Crestron PRO2™
Professional Dual Bus Control System

CRESTRON
HOME

The PRO2 is a completely new solution-driven control and network information system. It's the ideal solution for even the most complex home automation and control applications.

At the heart of the PRO2 is the breakthrough 2-Series Control Engine, based on the hot new 257 MIPS, 32-bit Motorola ColdFire® processor. Onboard 36MB memory is enhanced with a 4GB expansion slot that supports off-the-shelf Type II compact flash memory and the IBM Microdrive® hard disk drive, for on-board storage of program and touchpanel files, room and equipment profiles, upgrades, databases and schedules.

Crestron's unique Dual Bus system, with its high-speed I/O bus architecture, provides blazing fast throughput system wide. This Dual Bus architecture also lets you upgrade to the new, higher performance expansion cards, while still using your existing cards and software programs. The 40Mb/s Y-Bus supports existing CNX control cards and serves as the pipeline for IR, serial communications and relays. The 300Mb/s Z-Bus is designed for super high speed control card applications, such as 10/100 Ethernet, and future USB, USBII, FireWire, disk drive arrays and more.

The PRO2 with a variety of plug-in 10/100 Ethernet cards provides true secure network communi-cations required for today 's home networks and the Internet. Using the dual port Ethernet card, a built-in Firewall delivers the ultimate in security, with on-board

Network Address Translator (NAT) and Router functions. It supports static IP addressing and full duplex TCP/IP and UDP/IP, and offers a WAN port for Internet communications, and a LAN port for home network use. The built-in Web Server provides the ultimate in remote web-browser control and uses memory storage on a compact flash card for remote access and control.

The 2-Series real-time operating system is compatible with existing Crestron software and programming. A key feature is the new Crestron Compiler, which allows any existing Crestron SIMPL™ Windows® control program to be easily recompiled for the 2-Series. The real-time, preemptive multi-tasking/multi-threaded operating system offers a FAT32 file system with long file names for easy and open file management. And the enhanced SIMPL+™ instruction set is also fully compatible with existing Crestron SIMPL™ Windows® and SIMPL+™ programs.

With its blinding speed, massive memory and revolutionary Dual Bus architecture, the PRO2 is built from the ground up for high performance, secure Internet communications and Dynamic Expansion Capabilities. Designed for reliability and reinforced by Crestron's True Blue Customer Support, it's part of the complete Crestron Home™ line of advanced solutions for audio/video/Internet distribution and control.

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Processor

· **CPU:** 32-bit Motorola 5407 ColdFire® Processor
· **Processing Speed:** 257 MIPS (Dhrystone 2.1 benchmark)

Memory

· **On-board Memory:** 36MB

· **Expandable Memory: Compact Flash slot** (up to 4GB) accessible on rear panel accepts standard Type II Compact Flash or IBM Microdrive®

Dual Bus Architecture

Y-Bus:

· **40 Mb/s parallel communications**

· **IR/Serial ports:** 8 programmable simultaneous outputs for IR, TTL Level RS-232 or serial interface; signal (S) and ground (G) pins; infrared output up to 1.2MHz

· **I/O Versiports:** 8 programmable analog and digital inputs as well as digital outputs

· **Relay ports:** 8 normally open relays, isolated with MOV suppression

· **Communication ports:** 6 bi-directional ports for RS-232/422/485; Ports 1-4 Cresnet Accelerator ready

· **Built-in 3-slot card cage** supports Crestron's existing CNX and 2-Series expansion cards

Z-Bus:

· **300 Mb/s parallel communications**
· **1 expansion card slot.** Optional cards include:
  · **C2ENET-1:** Single Port 10/100 BaseT Ethernet
  · **C2ENET-2:** Dual Port WAN-LAN-10/100 BaseT Ethernet
  · Future Support for USB, USB II, FireWire, Disk Drive Array

Computer console

1 RS-232 port (accessible from front or rear panel), 9-pin DB9 for programming with a PC

Cresnet port

1 4-pin male connector, expandable via optional Cresnet Network Accelerator, which increases the effective network speed, fan-out and device addresses by a factor of 8 for each poll accelerator added to the system.

Ethernet (w/optional C2ENET-1/2)

· **10/100 BaseT Ethernet**
  · Built-in Firewall for ultimate security
  · Dynamic/static IP and full duplex TCP/IP, UDP/IP, SMTP
  · Built-in Router
  · Built-in Network Address Translator (NAT)
  · Built-in Web Server: Memory storage on Compact Flash Card

Operating System

· Real-time, preemptive, multitasking kernal
· Multi-threaded
· FAT32 file system with long names
· Fully compatible with existing SIMPL™ Windows® and SIMPL+™ programs
· Enhanced SIMPL+ instruction set

Screen

Reverse mode (yellow and black) LCD back light; 2 lines, 40 characters per line

Menu Function Buttons

PANEL: Programmable interface offering command text, indirect text, and hierarchical screen structure

INFO: Displays system information including the loaded SIMPL program

MSG: Displays system alarms and error messages

TIME: Permits alterations to system date and time; access code required

COM: Monitors the transmission and reception traffic on each COM port

Menu Selection Buttons

MENU: Returns screen display to menu default state

▲: Advances the current screen display

▼: Returns the current screen display to its previous state

BKLT: Alters screen and LCD brightness

Reset Buttons

HW-R: Performs physical reset of system

SW-R: Restarts SIMPL program

LED Indicators

PWR, NET, ERR, LNK A, ACT A, LNK B, ACT B, COM TXD (A-F), COM RXD (A-F), COM RTS (A-F), COM CTS (A-F), IR-SERIAL (A-H), INPUT-OUTPUT (1-8), RELAY (1-8), SLOT (1-3)

Power Requirements

100-240VAC, 2.4A, 50/60Hz, internal universal power supply

Dimensions

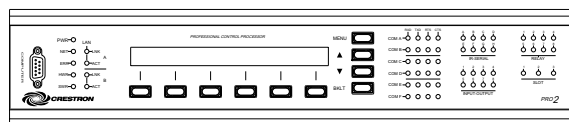3.47" / 8.81cm (H) x 19.00" / 48.26cm (W) x 9.7" / 24.6cm (D)
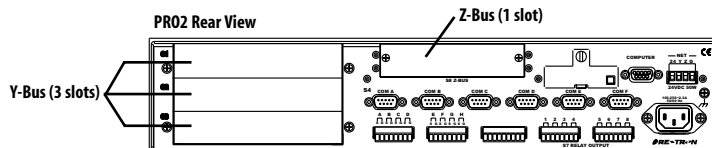
Weight

7.25lb/3.3kg

Optional Accessories

Cresnet Network Accelerator: Allows a large number of Cresnet devices to be controlled by a single PRO2 while maintaining a high level of reliability and performance. Connecting to the control processor via a high-speed RS-232 (using built-in COM ports C-F) or Ethernet link, it effectively multiplies Cresnet bandwidth by implementing eight hubs of a Cresnet networks, each operating at full speed.

PRO2 Front View

PRO2 Rear View

Z-Bus (1 slot)

Y-Bus (3 slots)