Crestron **QM-MDM3X1**
3 x 1 QuickMedia™ Mini-Switcher
Operations & Installation Guide

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Contents

3 x 1 QuickMedia™ Mini-Switcher: QM-MDM3X1

Introduction

The QM-MDM3X1 is a compact 3 x 1 QuickMedia™ switcher designed to expand the input capacity of a single QM-RMCRX-BA receiver or any device with a QuickMedia (QM) input port. It attaches directly to the top of a QM-RMCRX-BA, providing inputs for up to three QuickMedia Wall Plates, FlipTop Boxes and other QM transmitters. It can also be installed beneath a table or in a closet to provide localized switching of any three QM sources.

The QM-MDM3X1 behaves as a midpoint QM device just like any other QM switcher. All signal routing is provided over inexpensive CAT5e type cable via Crestron's exclusive QuickMedia transport, supporting the distribution of high resolution RGB, video, stereo audio and microphone signals up to a total of 450 feet (137 meters) end to end. Up to two QM-MDM3X1s or other QuickMedia switchers, distribution centers and distribution amplifiers may be cascaded in a given QuickMedia signal path to support larger system configurations.

Regardless of the configuration, complete system operation can be made transparent to the end user with all signal routing occurring smoothly under the command of the MediaManager control system. Audio breakaway capability allows audio signals to be selected independent of video signals.

Four built-in Cresnet® ports provide for distribution of Cresnet control signals and power. The QM-MDM3X1 can furnish up to 41 Watts of Cresnet power when powered by a dedicated PW-2420RU power supply (sold separately) or 16 Watts if powered by a PW-2410RU (sold separately). The QM-MDM3X1 may also be powered from any 2-Series control system or Cresnet power supply via the Cresnet network.

NOTE: For QuickMedia wiring use CresCAT-QM, CresCAT-IM or quality CAT5e/CAT6 cable with a maximum delay skew of 15 ns per 100 m. The maximum aggregate cable length and delay skew between any QM transmitter (origination point) and QM receiver (endpoint) is 450 feet (137 meters) and 22 ns. A maximum of two QM midpoint devices may be inserted into a given QM signal path. Exceptions apply; refer to each respective product manual for details.

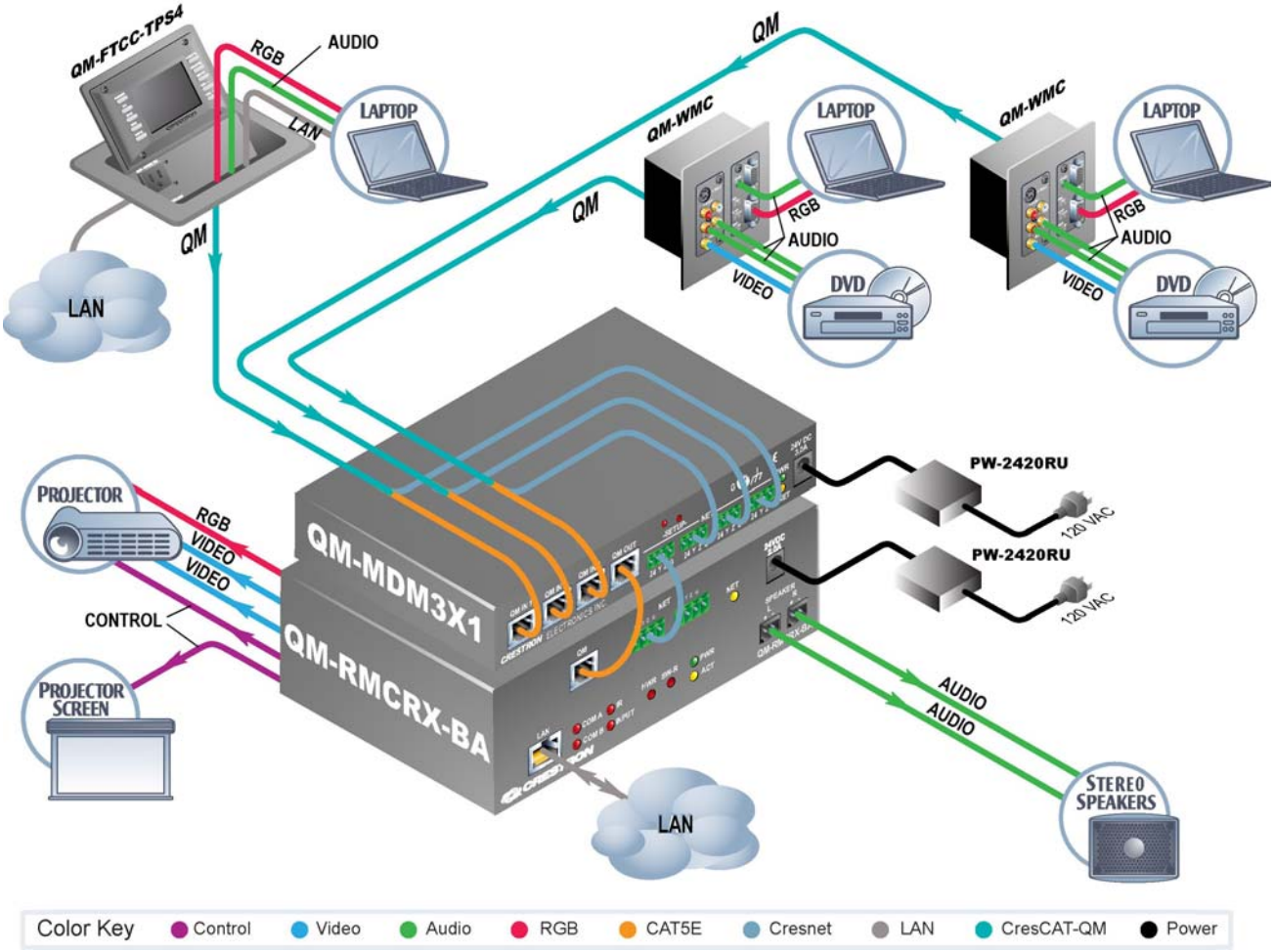
Features and Functions

- Compact 3 x1 QuickMedia™ switcher
- Provides easy input expansion for any QM receiver
- Mounts directly to pole mounted QM-RMCRX-BA
- Low profile design allows installation in furniture or closet
- Built-in Cresnet® power distribution
- Audio breakaway capability

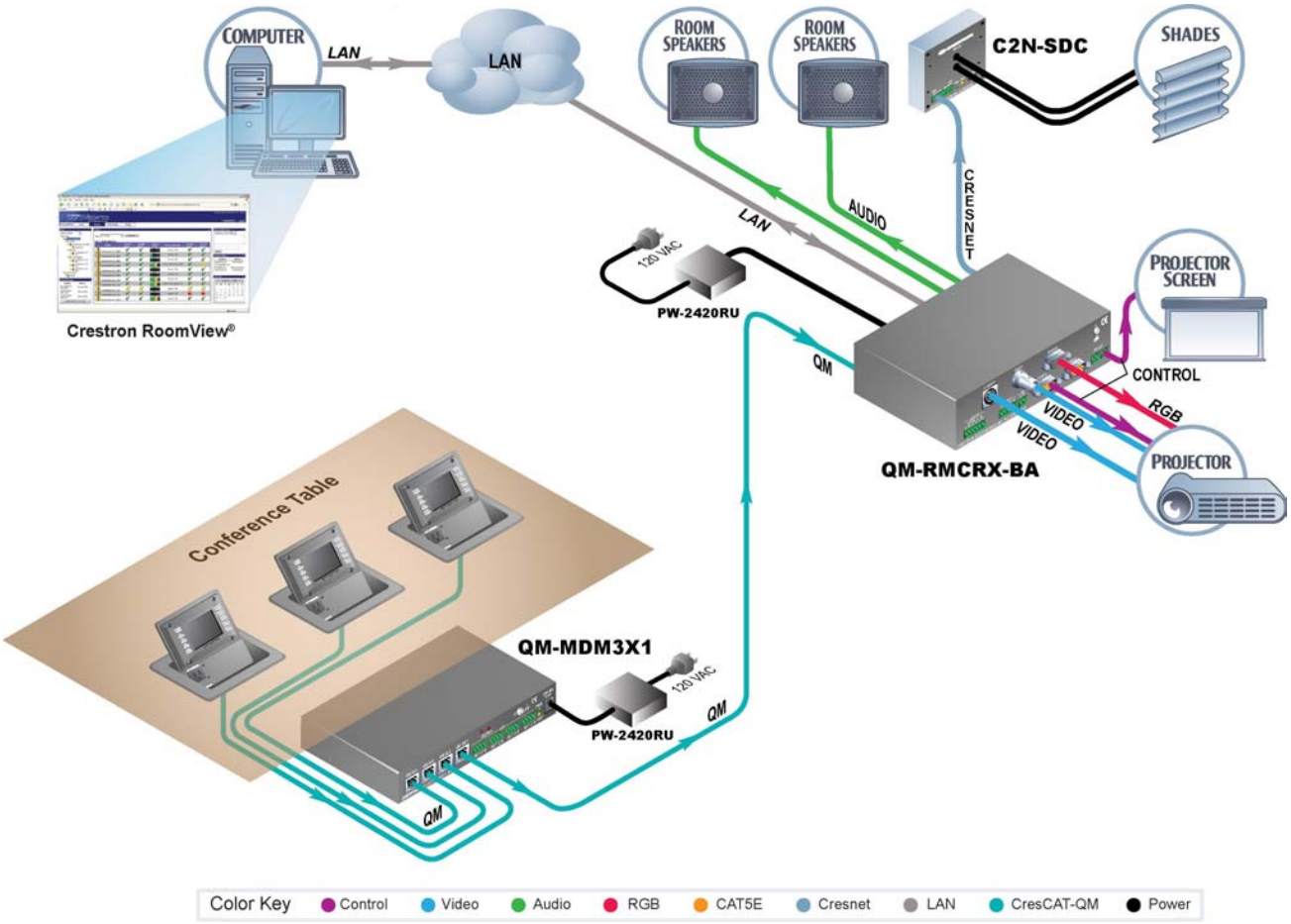
Applications

The following diagrams show a QM-MDM3X1 in a lecture hall and a business application.

QM-MDM3X1 in a Lecture Hall Application



QM-MDM3X1 in a Business Application



Specifications

Specifications for the QM-MDM3X1 are listed in the following table.

QM-MDM3X1 Specifications

SPECIFICATION	DETAILS
Video/RGB	
Switcher	3 x 1 selector switch; routes any of (3) QM video input signals to (1) QM output
Gain	0 dB
Audio	
Switcher	3 x 1 selector switch; routes any of (3) QM audio input signals to (1) QM output
Gain	0 dB
Power	
Power Consumption	9 Watts (0.375 Amps) @ 24 Volts DC
Recommended Power Supply	PW-2410RU or PW-2420RU (sold separately)

(Continued on following page)

QM-MDM3X1 Specifications (Continued)

SPECIFICATION	DETAILS
Power (Continued)	
Available Cresnet Power	16 Watts using PW-2410RU or 41 Watts using PW-2420RU
Cresnet Power Usage	9 Watts (0.375 Amps) @ 24 Volts DC with no power supply connected to the 24 VDC connector
Default Net ID	32
Minimum 2-Series Control System Update File[1, 2]	Version 3.137 or later
Environmental	
Temperature	32º to 104ºF (0º to 40ºC)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	50 BTU/Hr
Enclosure	
Chassis	Steel, black matte powder coat finish, convection cooled, vented top and sides with allowance for proper ventilation of attached QM-RMCRX-BA
Mounting	Freestanding, surface mount or attachment to top of QM-RMCRX-BA (adhesive feet, (4) "L" brackets and (4) strap brackets included)
Dimensions	
Height	1.17 in (2.96 cm)
Width	7.69 in (19.52 cm)
Depth	5.24 in (13.30 cm)
Weight	1.74 lbs (0.79 kg)

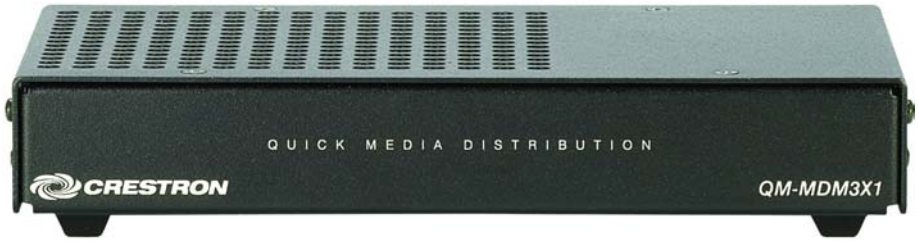
1. The latest software versions can be obtained from the Crestron website. Refer to the NOTE following these footnotes.
2. Crestron 2-Series control systems include the AV2 and PRO2. Consult the latest Crestron Product Catalog for a complete list of 2-Series control systems.

NOTE: Crestron software and any files on the website are for authorized Crestron dealers and Crestron Authorized Independent Programmers (CAIP) only. New users may be required to register to obtain access to certain areas of the site (including the FTP site).

Physical Description

This section provides information on the connections, controls and indicators available on your QM-MDM3X1.

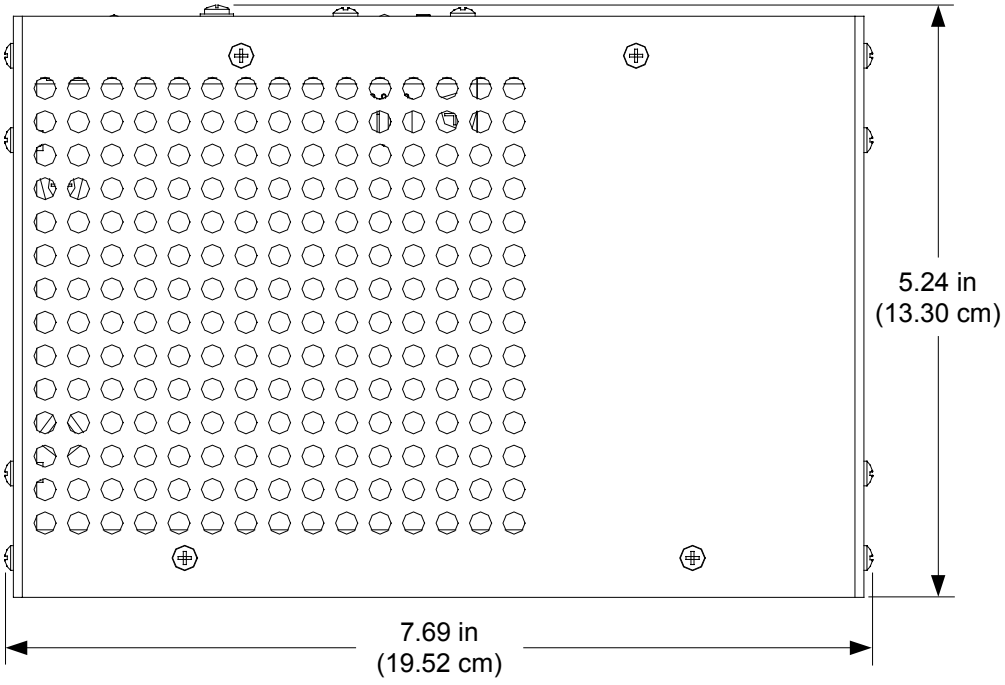
QM-MDM3X1 Physical View (Front)



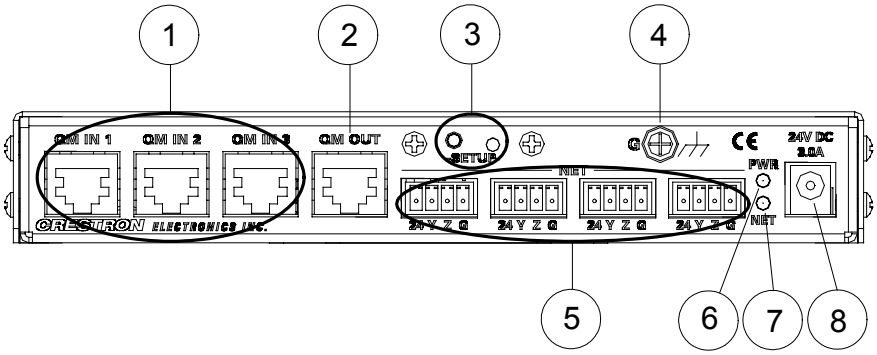
QM-MDM3X1 Physical View (Rear)

QM-MDM3X1 Overall Dimensions (Front View)

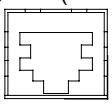
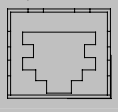
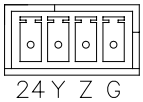
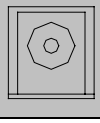
QM-MDM3X1 Overall Dimensions (Top View)



QM-MDM3X1 (Rear View)



Connectors, Controls & Indicators

#	CONNECTORS[1], CONTROLS & INDICATORS	DESCRIPTION
1	QM IN (1 – 3) 	(3) 8-wire RJ-45 female QuickMedia input ports; Connect to QM output ports of up to (3) QM transmitters or other QuickMedia devices via CresCAT-QM cable.[2, 3]
2	QM OUT 	(1) 8-wire RJ-45 female QuickMedia output port; Connects to QM input port of QM-RMCRX-BA or other QuickMedia device via CresCAT-QM cable.[2]
3	SETUP (button and LED)	(1) Miniature pushbutton and red LED, used for touch-settable ID (TSID) Used for setting network ID during initial configuration or when the device is being added/replaced.
4	G 	(1) 6-32 screw, chassis ground lug.
5	NET[4]  24 Y Z G	Four-position terminal block connector for data and power. Connects to Cresnet control network; Normally provides Cresnet distribution between QM-RMCRX-BA master port and (3) QM transmitters. Pin 1 (24) Power (24 Volts DC) Pin 2 (Y) Data Pin 3 (Z) Data Pin 4 (G) Ground
6	PWR LED	(1) Green LED, indicates 24 Volts DC power supplied from external power supply or Cresnet control network.
7	NET LED	(1) Yellow LED, indicates communication with Cresnet system.
8	24 VDC[4] 	(1) 2.1 mm barrel DC power jack, 24 Volt DC power input; (power supply sold separately); Passes through to **NET** ports to power additional Cresnet devices.

1. Interface connectors for **NET** ports are provided with the unit.
2. For QuickMedia wiring use CresCAT-QM, CresCAT-IM or quality CAT5e/CAT6 cable with a maximum delay skew of 15 ns per 100 m. The maximum aggregate cable length and delay skew between any QM transmitter (origination point) and QM receiver (endpoint) is 450 feet (137 meters) and 22 ns. A maximum of two QM midpoint devices may be inserted into a given QM signal path. Exceptions apply; refer to each respective product manual for details.
3. The eight-pin RJ-45 QuickMedia transport port accepts CAT5E/CAT6 carrying audio, video and microphone signals. The QM input port conforms to the 568B wiring standard. Refer to the following table for connector pinouts.

RJ-45 PIN NUMBER	WIRE COLORS (EIA 568B)	QM ASSIGNMENT: RGB	QM ASSIGNMENT: COMPOSITE, S-VIDEO, COMPONENT AND AUDIO
1	WHITE/ORANGE	- RGB RED	- CHROMINANCE (- P_r)
2	ORANGE	+ RGB RED	+ CHROMINANCE (+ P_r)
3	WHITE/GREEN	- RGB GREEN	- LUMINANCE (- Y)
4	BLUE	+ DIGITAL AUDIO	+ DIGITAL AUDIO
5	WHITE/BLUE	- DIGITAL AUDIO	- DIGITAL AUDIO
6	GREEN	+ RGB GREEN	+ LUMINANCE (+ Y)
7	WHITE/BROWN	- RGB BLUE	- COMPOSITE (- P_b)
8	BROWN	+ RGB BLUE	+ COMPOSITE (+ P_b)

4. The QM-MDM3X1 can be powered via the **24 VDC** jack or the **NET** port. Crestron recommends using one or the other but not both. Be sure to use a Crestron approved power supply as another may cause damage.

Industry Compliance

As of the date of manufacture, the QM-MDM3X1 has been tested and found to comply with specifications for CE marking and standards per EMC and Radiocommunications Compliance Labelling.

NOTE: This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Setup

Network Wiring

When wiring the network, consider the following:

- Use Crestron Certified Wire.
- Use Crestron power supplies for Crestron equipment.
- Provide sufficient power to the system.

  CAUTION: Insufficient power can lead to unpredictable results or damage to the equipment. Please use the Crestron Power Calculator to help calculate how much power is needed for the system (www.crestron.com/calculators).

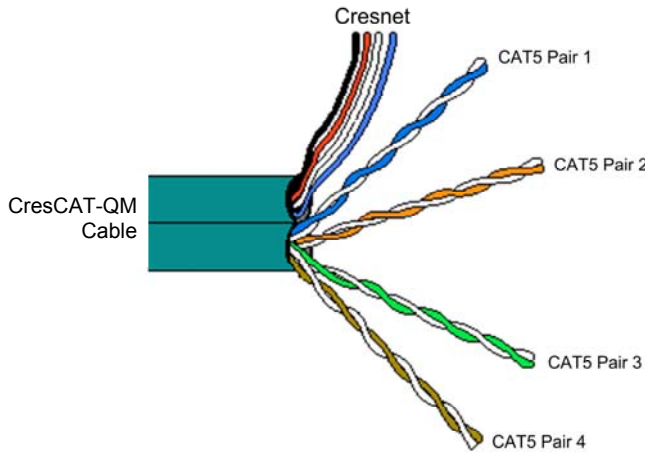
- For larger networks, use a Cresnet Hub/Repeater (CNXHUB) to maintain signal quality.

For more details, refer to "Check Network Wiring" on page 19.

QuickMedia Wiring

The Crestron QuickMedia cable (sold under the name "CresCAT-QM") contains one CAT5E cable and one Cresnet cable in Siamese jackets. Installation of any QM device is as simple as installing CresCAT-QM wires from the output of one device to the input of another. Installations are flexible, affordable and fast. For more information, refer to the latest revision of the Crestron MediaManager Applications Guide (Doc. 6244), which is available for download from the Crestron website (www.crestron.com/manuals).

CresCAT-QM Cable



NOTE: Do not untwist the two wires in a single pair for more than 1/3-1/2" (0.84-1.27 cm) when making a connection. The twists are critical to canceling out interference between the wires.

The aggregate cable length of a signal path originating at a QM transmitter and terminating at a QM receiver (with a QM-MDM3X1 in between) must not exceed 450 feet (137 meters). Video signals may experience a loss of quality over very long lengths of cable. This phenomenon is due to the added resistance and capacitance of longer cable lengths and is not peculiar to either Crestron and/or QuickMedia systems. To ensure sufficient bandwidth, the maximum aggregate cable length should not exceed 450 feet. The use of lower-resolution signals may allow increased cable length but must be tested by the installer with the sources to be used. The QM pin assignment is based on the EIA/TIA 568B RJ-45 Jack standard. Check your specific device, some (those without delay skew compensation) can use only 300 feet (90 meters) or less based upon resolution.

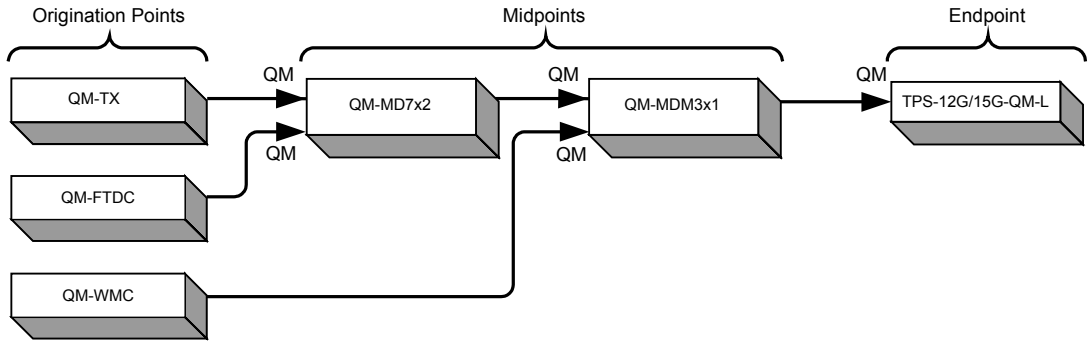
NOTE: When transmitting S-video, luminance uses the green video pathway and chrominance uses the red video pathway. When transmitting composite video, the signal is carried on the blue video pathway.

NOTE: When using CresCAT-QM wiring, four additional wires are included for making Cresnet connections.

When connecting multiple QM devices, the route between a QM origination point (transmitter) and a QM endpoint (receiver) cannot have more than two midpoints (e.g. QM-MDM3X1 or other QM switchers). Refer to the following diagram when configuring a QM network.

NOTE: The aggregate length from transmitter to receiver cannot have a delay skew of more than 22 ns.

QM Network Topology



Identity Code

The Net ID of the QM-MDM3X1 has been factory set to **32**. The Net IDs of multiple QM-MDM3X1 devices in the same system must be unique. Net IDs are changed from a personal computer (PC) via the Crestron Toolbox (refer to "Establishing Communication" on page 17).

When setting the Net ID, consider the following:

- The Net ID of each unit must match an ID code specified in the SIMPL™ Windows® program.
- Each network device must have a unique Net ID.

For more details, refer to the Crestron Toolbox help file.

Installation

The QM-MDM3X1 is designed to mount directly on top of a QM-RMCRX-BA (sold separately) or to the underside of a horizontal surface such as a desktop. It can also be used freestanding.

Tools required:

- Phillips screwdriver
- Drill/driver (for underside mounting only)

Supplied Hardware for the QM-MDM3X1

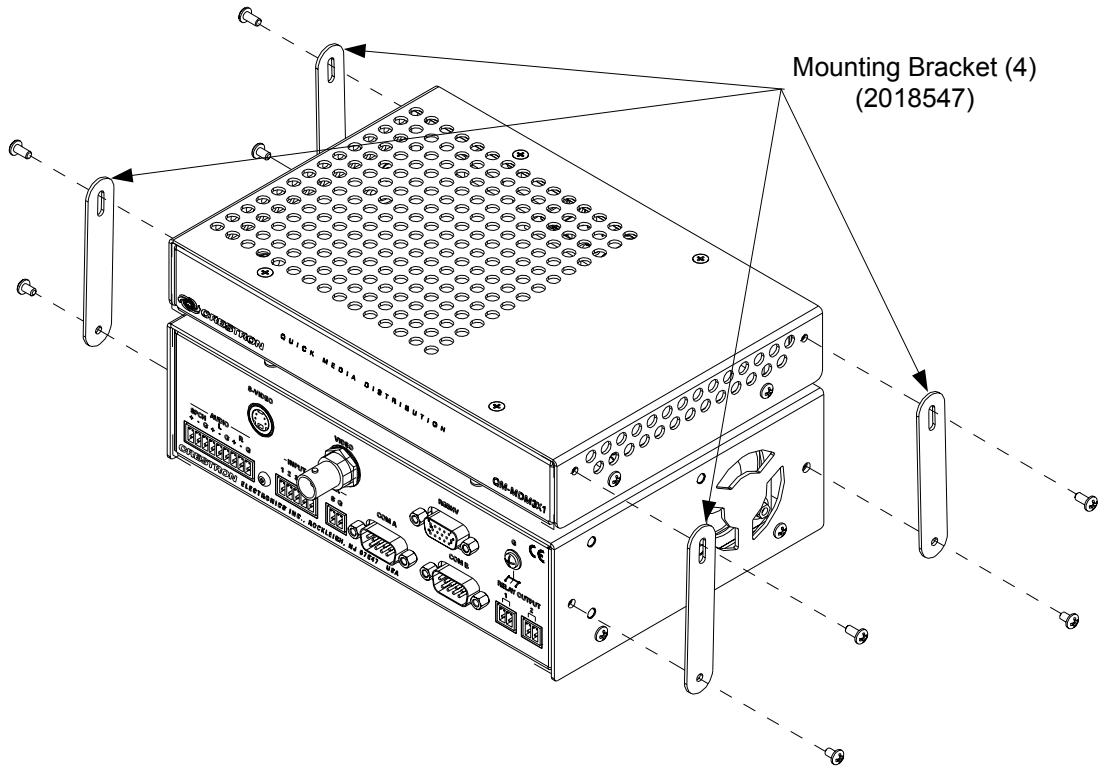
DESCRIPTION	PART NUMBER	QUANTITY
Mounting bracket (for attachment to QM-RMCRX-BA)	2018547	4
Mounting bracket (for underside mounting)	2009632	4
Adhesive feet	2002389	4

Attaching to QM-RMCRX-BA

To attach the QM-MDM3X1 to the top of a QM-RMCRX-BA, use the following procedure:

1. Attach the four adhesive "feet" provided with the QM-MDM3X1 to the bottom surface, one in each corner.
2. Remove the front and rear screws from both side panels of the QM-MDM3X1 and the front and rear screws from both side panels of the QM-RMCRX-BA, as shown in the diagram on the following page.
3. Place the QM-MDM3X1 on top of the QM-RMCRX-BA and install the two mounting brackets on each side of the pair, using the side panel screws from step 2.

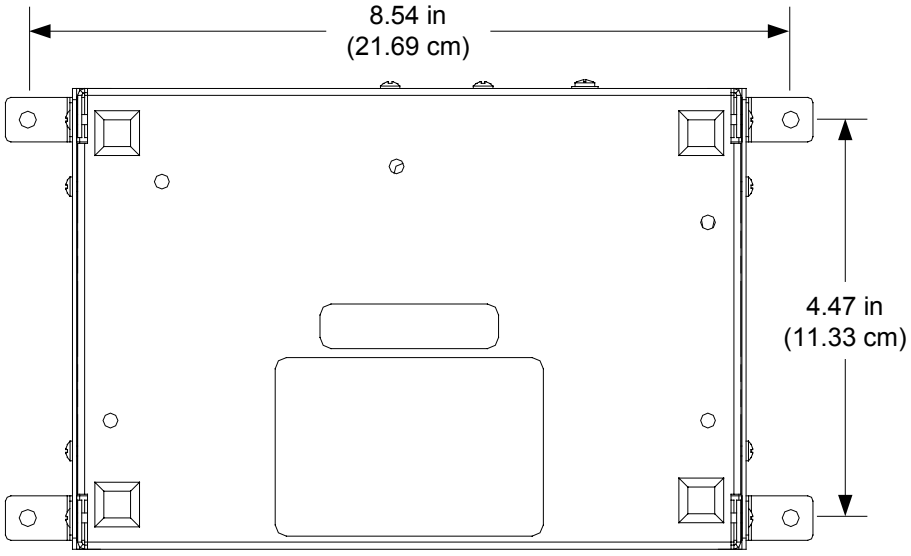
Attaching QM-MDM3X1 to a QM-RMCRX-BA



Underside Mounting

To attach the QM-MDM3X1 to the underside of a horizontal surface, use the following procedure:

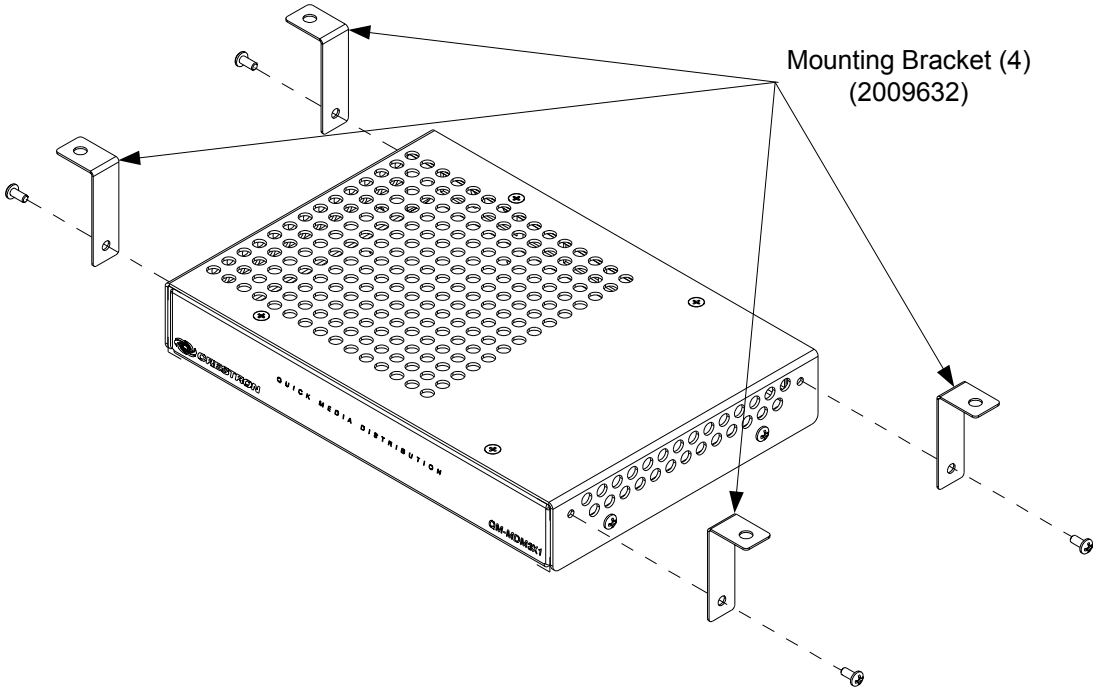
QM-MDM3X1 Bracket Dimensions for Underside Mounting



1. Remove the front and rear screws from both side panels of the QM-MDM3X1, as shown in the diagram on the following page.
2. Install the two L-shaped mounting brackets on each side of the QM-MDM3X1, using the side panel screws from step 1.

3. Use four #6 hardware screws (not supplied) to secure the unit to the underside of the surface.

Underside Mounting the QM-MDM3X1



NOTE: Do not over-tighten the screws as this may damage the surface and/or the unit.

NOTE: To prevent overheating, do not operate this product in an area that exceeds the environmental temperature range listed in the specifications table. Consideration must be given if installed in a closed or multi-unit rack assembly, inside a closed desk or in a closed podium since the operating ambient temperature of these environments may be greater than the room ambient temperature. Contact with thermal insulating materials should be avoided on all sides of the unit.

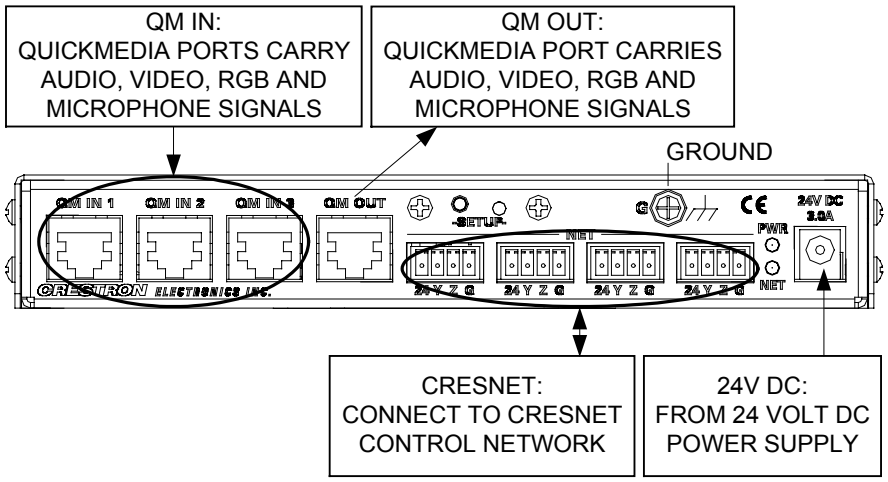
NOTE: When mounting the QM-MDM3X1 to the underside of a surface, to ensure proper ventilation, make sure to orient the unit so the ventilation holes on the top face upward. Similarly, when mounting to a vertical surface, orient the unit so the ventilation holes on one of the sides face upward.

Hardware Hookup

Connect the Device

Make the necessary connections as called out in the illustration that follows this paragraph. Refer to "Network Wiring" on page 8 before attaching the 4-position terminal block connector. Apply power after all connections have been made.

Hardware Connections for the QM-MDM3X1



NOTE: For optimum performance, Crestron strongly recommends using CresCAT-QM cable, available from Crestron. Other high-quality/low skew CAT5e/CAT6 wiring may also be used with varying performance.

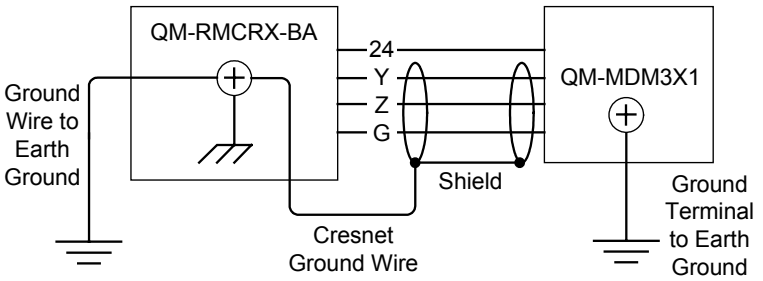
NOTE: Ensure the unit is properly grounded.

NOTE: The maximum continuous current from equipment under any external load conditions shall not exceed a current limit that is suitable for the minimum wire gauge used in interconnecting cables. The ratings on the connecting unit's supply input should be considered to prevent overloading the wiring.

Ground Wire Connections

Proper grounding is required. Connect the ground from the QM-MDM3X1 to earth ground. Connect the Cresnet shield at the QM-RMCRX-BA to the chassis ground provided on the QM-RMCRX-BA. The QM-RMCRX-BA chassis must also be connected to an earth ground (building steel). Refer to the following grounding diagram.

Ground Wire Connections



NOTE: Do not connect the shield to earth ground at the QM-MDM3X1.

Programming Software

Have a question or comment about Crestron software?

Answers to frequently asked questions (FAQs) can be viewed in the Online Help section of the Crestron website. To post a question or view questions you have submitted to Crestron's True Blue Support, log in at http://support.crestron.com. First-time users will need to establish a user account.

Earliest Version Software Requirements for the PC

NOTE: Crestron recommends that you use the latest software to take advantage of the most recently released features. The latest software is available from the Crestron website.

Crestron has developed an assortment of Windows®-based software tools to develop a Cresnet system. For the minimum recommended software versions, visit the version tracker page of the Crestron website (www.crestron.com/versiontracker).

Programming with Crestron SystemBuilder

Crestron SystemBuilder is the easiest method of programming but does not offer as much flexibility as SIMPL Windows. For additional details, download SystemBuilder from the Crestron website and examine the extensive help file.

Programming with SIMPL Windows

NOTE: While SIMPL Windows can be used to program the QM-MDM3X1, it is recommended to use SystemBuilder for configuring a QuickMedia system.

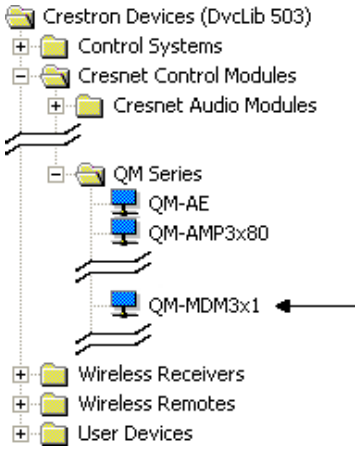
SIMPL Windows is Crestron's premier software for programming Crestron control systems. It is organized into two separate but equally important "Managers".

Configuration Manager

Configuration Manager is the view where programmers "build" a Crestron control system by selecting hardware from the *Device Library*.

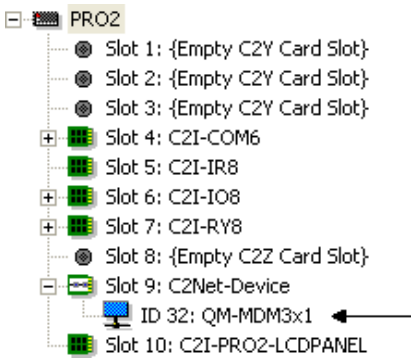
- To incorporate the QM-MDM3X1 into the system, drag the QM-MDM3X1 from the Cresnet Control Modules | QM Series folder of the *Device Library* and drop it in the *System Views.*

Locating the QM-MDM3X1 in the Device Library



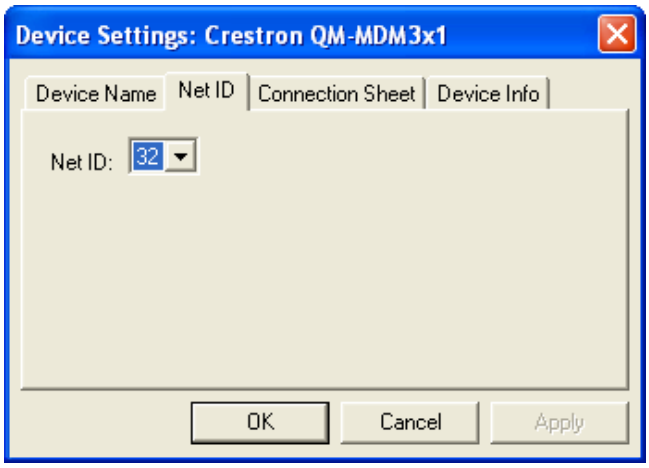
- The system tree of the control system displays the device in the appropriate slot with a default Net ID as shown in the following illustration.

C2Net Device, Slot 9



- Additional QM-MDM3X1 devices are assigned different Net ID numbers as they are added.
- If necessary, double click a device to open the "Device Settings" window and change the Net ID, as shown in the following figure.

"QM-MDM3X1 Device Settings" Window



- The ID code specified in the SIMPL Windows program must match the Net ID of each unit. Refer to "Identity Code" on page 9.

Program Manager

Program Manager is the view where programmers "program" a Crestron control system by assigning signals to symbols.

The symbol can be viewed by double clicking on the icon or dragging it into *Detail View*. Each signal in the symbol is described in the SIMPL Windows help file (**F1**).

Example Program

An example program for the QM-MDM3X1 is available from the Crestron website (www.crestron.com/exampleprograms).

Uploading and Upgrading

Crestron recommends using the latest programming software and that each device contains the latest firmware to take advantage of the most recently released features. However, before attempting to upload or upgrade it is necessary to establish communication. Once communication has been established, files (for example, programs or firmware) can be transferred to the control system (and/or device). Finally, program checks can be performed (such as changing the device ID or creating an IP table) to ensure proper functioning.

Establishing Communication

Use Crestron Toolbox for communicating with the QM-MDM3X1; refer to the Crestron Toolbox help file for details. There is a single method of communication: indirect communication.

Indirect Communication

- QM-MDM3X1 connects to control system via Cresnet.
- Establish communication between the PC and the control system as described in the latest version of the 2-Series Control Systems Reference Guide (Doc. 6256).
- Use the Address Book in Crestron Toolbox to create an entry for the QM-MDM3X1 using the expected communication protocol (Indirect). Select the Cresnet ID of the QM-MDM3X1 and the address book entry of the control system that is connected to the QM-MDM3X1.
- Display the QM-MDM3X1's "System Info" window (click the icon); communications are confirmed when the device information is displayed.

Programs and Firmware

Program or firmware files may be distributed from programmers to installers or from Crestron to dealers. Firmware upgrades are available from the Crestron website as new features are developed after product releases. One has the option to upload programs via the programming software or to upload and upgrade via the Crestron Toolbox. For details on uploading and upgrading, refer to the SIMPL Windows help file or the Crestron Toolbox help file.

SIMPL Windows

If a SIMPL Windows program is provided, it can be uploaded to the control system using SIMPL Windows or Crestron Toolbox.

Firmware

Check the Crestron website to find the latest firmware. (New users may be required to register to obtain access to certain areas of the site, including the FTP site.)

Upgrade QM-MDM3X1 firmware via Crestron Toolbox.

- Establish communication with the QM-MDM3X1 and display the "System Info" window.
- Select **Functions | Firmware…** to upgrade the QM-MDM3X1 firmware.

Program Checks

Using Crestron Toolbox, display the network device tree (**Tools | Network Device Tree**) to show all network devices connected to the control system. Right-click on the QM-MDM3X1 to display actions that can be performed on the QM-MDM3X1.

Problem Solving

Troubleshooting

The following table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

QM-MDM3X1 Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Device does not function.	Device is not communicating with the network.	Use Crestron Toolbox to poll the network. Verify network connection to the device.
	Device is not receiving power from a Crestron power source.	Use the provided Crestron power source. Verify connections.
	Device is not receiving sufficient power.	Use the Crestron Power Calculator to help calculate how much power is needed for the system.
PWR LED does not illuminate.	Device is not receiving power.	Verify power connection from either Cresnet or dedicated power supply.
NET LED does not illuminate	Improper Net ID used.	Verify that device ID matches Net ID in the program.
Loss of functionality due to electrostatic discharge.	Improper grounding.	Check that all ground connections have been made properly.

Check Network Wiring

Use the Right Wire

In order to ensure optimum performance over the full range of your installation topology, Crestron Certified Wire and only Crestron Certified Wire may be used. Failure to do so may incur additional charges if support is required to identify performance deficiencies because of using improper wire.

Calculate Power

CAUTION: Use only Crestron power supplies for Crestron equipment. Failure to do so could cause equipment damage or void the Crestron warranty.

CAUTION: Provide sufficient power to the system. Insufficient power can lead to unpredictable results or damage to the equipment. Please use the Crestron Power Calculator to help calculate how much power is needed for the system (www.crestron.com/calculators).

When calculating the length of wire for a particular Cresnet run, the wire gauge and the Cresnet power usage of each network unit to be connected must be taken into consideration. Use Crestron Certified Wire only. If Cresnet units are to be daisy-chained on the run, the Cresnet power usage of each network unit to be daisy-chained must be added together to determine the Cresnet power usage of the entire chain. If the unit is home-run from a Crestron system power supply network port, the

Cresnet power usage of that unit is the Cresnet power usage of the entire run. The wire gauge and the Cresnet power usage of the run should be used in the following equation to calculate the cable length value on the equation's left side.

Cable Length Equation

$$L < \frac{40{,}000}{R \times P}$$

Where: L = Length of run (or chain) in feet
R = 6 Ohms (Crestron Certified Wire: 18 AWG (0.75 MM^2))
or 1.6 Ohms (Cresnet HP: 12 AWG (4 MM^2))
P = Cresnet power usage of entire run (or chain)

Make sure the cable length value is less than the value calculated on the right side of the equation. For example, a Cresnet run using 18 AWG Crestron Certified Wire and drawing 20 watts should not have a length of run more than 333 feet. If Cresnet HP is used for the same run, its length could extend to 1250 feet.

NOTE: All Crestron certified Cresnet wiring must consist of two twisted pairs. One twisted pair is the +24V conductor and the GND conductor and the other twisted pair is the Y conductor and the Z conductor.

Strip and Tin Wire

When daisy-chaining Cresnet units, strip the ends of the wires carefully to avoid nicking the conductors. Twist together the ends of the wires that share a pin on the network connector and tin the twisted connection. Apply solder only to the ends of the twisted wires. Avoid tinning too far up the wires or the end becomes brittle. Insert the tinned connection into the Cresnet connector and tighten the retaining screw. Repeat the procedure for the other three conductors.

Add Hubs

For larger networks (i.e., greater than 28 network devices), it may become necessary to add a Cresnet Hub/Repeater (CNXHUB) to maintain signal quality throughout the network. Also, for networks with lengthy cable runs it may be necessary to add a Hub/Repeater after only 20 devices.

Reference Documents

The latest version of all documents mentioned within the guide can be obtained from the Crestron website (www.crestron.com/manuals). This link will provide a list of product manuals arranged in alphabetical order by model number.

List of Related Reference Documents

DOCUMENT TITLE
2-Series Control Systems Reference Guide
MediaManager Applications Guide

Further Inquiries

If you cannot locate specific information or have questions after reviewing this guide, please take advantage of Crestron's award winning customer service team by calling the Crestron corporate headquarters at 1-888-CRESTRON [1-888-273-7876]. For assistance in your local time zone, refer to the Crestron website (www.crestron.com/offices) for a listing of Crestron worldwide offices.

You can also log onto the online help section of the Crestron website (www.crestron.com/onlinehelp) to ask questions about Crestron products. First-time users will need to establish a user account to fully benefit from all available features.

Future Updates

As Crestron improves functions, adds new features and extends the capabilities of the QM-MDM3X1, additional information may be made available as manual updates. These updates are solely electronic and serve as intermediary supplements prior to the release of a complete technical documentation revision.

Check the Crestron website periodically for manual update availability and its relevance. Updates are identified as an "Addendum" in the Download column.

Return and Warranty Policies

Merchandise Returns / Repair Service

1. No merchandise may be returned for credit, exchange or service without prior authorization from CRESTRON. To obtain warranty service for CRESTRON products, contact an authorized CRESTRON dealer. Only authorized CRESTRON dealers may contact the factory and request an RMA (Return Merchandise Authorization) number. Enclose a note specifying the nature of the problem, name and phone number of contact person, RMA number and return address.
2. Products may be returned for credit, exchange or service with a CRESTRON Return Merchandise Authorization (RMA) number. Authorized returns must be shipped freight prepaid to CRESTRON, 6 Volvo Drive, Rockleigh, N.J. or its authorized subsidiaries, with RMA number clearly marked on the outside of all cartons. Shipments arriving freight collect or without an RMA number shall be subject to refusal. CRESTRON reserves the right in its sole and absolute discretion to charge a 15% restocking fee plus shipping costs on any products returned with an RMA.
3. Return freight charges following repair of items under warranty shall be paid by CRESTRON, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser.

CRESTRON Limited Warranty

CRESTRON ELECTRONICS, Inc. warrants its products to be free from manufacturing defects in materials and workmanship under normal use for a period of three (3) years from the date of purchase from CRESTRON, with the following exceptions: disk drives and any other moving or rotating mechanical parts, pan/tilt heads and power supplies are covered for a period of one (1) year; touchscreen display and overlay components are covered for 90 days; batteries and incandescent lamps are not covered.

This warranty extends to products purchased directly from CRESTRON or an authorized CRESTRON dealer. Purchasers should inquire of the dealer regarding the nature and extent of the dealer's warranty, if any.

CRESTRON shall not be liable to honor the terms of this warranty if the product has been used in any application other than that for which it was intended or if it has been subjected to misuse, accidental damage, modification or improper installation procedures. Furthermore, this warranty does not cover any product that has had the serial number altered, defaced or removed.

This warranty shall be the sole and exclusive remedy to the original purchaser. In no event shall CRESTRON be liable for incidental or consequential damages of any kind (property or economic damages inclusive) arising from the sale or use of this equipment. CRESTRON is not liable for any claim made by a third party or made by the purchaser for a third party.

CRESTRON shall, at its option, repair or replace any product found defective, without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty.

Except as expressly set forth in this warranty, CRESTRON makes no other warranties, expressed or implied, nor authorizes any other party to offer any warranty, including any implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supersedes all previous warranties.

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Operations & Installation Guide – DOC. 6608A
(2018858)
12.07
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