

## 3-Series Control System® w/infiNET EX®

- > Next generation control system
- > 3-Series® Control Engine
- > Exclusive modular programming architecture
- > Onboard 256MB RAM & 2GB Flash memory
- > Support for external USB flash memory and mass storage devices
- > Integrated infiNET EX® wireless gateway
- > Support for CNXRMIRD IR Receiver<sup>(1)</sup>
- > Customizable OSD user interface
- > WAV, MP3, and WMA audio file playback
- > Industry-standard Ethernet and Cresnet® wired communications
- > XPanel with Smart Graphics™ computer and Web based control
- > iPhone®, iPad®, Android™, and Samsung Smart TV® control app support
- > Crestron Fusion™ Enterprise Management Software support
- > SNMP support
- > Built-in IR, COM, relay, and digital input ports
- > Native BACnet®/IP support<sup>(2)</sup>
- > EMerge Alliance® compatible
- > Installer setup via on-screen display, Crestron Toolbox™, or Internet Explorer®<sup>(4)</sup>
- > Backwards compatible to run existing SIMPL programs
- > Full Unicode (multi-language) support
- > Increased network throughput and security
- > Secure access through Active Directory integration or standalone account management
- > Hardware level security using 802.1x authentication
- > IIS v.6.0 Web Server
- > IPv6 ready
- > External power supply included



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.

### Modular Programming Architecture

Designed for enhanced scalability, the MC3 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 AV, lighting, HVAC, security, 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 MC3 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 MC3 provides secure, reliable interconnectivity with IP-enabled touch screens, computers, mobile devices, video displays, Blu-ray Disc® players, 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, tablet, or Smart TV, 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

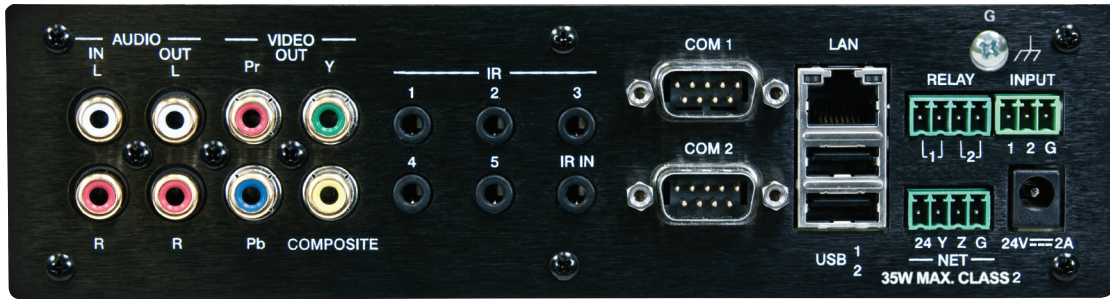
The Crestron® MC3 is an economical 3-Series Control System® in a compact form factor with built in infiNET EX® wireless technology and on-screen display capability. Featuring the 3-Series® control engine, the MC3 forms the core of any modern networked home or commercial building, managing and integrating all the disparate technologies throughout the facility to make life easier, greener, more productive, and more enjoyable.

### 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 boardroom AV and home theater 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

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MC3 – Rear View

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. Even Samsung Smart TV® has a Crestron control app available.

## Crestron Fusion™ Enterprise Management



Crestron Fusion 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 MC3 works integrally with Fusion RV® Remote Asset Management Software to enable remote scheduling, monitoring, and control of rooms and technology from a central help desk. Fusion EM® Energy Management Software 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.

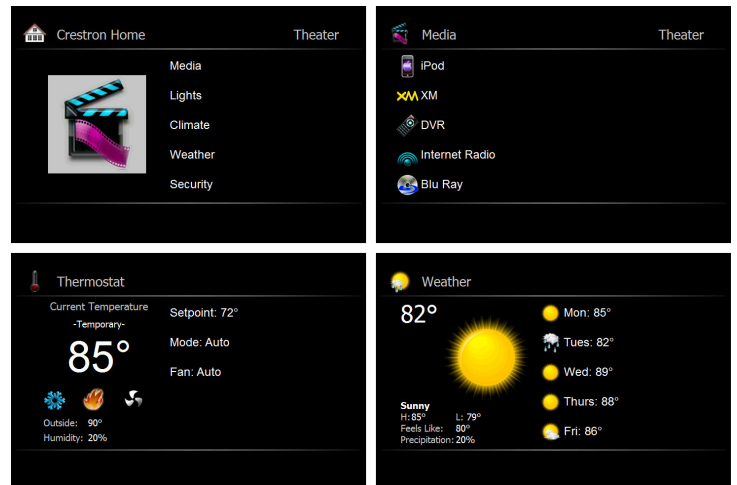
## infiNET EX® Wireless Control



Integrated infiNET EX technology provides an extremely easy and cost-effective way to add control of lighting, shades, room temperature, and other functions using the complete line of infiNET EX based wireless products. Adding an infiNET EX remote like the MTX-3 Handheld Wireless Touch Screen<sup>[1]</sup> or MLX-3 LCD Handheld Wireless Remote<sup>[1]</sup> enables sophisticated portable control over everything, whether simply watching TV or adjusting whole-house audio distribution, lighting, and climate control in every 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.

## Cresnet®

Cresnet provides a dependable network wiring solution for Crestron keypads, lighting controls, thermostats, 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.



## On-Screen Display

The MC3 includes the ability to control a home, hotel room, or other facility using just a television screen and a handheld remote<sup>[1]</sup>. Featuring customizable scrolling menus and full-color icons, the MC3 OSD makes it easy to select any room in the house, pick a music or video source, choose a radio station, TV channel, or media title, and even access lighting, climate, and security system controls. The MC3 OSD provides true-feedback so you always know the status of the item you're controlling. Audio adjustments and lighting levels are clearly indicated using bar graphs. Room temperature and security system status can be viewed and controlled without leaving your favorite seat. Even metadata from your iPod®, ADMS®, or Internet radio tuner can be displayed to show the current playing song, movie, TV program, or radio station.

## IR Wireless Option

When equipped with the optional CNXRMRD IR Receiver<sup>[1]</sup>, the MC3 affords a low-cost IR wireless control solution using any Crestron IR wireless remote or touch screen, or a third-party universal IR remote.

## Audio File Playback

Built-in audio signal rendering lets you add audio feedback to the OSD, or generate door chimes, phone ringers, and other signals that can be played through the home theater or whole-house audio system. Load your own custom audio files to sound alarms, provide confirmation when you execute a command, deliver helpful voice prompts, or just play welcome music as the home theater system turns on.

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## Onboard Control Ports

In addition to Ethernet, the MC3 includes two bidirectional RS-232 COM ports and five IR ports to interface directly with all of your centralized AV sources, video displays, and other devices. Two programmable relay ports are included for controlling a projection screen, lift, power controller, or other contact-closure actuated equipment. Two digital inputs enable the integration of occupancy sensors, power sensors, door switches, or anything else that provides a dry contact closure or low-voltage logic signal.

## 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.<sup>[2]</sup>



## EMerge Alliance® Registered

The MC3 is EMerge Alliance registered and designed to work within a 24 VDC room-level power distribution system. The EMerge Alliance is a not-for-profit open industry association leading the rapid adoption of safe DC power distribution in commercial buildings through the development of EMerge Alliance standards<sup>[3]</sup>. Crestron is a proud member and supporter of the Alliance. For more information about Crestron Solutions for EMerge Alliance Applications visit: [www.crestron.com/emerge](http://www.crestron.com/emerge).



## SPECIFICATIONS

### Control Engine

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

### Memory

SDRAM: 256 MB

Flash: 2 GB

External Storage: supports USB mass storage devices up to 1 TB

### 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; IEEE 802.1X; SNMP; BACnet®/IP<sup>[2]</sup>; IPv4 or IPv6; Active Directory authentication; IIS v.6.0 Web Server; SMTP e-mail client, installer setup via Crestron Toolbox™ or MSIE<sup>[4]</sup>

**Cresnet®:** Cresnet master mode

**USB:** Supports USB HID and USB mass storage class devices via rear panel USB 2.0 host ports, supports computer console via front panel USB 2.0 device port

**RS-232:** Supports 2-way device control and monitoring 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 (0-5 Volts) up to 115.2k baud; supports CNXR MIRD IR Receiver<sup>[1]</sup>

### Wireless Communications

**RF Transceiver:** infiNET EX® 2-way RF, 2.4 GHz ISM Channels 11-26 (2400 to 2483.5 MHz), default channel 15; IEEE 802.15.4 compliant  
**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<sup>[5]</sup>

**Device Support:** Maximum 100 infiNET EX devices (inclusive of up to 6 MTX-3 and/or MLX-3 remotes) and 5 infiNET EX expanders (model CLW-EXPEX or GLA-EXPEX)

### Graphics Engine (OSD)

Built-in customizable control pages, scrolling menus, and dynamic objects

### Video (OSD)

**Output Signal Types:** Component (YPbPr), Composite

**Output Formats:** Progressive 480p or 576p, interlaced NTSC or PAL

**Output Resolutions, Component:** 720x480@30Hz (480i), 720x576@25Hz (576i), 720x480@60Hz (480p), 720x576@50Hz (576p)

**Output Resolutions, Composite:** 480i, 576i

### Audio

**Functions:** Audio file playback, audio signal pass-thru w/mute during file playback

**Audio File Formats:** WAV (8 & 16 bit PCM, mono & stereo, 8 – 44.1 kHz sampling rates), MP3, WMA

**Input/Output Signal Types:** Analog stereo

**Analog-To-Digital/Digital-to-Analog Conversion:** 24-bit 48 kHz

**Performance (pass-thru):** Frequency Response: 20Hz to 20kHz ±0.2dB;  
S/N Ratio: >93dB, 20Hz to 20kHz A-weighted;  
THD+N: <0.01%, 20Hz to 20kHz;  
Stereo Separation: >91dB

### Connectors

**AUDIO IN, L – R:** (2) RCA female, unbalanced stereo line-level audio input;  
Input Level: 2 Vrms maximum;  
Input Impedance: 7k Ohms nominal

**AUDIO OUT, L – R:** (2) RCA female;  
Unbalanced stereo line-level audio output;  
Output Level: 2 Vrms maximum;  
Output Impedance: 100 Ohms nominal

**VIDEO OUT, Y Pb Pr:** (3) RCA female, component (YPbPr) video output;  
Output Level: 1 Vp-p nominal (Y), 0.7 Vp-p nominal (PbPr);  
Output Impedance: 75 Ohms nominal

**VIDEO OUT, COMPOSITE:** (1) RCA female, composite video output;  
Output Level: 1 Vp-p nominal;  
Output Impedance: 75 Ohms nominal

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**IR 1 – 5:** (5) 3.5mm mini-phone jacks, IR/Serial output ports;  
IR output up to 1.2 MHz;  
1-way serial TTL/RS-232 (0-5 Volts) up to 115.2k baud

**IR IN:** (1) 3.5mm TRS mini-phone jack;  
For connection of the CNXRMIRD IR receiver<sup>(1)</sup>;  
Allows IR wireless control from Crestron and third-party remotes using RC-5 IR commands

**COM 1 – 2:** (2) DB9 male, bidirectional RS-232 ports;  
Up to 115.2k baud; hardware and software handshaking support

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

**USB 1 – 2:** (2) USB Type A female;  
USB 2.0 ports for storage and mouse/keyboard devices

**G:** (1) 6-32 screw, chassis ground lug

**RELAY 1 – 2:** (1) 4-pin 3.5mm detachable terminal block comprising (2) normally open, isolated relays;  
Rated 1 Amp, 30 Volts AC/DC;  
MOV arc suppression across contacts

**INPUT 1 – 2:** (1) 3-pin 3.5mm detachable terminal block comprising (2) programmable digital inputs (referenced to GND);  
Input Voltage Range: 0-24 Volts DC;  
Logic Threshold:  $\geq 1.2$  Volts DC active/high,  $\leq 0.46$  Volt DC inactive/low;  
Input Impedance: 2.2k Ohms pulled up to 5 Volts

**NET:** (1) 4-pin 3.5mm detachable terminal block, Cresnet master port;  
Outputs power to Cresnet devices if a power pack is connected to the 24VDC power input jack;  
Receives Cresnet network power if no power pack is connected to the 24VDC power input jack;  
See “Power Requirements” for additional specifications

**24VDC 2A:** (1) 2.1 x 5.5 mm DC power connector, 24 Volt DC power input;  
PW-2420RU power supply included;  
Passes through to NET port to power Cresnet devices;  
See “Power Requirements” for additional specifications

**COMPUTER (front):** (1) USB Type B female;  
USB 2.0 computer console port, for setup only

**Antenna (front):** (1) Connection for supplied antenna

## Controls & Indicators

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**PWR:** (1) Green LED, indicates operating power supplied from power pack or Cresnet network

**NET:** (1) Amber LED, indicates communication with the Cresnet system

**HW-R:** (1) Recessed pushbutton for hardware reset

**SW-R:** (1) Recessed 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 communications

**LAN (rear):** (2) LEDs, green LED indicates Ethernet link status, amber LED indicates Ethernet activity

## Power Requirements

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**Power Pack:** 2.0 Amps @ 24 Volts DC;  
100-240 Volts AC, 50/60 Hz power pack, model PW-2420RU included

**Available Cresnet Power:** 35 Watts (1.46 Amps @ 24 Volts DC) when using power pack

**Cresnet Power Usage:** 9 Watts (0.375 Amps @ 24 Volts DC) when using Cresnet network power

## Environmental

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**Temperature:** 41° to 113°F (5° to 45°C)

**Humidity:** 10% to 90% RH (non-condensing)

**Heat Dissipation:** 31 BTU/Hr

## Enclosure

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**Chassis:** Aluminum w/polycarbonate label overlay

**Faceplate:** Plastic w/polycarbonate label overlay

**Mounting:** Freestanding (adhesive feet included)

## Dimensions

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**Height:** 2.30 in (59 mm);  
2.25 in (58 mm) without feet

**Width:** 8.12 in (207 mm)

**Depth:** 6.74 in (171 mm) including antenna

## Weight

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2.5 lb (1.2 kg)

# MC3 3-Series Control System® w/infiNET EX®

## MODELS & ACCESSORIES

### Available Models

**MC3:** 3-Series Control System® w/infiNET EX®

### Included Accessories

**PW-2420RU:** Power Pack, Desktop, 24VDC, 2A (50 Watts), Regulated, US/International (Qty. 1 included)

### Available Accessories

**C2N-HBLOCK:** Multi-type Cresnet Distribution Block

**CNSP-XX:** Custom Serial Interface Cable

**STIRP:** IR Emitter Probe w/3.5mm Mini Phone Plug

**CNXRMIRD:** IR Receiver

**ANT-EXT:** Antenna Extenders

**CLW-EXPEX:** infiNET EX® Wireless Expander

**GLA-EXPEX:** Crestron Green Light® Wireless Expander

**INET-IOEX-IRCOM:** infiNET EX® Wireless IR/RS-232 Control Module

**INET-IOEX-RYIO:** infiNET EX® Wireless Relay/Digital Input Control Module

**Crestron® App:** Control App for Apple® iOS®

**Crestron Mobile Pro®:** Control App for Apple® iOS® and Android™

**Crestron® App for Samsung Smart TV®:** Control App for Samsung Smart TV

**XPanel:** Crestron Control® for Computers

**myCrestron:** Dynamic DNS Service

**Fusion EM®:** Energy Management Software

**Fusion RV®:** Remote Asset Management Software

**RoomView® Express:** Remote Help Desk and Resource Management Software

**SW-3SERIES-BACNET:** BACnet®/IP Support for 3-Series™

**CSP-LIR-USB:** IR Learner

### Notes:

1. Item(s) sold separately.
2. License required. The MC3 supports a maximum of 500 BACnet objects when dedicated for BACnet use only. Actual capabilities are contingent upon the overall program size and complexity.
3. Information regarding the EMerge Alliance can be found at [www.emergealliance.org](http://www.emergealliance.org).
4. Web-based installer setup requires the Microsoft® Internet Explorer® Web browser running on a Windows® PC
5. The effective range of the entire wireless network is extended based on the placement and capabilities of each network device. Consult the specifications for each wireless network device to verify wireless capabilities and limitations.

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](http://www.crestron.com/salesreps) or by calling 800-237-2041.

The specific patents that cover Crestron products are listed online at: [patents.crestron.com](http://patents.crestron.com).

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