elitedali™ - for Niagara

smart lighting controls

elitedali Multidrop Connectivity Kit/N4 Datasheet

Introduction

elitedali Multidrop for Niagara, is the only web based smart IoT solution, globally available today, for smart lighting controls based upon DALI®. It transforms any suitable building Management System (BMS) controller running Tridium's Niagara Framework® technology into a smart IoT convergent lighting commissioning and control product. It enables such platforms running **elite**dali to have all the functionality necessary to allow the commissioning, control, management, monitoring and analytics of any intelligent addressable DALI light fixtures, in real-time, from anywhere.

DALI (Digital Addressable Lighting Interface) is the only international interoperable open published dedicated communication and control standard (IEC 62386) for intelligent lighting solutions.

This all that is required to simply connect DALI networks directly to smart IoT Building Management and Control multi-vendor platforms that use Tridium's Niagara Framework®, and be delivered, operated and maintained by suitably qualified Niagara System Integrators (SI).

*elite*dali **Multidrop Connectivity Kit/N4 Datasheet**

CNS's **elite**dali Multidrop Connectivity Kit/N4 version is part of CNS's Niagara DALI lighting commissioning, control, maintenance and management products and solutions.

For more details on the entire **elite**dali product and solution range visit **www.elitedali.com**.

Features

Each licensed **elite**dali Multidrop Connectivity Kit/N4 enables **-**

- ◆ The connection of a single DALI channel, circuit or network of up to 64 DALI® devices
- ◆ Seamless connectivity between any Niagara4 platform and DALI
- ◆ Full real-time Commissioning, Control, Maintenance, Management and Analytics of DALI networks and devices that conform to the open DALI standard from within Niagara4.
- ◆ Up to **4** x **elite**dali Multidrop Connectivity Kits can be connected per single RS-485 JACE serial port*
- ◆ Up to **24** x **DALI networks** can be physically connected to a single JACE*
- ◆ Potential maximum of **1,536** open standard DALI devices manageable by a single JACE*
- ◆ Expandable across multiple JACES for large scale DALI lighting networks

*NB: Subject to available computing resources on the chosen Niagara4 platform/'s installed to meet specific application requirements.

WARNING: elitedali **must only be installed and commissioned by suitably qualified Engineers and Technicians for more information on how to become a Certified elite**dali **Partner (**CeP™**) visit www.elitedali.com.**

Benefits of Niagara Lighting Controllers with **elite**dali

Lower cost of installation –

Less hardware, leveraging N4 platform lower costs, better utilisation & ROI.

Simpler network architecture –

Less to go wrong, less parasitic power consumption, more sustainable.

Easier & faster to commission –

Familiar Niagara environment, tools and methods, highly automated, easier to support and maintain, NO mapping, labelling or enumeration checking required, full DALI device addressing capability supported. Reduced commission time by up to 50%+. Library of lighting control components further reduces commissioning time and risk.

Future Proof –

Open standards based, highly vendor independent, multiple suppliers & installers Globally.
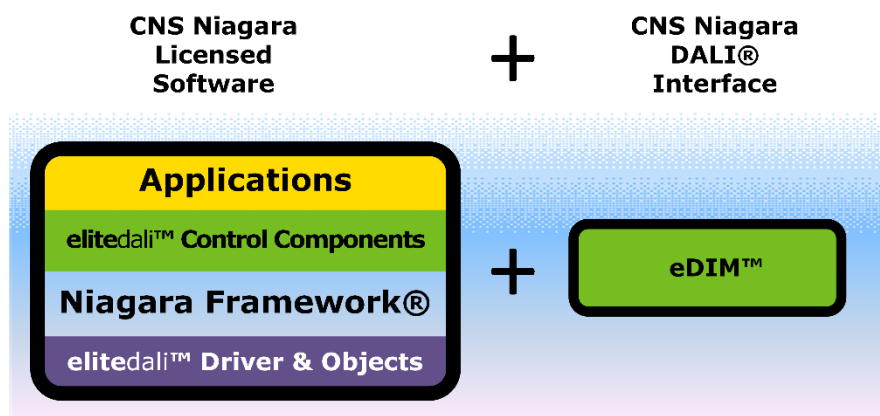
Total Integration –

Seamless native Niagara DALI solution guaranteeing total integration with all other sub-systems connected to the Niagara Framework, offering better user experience, lower energy costs and less equipment.

Seamless access to real-time data –

Enables complete control and management of assets in real-time both locally and remotely via smart mobile and cloud based tools.

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Website: www.control-network-solutions.co.uk

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The **elite**dali Multidrop Connectivity kit/N4 seamlessly connects DALI networks directly to any suitable Niagara4 platform, such as a **JACE™8K,** via its RS-485 serial port and comprises:-

◆ **Each elite**dali* **Connectivity Kit consists of-**

    ◆ 1 x Licensed instance of Niagara **elite**dali software comprising –

- Native Niagara DALI interface driver software, device modelling, addressing and commissioning tools
- Niagara smart lighting controls "kitcontrol" components library

    ◆ 1x DALI Interface Module **(e**DIM™) for open Interoperable Standard DALI devices

    ◆ Full documentation including User and Reference manuals

Enables the full addressing, commissioning, control, management, visualisation and analytics of one DALI network of 64 DALI devices.

*elitedali strictly conforms to the current published DALI IEC 62386 Open standard

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elitedali Multidrop Connectivity Kit/N4 comprises:-

All the basic components required to commission, control, maintain and manage a single 64 device open standard DALI network connected to a Niagara platform constituting the Building Control, Management, Automation or Energy solution.
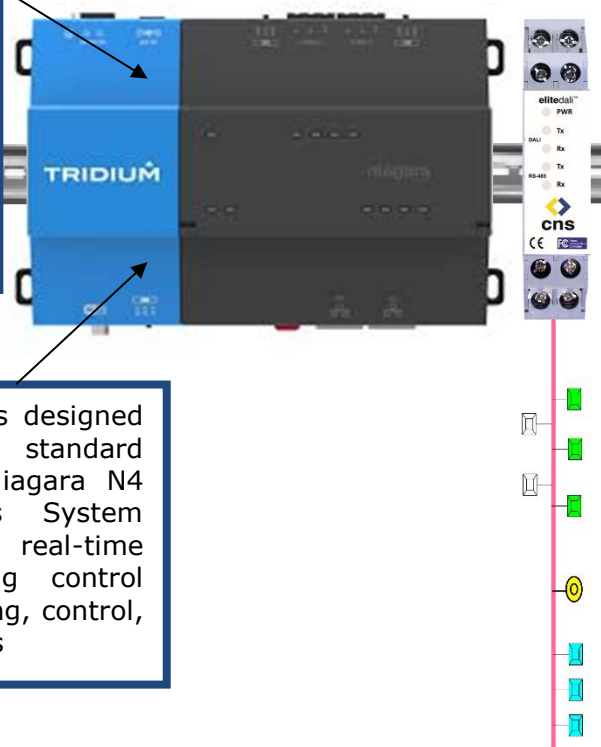
DALI native Niagara N4 software lighting **Control Components** including:-

- ➢ Constant Light
- ➢ Corridor Hold
- ➢ Switching & Dimming
- ➢ Absence Detect

A fuller list can be seen on page Error! Bookmark not

The physical connection between a Niagara N4 platform and a DALI lighting channel is achieved using **CNS's elite**dali **Interface Module (e**DIM**)** that seamlessly connects a single DALI network to an RS-485 serial port.

DALI Serial Interface is designed and implemented as a standard device network in the Niagara N4 Framework and allows System Integrators seamless, real-time access to DALI lighting control networks for commissioning, control, management and analytics

elitedali may be installed on a single Niagara4 controller or across many Niagara controllers.

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elitedali DALI® Driver Software Specification

- ◆ Native Niagara driver for Niagara4 version 4.1 onwards

- ◆ Uses device modelling so **NO** I/O mapping, labelling or enumeration checking required

- ◆ Standard functions such as creating new devices, adding devices, device discovery and matching devices are all included

- ◆ Enhanced functionality has been included specifically for the management of DALI networks.

- ◆ Utilises familiar Niagara methods and tools for addressing, discovery, logging alarming, scheduling etc..

- ◆ Seamless access to all DALI device data

- ◆ Capability to create simple and complex control strategies for a DALI lighting system via a specific lighting control components kitcontrol library, offering many pre-written and packaged software components, each with its own datasheet.

- ◆ Integrates with all Niagara services including but not limited to reporting, tagging, scheduling, alarming etc..

- ◆ Supports a full 64 Open Standard DALI IEC 62386 devices on a single DALI network

- ◆ User information is fully documented and supplied with the licensed software

elitedali **Lighting Control Component Software**

Included with every **elite**dali Multidrop Connectivity Kit is a "kitControl" library of licensed software control components. This allows a suitably qualified System Integrator quickly, simply and reliably to create lighting control strategies that reduce energy usage and create a modern comfortable environment.

Some examples of these software control components are shown below –

Control Component Name
- Constant Light Controller Direct
- Constant Light Controller with Override
- Meeting Room Constant Light Controller
- Corridor Controller with Boolean Inputs
- Corridor Controller with Enumerated Inputs
- Dimming Absence Controller
- Scene Selection Controllers
- Absence Detect Controller with Switching
- Switch Input Decay Timer Controller
- Switch Input Dimming Controller

These components enable the System Integrator to reliably build complex highly granular control strategies quickly and simply. Thus enabling Estate Managers, Building Supervisors, Facilities Managers, Clients and Users to manage their own environment both locally and remotely via any suitable interface including smart mobile. Additional licenses to add more software control components can be ordered separately, where more complex lighting systems are to be controlled.

Contact CNS for details.

These Software Control Component libraries are regularly being updated so the above is just an indication of the capability **elite**dali offers, in simplifying both commissioning and control strategy creation.

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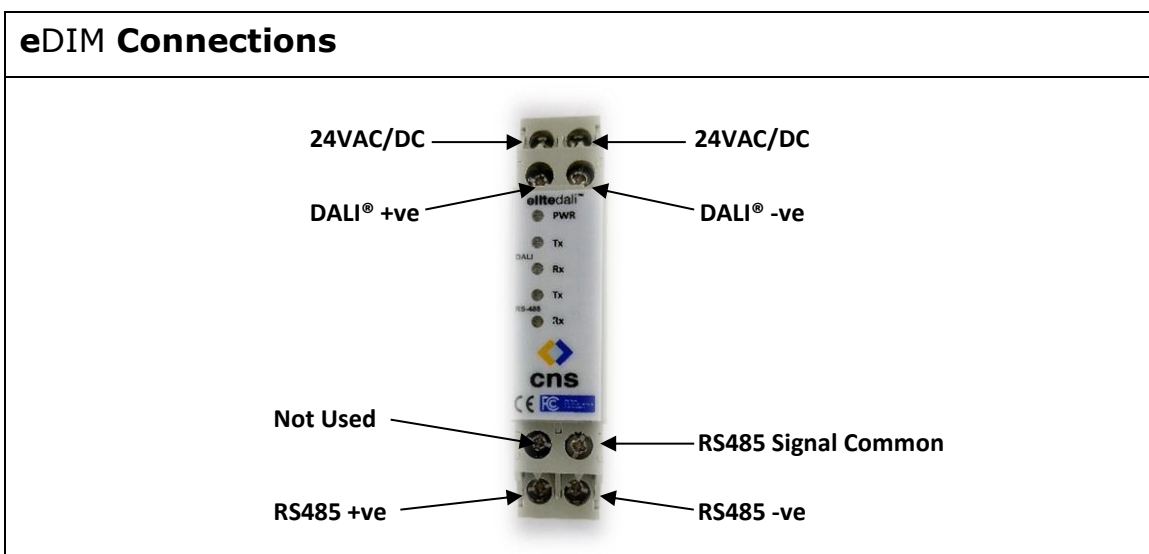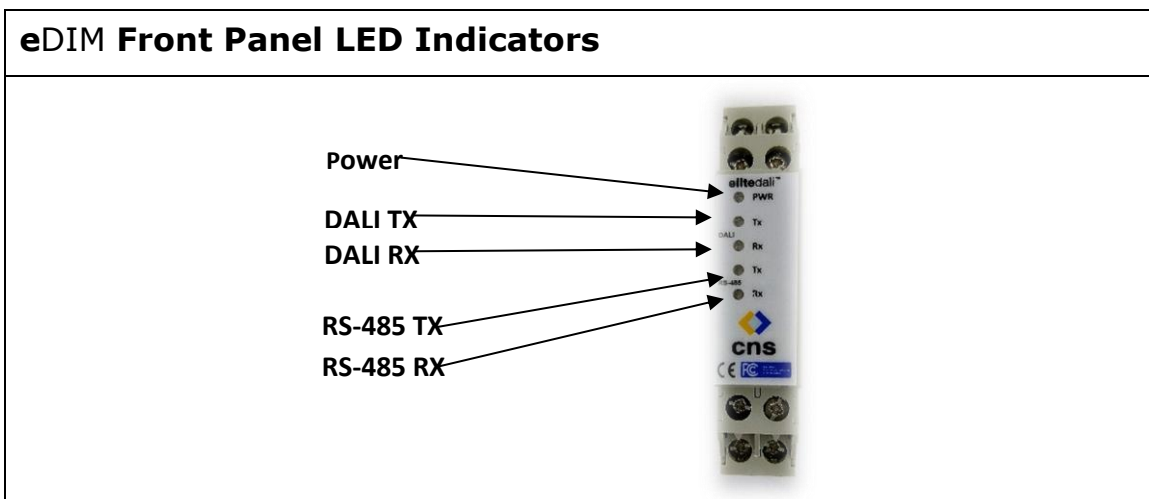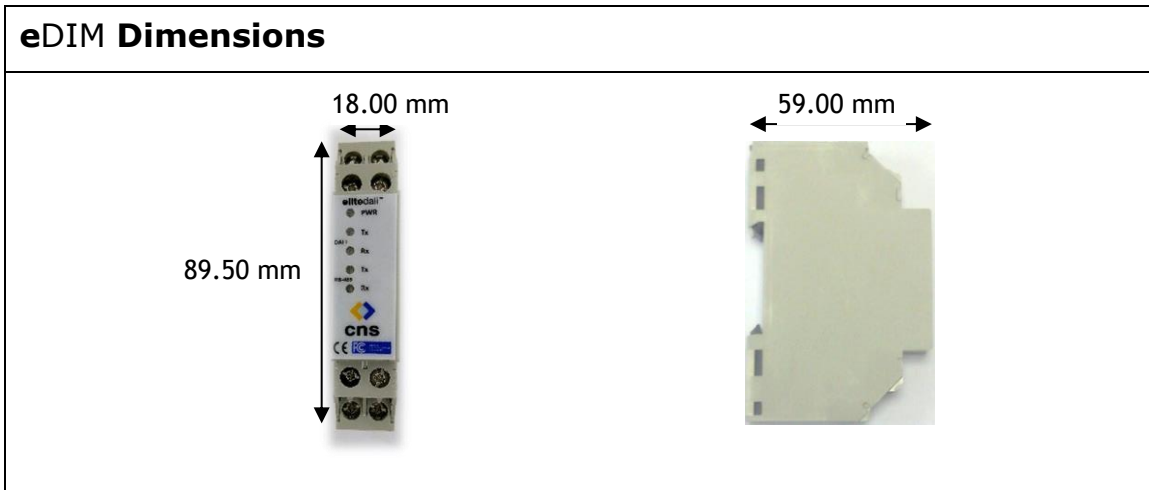# **elite**dali **Multidrop Connectivity Kit/N4 Datasheet**

elitedali **Multidrop Connectivity Kit Hardware Specifications**

elitedali **DALI® Interface Module(eDIM)**

Technical Data –Electrical	
Supply Voltage	24V AC/ DC, ±10%
Isolation	3KV
Power consumption	40mA mN4imum @ 24VDC
DALI network must be operating via an independent suitable DALI power supply source	9.5 V to 22V DC
Serial Connection	Standard 3- Wire RS-485, 100cm mN4imum
Serial Network Termination	Available Option on Request
Technical Data –Environmental	
Operating temperature range	0..+50 °C
Storage temperature range	-20...+85 °C
Relative humidity	5...90 % rel. annual average (non-condensing) (pollution degree1)
Environmental protection	*IP 54 (housing)
Technical Data –Mechanical	
Mounting	DIN rail, type NS35/17.5 (35mm x 17.5mm)
Screw Terminal Torque Settings	0.5 to 0.7Nm MN4imum
Serial network connection	3 x Polarity dependent Screw Terminals 0.2...2.5 mm² (stranded), 0.2...4.0 mm² (solid)
DALI Network connection	2 x Polarity independent screw terminals, 0.2...2.5 mm² (stranded), 0.2...4.0 mm² (solid)
24V AC/DC module power connection	2 x Polarity independent screw terminals, 0.2...2.5 mm² (stranded), 0.2...4.0 mm² (solid)
Conformity & Standards	
CE	
FCC	

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eDIM Dimensions

18.00 mm

59.00 mm

89.50 mm

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eDIM Front Panel LED Indicators

Power

DALI TX

DALI RX

RS-485 TX

RS-485 RX

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eDIM Connections

24VAC/DC   24VAC/DC

DALI® +ve   DALI® -ve

Not Used   RS485 Signal Common

RS485 +ve   RS485 -ve

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Certified elitedali Partners (CeP™)

elitedali products and solutions are only available to certified Niagara Community partners who also become Certified elitedali Partners (CeP). For more information about becoming a CeP please go to the elitedali website **www.elitedali.com** or contact us directly.

Order Details

Description: **Part No:**

- ◆ **elitedali Multidrop Connectivity Kit /N4**   **elite**dali**-DCK/M/N4**
- ◆ **Licensed software Upgrade Pack**   **elite**dali**.LUP/M/N4**

CNS can also supply elitedali **DALI compatible Presence, Light level, Relay, Repeater and Power Supply products click here for more details.**

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