Partner: Rollease Acmeda
Model: ARC2 Hub
Device Type: Shade/Motor Control

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GENERAL INFORMATION

SIMPLWINDOWS NAME:	Rollease Acmeda ARC2 v1.5 Command Processor IP
CATEGORY:	Shades/Drapes
VERSION:	1.5
SUMMARY:	This module controls IP communication with a Rollease Acmeda ARC2 hub.
GENERAL NOTES:	This module acts as the primary communication link to a particular ARC2 hub. Multiple instances of this module can be included in the Crestron program to communicate with different ARC2 hub devices on the network.
	Each instance of this primary module may have any number of additional "motor" modules (included as part of the module package) associated with it to control individual motors. This allows for a flexible mechanism to include only the motor control features desired within a particular system.
	In order to get the motor addresses for an installation, there are two possible methods:
	Method 1: download and use the Pulse LinQ (on a computer on the same network as the hub) to connect to the hub and discover the motors. This is the recommended method.
	Method 2: add the Rollease Acmeda ARC2 v1.5 Command Processor IP module to the Crestron SIMPL Windows program. Once connection has been established with the hub, place the Enable_Setup digital signal in the high position. Then from the mobile app, Automate, send commands to all of the motors that will need to be controlled. The ID of the motor that last moved/responded will be shown on the Motor_Address serial signal. Use this value as the Motor_Address parameter on the Motor Control module in your program.
CRESTRON HARDWARE REQUIRED:	Crestron 3-Series & 4-series processors **ONLY**.
SETUP OF CRESTRON HARDWARE:	N/A
VENDOR FIRMWARE:	N/A
VENDOR SETUP:	N/A

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PARAMETER:	
Command_Processor_ID	Setting to indicate the instance of a particular ARC2 Comm module. Up to 32 separate Comm modules may be used in a single program, each one operating independently and communicating with a different ARC2 hub. This parameter is used to distinguish events happening on difference ARC2 hub devices. Note that if multiple Comm modules are to be used in a single system, they must each have different Command Processor ID's set.
Pulse_Hub_IP_Address	Setting to indicate the IP address of the ARC2 hub to control.

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CONTROL:

Connect	D	Pulse to establish communication with the ARC2 hub, query for all relevant information and state and start the module "heartbeat" which is used to maintain communication with the hub and all connected motors by periodically sending status requests to confirm the hub and motors are still communicating with the control system. This signal is provided as a convenience should it be necessary to manually manage connection and disconnection with the hub. Connection will automatically occur upon program start.
Disconnect	D	Pulse to break communication with the ARC2 hub and all connected motors and stop the module "heartbeat".
Reinitialize	D	Pulse to re-establish communication with the ARC2 hub. This signal is provided as a convenience should it be desired to reinitialize at any point. Initialization will automatically occur upon connection to the hub.
Enable_Debug	D	Set high to enable internal trace messages to be printed in SIMPL Debugger. These messages may be useful while debugging to see what processes are occurring within the module. Note it is highly recommended to leave this signal low unless actively debugging as it causes much additional signal traffic in Debugger.
Enable_Setup	D	Set high to put the module into "setup" mode. This mode is provided as a convenience in order to ascertain the ID's of the various connected motors. Normal motor control will not work from the module while in Setup mode. Set this signal high only when you want to ascertain the ID's of the motors connected tot eh hub for use in your program.
Passthrough	S	This signal is used to manually send commands to the hub. Any serial data input on this signal will be added to the module's internal command queue and sent to the device. This signal is useful for troubleshooting purposes, sending test commands, or extending the control functionality to commands supported by the device but not supported by the module. Note, feedback processing will not occur on any commands that have been sent in on this signal. Any responses from the device as a result of a command sent on this signal will be ignored.
Enable_Passback	D	Set high to enable passback functionality. If enabled, all responses from the device will be sent out of the Passback feedback signal. This feature is useful should you wish to extend the functionality of the module and perform additional operations in your program based on the responses from the device.

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FEEDBACK:

Is_Communicating	D	High to indicate that communication has been established with the ARC2 hub. Once communication has been established, the module will attempt to initialize automatically.
Is_Initialized	D	High to indicate that the module and all connected motor component modules internal state variables are now synced with the hub and all connected motors current state. Once this signal goes high, the hub and all connected motors from your program are fully initialized.
Motor_Address	S	Serial signal indicating the last motor from which we received a response while the Enable_Setup signal is high. This allows you to identify the Motor ID for the individual motors connected to the hub.
Passback	S	Serial signal indicating the last response received from the hub, if Enable_Passback is set high.
Hub_Name	S	Serial signal indicating the name of the hub.
Hub_MAC	S	Serial signal indicating the MAC address of the hub.

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TESTING:

OPS USED FOR TESTING:	CP3: v1.8001.5362.29861 CP4: v2.8003.00056
SIMPL WINDOWS USED FOR TESTING:	4.3000.00
CRES DB USED FOR TESTING:	226.0500.003.00
DEVICE DATABASE:	200.36000.001.00
SYMBOL LIBRARY USED FOR TESTING:	1207
SAMPLE PROGRAM:	Rollease Acmeda ARC2 v1.5 Demo IP CP3
REVISION HISTORY:	v1.0 – Initial Release v1.1 – Change to Motor Component module. No change to Command Processor. Bumped version to match. v1.2 – Updated underlying .clz for Crestron Home support. No signal or functionality changes to this module. v1.3 – Change to Motor Component module. No change to Command Processor. Bumped version to match. v1.4 – Streamline Passthrough to bypass queue and send commands immediately to device. v1.5 – Update parsing to accommodate change in API