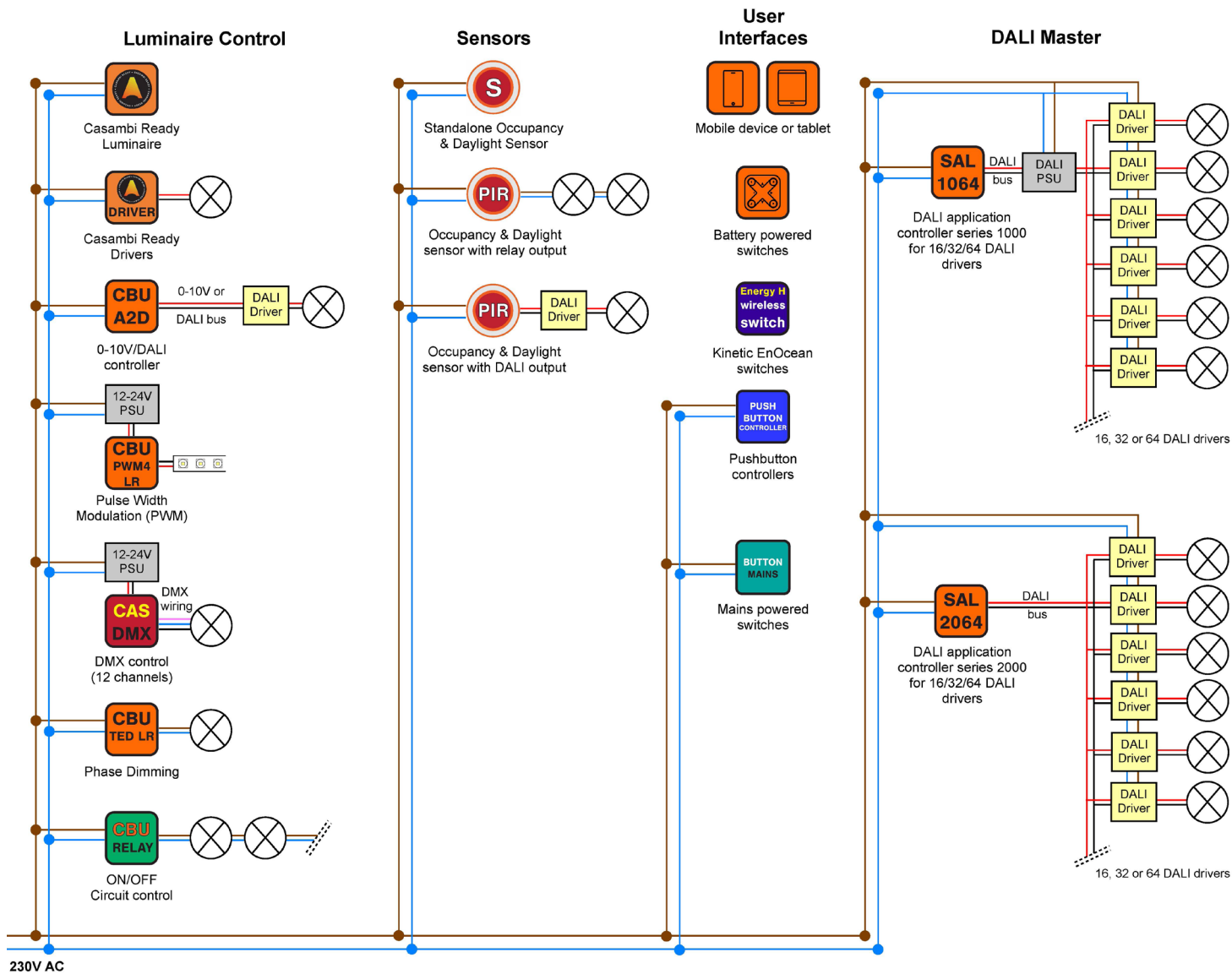
Linking multiple networks locally



Casambi System Diagram



Casambi System Diagram



Casambi System Diagram

Integration to other systems

