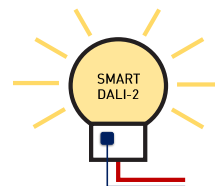


Digital Addressable Lighting Interface - DALI-2

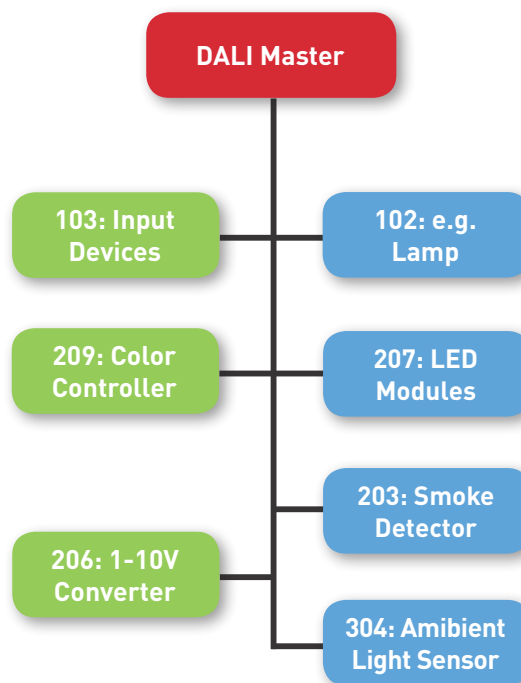
The nowadays well-established Digital Addressable Lighting Interface DALI helps to build robust, scalable, cost-effective, reliable and flexible lighting systems. DALI-2, the latest version of the protocol, is setting the standard for smart lighting control. It adds new features and introduces standardization of control devices including the recent addition of input devices, while maintaining backwards compatibility to the original DALI protocol.



Nuvoton supports DALI-2 device development and certification with a variety of certified DALI software stack libraries, development and certification test guides and hardware parts. With this support, the development schedule can be reduced by 3 to 6 months. Customers don't have to worry about communication software and can focus on implementing functions of the lamps like over-temperature and over-voltage protection.

Nuvoton provides verified solutions including hardware and software for different parts of the IEC 62386 Standard like:

- ◆ General Requirements
 - Part 101: System
 - Part 102: Control Gear
 - Part 103: Control Devices
- ◆ Specific Requirements for Control Gear
 - Part 206: Conversion to DC (0/1-10V)
 - Part 207: LED modules
 - Part 209: Color control
- ◆ Specific Requirement for Control/Input Devices
 - Part 303: Occupancy Sensors
 - Part 304: Light Sensors



On the hardware side, Nuvoton offers two specific device series for DALI-2 devices namely NDA102 (for control gear) and NDA103 (for control/input devices).

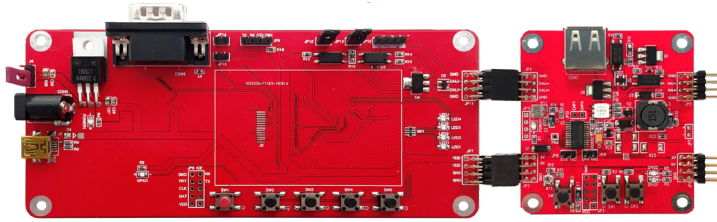
The first product generation is based on the Cortex-M0, the second uses the modern Cortex-M23 core. In the latest generation, Nuvoton has especially expanded the connectivity peripherals (e.g. UART and SPI) to enable more possibilities in the end product design.

Hardware Support

- Master MCU: NUC029 series
- 102+20x control gear: NDA102 series (Cortex M0 & M23)
- 103+30x control/input devices: NDA103 series (M0 & M23)
- Provide Schematic, Gerber file

Easy Development

To support and ensure a short time to market Nuvoton offers an evaluation system consists of the DALI-2 master board based on NUC029SEE and DALI-2 device board based on the NDA102EC1.



DALI-2 Master

MCU: NUC029SEE

Support power supply range: 8~24V

Support source code of Master

Support transmit 24/16-bit command

DALI-2 Device

MCU: NDA102

Support both Part 102+2XX & Part 103+3XX

5V power supply and DALI bus port

Support connecting multiple devices in series

16-bit PWM output to improve fineness of dimmer

Hardware divider to accelerate calculation of dimmer

Features

Complies with DALI certification

Supports DALI ProbitLab2 test verification

Upgrades and maintains libraries by Nuvoton

Software Support

Support Source code of Master

Support library code of Control gear

DALI test verification guide