

# Crestron AV2

## Economical 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 AV2 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 AV2 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 AV2 is the powerful 32-bit Freescale ColdFire® processor. Crestron's exclusive enhanced real-time operating system makes the AV2 the fastest, most reliable control system available.

**Dual Bus Architecture**—The AV2'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 (expansion cage option required). 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 AV2 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 AV2 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 AV2'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 AV2's internal memory using any Type II Compact Flash memory card up to 4 GB.

- > 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

## 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)

### 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

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**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  
 (Requires CAGE2 expansion cage accessory, sold separately)

**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)

## 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

## 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

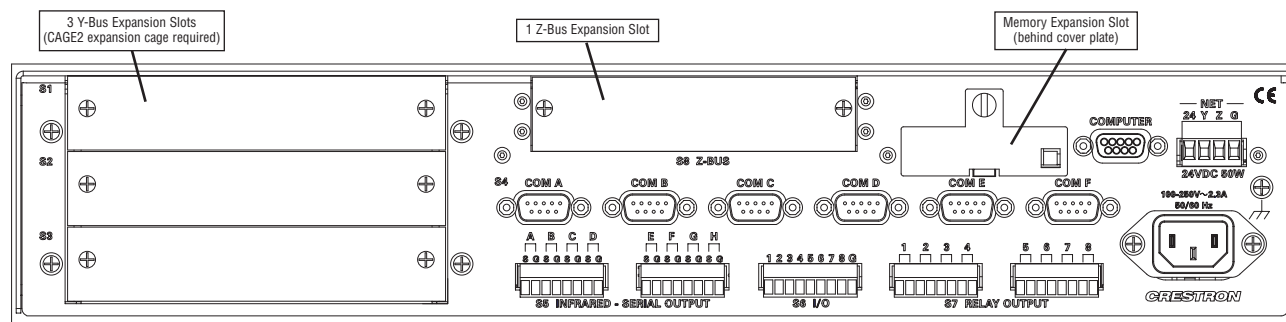
**Height:** 3.47 in (8.81 cm)

**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

7.1 lb (3.22 kg) – with line cord



Rear Panel

## AVAILABLE ACCESSORIES

### CAGE2

3-Card Expansion Cage

### 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