

**MOUNT**  
LIGHTING THE WAY

# Casambi Design Guide

WIRELESS CONTROL SYSTEM

CAS  MBI

# Enable lighting your way with the Casambi wireless system

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The most robust,  
cost-effective,  
and future-proof  
wireless lighting  
control system on  
the market



The Casambi wireless system enables a complete control solution, while providing a dynamic and reliable user experience. The system is based on modern wireless mesh technology, allowing the system to be fully future-proofed and adaptable. It uses an intelligent control hierarchy in order to adapt the lighting to best suit your needs. From dimming to colour temperature control, you have full control with just a touch.

This scene-based approach also enables optimum energy efficiency and user-friendliness.

Third-party luminaires can be controlled with the system alongside Casambi-native products. View page 5 to find out more information about Casambi compatible products.

# A complete wireless network



The Casambi wireless lighting control system is based on a Bluetooth Low Energy mesh network, ensuring there are no single points of failure. The mesh concept makes the system future-proof, with the network being able to self-heal around any failures that may occur within the network. The system can be easily scaled from small single room or housing projects to large industrial-scale solutions.

Every part of the system, including drivers, lights or switches is a Casambi node, with every node having the entire network programmed into it. The same chip is used in all Casambi devices to ensure compatibility across the whole network.

The firmware can be updated remotely, and updates auto-propagate from a single node. Internet is only required for set up, not usage.



## A full, open ecosystem that includes all major lighting companies

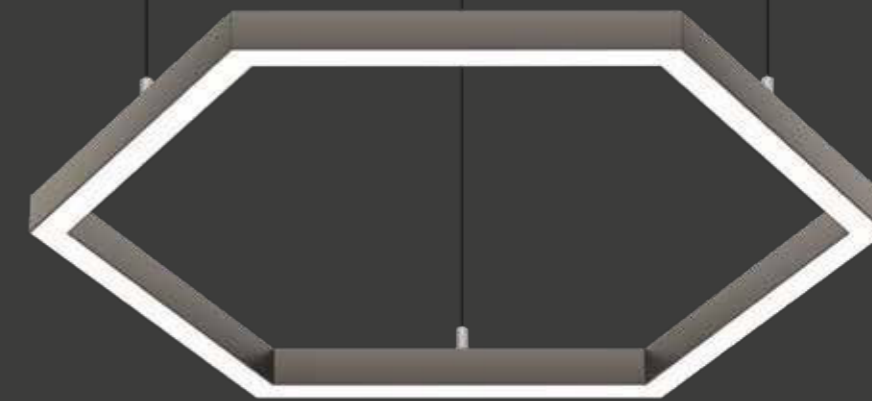
The Casambi system is deliberately product-agnostic and works with all leading luminaire and lighting control manufacturers. The Casambi system is currently compatible with nearly 2100 third-party modules, drivers, luminaires, sensors, and switches, with this number growing every week. All Casambi-ready devices are compatible with each other and the Casambi App.

# Create bespoke lighting set-ups to best suit your environment

FEATURES

## Full of easy-to-use features with a wide array of benefits, to create the perfect lighting for your space

The Casambi wireless control system provides users with a professional grade selection of control options. The Casambi wireless control system isn't just about dimming or turning the lights on and off. The system is fully connected and intelligent, so it can be adjusted from manual switches, timers, automation or sensors.



This can be used to save energy, enable dynamic light displays, and deliver 'human-centric lighting' that can promote wellbeing.

Due to its adaptiveness, it can deal with an unlimited number of luminaires, making it perfect for any project, no matter the size – from single meeting rooms all the way through to commercial complexes. The non-invasive nature of the Casambi solution makes it perfect for retrofitting, as well as for new building projects.



### Light Colour and Dimming

Choose the perfect light colour, including RGBW and tuneable white. The luminaire manufacturer defines the colour range of their Casambi-ready product. The end user can play within these parameters, saving favourites in a colour palette.



### Grouping

Grouping luminaires in the Casambi App is very easy. It works with the same gestures used for grouping apps on your smart device. All grouped luminaires can be synchronously controlled and/or programmed for individual control.



### Scene Setting

Create multiple lighting scenes to fit the changing needs within a space. These are created in the Casambi App and can be activated with the touch of a button. One luminaire can be used in several scenes.



### Occupancy Sensing

Casambi's system supports movement sensors, incorporating overlapping movement sensor information, to ensure that only the right light, in the right place, at the right time is used.



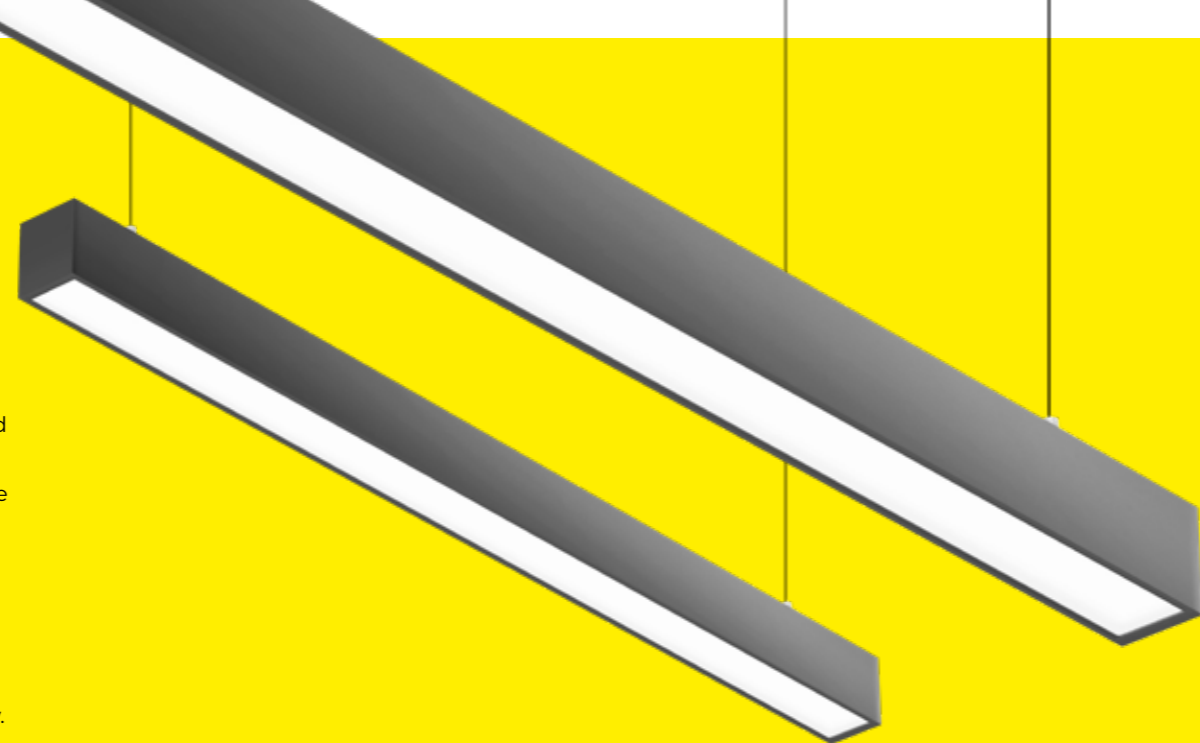
### Daylight Sensing

Daylight sensors measure the illuminance levels and report lux values back to the network. This way, automated lighting scenes can be programmed to achieve maximum lighting quality and reduced energy consumption.



### Auto-synchronisation

Casambi devices form a mesh network, which is self-organising and in constant synchronization. This means every single device contains the same full intelligence of the network and ensures no single point of failure. The more nodes that are installed, the more routes and the farther the signal can travel.



### Sequences and Animation

Animations are dynamic scenes in which it is possible for the lighting to fade from one preset into another. You can set the tempo, duration and cycles in the app.



### Timed Activities

Control your lighting according to pre-defined schedules. With the calendar and timer functionality, scenes and animations can be programmed to turn on and off based on bespoke needs.



### Human-Centred Lighting

The Casambi system, alongside appropriate lighting, can be used to regulate the usage and colour of the light to mimic daylight much more closely to assist the human body clock.



### Gateways

You can set up integration with a Casambi Gateway to control your lights when you are not connected to the local Bluetooth network. A gateway connects to your Casambi lighting network via the internet.



### Scalability

From a single-room set up, it is easy and cost-effective to upscale to site-level functionality and even expand to outdoor applications. Casambi allows you to control multiple networks simultaneously.



# FEATURES



CASAMBI APP

# Gain complete control of your lighting with the Casambi app



## The Casambi app makes the commissioning and setting up of the network straightforward



The Casambi app works seamlessly with both iOS and Android devices, being free to download from their respective stores. The app has been designed by interface experts to make it easy for anyone to commission and control their luminaires. The Casambi app has been created to work for both the consumer market and professional market.

The app can be accessed and controlled from all devices, including tablets, phones and smart watches, to give users complete control of their lighting. Being easily accessible means there is no reliance on expensive third-party apps.

The app employs intuitive gesture control: tap a luminaire to turn it on or off, swipe side-to-side to adjust brightness, up and down for colour temperature, or hold to change the colour. The unique gallery feature even lets users upload their own photos of their spaces, mark the positions of the luminaires, and use this to select and control them.



# SWITCHES

Casambi-enabled devices can be controlled by a variety of switches. A standard wall switch or push button can be used for dimming, controlling a scene or cycling through several scenes. These are programmed via the Casambi app.



## Battery switches

Battery switches have no connection cables, but are battery powered to enable connection to Casambi. Battery switches include the Casambi Xpress, which can be configured to control lights wirelessly, dimming up and down or changing the colour temperature or balance of direct/

indirect illumination. The Xpress controller can be stored on a magnetic wall plate. FELA battery switches feature a stylish glass front, while Lithoss examples have a wide range of finishes and customisable icons and can have up to four buttons, which are freely programmable.



## iPad mounts

iPad mounts allow control of the Casambi-enabled luminaires from an iPad. iPad mounts include hidden charging and can be either surface or



recessed. This would allow a central and secure location to house the device with the downloaded Casambi app.



## Powered rotary switch

Powered Rotary Switches are 240v AC-powered devices that are rotary and connectable to Casambi. These can fit into both Crabtree and MK Grid Plus systems.



## Touchscreen

Touchscreens allow users to customise the lighting without the app. These can be programmable and interact with the Casambi system to recall scenes and luminaires and select specific colours.



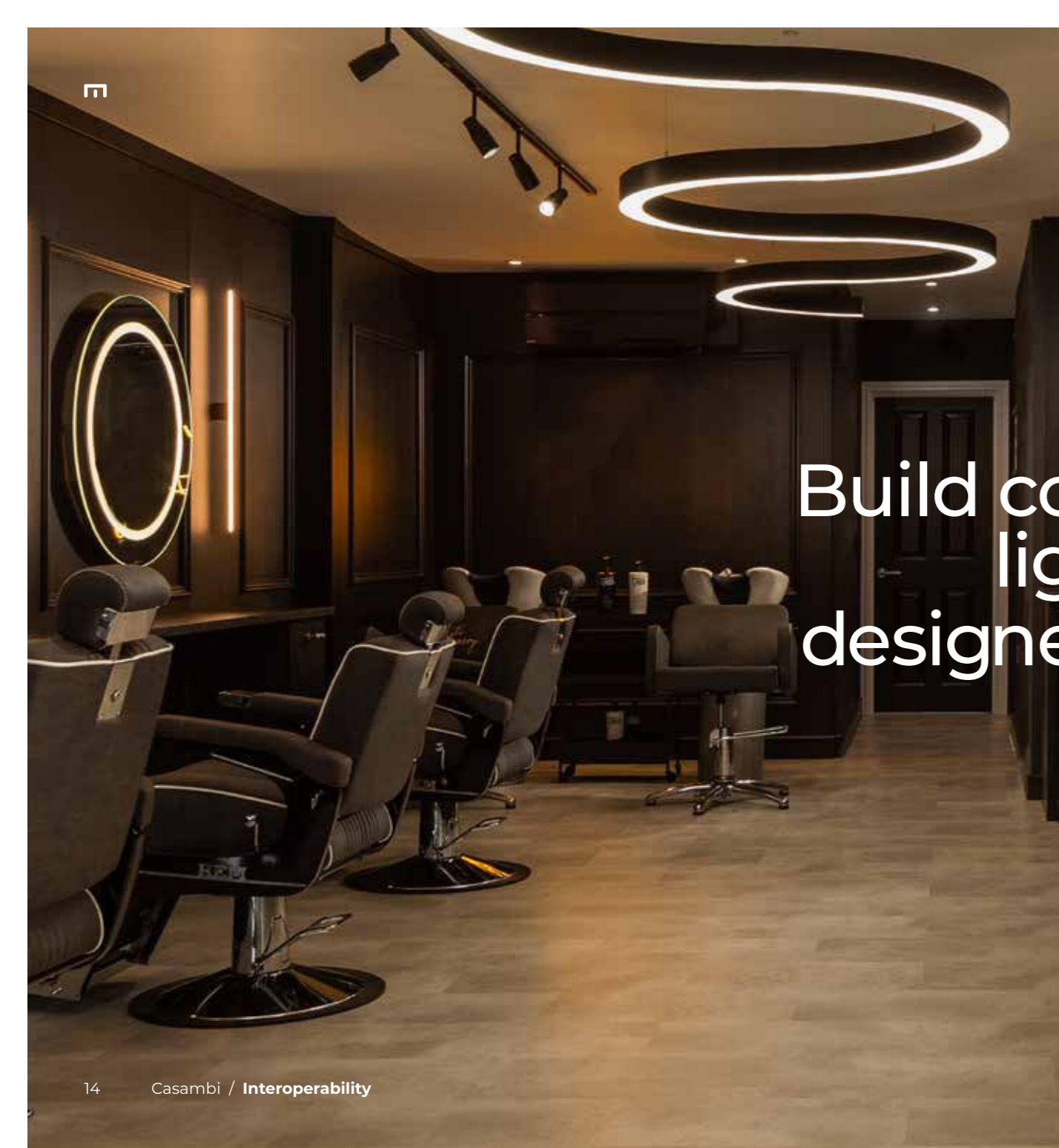
## Powered interfaces

Interfaces are Casambi-connected devices that join a Casambi network to any rocker switch, whoever it is made by. This gives complete flexibility should you wish to use your own range of switches with a custom finish.



## Kinetic switches

Kinetic switches are wireless and battery-free technology that uses the energy from pressing the switch to transmit a signal. Self-powered IOT solutions are pioneered by EnOcean.



# Build connected lighting systems designed to fit your environment

## INTEROPERABILITY

Interoperability is a key feature of Casambi. The Casambi technology allows us to customise our offering but also be 100% compatible with all other Casambi products on the market.



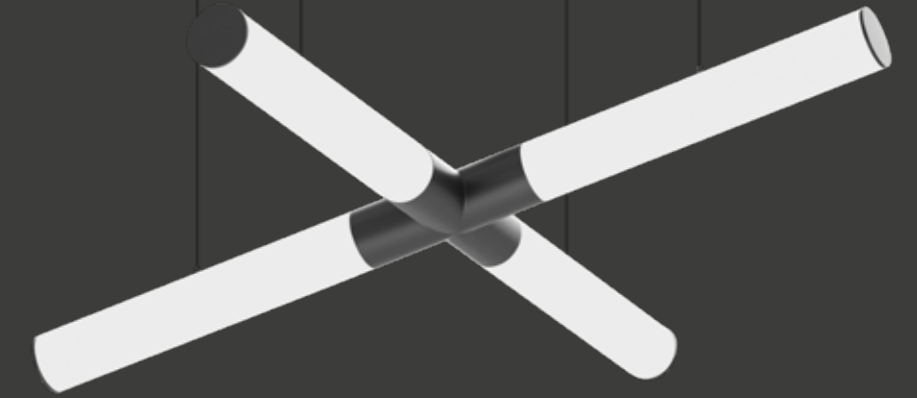
### Communication and dimming protocols

Casambi-enabled devices can control different types of loads, from phase dimming to 0-10v and DALI, and even DMX. Casambi-enabled devices can also be integrated with these other control protocols allowing 2-way communication between devices. This allows the extension to/from other systems.



### Dashboard and Analytics

The Casambi system allows for a custom dashboard to display data output, including energy, space usage analysis and automation of emergency lighting testing. This also allows diagnostics and predictive maintenance on lighting equipment.



### Remote Gateway

With a remote gateway on the network, Casambi automatically connects to the cloud, allowing any user of the network to access the system remotely.



### DALI

Casambi is highly capable as a DALI extender. If there is a DALI master controller, either with a new building or a part refurbishment, the Casambi items in Gateway mode simply extend the lighting system. The master network can't tell the difference between a DALI native device and a Casambi device.

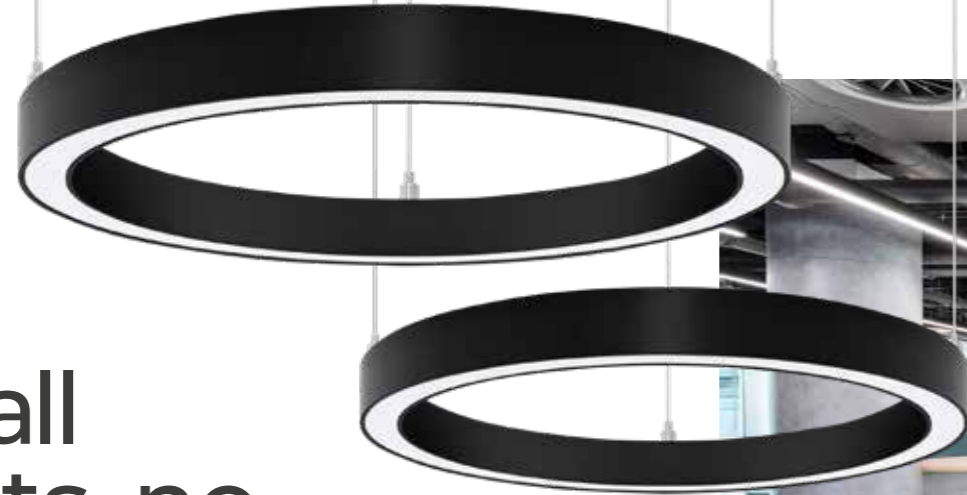


# Design and Specifications with Casambi

PROJECTS

# Perfect for all projects, no matter the size

The wireless nature of the Casambi system means it is perfectly suited to work on any project, no matter the size. Whether it be simple single meeting rooms or retail stores, all the way through to commercial and complex industrial developments. The system also suits retrofitting applications, historic buildings and temporary installations.



# Help to create a more sustainable future



Using the system has significant sustainability benefits that will help businesses achieve a greener footprint for their sites. These include;

- Usage of raw materials is greatly reduced compared to standard systems.
- No lighting racks are required, because all control equipment is distributed.
- No control cabling required, just power.
- Riser space, containment size all reduced.
- Circular economy is promoted, because Casambi can be added to existing luminaires in order to avoid upgrading if not necessary.
- Future-proofing via wirelessly adding to networks.
- Helps keep light levels to a minimum to reduce light pollution.
- The Daylight harvesting feature is estimated to save up to 60% of lighting load.

- Occupancy detection can make up to 44% in savings compared to a no-control scenario.
- Timers and Scheduling minimise the amount of time that lighting needs to be left on.
- Light scenes only come on when necessary for the activity taking place in the zone, meaning it minimises wasteful light.

All of these points add up to a cumulative benefit for users. These features also add individual control for extra user comfort.

Complex hierarchies can also be developed for maximum efficiency in custom situations. Timers, sensors, and switches can all have unique assigned priorities, so that in different types of spaces, human interaction is as intuitive as possible.



## FLEXIBILITY

### Create bespoke and adaptable lighting solutions that anyone can use

The increasingly varied needs of the modern workplace make flexibility extremely important. The whole Casambi program being based on the free app, allows anyone with a login to access the system and make changes. This greatly simplifies the process of changing office layouts. To help hybrid offices to reconfigure their spaces much more quickly, whole system presets can be saved and quickly triggered.

The real-time grouping changes in the app allows for a very granular level of user control, with the ability to give each user group a unique QR code so they can change their own lights without the need of an app.

## Enhance wellbeing with Human Centred Lighting



The right light at the right time can influence everything from our sleep to how we feel and perform. This can be broken down into three key areas of how light can affect us visually, emotionally and biologically.

**Visually** – This is how light affects what you see, and the information that is conveyed to us visually.

**Emotionally** – Using Human Centred Lighting has been shown to make us feel better and happier.

**Biologically** - Human eyes have receptors that are sensitive to non-visual light and these receptors affect our bodyclock. LED's affect our body clock more than we realise, because the spectrum of light they give out in the relevant non-visual area tends to be quite high and this can lead to serious eye strain.

The Casambi system, alongside appropriate lighting, can be used to regulate the usage and colour of the light to mimic daylight.



## SCENE SETTING Create lighting scenes to fit the needs of your space

The scene setting feature adds the opportunity to add sophistication, drama and mood changes to the lighting controls. This can be activated in real-time, so it can be adjusted to suit the requirement.

The thematic approach allows the lighting design to be built into the user interface, so that the best results are always achieved with a one-touch

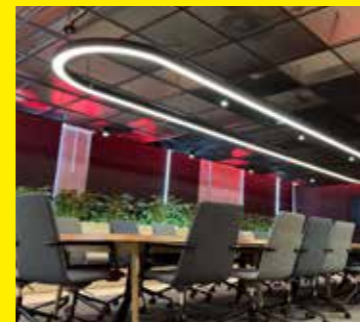
operation. This also assists with energy efficiency, because unnecessary lighting is unused.

With modern hybrid offices needing to offer user experiences and to be flexible between working, living and hospitality, a one-touch approach to selecting a new scene is invaluable. The use of colour-change lighting also supports these approaches.



# Your diverse group of lighting experts with a difference

Mount Lighting are here to help with everything, from design and supply, all the way through to updates



At Mount Lighting, we are able to provide a full interior lighting design service for many refurbishments and new build projects. As part of our design services, we can include third-party lighting products into the controls design if required. Mount Lighting are also able to provide the specifications and layout designs for the best lighting and control positioning for your environment.

We hold a huge stock of custom fixtures in our UK production facility to allow for a fast

turnaround and have provisions to deliver lighting straight to site, with the Casambi components built into the luminaires where possible.

Once delivered, we are on hand to assist your installers and commission the system according to the strategy defined. If you need to update your lighting, our experts can evaluate and advise on any layout changes or usage updates.

Mount Lighting  
are here to help  
from the beginning to  
the end and beyond

RIBA STAGES



Design

- Stage 2**  
Concept Design
- Stage 3**  
Spatial Coordination
- Stage 4**  
Technical Design



Supply

- Stage 5**  
Manufacturing and Construction



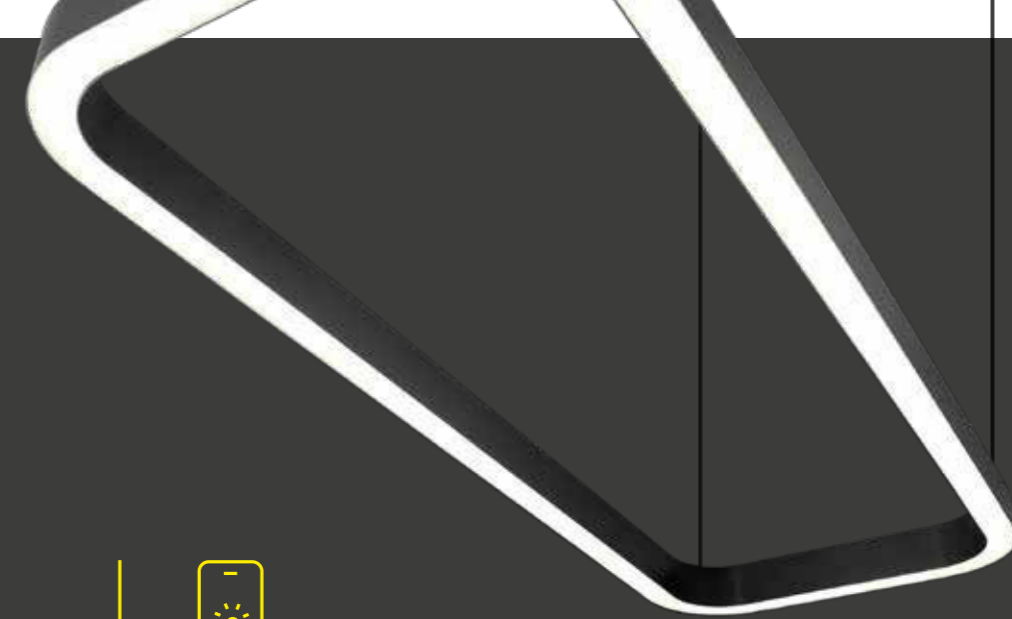
Commissioning

- Stage 6**  
Handover



Updates

- Stage 7**  
Usage





For more information about the  
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