Partner: Biamp
Model: Tesira
Device Type: Digital Signal Processor

GENERAL INFORMATION

SIMPLWINDOWS NAME:	Biamp Tesira Command Processor IP v3.2
CATEGORY:	DSP
VERSION:	3.2
SUMMARY:	This module controls all TCP/IP communication with the Biamp Tesira.
GENERAL NOTES:	The Biamp Tesira has the capabilities to allow multiple simultaneous IP connections to the same port and IP address. Because of this you can use multiple instances of the Biamp Tesira Command Processor IP v3.0 ("processing module") throughout your program.

This module is the core IP communication module for a suite of modules. The suite of modules utilizes the SIMPL# technology and will only work on the 3-Series Controller. Up to 32 instances of this module can be used in a single program slot. The module has a parameter that allows you to choose one of the 32 instance IDs. Each instance ID can only be used once. The other modules in this suite are control modules. The control modules are responsible for providing the actual control interface in SIMPL. With the SIMPL# technology, the Control modules no longer need to be physically "connected" to the command processor. They register themselves automatically behind the scenes. Each of the control modules also have a command processor ID parameter that you assign to the instance of the command processor to which they report to. You can virtually have an unlimited number of control modules report to a single instance of a command processor.

A .tmf file (Demo.tmf) was created for Crestron testing purposes and MUST be used for proper operation of the Tesira Demo program.

Once the processing module has determined that it is communicating with the Tesira, it will initialize any individual control modules that are registered to it. Once a control module receives all the responses it is looking for, it will instruct the processing module that its initialization has been completed. The processing module will then request the next control modules initialization. Once all control modules are initialized that are registered with the processing module, the Is_Initialized output on the processing module will go high. At this point, you will have full control of all functionality on the registered control modules. If any components fail registration due to Tesira configuration issues (missing instance tag, invalid index parameters or invalid attribute parameters), they will be placed in a quarantine pool until the configuration issue has been resolved. The number of quarantined components will propagate on the Quarantined_Count output on the processing module. The number of enabled and registered components will propagate on the Enabled_Count output on the processing module.

Because of the multi-module design, you can cause a lot of traffic on your system by triggering many input signals at the same time. If you have a lot of input signals to trigger at one time, be sure to pace the triggering of the signals allowing the controller to deal with the traffic. Keep in mind the modules, during the initialization process, will get the current state of each of your control points, So you do not need to duplicate this effort. If you have to put the control points into a default states for various room configurations, it is best to use the preset feature built into the Tesira. Trying to automate a preset using SIMPL logic will add a lot of traffic on your system, and will cause adverse effects.

You should wait for any and all processing modules to set "Is_Initialized" to high before attempting to control the Tesira. This is your indication that the Biamp programming is correct and ready to go. |

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Certified Module

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GENERAL INFORMATION *continued*

CRESTRON HARDWARE REQUIRED:	3-series & 4-series processors **only** (*Note: use 1.X modules for 2-series processors*)
SETUP OF CRESTRON HARDWARE:	N/A
VENDOR FIRMWARE:	Tesira Firmware – 3.16.0.27

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PARAMETER:	
Command_Processor_ID	Setting to indicate the ID for a particular processing module. Up to 32 separate processing modules may be used in a single program, each one operating independently. Note that if multiple processing modules are to be used in a single program, they **must** each have different ID's set.
IP_Transport_Type	Setting to indicate the method of connection to the Tesira (Telnet or SSH).
IP_Address	Setting to indicate the IP address of the Tesira.
Username	Optional username field for authentication if Tesira Device/System security has been enabled. When using SSH transport, the default username is 'default'.
Password	Optional password field for authentication if Tesira Device/System security has been enabled. When using SSH transport, the default password is left blank.

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CONTROL:		
Connect	D	The processing module will attempt to connect to the Tesira on the rising edge of this signal.
Disconnect	D	The processing module will disconnect from the Tesira on the rising edge of this signal.
Initialize	D	Set this input high to auto-initialize all control modules (once the processing module establishes communication with the Tesira).
Debug	D	Set this input high to allow internal trace messages to be printed in SIMPL Debugger. This is useful for debugging the processes going on inside the compiled SIMPL# code.
IPAddress	S	Sets the communication IP Address. You can use the Signal to set the IPAddress or the Parameter. The Signal IPAddress overrides the parameter if set.

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FEEDBACK:

Is_Initialized	D	Set to high when all registered control modules have successfully indicated that they have received the required responses to all their queries. This will still be set to high even if control modules have been quarantined.
Is_Communicating	D	Set to high when the processing module has successfully established communication with the Tesira and is receiving appropriate responses.
Enabled_Count	A	This signal indicates the total number of enabled components that are registered with the command processor. Certain modules contain more than one component, as an example, the Basic LevelMute module. This module contains both a Level and a Mute component and will register both with the command processor.
Quarantined_Count	A	This signal indicates the total number of components that are enabled and registered to the command processor, but failed initialization due to configuration issues. Certain modules contain more than one component, as an example, the Basic LevelMute module. This module contains both a Level and a Mute component and if the module defined contains a configuration issue, both components will be counted in the quarantine count.

TESTING:

OPS USED FOR TESTING:	CP3: v1.603.4242.34642
SIMPL WINDOWS USED FOR TESTING:	4.14.21
CRES DB USED FOR TESTING:	201.05.001.00
DEVICE DATABASE:	200.10.001.00
SYMBOL LIBRARY USED FOR TESTING:	1115
SAMPLE PROGRAM:	Biamp Tesira v3.2 IP Demo
REVISION HISTORY:	v2.0 – Initial Release

v2.1 – Upated to Support TesiraLux. Also added IPAddress serial signal, and updated to support up to 32 command processor per program.

v2.2 – Fixed issue with SSH and Telnet reconnection after loss of communication. In addition, updated SSH for firmware v3.2.0.144 requiring Keyboard Authentication Mode.

v2.3 – No modifications have been performed.

v3.0 – Added SIMPL# event callbacks. Reworked module Registration. Changed around how the subscription watchdog logic works. Once initialization is achieved, the subscription watchdog begins a patrolling or revolving method that tests each subscription capable registered instance tag.

v3.1 – Added quarantine functionality.

v3.2 – No revisions have been performed. |