

Partner: Polycom  
 Model: SoundStructure  
 Device Type: DSP



**GENERAL INFORMATION**

<b>SIMPLWINDOWS NAME:</b>	Polycom SoundStructure IP Control Processor v2.1
<b>CATEGORY:</b>	Conferencing
<b>VERSION:</b>	2.1
<b>SUMMARY:</b>	This module manages IP connectivity to the SoundStructure DSP and performs initial feedback processing.
<b>GENERAL NOTES:</b>	<p>This module manages IP connectivity to the SoundStructure DSP. It is also responsible for authenticating to the SoundStructure if the SoundStructure has authentication enabled. Once the Enable_IP_Connection input is set high, this module will begin connecting to the SoundStructure and will attempt to stay connected for as long as this input is high. To disconnect from the SoundStructure, Enable_IP_Connection must be set low. Do not pulse this input!</p> <p>This module uses SIMPL+ Direct Sockets for TCP/IP connectivity; therefore a standalone TCP/IP Client symbol is not required.</p> <p>The module will not work unless the Initialize input is pulsed. Initializing will cause the feedback processor module to send a command to each output on the module. A control module connected to that input would respond with the virtual channel name for that control module. After this process is complete, this module will check each response from the SoundStructure for the virtual channel name. The response will then be sent to the output for the control module controlling that virtual channel. If the initialize input is pulsed and the module is NOT connected to SoundStructure, the module will wait until it is connected before starting the initialization sequence.</p> <p>If you need more than 100 control modules, you may use more than one Feedback processor module in your program.</p> <p>NOTE: POLYCOM RECOMMENDS END-USER VOLUME ADJUSTMENTS TO INPUTS AND OUTPUTS SHOULD BE PERFORMED WITH THE FADER CONTROLS AS SHOWN IN THE BASIC MODULE.</p> <p>INPUT AND OUTPUT GAIN CONTROLS FOUND ON THE ADVANCED MODULE SHOULD ONLY BE USED TO SET THE APPROPRIATE GAIN OR ATTENUATION REQUIRED TO BE COMPATIBLE WITH THE ELECTRICAL SIGNAL LEVELS COMING FROM ANY EXTERNAL EQUIPMENT (SUCH AS MICROPHONES, AMPLIFIERS, ETC.) THAT ARE CONNECTED TO THE SOUNDSTRUCTURE DEVICE. THE INPUT AND OUTPUT GAINS SHOULD BE SET DURING THE ROOM INSTALL PROCESS USING THE SOUNDSTRUCTURE STUDIO DESIGN SOFTWARE THAT IS SHIPPED WITH THE PRODUCT AND AVAILABLE FROM POLYCOM'S WEBSITE.</p> <p>END-USER ADJUSTMENTS OF THE INPUT AND OUTPUT GAIN SETTINGS AFTER INSTALLATION ARE NOT REQUIRED.</p>
<b>CRESTRON HARDWARE REQUIRED:</b>	C2I-COM6, C2COM-2/3, C2ENET-1/2, C2I-MC3-COM2-232, C2I-MC3ENET-1
<b>SETUP OF CRESTRON HARDWARE:</b>	<p>TCP/IP:</p> <p>Port: 52774 (no authentication)</p> <p>Port: 52775 (authentication enabled)</p>

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<b>VENDOR FIRMWARE:</b>	1.6.0-Beta2
<b>VENDOR SETUP:</b>	The Polycom SoundStructure must have a program loaded. The virtual channel names from that program must be entered in the parameter fields on the control modules.
<b>CABLE DIAGRAM:</b>	N/A

### CONTROL:

<b>Enable_IP_Connection</b>	D	Hold high to begin connecting via TCP/IP to the SoundStructure. The module will continually attempt to reconnect as long as this input is high if the connection fails. To disconnect from the SoundStructure, or to stop reconnecting, Enable_IP_Connection must be set low. Do not pulse this input!
<b>Initialize</b>	D	Pulse to start the initialization process. This will get the virtual channel names for all connected control modules.
<b>To_Device_From_Modules\$</b>	S	Routed from the To_Device\$ output of any and all control modules that are connected to this module. This transmits data from the control modules to the actual SoundStructure over the network.
<b>Virtual_Name_In_*\$</b>	S	Serial signal from the Virtual_Name_Out\$ output of the control modules. There should be one module connected per input.

### PARAMETERS:

<b>IP Address</b>	P	The IP address or hostname of the SoundStructure to use for connecting over IP. If you are using a hostname, ensure your Crestron system is configured to use at least one DNS server and that DNS server can be reached from the control system.
<b>Port</b>	P	<p>The TCP port to use for connecting to the SoundStructure. There are three choices available:</p> <p>52774: Used for unauthenticated access to the SoundStructure. Will not work if authentication is enabled.</p> <p>52775: Used when authentication is enabled on the SoundStructure. Will not work unless authentication is enabled.</p> <p>Auto: Attempts to cycle between ports 52774 and 52775 and connect to the SoundStructure regardless of whether or not authentication is enabled. Once the Crestron system successfully connects in auto mode, all subsequent reconnections will be made using the same port number that module successfully connected to. This behavior will continue until the control system is rebooted or the program is reloaded or restarted.</p> <p>The default value is "auto".</p>
<b>User Name</b>	P	Currently "admin" is the only username permitted to log in to the SoundStructure.
<b>Password</b>	P	<p>The password to use when authenticating to the SoundStructure. If authentication is not being used, this value is ignored and can be safely left blank.</p> <p>The default value is "456".</p>

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**FEEDBACK:**

Fully_Connected_Fb	D	Indicates this module has an active IP connection to the SoundStructure. If authentication is being used, this output will not go high until the Crestron system has successfully authenticated with the SoundStructure.
To_Preset_Modules\$	S	Serial signal to be routed to any Run Preset modules in the program. This may be connected to more than one Run Preset module if needed.
To_Virtual_Name_*_Module\$	S	Serial signal to be routed to the From_Processor\$ input on the control modules. There should be one module per connected input.

**TESTING:**

OPS USED FOR TESTING:	PRO2: 4.003.0015 MC3: 1.003.0008
SIMPL WINDOWS USED FOR TESTING:	4.03.20
DEVICE DB USED FOR TESTING:	73.05.002.00
CRES DB USED FOR TESTING:	55.00.011.00
SYMBOL LIBRARY USED FOR TESTING:	985
SAMPLE PROGRAM:	Polycom SoundStructure v2.1 Demo
REVISION HISTORY:	<p>V. 1.0 – Original Release</p> <p>V. 1.1 – Added level maximum and minimum feedback from the Polycom. These values are used to adjust the scale of the bar graph and prevent ramping beyond these points. Removed the maximum and minimum parameter fields on the module.</p> <p>V. 1.2 – Created separate basic and advanced controls. The basic controls do not offer control of the Level. Polycom recommends using the basic modules to control the SoundStructure.</p> <p>V. 2.0 – Now 3-Series compatible. Improved performance by reducing extraneous find() calls. Added logic to handle virtual names containing double quote characters by escaping them with a backslash.</p> <p>V. 2.1 – Incorporated 3-series best practices as needed in all Simpl+.</p>