Partner: BiAmp
Model: AudiaFlex & Nexia
Device Type: DSP

GENERAL INFORMATION

SIMPLWINDOWS NAME:	BiAmp AudiaFlex + Nexia Command Processor IP v7.5.1
CATEGORY:	Mixer
VERSION:	7.5.1
SUMMARY:	This module controls all TCP/IP communication with the BiAmp AudiaFlex or Nexia.
GENERAL NOTES:	This module controls all TCP/IP communication with the BiAmp AudiaFlex or Nexia. There are up to 500 serial outputs on this module, one for each of up to 500 control modules. All responses from the BiAmp are processed by this module and sent to the appropriate serial output for that module. It is now possible to skip outputs on the To_Modules[*] signals. The outputs should not be expanded past the last connected control module. All control modules MUST be located in the program where the BiAmp AudiaFlex + Nexia Command Processor IP v7.5 module is located. If controls are required in other program slots or processors the control and feedback signals should be passed. Do not pass the To_Modules[*] or From_Modules signals. When polling the BiAmp for current status, you should poll for only the information you really need at the time. The more data points you poll for at one time, the longer it will take to get an update for any one data point. It should not normally be necessary to poll for all data points all the time. This information is all contained in the Block properties field when developing the .dap file within the BiAmp AudiaFlex Windows software or the .nex file within the BiAmp Nexia software. A .dap file (Crestron Test w-VOIP v7.4.dap) was created for Crestron testing purposes and MUST be used for proper operation of the BiAmp AudiaFlex + Nexia Serial v7.5.1 Demo program. A .nex file (2 tc Room Combining v7.4.nex) was created for Crestron testing purposes and MUST be used for proper operation of the BiAmp AudiaFlex + Nexia IP v7.5.1 Demo program. The processor module will send a message to each output of the module at system start up to determine which outputs have control modules connected. When the Initialize input is pulsed it will request the device type, device id, index 1, and index 2 from each control module. If any of the control modules do not respond to this request the initComplete will not be set high.
CRESTRON HARDWARE REQUIRED:	C2ENET-1/2, C2I-*ENET-*
SETUP OF CRESTRON HARDWARE:	TCP/IP Port: 23 (Telnet)
VENDOR FIRMWARE:	4.560

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CONTROL:

Initialize	D	Pulse to initialize the communications between all of the BiAmp control modules being used in the Crestron program. If the initComplete output does not get set high after pulsing this input there was a problem with getting the requested information from the control modules.
Connect_F	D	Digital signal to be connected from the Connect-F output on a TCP/IP Client symbol.
From_Device	S	Serial signal to be routed from the RX$ output on a TCP/IP Client symbol.
From_Modules	S	Serial signal to be routed from all BiAmp control modules in the program.

FEEDBACK:

Initialize_is_Busy	D	High to indicate that the module is busy initializing communications with the other BiAmp control modules.
initComplete	D	High to indicate that the initialization process is complete. If this signal does not get set high after pulsing the Initialize input, there was an error with this process.
To_Device	S	Serial signal to be routed to the TX$ input on a TCP/IP Client symbol.
To_Modules[*]	S	Serial signals to be routed to the From_Processor input on a single BiAmp control module.

TESTING:

OPS USED FOR TESTING:	PRO3: 1.501.0013
SIMPL WINDOWS USED FOR TESTING:	4.03.20
DEVICE DB USED FOR TESTING:	73.00.001.00
CRESTRON DB USED FOR TESTING:	54.05.005.00
SAMPLE PROGRAM:	BiAmp Nexia IP v7.5.1 Demo
REVISION HISTORY:	V3 – 2-Series Only, corrected dialer timing, text display, speed of dialing and over all operation (firmware) V4 – Changed timing of dialer strings sent when off hook V5 – Made changes for the new responses from the BiAmp. These new responses have the command details and status in them. This eliminates the need to poll for status when making changes. Added new commands. Added buffering for the responses to improve system response. V5.1-Changed the Command Processor module to handle the response for presets. Also eliminated the Command Processor sending any response if the unit ID is determined to be 0. Changed all of the modules to allow instance IDs up to 65534d. Changed all modules to

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	look for the proper channel ID. Added MBMUTE command to the On-Off module. V7.0 – Changed all modules to allow the use on Instance ID Tags. Changed the volume control module to allow for the selection of the size of the volume change step. Changed the command processor module to handle all filtering of the feedback. Eliminated the unit buffer module. Also eliminated the need for using serial buffers. V7.1 – Fixed an issue in the Processor module that allowed feedback from the BiAmp to be sent to the wrong module. Also fixed an issue in the level control module with controlling the AEC Inputs. V7.2 – Created separate processor module for IP and Serial control. The IP processor module sets the telnet echo to off. Fixed an issue in the BiAmp AudiaFlex + Nexia Dialer module where a wait statement in Simpl+ was not programmed correctly. Fixed an issue with the processor module that allowed the processor to "lockup" if the queue pointers in the wrapped around. Changed the method that the processor module uses to collect the InstanceID information. The new method should be less confusing to program. Added a Simpl Windows gather to the processor modules to reduce the number of entries into the Simpl+. Added code to the control modules to prevent buttons presses more frequently than every 1 second. V7.4 – Adjusted a timing issue with the way that the modules initialize. Changed the Initialize input to allow a larger time window for pulsing the Initialize input after the 60 second lock out. Fixed an issue with the VoIP module when sending the DTMF tones. Tested the modules with the 3-Series processor. Added new compiler directives #IF-SERIES2 and #IF_SERIES3 in Simpl+ to clean up warnings when compiling Simpl+. V7.5 – Made several changes to the processor module: 1) Incorporated 3-series best practices for processing the responses from the BiAmp and from the control modules. 2) Changed the way that the module handles the initialization of communications between the processor module and the control modules. Made several changes to the control modules: 1) Incorporated 3-series best practices for processing data from the BiAmp AudiaFlex + Nexia Command Processor Serial v7.5 or the BiAmp AudiaFlex + Nexia Command Processor IP v7.5 module. 2) Added code to handle the new initialization process. 3) Added an output to indicate that there was an error when trying to control a point on the BiAmp. V7.5.1 – Fixed a timing issue in BiAmp AudiaFlex + Nexia Command Processor Serial v7.5 and the BiAmp AudiaFlex + Nexia Command Processor IP v7.5 module the with some 2-series processors.

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