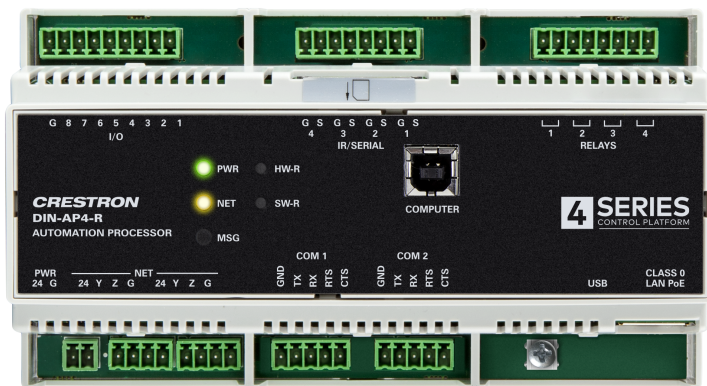# DIN-AP4-R

4-Series™ DIN Rail Control System for Crestron Home® OS

- *4-Series™ control system with built-in Crestron Home® OS*
- *Embedded 4-Series multicore CPU processor offers remarkable speed and performance*
- *Communicates with the Crestron Home App for system configuration and control*
- *Integrates control and monitoring of audio, video, lighting, shades, thermostats, door locks, sensors, and other devices*
- *Includes built-in IR/serial, COM, I/O, relay, Cresnet® network, and high-speed gigabit Ethernet control ports*
- *Supports infiNET EX® and SG network wireless devices via an external wireless gateway (sold separately)*
- *High-speed USB 2.0 host port and memory card slot*
- *Enterprise-class network security and authentication*
- *Native BACnet network/IP support*
- *Powered via 24VDC power pack or PoE (Power over Ethernet)*
- *9M wide DIN rail mountable*

The DIN-AP4-R is a secure, high-performance control system with a powerful 4-Series™ control engine designed specifically for DIN rail mounting applications. It is designed exclusively to function as the core of a Crestron Home system, and features enhanced processing power to handle small to medium sized home automation, home theater, multiroom video, and MDU (multidwelling unit) applications. The DIN-AP4-R comes equipped with a 4-Series multicore CPU processor that delivers remarkable speed and performance while handling the demands of an advanced automated system.

Through a full complement of onboard control ports, the DIN-AP4-R allows Crestron Home to integrate with a wide variety of audio, video, lighting, motorized shades, thermostats, door locks, sensors, and other equipment.

Built-In Crestron Home OS

Crestron Home unlocks the full potential of a smart home. It provides dealers with the ability to deliver a sleek user interface that includes fluid dynamic room controls and new features such as support for multiple homes, favorites, custom access, room image customizations, and more.

Refer to www.crestron.com/crestronhome for more information about Crestron Home and for a list of supported Crestron and third-party equipment.

BACnet Support

Native support for the BACnet communication protocol provides a direct interface to third-party building management systems over Ethernet, simplifying integration with HVAC, security, and other systems. Using BACnet, each system runs independently but communicates together on one platform.[1]

Versatile Power Options

The DIN-AP4-R can be powered using a 24VDC power pack (DIN-PWS30-277 or equivalent, sold separately) or via PoE (Power over Ethernet). Using PoE technology, the DIN-AP4-R gets its operating power directly through the LAN wiring. A PoE injector (PWE-4803RU) simply connects in line with the LAN cable at a convenient location. Crestron PoE switches (CEN-SW-POE-5 or CEN-SWPOE-16) may also be used to provide a total networking solution with built-in PoE. All PoE injectors and switches are sold separately.

DIN Rail Mounting

The DIN-AP4-R is designed to attach to a standard DIN rail for installation in a wall mount enclosure (Crestron DIN-EN series or similar) or on a wall panel as part of a complete DIN rail automation system.

CRESTRON®

Specifications

Control Engine

Crestron 4-Series™; real-time, preemptive multi-threaded/multitasking kernel;
Transaction-Safe Extended FAT file system

Communications

Ethernet	100/1000 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, industry-standard TCP/IP stack, UDP/IP, CIP, DHCP, SSL, TLS, SSH, SFTP (SSH File Transfer Protocol), FIPS 140-2 compliant encryption,IPv4 or IPv6, HTTPS web server, SMTP email client[1]
Cresnet® Network	Cresnet server mode
USB	Supports USB mass storage class devices via the bottom panel USB 2.0 host port, supports computer console via the front panel USB 2.0 device port
RS-232/422/485	For 2-way device control and monitoring, supports RS-232, RS-422, or RS-485 up to 115.2k baud with hardware and software handshaking
IR/Serial	Supports 1-way device control via infrared up to 1.2 MHz or serial TTL/RS-232 (0–5V) up to 115.2k baud
BACnet™ network/IP	Supports up to 500 BACnet objects

Memory

SDRAM	2 GB
Flash	8 GB
Memory Card	Supports microSD® cards up to 32 GB (4 GB included)
External Storage	Supports USB storage devices up to 1 TB

Connectors and Card Slots

I/O 1–8	(1) 9-pin 3.5 mm detachable terminal block; Comprises (8) Versiport digital input/output or analog input ports (referenced to GND); Digital Input: Rated for 0–24VDC, input impedance 20k Ω, logic threshold >3.125V low/0 and <1.875V high/1; Digital Output: 250 mA sink from maximum 24VDC, catch diodes for use with real world loads; Analog Input: Rated for 0–10VDC, protected to 24VDC maximum, input impedance 21k Ω with pull-up resistor disabled; Programmable 5V, 2k Ω pull-up resistor per pin
MEMORY	(1) microSD memory card slot; Accepts one microSD card up to 32 GB for storage of log files; 4 GB microSD card included
IR/SERIAL 1–4	(1) 8-pin 3.5 mm detachable terminal block; Comprises (4) IR output ports; IR output up to 1.2 MHz; 1-way serial TTL/RS-232 (0–5 V) up to 115.2k baud; IRP2 IR emitters sold separately
RELAYS 1–4	(1) 8-pin 3.5 mm detachable terminal block; Comprises (4) normally open, isolated relays; Rated 1 A, 30VAC/VDC; MOV arc suppression across contacts
COMPUTER	(1) USB Type-B connector, female; USB 2.0 computer console port; For setup only
PWR	(1) 2-pin 3.5 mm detachable terminal block; 24VDC power input for power pack (sold separately)
NET	(2) 4-pin 3.5 mm detachable terminal blocks, paralleled; Cresnet server ports
COM 1–2	(2) 5-pin 3.5 mm detachable terminal blocks; Bidirectional RS-232/422/485 ports; Up to 115.2k baud; hardware and software handshaking support
G	(1) 6-32 screw; Chassis ground lug

USB	(1) USB Type-A connector, female; USB 2.0 port for storage devices
LAN PoE	(1) 8-pin RJ-45 connector, female; 100BASE-TX/1000BASE-T Ethernet port; PoE (Power over Ethernet) PD (Powered Device) port

Controls and Indicators

PWR	(1) Bicolor green/amber LED, indicates operating power is present; Amber indicates that the device is booting and is not yet ready to operate; Green indicates that the device is ready to operate
NET	(1) Amber LED, indicates communication with Cresnet devices
MSG	(1) Red LED, indicates control processor has generated an logging message
HW-R	(1) Recessed miniature push button, initiates hardware reset and factory reset; Hardware reset: Press HW-R one time; Factory reset: Press HW-R and then press SW-R three times
SW-R	(1) Recessed miniature push button, initiates software reset and password reset; Software reset: Press SW-R one time; Password reset: Press and Hold SW-R (about 15 seconds) until the MSG LED flashes rapidly
LAN	(1) Green and (1) Amber LEDs; Green LED indicates Ethernet link status and connection speed; Amber LED indicates Ethernet activity

Power

Power Source Options	Power supply (sold separately) or PoE (Power over Ethernet)
Power Supply	Must supply 24VDC to 2-pin terminal block via flying leads; Use model DIN-PWS30-277 or equivalent
Power over Ethernet	IEEE 802.3at Type 1 (802.3af compatible) Class 0 (12.95W) PoE Powered Device
Available Cresnet Power	2.5 W maximum when powered via PoE; 20 W maximum when powered via DIN-PWS30-277
Power Consumption	9.7 W (not including any connected Cresnet devices)

Environmental

Temperature	41° to 113°F (5° to 45°C)
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	33 BTU/hr

Enclosure

Housing	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	3.57 in. (91 mm)
Width	6.33 in. (161 mm)
Depth	2.28 in. (58 mm)

Weight

9.8 oz (277 g)

Compliance

Regulatory Model: DIN-AP4
UL® Listed for US & Canada, CE, IC, FCC Part 15 Class B digital device

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

Model

DIN-AP4-R
4-Series™ DIN Rail Control System for Crestron Home® OS

Available Accessories

For a list of available accessories, visit the DIN-AP4-R product page.

Notes:

1. Up to 500 BACnet objects are supported out of the box with no licensing required.

CRESTRON

3.57 in.
(91 mm)

3.68 in.
(93 mm)

6.33 in.
(161 mm)

2.28 in.
(58 mm)

G 8 7 6 5 4 3 2 1
I/O

G S G S G S G S
4   3   2   1
IR/SERIAL

1   2   3   4
RELAYS

PWR   HW-R

NET   SW-R

MSG

COMPUTER

4 SERIES
CONTROL PLATFORM

CRESTRON
DIN-AP4-R
AUTOMATION PROCESSOR

COM 1   COM 2

PWR   NET
24 G   24 Y Z G   24 Y Z G

GND TX RX RTS CTS   GND TX RX RTS CTS

USB

CLASS 0
LAN PoE