Crestron PRO2

Professional Dual Bus Control System

Shown with optional expansion cards installed

Crestron 2-Series Control Systems are the brain of a complete integrated AV or automation solution. Every audio, video, and environmental element of the home, boardroom, classroom, or command center becomes integrated and accessible through the control system. Crestron 2-Series control systems are unmatched for power, performance and scalability, providing the ideal choice for today's demanding control applications.

The flagship PRO2 is designed for medium to large-scale commercial and residential control applications. Six built-in COM ports, eight IR/Serial ports, eight I/O Versiports, eight isolated relays, and optional Ethernet provide the essential interface for control of numerous devices including video projectors, plasma displays, switchers, DVD players, screens, lifts, and much more. The PRO2 features a built-in power supply, with power available to support external Cresnet devices including touchpanels, keypads and expansion modules.

2-Series Engine—At the heart of the PRO2 is the powerful 32-bit Freescale ColdFire® processor. Crestron's exclusive enhanced real-time operating system makes the PRO2 the fastest, most reliable control system available.

Dual Bus Architecture—The PRO2's unique dual-bus architecture affords ultra fast communications. The 40Mbps Y-Bus provides a high-speed backplane for IR, serial, and other integrated control ports. Additional control ports and interfaces like MIDI and digital audio processing may be added by installing up to three Y-Bus control cards. At a blazing 300Mbps, the Z-Bus supports Fast Ethernet with future support for other emerging technologies.

Cresnet®—Cresnet is the communications backbone for many Crestron touchpanels, keypads, lighting controls, and other devices. The Cresnet bus is a simple, yet flexible 4-wire network that provides rock-solid bidirectional communication and power for up to 252 Cresnet devices.

Cresnet Slave Mode—Selectable Cresnet Slave Mode enables the PRO2 to be configured as a Cresnet slave device, effectively transforming it into a Cresnet expansion module. Such flexibility can offer a cost-effective solution for system expansion, providing a host of additional control ports in a single module.
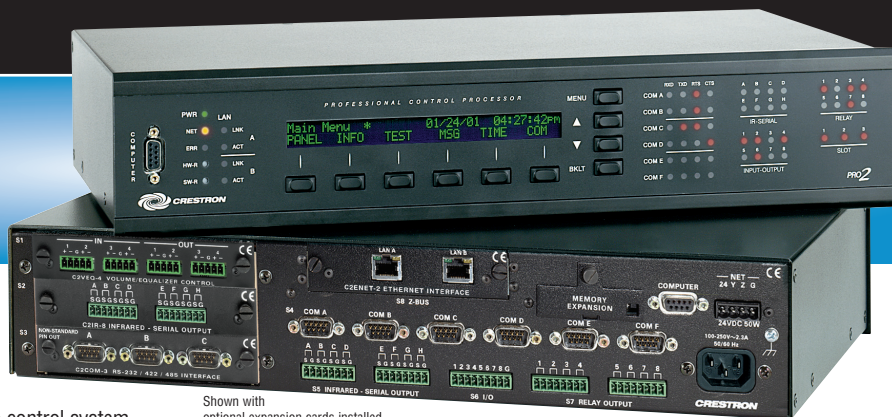
Ethernet—Crestron pioneered the IP-based control system to harness the vast possibilities of Ethernet and the Internet for remote control, monitoring, programming, and diagnostics, and the PRO2 is designed to deliver the world's most advanced IP control solution. A choice of single or dual port Ethernet cards enables a full-duplex 10/100 Ethernet connection with built-in Web server and email client, and support for both static and dynamic IP addressing.

e-Control®2—Crestron's award-winning e-Control 2 XPanel solutions offer the most flexible range of IP control possibilities available. Using a Windows® computer or CE/PocketPC™ PDA device, e-Control 2 provides an amazing control GUI that looks and behaves just like a Crestron Isys® touchpanel.

RoomView™—Every Ethernet-enabled 2-Series control system works directly with Crestron's exclusive RoomView Help Desk software for the industry's most comprehensive facility-wide asset management solution.

SNMP—Built-in SNMP support enables network management of Crestron control systems using third-party SNMP software. As an alternate or supplement to RoomView, SNMP allows full control and monitoring from the IT Help Desk or NOC in a format that's familiar to IT personnel.

SSL—All Ethernet-enabled 2-Series control systems support SSL (Secure Sockets Layer), the industry standard for protecting sensitive network communications.

NAT—The PRO2's onboard NAT (Network Address Translator) acts as a firewall and router to facilitate the configuration of a private control LAN with a single-point connection to the client's LAN (Dual-port Ethernet card required).

Memory Expansion—A memory card slot accessible on the rear panel allows for easy expansion of the PRO2's internal memory using any Type II Compact Flash memory card up to 4 GB.

Front Panel Control—The PRO2 includes a programmable front control panel with LCD display and control port status indicators. The PRO2's front panel serves as a ready user interface for system configuration and diagnostics, and can also be custom programmed to enable menu-driven control capability.

> 2-Series engine | Dual-bus architecture

> 4GB Compact Flash memory card slot

> Cresnet port – master/slave selectable

> 10/100 Ethernet capable | SSL encryption

> e-Control 2 and RoomView enabled

> SNMP support | Built-in firewall, NAT and router

> 6 Com ports, 8 IR/serial ports, 8 Versiport I/O ports, 8 Relay ports

> 3 Y-Bus / 1 Z-Bus control card expansion slots

> Internal power supply | 2-Space EIA rack-mountable

> Front control panel with LCD display

SPECIFICATIONS

Processor

CPU: 32-bit Freescale ColdFire® Microprocessor
Processing Speed: 257 MIPS (Dhrystone 2.1 benchmark)

Memory

SDRAM: 32 MB
NVRAM: 256 KB
Flash: 4 MB
Compact Flash: Accepts up to 4 GB

Operating System

Real-time, preemptive multi-threaded/multitasking kernel; FAT32 file system with long names; supports SIMPL™ Windows® and SIMPL+®

Ethernet

With C2ENET-1: 10/100BaseT, auto-negotiating, full/half duplex, static IP or DHCP/DNS, SSL, TCP/IP, UDP/IP, CIP, SMTP, SNMP, built-in Web server and e-mail client; supports Crestron e-Control®2 XPanel and RoomView™ applications

With C2ENET-2: All above features plus: built-in firewall, router, and network address translator (NAT)

CRESTRON

Connectors and Expansion Slots

Y-Bus: 40 Mb/s parallel communications
Backplane for integrated control ports and Y-Bus expansion slots

COM A - F: (6) DB9 male, bidirectional RS-232/422/485 ports
Up to 115.2k baud, hardware and software handshaking support
Ports C-F support C2N-NPA8 Network Poll Accelerator

INFRARED-SERIAL OUTPUT A - H: (8) 2-pin 3.5mm detachable terminal blocks
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
Individual signal generator per port, allowing simultaneous firing of all ports

I/O Versiports 1 - 8: (1) 9-pin 3.5mm detachable terminal block comprising (8) digital input/output or analog input ports (referenced to GND);
Digital Input: Rated for 0-24 Volts DC, input impedance 20k ohms, logic threshold 1.24 Volts DC;
Digital Output: 250 mA sync from maximum 24 Volts DC, catch diodes for use with "real world" loads;
Analog Input: Rated for 0-10 Volts DC, protected to 24 Volts DC maximum, input impedance 20k ohms;
Programmable 5 Volts, 2k ohms pull-up resistor per pin

RELAY OUTPUT 1 - 8: (2) 8-pin 3.5mm detachable terminal blocks comprising (8) normally open, isolated relays;
Rated 1 Amp, 30 Volts AC/DC, MOV arc suppression across contacts

Expansion Slots: (3) Y-Bus expansion slots, accept all Y-Bus control cards

Z-Bus: 300 Mb/s parallel communications, backplane for Z-Bus expansion slots

Expansion Slot: (1) Z-Bus expansion slot, accepts all Z-Bus control cards

COMPUTER: (2) DB9 female, front and rear panel RS-232 computer console ports

NET: (1) 4-pin 5mm detachable terminal block, Cresnet port, Master/Slave selectable
Expandable via C2N-NPA8 Network Poll Accelerator

100-250V ~ 2.3A: (1) IEC Socket, mates with removable power cord (included)

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

Buttons

HW-R: Hardware reset (reboots the control system)
SW-R: Software reset (restarts the SIMPL program)
FUNCTIONS: (6) Up to 6 dynamically assigned functions based upon current menu
MENU: (1) Returns the LCD display to the MAIN menu

▼ ▲ : (2) Scroll up or down through any list displayed in the LCD display
BKLT: (1) Toggles through 4 levels of backlight intensity for the LCD display

Refer to the Operations Guide for additional menu functions

Display

(2) lines, (40) characters per line; reverse mode (yellow and black) LCD back light
Displays system information, configuration menus, and custom user functions

LED Indicators

PWR: (1 green) Indicates AC power supplied to unit
NET: (1 yellow) Indicates Cresnet bus activity
MSG: (1 red) Indicates control system has generated an error message
LNK A: (1 red) Indicates a valid connection on LAN port A
ACT A: (1 red) Indicates activity on LAN port A
LNK B: (1 red) Indicates a valid connection on LAN port B
ACT B: (1 red) Indicates activity on LAN port B
COM A – F (TXD, RXD, RTS, CTS): (24 red) Indicate activity on each respective COM port
IR-SERIAL A – H: (8 red) Indicate activity on each respective IR/Serial port
INPUT-OUTPUT 1 – 8: (8 red) Indicate activity on each respective I/O Versiport
RELAY 1 – 8: (8 red) Indicate contact closure at each respective relay port
SLOT 1 – 3: (3 red) Illuminates to indicate presence of a card in the respective expansion slot; extinguishes momentarily to indicate activity

Power Requirements

Internal Universal Power Supply: 2.3 Amps, 100-250 Volts AC, 50/60 Hz
Available Cresnet Power: 50 Watts (shared with control card expansion slots)

Environmental

Temperature: 41° to 113°F (5° to 45°C)
Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black metal, 2U 19" rack-mountable (rack ears included)
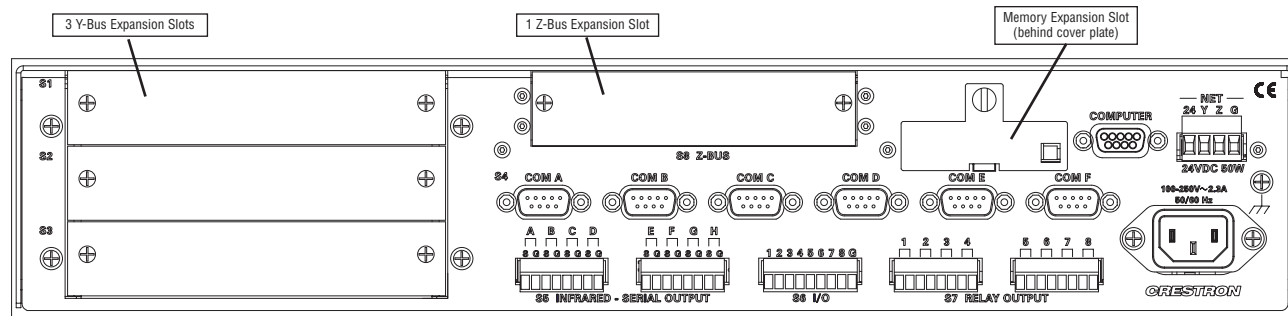
Dimensions

Height: 3.47 in (8.81 cm)
Width: 19.00 in (48.26 cm) with ears; 17.03 in (43.24 cm) without ears
Depth: 9.69 in (24.61 cm)

Weight

8.0 lb (3.62 kg) – with line cord

Rear Panel

AVAILABLE ACCESSORIES

C2COM-2
2 COM Port Y-Bus Control Card

C2COM-3
3 COM Port Y-Bus Control Card

C2IR-8
8 IR/Serial Output Y-Bus Control Card

CNXIO-16
16 I/O Versiport Y-Bus Control Card

CNXAO-8
8 Analog Output Y-Bus Control Card

CNXRY-8
8 Relay Y-Bus Control Card

CNXRY-16
16 Relay Y-Bus Control Card

CNXMIDI
MIDI Y-Bus Control Card

C2VEQ-4
4 Channel Volume/EQ Y-Bus Control Card

C2ENET-1
Single Port Ethernet Z-Bus Control Card

C2ENET-2
Dual Port Ethernet Z-Bus Control Card

C2N-HBLOCK
Cresnet Network Distribution Block

C2N-NPA8
Cresnet Network Poll Accelerator

C2N-SPWS300
300 Watt Cresnet Power Supply

CNSP-XX
Custom Serial Interface Cable

IRP2
IR Probe