Partner: Mantel Mount
Model: MM860
Device Type: Motor Control

GENERAL INFORMATION

SIMPLWINDOWS NAME:	Mantel Mount MM860 v1.0 Demo IP
CATEGORY:	Motor Control
VERSION:	1.0
SUMMARY:	This module controls IP communication with a Mantel Mount MM860 motorized display mount.
GENERAL NOTES:	This module acts as the primary communication interface to a particular device. Multiple instances of this module can be included in the Crestron program to communicate with multiple devices on the network. The mount elevation must be lowered to a minimum of 90 degrees before the azimuth position can be changed.
CRESTRON HARDWARE REQUIRED:	Crestron 3-Series processor.
SETUP OF CRESTRON HARDWARE:	N/A
VENDOR FIRMWARE:	N/A
VENDOR SETUP:	N/A

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PARAMETER:	
IP_Address	Setting to indicate the IP address of the mount to control.
Port	Setting to indicate the remote IP port for device communication. The default port set in the device firmware is 81.

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CONTROL:

Connect	D	Pulse to establish communication with the mount and start the module "heartbeat" which is used to maintain communication with the mount by periodically sending firmware version requests to confirm the mount is still communicating with the control system.
Disconnect	D	Pulse to break communication with the mount and stop the module "heartbeat".
Reinitialize	D	Pulse to re-establish communication with the mount. This signal is provided as a convenience should it be desired to reinitialize at any point. Initialization will automatically occur when the program starts.
Status_Query	D	Pulse to send a status refresh request. The response is comprised of several values, including: error status, azimuth position, elevation position, left actuator, right actuator, memory index value, temperature, TV power state, last event index, and firmware version.
Enable_Debug	D	Pulse to toggle the 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 debugging disabled unless actively debugging as it causes much additional signal traffic in Debugger.
Clear_Fault	D	Pulse to clear the last error state indicated by the device.
Preset_Recall	D	Pulse to recall the preset specified by the Preset_Index analog value.
Preset_Save	D	Pulse to save the position of the mount to the preset specified by the Preset_Index analog value.
Preset_Index	A	Input the value of the preset location to save or recall. The valid range is (1-3).
Jog_Left	D	Pulse to move the mount incrementally to the left.
Jog_Right	D	Pulse to move the mount incrementally to the right.
Jog_Up	D	Pulse to move the mount incrementally upward.
Jog_Down	D	Pulse to move the mount incrementally downward.
Move_Left	D	Latch high to move the continuously towards the left limit. Set the signal low to stop moving.
Move_Right	D	Latch high to move the continuously towards the right limit. Set the signal low to stop moving.
Move_Up	D	Latch high to move the continuously towards the upper limit. Set the signal low to stop moving.
Move_Down	D	Latch high to move the continuously towards the lower limit. Set the signal low to stop moving.

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Move_Home	D	Pulse to move the move the mount to the stowed position.
Move_Stop	D	Pulse to stop movement of the mount.
Move_Azimuth	D	Pulse to change the azimuth angle of the mount specified by the Azimuth_SetPosition analog value.
Azimuth_SetPosition	A	Input the value for the azimuth angle. Valid range is (-23-23).
Move_Elevation	D	Pulse to change the elevation angle of the mount specified by the Elevation_SetPosition analog value.
Elevation_SetPosition	A	Input the value for the elevation angle. Valid range is (0-115).

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FEEDBACK:

Is_Communicating	D	High to indicate that communication has been established with the mount. Once communication has been established, the module will start sending periodic heartbeats to the device.
Is_Initialized	D	High to indicate that the module parameters have been set in the internal module instance and that a connection to the mount has been established.
Is_Stowed	D	High to indicate that the mount is in the stowed position.
Is_DebugEnabled	D	High to indicate that debug state is enabled, trace output is sent to SIMPL Debugger. Toggle the debug state by pulsing the Enable_Debug digital signal.
Azimuth_Position	A	Value indicating the current azimuth angle position of the mount. The value is scaled from in the internal range of (-23-23), to (0-46) for SIMPL+.
Elevation_Position	A	Value indicating the current elevation angle position of the mount. The valid range is (0-115).
Error_Status	S	String value indicates the error status of the mount.
Azimuth_Value	S	String value indicates the current azimuth position.
Elevation_Value	S	String value indicates the current elevation position.
Left_Actuator	S	String value indicates the left actuator position.
Right_Actuator	S	String value indicates the right actuator position.
Memory_Index_Value	S	String value indicates the memory index for the current preset.
Temperature	S	String value indicates the ambient temperature value around the mount.
TV_State	S	String value indicates the power state of the connect TV. 0 = off, 1 = on.
Last_Event	S	String value indicates the index of the source for the last command to the mount.
Firmware_Version	S	String value indicates the firmware version of the mount.

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TESTING:

OPS USED FOR TESTING:	RMC3 1.501.2960.30279
SIMPL WINDOWS USED FOR TESTING:	4.09.04
CRES DB USED FOR TESTING:	68.06.001.00
DEVICE DATABASE:	94.00.001.00
SYMBOL LIBRARY USED FOR TESTING:	1060
SAMPLE PROGRAM:	Mantel Mount MM860 v1.0 Demo IP RMC3
REVISION HISTORY:	v1.0 – Initial Release