



# SYNAPSYS

BUILDING INTELLIGENCE



## Smart Lighting Solutions

- Extensive lighting control functionality
- Multi-protocol connection to BMS and IoT networks
- Simple to commission - no special software required
- Colour control and tunable white light LED control
- DALI and DALI-2 standards



## SMART LIGHTING

- Lighting is responsible for 20% of all the electricity consumed by buildings in the UK. Non-domestic lighting accounting for 24 Million tonnes of CO<sub>2</sub> per year.
- LED lighting solutions still waste in excess of 30% of unnecessary consumption without suitable intelligent control.
- Up to 40% extra energy savings can be achieved over and above the use of LED when suitable tuning/scene setting is used with intelligent lighting controls.
- Good workplace lighting is an essential part in developing work environments that support well-being and performance, and reduce the likelihood of employee stress, absenteeism, and industrial accidents.
- A quick ROI can be achieved based on energy reduction and maintenance savings through improved monitoring and control of your high value LED estate.
- Worker controlled lighting and lighting solutions tailored to the individual needs of workers have considerable potential for enhancing employees' work satisfaction and enhancing retention.

Sources: Kuller / UK Health and Safety Executive / Carbon Trust



## FANTASTIC LIGHTING

- With the introduction of DALI type 8 to our LiGO lighting control solutions it has enabled us to provide architectural lighting in a cost effective way to all buildings large and small, inside and out.
- Colour control enables users to enhance and change the look and feel of a room, area or building easily and simply with stunning results, cutting out the need for major refits or decor changes.
- Tunable white light is also now available which enables the control of lighting levels throughout the day, it is used to mimic the bodies natural Circadian Rhythm and can help to promote occupants performance, health and well-being across the day.
- LiGO technology has been developed specifically to meet today's demanding lighting control schemes. LiGO devices easily connect with other intelligent building systems and tomorrow's IoT environment.
- We work directly with end users, consultants and contractors to ensure LiGO systems provide the lighting control, features and connectivity, demanded by our customers.
- With nearly 20 years' experience in the integration and intelligent lighting controls market, our team will enable the benefits of the rich feature set of LiGO to be readily achieved on even the most complex projects.
- Alternatively, if you are a lighting supplier, we provide LiGO devices and support for on-sale, complete with your own branding and features if so required. Please contact us to discuss your requirements further.

## Time Control

Lighting output and settings can be matched to your building's exact occupancy times, adapt to changes in daylight saving time and even accommodate public holidays.

## Integration

LiGO multi protocol connectivity, including cloud connectivity via MQTT/Rest/FTP. Data from energy and key variables within your LiGO lighting system can be transported to iNSIGHT for monitoring and analysis. LiGO is easily integrated into Building Management Systems (BMS) or any open protocol third party system.

## Presence/Absence Detection

Lights switch on or off when presence or absence is detected. This delivers optimal energy savings whilst ensuring the building is always ready for use. Run-on timers can ensure that people aren't left in the dark when people are seated and the "corridor hold" feature ensures a room entrance/exit is lit whilst the room is occupied, essential for the office environment.

## Emergency Lighting/Reporting

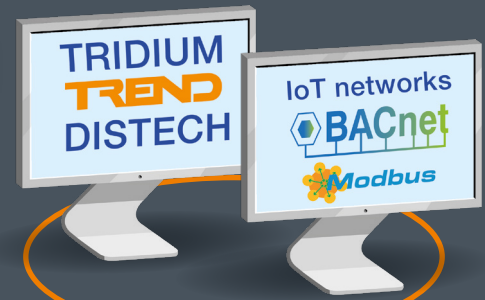
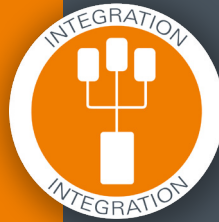
LiGO+'s simple built-in 'Test Scheduler' enables functional and duration tests to be set up then executed automatically. Results can be stored in the system or automatically sent via email. LiGO+ also supports central battery systems according to BS5266-1 BS EN50171 Central Power Supply Systems and BS EN 62034 Automatic Test Systems for Battery Powered Emergency Escape Lighting.

## Daylight Harvesting

External light not only allows you to create a more natural, enjoyable environment, it's also free! Automatic switching or dimming ensures light levels respond to maximise and complement the available daylight. Window Edge Dimming saves more energy by proportionally reducing the output of lights near the window.

## Scene Setting

Light levels and scene effects can be programmed according to the changing uses of a building. These can then be automatically programmed and controlled via web login or changed at the touch of a button.



Building monitoring and Connectivity



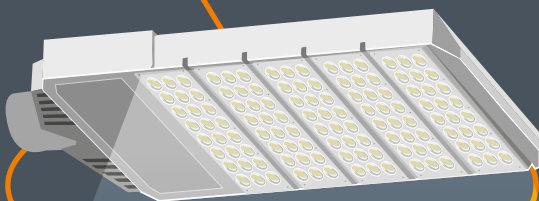
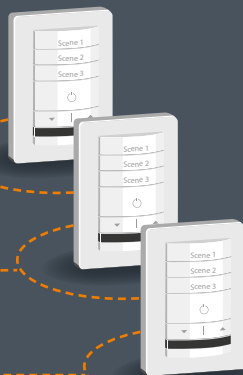
# Lighting Control



Energy monitoring

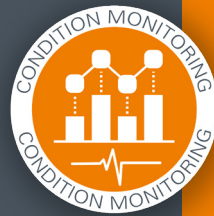


LiGO dashboard



## Dimming

Light levels can be controlled according to changing uses of the building, for example lowering output when the building is being cleaned in the evenings. This drives further savings whilst ensuring the building is still functional, also dimming the lighting from off to on and on to off can add many more hours of run time to the ballasts. Specialist features such as dusk/dawn dimming control for Pharmco laboratories are available as standard.



## Condition Monitoring

LiGO+ continuously monitors every component of the system and records the hours run and output level for each. Any failure in a light fixture is automatically reported and can be used as 'hard evidence' for resolving warranty claims.



## Circadian Rhythm Lighting

LiGO+ can utilise circadian rhythm lighting using different colour temperature fittings, altered throughout the day. This affects the biological response of the body in order to increase productiveness and wellness, especially in learning environments.



## External Lighting

External lighting is often overlooked within lighting schemes. With LiGO+ a combination of dusk/dawn times along with outside light sensing can be utilised to either control fixed loads of lighting (relay controlled) or, using DALI fittings, reduce energy by only providing minimum level of light that is required, and increasing when movement is detected.



## LED Control – Hours Run/ LED Maintenance

Your LED real estate is one of the largest investments in lighting that a building owner makes, yet many control systems will just treat LED like an incandescent lamp. With LiGO+ we understand LED, and how to get the longest life from your LED estate. With the run-times of fittings being stored and logged within LiGO+ it's easy to go back to a manufacturer's claim of 50k hours when the fitting has only lasted 800!



## Energy Monitoring

LiGO+ can take accurate energy consumption data and the operating hours of a light fitting directly from the ballast and transfer this energy data to a Building / Energy monitoring platform, such as our own iNSIGHT Energy & Building Software (EBIS).

## LiGO2 LIGHTING CONTROL SOLUTION

Our latest product development is the new LiGO2 lighting control solution. It is a cost effective solution for smaller areas such as single office floors or apartments. The LiGO2 hardware is still packed with all the latest DALI type 8 updates, along with many of the features and tools which you would find in our LiGO+ hardware.

Developed in response to our customers needs for a smaller solution where a limited number of devices are required to be controlled. LiGO2 has on-board DALI and DALI-2 with control of up to 64 devices, with the option to add a further 64 devices via our SIPslice DALI device. Integration with BMS systems is simple and the commissioning, set up and control is all via built in web pages making it quick and easy to get up and running.

## LiGO2 FEATURES

- On board DALI and DALI-2 to control of up to 64 devices
- Additional 64 devices can be added via the SIPslice DALI
- Integration to BACnet / Modbus slave / TREND BMS systems
- IoT connectivity via MQTT / REST
- Energy data can be export to other SIP+, LiGO+ or third party systems
- All the same control features and control tools from the LiGO+ device



## LiGO2 IS THE IDEAL SOLUTION FOR USE IN

- Apartments
- Smaller offices
- Meeting rooms
- Other small areas

## LUNATONE LIGHTING ACCESSORIES NOW AVAILABLE FROM THE SYNAPSYS eSTORE

To complement our LiGO technologies we now offer a range of Lunatone DALI lighting system accessories to our customers. These are available through the Synapsys eStore which contains all details, data sheets, specifications and pricing for the products which we offer.

## OFFERING A RANGE OF DALI LIGHTING ACCESSORIES INCLUDING

- Sensors
- Controls
- Power supplies
- System Extenders
- LED drivers
- Wireless solutions
- Interfaces and many more



## WHY LiGO TECHNOLOGY IS THE WAY TO GO

Our innovative LiGO systems are installed in a diverse portfolio of buildings, including small/large retail premises, offices, pharma laboratories, schools, universities, hospitals, galleries, museums, rail stations and logistic depots, with the common result of achieving impressive cost and energy savings as well as improved environments for the buildings occupants and users. The LiGO web pages allow users to set up the system, create reports and adjust settings. It gives users access to a range of easy to use features including: time zone control, emergency override, alarm reporting, energy graphs, and emergency light test reporting with NO ongoing licence or subscription fee.

LiGO technology is based on the manufacturer-independent DALI and DALI-2 standards that ensures interchangeability and interoperability of lighting system components. This makes it possible to create flexible, cost-effective and decentralised lighting systems. DALI addressable solutions can function as a standalone system or as part of a building management system. The LiGO hardware comes “out the box” with embedded tools and a suite of preprogrammed smart lighting control algorithms to quickly group the luminaires, set the scene and optimally control LEDs to derive best performance. Coupled with its ability to connect with, and report to, other building systems make the LiGO technologies a winner with installers and users alike.

## DALI-2 OPENS UP MORE OF THE LiGO's POTENTIAL

**Additional energy functionality** - Values for Apparent power/energy\* and Active power/energy\* are available for the first time from within the lighting ballast This in turn gives the ability to pass this data through LiGO enabling lighting energy to be easily and more accurately monitored than ever before. It also enables the monitoring of power factor in Data centre environments.


**Interoperability** - With the new DALI-2 Standard DALI manufacturers of input devices, such as sensors, scene plates, switches and other devices no longer use features that are proprietary to their own systems. This standardisation means its easier than ever to incorporate different manufacturers products into your lighting scheme.

LiGO has always been exceptionally flexible, working with Blue-chip manufacturers on incorporating a range of input devices, such as sensors, scene plates, and DALI accessories. With DALI-2 the range of choice is now wider than ever, with devices ranging in suitability from commercial to high end architectural wall plates giving you freedom of choice and negating the need for alternative comm's bus.

**Additional functionality** - DALI-2 extends the already feature rich command set that came with DALI, such as extended fade times and more flexible grouping.

LiGO has always been bursting at the seams with features brought from our deep history in commercial building controls, many ideas and features are now available as part of the DALI-2 standard. For instance hours run of a ballast can now be read from the device, this has been available from LiGO since its conception. New features such as the number of lamp starts could be used in determining tuning of lighting areas, as an example LED's degrade when switched off/started, something that you don't want with your expensive LED real estate.

\* Please note: Not all DALI-2 control gear currently supports energy data, please check with ballast manufacturer.



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# liggo+



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