Partner: Polycom
Model: ATX
Device Type: Video Conference
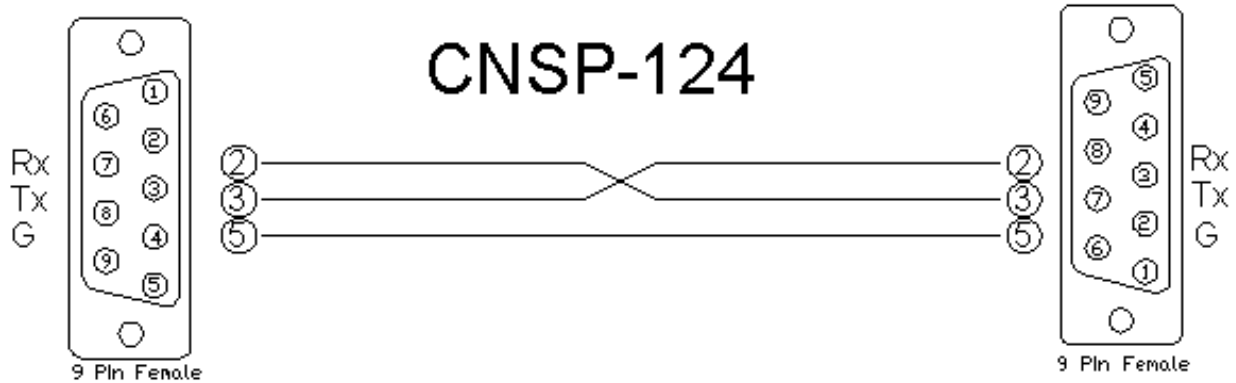
GENERAL INFORMATION

SIMPLWINDOWS NAME:	Polycom ATX v2.0.8.4
CATEGORY:	Conferencing
VERSION:	2.0.8.4
SUMMARY:	This module provides control and feedback for the Polycom ATX200, ATX300 and ATX400.
GENERAL NOTES:	This module controls the Polycom ATX200, ATX300 and ATX400 telepresence systems. The ATX telepresence system consists of two, three or four Polycom HDX8000s. The Crestron control system communicates with the primary HDX8000 only. The intent of this module and the associated touch panel pages is to provide the dealer with the opportunity to add functionality while still providing the standard Polycom telepresence functionality. There is a text file that must be loaded onto the Crestron processor. This file MUST be called System_Config.ini. It MUST be placed in the User folder in the Internal Flash. This file is only read when the Initialize input is pulsed. This must be completed one time before any control is allowed. The module will first read the System_Config.ini file. After that is complete it will initialize with the HDX. Once this process has successfully completed, the System_Is_Enabled output will go high. At this point, control is allowed. In order for the Meeting Composer functions to work, a Polycom RMX2000 bridge address must be entered in the Polycom ATX system. For more information on the Polycom RMX2000 bridge, please contact Polycom. In order for the global address functions to work, an LDAP global address server is required. The module will not work with a Polycom GDS or Microsoft Office Communications Server. Contact Polycom for more information about an LDAP. THIS MODULE IS PASSWORD PROTECTED.
CRESTRON HARDWARE REQUIRED:	C2ICOM
SETUP OF CRESTRON HARDWARE:	RS232 Baud: 38400 Parity: None Data Bits: 8 Stop Bits: 1
VENDOR FIRMWARE:	Polycom Architected Telepresence Experience™ (ATX) Software Development Kit (SDK) version 2.0 and future releases of the ATX SDK.
VENDOR SETUP:	The firmware must be loaded into all of the Polycom HDX8000 units. All of the HDX8000s need to have the option key installed to enable the ATX system. The HDXs also must be set up using Polycom's Telepresence software. If these steps are not taken the module will not work. In order for the Meeting Composer functions to work, a Polycom RMX2000 bridge address must be entered in the Polycom ATX system. For more information on the Polycom RMX2000 bridge, please contact Polycom.

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CABLE DIAGRAM:	CNSP-124

CONTROL:

Initialize	D	Pulse to read in the ini file and initialize communications with the ATX system. THIS MUST BE PULSED ONCE BEFORE CONTROL WILL BE ALLOWED.
Start_Button	D	Pulse to go to the main page.
<Show/Hide>_Display<_Toggle>	D	Pulse to set all video displays to either blank video or local video. This is only available when not in a video call.
Meeting_Composer_Button	D	Pulse to enter meeting composer mode. Will set the Meeting_Composer_Addressbook_Is_Selected high. Will also request the favorites or global address book from the ATX.
Speed_Dial_Button	D	Pulse to go to the speed dial page.
Ad_Hoc_Button	D	Pulse to go to the manual dial keypad. This will allow video or audio dialing.
Audio_DTMF	D	Pulse to display the audio DTMF page. This will only be enabled when you are on the Speed Dial page and there is an audio only call connected.
Meeting_Composer_Addressbook_Button	D	Pulse to go to the meeting composer address book page. Will request the favorites or global address book from the ATX.
Meeting_Composer_Addressbook_<Favorites/Global>_Button	D	Pulse to select either the favorites or global address book. This will request the desired address book from the ATX.
Meeting_Composer_Speed_Dial_Button	D	Pulse to go to the meeting composer speed dial page. If the UseINISpeedDials is not set to 1 in the ini file, this will request the speed dials from the ATX.
Meeting_Composer_Ad_Hoc_Button	D	Pulse to go to the meeting composer ad hoc dial page.

Meeting_Composer_Search_Button	D	Pulse to go to the meeting composer search page.
Meeting_Composer_Search_ <Favorites/Global>_Button	D	Pulse to set the address book for the search.
Meeting_Composer_DTMF	D	Pulse to show the meeting composer DTMF sub page. This will only be enabled when you are on the Meeting Composer page and there is a connected video call.
Meeting_Composer_Audio_DTMF	D	Pulse to show the meeting composer audio DTMF sub page. This will only be enabled when you are on the Meeting Composer page and there is a connected audio only call.
Help_Desk_Button	D	Pulse to dial the help desk number entered in the System_Config.ini file. If there is an audio call connected, that will be hung up first.
Video_Speed_Dial_<First/Previous/Next>_Page	D	Pulse to navigate through the video speed dial pages.
Video_Speed_Dial_Select_Entry_*	D	Pulse to select the desired video speed dial entry. If meeting composer mode is active, this will add the selected endpoint to the meeting composer list. If the selected entry is a group and meeting composer mode is active, pulse a second time to add the entire selected entry group to the meeting composer list.
Hang_Up_Video	D	Pulse to hang the connected video call.
Audio_Speed_Dial_<First/Previous/Next>_Page	D	Pulse to navigate through the audio speed dial pages.
Audio_Speed_Dial_Select_Entry_*	D	Pulse to select the desired audio speed dial entry. If meeting composer mode is active, this will add the selected endpoint to the meeting composer list.
Hang_Up_Audio	D	Pulse to hang up the connected audio call.
Ad_Hoc_Dial_Key_*	D	Pulse to enter a manual audio or video number to dial.
Ad_Hoc_Dial_Key_<Video/Audio>_Dial	D	Pulse to video or audio dial the entered number. If meeting composer mode is active, this will add the entered number to the meeting composer list. If a video or audio call is active, this will hang up that call.
Volume_<Up/Down>	D	Press and hold to adjust the near end volume.
Privacy_<On/Off/Toggle>	D	Pulse to mute and unmute the near end microphone.
Incoming_Video_Call_Answer	D	Pulse to answer the incoming video call.
Incoming_Video_Call_Ignore	D	Pulse to ignore the incoming video call.
Incoming_Audio_Call_Answer	D	Pulse to answer the incoming audio call.
Near_End_Send_<Document_Camera/Laptop>	D	Pulse to send the near end document camera or laptop. The document camera will only be enabled if the UseIntegratedDocCam is set to 1 in the ini

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		file. The associated *_Relay_Is_On output will be set high.
Do_Not_Disturb	D	Pulse to set the do not disturb mode to do not disturb or the previous auto answer mode. This will only be enabled if the ShowDNDButton is set to 1 in the ini file.
Camera_View_<Close_Up/Wide>	D	Pulse to recall camera presets when either in a bridge call or a single codec call. Close Up will recall preset 99. In a bridge call, Wide will recall preset 96 and in a single codec call it will recall preset 97. This will only be enabled if the UseCameraViews is set to 1 in the ini file.
DTMF_Key_*	D	Pulse to send the DTMF tones to the connected video call.
Audio_DTMF_Key_*	D	Pulse to send the DTMF tones to the connected audio call.
Favorites_<First/Previous/Next>_Page	D	Pulse to navigate through the favorites pages.
Favorites_Select_Entry_*	D	Pulse to add the selected entry to the meeting composer list. If the selected entry is a group, this will display the members of the group. If the selected entry is a group, pulse a second time to add the entire selected entry group to the meeting composer list.
Group_<First/Previous/Next>_Page	D	Pulse to navigate through the group member list pages.
Group_Select_Entry_*	D	Pulse to add the desired group member to the meeting composer list.
Meeting_Composer_<First/Previous/Next>_Page	D	Pulse to navigate through the meeting composer list. This list will either be the endpoints to be called or the endpoints in the active multisite conference.
Meeting_Composet_Select_Entry_*	D	Pulse to remove the desired endpoint from the list. If in an active multisite conference, this will drop the selected endpoint from the call.
Meeting_Composer_Connect	D	Pulse to connect the listed endpoints.
Meeting_Composer_Clear_All	D	Pulse to remove all of the endpoints from the list. This is only available if not in an active multisite conference.
Meeting_Composer_Search	D	Pulse to search the selected address book for the string entered on the Search_String_In input.
Meeting_Composer_Hang_Up_All	D	Pulse to disconnect all connected endpoints.
Search_String_In	S	Serial input for the string to be used in the address book search.
From_Device	S	Serial signal to be routed from a 2-way serial com port.

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FEEDBACK:		
Initialize_Is_Busy	D	High to indicate that the system is currently busy reading the ini file and starting communication with the ATX.
Start_Button_Is_Active	D	Feedback for the Start_Button.
Start_Button_Mode	A	Analog signal for the start button mode. Mode 0 is not enabled, mode 1 is enabled.
System_Is_Enabled	D	High to indicate that the initialization completed successfully.
Show_Main_Page	D	Will pulse to show the main page.
Show_Opening_Page	D	Will pulse to show the opening page.
System_Is_ATX_<200/300/400>	D	High to indicate which ATX system model is being controlled.
<Show/Hide>_Display_Is_Active	D	High to indicate the current state of the local or blank video output to the displays.
*_Display_Active_Mode	A	Analog output indicating the current state of each display during a call. Mode 0 is not active, mode 1 is active.
Meeting_Composer_Is_Selected	D	High to indicate that the Meeting_Composer_Button input has been pulsed.
Speed_Dial_Is_Selected	D	High to indicate that the Speed_Dial_Button input has been pulsed.
Show_Video_Speed_Dial	D	High to show the video speed dial page. This will be high when not in a video call and the Speed_Dial_Is_Selected output is high.
Show_Audio_Speed_Dial	D	High to show the audio speed dial page. This will be high when not in an audio call and the Speed_Dial_Is_Selected output is high.
Ad_Hoc_Is_Selected	D	High to indicate that the Ad_Hoc_Button input has been pulsed.
Audio_DTMF_Is_Selected	D	High to indicate that the Audio DTMF button has been pressed. This should be connected to the Audio DTMF sub page.
Meeting_Composer_Addressbook_Is_Selected	D	High to indicate that the Meeting_Composer_Addressbook_Button input was pulsed.
Meeting_Composer_Addressbook_Favorites_Is_Selected	D	High to indicate that the Meeting_Composer_Addressbook_Favorites_Button input was pulsed.
Meeting_Composer_Addressbook_Global_Is_Selected	D	High to indicate that the Meeting_Composer_Addressbook_Global_Button input was pulsed.
Meeting_Composer_Speed_Dial_Is_Selected	D	High to indicate that the Meeting_Composer_Speed_Dial_Button input was pulsed.

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Meeting_Composer_Ad_Hoc _Is_Selected	D	High to indicate that the Meeting_Composer_Ad_Hoc_Button input was pulsed.
Meeting_Composer_Search _Is_Selected	D	High to indicate that the Meeting_Composer_Search_Button input was pulsed.
Meeting_Composer_Search_ Favorites_Is_Selected	D	High to indicate that the Meeting_Composer_Search_Favorites_Button input was pulsed.
Meeting_Composer_Search_ Global_Is_Selected	D	High to indicate that the Meeting_Composer_Search_Global_Button input was pulsed.
Show_Meeting_Composer_ Search_ Keyboard_Sub_Page	D	High to show the search keyboard subpage.
Show_Meeting_Composer_Search_ Results_Sub_Page	D	High to show the search results subpage.
Meeting_Composer_DTMF _Is_Selected	D	High to indicate that the Meeting_Composer_DTMF_Button was pulsed.
Meeting_Composer_Audio_DTMF _Is_Selected	D	High to indicate that the Meeting_Composer_Audio_DTMF_Button was pulsed.
Help_Desk_Button_Is_Enabled	D	High to indicate that the help desk button is enabled.
Help_Desk_Call_Disconnect_Audio_Text	S	Serial signal to display a message that the connected audio call is being disconnected.
System_Name_Text	S	Serial signal indicating the system name as entered in the ini file.
Codec_Address_Text	S	Serial signal indicating the codec address of the connected Primary codec.
Video_Location_Text	S	Serial signal indicating the connected video location.
Video_Speed_Dial_<Previous/Next> _Button_Mode	A	Analog signal indicating the mode for the video speed dial next and previous buttons. Mode 0 is disabled, mode 1 is enabled.
Video_Speed_Dial_Entry_*_Name_Text	S	Serial signal indicating the names of the video speed dial entries.
Video_Call_Status_Text	S	Serial signal indicating the current video call status.
Audio_Speed_Dial_<Previous/Next> _Button_Mode	A	Analog signal indicating the mode for the audio speed dial next and previous buttons. Mode 0 is disabled, mode 1 is enabled.
Audio_Speed_Dial_Entry_*_Name_Text	S	Serial signal indicating the names of the audio speed dial entries.
Ad_Hoc_Dial_Text	S	Serial signal indicating the entered ad hoc dial string.
<Video/Audio>_Call_Is_In_Progress	D	High to indicate whether there are connected video and audio calls.
Volume_Level_Gauge	A	Analog signal indicating the current near end volume level.
Privacy_Is_<On/Off>	D	High to indicate the current state of the privacy (near end microphone mute).

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Signal	Type	Description
Incoming_<Video/Audio>_Call_Text	S	Serial signal indicating the incoming call information.
Document_Camera_Is_Enabled	D	High to indicate that the document camera is enabled.
Near_End_Sending_<Document_Camera/Laptop>	D	High to indicate that the near end is sending the document camera or the laptop.
<Document_Camera/Laptop>_Relay_Is_On	D	High to drive relay outputs for an external video switcher.
Far_End_Is_Sending_Content	D	High to indicate that the far end is sending content.
Far_End_Is_Muted	D	High to indicate that the far end has muted their microphones.
Do_Not_Disturb_Is_On	D	High to indicate that the do not disturb is active.
Show_Manual_Answer_Page	D	High to show the video manual answer page.
Show_Audio_Manual_Answer_Page	D	High to show the audio manual answer page.
Show_<DMTF/Audio_DTMF>_Page	D	High to show the DTMF and Audio DTMF pages.
Show_Camera_Control_Page	D	High to show the camera control page.
Show_Do_Not_Disturb	D	High to show the do not disturb subpage.
Show_<Video/Audio>_Hang_Up_Page	D	High to show the video and audio hang up page.
Show_Meeting_Composer_<DTMF/Audio_DTMF/Camera_Comtrol>_Page	D	High to show the DTMF, Audio DTMF and camera control page while meeting composer is active.
Favorites_<Previous/Next>_Button_Mode	A	Analog signal indicating the mode for the favorites list next and previous buttons. Mode 0 is disabled, mode 1 is enabled.
Favorites_List_Enry_*_Text	S	Serial signal indicating the favorites list entry names.
Show_Group_Members_List_Sub_Page	D	High to show the group members list subpage.
Group_<Previous/Next>_Button_Mode	A	Analog signal indicating the mode for the group list next and previous buttons. Mode 0 is disabled, mode 1 is enabled.
Group_List_Enry_*_Text	S	Serial signal indicating the group list entry names.
Meeting_Composer_<Previous/Next>_Button_Mode	A	Analog signal indicating the mode for the meeting composer list next and previous buttons. Mode 0 is disabled, mode 1 is enabled.
Meeting_Composer_List_Enry_*_Text	S	Serial signal indicating the meeting composer list entry names.
Meeting_Composer_Connect_Button_Mode	A	Analog signal indicating the meeting composer connect button mode. Mode 0 is disabled, mode 1 is enabled.

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Show_Meeting_Composer_In_Call_Buttons	D	High to show the DTMF, Audio DTMF and Meeting Composer Hang Up All subpages.
MultisSite_Conference_Is_In_Progress	D	High to indicate that the system is in a multisite conference.
To_Device	S	Serial signal to be routed to a 2-way serial com port.

TESTING:

OPS USED FOR TESTING:	4.007.0004
SIMPL WINDOWS USED FOR TESTING:	3.11.15
CRESTRON DB USED FOR TESTING:	33.05.005.01
DEVICE DB USED FOR TESTING:	45.00.019.00
SAMPLE PROGRAM:	Polycom ATX v2.0.8.4 Demo

REVISION HISTORY:	V. 1.0 – Original release.
	
	V. 2.0.2 – Incorporated new commands added to the ATX SDK.
	
	V. 2.0.3 – Fixed several bugs.
	
	  1) Fixed an incorrect command string format for calling a multicodec system when using Meeting Composer.
	
	  2) Fixed an issue where we were creating a multisite call when only one entry had been selected in Meeting Composer. When there is only one entry in the Meeting Composer list, we should be creating a standard call.
	
	  3) Fixed an issue with clearing the text in the lists when switching between lists.
	
	  4) Fixed an issue where in some situations we would display multiple copies of the same speed dial entry.
	
	V. 2.0.4 – Fixed several bugs.
	
	  1) Fixed an issue where the meeting composer dial command was missing two parameters that tell it when the system being dialed is a telepresence system.
	
	  2) Fixed an issue with not clearing the address book entries before requesting the entries from the ATX in certain situations. This is required in case there have been any entries deleted in the ATX.
	
	  3) Fixed an issue with speed dials not including all of the numbers when dialing a telepresence system when not in meeting composer.
	
	V. 2.0.5 – Fixed a couple of bugs.
	
	  1) Fixed an issue when the meeting composer speed dial button is pressed and then the speed dial button is pressed immediately after. This was causing the entries to be displayed twice.
	
	  2) Fixed a problem where for certain types of calls, when there was only one entry in the meeting composer list, the speed as left off of the dial command.
	
	V. 2.0.6 – Fixed two bugs.
	
	  1) Fixed an issue with the entries of the global address book being stored incorrectly.

2) Fixed an issue with the wrong type being stored with the individual entries in a group.

V. 2.0.7 – Fixed an issue where a single global address entry would be displayed in the Meeting Composer list by its system id and not its name.

V. 2.0.8 – Fixed two bugs.

1) Fixed an issue with the call speed setting auto being sent as Auto in some cases.

2) Added DTMF controls for audio calls.

Changed the module to display the hang up and DTMF buttons on the Meeting Composer page even when not in a Meeting Composer call.

V. 2.0.8.1 – Fixed a bug with the Audio DTMF commands.

V. 2.0.8.2 – Fixed two bugs.

1) Fixed an issue with the way that the module resends commands if there is no response from the Polycom ATX.

2) Changed the time out when we are requesting the Global address book. There are times when the Global address book requests can take longer than expected to be answered. This might happen if the Global address book server is located outside the local office building, say in the headquarter office located half way around the world. The module will now wait 60 seconds before resending a request for the Global address book.

V. 2.0.8.3 – Fixed an issue where in certain cases the call type was dropped from the dial string.

v. 2.0.8.4 – Fixed several issues.

1) Fixed an issue where if the ATX system was in a call and the system type was set to ATX 200 in the System_Config.ini file, initialization would fail.

2) Fixed an issue where sometimes the hide display command didn't work.

3) Fixed an issue with the demo program touch panel file help file that prevented the camera view buttons from working. This was an issue with the touch panel file and not the module.