Crestron QM-RMCRX
QuickMedia™ Control System and AV Receiver/Processor

mediamanager by crestron

The QM-RMCRX combines a 2-Series Ethernet control system with a QuickMedia™ receiver, digital audio processor, and stereo amplifier, to provide an elegant, yet cost-effective solution for AV signal routing and control as part of Crestron's MediaManager™ line of products. Crestron's exclusive QuickMedia Transport technology utilizes a single inexpensive CAT5E/CAT6 cable to distribute video, audio, and high-resolution RGB. MediaManager is a comprehensive family of affordable products that fuses high-performance AV signal distribution, device control, and facility-wide AV system management.

Professional Video Control—The QM-RMCRX receives video via CAT5 from Crestron QuickMedia wall plates, tabletop media centers and switchers for transmission to the display device. The programmable outputs for RGBHV, S-video and composite video are buffered to ensure signal integrity. The unit also provides frequency compensation to achieve high bandwidths over cable runs up to 300 feet and time-skew compensation to equalize up to 15 ns. of delay between video signals.

Professional Audio Control and EQ—The QM-RMCRX features onboard professional digital audio processing with volume and tone control, 12-band graphic/parametric EQ and up to 40ms of delay for speech audio. Two amplified audio outputs provide 20W of audio power, 10W per channel, while 3 line-level outputs can be connected to powered speakers or amplifiers if additional power is required. The onboard mic mixer can mix two remote microphones with stereo program signals in any proportion, so the sound is always precisely tailored to the listening environment. All the audio features of the QM-RMCRX are easily configured using Crestron Digital Media Tools™ software. Drag sliders and adjust waveforms to set EQ filters and presets, input/output gain and mixing levels. Select real time mode to hear the sound as it is adjusted and then create a configuration file ready to be uploaded to the QM-RMCRX.

e-Control 2® Technology—QM-RMCRX is a full-featured Ethernet control system that runs on the powerful 2-Series processor, based on Motorola's 32-bit ColdFire® technology. Crestron e-Control®2 XPanel technology is fully supported as well, allowing uncompromised control from any Windows® PC, XP Tablet PC or Windows PocketPC 2002 PDA device. Hundreds of AV devices and complete room AV systems throughout a facility can be easily managed using Crestron's e-Outlook room scheduling plug-in for Microsoft® Outlook®, and Crestron's powerful RoomView™ AV Room Management Software, delivering the industry's best help desk control, monitoring and scheduling solutions.

The QM-RMCRX provides 2 bi-directional RS-232 ports, 2 Cresnet ports and 1 IR/Serial port, for full control of a wide array of AV devices. In addition, four digital input ports provide for direct connection to room occupancy sensors and power sensors.

> QuickMedia™ transport technology
> Composite, S-video, and RGBHV video outputs
> Line level stereo and speech output
> Volume, treble and bass control
> 20W amplifier
> 12-band graphic/parametric EQ
> Mic mixer with up to 40ms delay
> 2 RS-232 ports, 1 IR port, 4 digital inputs
> 2 Cresnet ports
> 1 10/100BaseT Ethernet port
> Built-in Web server for remote
    Web browser/XPanel control
> DHCP/DNS enabled with SSL, Secure Sockets Layer
> Power supply/wall module included

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Crestron QM-RMCRX QuickMedia™ Control System and AV Receiver/Processor

Processor

CPU: 32-bit Motorola ColdFire® Microprocessor

Processing Speed: 63 MIPS (Dhrystone 2.1 benchmark)

Memory

4MB Flash, 32MB SDRAM, 256KB NVRAM

Connectors

COM: (2) DB9 male; (2) Bidirectional RS-232 ports
Up to 115.2K baud
Hardware and software handshaking support
COM port B also serves as the computer console port

QM In: (1) 8-wire RJ45
Composite, S-Video and RGBHV video on twisted pairs 1-3
Digital audio via S/PDIF protocol on twisted pair 4
Cat5e cable requires delay skew less than or equal to 15ns per 100 meters

Digital Input: (1) 5-pin mini Phoenix terminal block
(4) Digital input ports (referenced to GND)
Rated for 0-24VDC; input impedance 20K ohms; logic threshold 2.5VDC nominal

IR: (1) 2-pin mini Phoenix terminal blocks
(1) IR/Serial output port
IR output up to 1.2 MHz
1-way serial TTL/RS-232 (0-5V) up to 9600 baud
Expandable via ST-SPL to control multiple disparate devices

Composite Video Out: (1) BNC male
Maximum input level: 1.0V p-p @ 0dB (unity gain, double termination)
Output impedance: 75 ohms
Bandwidth: >40MHz (-3dB) at unity gain

S-Video Out: (1) 4-pin mini DIN S-video
Maximum input level: 1.0V p-p @ 0dB (unity gain, double termination)
Output impedance: 75 ohms
Bandwidth: >40MHz (-3dB) at unity gain

RGBHV Out: (1) D15HD female

Maximum input level (R/G/B): 0.7V p-p @ 0dB (unity gain, double termination)
Input impedance: 75 ohms
H and V sync: 5V p-p maximum
Output impedance: 100 ohms

Audio Line-Level Out: (1) 6-pin mini Phoenix
Signal and ground for Speech, Left and Right
Maximum line level input: 2Vrms
Output impedance: 100 ohms
Audio bandwidth: 20Hz to 20KHz

Speaker: (2) 2-pin Electrovert type
10W per channel max into 4 or 8 ohms, THD max 1%

NET: (2) 4-pin mini Phoenix terminal blocks
Cresnet ports, Master/Slave selectable
Expandable via C2N-NPA8 Network Poll Accelerator

LAN: (1) 8-wire RJ45 with 2 LED indicators
10/100BaseT Ethernet port
Green LED indicates link status
Yellow LED indicates Ethernet activity

24VDC: (1) 24 Volt DC power jack (PW-2420RU power supply included)

RGB Video Compensation

Bandwidth: Suitable to support up to 1600x1200 @ 60Hz vertical rate at unity gain, with cable length up to 300 feet and maximum compensation at receiver

Bandwidth compensation: Digital control, 10-bit D/A

Digital gain control: 10-bit D/A (low frequency compensation)

Propagation delay: Digitally controlled delay line (4-bit control)

Maximum compensation: 15ns (for R, G or B independently)

Audio

Master volume: -80dB to +20dB, 0.1dB steps (balanced I/O)

4x3 Mic Mixer: Mixes two remote microphones with stereo program signals in any proportion

Mic delay: 40ms. maximum

Input compensation: ±10dB per input channel

Input impedance: 10K ohms balanced, 5K ohms unbalanced

Bass/Treble gain range: ±15dB, 0.5dB steps

Equalization modes: 5-band graphic plus 7-band parametric (speech optimized and non speech optimized); 3-band graphic plus 9-band parametric; 10-band graphic plus 2-band parametric; or 12-band parametric

PEQ filter gain: ±12dB, 0.1 dB steps from DAT; +24/-36dB, 0.1 dB steps from SIMPL

PEQ filter bandwidth: .02 to 2.0 octaves, .001 increments

PEQ filter center frequency: 25Hz to 19.9kHz from DAT; 5Hz to 24KHz from SIMPL

PEQ filter types: low pass, high pass, EQ filter (peaking/notching), bass shelf, and treble shelf

GEQ filter gain: +5/-10dB, 0.1dB steps from DAT; ±10dB, 0.1dB steps from SIMPL

Frequency response: +0/-0.5 dB 20Hz–20kHz

Total harmonic distortion (THD) + Noise: <0.05% at 1kHz, 20Hz–20kHz A-weighted, max I/O

S/N ratio: >94 dB, 20Hz–20 kHz A-weighted

LED Indicators / Reset Buttons

PWR, ACT, NET, COM A, COM B, IR, INPUT

HW-R: Hardware reset button (reboots the control system)

SW-R: Software reset button (restarts the SIMPL program)

Power Requirements

38 Watts (2 Amps @ 24 Volts DC)
PW-2420RU power supply included

Environmental

Temperature: 41° to 104°F (5° to 40℃)

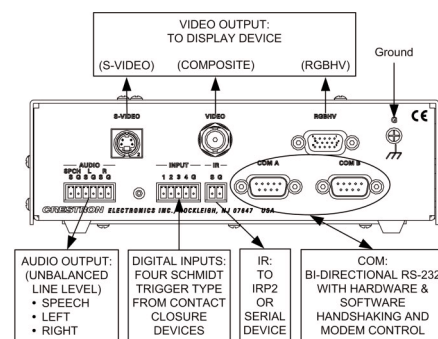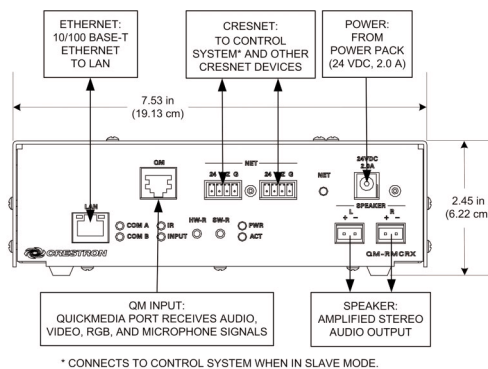**Humidity:** 10% to 90% RH (non-condensing)

Dimensions

Height: 2.45 in (6.22 cm)

Width: 7.53 in (19.13 cm)

Depth: 5.24 in (13.31 cm)

Weight

2.20 lb (1.00 kg)

ETHERNET: 10/100 BASE-T ETHERNET TO LAN

CRESNET: TO CONTROL SYSTEM* AND OTHER CRESNET DEVICES

POWER: FROM POWER PACK (24 VDC, 2.0 A)

7.53 in (19.13 cm)

2.45 in (6.22 cm)

QM INPUT: QUICKMEDIA PORT RECEIVES AUDIO, VIDEO, RGB, AND MICROPHONE SIGNALS

SPEAKER: AMPLIFIED STEREO AUDIO OUTPUT

* CONNECTS TO CONTROL SYSTEM WHEN IN SLAVE MODE.

VIDEO OUTPUT: TO DISPLAY DEVICE

(S-VIDEO)   (COMPOSITE)   (RGBHV)   Ground

AUDIO OUTPUT: (UNBALANCED LINE LEVEL)
• SPEECH
• LEFT
• RIGHT

DIGITAL INPUTS: FOUR SCHMIDT TRIGGER TYPE FROM CONTACT CLOSURE DEVICES

IR: TO IRP2 OR SERIAL DEVICE

COM: BI-DIRECTIONAL RS-232 WITH HARDWARE & SOFTWARE HANDSHAKING AND MODEM CONTROL

Specifications subject to change without notice. Doc 6182   01/04

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