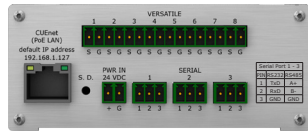# controlCUE-versatile

Ethernet IP Enabled Controller with Serial and Versatile Ports

cue

Main Features

- Wired 10/100 BaseT LAN
- 3x Bi-directional serial RS-232/485 port
- 8x Versatile port
- ARM® processor platform
- Internal RAM LPDDR 64 MB, flash 256 MB
- Onboard real time clock
- IR code capture sensor
- Front panel indicators
- 24 VDC or Power over Ethernet power supply
- Unified aluminium enclosure for desktop and 19" rack
- Web server and Admin Web pages for setup

Description

The controlCUE-versatile is fully functional IP controller with eight versatile ports and three bi-directional RS-232/485 control ports. Fully compatible with CUE touch panels, this controller can work as standalone device. 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
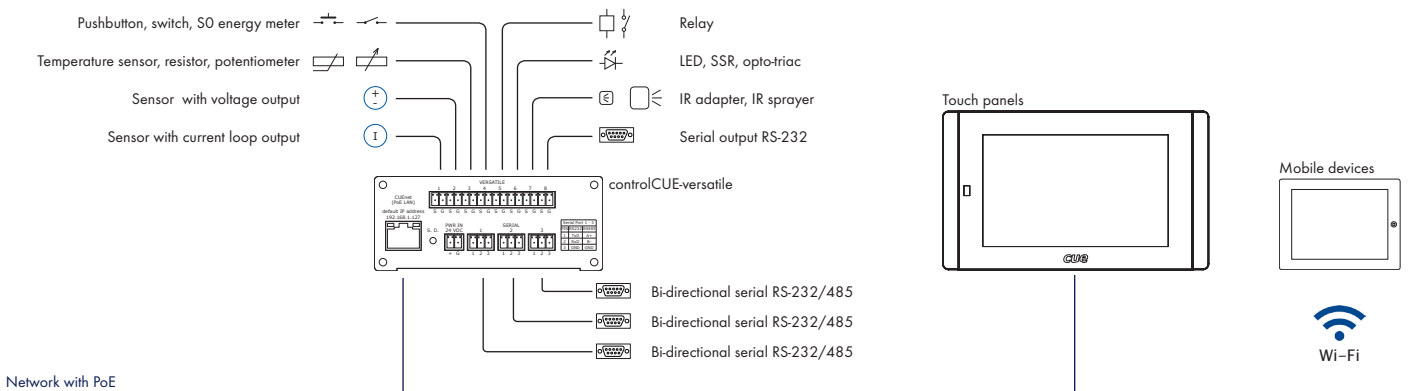
- Digital input for potential free contacts, pushbuttons, switches, digital inputs 24 V, S0 energy meter outputs, etc. In addition this mode can be used for pulse counting and digital signal frequency measurement.
- Resistance input for temperature sensors, resistors, potentiometers, etc. Standard temperature 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).

The controller keeps date and time with its onboard real time clock (RTC) and thus allowing for a wide variety of distributed intelligence scheduling applications. 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 table or into a 19" rack. 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

Pushbutton, switch, S0 energy meter	Relay
Temperature sensor, resistor, potentiometer	LED, SSR, opto-triac
Sensor with voltage output	IR adapter, IR sprayer
Sensor with current loop output	Serial output RS-232

controlCUE-versatile

Bi-directional serial RS-232/485
Bi-directional serial RS-232/485
Bi-directional serial RS-232/485

Touch panels

Mobile devices

Wi–Fi

Network with PoE

Box Contents

Controller controlCUE-versatile
2x IR Adapter /i
Connector set
Ethernet cable
Power supply 24 VDC / 24 W
Data Sheet, Cue System Connector Wiring Sheet
Declaration of Conformity

Order Information

Product code CS0475

controlCUE-versatile

Ethernet IP Enabled Controller with Serial and Versatile Ports

cue

Specifications

Control ports
  3x Bi-directional serial, 3-pin 3.5 mm connector
  RS-232/485 modes
  8x 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 Versatile - indicates output is closed.
  Yellow Versatile - indicates IR or serial data is being transmitted.
  Green Serial - indicates serial data is being transmitted.
  Red Serial - indicates serial data is being received.
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
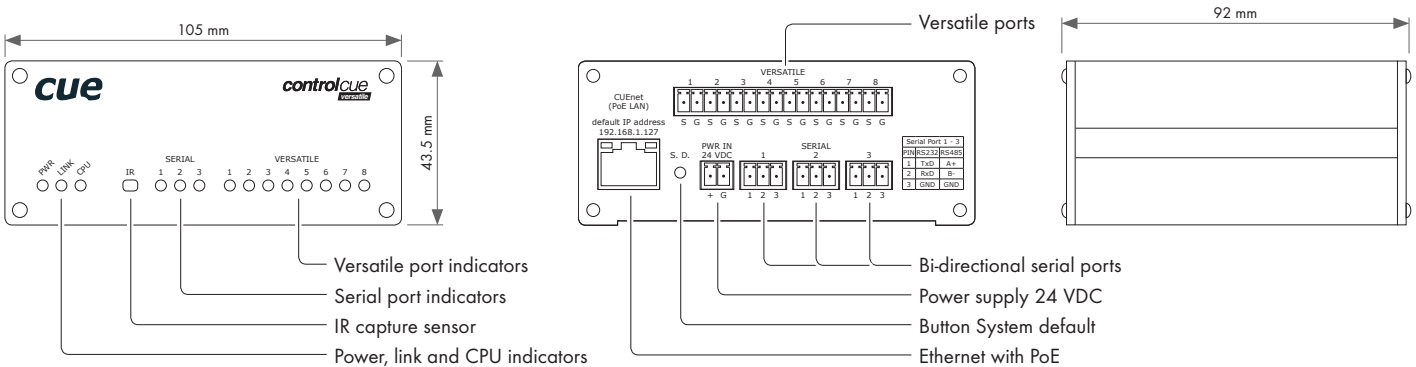 Power over Ethernet, 802.3af compatible
Physical
  Aluminium enclosure
  Dimensions 105 x 43.5 x 92 mm / 4.14" x 1.7" x 3.6"
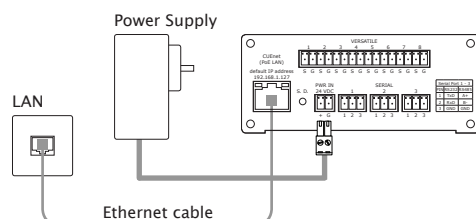 1/4 rack space, 1 U
  Weight 0.3 kg / 0.7 lb
Environment conditions
  Operating temperature 10° to 40° C
  Storage temperature 0° to 60° C
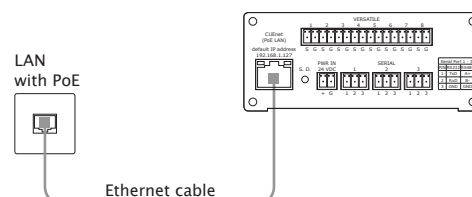 Relative humidity 10% to 90% non-condensing

Mechanical Description

Versatile port indicators
Serial port indicators
IR capture sensor
Power, link and CPU indicators

Bi-directional serial ports
Power supply 24 VDC
Button System default
Ethernet with PoE

Power Supply

Delivered 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.