Partner: Planar
Model: VM Series
Device Type: LCD Display

GENERAL INFORMATION

SIMPLWINDOWS NAME:	Planar VM Series v1.0 RS232
CATEGORY:	TV/Video Projector
VERSION:	1.0
SUMMARY:	This module controls RS232 communication with the Planar VM Series displays.
GENERAL NOTES:	1) In order to implement a video wall at this time, an instance of this module must be included in your program for **each** display and **each** display must have its own RS232 connection to the processor. Should the Crestron processor you are using not have enough RS232 ports to accommodate each display, additional port expansion boxes, such as the Crestron ST-COM, can be utilized. 2) Please ensure all Eco and Power Saving options are turned off in order for the module to function properly. 3) It has been noted that the display does not respond to commands that are sent too fast. In order to operate properly, it has been found that commands need to be sent no quicker than every 1 second. As such, a delay between commands has been implemented. This delay is most noticeable during ramping operations. It is recommended to use a direct touch-settable bargraph in this case where the value is set upon release of the bargraph. This will minimize the effect of the delay. The example program implements this functionality for reference.
CRESTRON HARDWARE REQUIRED:	Crestron 2-Series* or 3-Series processor. **this module is set up to work with a 2-Series processor but has not been tested with one as of this writing.*
SETUP OF CRESTRON HARDWARE:	RS232: Baud: 9600 Parity: None Data Bits: 8 Stop Bits: 1 Flow Control: None
VENDOR FIRMWARE:	N/A
VENDOR SETUP:	N/A

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PARAMETER:	
Monitor_ID	Setting to indicate the Monitor ID that has been set for the device.
H_Monitor_Count**	Setting to indicate the number of horizontal monitors in the video wall array.
V_Monitor_Count**	Setting to indicate the number of vertical monitors in the video wall array.
Position**	Setting to indicate the position of the monitor within the video wall array.
Volume_Step_Size	Setting to indicate the number of steps to increase/decrease the volume level.
Backlight_Step_Size	Setting to indicate the number of steps to increase/decrease the backlight level.

***This setting is only relevant if video wall functionality will be required. If no video wall functionality is required, this value should be left at default (1).*

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CONTROL:

Connect	D	Pulse to establish communication with the monitor.
Disconnect	D	Pulse to break communication with the monitor.
Reinitialize	D	Pulse to re-establish communication with the monitor. Pulsing this signal is the equivalent of pulsing Disconnect followed by Connect.
Power_On	D	Pulse to turn on the monitor.
Power_Off	D	Pulse to turn off the monitor.
Power_Toggle	D	Pulse to toggle the power status of the monitor.
Input_[x]	D	Pulse to switch to current input on the monitor to [x].
Volume_Up	D	Pulse to raise the volume of the monitor by 1 step. Hold to raise the volume of the monitor in 1 step increments until released.
Volume_Down	D	Pulse to lower the volume of the monitor by 1 step. Hold to lower the volume of the monitor in 1 step increments until released.
Volume_Set	A	Set the volume level of the monitor.
Volume_Mute_On	D	Pulse to mute the volume of the monitor.
Volume_Mute_Off	D	Pulse to unmute the volume of the monitor.
Volume_Mute_Toggle	D	Pulse to toggle the volume mute status of the monitor.
Backlight_Up	D	Pulse to raise the backlight level of the monitor by 1 step. Hold to raise the backlight level of the monitor in 1 step increments until released.
Backlight_Down	D	Pulse to lower the backlight level of the monitor by 1 step. Hold to lower the backlight level of the monitor in 1 step increments until released.
Backlight_Set	A	Set the backlight level of the monitor.
IR_[x]	D	Pulse to send an IR emulation command to the monitor for [X].

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CONTROL *continued*:		
Tiling_On	D	Pulse to set tiling (i.e. video wall) functionality on.
Tiling_Off	D	Pulse to set tiling (i.e. video wall) functionality off.
Tiling_Toggle	D	Pulse to toggle the tiling (i.e. video wall) status.
Frame_Comp_On	D	Pulse to turn frame compensation on.
Frame_Comp_Off	D	Pulse to turn frame compensation off.
Frame_Comp_Toggle	D	Pulse to toggle the frame compensation status.
Poll_Enable	D	Latch high to enable polling the monitor for the status of all relevant attributes. Unlatch to turn off polling. *Note: the monitor does not provide unsolicited feedback. Enabling polling is highly recommended for accurate and up-to-date feedback.*
From_Device	S	Serial signal to be routed from a 2-way COM port.

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FEEDBACK:

Is_Communicating	D	High to indicate that communication has been established with the device. Once communication has been established, the module will attempt to initialize automatically.
Is_Initialized	D	High to indicate that the module's internal state variables are now synced with the device's current state. *Note: Outgoing commands will not be sent to the monitor until the module is initialized. However, heartbeat commands will continue to be sent.*
Power_Is_On	D	High to indicate the monitor is currently on.
Input_Is_[X]	D	High to indicate the current input of the monitor is set to [X].
Volume_Level	A	Value indicating the current volume level of the monitor.
Volume_Is_Muted	D	High to indicate the volume of the monitor is currently muted.
Backlight_Level	A	Value indicating the current backlight level of the monitor.
Tiling_Is_On	D	High to indicate tiling (i.e. video wall) has been turned on.
Frame_Comp_Is_On	D	High to indicate frame compensation has been turned on.
Polling_Is_Enabled	D	High to indicate the module is currently set to poll for device status.
To_Device	S	Serial signal to be routed to a 2-way COM port.

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TESTING:

OPS USED FOR TESTING:	RMC3: 1.011.0023
SIMPL WINDOWS USED FOR TESTING:	4.03.14.01
CRES DB USED FOR TESTING:	52.05.013.00
DEVICE DATABASE:	67.00.001.00
SYMBOL LIBRARY USED FOR TESTING:	956
SAMPLE PROGRAM:	Planar VM Series v1.0 Demo RS232 RMC3
REVISION HISTORY:	v1.0 – Initial Release

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