

3-Series Control System® w/infiNET EX® & ER Wireless Gateway

- > Enterprise-class 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® and ER wireless gateway
- > Support for CNXRMIRD IR Receiver^[3]
- > 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®, and Android™ control app support
- > Crestron Fusion® Enterprise Management Software support
- > SNMP remote management support
- > Built-in IR, COM, relay, and digital input ports
- > Programmable event scheduling with astronomical time clock
- > Native BACnet™/IP support^[4]
- > Installer setup via on-screen display, 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
- > Universal 100-240V external power supply included



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.

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, shades, 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, 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

The Crestron® MC3 is an economical 3-Series Control System® in a compact form factor with built in infiNET EX® and ER 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 your 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.

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MC3 – Rear View

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® 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, door locks, and other functions using the 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.^[1]

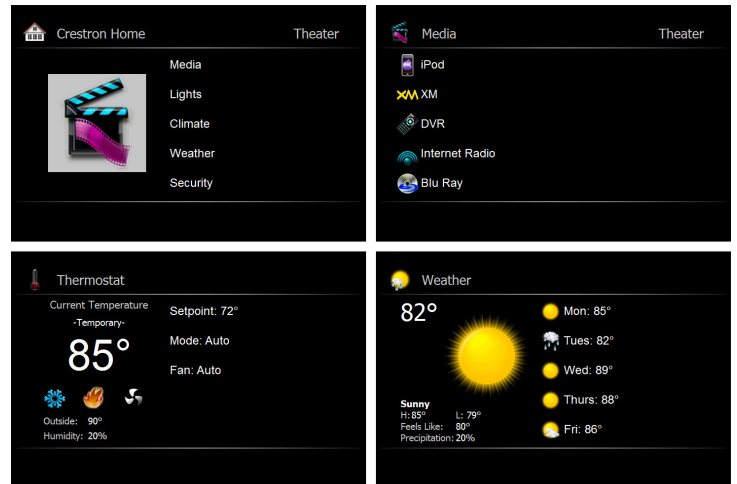


“ER” Extended Range RF Technology

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.^[2]

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.



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^[3]. 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® or Internet radio tuner can be displayed to show the current playing song or radio station.

IR Wireless Option

When equipped with the optional CNXRMRD IR Receiver^[3], the MC3 affords a low-cost IR wireless control solution using a universal IR remote.

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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.

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 power sensors, motion detectors, door switches, alarms, 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.^[4]



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

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, TLS, SSH, SFTP (SSH File Transfer Protocol), FIPS 140-2 compliant encryption, IEEE 802.1X, SNMP, BACnet™/IP^[4], IPv4 or IPv6, Active Directory authentication, IIS v.6.0 Web Server, SMTP e-mail client

Cresnet®: Cresnet master mode

USB: Supports 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 CNXRMIRD IR Receiver^[3]

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
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^[1]

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^[5]

Wireless Device Support

infiNET EX Devices: Supports all Crestron and third-party infiNET EX devices including HR-100, HR-150, MLX-3, and MTX-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^[2]

Maximum Devices Allowed^[6]:

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 and/or MTX-3 remotes

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

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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 ± 0.2 dB;
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

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^[3];
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: ≥ 1.2 Volts DC active/high, ≤ 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

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 RX and TX data activity

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

Power Requirements

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

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

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

Heat Dissipation: 31 BTU/Hr

Enclosure

Chassis: Aluminum w/polycarbonate label overlay

Faceplate: Plastic w/polycarbonate label overlay

Mounting: Freestanding (adhesive feet included)

Dimensions

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

2.5 lb (1.2 kg)

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MODELS & ACCESSORIES

Available Models

MC3: 3-Series Control System® w/infiNET EX® & ER Wireless Gateway

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® and Android™

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. 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.
2. The MC3 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](#).
3. Item(s) sold separately.
4. 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.
5. Roaming capability using multiple gateways is for ER devices only. infiNET EX utilizes only one gateway and does not support roaming.
6. 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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