RAPIX LIGHTING CONTROL SYSTEM

System Overview

RAPIX DALI-2 Lighting Control System

LIGHTING CONTROL OF
BRILLIANT SIMPLICITY

Technical Overview Guide

February 2024

Engineered by
OZUNO

"With RAPIX, the possibilities are endless

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Benefits of RAPIX Lighting Control

Reduce design, installation and commissioning times.

Based on Ethernet and DALI-2, the RAPIX Lighting Control System was designed and built from the ground up to meet the requirement of modern buildings.

Effective lighting control systems can greatly assist with Building Regulations compliance.

Lighting can be responsible for up to 40% of a building's total power usage. Well designed lighting control can save up to 60%* of lighting energy, without compromising light quality, user comfort or safety.

To encourage organisations to reduce energy usage during peak hours, utility companies increasingly employ 'time of day' and 'maximum demand' energy tariffs.

In house support available for troubleshooting and installation advice.

*Source: Green Building Council Australia

Resilience is the key to RAPIX.

Purpose built for small, medium
and large commercial applications.

DALI-2 Compliant and ready for the future of
lighting control cyber security requirements.

Commercially savvy system due to less
complexity, uncertainty and cost at every
stage of the process.

Brilliant Simplicity: Easy commissioning
for the Systems Integrator to get projects
commissioned better and faster.

Our Story

Ozuno was created in 2017 when the Engineering Development team at Gerard Lighting purchased the engineering & intellectual property for DALI products and the RAPIX Lighting Control System.

A further transaction in 2021 transferred complete operational control and market access.

Ozuno now continues establishing sales and Systems Integrator relationships in Australia and Globally.

Introduction

The RAPIX DALI-2 Lighting Control system was purpose built to communicate using DALI and Ethernet, stripping away the need to use any additional bus systems as a form of communication.

The Ethernet backbone is encrypted and the open protocol of DALI has been utilised to allow operation with DALI compliant and DALI-2 certified devices.

This brochure provides an overview of the system and its capabilities.

History

The management and team at Ozuno have extensive experience in the lighting control industry. Collectively, the development team brings over 150 years of lighting control expertise.

We have in-depth knowledge with dimming, lamps, loads, and electronics, and we pride ourselves on developing high quality energy management products.

Ethernet Mesh

In a RAPIX DALI-2 system, the RAPIX Zone Controllers do not act as a central point of control: there is no central controller, and no single point of failure.

Any failure in the Ethernet infrastructure might split a RAPIX system into several parts that cannot communicate with each other. In that case, each part carries on working independently. When the Ethernet failure is repaired, the parts self-heal automatically.
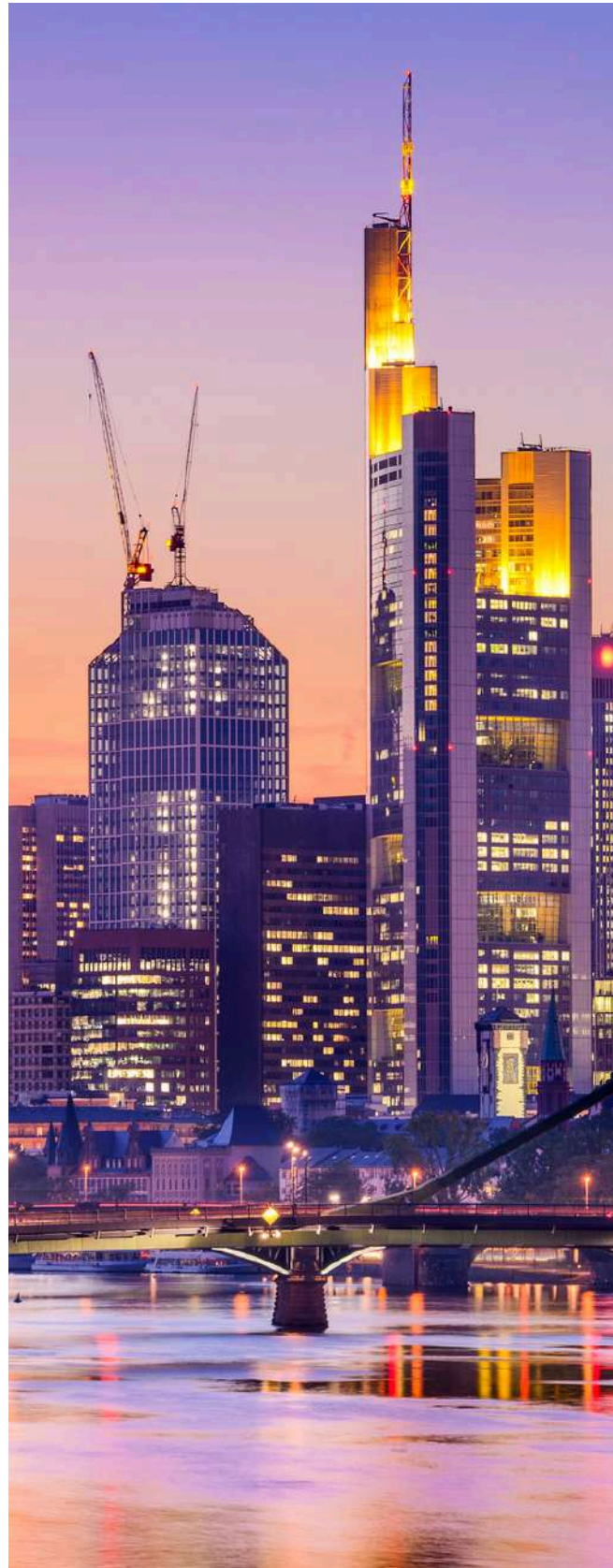
DALI-2

All RAPIX products are DALI-2 tested and certified. This includes all controllers, gateways, relays, dimmers, switches and sensors.

DALI-2 certification ensues interoperability. RAPIX switches, sensors, relays and dimmers are all DALI-2 certified and can be used in any DALI-2 compliant system.

Proudly Australian

All firmware, software and hardware is designed and developed in Adelaide Australia.

TRUSTED AUSTRALIAN
DESIGN

DALI and DALI-2

RAPIX from its first design meeting was built with simplicity in mind. This begins with the idea of DALI for the lighting bus and Ethernet to make up the backbone of a solution and to allow communication between DALI lines. There is no requirement for any additional bus systems for communication between devices, unlike systems of the past.

With DALI being at the forefront of the lighting world and becoming widely adopted globally, Ozuno has integrated the latest DALI-2 standard into the RAPIX Lighting Control System.

This latest standard has set the new benchmark for DALI and has remedied many of the nuances and gaps of the original DALI Version 1 standard.

Benefits of DALI-2

- Offical DALI-2 compliance and certification with the DALI Alliance for DALI Power Supplies.

- Additional DALI commands including increased fade rates and times for greater user benefit.

- Certification of DALI movement sensors, light level sensors, switches and input devices to ensure manufacturer interoperability.

- Certification of DALI application controllers to ensure communication to DALI-2 control gear and control devices.

Key features of DALI-2

01 A new IEC standard. Open protocol. Revised specifications. Tighter tolerances. Better performance.

02 A bus system for all your lighting system requirements including sensors, switches, light fittings, emergencies, relays and dimmers.

03 Manufacturer interoperability. Talk the same language across multiple vendors and manufacturers.

DALI-2 Movement and Light Level Sensors

Movement detection and Daylight harvesting

The RAPIX Movement and Light Level Sensor can act as a miniature application controller for its own built-in sensing functions, with passive infrared movement sensing, light level sensing, and a voltage-free input.

The RAPIX Movement Sensor allows all common movement operations as well as light level sensing and light level maintenance. Switching and control functions are available using the voltage-free input.

This sensor can act as a miniature DALI Application Controller. Multiple sensors can easily be used to expand coverage to larger areas.

RAPIX sensors can operate with no other controllers, or with RAPIX Zone Controllers, or as part of any DALI-2 lighting control system.

Transparent wiring cover for easy inspection of the cable connection

Voltage free contact input for switches and sensors

57-67mm cutout
*Optional surface mount adaptor available

DALI Loop in / out; generous sized terminals suited to 2.5mm cabling

LED indicator for easy identification during commissioning

8-10m diameter detection range @ 2.7m ceiling

Light level sensor 0-65000 lux

" Every RAPIX sensor can be a DALI-2 application controller.

Security

In the modern world, encryption and security are integral parts of a safe and secure digital building infrastructure.

The RAPIX DALI-2 Lighting Control System was designed with security and encryption as core principles for Ethernet connected devices.

RAPIX security and encryption is built-in, with no need for additional hardware or software.

AES Encryption

Out of the box, RAPIX Zone Controllers have 128 bit AES encryption and authentication built-in. No external components or internet connection is needed to use best in class security and encryption protocols.

Security features of RAPIX

01 No internet or cloud services required for operation at any point.

02 128 Bit Authentication and Encryption out of the box.

03 Future Proof - Upgradeable technology and operating system as the worlds security needs change.

System Resilience

RAPIX is a decentralised system. Distributed application controllers are far more complex than a single point controller - but in the case of failures, a distributed system is far more resilient.

RAPIX switches, sensors and interfaces include a small DALI-2 Application Controller. These controllers cooperate to create a software model of the DALI system. This model includes load levels, group memberships and scene settings.

When input units know the load state on the DALI line, lighting operations become straightforward, and watching the DALI commands allows the software model to always stay up to date.

Input units also include a dedicated programming language specifically designed for lighting. Operations performed by sensors and switches are code segments that get loaded into the product.

The software DALI model, along with the programming language and code segments allows new functions to be added to input units quickly, easily and with no requirement for firmware updates.

The RAPIX DALI-2 Zone Controller links DALI lines to allow an action or operation on one line to perform a required function on other DALI lines. Zone Controllers communicate with each over Ethernet, allowing the ability to scale up the number of DALI lines in a site with practically no limit.

> " The biggest single RAPIX installation has 90 Zone Controllers, 350 DALI lines and around 12,000 devices installed. It works as a single system.

RAPIX provides resilience in the case of failures. Switches and sensors are Application Controllers that operate in their local environment - they control their local DALI line. Zone Controllers monitor switches and sensors, and push anything required to any other required DALI lines. This needs a sophisticated combination of messaging, firmware and software. The end result is a system that can tolerate and operate (albeit with reduced function) in the case of different kinds of system failures.

> " Robustness is a key focus for the RAPIX Lighting Control System.
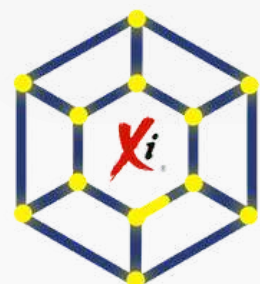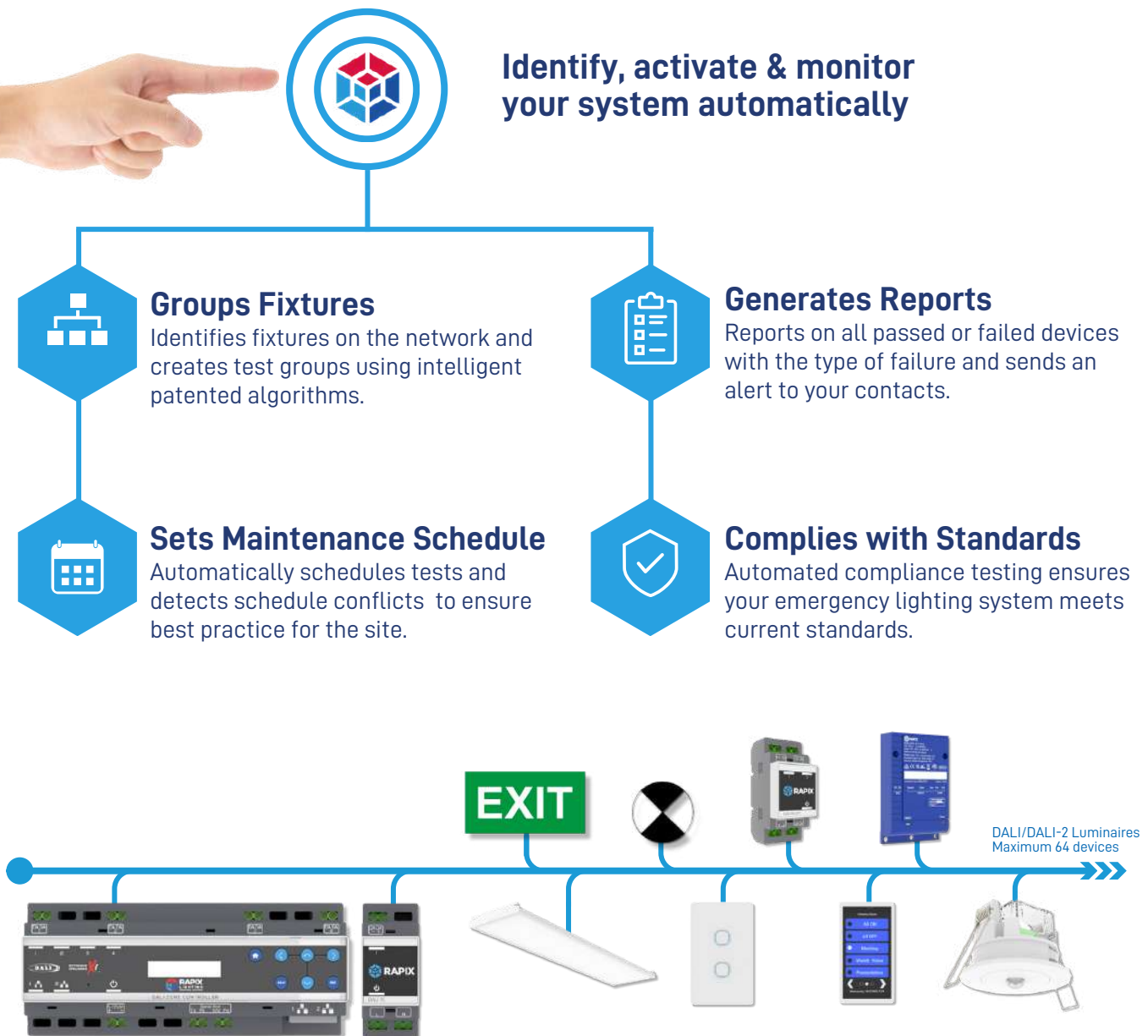
Emergency Lighting

One solution for all your general lighting and emergency lighting requirements

Simply cable all your DALI-2 exit and emergency lighting along with your general DALI-2 lighting and DALI-2 input devices.

RAPIX software can monitor and report on the exit and emergency lighting installation.

Identify, activate & monitor your system automatically

Groups Fixtures
Identifies fixtures on the network and creates test groups using intelligent patented algorithms.

Generates Reports
Reports on all passed or failed devices with the type of failure and sends an alert to your contacts.

Sets Maintenance Schedule
Automatically schedules tests and detects schedule conflicts to ensure best practice for the site.

Complies with Standards
Automated compliance testing ensures your emergency lighting system meets current standards.

EXIT

DALI/DALI-2 Luminaires
Maximum 64 devices

RAPIX Zero-Commissioning

RAPIX products work straight out of the box

Many RAPIX DALI-2 switches and sensors support RAPIX Zero-Commissioning. If there is no setup or commissioning by DALI-2 or RAPIX Software, then:

• The switch input transmits DALI Broadcast On/Off/Fade; and
• If desired, the movement sensor can be enabled to operate as a 15 minute occupancy function, which transmits DALI broadcast On/Off. When used for this function, the OFF operation of the switch input allows an exit delay.

Features of RAPIX Zero-Commissioning:

LED Modular Switch Range:

• Push / release to transmit Broadcast ON/OFF. Push and hold to DIM UP/DOWN. Release to terminate the dimming. (Rotaries) Rotate the dial to DIM UP/DOWN, push/release to switch off or to maximum.

LED Movement Sensor Range:

• Unprogrammed sensors are easily located: A green indicator behind the lens is illuminated when the movement sensor has no setup, and RAPIX Zero-Commissioning has not been activated.
• Out of Box movement detection can be enabled using a bright light. When enabled, movement will transmit Broadcast ON, with a 15 minute timeout.
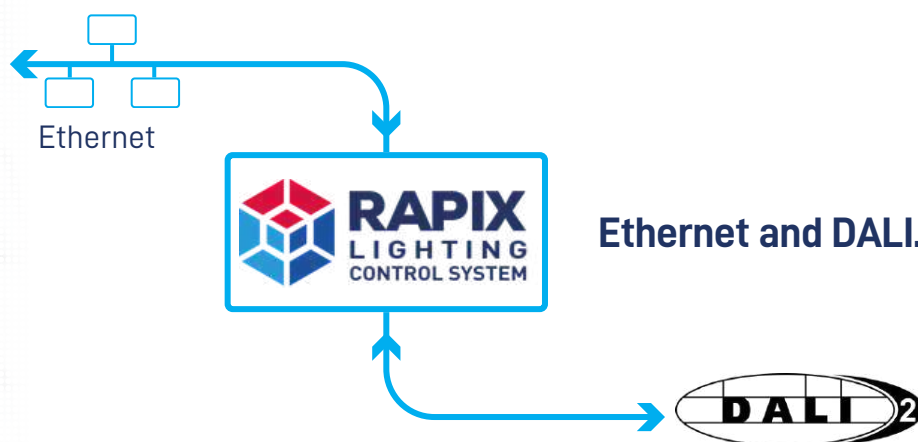• Multiple sensors can work together.

Lighting Control of Brilliant Simplicity

DALI 2
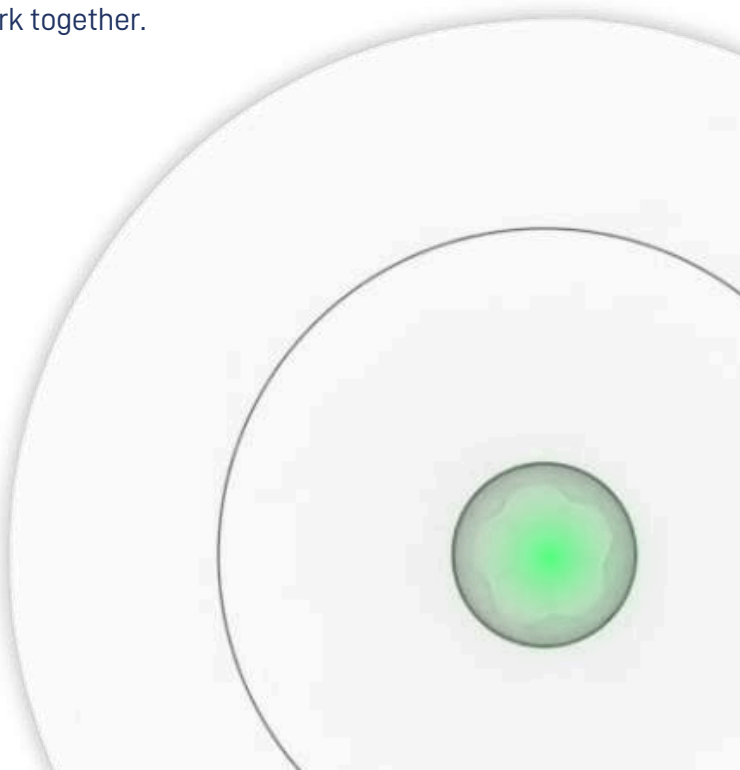
Lighting Control of
Brilliant Simplicity

SIMPLE - FAST - SECURE

Ethernet

RAPIX LIGHTING CONTROL SYSTEM

Ethernet and DALI.

DALI 2

No additional Bus Systems or Gateways required.

For The Installer

- All lighting, emergencies, sensors and switches connected direct to DALI.

- Low cabling requirements with no need for any other control system.

- Simple and easy-to-install guidelines to reduce potential wiring faults.

- Significant cost savings in cable use by using DALI Relays and Phase Dimmers where required rather that located in the distribution board.

- Ethernet Backbone. No mixing and matching of different bus systems.

THINK DALI-2
THINK RAPIX

For The Building Owner

- One Lighting System for all your general lighting and emergency needs.

- Open Standard for the replacement of fittings from any suitable DALI lighting Manufacturer.

- Preventative Maintenance reports to ensure your tenants satisfaction.

- Scalable and easy to make changes for fit-outs and refurbishments.

- Safe, Secure and Encrypted.

RAPIX
LIGHTING
CONTROL SYSTEM

Contact Us Today

sales@ozuno.com

www.ozuno.com

RAPIX DALI-2 Zone Controller

The brilliant simplicity of the RAPIX Lighting Control System helps eliminate the time and money-wasting patchwork of complex integration and post-installation troubleshooting that's often needed to make lighting systems perform as expected.

We provide industry-standard protocols for integration with other systems: Control4, MQTT, Modbus and BACnet. A built in logic engine is available at no additional charge, and a JSON based API over TCP/IP allows seamless integration of third-party systems. Embedded or PC based integration can be quickly and easily achieved while preserving unrivalled information systems security.

DALI Line 1

DALI Line 2

DALI Line Indicators

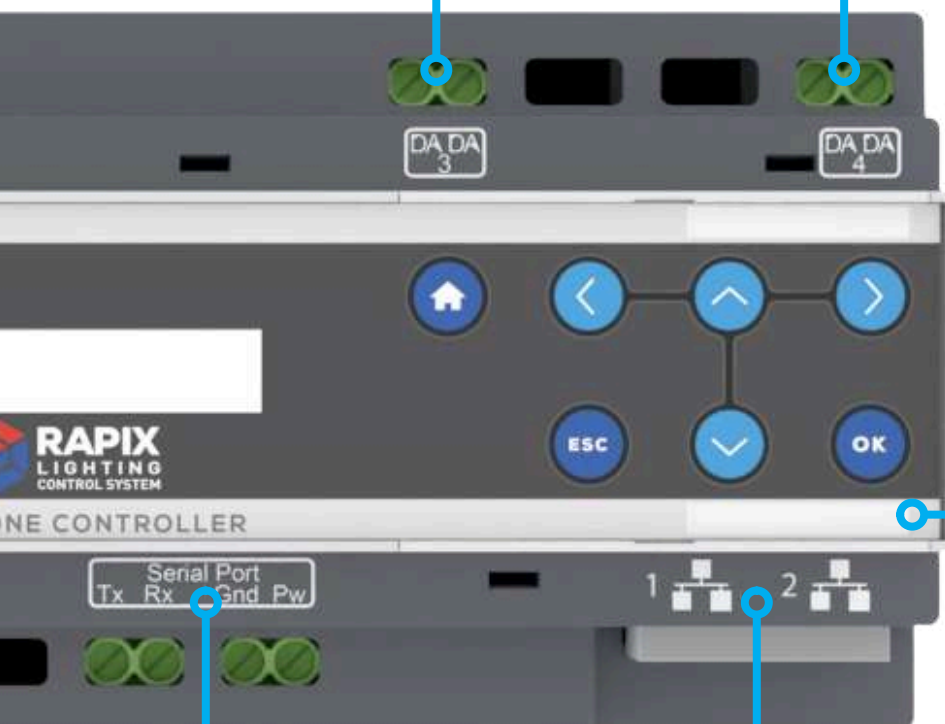Ethernet Indicators

Controller Reset

Power Indicator
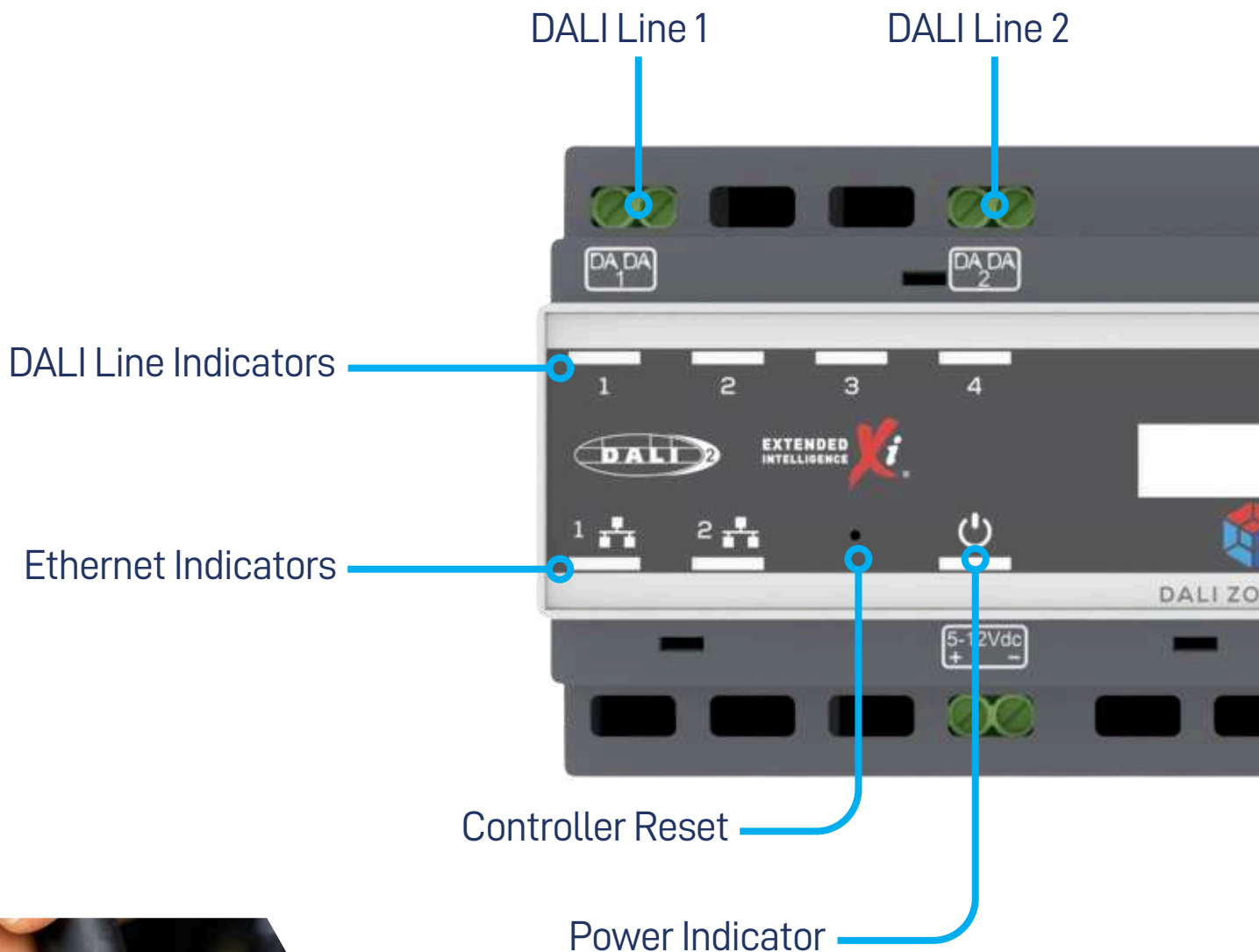
LCD Screen with integrated control buttons provide on-site access with no equipment. No fuss!
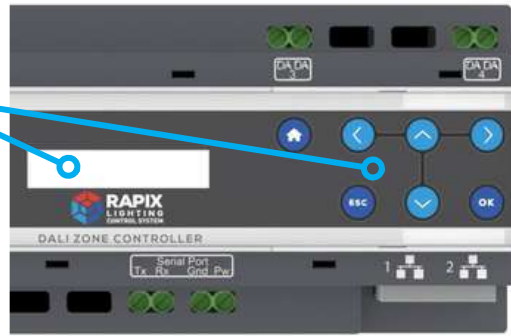
DALI Line 3

DALI Line 4

Native Integration built in:

RS232 COMM

json:api

Control4

Modbus TCP/IP

MQTT

ASHRAE BACnet

Built-in logic engine

2 x Ethernet Ports

Serial RS232 Port

RAPIX Lighting Control

![DALI 2]

Simpler.

Easier.

Faster.

RAPIX DALI-2 Remote Relays

RAPIX DALI remote relays are designed for on/off switching of up to 16 AX load using DALI commands. The on-board 240 V ac rated relay is capable of switching a full 16 A of LED, fluorescent, incandescent and HID lighting loads at 220-240 V ac, making it suitable for a wide range of commercial and industrial building applications.

The most reliable DALI-2 Relay available

1 and 2 channel versions.

Capable of switching 16 AX @ 240 Vac.

High Inrush current: 500 A (2 ms).

Fits through a 90 mm downlight hole.

Easy wiring terminations
Terminals designed for
2 x 2.5mm2 cable size.

RAPIX DALI-2 One & Two Channel Din Mount Relay

RAPIX DALI-2 DIN mount relays are available in one and two channel models and are designed for on/off switching of up to 12 Amps of lighting load.

To maximise contact life, RAPIX DALI-2 relay products include zero cross switching to ensure that for switch-on, the relay contacts are closed at the ac voltage zero-crossing point.

Blind and Shutter Relay

This DIN mounted relay is suitable for the control of ac and dc motors commonly used for curtains, blinds, shutters and tilting shade systems. This relay can be used in any DALI system. Operations include manual control – UP/OPEN, DOWN/CLOSE and STOP. Commissioning options allow proportional control, for example setting the open amount or tilt angle.

The only DALI-2 product like it!

Suitable for blind / shutter / curtain / tilt motors.

Used for garage panel / roller doors with appropriate connection to a door controller.
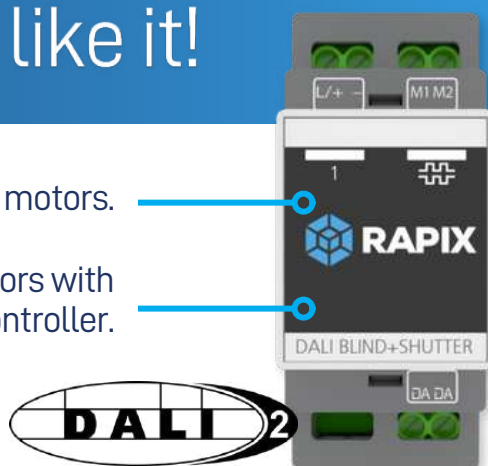
DALI-2 Phase Dimmer

Trailing Edge phase dimming of lighting loads from received DALI commands.

1 W minimum load.

Two wire dimming device: no Neutral required, only the ac Line (Active) and Load is connected.

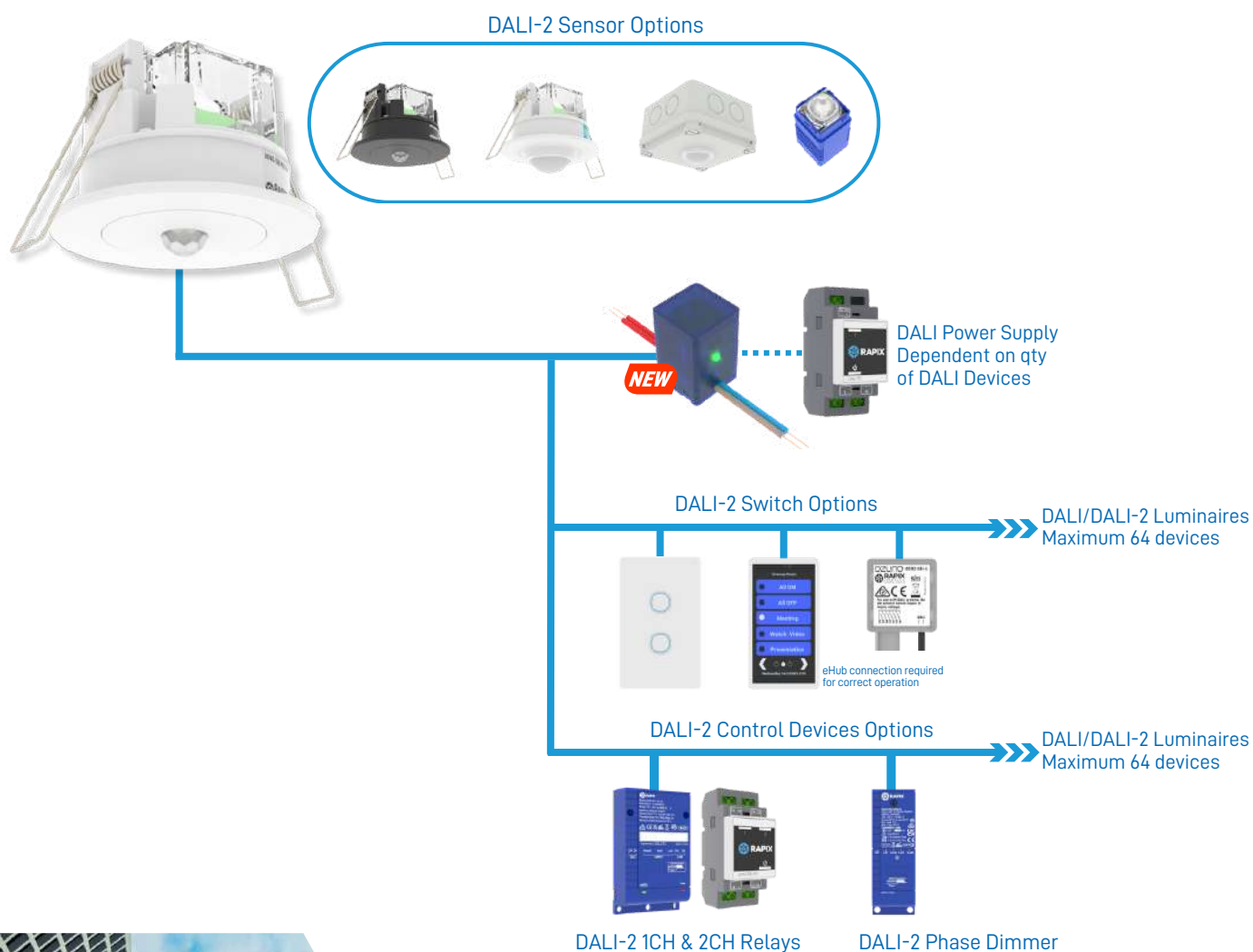Worlds best performing Phase Dimmer for LED lighting loads

Scalability

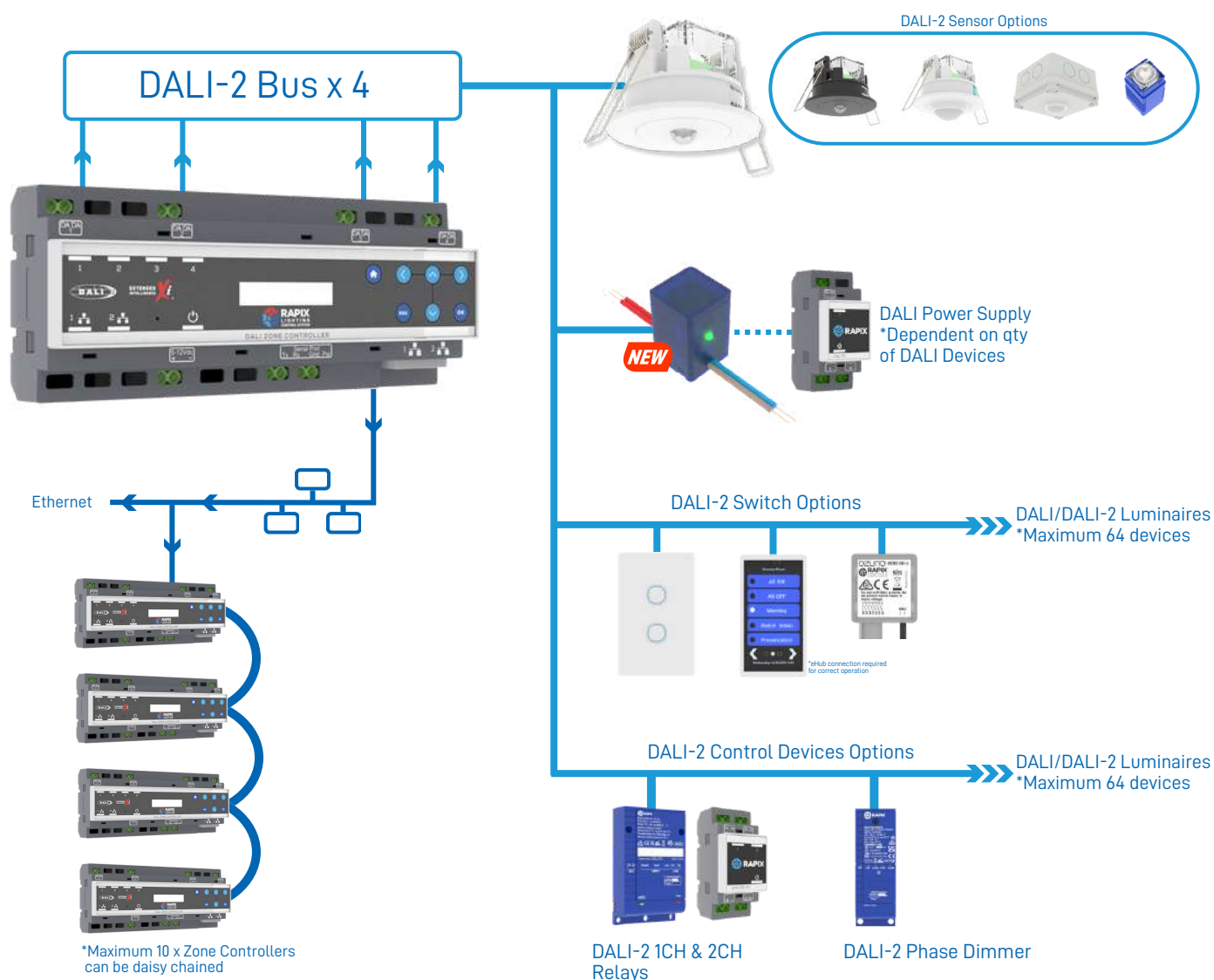## Large and small - RAPIX can do it all

Small sized project

All RAPIX DALI Sensors and Switches have a DALI application controller built in, and can control all DALI and DALI-2 control gear including DALI Type 8. RAPIX DALI-2 switches and sensors are powered from the DALI line and have the lowest power consumption of any products on the market.

DALI-2 Sensor Options

NEW

DALI Power Supply
Dependent on qty
of DALI Devices

DALI-2 Switch Options

DALI/DALI-2 Luminaires
Maximum 64 devices

eHub connection required
for correct operation

DALI-2 Control Devices Options

DALI/DALI-2 Luminaires
Maximum 64 devices

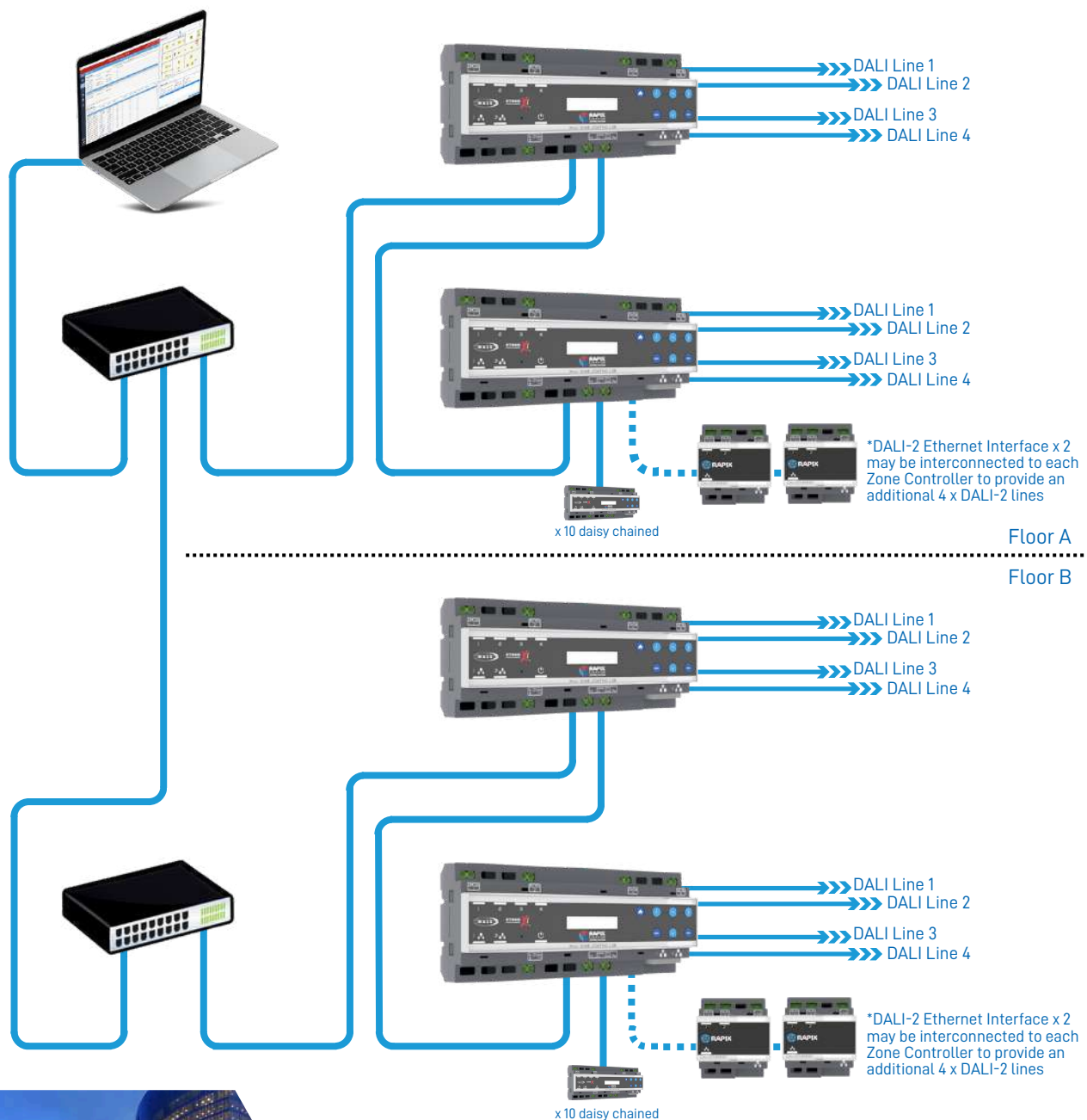DALI-2 1CH & 2CH Relays   DALI-2 Phase Dimmer

Mid sized project

RAPIX DALI-2 Zone Controllers allow creating a DALI installation that spans multiple DALI lines. Linking by Ethernet then allows a system to expand beyond 4 lines.

DALI-2 Sensor Options

DALI-2 Bus x 4

Ethernet

DALI Power Supply
*Dependent on qty
of DALI Devices

NEW

DALI-2 Switch Options

DALI/DALI-2 Luminaires
*Maximum 64 devices

*eHub connection required
for correct operation

DALI-2 Control Devices Options

DALI/DALI-2 Luminaires
*Maximum 64 devices

*Maximum 10 x Zone Controllers
can be daisy chained

DALI-2 1CH & 2CH
Relays

DALI-2 Phase Dimmer

Large sized project

Whether it be an office tower, school, university, hospital, airport or building campus - RAPIX is fully scalable and secure.

DALI Line 1
DALI Line 2
DALI Line 3
DALI Line 4

DALI Line 1
DALI Line 2
DALI Line 3
DALI Line 4

*DALI-2 Ethernet Interface x 2 may be interconnected to each Zone Controller to provide an additional 4 x DALI-2 lines

x 10 daisy chained

Floor A

Floor B

DALI Line 1
DALI Line 2
DALI Line 3
DALI Line 4

DALI Line 1
DALI Line 2
DALI Line 3
DALI Line 4

*DALI-2 Ethernet Interface x 2 may be interconnected to each Zone Controller to provide an additional 4 x DALI-2 lines

x 10 daisy chained

Very large sized project

RAPIX can scale up, from large to very large. Simply keep adding Zone Controllers and DALI lines.
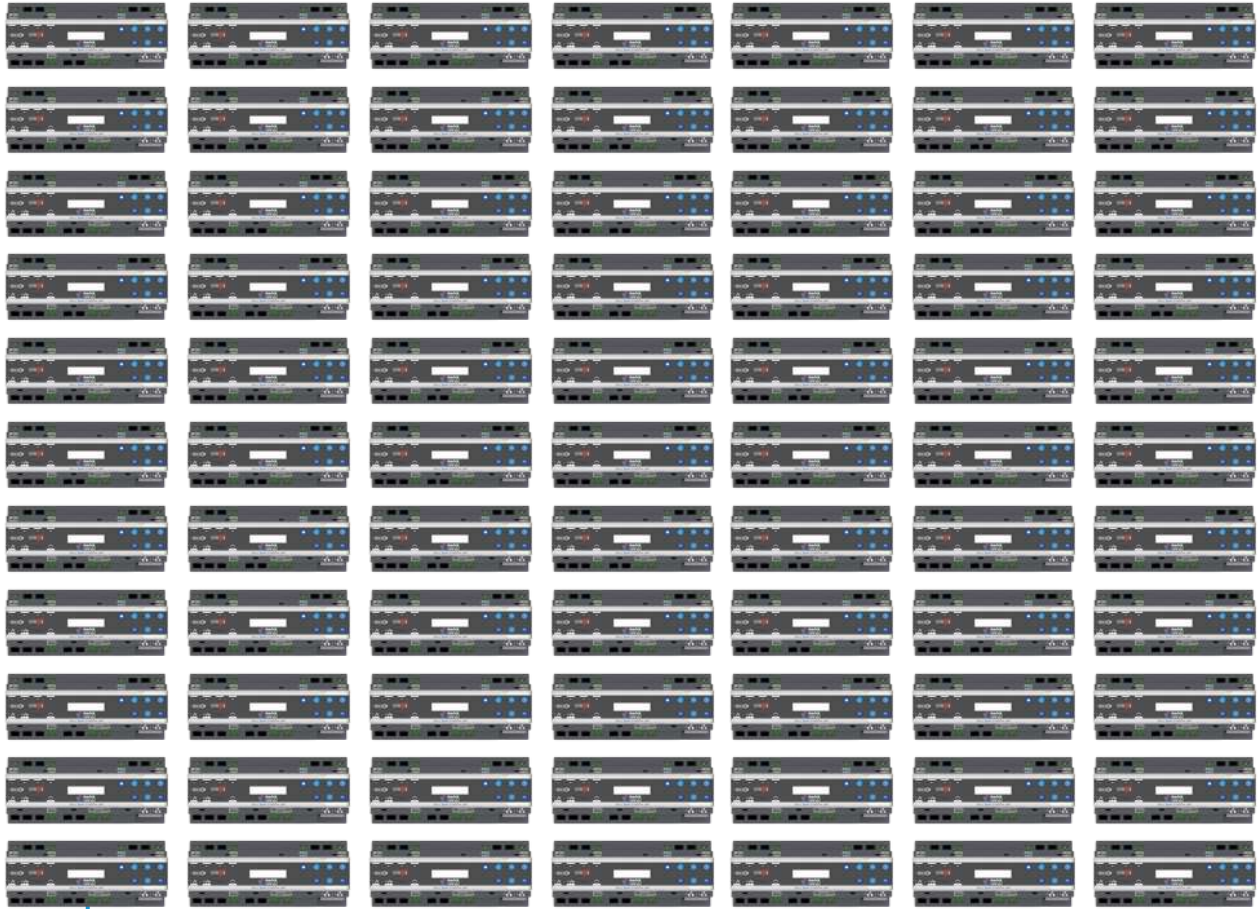
RAPIX DALI-2 Modular LED Switch Range

The new Ozuno range of DALI-2 light switches connect directly to the DALI line and include built-in LED indicators. This new range of light switches are available in two push button styles and a rotary, with optional accessories for small and large dials.

Secondary slave push buttons and rotaries can be added allowing up to 2 gangs per master switch unit. These push button and rotary styles can be mixed and matched without limitations. Both push buttons and rotary are compatible with a wide range of switch plates from most major Australia and New Zealand suppliers.

Connects directly to the DALI line

Key Features:

- DALI-2 Certified, can be used with any DALI-2 controller.
- ON / OFF / Dim Up / Dim Down.
- Control both Tuneable White and RGBW Colour .
- Scene Setting / Timers.
- DALI Broadcast out of the box when connected to a DALI power supply.
- LED Backlight and Nightlight Function.
- Fits most Australian and New Zealand Wall Plates.
- Only 4 mA nominal DALI Power Consumption.
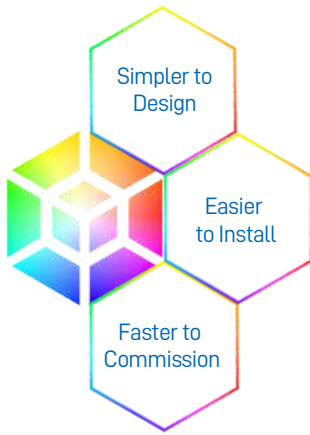
RAPIX DALI-2 Switch for Colour Control

Looking to add a splash of colour? The RAPIX DALI-2 Modular LED Switch range has your solution covered.

Using the RAPIX Addressing software or the RAPIX Integrator software, you have the ability to customise an RGBW colour solution exactly to your requirements.

Simpler to Design

Easier to Install

Faster to Commission

RGBW and Tuneable White Control

Powerful Tuneable White Control with RAPIX DALI-2 Rotary Switch

Tune into your circadian rhythm with the RAPIX DALI-2 Modular LED Switch Range.

The new RAPIX DALI-2 switch range includes powerful DALI Type 8 Tuneable White control, allowing easy change of colour temperature with push of a button or the spin of a dial.

The adjustment features of these new switches can work stand-alone, or hand in hand with RAPIX DALI Zone Controllers. A Zone Controller can add further features, such as scheduled colour temperature change during each day.

Complete Control with DALI-2

Set the colour to the mood

Faster to Commission

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RAPIX Software

A complete suite of products

RAPIX Addressing

One tool for your DALI addressing needs.

RAPIX ADDRESSING

RAPIX Integrator

A professional tool for commissioning a RAPIX Lighting Control System.

RAPIX INTEGRATOR

RAPIX Facilities

One software for all your facility lighting requirements.

RAPIX FACILITIES

RAPIX Emergency

Intelligent DALI Emergency Lighting Monitoring System with 'One Click' commissioning.

RAPIX
EMERGENCY

RAPIX Desktop

Take control of your lighting from the desktop.

RAPIX
DESKTOP APP

RAPIX Touch

Convert a mobile tablet device into a programmable touch panel.

RAPIX
TOUCH

Simple, Fast and Mobile

RAPIX Addressing is the one tool you need for all your DALI addressing. This tool will allow you to set addresses, groups and scenes for all DALI and DALI-2 devices.

Key features

- DALI-2 address assignment including DALI-2 Control Devices.
- Set Groups and Scenes.
- Go Mobile for faster commissioning.
- Set up a team with multiple addressing tools on a project.
- Address relays, phase dimmers, switches and sensors.
- Can be used to asset addresses for DALI components from any DALI-2 certified manufacturer
- Can be used to address and program single line DALI installations.

Devices required:

FREE software download

DGLMIFU01

Define lighting Zones across DALI lines

RAPIX Integrator brings you all the features of RAPIX Addressing and then adds the power and functionality to bring the entire installation to life through RAPIX DALI-2 Zone Controllers.

Key features

- Create Zones across DALI lines and Zone Controllers.
- Set Scenes across DALI lines and Zone Controllers.
- Program schedules for time of day use.
- Create enable and disable settings for sensors and switches utilising flags and operating properties.
- Utilise the Logic engine for those requirements that might be a little different.
- 3rd Party Integration built in- JSON API, MODBUS TCP, Control4, MQTT and BACNET IP
- Use the RAPIX template programming system with switches and sensors from any DALI-2 certified manufacturer.

DGOZ-ZONEC-4DA

**Devices required:**

FREE software download

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Complete Lighting Maintenance

RAPIX Facilities is your complete lighting control facilities maintenance software. Designed for the building owner and building manager, this software provides all the features required to maintain your entire lighting installation.

Key features

- View the status of all DALI and DALI-2 Devices.
- Click on a device to pull up the location directly on the floor plan view.
- View the location and history of all devices.
- Visualise the entire project with floor plans.
- View all test schedules, including device checks and all exit and emergency tests.
- Edit and make changes to lighting schedules throughout the building.
- Edit and make changes to scenes.
- View all test and repair reports.

Devices required:

+
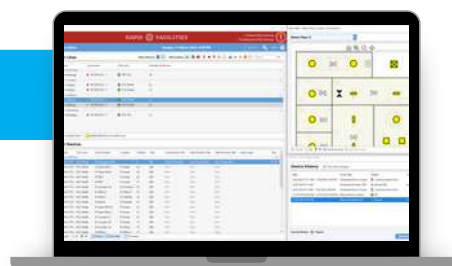
DGOZ-ZONEC-4DA

Software licence required

One Click Commissioning

RAPIX Emergency is the intelligent DALI Emergency Lighting System with One Click commissioning and is a complete monitoring and reporting solution for your emergency lighting installation.

Key features

- Connect & auto-scan DALI lines.
- Auto-addresses DALI devices.
- Identify all Emergency DALI devices.
- Groups fixtures.
- Set maintenance schedule.
- Generates automated reports.
- Auto-emails reports.
- Password protected access control.
- Scalable solution.
- Import project from other RAPIX software tools.
- FREE SOFTWARE.

DGOZ-ZONEC-4DA

OR

DGLMIFE02

+

Devices required:
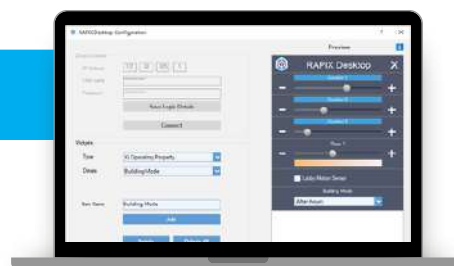
FREE software download

Control your lights from the desktop

RAPIX Desktop gives you and your team to control the lights directly from their computer. This might be just to dim the light above or to turn off a group of lights around them. Give users the ultimate flexibility to ensure they are comfortable in their environment.

Key features

- Set lighting levels.
- Turn on or off groups and zones.
- Set scenes.
- Set colour temperature of the lighting.
- Set RGBW lighting.
- Set system modes; eg after hours.
- Enable or disable sensors and switches.

Devices required:

+

DGOZ-ZONEC-4DA

FREE software download

RAPIX TOUCH

Conveniently control with a simple touch

RAPIX Touch - the modern touch screen solution for commercial environments. Utilising the windows operating system, RAPIX touch creates a simple but intelligent touch screen application for all your lighting control requirements.

Key features

- Control and monitor many aspects of a RAPIX Lighting Control System.
- Adjust lighting levels.
- Change colour temperature.
- Set RGB or RGBW colour.
- Shutter, curtain and blind control.
- Activate scenes.
- Change building system modes.
- Enable / Disable features, such as sensors.
- Edit schedules and scenes.
- Many theme colours and style options.
- Multi-page, including lock screen.
- Widget based user experience.

DGOZ-ZONEC-4DA

Devices required:

Software licence required

RAPIX PRODUCTS

DALI USB Interface

DALI Interfaces

DALI Relays & Dimmers

RAPIX Sensors

DALI Switches

Accessories

DALI-2 USB Adressing Tool

- DGLMIFU01

Key Features:

- RAPIX Addressing allows simple and fast DALI Short Address commissioning from a PC and mobile device.
- RAPIX Addressing allows assignment and change of DALI Short Addresses for DALI Lighting & Emergency Control Gear, as well as DALI-2 switches and sensors.
- Allows fast and easy connectivity and basic operation testing for units on a DALI line without a PC.
- Buttons allow all units on a DALI line to be manually toggled ON and OFF, faded UP and DOWN (if the control gear allows) and cycled ON / OFF.
- Connects directly to a PC with the supplied USB lead.
- Separate LED indicators for DALI communications, DALI line power, USB connectivity, DALI device cycle.
- Rugged, hand held device housed in a protective silicon case.
- Designed and manufactured in Australia.
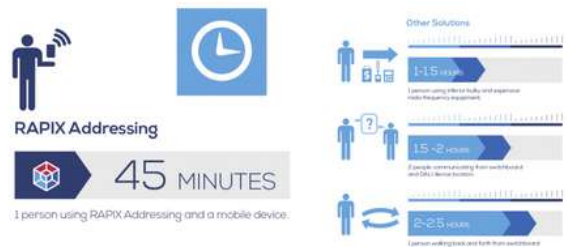
Interfaces

DALI-2 Zone Controller

Certified to DALI standards IEC 62386-101 Ed 2 and IEC 62386-102 (DALI-2)
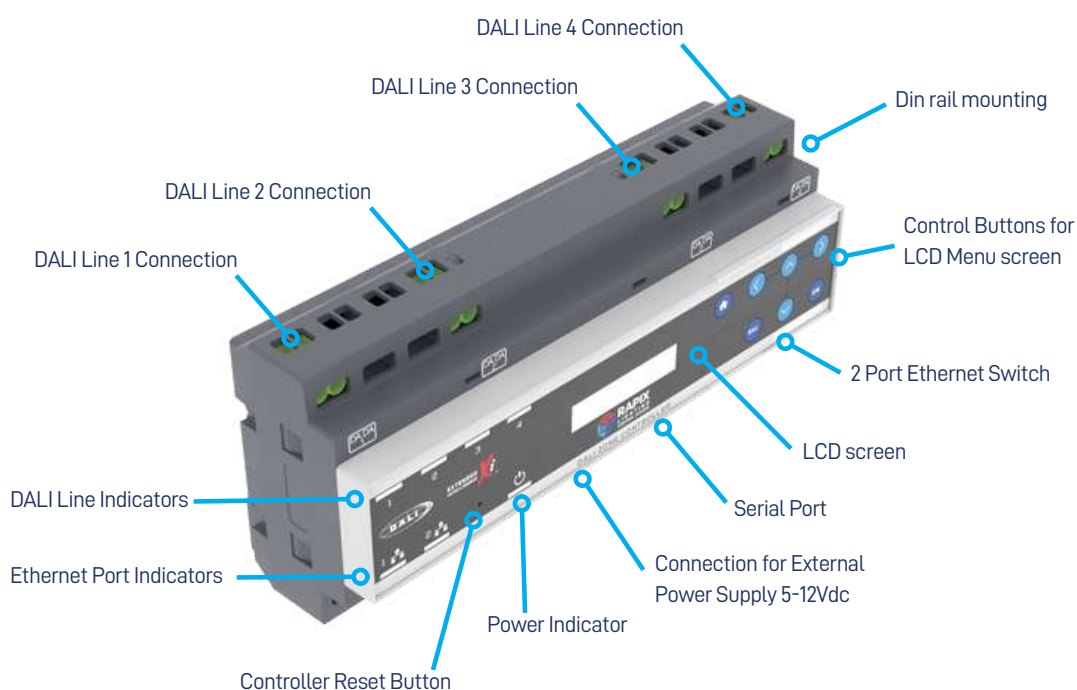
Available in both 2 channel and 4 channel models

- **DGOZ-ZONEC-4DA**
  4 Channel

- **DGOZ-ZONEC-2DA**
  2 Channel

Key Features:

- 12M wide DIN rail mounted embedded controller.
- Direct connect for up to four (4) DALI lines (two DALI lines on DGOZ-ZONEC-2DA).
- Two Ethernet ports with in-built Ethernet switch for daisy chain connections.
- Zone creation – Zones being collections of DALI lines and / or DALI Groups and / or DALI Short Addresses.
- Scene control across all connected Zone Controllers and DALI lines.
- Includes embedded Logic Engine using C# programming language.
- External connectivity using REST API, JSON API, Modbus and MQTT.
- Configured using the FREE RAPIX Integrator software tool.
- Generous terminals allow terminating 3 x 1.5 mm2 or 2 x 2.5 mm2 conductors (solid or stranded).

DALI Line 4 Connection
DALI Line 3 Connection
DALI Line 2 Connection
DALI Line 1 Connection
Din rail mounting
Control Buttons for LCD Menu screen
2 Port Ethernet Switch
LCD screen
Serial Port
Connection for External Power Supply 5-12Vdc
DALI Line Indicators
Ethernet Port Indicators
Power Indicator
Controller Reset Button

Native Integration in-built:

Interfaces

DALI-2 Two Channel Ethernet Interface

Certified to DALI-2 standards IEC 62386-101 Ed 2 and IEC 62386-103 (DALI-2)

- ■ DGLMIFE02

Key Features:

- Supports two DALI lines, each line can have up to 64 DALI addressable units such as LED drivers, Emergency Lighting Drivers, Phase Dimmers, Relays and more.
- Up to two of these Ethernet Interfaces can be used with a Zone Controller to add 1 to 4 extra DALI lines to each Zone Controller.
- 2 mA current draw on each DALI line.
- Operates with 10 / 100 / 1000 Mbits / sec twisted pair network types.
- Generous terminals allow terminating 3 x 1.5 mm2 or 2 x 2.5 mm2 conductors (solid or stranded).

Learn more

RAPIX DALI eHub Application Controller

Complies with DALI standards IEC 62386-101 and IEC 62386-102

- ■ DGOZ-EHUB-4G-2S

Key Features:

- Powered via external 12 V dc SELV power supply (Australia pinout version included).
- Sockets for quick and easy input peripheral connection.
- Stores all logical operations and processing for peripherals.
- Allows plug-and-play for peripherals of the same type (sensor or human interface).
- Segregated terminal block for DALI line connections.
- LED indicators for power, DALI and Ethernet.
- Supports the RAPIX LCD Switch.
- Up to 8 Schedules, each supporting 1 or more days per week.

Learn more

DALI Power Supplies
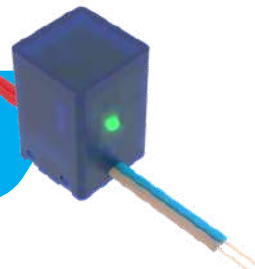
RAPIX DALI-2 Power Supply

■ DGLMPS01

Key Features:

- Delivers the largest possible DALI line current, ensuring limits are not exceeded.
- Indicators show the state of the mains supply and the DALI line.
- Nominal rated load current for the DALI Power Supply is 238 mA; and guaranteed. minimum current 225 mA.
- Robust design and suitable for high temperature environments.
- DIN rail mounted.
- Certified to DALI-2 standard IEC 62386-101 (Ed 2).

RAPIX DALI-2 Miniature Power Supply

■ DGOZ-DPSM

Key Features:

- A DALI-2 compliant power supply for small installations.
- Transparent case design to aid displaying indicators show the state of the mains supply and the DALI line.
- Nominal rated load current for the DALI Power Supply is 50 mA.
- Robust design and suitable for high temperature environments.
- Suitable for mounting in wall cavities or ceiling voids.
- Complies with DALI-2 standard IEC 62386-101 (Ed 2).

Relays and Dimmers

*Max 16A load

RAPIX DALI-2 One & Two Channel Relay

- DGOZ-RLY-16A-01
  1 Channel
- DGOZ-RLY-10A-02
  2 Channel

Key Features:

- General purpose load switching (ON and OFF) using received DALI commands.
- Capable of switching 16 AX @ 100-240 V ac (2 Channel version: 10 AX).
- High Inrush current: 500A (2 ms).
- Large Neutral and Earth termination bars.
- Suitable for mounting in a ceiling void, or can be DIN rail mounted using optional bracket.
- Zero crossing detection to maximise relay contact life.
- Fits through a 90 mm downlight hole.
- LED indicators (DALI and Power connections).
- Can be included in up to 16 DALI Group Addresses and/or up to 16 DALI Scenes.
- DALI Short Address, Group Addresses and DALI Scenes are configured using RAPIX Addressing or RAPIX Integrator software.
- Can also be commissioned using other DALI commissioning software that supports DALI Device Type 7.

Available Soon: Two channel, 16A, DALI-2 version. Order code: DGOZ-RLY-16A-02

*Max 12A load

RAPIX DALI-2 One & Two Channel Relay - Din Mount

- DGOZ-DINRLY-12A-01
  1 Channel
- DGOZ-DINRLY-12A-02
  2 Channel

Key Features:

- General purpose load switching (ON and OFF) using received DALI commands.
- Capable of switching 12 AX @ 240 V ac per channel.
- High Inrush current: 500A (2 ms).
- Zero crossing detection to maximise relay contact life.
- LED indicators (DALI and Power connections).
- Can be included in up to 16 DALI Group Addresses and/or up to 16 DALI Scenes.
- DALI Short Address, Group Addresses and DALI Scenes are configured using RAPIX Addressing or RAPIX Integrator software.
- Can also be commissioned using other DALI commissioning software that supports DALI Device Type 7.

Relays and Dimmers

DALI-2 Blind and Shutter Relay - Din Mount

■ DGOZ-DINBSR-01

Key Features:

- Suitable for blind / shutter / curtain / tilt motors.
- May also be used for garage panel and roller doors with appropriate connection to a door controller.
- Can be used with both ac and dc motors *see ratings on datasheet.
- LED indicators (DALI and Output On).
- Button control UP/OPEN, DOWN/CLOSE and STOP.
- Proportional control for amount open or tilt angle in increments of 1% (when commissioned using RAPIX Addressing or RAPIX Integrator software).

DALI-2 DALI-2 Adaptive Phase Dimmer

■ DGOZ-DM-400W-01

Key Features:

- Trailing Edge Phase dimming from received DALI commands.
- Optimised for dimmable LED lighting loads .
- Suited to lighting loads up to 500 W (at 40 °C ambient) and 400 W (at 50°C ambient).
- 1 W minimum load .
- Two wire dimming device: no Neutral required, only the ac Line (Active) and Load is connected.
- Nominal mains voltage 220 – 240 V ac, 47 – 53 Hz.
- Uses a single DALI Short Address, and can be included in up to 16 DALI Group Addresses and/or up to 16 DALI Scenes.
- DALI Short Address, Group Addresses and DALI Scenes are configured using RAPIX Addressing, Integrator or any other DALI commissioning software.

DALI-2 One Channel Voltage Free Relay
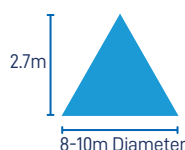
■ DGOZ-LPVFR-11

Key Features:

- General purpose load switching (ON and OFF) using received DALI commands.
- Suitable for ac and dc loads up to 1 A, including all lighting load types and lower power motors such as exhaust and ceiling fans.
- For ac loads, performs zero-crossing switching to minimise stresses in the load and reduce inrush currents.
- Can be used with SELV and dc loads up to 24 V dc.
- Suitable for low power / low current voltage-free interface functions wherever an isolated relay contact is required.
- Includes over-temperature, overload and short circuit protection.
- Uses a single DALI Short Address; can be including in up to 16 DALI Group Addresses and/or up to 16 DALI Scenes.
- Configured using RAPIX Addressing or RAPIX Integrator software, or any software that supports DALI Device Type 7.

Sensors

DALI-2 8m Movement and Light Level Sensor
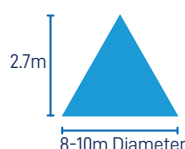
■ DGOZ-SEN-PRLLSW

Key Features:

- Only 2 mA current drawn from DALI.
- Light Level measurement 0 – 65000 lux.
- 55 mm diameter, suits hole saws 57 – 67 mm.
- External voltage free input suits all switch types and voltage free motion sensors.
- Generous terminal sizes for easy DALI connection, allowing loop-in / loop-out.
- Large cable strain relief for easy installation.
- Transparent wiring cover for easy inspection of the cable connection while preserving safety isolation.
- Surface mount adaptor available, suited to 50 mm and 60 mm screw mounting centres.

Max Mounting Height - 2.7m
Max Detection Diameter - 8-10m

2.7m

8-10m Diameter

Available in Black. Order code: DGOZ-SEN-PRLLSW-BK
(4 mA current draw)

## DALI-2 8m Movement Sensor

■ DGOZ-SEN-PRSW

Key Features:

- Only 2 mA current drawn from DALI.
- 55 mm diameter, suits hole saws 57 – 67 mm.
- External voltage free input suits all switch types and voltage free motion sensors.
- Generous terminal sizes for easy DALI connection, allowing loop-in / loop-out.
- Large cable strain relief for easy installation.
- Transparent wiring cover for easy inspection of the cable connection while preserving safety isolation.
- Surface mount adaptor available, suited to 50 mm and 60 mm screw mounting centres.

Max Mounting Height - 2.7m
Max Detection Diameter - 8-10m

2.7m

8-10m Diameter
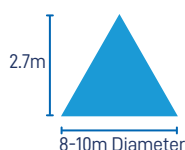
DALI-2 Miniature Movement and Light Level Sensor

■ DGOZ-SEN30-PRLLSW

Key Features:

- Miniature form factor for fitment in wall plates or luminaires.
- Only 4 mA current drawn from DALI.
- A RAPIX DGOZ-DSW30S-Px push button slave switch can be connected.
- Requires strain relief for cable terminations.
- Designed in conjunction with miniature DALI-2 power supply launching 2024.

Max Mounting Height - 2.7m
Max Detection Diameter - 8-10m

2.7m

8-10m Diameter

Sensors

DALI-2 Long Range Movement and Light Level Sensor

Max Mounting Height - <16m
Max Detection Diameter - 24m

16m
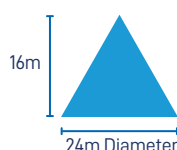
24m Diameter

- DGOZ-LRS-PRLLSW

Key Features:
- Suited to warehouses and industrial applications for indoor use .
- Only 4 mA current drawn from DALI.
- 55 mm diameter, suits hole saws 57 – 67 mm.
- External voltage free input suits all switch types and voltage free motion sensors.
- Generous terminal sizes for easy DALI connection, allowing loop-in / loop-out.
- Large cable strain relief for easy installation.
- Transparent wiring cover for easy inspection of the cable connection while preserving safety isolation.
- Surface mount adaptor available, suited to 50 mm and 60 mm screw mounting centres.
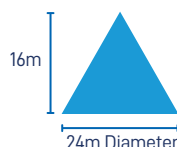
DALI-2 IP65 Long Range Movement and Light Level Sensor

Max Mounting Height - <16m
Max Detection Diameter - 24m

16m

24m Diameter

- DGOZ-SEN-PRLLSW-IP

Key Features:
- IP65 rated for water ingress and impact protection.
- Only 4 mA current drawn from DALI.
- External voltage free input suits all switch types and voltage free motion sensors.
- Generous terminal sizes for easy DALI connection, allowing loop-in / loop-out.
- Large cable strain relief for easy installation.
- Transparent wiring cover for easy inspection of the cable connection while preserving safety isolation.

DALI-2 Outdoor Light Level Sensor
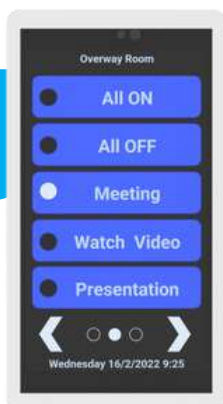
- DGOZ-SEN-LL65

Key Features:
- DALI-2 certified outdoor light level measurement.
- IP65 rating.
- DALI sunset switch or other exterior light level control functions.

Learn more

Learn more

Learn more

Touch Screens

■ DGOZ-TCSW-LR50-WH

## LCD 5" Capacitive Touchscreen - White trim

Key Features:

- 5" colour LCD with capacitive touch.
- Up to 20 software configurable control buttons.
- Optional date and time display.
- Lock screen, including DALI-system wide lock by flag with optional PIN code.
- Optional beep when touched.
- Customisable button text with Unicode support.
- Can show progress of fading operations (up, down) and timer operations.
- Optional fall-back page which can be configured to show a blank page, date and time, or a user-defined logo.
- Configurable screen brightness and automatic brightness control based on timeout after a touch.
- Proximity sensing for automatic brightness control and change from the fallback page to showing buttons.

Black trim available. Order code: DGOZ-TCSW-LR50-BK.

Optional fall-back page can be configured with user-defined logo.

Up to 20 configureable buttons.
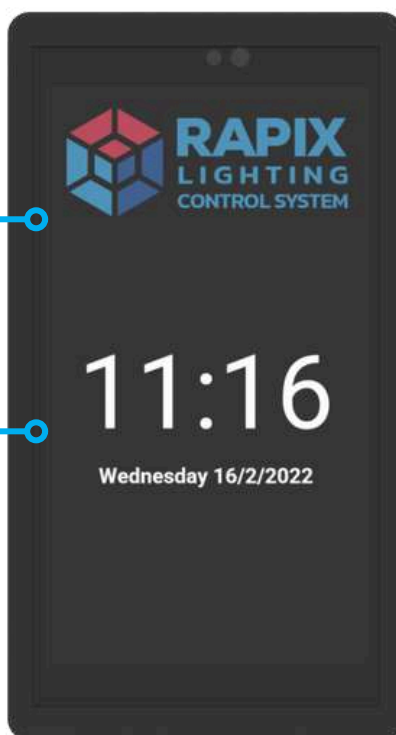
Capacitive Touch Technology

Configurable and Customisable

Switches

DALI-2 LED Classic Push Button - Master

Key Features:

- Software configurable white LED. (Optional – Orange, Blue, Green, Clear bezels available).
- Fits common wall switch apertures.
- Master RAPIX modular switches connect to directly to the DALI Line.

■ DGOZ-DSW30M-PC

Learn more

DALI-2 LED Classic Push Button - Slave

Key Features:

- Software configurable white LED. (Optional – Orange, Blue, Green, Clear bezels available).
- Fits common wall switch apertures.
- Slave RAPIX modular switches connect to a Master and are powered from the Master.

■ DGOZ-DSW30S-PC

Learn more

DALI-2 LED Diva Push Button - Master

Key Features:

- Software configurable white LED. (Optional – Orange, Blue, Green, Clear bezels available).
- Fits common wall switch apertures.
- Master RAPIX modular switches connect to directly to the DALI Line.

■ DGOZ-DSW30M-PD

Learn more

DALI-2 LED Diva Push Button - Slave

Key Features:

- Software configurable white LED. (Optional – Orange, Blue, Green, Clear bezels available).
- Fits common wall switch apertures.
- Slave RAPIX modular switches connect to a Master and are powered from the Master.

■ DGOZ-DSW30S-PD

Learn more

DALI-2 LED Modular Switches Accessories

Key Features:

- Easy switch out / exchange of the standard white / clear / small dial options allowing use of colour options if desired .

Black Push Button Dolly – Classic Style	DGOZ-DSW30ACC-PBB
Green Push Button Bezel	DGOZ-DSW30ACC-GB
Orange Push Button Bezel	DGOZ-DSW30ACC-OB
Blue Push Button Bezel	DGOZ-DSW30ACC-BB
Large White Dial with Clear Ring	DGOZ-DSW30ACC-LDW
Large Black Dial with Clear Ring	DGOZ-DSW30ACC-LDB
Large Green Rotary Grip Ring	DGOZ-DSW30ACC-GRL
Large Orange Rotary Grip Ring	DGOZ-DSW30ACC-ORL
Large Blue Rotary Grip Ring	DGOZ-DSW30ACC-BRL
Small Black Dial with Clear Ring	DGOZ-DSW30ACC-SDB
Small Green Rotary Grip Ring	DGOZ-DSW30ACC-GRS
Small Orange Rotary Grip Ring	DGOZ-DSW30ACC-ORS
Small Blue Rotary Grip Ring	DGOZ-DSW30ACC-BRS

Learn more

Switches

DALI-2 LED Rotary - Master

Learn more

DGOZ-DSW30M-RT

Key Features:

- Software configurable white LED. (Optional – Orange, Blue, Green, Clear bezels and grip rings available).
- Supplied with Clear Grip Ring.
- Fits common wall switch apertures.
- Master RAPIX modular switches connect to directly to the DALI Line.

DALI-2 LED Rotary - Slave

Learn more

DGOZ-DSW30S-RT

Key Features:

- Software configurable white LED. (Optional – Orange, Blue, Green, Clear bezels and rings available).
- Supplied with Clear Grip Ring.
- Fits common wall switch apertures.
- Slave RAPIX modular switches connect to a Master and are powered from the Master.

DALI-2 Universal Switch Input

Learn more

DGOZ-USI-6

Key Features:

- 6 inputs for switches or voltage free contacts.
- Easily visible DALI indicator and identification indicator to allow locating the device during installation.
- Only 4 mA current drawn from DALI.

DALI-2 DIN mount Universal Switch Input

Learn more

DGOZ-DINUSI-6

Key Features:

- 6 inputs for switches or voltage free contacts.
- Easily visible DALI indicator and identification indicator to allow locating the device during installation.
- Only 4 mA current drawn from DALI.

RAPIX
LIGHTING
CONTROL SYSTEM

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OZUNO

Version 1 February 2024

TRUSTED AUSTRALIAN
DESIGN