DIN-AP3MEX

3 SERIES

DIN Rail 3-Series® Automation Processor w/infiNET EX® & ER Wireless Gateway



- *Enterprise class control system*
- *3-Series® Control Engine — substantially faster and more powerful than other control systems*
- *Exclusive modular programming architecture*
- *Programmable astronomical time clock for scheduled events*
- *Onboard 256MB RAM & 4GB Flash memory*
- *Memory card slot*
- *Integrated infiNET EX® and ER wireless gateway*
- *Industry-standard Ethernet and Cresnet® wired communications*
- *XPanel with Smart Graphics™ computer and web based control*
- *iPhone®, iPad®, and Android™ control app support*
- *Crestron Fusion® Cloud Enterprise Management Service support*
- *SNMP remote management support*
- *Native BACnet™/IP support [5]*
- *Installer setup via Crestron Toolbox™ software or web browser*
- *C#, symbol based, and drag-and-drop programming environments*
- *Full Unicode (multi-language) support*
- *Increased network throughput and security*
- *Secure access through full user/group management or Active Directory integration*
- *Hardware level security using 802.1X authentication*
- *TLS, SSL, SSH, and SFTP network security protocols*
- *FIPS 140-2 compliant encryption*
- *IIS v.6.0 Web Server*
- *IPv6 ready*
- *Front panel USB computer console port*
- *9M wide DIN rail mountable*

3-Series® Control Systems

Today's commercial buildings and custom homes comprise more technology than ever before, and all these systems need to be networked, managed, and controlled in fundamentally new ways. The IP based 3-Series platform is engineered from the ground up to deliver a network-grade server appliance capable of faithfully handling everything from lighting and AV system control to total building management.

3-Series embodies a distinctively robust, dynamic, and secure platform to elevate your system designs to higher levels of performance and reliability. Compared to other control systems, Crestron 3-Series provides a pronounced increase in processing power and speed with more memory, rock solid networking and IP control, and a unique modular programming architecture.

The Crestron® DIN-AP3MEX is a 3-Series Control System® designed for DIN rail mounting applications. Built-in infiNET EX® and ER wireless technology makes the DIN-AP3MEX ideal for all types of lighting, shading, AV, and climate control applications wherever a reliable wireless control solution is preferred. Wired Cresnet® and Ethernet communication is also supported. Featuring the 3-Series® control engine, the DIN-AP3MEX forms the core of any modern networked home or commercial building, managing and integrating all the disparate technologies throughout your facility to make life easier, greener, more productive, and more enjoyable.

DIN Rail Mounting

The DIN-AP3MEX is designed to snap onto a standard DIN rail for installation in a wall mount enclosure [1] (Crestron DIN-EN series [2] or similar) or on a wall panel. DIN rail mounting affords a very space-efficient, cost-effective, and modular solution for configuring complete automation systems using the DIN-AP3MEX along with additional Crestron and third-party DIN rail mountable devices.

Modular Programming Architecture

Designed for enhanced scalability, the DIN-AP3MEX affords high-speed, real-time multi-tasking to seamlessly run multiple programs simultaneously. This exclusive modular programming architecture lets programmers independently develop and run device-specific programs for lighting, shades, HVAC, security, AV, etc., allowing for the optimization of each program, and allowing changes to be made to one program without affecting the whole. Even as your system grows, processing resources can easily be shifted from one 3-Series processor to another without rewriting any code. The end benefit is dramatically simplified upgradability with minimal downtime, whether implementing changes on site or remotely via the network.

Robust Ethernet & IP Control

IP technology is the heart of 3-Series, so it should be no surprise that its networking abilities are second to none. High-speed Ethernet connectivity enables integration with IP-controllable devices and allows the DIN-AP3MEX to be part of a larger managed control network. Whether residing on a sensitive corporate LAN, a home network, or accessing the Internet through a cable modem, the DIN-AP3MEX provides secure, reliable interconnectivity with IP-enabled touch screens, computers, mobile

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devices, video displays, media servers, security systems, lighting, HVAC, and other equipment — whether on premises or across the globe.

Control Apps & XPanel

Years ago, Crestron pioneered the world's first IP-based control system unleashing vast new possibilities for controlling, monitoring, and managing integrated systems over a LAN, WAN, and the Internet. Today, Crestron offers more ways than ever to control your world the way you want. Using a computer, smartphone, or tablet device, Crestron lets you control anything in your home or workplace from anywhere in the world.

Native to every 3-Series control system, Crestron XPanel technology transforms any laptop or desktop computer into a virtual Crestron touch screen. Crestron control apps deliver the Crestron touch screen experience to iPhone®, iPad®, and Android™ devices, letting you safely monitor and control your entire residence or commercial facility using the one device that goes with you everywhere.

Crestron Fusion® Cloud

Crestron Fusion Cloud provides an integrated platform for creating truly smart buildings that save energy, enhance worker productivity, and prolong the life-span of valuable equipment. As part of a complete managed network in a corporate enterprise, college campus, convention center, or any other facility, the DIN-AP3MEX works integrally with Crestron Fusion Cloud to enable remote scheduling, monitoring, and control of rooms and technology from a central help desk. It also enables organizations to reduce energy consumption by tracking real-time usage and automating control of lighting, shades, and HVAC.

SNMP Support

Built-in SNMP support enables integration with third-party IT management software, allowing network administrators to manage and control Crestron systems on the network in an IT-friendly format.

Astronomical Time Clock Feature

Scheduled events may be programmed on the DIN-AP3MEX according to an astronomical time clock. As a result, events can be set to occur at specific times or at an offset from sunrise or sunset.

infiNET EX® Wireless Control

Integrated infiNET EX technology provides an extremely easy and cost-effective way to add control of lighting, shades, room temperature, door locks, and other functions using our complete line of infiNET EX based wireless products. Adding infiNET EX wireless keypads and remotes enables complete, customizable control over everything from any room. Perfect for existing structures and rentals, infiNET EX affords ultra-reliable 2-way wireless communications throughout a home or business without the need for physical control wiring.[3]

"ER" Extended Range RF Technology

Crestron Extended Range (ER) wireless technology enables compatibility with certain Crestron wireless touch screens and handheld remotes. Crestron "ER" operates in the same 2.4 GHZ spectrum as infiNET EX, and is specifically optimized for use with wireless touch screen devices to ensure robust and dependable bidirectional RF communications.[4]

Cresnet®

Cresnet provides a dependable network wiring solution for Crestron keypads, lighting controls, shade motors, thermostats, occupancy sensors, and other devices that don't require the higher speed of Ethernet or the wireless communication of infiNET EX. The Cresnet bus offers easy wiring and configuration, carrying bidirectional communication and 24VDC power to each device over a simple 4-conductor cable. To assist with trouble-shooting, the DIN-AP3MEX includes our patent-pending Network Analyzer which continuously monitors the integrity of the Cresnet network for wiring faults, marginal performance, and other errors.

The DIN-AP3MEX includes a pair of Cresnet master ports (paralleled) capable of supporting approximately 20 typical devices. Larger systems with more than 20 devices can be handled by adding the DIN-HUB Cresnet Distribution Hub or DIN-CENCN-2 Ethernet to Cresnet Bridge [2]. Connectivity for multiple homeruns can be facilitated using one or more DIN-BLOCK Cresnet Distribution Blocks [2]. Additionally, at least one DIN-PWS50 Cresnet Power Supply [2] is required to power the DIN-AP3MEX and any connected Cresnet devices.

BACnet™/IP

Native support for the BACnet/IP communication protocol provides a direct interface to third-party building management systems over Ethernet, simplifying integration with HVAC, security, fire & life safety, voice & data, lighting, shades, and other systems. Using BACnet/IP, each system runs independently with the ability to communicate together on one platform for a truly smart building.[5]

SPECIFICATIONS

Control Engine

Crestron 3-Series; real-time, preemptive multi-threaded/multitasking kernel; Transaction-Safe Extended FAT file system; supports up to 10 simultaneously running programs

Memory

DDR3 SDRAM: 256 MB
Flash: 4 GB
Memory Card: supports SD and SDHC cards up to 32 GB

Wired Communications

Ethernet: 10/100 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, IEEE 802.1X, SNMP, BACnet/IP [5], IPv4 or IPv6, Active Directory authentication, IIS v.6.0 Web Server, SMTP e-mail client
Cresnet: Cresnet master mode
USB: Supports computer console via front panel USB 2.0 device port

Wireless Communications

RF Transceiver: infiNET EX® & ER 2-way RF, 2.4 GHz ISM Channels 11-26 (2400 to 2483.5 MHz), default channel 15; IEEE 802.15.4 compliant

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infiNET EX Range (typical): 150 ft (46 m) indoor, 250 ft (76 m) outdoor to nearest mesh network device(s); subject to site-specific conditions and individual device capabilities [3]
ER Range (typical): 100 to 200 ft (33 to 66 m) maximum indoor, 1000 ft (305 m) outdoor, subject to site-specific conditions
ER Roaming: Supports roaming amongst up to 8 gateways [6]

Wireless Device Support

infiNET EX Devices: Supports all Crestron and third-party infiNET EX devices including HR-100, HR-150, and MLX-3 handheld remotes
infiNET EX Expanders: Supports Crestron infiNET EX expander models CLW-EXPEX and GLA-EXPEX
ER "Extended Range" Devices: Supports Crestron wireless touch screen models TSR-302, TST-600, TST-602, & TST-902 [4]
Maximum Devices Allowed [7]:

infiNET EX Devices*	infiNET EX Expanders	ER "Extended Range" Devices
100	5	0
90	5	1
80	5	2
70	5	3
60	5	4
50	5	5
40	5	6
30	5	7
20	5	8
10	5	9
0	5	10

**Inclusive of a maximum of six MLX-3 remotes*

Connectors & Card Slots

Ground: (1) Captive screw terminal;
Chassis ground lug

Antenna: (1) Connection for supplied antenna

MEMORY: (1) SD memory card slot;
Accepts one SD or SDHC card up to 32 GB for memory expansion

COMPUTER: (1) USB Type B female;
USB 2.0 computer console port (6 ft cable included);
For setup only

NET: (2) 4-pin 3.5 mm detachable terminal blocks, paralleled;
Cresnet master port and 24 Volt DC power input

LAN: (1) 8-pin RJ45 jack;
10Base-T/100Base-TX Ethernet port

Controls & Indicators

PWR: (1) Dual-color green/amber LED, indicates operating power supplied from Cresnet network or power supply, turns amber while booting and green when operating
NET: (1) Amber LED, indicates communication with the Cresnet system
MSG: (1) Red LED, indicates processor has generated an error message
HW-R: (1) Recessed miniature pushbutton for hardware reset
SW-R: (1) Recessed miniature pushbutton for software reset
ACQUIRE: (1) Recessed pushbutton with red LED, used to set up connections with wireless devices
ACTIVITY: (1) Red LED, indicates wireless RX and TX data activity
LAN: (2) LEDs, green LED indicates Ethernet link status, amber LED indicates Ethernet activity

Power

Cresnet Power Usage: 8 Watts (0.33 Amp @ 24 Volts DC)

Environmental

Temperature: 32° to 104° F (0° to 40° C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 26 BTU/hr

Enclosure

Light gray polycarbonate housing with polycarbonate label overlay, UL94 V-0 rated, 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: 3.72 in (95 mm)
Width: 6.28 in (160 mm)
Depth: 2.29 in (59 mm)

Weight

9.8 oz (277 g)

MODELS & ACCESSORIES

Available Models

DIN-AP3MEX: DIN Rail 3-Series® Automation Processor w/infiNET EX® & ER Wireless Gateway

Available Accessories

ANT-EXT: Antenna Extenders
CLW-EXPEX: infiNET EX® Wireless Expander
GLA-EXPEX: Crestron Green Light® Wireless Expander for infiNET EX® Networks
INET-IOEX-IRCOM: infiNET EX® Wireless IR/RS-232 Control Module
INET-IOEX-RYIO: infiNET EX® Wireless Relay/Digital Input Control Module
DIN-EN: Enclosures for DIN Rail Devices

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DIN-PWS50: DIN Rail 50 Watt Cresnet Power Supply
DIN-PWS30-277: DIN Rail 30 Watt Cresnet Power Supply, 277V
DIN-BLOCK: DIN Rail Cresnet Distribution Block
DIN-HUB: DIN Rail Cresnet Distribution Hub
DIN-CENCN-2: Ethernet to Cresnet Bridge
DIN-CENCN-2-POE: Ethernet to Cresnet Bridge w/PoE
DIN-1DIM4: DIN Rail Dimmer, 1 feed, 4 channels
DIN-1DIMU4: DIN Rail Universal Dimmer, 1 feed, 4 channels
DIN-4DIMFLV4: DIN Rail 0-10V Fluorescent Dimmer, 4 feeds, 4 channels
DIN-8SW8: DIN Rail High-Voltage Switch, 8 feeds, 8 channels
DIN-8SW8-I: DIN Rail High-Voltage Switch with Digital Inputs
DIN-2MC2: DIN Rail Motor Control, 2 feeds, 2 channels
DIN-AO8: DIN Rail Analog Output Module
DIN-IO8: DIN Rail Versiport Module
DIN-DALI-2: DIN Rail 2 Channel DALI Interface
Crestron® App: Control App for Apple® iOS® and Android™
XPanel: Crestron Control® for Computers
myCrestron: Dynamic DNS Service
Crestron Fusion®: Enterprise Management Platform
SW-3SERIES-BACNET: BACnet™/IP Support for 3-Series®
CSP-LIR-USB: IR Learner

Notes:

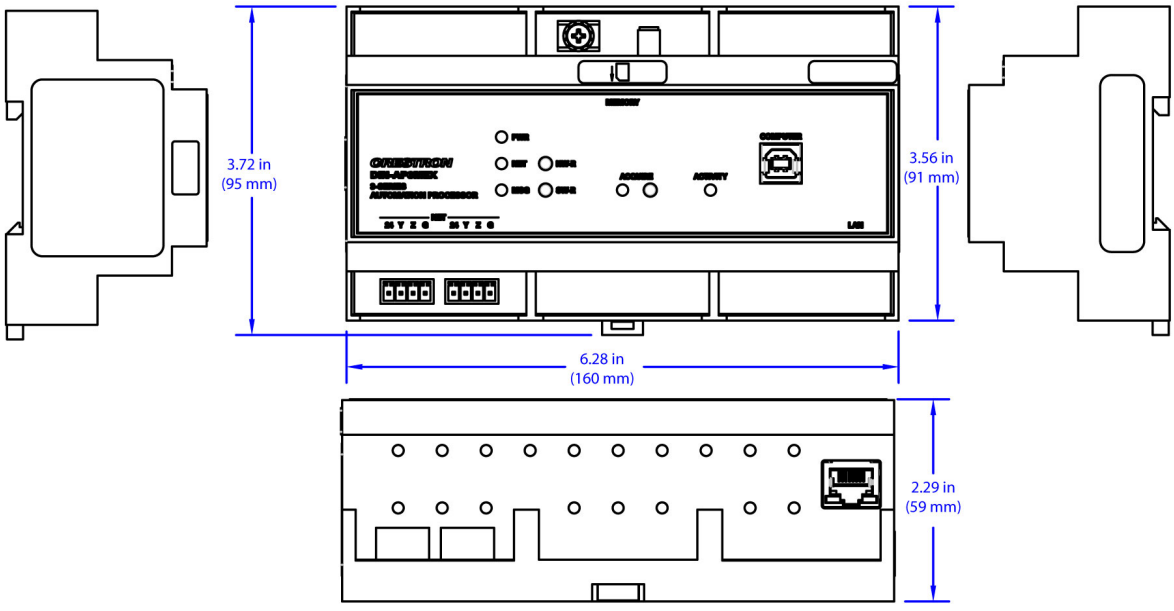
1. Use of an Antenna Extender (ANT-EXT) is advised when mounting the DIN-AP3MEX in an enclosure.
2. Item(s) sold separately.
3. The total range of an infiNET EX wireless network is dependent on the placement and capabilities of each network device. Employing a mesh network topology, nearly every infiNET EX device on the network acts as an "expander," relaying wireless commands between the gateway and all the other "EX" devices on the network. Each infiNET EX device that is added to the network effectively increases the range and stability of the entire network by providing multiple redundant signal paths. The wireless range between any two EX devices is typically up to 150 ft (46 m) indoors. Battery-powered infiNET EX devices do not provide expander functionality, and may have reduced RF range capabilities. Consult the specifications for each network device to confirm its actual wireless capabilities. Crestron also offers dedicated infiNET EX expanders (models CLW-EXPEX or GLA-EXPEX, sold separately), which may be deployed to fill gaps in coverage and extend the wireless range of the mesh network. infiNET EX expanders are only for infiNET EX networks and offer no benefit to the performance of ER devices. A maximum of five infiNET EX expanders may be deployed on an infiNET EX network.
4. The DIN-AP3MEX is not compatible with TPS-6X or UFO-WPR-3ER model remotes. For these devices, please use the dedicated ER gateway model CEN-ERFGW-POE.
5. License required. The DIN-AP3MEX supports a maximum of 500 BACnet objects when dedicated for BACnet use only. Actual capabilities are contingent upon the overall program size and complexity.
6. Roaming capability using multiple gateways is for ER devices only. infiNET EX utilizes only one gateway and does not support roaming.
7. Best practices suggest configuring the system with no more than 50% of the maximum devices allowed per gateway. Additional gateways may be deployed to support more devices, with a maximum of 16 gateways permitted on a complete system (RF conditions allowing).

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

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.

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