Certified Module

Partner: Planar
Model: EP-Series 4K
Device Type: LCD Display

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GENERAL INFORMATION

SIMPLWINDOWS NAME:	Planar EP-Series 4K RS232 v1.0
CATEGORY:	TV/Video Projector
VERSION:	1.0
SUMMARY:	This module controls RS232 communication with the Planar EP-Series 4K monitors.
GENERAL NOTES:	Depending on the Power Save mode and inputs being used, the monitor may not respond to any commands or queries (other than power) if turned off. In order to ensure the module works correctly, Power Save must be set to "Always On". If Power Save is set to any other mode, the monitor must be powered on in order for the module to initialize and in order for any commands other than power on to function. It is **highly** recommended that no other Power Save option other than "Always On" is selected.
	If a Power Save mode other than "Always On" is selected, the monitor will attempt to initialize only after the monitor is turned on. This process may take up to 60 seconds. Once powered on and fully initialized, the full control functions of the module will be available for use.
	It has also been noticed during module development that some responses from the monitor are lost in some cases if a large number of commands are sent very quickly in succession.
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: 9600/19200/38400/115200 (Default: 19200) Parity: None Data Bits: 8 Stop Bits: 1 Flow Control: None
VENDOR FIRMWARE:	N/A
VENDOR SETUP:	N/A

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PARAMETER:	
Volume_Step_Size	Setting to indicate the single step amount to increment/decrement the volume.
Backlight_Step_Size	Setting to indicate the single step amount to increment/decrement the backlight.

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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.
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. The volume will be raised by the amount assigned to the parameter "Volume_Step_Size".
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. The volume will be lowered by the amount assigned to the parameter "Volume_Step_Size".
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 of the monitor by 1 step. Hold to raise the backlight of the monitor in 1 step increments until released. The backlight will be raised by the amount assigned to the parameter "Backlight_Step_Size".
Backlight _Down	D	Pulse to lower the backlight of the monitor by 1 step. Hold to lower the backlight of the monitor in 1 step increments until released. The backlight will be lowered by the amount assigned to the parameter "Backlight_Step_Size".
Backlight _Set	A	Set the backlight level of the monitor.
Message_Box_On	D	Pulse to turn the message box of the monitor on.
Message_Box _Off	D	Pulse to turn the message box of the monitor off.
Message_Box _Toggle	D	Pulse to toggle the message box status of the monitor.

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CONTROL *continued*:

Video_Input_[X]	D	Pulse to switch the current video input on the monitor to [X].
Video_Input_Cycle	D	Pulse to cycle to the next video input of the monitor.
Audio_Input_[X]	D	Pulse to switch the current audio input on the monitor to [X].
MultiSource_View_[X]	D	Pulse to set the monitor Multi-Source View to [X].
MultiSource_View_Cycle	D	Pulse to cycle to the next Multi-Source View of the monitor.
MultiSource_Select_2_[X]**	D	Pulse to switch the Multi-Source Window #2 input on the monitor to [X].
MultiSource_Select_3_[X]**	D	Pulse to switch the Multi-Source Window #3 input on the monitor to [X].
MultiSource_Select_4_[X]**	D	Pulse to switch the Multi-Source Window #4 input on the monitor to [X].
MultiSource_Preset_[X]	D	Pulse to recall Multi-Source Preset [X] on the monitor.
Power_Save_Config_[X]	D	Pulse to set the current power save config on the monitor to [X].
Power_Save_Config_Cycle	D	Pulse to cycle to the next power save config on the monitor.
IR_[X]	D	Pulse to send an IR emulation command to the monitor for [X].
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.

** the ability to choose an input for a Multi-Source Window will depend entirely on the current Multi-Source View setting. For example, if Multi-Source View is set to Off, the monitor will not allow selection of inputs for any Multi-Source Window other than Main. If the Multi-Source View is set to Dual, the monitor will allow selection of inputs only for Multi-Source Main and Window #2 and selection of inputs for Multi-Source Windows #3 and #4 will not work.

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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 if Power Save mode is set to "Always On" or, if another Power Save mode is selected, once the monitor is powered on.
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 (other than power) 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.
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.
Message_Box_Is_On	D	High to indicate the monitor message box is currently on.
Video_Input_Is_[X]	D	High to indicate the current video input of the monitor is set to [X].
Audio_Input_Is_[X]	D	High to indicate the current audio input of the monitor is set to [X].
MultiSource_View_Is_[X]	D	High to indicate the current Multi-Source View of the monitor is set to [X].
MultiSource_Select_2_Is_[X]	D	High to indicate the Multi-Source Window #2 input of the monitor is set to [X].
MultiSource_Select_3_Is_[X]	D	High to indicate the Multi-Source Window #3 input of the monitor is set to [X].
MultiSource_Select_4_Is_[X]	D	High to indicate the Multi-Source Window #4 input of the monitor is set to [X].
MultiSource_Preset_Is_[X]	D	Pulsed signal to indicate the last Multi-Source Preset that was selected on the monitor was [X].
Power_Save_Config_Is_[X]	D	High to indicate the current Power Save Config of the monitor is set to [X].
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 EP-Series 4K Demo RS232 RMC3
REVISION HISTORY:	v1.0 – Initial Release