

MC4-I

4-Series Control System, International



- Compact 4-Series controller with 1 GB SDRAM and 4 GB Flash memory
- Embedded 4-Series multicore CPU processor
- iPhone®, iPad®, and Android® device control app support
- XPanel computer and web based control
- Modular programming architecture (optional)
- Onboard IR, COM, I/O, relay, Cresnet® network, and high-speed gigabit Ethernet control ports
- High-speed USB 2.0 host port and rear panel memory card slot
- Built-in infiNET EX® and ER wireless network gateway
- Crestron Fusion® software room monitoring and scheduling support
- Crestron XiO Cloud™ service provisioning and management support
- Enterprise-class network security and authentication
- SNMP V3 remote IT management support
- Native BACnet™ network/IP support
- Installer setup via software, web browser, or cloud
- IPv6 ready
- Integrates with Apple® HomeKit® technology
- PoE (Power over Ethernet) powered
- Rack or surface mountable

The 4-Series Control System, International (MC4-I) provides a secure, high-performance, cost-effective control processor and interface. Its small form factor and versatile mounting options makes it ideal for smaller systems such as single-room media systems, small to medium-sized homes and offices, and MDUs (multidwelling units). The MC4-I includes a built-in infiNET EX® and ER wireless gateway for acquiring wireless devices as well as numerous control ports for controlling wired devices.

4-Series Control Engine

4-Series control systems come equipped with an upgraded multicore CPU, delivering a sizable speed and performance increase compared to all Crestron 3-Series® control processors. The improved performance allows 4-Series control systems to handle the increasing demands of an advanced automated system. Crestron 4-Series delivers a dynamic and secure control system platform capable of managing a room full of disparate technologies.

Reliable networking and IP control afford seamless integration with other systems and devices, with add-on control capability using Crestron touch screens, wireless remotes, and mobile device apps, as well as remote management through Crestron Fusion® software and the Crestron XiO Cloud™ service.

Modular Programming Architecture

The MC4-I is designed to run a single program out of the box. The optional modular programming architecture add-on allows the MC4-I to run up to ten programs simultaneously.¹ Programmers can develop and run independent, device-specific programs, enabling each program to be optimized for a specific function and allowing for changes to be made to one program without affecting the whole system.

Onboard Control Ports

Through a full complement of onboard control ports, the MC4-I can be integrated with a wide variety of audio, video, lighting, motorized shades, thermostats, door locks, sensors, security systems, and other equipment.

- Gigabit Ethernet provides an interface for connecting to the building network and controlling Crestron AV switchers, audio processors, power controllers, and other IP controllable equipment.
- Cresnet® network connectivity provides support for Crestron lighting dimmers, motorized shades, sensors, thermostats, keypads, and more.
- Onboard RS-232, IR, relay, and Versiport I/O control ports enable direct integration with all types of third-party equipment.

Expanded connectivity can be provided to the MC4-I via Crestron [control port expansion modules](#), [Ethernet to Cresnet bridges](#), [wired Ethernet I/O extenders](#), or [Wi-Fi® network I/O extenders](#) (all sold separately).

Built-In Wireless Gateway

The MC4-I also provides a built-in infiNET EX wireless gateway that allows wireless infiNET EX and ER (extended range) devices to be paired directly to the control system.

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infiNET EX Technology

Integrated infiNET EX technology provides an easy and cost-effective way to control various functions using infiNET EX based wireless products. infiNET EX wireless technology provides 2-way RF communications throughout a structure without the need for physical control wiring. Employing a 2.4 GHz 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 to ensure that every command reaches its intended destination without disruption.²

Extended Range (ER) 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 optimized specifically for use with wireless touch screen devices to ensure dependable bidirectional RF communications.

IR Wireless Option

When equipped with the optional CNXRMIRD IR Receiver, the MC4-I affords a low-cost IR wireless control solution using a universal IR remote.

Crestron Fusion Room Monitoring and Scheduling

Crestron Fusion provides an integrated platform for creating smart buildings that save energy and enhance worker productivity. As part of a complete managed network in a corporate enterprise, college campus, convention center, or any other facility, the MC4-I works with Crestron Fusion to enable remote scheduling, monitoring, and control of rooms and technology from a central help desk or mobile app. It also enables organizations to reduce energy consumption by tracking real-time usage and automating control of AV, lighting, shades, and HVAC. For more information about Crestron Fusion, visit www.crestron.com/fusion.

Crestron XiO Cloud Provisioning and Management

4-Series control systems leverage the power and flexibility of Crestron XiO Cloud services, enabling users to remotely provision, monitor, and manage Crestron devices across an enterprise network. Crestron XiO Cloud can be used to configure and load programs to the control system before it is received, making the control system fully functional as soon as it is connected to the network. Crestron XiO Cloud is built on the Microsoft® Azure® software platform and utilizes Microsoft's industry leading Azure IoT Hub technology. Crestron XiO Cloud enables installers and IT managers to deploy and manage thousands of devices in the time it previously took to manage just one. Unlike other virtual machine based cloud solutions, Azure services provide unlimited scalability to suit the ever growing needs of an enterprise. For more information, visit www.crestron.com/xiocloud.

Enhanced Enterprise-Grade Security

The MC4-I is an enterprise-class control processor that can be deployed across hundreds of spaces and set up easily using a web browser, Crestron Toolbox™ software, or Crestron XiO Cloud. It employs standard network security protocols, including 802.1X network access control, Active Directory® service authentication, SSH, TLS, and HTTPS to ensure reliability and compliance with your organization's IT policies.

The MC4-I is configured to meet Crestron's enhanced security standards right out of the box. The MC4-I ships with authentication enabled and requires that an administrator account be created before access is granted to device configuration and control interfaces.

SNMP V3 Support

Built-in SNMP V3 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.

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.³

Apple HomeKit Integration

The MC4-I supports integration with an Apple® HomeKit® technology system. Once the MC4-I is paired with a HomeKit system via [SIMPL](#) programming, a Crestron [TSR-310](#) can be used to control supported Apple devices. A pairing QR code is affixed to the MC4-I that makes it easy to pair the control system directly to the Apple Home app.⁴

PoE Network Powered

Using PoE technology, the MC4-I gets its operating power directly through the LAN wiring, eliminating the need for a local power supply or dedicated power 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.

NOTE: Ethernet speed is limited to 100 Mbps when using the PWE-4803RU.

Versatile Mounting Options

The MC4-I mounts conveniently to a wall, ceiling, or other flat surface. Its compact, surface-mountable form factor fits easily behind a flat panel display, beneath a tabletop, or inside other furniture, making it ideal for single-room systems. It can even be installed into an equipment rack using the included rack ears or can be attached to a single rack rail.

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Specifications

Control Engine

Crestron 4-Series; real-time, preemptive multi-threaded/multitasking kernel; Transaction-Safe Extended FAT file system; single program support out of the box; supports up to 10 simultaneously running programs (license required¹)

Wired 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, IEEE 802.1xX, SNMP, BACnet™ and IP ³ , IPv4 or IPv6, Active Directory® service authentication, HTTPS web server, HTTPS web browser setup and Crestron XiO Cloud™ client, SMTP email client
Cresnet® Network	Cresnet master mode
USB	Supports USB mass storage class devices via the rear panel USB 2.0 host port
RS-232	For 2-way device control and monitoring, COM port supports RS-232 up to 115.2k baud with software handshaking
IR	Supports 1-way device control via infrared up to 1.2 MHz

Wireless Communications¹

RF Transceiver	infiNET EX® network 2-way RF, 2.4 GHz ISM Channels 11-26 (2400 to 2483.5 MHz), default channel 15; IEEE 802.15.4 compliant
Range	15 m (50 ft) to nearest mesh network device(s), subject to site-specific conditions and device capabilities, range between floors or ceilings is limited to one level ²

NOTE: Do not rack mount or stack multiple units when using wireless communications. Use care when positioning the device to avoid interference from nearby RF devices, obstructions, and metal surfaces.

Memory

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

Connectors and Card Slots

MEMORY	(1) microSD memory card slot; Accepts one microSD card up to 32 GB for storage of log files
G	(1) 6-32 screw; Chassis ground lug
USB	(1) USB Type A connector, female; USB 2.0 port for storage devices
IR IN	(1) 3.5 mm TRS mini phone jack; For connecting CNXRMIRD IR receiver; Allows IR wireless control from Crestron and third-party remotes using RC-5 IR commands
RELAY (1-2)	(1) 4-pin 3.5 mm detachable terminal block; Comprises (2) normally open, isolated relays; Rated 1 Amp, 30 VAC/VDC; MOV arc suppression across contacts
VER SI (1-2)	(1) 3-pin 3.5 mm detachable terminal block; Comprises (2) Versiport digital input/output or analog input ports (referenced to GND); Digital Input: Rated for 0-24 VDC, input impedance 20k Ω, logic threshold >3.125 V low/0 and <1.875 V high/1; Digital Output: 250 mA sink from maximum 24 VDC, catch diodes for use with real world loads; Analog Input: Rated for 0-10 VDC, protected to 24 VDC maximum, input impedance 21k Ω with pull-up resistor disabled; Programmable 5 V, 2k Ω pull-up resistor per pin
COM	(1) 3-pin 3.5 mm detachable terminal block; Bidirectional RS-232 port; Up to 115.2k baud; software handshaking support
IR (1-4)	(2) 4-pin 3.5 mm detachable terminal blocks; 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
EX/ER	(1) Connection for supplied antenna
CRESNET	(1) 4-pin 3.5 mm detachable terminal block; Cresnet master port; Outputs power to Cresnet devices; See "Power" section below for additional details

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LAN (1) 8-pin RJ-45 connector, female; 100/1000Base-TX 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

HW-R (1) Recessed push button, initiates hardware reset

SW-R (1) Recessed push button, initiates software reset

ACQUIRE (1) Push button with red LED, used to set up connections with wireless devices

LAN (1) Bicolor green/amber and (1) Amber LEDs; Green/amber LED indicates Ethernet link status and connection speed; Amber LED indicates Ethernet activity

Power

Power Source Options PoE (Power over Ethernet)

Power over Ethernet IEEE 802.3at Type 1 (802.3af compatible) Class 0 (12.95 W) PoE Powered Device

Available Cresnet Power 2.5 W

Power Consumption 7 W typical

Environmental

Temperature 5 to 45 °C (41 to 113 °F)

Humidity 10 to 90% (noncondensing)

Heat Dissipation 24 BTU/hr

Enclosure

Chassis Metal, black finish, with (2) integral mounting flanges; vented top, sides, and bottom

Mounting Freestanding, surface mount, attach to a single rack rail, or 1 RU 19-in. rack mountable (rack ears included)

Dimensions

Height 27 mm (1.07 in.)

Width 258 mm (10.15 in.)

Depth 130 mm (5.11 in.)

Weight

454 g (1.0 lb)

Compliance

Regulatory Model: M201910001
CE, IC, FCC Part 15 Class B digital device

Models

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Available Accessories

C2N-IO
Control Port Expansion Module

C2N-HBLOCK
Multitype Cresnet® Network Distribution Block

CEN-IO-COM-102
Wired Ethernet I/O Extender with 2 COM Ports

CEN-IO-DIGIN-104
Wired Ethernet I/O Extender with 4 Digital Inputs

CEN-IO-IR-104
Wired Ethernet I/O Extender with 4 IR Ports

CEN-IO-RY-104
Wired Ethernet I/O Extender with 4 Relay Ports

CEN-IO-COM-202
Wi-Fi® Network I/O Extender with 2 COM ports

CEN-IO-DIGIN-204
Wi-Fi® Network I/O Extender with 4 Digital Inputs

CEN-IO-IR-204
Wi-Fi® Network I/O Extender with 4 IR Ports

CEN-IO-RY-204
Wi-Fi® Network I/O Extender with 4 Relay Ports

CEN-SWPOE-16
16-Port Managed PoE Switch

CEN-SW-POE-5
5-Port PoE Switch

CNSP-XX
Custom Serial Interface Cable

CNXRMIRD
IR Receiver

CNTBLOCK
Cresnet® Network Distribution Block

CRESTRON-APP
Crestron® App for iPhone® and iPod touch® Devices

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CRESTRON-APP-ANDROID

Crestron® App for Android® OS

CRESTRON-APP-PAD

Crestron® App for iPad® Device

DIN-CENCN-2

Ethernet to Cresnet® Network Bridge

DIN-CENCN-2-POE

Ethernet to Cresnet® Network Bridge with PoE

IRP2

IR Emitter with Terminal Block Connector

SW-3SERIES-BACNET-50+

BACnet™ Network/IP Support for 3-Series® and 4-Series Control Processors

SW-FUSION-C-3

Crestron Fusion® Cloud; 250 rooms; 3-year service, support, and updates

SW-FUSION-P-L

Crestron Fusion® On-premises; Unlimited rooms; lifetime service, support, and updates

SW-RMC3-PROG10

10 Program MPA Support License for RMC3, MPC3, and MC4 Series

SW-XIOC-P-1

Crestron XiO Cloud™ Premium Provisioning and Management Service for one device, 1 year subscription

SW-XIOC-P-1Q

Crestron XiO Cloud™ Premium Provisioning and Management Service for one device, 1 quarter year subscription

SW-XIOC-P-2

Crestron XiO Cloud™ Premium Provisioning and Management Service for one device, 2 year subscription

SW-XIOC-P-2Q

Crestron XiO Cloud™ Premium Provisioning and Management Service for one device, 2 quarter year subscription

SW-XIOC-P-3

Crestron XiO Cloud™ Premium Provisioning and Management Service for one device, 3 year subscription

SW-XIOC-P-3Q

Crestron XiO Cloud™ Premium Provisioning and Management Service for one device, 3 quarter year subscription

SW-XIOC-P-5

Crestron XiO Cloud™ Premium Provisioning and Management Service for one device, 5 year subscription

SW-XIOC-S-1

Crestron XiO Cloud™ Standard Provisioning and Management Service for one device, 1 year subscription

SW-XIOC-S-1Q

Crestron XiO Cloud™ Standard Provisioning and Management Service for one device, 1 quarter year subscription

SW-XIOC-S-2

Crestron XiO Cloud™ Standard Provisioning and Management Service for one device, 2 year subscription

SW-XIOC-S-2Q

Crestron XiO Cloud™ Standard Provisioning and Management Service for one device, 2 quarter year subscription

SW-XIOC-S-3

Crestron XiO Cloud™ Standard Provisioning and Management Service for one device, 3 year subscription

SW-XIOC-S-3Q

Crestron XiO Cloud™ Standard Provisioning and Management Service for one device, 3 quarter year subscription

SW-XIOC-S-5

Crestron XiO Cloud™ Standard Provisioning and Management Service for one device, 5 year subscription

XPANEL

XPanel – Crestron Control® Interface for Computers

Notes:

1. Enabling Modular Programming Architecture (MPA) on the MC4-I requires the purchase of one [SW-RMC3-10PROG](#) license. The license enables support for running up to 10 simultaneous programs on a single MC4-I. The license is not required if only one program is run on the MC4-I. To obtain a license for the MC4-I, complete the "[Request for SW-RMC3-10PROG License](#)" form. For questions, contact license@crestron.com.
2. The total range of an inFiNET EX wireless network is dependent on the placement and capabilities of each network device. A mesh network topology is employed so every EX device on the network acts as a routing node or expander, which relays the signals it receives on to other EX devices within range. This effectively extends the total range of the network and provides multiple redundant signal paths for extra reliability. A maximum of six hops across routing nodes is allowed, although a maximum of three is recommended. Battery-powered inFiNET EX devices only operate as leaf nodes and do not provide expander functionality. Up to 100 inFiNET EX devices are permitted, although best practices suggest a limit of 50. Up to 15 external gateways (CEN-GWEXER, sold separately) may be added to support additional devices (RF conditions allowing). Refer to the Installation and Setup of Crestron RF Products Best Practice Guide (Doc. 6689) for additional guidelines.
3. A BACnet and IP license is required. A free license is available to support up to 50 BACnet objects on a single 4-Series control system. Enabling support for more than 50 BACnet objects requires the purchase of one [SW-3SERIES-BACNET-50+](#) license. The MC4-I supports a maximum of 500 BACnet objects when dedicated for BACnet use only. Actual capabilities are contingent upon the overall program size and complexity. To obtain the license, visit www.crestron.com/bacnetlicense.
4. This feature is only available when using the TSR-310. Other Crestron touch screens, handheld remotes, and keypads are not supported. For these interfaces, traditional IR or CEC control must be used to control supported Apple devices.

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 by calling 855-263-8754.

This product is covered under the Crestron standard limited warranty. Refer to www.crestron.com/warranty for full details.

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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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