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

GENERAL INFORMATION

SIMPLWINDOWS NAME:	Biamp Tesira VoIP Control v3.0
CATEGORY:	DSP
VERSION:	3.0
SUMMARY:	This module controls the Biamp Tesira VoIP Dialer and VoIP Control Status objects in the Biamp Tesira.
GENERAL NOTES:	This Biamp VoIP control object supports two lines, this module only supports one. Select which line to use from the parameter list.

The VoIP control object supports up to 6 separate calls per line. The Biamp protocol manuals calls these "Call Appearances". Set the Call_Select signal to select which "Call Appearance" to control. You MUST have this value set in order to use most of the controls on this module. Call_*_State, Call_*_State_Text, Call_*_Prompt_Text signals provide status of each call appearance.

It is worth noting that different VoIP/SIP networks may utilize call instances in different ways. It is common for some outbound calls initiated on Call Appearance 1 to be connected on Call Appearance 2 by the VoIP proxy server. This behavior is also observed with bridge conferencing services. If the end user does not have visibility of per-Call Appearance call activity, some Call State tracking and Call Select logic may be required. Be sure to adequately test this behavior on each respective site/project.

In order to use this module you must assign two Instance Tags, Dialer_Instance_Tag and Control_Status_Instance_Tag. The Biamp Dialer control object provides functionality for Call and Directory Control, while Control Status provide for call status and incoming call features. Together they provide complete control. If a Tesira HD-1 Dialer is used, it takes the place of the dialer block usually used in Tesira software. The instance tag of the HD-1 should be entered in the Crestron control module accordingly.

VoIP Receive and VoIP Transmit Level/Mute adjustment are supported by the Biamp Tesira Level Control v3.0 module and Biamp Tesira State Control v3.0 module. |
CRESTRON HARDWARE REQUIRED:	3-series processor **only** (*Note: use 1.X modules for 2-series processors*)
SETUP OF CRESTRON HARDWARE:	This module requires the Biamp Tesira Command Processor IP v3.0 or the Biamp Tesira Command Processor RS232 v3.0 modules in order to operate. Please read the help files associated with these modules.
VENDOR FIRMWARE:	Tesira Firmware - 3.5.0.32

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

CRESTRON
CERTIFIED **INTEGRATED** PARTNER

PARAMETER:	
Dialer_Instance_Tag	Dialer_Instance_Tag is the unique name of the Biamp Tesira VoIP Dialer object you wish to control. *Note: If your Instance_Tag has spaces in its name, surround the name with quotes using the \x22 hex escape sequence. Example: \x22My Name\x22*
Control_Status_Instance_Tag	Control_Status_Instance_Tag is the unique name of the Biamp Tesira VoIP Control Status object you wish to control. *Note: If your Instance_Tag has spaces in its name, surround the name with quotes using the \x22 hex escape sequence. Example: \x22My Name\x22*
Line_Number	The Biamp VoIP dialer supports two lines, select which line this module will control.
Command_Processor_ID	Setting to indicate the ID for the command processor that this module will register itself with.

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

CRESTRON
CERTIFIED **INTEGRATED** PARTNER

CONTROL:

Poll_Dialer	D	Pulse to poll for items that are not handled by subscriptions. A subscription is a process of registering for unsolicited messages. Some Biamp Tesira Control objects have this capability.
Call_Select	A	Assign to select which call to control. Valid values are 1d to 6d.
Conference	D	Pulse to add currently selected Call to conference. Call _Select must be set.
Answer	D	Pulse to answer currently selected Call. Call_Select must be set.
Flash	D	Pulse to perform Hook-Flash of the currently selected Call. Call_Select must be set.
Redial	D	Pulse to redial using the currently selected Call. Call_Select must be set.
Send	D	Pulse to send the DTMF characters that were sent when the call was off-hook using the currently selected Call. Call_Select must be set.
End	D	Pulse to end the call/conference of the currently selected Call. Call_Select must be set.
Resume	D	Pulse to resume the call/conference of the currently selected Call. Call_Select must be set.
Hold	D	Pulse to hold the call/conference of the currently selected Call. Call_Select must be set.
On_Hook, Off_Hook	D	Pulse to put the call/conference of the currently selected Call on-hook or off-hook. Call_Select must be set.
Transfer	D	Pulse to transfer the currently selected Call. Call_Select must be set.
Answer_Call_*	D	Pulse to answer a specific call.
Hangup_Call_*	D	Pulse to hang up a specific call.
Hangup_All	D	Pulse to hang up all calls.
Keypad_0-9, Star, Pound	D	Pulse to enter digits 0-9,* and # to Keypad_Text for dialing. If there is an active call, DTMF tones will be transmitted automatically. Send must be pulsed to send the DTMF tones.
Keypad_Clear, BackSpace	D	Pulse to edit Keypad_Text.
Keypad_Dial	D	Pulse to Dial Keypad_Text using the currently selected call. Call_Select must be set.

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

CONTROL *continued*:

Auto_Answer_On	D	Pulse to set auto-answer on.
Auto_Answer_Off	D	Pulse to set auto-answer off.
Auto_Answer_Toggle	D	Pulse to toggle auto-answer state.
AlphaNumeric_Entry_Text	S	Sets an Alphanumeric "Phone Number" to dial.
AlphaNumeric_Entry_Dial	D	Pulse to Dial the Alphanumeric "Phone Number" set by AlphaNumeric_Entry.
Select_Directory_Item_*	D	Pulse to select a directory item. Will assign directory item for display to Selected_Directory_Item_Name_Text and Select_Directory_Item_Num_Text.
Dial_Selected_Directory_Item	D	Pulse to dial directory entry displayed in Selected_Directory_Item_Name_Text and Select_Directory_Item_Num_Text.
Select_Directory_Save_Location	A	Setting this value will pick the location in the directory to edit an entry. Valid values are 1d through 16d.
Directory_Save_Name_Text	S	Setting this value will assign the display text of the directory item location assigned by Select_Directory_Save_Location. Save_Directory_Item must be pulsed in order to finalize the save.
Directory_Save_Num_Text	S	Setting this value will assign the phone number of the directory item location assigned by Select_Directory_Save_Location. Save_Directory_Item must be pulsed in order to finalize the save.
Save_Directory_Entry	D	Pulse to save Directory_Save_Name_Text and Directory_Save_Num_Text to the directory item assigned by Select_Directory_Save_Location.
DND_Enable	D	Pulse to set DND to enabled.
DND_Disable	D	Pulse to set DND to disabled.
DND_Toggle	D	Pulse to toggle DND.
DND_Response_DND	D	Pulse to set DND mode/response to "Do Not Disturb".
DND_Response_Busy	D	Pulse to set DND mode/ response to "Busy"
DND_Response_Decline	D	Pulse to set DND mode/ response to "Decline"
Enable	D	Set High: Control Module Enabled. Set Low: Control Module Disabled. *Note: Use a **1** for normal operation.*

FEEDBACK:

Is_Initialized	D	Signal is high to indicate the module has successfully received all required responses from its initializing queries.
Selected_Call	A	Indicates currently selected call. Valid values 0d to 6d. 0d indicates no call is selected.
Call_*_LED	A	Indicates the current state of the call. Values are set based on current call state values as follows: Grey = 0. LED will be set to this value when the call state is: "Init", "Idle" or "Reject". Red = 2. LED will be set to this value when the call state is: "Fault", "Active Muted", "Conference Hold", "On Hold", "Transfer Init Error", "Transfer On Hold", "Transfer Replaces Process", or "Transfer Process". Green = 1. LED will be set to this value when the call state is any value not listed above.

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

FEEDBACK *continued*:

Call_*_State	A	Indicates the current state of the call. Valid values are as follows. Init = 1 Fault = 2 Idle = 3 Dial Tone = 4 Silent = 5 Dialing = 6 Ringback = 7 Ringing = 8 Busy = 10 Reject = 11 Invalid Number = 12 Active = 13 Active Muted = 14 On Hold = 15 Waiting Ring = 16 Conference Active = 17 Conference Hold = 18 Transfer Init = 19 Transfer Silent= 20 Transfer Request Dialing = 21 Transfer Ringback = 25 Transfer Active = 24 Transfer Wait = 29 Transfer Decision = 27 Transfer Init Error = 28 Transfer On Hold = 26 Transfer Replaces Process = 23 Transfer Process = 22
Call_*_State_Text	S	Text descriptions of the Call_*_State signal. Valid values are as follows "Init", "Fault ", "Idle ", "Dial Tone", "Silent", "Dialing" , "Ringback", "Incoming Call", "Busy", "Reject ", "Invalid Number ", "Active ", "Active Muted ", "On Hold", "Waiting Ring ", "Conference Active", "Conference Hold "

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

FEEDBACK *continued*:

Call_*_Prompt_Text	S	Text help prompt, indicates possible next step for users or information on issue. Valid values are as follows. "Unknown", "None", "Starting", "Registering", "SIP User Not Configured", "Enter Number", "Connecting", "Incoming Call", "Peer Busy", "Call Cannot Be Completed", "On Hold", "On Held", "Conference", "Conference On Hold", "Connected", "Connected Muted", "Auth Failure", "Proxy Not Configured", "Network Init", "DHCP In Progress", "Network Link Down", "Network Link Up", "IP Address Conflict", "Network Configured", "CODEC Negotiation Failure", "Unexpected Error", "Auth User Not Configured", "Auth Password Not Configured"
Call_*_CID_Name_Text	S	Indicates Caller ID name of incoming call.
Call_*_CID_Num_Text	S	Indicates Caller ID number of incoming call.
Last_Number_Dialed_Text	S	Displays last number called.
Keypad_Text	S	Displays the current entered telephone number.
Auto_Answer_Is_On	D	Indicates Auto-Answer is enabled.
Auto_Answer_Is_Off	D	Indicates Auto-Answer is disabled.
Directory_Name_*_Text	S	Displays the name for a specific entry in the directory.
Directory_Number_*_Text	S	Displays the number for a specific entry in the directory.
Selected_Directory_Item	A	Indicates the index of the currently selected directory entry.
Selected_Directory_Item_Name_Text	S	Displays the name of the currently selected directory item.
Selected_Directory_Item_Num_Text	S	Displays the phone number of the currently selected directory item.
DND_Is_Enabled	D	Indicates Do Not Disturb is enabled.
DND_Response_Is_DND	D	Indicates Do Not Disturb response will be "Do Not Disturb"
DND_Response_Is_Busy	D	Indicates Do Not Disturb response will be "Busy"
DND_Response_Is_Decline	D	Indicates Do Not Disturb response will be "Decline"

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

TESTING:

OPS USED FOR TESTING:	CP3: v1.503.0016
SIMPL WINDOWS USED FOR TESTING:	4.09.04
CRES DB USED FOR TESTING:	66.06.003.00
DEVICE DATABASE:	92.00.002.00
SYMBOL LIBRARY USED FOR TESTING:	1055
SAMPLE PROGRAM:	Biamp Tesira v3.0 IP Demo Biamp Tesira v3.0 RS232 Demo
REVISION HISTORY:	v2.0 – Initial Release v2.1 – Fixed issue where the ControlStatus and Dialer instance tag names could not be similar. Fixed issue with CallerID and CallerName. Fixed parsing issue with Last Number Dialed. v2.2 – No modifications have been performed. v2.3 – No modifications have been performed. v3.0 – Added SIMPL# event callbacks. Reworked module Registration, and added Enable signal.