controlCUE-dali-d

Ethernet IP Enabled Controller with DALI, Serial and Versatile Ports

cue

Main Features

- Wired 10/100 BaseT LAN
- 1x DALI control port
- 1x Bi-directional serial RS-232/485 port
- 4x Versatile port
- ARM® processor platform
- Internal RAM LPDDR 64 MB, flash 256 MB
- Onboard real time clock
- IR code capture sensor
- Front panel indicators
- Power over Ethernet or 24 VDC power supply
- DIN rail plastic enclosure, width 4 modules
- Web server and Admin Web pages for setup

Description

The controlCUE-dali-d is fully functional IP controller with DALI (Digital Addressable Lighting Interface) port, one bi-directional RS-232/485 port and four versatile ports. Fully compatible with CUE touch panels, this controller provides connection between Cue System and DALI bus and it can work as standalone device.

DALI is a data protocol and transport mechanism for control of fluorescent HF ballasts, LED drivers, low voltage transformers, etc. Up to 64 devices and 15 independent groups can be addressed.

The versatile port is a new type of control port and depending on the application each versatile port can be used as an input or output.

Versatile port input modes are as follows

- Digital input for potential free contacts, pushbuttons, switches, digital inputs 24 V, S0 energy meter outputs, etc. In addition this mode can be used for pulse counting and digital signal frequency measurement.
- Resistance input for temperature sensors, resistors, potentiometers, etc. Standard temperature sensors Pt1000, Ni1000, NTC 12k, KTY 81-121 can be connected and allow temperature measurement with accuracy 0.5 °C.

- Voltage input for sensors equipped with voltage output.
- Current loop passive input for sensors equipped with current loop output 0 / 4 ÷ 20 mA. External resistor is needed for this mode.

Versatile port output modes are as follows

- Digital open collector for driving a relay coils, LED indicators, LED strips, etc. External voltage max. 30 V, max. load is 200 mA.
- Current-source pull-up 12 V / 10 mA for LED, opto-triac, SSR, etc.
- Current-source pull-down -12 V / 10 mA for LED, opto-triac, SSR, etc.
- IR output for IR adapters and sprayers, max. carrier frequency 500 kHz.
- Serial RS-232 output for serial controlled devices, baud rate 300 Bd ÷ 115 200 Bd (bps).

Single cable Ethernet connection provides easy network integration. The controller is equipped with Power over Ethernet (PoE) technology enabling an Ethernet network cable to deliver both data and power. The controller installs easily on a DIN rail or on a wall.

This controller comes with a web server and allows setup through a standard web browser. Unit programming is based on CUE's standard programming tool Cue Visual Composer.

Application Diagrams
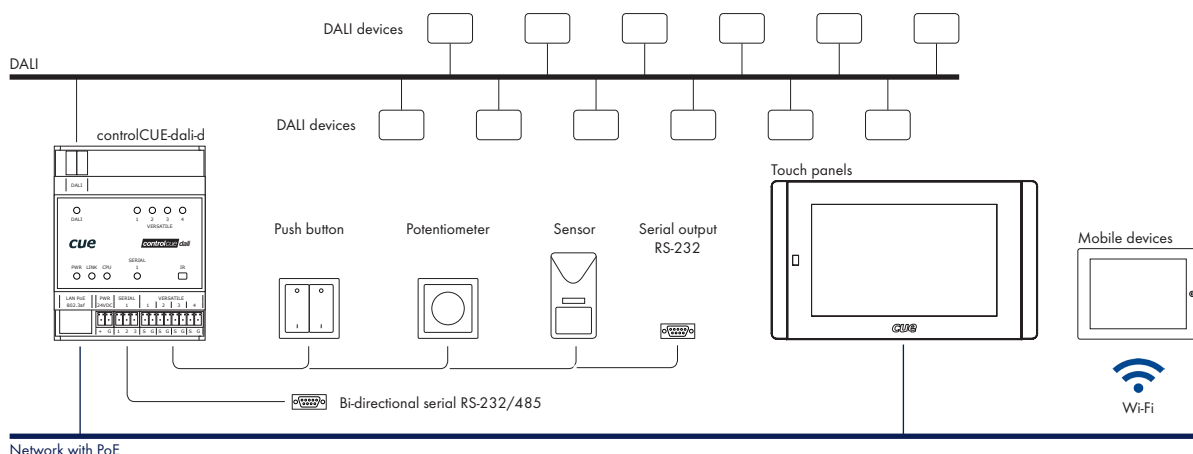
Box Contents

Controller controlCUE-dali-d
2x IR Adapter /i
Connector set
Ethernet cable
DIN rail compatible power supply 24 VDC / 15 W
Data Sheet, Cue System Connector Wiring Sheet
Declaration of Conformity

Order Information

Product code CS0454

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Specifications

Control ports
  1x DALI
    Pluggable terminal block 2 x 4 push-wire connection, AWG 18-22
  1x Bi-directional serial, 3-pin 3.5 mm connector
    RS-232/485 modes
  4x Versatile, 2-pin 3.5 mm connector, each port can be used as
    Input protected to 30 VDC / -12 VDC
    Digital input
      Adjustable threshold
        High sensitivity: binary 0 < 1.45 V, binary 1 > 2.05 V
        Low sensitivity: binary 0 < 5.8 V, binary 1 > 8.2 V
      Input impedance >100 kΩ
      Adjustable digital filter
    Digital pulse counter
      Adjustable threshold and input impedance as above
      Pulse length min. 1 ms, max. frequency 500 Hz
      Max. number of pulses 2 147 483 647 (Long)
      Adjustable digital filter
    Voltage input
      Range 0 ÷ 2.5 VDC, 0 ÷ 10 VDC, auto
      Input impedance >100 kΩ
      Resolution 12-bit, adjustable digital filter
      Accuracy ±0.1 % of reading, ±0.1 % of range
      (0.1 ÷ 10 V, digital filter applied)
    Resistance input
      Range 2 kΩ, 20 kΩ, 200 kΩ, auto
      Resolution 12-bit, adjustable digital filter
      Accuracy (digital filter applied)
        100 Ω ÷ 800 Ω: ±3 % of reading, ±0.1 % of range
        800 Ω ÷ 20 kΩ: ±0.3 % of reading, ±0.1 % of range
        20 kΩ ÷ 200 kΩ: ±1 % of reading, ±0.1 % of range
    Digital output
      Open collector
      Max. sink current 200 mA / max. 30 VDC
      Catch diodes for use with real load
    Current pullup
      Current-source pull-up 12 V / 10 mA
    Current pulldow
      Current-source pull-down -12 V / 10 mA
    IR output
      Maximum IR carrier frequency 500 kHz
      Up to 3 original IR Adapter /i in parallel
    Serial output
      RS-232, serial data baud rate 300 Bd ÷ 115 200 Bd (bps)

Internal IR sensor
  IR code capture
LED indicators
  Blue Power - indicates power is presented and unit is ready.
  Green Link - indicates network link and activity.
  Yellow CPU - confirms the system default function is performed.
  Green / Red DALI - indicates DALI port status and activity.
  Green Serial - indicates serial data is being transmitted.
  Red Serial - indicates serial data is being received.
  Green Versatile - indicates output is closed.
  Yellow Versatile - indicates IR or serial data is being transmitted.
Button
  System Default sets default IP address and password.
Real time and date
  RTC with battery backup
Memory
  Internal RAM LPDDR 64 MB
  Internal non-volatile flash 256 MB
Software technologies
  Admin Web, XPL^2 Inside
System communication
  10/100 BaseT Ethernet , RJ-45 connector
Power supply
  24 VDC (+/-20%), 3 W, 2-pin 3.5 mm connector
  Power over Ethernet (PoE), IEEE 802.3af compatible
Physical
  DIN rail plastic enclosure compatible with DIN EN 50022
  Width 4 modules
  Dimensions 70 x 90 x 58 mm / 2.8" x 3.5" x 2.3"
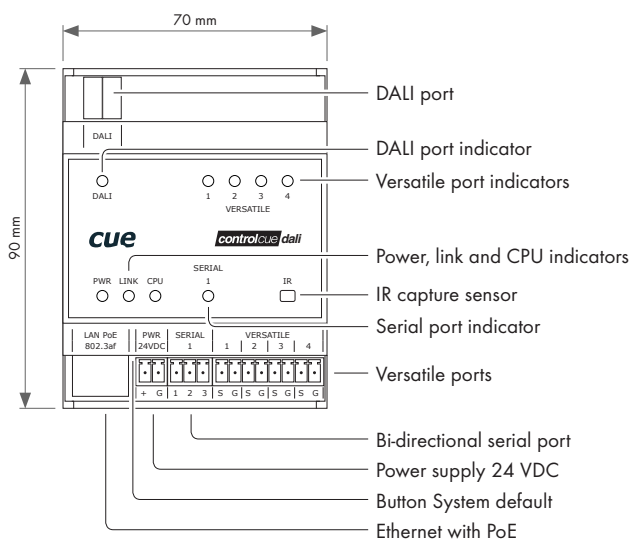 Weight 0.2 kg / 0.5 lb
Environment conditions
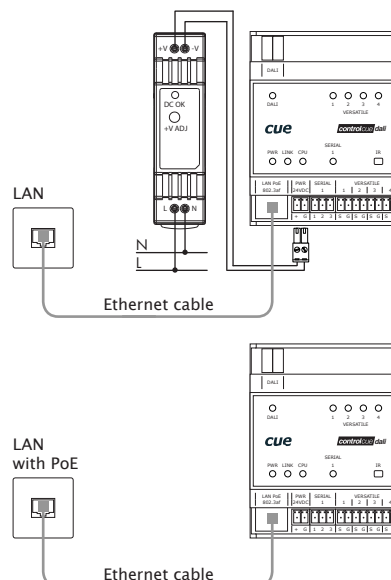 Operating temperature 10° to 40° C
  Storage temperature 0° to 60° C
  Relative humidity 10% to 90% non-condensing

Mechanical Description

Power Supply

Delivered DIN rail power supply 24 VDC can be used for areas without PoE infrastructure.

The integrated IEEE 802.3af PoE support allows installation in areas where PoE network infrastructure is installed.