QMotion QIS v1.0
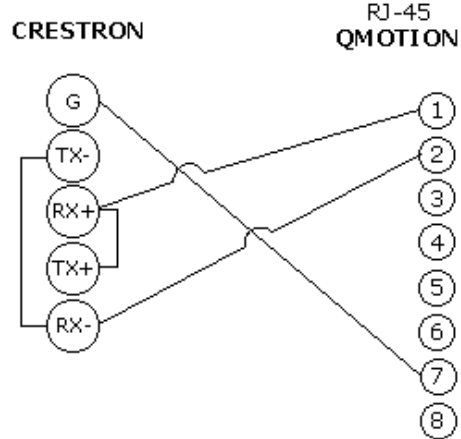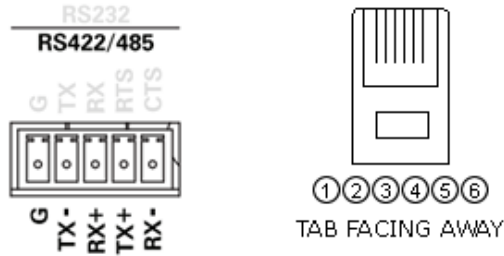# Module Application Guide

Description

This module is compatible with QMotion QIS shades via RS485.

Supported Processors

Any 2-series 3-series processor that supports RS485 is supported. Alternatively, if RS232 is needed, a RS232 to RS485 converter will work.

Compatibility			Processor Requirements	
3 COMPATIBLE	2 SERIES COMPATIBLE	System Builder NOT COMPATIBLE	Ethernet NOT NEEDED	Compact Flash NOT NEEDED

RS232
RS422/485

G TX RX RTS CTS

G
TX -
RX+
TX+
RX -

TAB FACING AWAY

① ② ③ ④ ⑤ ⑥

CRESTRON

RJ-45
QMOTION

G
TX-
RX+
TX+
RX-

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

SERIAL SETTINGS	
COMM STD	RS485
BAUD RATE	115200
DATA BITS	8
STOP BITS	1
PARITY	NONE
HW HANDSHAKING	NONE
SW HANDSHAKING	NONE

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Module Application

Determining shade addresses.

Currently, the only way to determine shade addresses is to:

- Apply power to the shade. This will generate a response that you can view in Crestron Debugger in which you can see the address.
- Tug on a shade. This will generate a response that you can view in Crestron Debugger in which you can see the address.

The address will be located between the {}. i.e. [#] {SHADE_ID} ….\x0D\x0A

Polling

The modules will not poll for feedback automatically. You will need poll at a frequency that you see fit for your project. Each Shade module has a poll input to query the shades current position. See the demo program for an example.

Sliders and Shades Controls

The analog input for any goto levels should never be ramped, it should be initialized. When using sliders and shade objects in VTPro-e, we recommend only sending the final touched position. See the demo program for an example.

Groups

At this time the only way to determine what group(s) is assigned to a shade is to pulse the query groups input and watch in SIMPL Debugger for the response. The response will contain the id's for each group the shade is in.

Signal and Parameter Descriptions –Processor Module

Bracketed signals such as "[signal_name]" are optional signals

DIGITAL INPUTS

ANALOG INPUTS

[groupx_goto_level] ....Initialize to send a group of shades to a level.

SERIAL INPUTS

[tx$] ....Tie to COM port tx$.

[from_shadex]...XSIG to shade module. Tie this signal to a shade modules [to_shade_processor] output. . See demo program for an example.

DIGITAL OUTPUTS

ANALOG OUTPUTS

SERIAL OUTPUTS

[rx$] ....Tie to COM port rx$.

[to_shadex]...XSIG to shade module. Tie this signal to a shade modules [from_shade_processor] input. See demo program for an example.

PARAMETERS

Groupx ID ....Enter the Group ID for [groupx_goto_level].

Signal and Parameter Descriptions –Shade Module

Bracketed signals such as "[signal_name]" are optional signals

DIGITAL INPUTS

[raise] ....Pulse to raise a shade. The shade will start raising until it reaches the upper limit.

[lower] ....Pulse to lower the shade. The shade will lower until it reaches the lower limit.

[stop] ....Pulse to stop the shade from traveling.

[query_position] ....Pulse to poll the shade for its current position.

[query_groups]...pulse to query the shade for which groups it is in. Shade will respond with all group id's that its in.

[identify]..Pulse to make the shade identify itself. The shade will travel up and down for approximately 20 seconds.

[assign_group_id]..pulse to assign shade to group as defined by the analog on [group_id].

[remove_group_id] ....pulse to remove the shade from a group as defined by the analog on [group_id].

ANALOG INPUTS

[goto_level]...Initialize to send the shade to a level where 0d corresponds to the lower limit and 65535d corresponds to the upper limit. Do not Ramp the input.

[group_id]..initialize to a group id to be used for [assign_group_id] [remove_group_id].

SERIAL INPUTS

[from_shade_processor] ....XSIG to processor module. Tie this signal to a processors [to_shadex] output.See demo program for an example.

DIGITAL OUTPUTS

ANALOG OUTPUTS

[level_fb] ....Actual level of shade as reported from the Shade where 0d corresponds to the lower limit and 65535d corresponds to the upper limit.

[level_fb_seeded] ....Level feedback of shade first seeded by goto_level, then output is reseeded by the actual level of shade as reported from the Shade when the shade reports its final position. 0d corresponds to the lower limit and 65535d corresponds to the upper limit.

SERIAL OUTPUTS

[to_shade_processor]..XSIG to processor module. Tie this signal to a processors [from_shadex] input. See demo program for an example.

PARAMETERS

Shade Address..Enter the shade address as its found the QMotion app described above.

Support

This module is supported by ControlWorks Consulting, LLC. Should you need support for this module please email support@controlworks.com or call us at 440-449-1100. ControlWorks normal office hours are 9 AM to 5 PM Eastern, Monday through Friday, excluding holidays.

Before calling for support, please ensure that you have loaded and tested operation using the included demonstration program and touchpanel(s) to ensure that you understand the correct operation of the module. It may be difficult for ControlWorks to provide support until the demonstration program is loaded.

Updates, when available, are automatically distributed via Email notification to the address entered when the module was purchased. In addition, updates may be obtained using your username and password at https://www.controlworks.com/Customers/Login.aspx.

Distribution Package Contents

The distribution package for this module should include:

QMotion_QIS_Processor_(ControlWorks)_v1.0.umc........Crestron User Module
QMotion_QIS_Engine_V1.0_(ControlWorks).usp............SIMPL+ file used within the processor module
QMotion_QIS_Engine_V1.0_(ControlWorks).ush ....SIMPL+ header file
QMotion_QIS_Shade_Control_(ControlWorks)_v1.0.umc.SIMPL+ file used within the processor module
Qmotion_QIS_TSW1052_(ControlWorks)_v1.0.vtp.........Demo touchpanel for TSW-1052
Qmotion_QIS_Demo_(ControlWorks)_v1.0.smw ....Demo program for PRO3 processor

Revision History

V1.0 caleb@controlworks.com 2016.08.01
        -initial release

Development Environment

This module version was developed on the following hardware and software. Different versions of hardware or software may or may not operate properly. If you have questions, please contact us.

Manufacturer Hardware	Software Version
Crestron Hardware	**Firmware Version**
Crestron AV3 Processor	1.501.0013
Software	**Software Version**
SIMPL Windows	4.03.24
Vision Tools Pro-e	6.0.07
Smart Graphics Controls	2.09.06.01
Crestron Database	57.00.003.00
Device Database	76.05.002.00

ControlWorks Consulting, LLC Module License Agreement

Definitions:
ControlWorks, *We*, and *Us* refer to ControlWorks Consulting, LLC, with headquarters located at 701 Beta Drive, Suite 22 Mayfield Village, Ohio 44143-2330. *You* and *Dealer* refer to the entity purchasing the module. *Client* and *End User* refer to the person or entity for whom the Crestron hardware is being installed and/or will utilize the installed system. *System* refers to all components described herein as well as other components, services, or utilities required to achieve the functionality described herein. *Module* refers to files required to implement the functionality provided by the module and may include source files with extensions such as UMC, USP, SMW and VTP. *Demo Program* refers to a group of files used to demonstrate the capabilities of the Module, for example a SIMPL Windows program and VisionTools Touchpanel file(s) illustrating the use of the Module but not including the Module. *Software* refers to the Module and the Demo Program.

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We provide limited levels of technical support only for the most recent version of the Module as determined by Us. We do not provide support for previous version of the module, modifications to the module not made by Us, to persons who have not purchased the module from Us. In addition, we may decline to provide support if the Demo Program has not been utilized. We may withdraw a module from sale and discontinue providing support at any time and for any reason, including, for example, if the equipment for which the Module is written is discontinued or substantially modified. The remainder of your rights and obligations pursuant to this license will not be affected should ControlWorks discontinue support for a module.

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You may not decrypt (if encrypted), reverse engineer, modify, translate, disassemble, or de-compile the Module in whole or part. You may modify the Demo Program. In no event will ControlWorks Consulting, LLC be liable for direct, indirect, incidental or consequential damages resulting from You modifying the Software in any manner.

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ControlWorks, in its sole and absolute discretion may refuse to provide support for the application of the Module in such a manner that We feel has the potential for property damage, or physical injury to any person. Dealer shall indemnify and hold harmless ControlWorks Consulting LLC, its employees, agents, and owners from any and all liability, including direct, indirect, and consequential damages, including but not limited to personal injury, property damage, or lost profits which may result from the operation of a program containing a ControlWorks Consulting, LLC Module or any component thereof.

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