Partner: Planar
Model: RA-Series
Device Type: LCD Display

GENERAL INFORMATION

SIMPLWINDOWS NAME:	Planar RA-Series IP v1.0
CATEGORY:	TV/Video Projector
VERSION:	1.0
SUMMARY:	This module controls IP communication with the Planar RA-Series displays.
GENERAL NOTES:	This module is intended to control a single monitor. Video wall functionality is not implemented at this time. The serial communication type for the display is set to "RS232" by default. In order to communicate with the display via IP, the communication type must be set to IP. However, the on-screen display settings do not include the option to change this setting, as of this writing. In order to set the communication type to IP, you must connect to the display's RS232 port (via PC/laptop connection) and send a Hex command manually. This command need only be sent once, prior to utilizing the module. See the notes and examples below. **\xA6<ID>\x00\x00\x00\x04\x01\x97\x01<CHECKSUM>\x0D** <ID>: this is the ID for the display as a single-byte hex character. <CHECKSUM>: this is the checksum which is calculated by doing a XOR of all the bytes preceding it. The built-in Windows calculator in "Programmer" mode will allow you to calculate this value. Format is a single-byte hex character. Example for a display with ID 1 **\xA6\x01\x00\x00\x00\x04\x01\x97\x01\x34\x0D** Example for a display with ID 2 **\xA6\x02\x00\x00\x00\x04\x01\x97\x01\x37\x0D**

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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:	TCP/IP: Port: 5000
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.
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:

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].
Input_Cycle	D	Pulse to cycle to the next input 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.
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*:		
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.*
{{TCP/IP_Client_>>_Connect-F}}	D	Digital signal to be routed from the TCP/IP client symbols Connect-F signal.
{{TCP/IP_Client_>>_status}}	A	Analog signal to be routed from the TCP/IP client symbols status signal.
{{TCP/IP_Client_>>_RX$}}	S	Serial signal to be routed from the TCP/IP client symbols RX$ signal.

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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.
Polling_Is_Enabled	D	High to indicate the module is currently set to poll for device status.
Connect-F	D	High to indicate the TCP/IP client is connected. This signal is effectively a mirror of the Connect-F signal on the TCP/IP client. It is recommended that this signal be commented out in your program.
status	A	Value indicating the TCP/IP client connection status. This signal is effectively a mirror of the status signal on the TCP/IP client. It is recommended that this signal be commented out in your program.
{{Connect_>>_TCP/IP_Client}}	D	High to indicate the module is ready to connect to the device. This signal should be routed to the TCP/IP Client symbols Connect signal.
{{TX$_>>_TCP/IP_Client}}	S	Serial signal to be routed to the TCP/IP client symbols TX$ signal.

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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 RA-Series Demo IP RMC3
REVISION HISTORY:	v1.0 – Initial Release

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