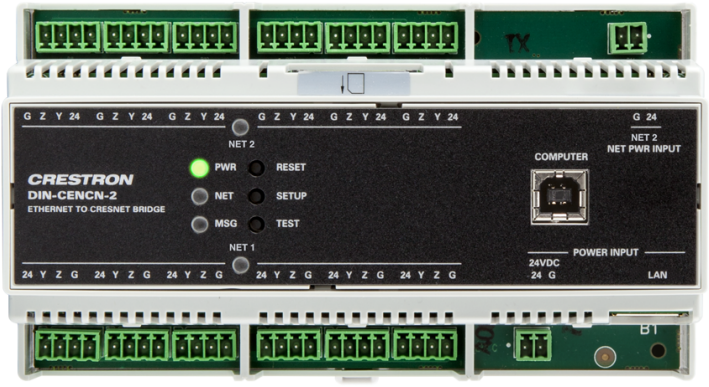
DIN-CENCN-2

Ethernet to Cresnet® Bridge



- *Maximizes Cresnet® network reliability and performance*
- *Enables Cresnet data communications over high-speed Ethernet*
- *Provides two isolated Cresnet subnets*
- *Supports 20 Cresnet devices per subnet*
- *Supports 1500 feet (457 m) aggregate cable length per subnet*
- *Includes intelligent power management for each subnet*
- *Features built-in network diagnostics tools*
- *Network wiring, power, and communications testing*
- *Detailed error analysis via software or web browser*
- *Real-time error reporting via the control system*
- *Cresnet activity and error logging over time*
- *9M wide DIN rail mountable*

The DIN-CENCN-2 is an Ethernet to Cresnet® Network Bridge that works with a Crestron® Control System® to maximize the reliability and robustness of the Cresnet network. It offers a more sophisticated solution than a Cresnet block or hub, providing two isolated subnets and built-in diagnostics, plus versatile power distribution options and a convenient DIN rail form factor.

> **NOTE:** The DIN-CENCN-2 is not compatible with Crestron 2-Series control systems or earlier.

The Cresnet Bus

Cresnet is the communications backbone for many Crestron keypads, lighting controls, shade motors, thermostats, sensors, and other devices that don't require the higher speed of Ethernet. It provides a dependable and flexible wiring solution, allowing multiple devices to be wired together in parallel using both home-run and daisy-chain topologies. The Cresnet bus distributes bidirectional data communication and 24VDC power to each device over a single 4-conductor cable.

Ethernet to Cresnet Bridge

Adding Ethernet to Cresnet bridges to a Crestron Control System enables the distribution of Cresnet over high-speed Ethernet. The increased bandwidth afforded by Ethernet reduces latency for overall improved speed and performance. Wiring distances can be extended easily while potentially reducing the overall wiring requirements by leveraging existing LAN infrastructure in any facility. One or more bridges can be deployed on a single control system, and they can even be addressed by more than one control system, affording incredible flexibility in system design and functionality.

Dual Cresnet Subnets

The DIN-CENCN-2 provides two isolated subnets. Each subnet behaves as a Cresnet Server with its own unique address space. A maximum of 20 Cresnet devices is supported per subnet, and each subnet furnishes six Cresnet connectors for easy termination of multiple lines. Crestron recommends a maximum aggregate cable length of 1500 feet (457 meters) per subnet.

Cresnet Power Distribution

Proper power distribution is key to a reliable Cresnet network. To facilitate proper powering, the DIN-CENCN-2 offers versatile, scalable power management using one or two external 24VDC Cresnet power supplies. For more details, refer to the "Power" section of the specifications.

The DIN-CENCN-2 configures itself automatically based on the power source(s) connected. Built-in protection intelligently monitors the load and wiring conditions on each subnet, and shuts down power to either subnet in case of an overload, wiring fault, or power supply failure. If such an error occurs, only the subnet with the error is shut down, leaving the other subnet fully operable.

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Diagnostics Tools

Many common control system problems are caused by wiring faults, insufficient power, or too many devices. The latter is resolved by increasing bandwidth using Ethernet and limiting the number of devices that can be connected to each subnet.

For the other issues, the DIN-CENCN-2 provides a full set of diagnostic tools to help identify and resolve them easily.

From the unit's front panel, an installer can press the TEST button and observe the LED indicators to see if there are any error codes. This allows wiring problems to be identified before ever powering up the control system. More complete details can be viewed and analyzed using a web browser or Crestron Toolbox™ software.

In a functioning system, sporadically occurring errors caused by cut or faulty wires, disconnected devices, or failed power supplies can be reported to the control system in real-time to provide error notifications via a touch screen, mobile device, email, or text message. For commercial enterprise applications, SNMP, and Crestron Fusion® Cloud applications are also supported. Insertion of an SD memory card (not included) enables logging of Cresnet activity and errors, making it easier to diagnose intermittent issues that cannot be duplicated on demand.

DIN Rail Mounting

The DIN-CENCN-2 is designed to snap onto a standard 35 mm DIN rail for installation in a wall mount DIN-EN series enclosure or on any flat surface. DIN rail mounting affords a very space-efficient, cost-effective, and modular solution for configuring complete control systems using a Crestron control system along with additional Crestron and third-party DIN rail mountable devices.

Specifications

Communications

Ethernet	100 Mbps, autoswitching, autonegotiating, autodiscovery, full/half duplex, DHCP, web server
Cresnet	Cresnet server mode with two separate subnets
USB	Supports computer console via front panel USB 2.0 device port

Connectors & Card Slots

POWER INPUT - 24VDC	(1) 2-pin 3.5 mm detachable terminal block; 24VDC power input for Subnets 1 and 2 or Subnet 1 only (refer to the product description and "Power" specifications); Also powers the Ethernet to Cresnet Bridge
LAN	(1) 8-pin RJ-45, female; 100BASE-TX Ethernet port
NET PWR INPUT - NET 2	(1) 2-pin 3.5 mm detachable terminal block; 24VDC power input for Subnet 2 only (refer to the product description and power requirement specifications)
NET 1	(6) 4-pin 3.5 mm detachable terminal blocks, paralleled; Subnet 1 Cresnet server ports; Connect up to 20 Cresnet devices; A maximum aggregate cable length of 1500 feet (457 meters) is recommended
NET 2	(6) 4-pin 3.5 mm detachable terminal blocks, paralleled; Subnet 2 Cresnet server ports; Connect up to 20 Cresnet devices; A maximum aggregate cable length of 1500 feet (457 meters) is recommended
COMPUTER	(1) USB Type-B female; USB 2.0 computer console port; For setup only
Memory Card	(1) SD memory card slot; Accepts one SD or SDHC card for log file storage

Controls & Indicators

PWR	(1) Bi-color green/amber LED, indicates operating power supplied from Cresnet, turns amber while booting and green when operating
NET	(1) Bi-color green/red LED, indicates connection (green) or no connection (red) to a control system via Ethernet
MSG	(1) Bi-color green/red LED, indicates error codes for communication and power

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RESET	(1) Recessed pushbutton, initiates hardware reset
SETUP	(1) Recessed pushbutton, initiates Ethernet autodiscovery
TEST	(1) Recessed pushbutton, initiates a hardware test
NET 1 – 2	(2) Bi-color amber/red LEDs, each indicates data communication (amber) and wiring error codes (red blinking patterns) for the corresponding subnet
LAN	(2) LEDs, green LED indicates Ethernet link status, amber LED indicates Ethernet activity

Power

Cresnet Power 24VDC (refer to table below)

Cresnet Power Usage at 24VDC POWER INPUT	Cresnet Power Usage at NET 2 NET PWR INPUT	Available Cresnet Power at NET 1 ports	Available Cresnet Power at NET 2 ports
2 W	None	None	None
75 W maximum	None	75 W total across all NET ports	
75 W maximum	75 W maximum	75 W total	75 W total

NOTE: The use of a Cresnet power supply with less than 75 W available will reduce the available Cresnet power respectively.

Environmental

Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 95% RH (noncondensing)

Construction

Chassis	Light gray polycarbonate housing with polycarbonate label overlay, UL94 V-0 rated
Mounting	35 mm DIN EN 60715 rail mount, DIN 43880 form factor for enclosures with 45 mm front panel cutout, occupies 9 DIN module spaces (162 mm)

Dimensions

Height	3.61 in. (92 mm)
Width	6.33 in (161 mm)
Depth	2.30 in (59 mm)

Weight

9.8 oz (277 g)

Compliance

FCC Class B, CAN ICES-3(B)/NMB-3(B)

To search for product certificates, refer to support.crestron.com/app/certificates.

Model

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Available Accessories

For a list of available accessories, visit the DIN-CENCN-2 product page.

This product may be purchased from select authorized Crestron dealers and distributors. To find a dealer or distributor, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/How-To-Buy/Find-a-Representative or contact us for additional information by visiting www.crestron.com/contact/our-locations for your local contact.

The original language version of this document is U.S. English. All other languages are a translation of the original document.

The product warranty can be found at www.crestron.com/warranty.

The specific patents that cover Crestron products are listed online at patents.crestron.com.

Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource.

Specifications are subject to change without notice.

Rev 08/16/22

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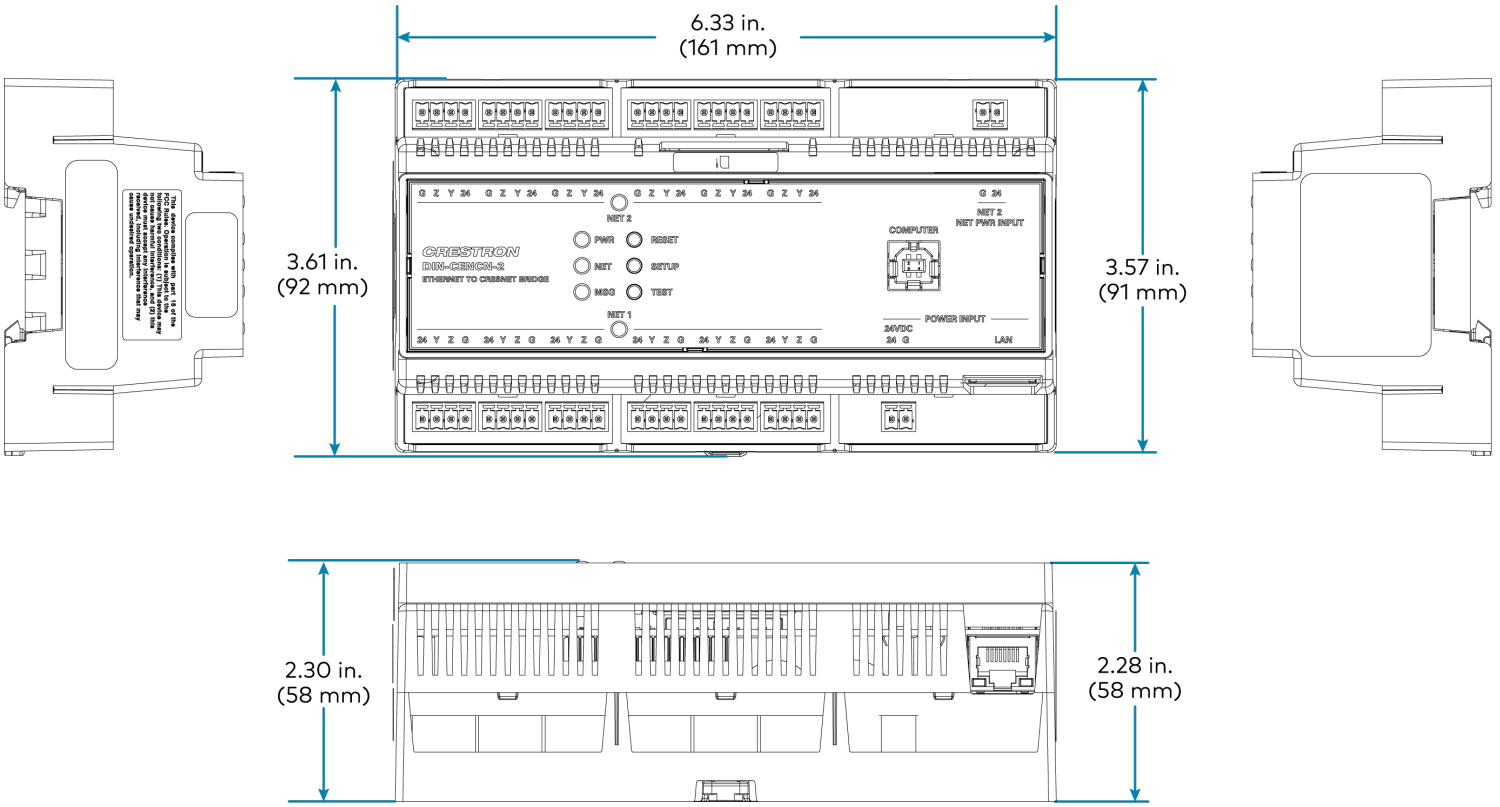

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