# Casambi Design Guide

### Highlights



Modern healthcare facilities are evolving from exclusively clinical environments into welcoming, empathic destinations for patients seeking care. This situation has led to a notable improvements toward sensitive environments, such as in hospitals that make better use of space where good lighting is key for the well-being of both patients and staff.

Patient-centric and easy adaptive modularity in lighting systems leave room for capacity enhancements and Casambi ready luminaires allow any future changes without rewiring.

Multi-bed bays and visiting rooms require versatile and well-planned lighting to integrate and zone successfully. The lighting solution should offer the opportunity to easily jump between different lighting scenarios. ie. especially regarding the procedures for medical examinations with the ophthalmologist's slit lamp.

Decorative and technical luminaires in association with a lighting control system can be used to ensure that illuminance levels, brightness and color temperature are always adjusted to suit the current tasks, needs and mood.

Casambi's Bluetooth Low Energy based technology provides lighting designers and manufacturers with the ability to wirelessly link devices together enabling the creation of personalized smart lighting networks that are easily configured and controlled using the Casambi App.

#### Owner

- Reduced total cost of ownership
- Energy efficient & cost effective
- Simple reconfiguration without disruption
- Building accreditations
- Quick and easy device replacement no reprogramming
- Remote access
- Flexibility

#### **Installer & Commissioner**

- Quick & easy to install
- No control cables needed
- Commission via the free app
- Ease of troubleshooting

#### **Consultant & Lighting Designer**

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

#### Patients

- Customized scenes
- Visual comfort & wellbeing
- Task tuning and personalization
- Human centric lighting & customizable circadian profiles



## How to read this guide?





# **1. Single Patient Room**

# **Individual Control**



Group control

#### **Benefits**

Sensors used under bed can be programmed to turn on LED lights under the bed for easy wayfinding during the night.

Casambi also offers out-of-bed sensor for automatic notification to the nursing station and staff when a patient leaves their bed. We provide full flexibility and adjustability of light sources in terms of color temperature and brightness. It helps patients to adjust them according to their needs.

#### Devices

LUMINAIRE	Casambi Ready Iuminaire
	Decorative Lamp
	Hospital over-bed lighting 0/1-10V
	Linear LED with power supply
SWITCH	Casambi Ready 4 button wireless switch
	Casambi wireless Xpress switch
OTHER	Casambi Ready blind controller
SENSOR	Casambi Ready occupancy and daylight sensor
	Casambi Ready out-of-bed sensor
APPLICATION	Casambi App on a smart mobile device *Not mandatory for daily use.

### **Functionality**

Casambi App on a Smart Mobile Device

Human Centric Lighting











Scenes





Group control



#### Benefits

Multiple scenes and easily adaptible lighting suit various tasks of office work, patient interviews and examination. With the help of Xpress switch, medical examinations that involve a monitor or ophthalmology examinations where special lighting is used both require different light settings that should be easily adjustable by the doctor or staff.

#### **Devices**

LUMINAIRE	Casambi Ready Iuminaire	•)))	3	Q
	Casambi Ready Iuminaire	·)))	4	And a second
SWITCH	Casambi Ready wireless switch	<b>(</b> , .))	1	
	Casambi wireless Xpress switch	))) (•)	1	
SENSOR	Casambi Ready occupancy and daylight sensor	(·)))	2	A DAY OF
OTHER	Casambi Ready blind controller	•)))	1	
APPLICATION	Casambi App on a smart mobile device *Not mandatory for daily use.	,))) •		

### Functionality

Casambi App on a Smart Mobile Device

Human Centric Lighting



Occupancy Detection

Scenes









Casambi networks do not use the standard BLE radio channels, which means it is much less likely that a BLE standard medical device will operate on the same radio channel as a Casambi network and cause interference. In case there is another BLE device within close proximity that is using the adjacent or a similar channel, the radio channels used in the Casambi network can be manually configured from the app to avoid interference.

### **Devices**

LUMINAIRE	Casambi Ready luminaire	•)))	14	
	Casambi Ready luminaire	•)))	1	
SWITCH	Casambi Ready 4 button wireless switch	<b>`</b> ,)))	1	
APPLICATION	Casambi App on a smart mobile device *Not mandatory for daily use.	(۱)) د		

### **Functionality**

Casambi App on a Smart Mobile Device

Scenes







Group control



Casambi Application: 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.

Full flexibility: Hospitals today require high modularity in patient rooms, to leave room for capacity enhancements in the future. Casambi ready luminaires allow any future changes without rewiring.

### **Devices**

LUMINAIRE	Casambi Ready luminaire	— ·)) 28 <b>()</b> )
	Hospital over-bed lighting 0/1-10V	$- + \bigcirc 4 \longrightarrow \bigcirc$
SENSOR	Casambi Ready occupancy sensor	<ul><li>●·)) 2</li></ul>
	Casambi Ready air quality sensor	<ul><li>.≫) 1</li></ul>
SWITCH	Casambi Ready wireless switch	🍼 ·)) 4 🔕
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



Human Centric Lighting



# 5. Nurse Station / Waiting Lounge

## Retrofit



#### ---- DALI bus

Medical staff working round the clock occasionally suffer from disturbances in sleep-wake rhythms. Human-centric lighting can help to boost alertness and activity levels without causing any damage to health.

### **Devices**

LUMINAIRE	Decorative table lamp	
	Standard DALI Iuminaire	
	Standard DALI Iuminaire	
	Linear LED with power supply	
OTHER	Casambi Ready blind controller	
SENSOR	Casambi Ready occupancy and light sensor	
	Casambi Ready air quality sensor	
SWITCH	Casambi wireless Xpress switch	
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



Human Centric Lighting
Daylight Harvesting
Data Analytics

0	Decorative table lamp
	Standard DALI Iuminaire
	Standard DALI Iuminaire
	Linear LED with power supply
•)))	Casambi Ready blind controller
••••	Casambi Ready occupancy and light sensor
••••	Casambi Ready air quality sensor
))) (• [ <u>``</u> ]	Casambi wireless Xpress switch
(A)-)))	Casambi wireless phasecut dimmer
₿∙୬)	Casambi wireless DALI controller
(c)-)))	Casambi wireless 4-Channel PWM dimmer
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# Linking multiple networks with Casambi Cloud Gateway



# Linking multiple networks locally



